



FULL LINE CATALOGUE 2012/2013

Electrical connection systems
Tools and measuring instruments



Verbindungen mit **System**
The **Power** of Partnership

Klauke[®]
A Textron Company



Dear customer,

A very warm welcome to the new Klauke Catalogue. A catalogue very much dedicated to the "Generation Safety Plus". The new generation of hydraulic crimping and cutting tools combines proved and tested Klauke technologies and benefits with even more intelligence, performance and ergonomics. Everything needed to work with our tools even safer and facilitating easy operation.

In addition we are extending our range with professional crimping tools for plug connection systems in the photovoltaic sector and special ergonomic tools for processing cable end sleeves. All this emphasises also this year our company's innovative strength. Within the Greenlee range the next generation of battery-powered hydraulic punching tools, MagnumPro fish tapes and innovative voltage testers, multimeters and VDE testers is available. All new developments with specific product benefits and advantages for the user.

The product range:

Klauke® *Electrical connection systems, crimping, cutting and hand tools*



GREENLEE®
A Textron Company

Punching and processing tools, cable pulling technology, testing, measuring and inspection equipment

Connections with a system – the Power of Partnership: our philosophy to connect man and technology in a unique way which in addition creates the basis for a one-of-a-kind relationship between you and ourselves.

*Yours sincerely
Klauke Team*

*Verbindungen mit **System**
The **Power** of Partnership*



Faster. Stronger. Better.

For you in this catalogue.

Klauke stands for permanent development and constant product improvement.

Generation Safety Plus

Hydraulic crimping tools

EK 50/5-L



EK 60/22-L



- ▶ Intelligent Pressing System – IPS
- ▶ Integrated pressure sensor, evaluation function via USB adapter
- ▶ Powerful 18 V Li-Ion battery

[More from page 302](#)

Hydraulic cutting tools

ESG 85-L



- ▶ Robust and lightweight cutting heads
- ▶ Cutting range up to \varnothing 105 mm, also for armoured cables
- ▶ Manual retraction stop – MRS

[More from page 326](#)

Hydraulic universal tools

EK 60 UNV-L



- ▶ One tool for cutting, crimping and punching
- ▶ Also as 12-ton version: EK 120 UNV-L
- ▶ Time saving by MRS+ function

[More from page 330](#)

Crimping dies series 5

Series 5



5
Klauke

- ▶ For 5 ton crimping tool EK 50/5-L
- ▶ Crimping dies with double profile
- ▶ Crimping range up to 240 mm² (Cu)

[More from page 397](#)

Hydraulic crimping heads

THK 120



- ▶ BG-compliant version
- ▶ 120 kN crimping force
- ▶ Crimping dies Klauke series 13

[More from page 342](#)

Hydraulic cutting heads

SDK 105



- ▶ Up to \varnothing 120 mm depending on design
- ▶ Models for fine-stranded conductors, steel-armoured cables and Al/St cables (ACSR)
- ▶ Up to 40% lighter than previous models

[More from page 352](#)

Success tells its own tale and our innovations always create greater benefits for our customers. Work becomes even more efficient. Electrical connections even get safer.

Mechanical crimping tools

K 38 ERGO



- ▶ Ergonomic design
- ▶ Square crimping ideal for box terminals and spring clamp technology
- ▶ Easy handling

More from page 218

Crimping tools for photovoltaic applications

K 90 MC3
K 90 MC4



- ▶ Crimping tools for Multi-Contact plug-in systems MC3 and MC4
- ▶ High precision by linear closing dies

More from page 253

Holemaking tools

LS 60-L



LS 50-L FLEX



- ▶ Improved performance with Li-Ion technology
- ▶ LS 50-L FLEX with rotating head
- ▶ Automatic limit stop and lag stop

More from page 522

Fish tapes

Magnum Pro™



- ▶ Fish tapes made from steel, stainless steel, nylon and fibre glass
- ▶ Extreme robust shock-proof housing with comfort handle

More from page 568

Voltage tester and multimeter

GT-16



DM-210A



- ▶ Voltage testers for fast contactless testing
- ▶ Digital multimeter with illuminated display
- ▶ Readouts transferred to PC

More from page 582

Installation tester

ETest Multi



ETest R_E



ETest R_{ISO}



- ▶ ETest Multi – The VDE 0100 Tester
- ▶ ETest R_E – Earth resistance meter
- ▶ ETest R_{ISO} – Insulation resistance meter

More from page 622

- What's new
- Solutions for installers, trade and industry
- Our tradition of innovations
- Demanding more than standards
- Anything is possible
- Here you are in good hands
- More than just maintenance
- Klauke - always close by
- For secure connections worldwide



Electrical connection system 22

- Copper tubular cable lugs and connectors
- Stainless steel and nickel tubular cable lugs and connectors
- Copper compression cable lugs and connectors to DIN
- Copper solderless terminals, connectors & pin cable lugs to DIN
- Copper sleeves for compacted conductors and sector shaped conductors
- Aluminium compression cable lugs and connectors to DIN
- Aluminium/copper compression cable lugs and connectors
- Clamps and screw connectors
- Cable end sleeves
- Cable connections, insulated and non insulated
- Assortments



Crimping dies 386

- Series 50
- Series 4
- Series 5
- Series 18
- Series 22
- Series 13
- Series 25
- Series 45



Holemaking tools 496

- Round and special shape punches
- Punch drivers and sets
- Hole saws
- Bits and step bits



Cable pulling technology 564

- Fish tapes
- Cable puller
- Pulling grips



Technical Appendix

- Notes on the various crimping profiles
- Legend for pictograms used
- Conversion charts
- Standards, changes, improvements



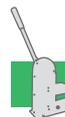
Crimping and cutting tools 206

- Mechanical crimping and cutting tools
- Electric and pneumatic crimping tools
- Hand-operated hydraulic crimping, cutting and universal tools
- Battery-operated crimping, cutting and universal tools
- Hydraulic crimping, cutting and universal heads
- Hydraulic drive units
- Hydraulic systems
- Accessories for hydraulic tools
- Force and pressure gauge systems



Hand tools 426

- VDE tools
- Standard tools
- Wire stripping tools
- Stripping tools
- Tools for communications technology



Production tools 552

- Special cutting tools
- Machining tools for bus bars
- Pumps and accessories



Testing and measuring instruments 578

- Voltage testers
- Digital multimeters
- Clamp meters
- VDE testing instruments
- Temperature gauges
- Locators
- Cable and conductor identifiers
- Network measuring devices and testers

- Service check list as master copy
- Order form as master copy
- Alphabetical Index
- Alphanumerical Index



Safety Plus – a Generation with added value.

From advanced technology, get more out of it –

Generation Safety Plus.

Klauke electro-hydraulic crimping and cutting tools are always the most convenient and powerful solution when it concerns reliable crimping of connection material and cutting. However, previous achievements do not mean we should rest on our laurels. On the contrary, we will be working continuously for improvement.

The result: our new tool generation - Safety Plus.

The successful and established Klauke® mini-Series and the new Klauke® mini+, ultra and ultra+ series set standards for crimping and cutting tools as regards intelligence, performance and ergonomic and thus make electrical connection systems more secure than ever.



More intelligence.

- ▶ Integrated pressure measurement with visual and audible signals in case of failure.
- ▶ Evaluation function using optical interface and USB adapter.
- ▶ Light diode for maintenance control, charge level indicator and data transmission to the PC.
- ▶ Automatic retract stop (ARS) for positioning control in case of multiple crimps.



Higher performance.

- ▶ High-performance Li-Ion batteries with high capacity and extremely short charging time.
- ▶ High-performance motors for maximum operating speed.
- ▶ Energy saving function by stopping motor.
- ▶ Mains adapter NG2 for mains operation.

More ergonomic.

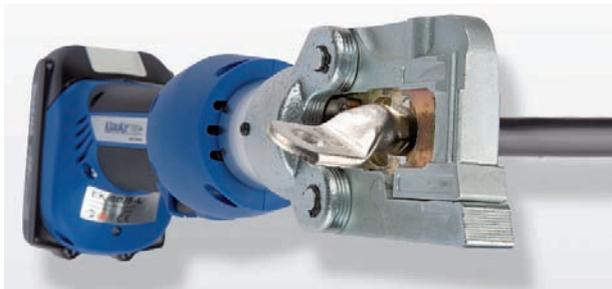
- ▶ Grip through to 2-component housing.
- ▶ Optimised centre of gravity.
- ▶ One-button-operating concept for easy handling.
- ▶ High-performance LED for work area illumination.

The most powerful Mini ever seen.

EK 50/5-L

The new 5-ton tool class.

The Klauke[®] mini+ is the clear evidence of the fact that small dimensions and lightweight do not necessarily associate with low performance. Its ergonomic design enables simple handling. It outshines most of the large series due to its high-performance engine, new 18 V Li-Ion batteries and also the automatic feedback for crimping process. All ideal conditions – so that each work step becomes easy – even in tight areas.



Characteristics:

- ▶ Crimping area up to 240 mm² (Cu)/185 mm² (Al).
- ▶ Electronic control and monitoring of crimping operation.
- ▶ Integrated pressure measurement with visual and audible signals in case of failure.
- ▶ Evaluation function using optical interface and USB adapter.
- ▶ 18 V/1.3 Ah Li-Ion battery.
- ▶ With LED for workplace illumination.

Crimping dies of series 5.





*Cutting made easy
up to Ø 120 mm.*

The new hydraulic cutting tools.

The latest generation of our hydraulic cutting tools distinguishes itself through function and performance. New features enable the working with it safer and easier.

The 18 V Li-Ion batteries of the battery-powered hydraulic tools feature 50 % more energy than the conventional NiMH batteries.

The ultra+ models with 120 kN cutting force are available with both open and closed head and cut armored cables of diameters up to 105 mm.

Retraction can be interrupted at any position using the manual retract stop (MRS) – this saves time and energy.



The extremely robust cutting heads are distinguished primarily thanks to their lightweight. The new heads are up to 40 % lighter than the previous models.



Characteristics:

- ▶ For Al/St ropes (ACSR) of up to Ø 55 mm.
- ▶ For multiple and fine stranded cables and conductors up to Ø 120 mm.
- ▶ Closed cutting heads with innovative bolt interlock.
- ▶ Manual retract stop (MRS) for efficient operations.

Efficiency for the cable harness assembly.

The workbench-mounted tool with 120 kN crimping force: THK 120

The range of hydraulic crimping tools for workbench mounting has been supplemented with an additional tool: The THK 120 with 120 kN crimping force and a crimping range up to 400 mm². The processing time is clearly reduced through wide crimping using dies from Klauke 13-series as compared to 6-ton tools, in particular in case of large nominal cross sections.

Characteristics:

- ▶ For 13-series interchangeable dies, wide crimping.
- ▶ Quick action coupling.
- ▶ For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results.



Ideal for box terminals and spring clamp technology.

The cable end-sleeves specialist:

K38 ERGO

In constricted places, the crimping of cable end-sleeves proves to be extraordinarily tricky. This is where the new mechanical crimping tool K38 ERGO can help.



Thanks to its pistol form and slim crimping head, cable end-sleeves can be crimped comfortably into tightly fitted control cabinets. The conductors can be inserted comfortably from the front. The ergonomic design allows extraordinarily easy handling.

The tool inclusive of practical plastic case and a range of insulated cable end-sleeves is available as K38 ERGO set.

Characteristics:

- ▶ Square crimping ideal for box terminals and spring clamp technology.
- ▶ Crimping range from 0.25 mm² up to 6 mm².
- ▶ Easy operation with minimum effort.
- ▶ Ergonomic design.



Highest precision for photovoltaic.

Crimping tools for Multi-Contact plug-in systems:

K90 MC3 / K90 MC4

Especially for the photovoltaic sector, the range is added to Klauke K90 MC tool series for the Multi-Contact plug-in systems MC3 and MC4.

The tools with simultaneous die movement ensure maximum level of precision. The crimping head KP 90 MC31 can be combined with all basic tools of Klauke Pro-Series.



Characteristics:

- ▶ Crimping profiles for Multi-Contact plug-in systems.
- ▶ High precision by linear closing dies.
- ▶ Ergonomic design with optimum force transmission.



Safe installation tests for every application.

The new multi-testers of GREENLEE® A Textron Company

The new ETest-Series for safe installation tests. With the help of these devices you make sure that electronic installations comply with all requirements according to VDE 0100.

ETest Multi and ETest Riso have a cordless probe, thanks to which you can use your hand freely to hold the tester – so that you can test and simultaneously read the results.



Characteristics:

- ▶ The ETest Multi is a VDE 0100 tester, which can be used for continuity tests, voltage and insulation resistance measurements (100 V, 250 V, 500 V) as well as for line and earth loop impedance measurements.
- ▶ The earth resistance measuring device ETest RE is suitable for 110 V and 230 V installations as well as for electrical three-phase systems.
- ▶ The ETest RISO meets the requirements for insulation resistance measurements and continuity measurements. The device is compatible with the EN 61577 und IEC 61010-1600 V Cat. III standards.

Voltage detection, measurement and more.

The new voltage tester and multimeter **GT-16** and **DM-210A**



The non-contact voltage tester GT-16 detects voltages between 5 and 1000 V AC. Due to the compact size, the device fits in every shirt pocket or in the tool belt. An acoustic signal and LED are immediately displayed when voltage is applied.



The new generation of multimeters is provided with several new features. Thanks to the enlarged and illuminated displays, the devices can be read properly in dark as well. Voltage can also be detected without contact. The respective models have a variety of measuring functions - partly even with temperature measurement. The measurement results can be transmitted via optical RS 232 interface or USB cable directly to a PC.

*New generation also for
punching tools.*

**Punching made easy: LS 50-L FLEX
and LS 60-L**



With the LS 50-L FLEX Klauke introduces a new battery-hand hydraulic punch driver on the basis of mini+ with Lithium ions technology. The tool has a rotating head

which provides highly flexible use to the user. Using the new LS 60-L Klauke replaces the LS 60. The battery-hand hydraulic punch driver is also equipped with the new Lithium ions technology. Both tools have an automatic end stop. In addition to this they have a lag stop which interrupts the rate of advance immediately after releasing the control switch. Built-in white LED illuminates the field of working area.



Characteristics:

- ▶ Compact, ergonomically formed 2-component housing for optimum hold and effortless operations.
- ▶ Automatic limit stop and lag stop.

*Even easier retraction thanks to
improved housing.*

The cable-fish tapes of the MagnumPro™ Series.

We have developed the fish tapes of MagnumPro™ Series based on comprehensive market observations, customer discussions and scientific investigations. These fish tapes are manufactured from steel, stainless steel, nylon and fibreglass. A number of enhancements were available to increase comfort, ergonomics and durability in the housing compared to the previous ones. Lifetime and productivity have increased significantly. Moreover, the eyelets of the latest steel strips were improved – these are smaller with offset bend for improved fishing ability.



Characteristics:

- ▶ 19 models with different materials.
- ▶ Robust, beveled and shock-proof housing with comfort handle.
- ▶ Patented system for easy extension and retraction.



Solutions for installers, trade and industry.

Klauke, a Textron Group Company – and your partner.

We use best matched products and services to create pioneering solutions for installers, trade and industry all over the world. Both alone as Klauke, but also within the multi-industrial company Textron with Greenlee.

Through the **strategic alliance with Greenlee**, we offer complementary and matched product ranges for professional application. Together, we have at our disposal ultra-modern research and development centres in Germany, Great Britain and the United States and an **international distribution network with service centres in more than seventy countries.**

Being **in constant touch with our customers**, we discover ways to optimise our products. This information help to continually develop our products. The resulting safety and efficiency for all working with Klauke products is reason that craftsmen all over the world trust in Klauke.



Our tradition of innovation.

Customer requirements as basis for new developments.

We have been committed to systematically **developing innovative, application oriented solutions since our foundation in 1879**. To achieve this we closely work together with users. All our developments start with your requirements, ideas and preferences. Skilled and qualified labour realise these developments - from the idea through to start of production. The **system concept** plays the key role in this process: All new developments complement the existing product range and offer variable applications.

This generates innovative products that offer significantly more when it comes to operation and affordability. **Numerous awards and innovation prizes** confirm that this is the way forward.

Klauke pliers, for instance, have received the **IF-Product-Design-Award** for ergonomic and safety design. And this range is just one of the innovative product highlights which we present with this catalogue.



Demanding more than standards

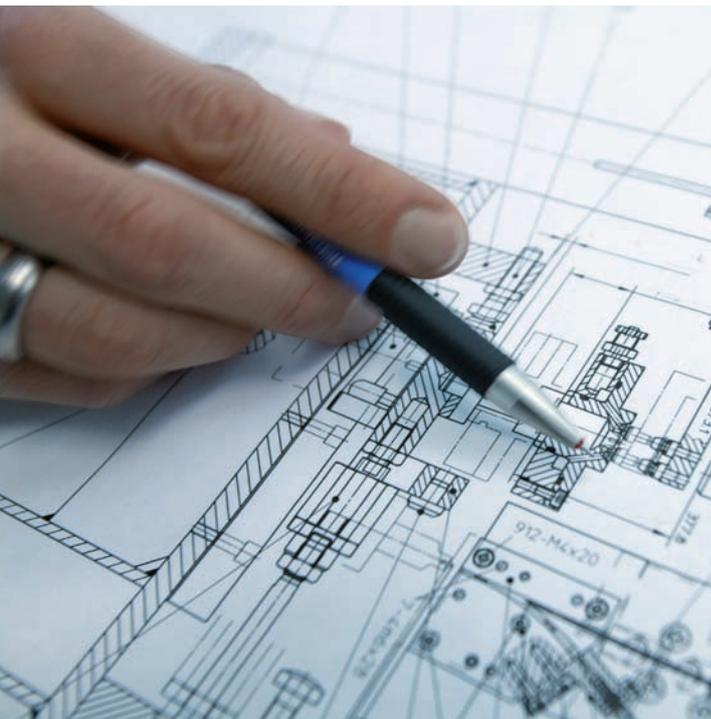
Klauke for more safety and quality.

Just meeting the standard isn't enough. In terms of safety, user friendly application and robustness, all Klauke as well as Greenlee products comply with the highest specifications and **perform in excess of the standards required**. We are certified to ISO 9001. Regular internal and external audits guarantee consistently high quality. Our products comply with international approvals.

We purchase only raw materials and components that guarantee first-class quality. And to guarantee that we work consistently with carefully chosen suppliers. Stringent inspections and quality tests at every stage of the manufacturing process **safeguard our high standards**. Klauke customers depend on it. Which is their right: We guarantee maximum safety and optimised comfort in the application of our products.

Environmental issues also play a crucial role. Our company is **Ecoprofit** ("**EC**ological **PRO**ject **FO**r **I**ntegrated **E**nvironmental **T**echnology") **certified** and excels through its especially pro-environmental production.





Anything is possible.

Special manufacture for individual solutions.

Beside Klauke's expansive product range of solderless connection systems and tools, we also develop a **host of individual solutions for special applications.**

Specially-dimensioned tubular cable lugs, hooked types, with double hole, angled lugs, as well as connectors and parallel connectors **made to specification** and other designs **acc. to drawing** are possible. Made from copper or aluminium. Copper finish, tin or nickel-plated versions are available.

We also design **special tool solutions** for our industrial partners. Precisely tailored for each application. Please refer to the checklist in the Technical Appendix with details on issues required. Please refer directly to your contact person in our sales office.





Here you are in good hands.

Our sales force at your service.

As a partner to installers, trade and industry, our service - and sales - teams are close to our customers. Highly-motivated personnel offer **you every possible support**. Every year, we train thousands of installers and staff from our wholesalers and distribution partners. Apart from product presentations our main objective is to exchange ideas and experiences with our customers.

And it's not only here that we encourage dialogues: Every day our personnel answers questions on the phone or at site. Our application technology tests your electrical connections - and provides active support in the form of individual **solutions for your particular applications**. These measures are the platform from which we consistently advance and improve our products. And guarantee the safety of the electrical connections done with Klauke products.

- ▶ Product presentations and expert **advice at site** through our field service team.
- ▶ **Klauke Mobile** in operation for you.
- ▶ Internal and external **training and seminars** for customers.
- ▶ Information, **advice and workshops** at all important national and international exhibitions.
- ▶ Fast **technical support** for special applications from our experts.
- ▶ We test your electrical connections and **provide test reports** upon request.





More than just maintenance.

Services for your tool.

The Service Center in Remscheid and the worldwide authorised Service Centers (ASC) offer you reliable **technical support for our tools**. Starting with a free tool hotline for maintenance and repair service with test plates and certificates through to a hire service. We do everything we can to make sure your tools remain fully functional - or provide you with alternatives if necessary.



In addition to these services, Klauke of course provides **2 years of guarantee** on full functionality of the tools.

We provide this service all over the world. Our national and international partners' expertise and equipment always conforms to the latest standards.

- ▶ **Free Hotline** for all questions about the tool service in Germany.
- ▶ Repair and maintenance through the **Service Centers**.
- ▶ Complete maintenance service with annual inspection and maintenance at fixed prices, including **test plate and certificate**.
- ▶ Fast, uncomplicated **tool hire service for all standard tools**.
- ▶ On-site **Service Mobile**.

Klauke ASC
Authorised Service Center



Hotline Germany

+49 (0)800 / 4 68 55 28

Repair Service

+49 (0)2191 / 907 - 222

Rental or Loan Service

+49 (0)2191 / 907 - 221

International phone

+49 (0)2191 / 907 - 322

Fax Service Center

+49 (0)2191 / 907 - 243

E-mail

service@klauke.textron.com

Klauke - always close by...



Gustav Klauke GmbH

Auf dem Knapp 46
D-42855 Remscheid
Phone: +49 (0)2191 / 907 - 0
Fax: +49 (0)2191 / 907 - 201
info@klauke.textron.com
www.klauke.com

Sales-Hotline: +49 (0)2191 / 907 - 107

■ **Sales manager**
Torsten Darkow
Phone: +49 (0)2191 / 907 - 120
Fax: +49 (0)2191 / 907 - 340
Mobile: +49 (0)172 / 70 51 247
tdarkow@klauke.textron.com

■ **Internal service manager**
Axel Rauch
Phone: +49 (0)2191 / 907 - 401
Fax: +49 (0)2191 / 907 - 340
Mobile: +49 (0)172 / 70 51 240
arauch@klauke.textron.com

■ **Assistance**
Jasmin Schippling
Phone: +49 (0)2191 / 907 - 254
Fax: +49 (0)2191 / 907 - 340
jschipping@klauke.textron.com

NORTHERN REGION

Regional sales manager

Uwe Pilgrim

Phone: +49 (0)521 / 78 53 - 470
Fax: +49 (0)521 / 78 53 - 471
Mobile: +49 (0)151 / 14 63 97 53
upilgrim@klauke.textron.com

Representatives

■ Schleswig-Holstein, Hamburg

Jens Brehmer

Representatives
Küstriner Str. 10
D-25421 Pinneberg
Phone: +49(0)4101/789340
Fax: +49(0)4101/780776
jens.brehmer@freenet.de

■ Niedersachsen East, Eastern Westphalia, Münster

Detlef Sikora GmbH
Lägenfeldstraße 7
D-30952 Ronnenberg
Phone: +49(0)511/43804-0
Fax: +49(0)511/43804-49
hannover@sikora.de

■ Sachsen-Anhalt

Detlef Sikora GmbH
Industriegebiet Süd 2
D-39443 Förderstedt
Phone: +49(0)39266/931-0
Fax: +49(0)39266/931-15
magdeburg@sikora.de

Sales

■ Niedersachsen North-West, Bremen

Jochen Wordtmann
Phone: +49 (0)4486 / 920 - 612
Fax: +49 (0)4486 / 920 - 764
Mobile: +49 (0)151 / 14 63 99 43
jwordtmann@klauke.textron.com

■ Niedersachsen South-West, Nordrhein-Westfalen North-West

Uwe Pilgrim
Phone: +49 (0)521 / 78 53 470
Fax: +49 (0)521 / 78 53 471
Mobile: +49 (0)151 / 14 63 97 53
upilgrim@klauke.textron.com

Sales support

■ Northern region

Friedrich Reusch
Phone: +49 (0)511 / 71 27 371
Fax: +49 (0)511 / 71 27 372
Mobile: +49 (0)172 / 70 51 242
freusch@klauke.textron.com

CENTRAL REGION

Regional sales manager

Roland Recke

Phone: +49 (0)2191 / 907 - 368
Fax: +49 (0)2191 / 907 - 340
Mobile: +49 (0)151 / 14 63 97 59
rrecke@klauke.textron.com

Area sales manager

■ NRW-Middle, Hessen, Rheinland-Pfalz, Saarland

Wolfgang Frowein

Phone: +49 (0)2191 / 907 - 119
Fax: +49 (0)2191 / 907 - 340
Mobile: +49 (0)172 / 70 51 241
wfrowein@klauke.textron.com

Sales

■ Mecklenburg-Vorpommern, Berlin, Brandenburg

Dietmar Hilgendorf
Phone: +49 (0)3385 / 50 37 11
Fax: +49 (0)3385 / 50 37 12
Mobile: +49 (0)172 / 70 51 239
dhilgendorf@klauke.textron.com

■ Sachsen

Mario Schüppel
Phone: +49 (0)371 / 84 49 140
Fax: +49 (0)371 / 84 49 141
Mobile: +49 (0)172 / 70 51 244
mschueppel@klauke.textron.com

■ Thüringen

Georg Göritz
Phone: +49 (0)3628 / 92 98 46
Fax: +49 (0)3628 / 92 98 47
Mobile: +49 (0)151 / 57 13 61 16
ggoeritz@klauke.textron.com

■ Nordrhein-Westfalen South-West

Marc Schüler
Phone: +49 (0)2191 / 907 - 0
Fax: +49 (0)2191 / 907 - 340
Mobile: +49 (0)173 / 86 22 272
mschueler@klauke.textron.com

Sales support

■ Central region

Daniel Frowein
Phone: +49 (0)2191 / 907 - 0
Fax: +49 (0)2191 / 907 - 340
Mobile: +49 (0)151 / 14 63 97 62
dfrowein@klauke.textron.com

SOUTHERN REGION

Regional sales manager

Thomas Keck

Phone: +49 (0)7042 / 10 22 80
Fax: +49 (0)7042 / 10 23 85
Mobile: +49 (0)151 / 14 63 97 69
tkeck@klauke.textron.com

Representatives

■ Baden-Württemberg

Claudia Nolle e. K.
Industrial representatives
Teckstraße 21
D-73734 Esslingen-Berkheim
Phone: +49(0)711/365611-0
Fax: +49(0)711/365611-99
info@iv-nolle.de

■ Bayern North

**Jürgen Doerner
Handelsvertretungen GmbH**
Kafkastraße 5
D-90471 Nürnberg
Phone: +49(0)911/99815-0
Fax: +49(0)911/99815-40
nuernberg@hv-doerner.de

■ Bayern South

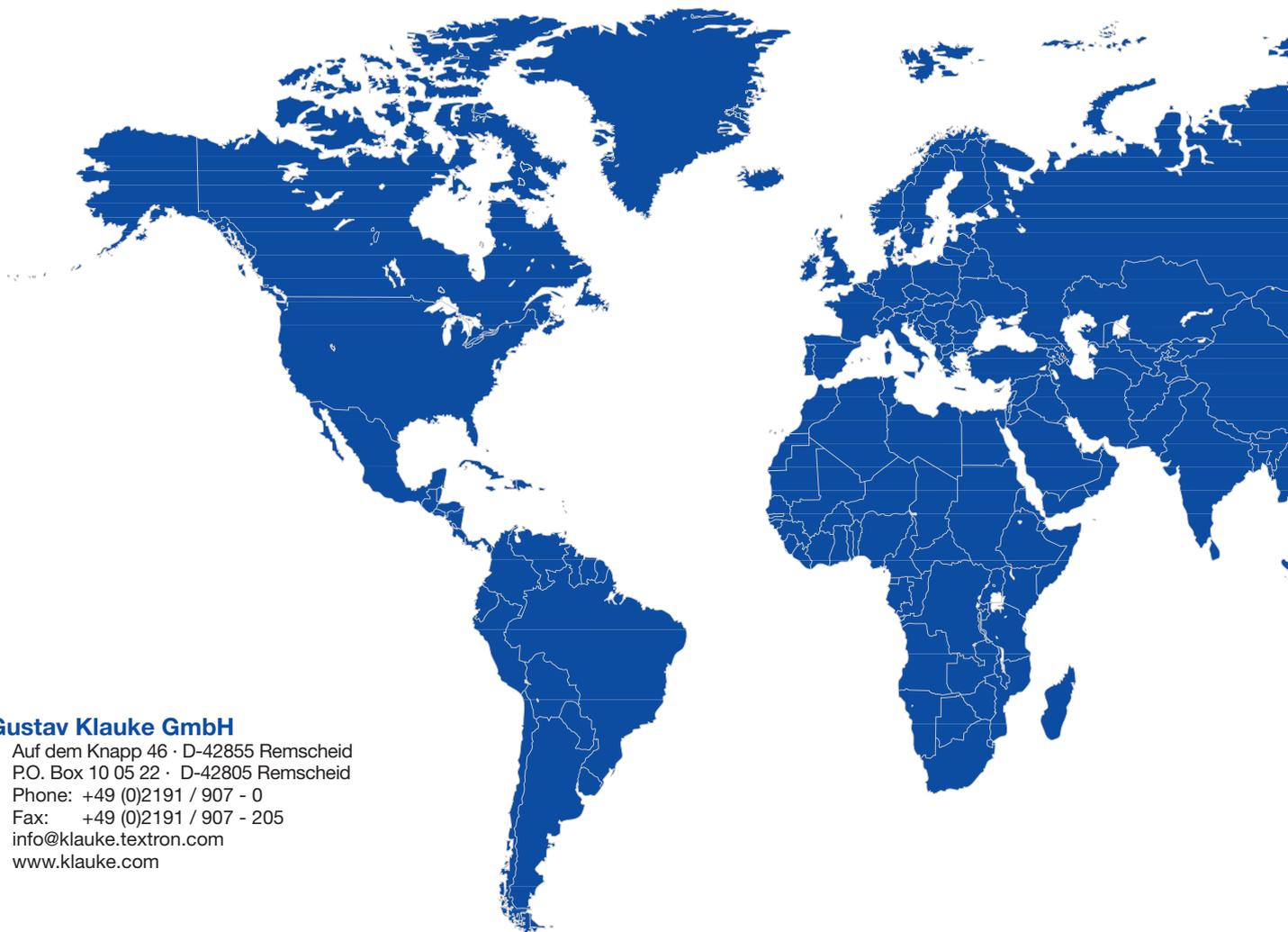
**Jürgen Doerner
Industrievertretungen GmbH**
Bussardstraße 8
D-82166 Gräfelfing
Phone: +49(0)89/898070-0
Fax: +49(0)89/898070-35
info@doerner-muenchen.de

Sales support

■ Southern region

Philipp Rausch
Phone: +49 (0)8431 / 64 11 903
Fax: +49 (0)8431 / 64 11 989
Mobile: +49 (0)151 / 14 63 97 74
prausch@klauke.textron.com

For secure connections worldwide.



Gustav Klauke GmbH

Auf dem Knapp 46 · D-42855 Remscheid
P.O. Box 10 05 22 · D-42805 Remscheid
Phone: +49 (0)2191 / 907 - 0
Fax: +49 (0)2191 / 907 - 205
info@klauke.textron.com
www.klauke.com

Distributorships / sales offices

- **GREENLEE TEXTRON INC.**
4455 Boeing Drive
Rockford, Il. 61109-2988
America
Phone: +1 815 / 397 - 7070
Fax: +1 815 / 397 - 9247
www.greenlee.textron.com
- **KLAUKE FRANCE S.A.R.L.**
16, Rue Saint-Louis, Z.I. ACTISUD
F-57150 Creutzwald
France
Phone: +33 (0)387 / 29 84 70
Fax: +33 (0)387 / 29 84 79
gcordel@klauke.textron.com
- **KLAUKE HANDELSGES.M.B.H.**
Ared-Str. 7 TOP 3
2544 Leobersdorf
Austria
Phone: +43 (0)2256 / 629 25
Fax: +43 (0)2256 / 629 25 - 30
atoffice@klauke.textron.com
- **OOO KLAUKE RUS**
Russian Federation
125009, Moscow, Tverskaya 16/2
Building 1, 7th floor, office 901B
Russian Federation
Phone: +7 495 / 935 89 71
Fax: +7 495 / 935 89 62
slekomtseva@klauke.textron.com
- **KLAUKE UK LTD.**
Hillside Road East, Bungay, Suffolk
NR35 1JX
Phone: +44 (0)1986 891519
Fax: +44 (0)1986 896132
uksales@klauke.textron.com
- **GREENLEE COMMUNICATIONS LIMITED**
Brecon House, William Brown Close
Llantarnam Park, Cwmbran NP44 3AB
Wales
Phone: +44 (0)1633 / 62 77 10
Fax: +44 (0)1633 / 62 77 11
info@tempo.textron.com
- **TEXTRON CHINA INC.**
GREENLEE / KLAUKE OFFICE
Floor 6th Lippo Plaza, No. 222 Huai Hai
M. Rd
200021 Shanghai,
P.R. of China
Phone: +86 21 / 53 96 65 55
Fax: +86 21 / 53 96 69 13
jsking@greenlee.textron.com
- **GREENLEE / KLAUKE OFFICE SOUTH EAST ASIA**
50 Loyang Way
Singapore 508743
Phone: +65 / 98 19 22 97
Fax: +65 / 67 48 16 51
cwee@greenlee.textron.com
- **GREENLEE / KLAUKE OFFICE AUSTRALIA / NEW ZEALAND**
25 Webb Ellis Court,
Pelican Waters, Queensland 4551
Australia
Phone: +61 7 / 54 39 73 77
Fax: +61 7 / 54 39 75 77
nellement@greenlee.textron.com
- **GREENLEE / KLAUKE OFFICE LATIN AMERICA**
1846 nw 82 Ave
Miami, Florida 33126
America
Phone: +1 305 / 406 1315
Fax: +1 305 / 406 1715
rvazquez@greenlee.textron.com
- **TEXTRON INDIA PVT. LTD.**
GREENLEE / KLAUKE OFFICE
Global Village, Behind R V College of
Engineering,
RVCE Post, Mylasandra,
Bangalore – 560 059
India
Mobile: + 91 99 0232 2466
Fax: +91-80-6712 9250
bpaul01@textron.com



Representatives worldwide

- **America**
GREENLEE TEXTRON INC.
Rockford, Il. 61109-2988
Phone: +1 815 / 397 - 7070
Fax: +1 815 / 397 - 9247
www.greenlee.textron.com
- **Andorra**
GAVE ELECTRO, S.L.
08430 La Roca del Valles
Phone: +34 93 / 842 48 87
Fax: +34 93 / 842 27 55
gave@gave.com
- **Argentina**
JAIME LARRABE
Penalolen, Chile
Phone: +562 / 279 0139
Fax: +562 / 279 0139
jaimelarrabe@yahoo.es
- **Australia**
GREENLEE / KLAUKE OFFICE AUSTRALIA / NEW ZEALAND
Pelican Waters 4551 QLD
Phone: +61 7 / 5439 7377
Fax: +61 7 / 5439 7577
nellement@greenlee.textron.com

- **Austria**
KLAUKE HANDELSGES.M.B.H.
2544 Leobersdorf
Phone: +43 2256 / 629 25
Fax: +43 2256 / 629 25-30
atoffice@klauke.textron.com

- **Bahrain**
NISSAD DEVELOPMENT CO. LTD.
1306 Nicosia
Phone: +357 22 / 76 50 14
Fax: +357 22 / 76 15 35
info@nissad.com



- **TOMAD INTERNATIONAL INC.**
Beirut
Phone: +961 1 / 88 49 44
Fax: +961 1 / 88 49 29
vahe@tomad.info



- **Belarus**
OOO KLAUKE RUS
125009 Moscow
Phone: +7 495 / 935 89 71
Fax: +7 495 / 935 89 62
slekomtseva@klauke.textron.com

- **Belgium**
NBR NUSSBAUMER NV/SA
1500 Halle
Phone: +32 2 / 35 70 940
Fax: +32 2 / 35 49 679
info@nussbaumer.be



- **SADINTER SOGECOMEX S.A.**
1190 Brussel Forest
Phone: +32 2 / 34 90 911
Fax: +32 2 / 34 35 139
contact@sadinter.be



- **Bosnia and Herzegovina**
KABELTECH DOO
71000 Sarajevo
Phone: +387 33 / 71 30 61
Fax: +387 33 / 71 30 63
info@kabeltech.co.ba

- **Brazil**
GREENLEE / KLAUKE OFFICE LATIN AMERICA
Miami, Florida 33126 / USA
Phone: +1 305 / 406 1315
Fax: +1 305 / 406 1715
rvazquez@greenlee.textron.com

- **Brunei**
GREENLEE / KLAUKE OFFICE SOUTH EAST ASIA
Singapore 508743
Phone: +65 9819 / 22 97
Fax: +65 6748 / 1651
cwee@greenlee.textron.com

- **Bulgaria**
V & V ISOMATIC LTD.
1505 Sofia
Phone: +359 2 / 95 83 111
Fax: +359 2 / 95 82 270
v.v@technolink.com

- **Canada**
GREENLEE TEXTRON INC.
Rockford, Il. 61109-2988
Phone: +1 815 / 397 - 7070
Fax: +1 815 / 397 - 9247
www.greenlee.textron.com

- **China**
TEXTRON CHINA INC. GREENLEE / KLAUKE OFFICE
Shanghai 200021
Phone: +86 21 / 53 96 65 55
Fax: +86 21 / 53 96 69 13
jsking@greenlee.textron.com

- **Columbia**
LAUMAYER COLOMBIANA S.A.
Medellin
Phone: +57 4 361 85 85
Fax: +57 4 361 36 67
comercial@laumayer.com

- **Croatia**
KONEKT D.O.O.
HR10000 Zagreb
Phone: +385 1 / 23 61 890
Fax: +385 1 / 23 61 882
konekt@konekt.hr

- **Czech Republic**
KLAUKE Z. NITSCH S.R.O.
14000 Praha 4 - Pankrac
Phone: +42 02 / 61 21 3219
Fax: +42 02 / 61 21 3218
klauke@klauke.cz

- **Denmark**
WEXO E A/S
3500 Vaerloese
Phone: +45 / 45 46 58 00
Fax: +45 / 45 46 58 01
wexoe@wexoe.dk

- **Ecuador**
AMER-ANDES
Bogota/Columbia
Phone: +571 / 616 7094
Fax: +571 / 610 2402
amerandes@cablenet.co

- **Egypt**
WARCO ENGINEERING & TRADING
Mohandessin / Giza
Phone: +20 2 / 30 25 265
Fax: +20 2 / 30 25 275
aragab@commnet.com.eg



- **TOMAD INTERNATIONAL INC.**
Beirut
Phone: +961 1 / 88 49 44
Fax: +961 1 / 88 49 29
vahe@tomad.info



- **El Salvador**
ABELLA GROUP
Miami, Florida 33126 / USA
Phone: +1 305 470 9800
Fax: +1 305 470 2202
ae.aespinoza@abellagroup.com

- **Estonia**
LAPP MILTRONIC SIA ESTONIAN BRANCH
Lääne-Virumaa 44307
Phone: +372 / 65 18 970
Fax: +372 / 65 18 971
info@lappmiltronic.ee

- **Finland**
CABLEX OY
20360 Turku
Phone: +358 2 / 88 00 020
Fax: +358 2 / 88 00 021
reijo.karlsson(a)cablex.fi

- **France**
KLAUKE FRANCE S.A.R.L.
 57150 Creutzwald
 Phone: +33 387 / 29 84 70
 Fax: +33 387 / 29 84 79
 gcordel@klauke.textron.com
- **Great Britain**
KLAUKE UK LTD.
 Bungay Suffolk NR35 1JX
 Phone: +44 (0)1986 891519
 Fax: +44 (0)1986 896132
 uksales@klauke.textron.com
- **Greece**
KALAMARAKIS SAPOUNAS S.A.
 13671 Chamomilos-Acharnes
 Phone: +30 2 / 10 24 06 000-6
 Fax: +30 2 / 10 24 06 007
 ksa@ksa.gr
- **Guatemala**
ABELLA GROUP
 Miami, Florida 33126 / USA
 Phone: +1 305 470 9800
 Fax: +1 305 470 2202
 ae.aespinoza@abellagroup.com
- **Hong Kong**
TEXTRON CHINA INC.
GREENLEE / KLAUKE OFFICE
 Shanghai 200021
 Phone: +86 21 / 53 96 65 55
 Fax: +86 21 / 53 96 69 13
 jsking@greenlee.textron.com
- **Hungary**
TRENDELEKTRO KFT.
 H-2049 DIOSD
 Phone: +36 23 / 545 140
 Fax: +36 23 / 545 141
 info@trendelektro.hu
- **Iceland**
REYKJAFELL LTD.
 125 Reykjavik
 Phone: +354 / 58 86 010
 Fax: +354 / 58 86 088
 reykjafell@reykjafell.is
- **India**
TEXTRON INDIA PVT. LTD.
GREENLEE / KLAUKE OFFICE
 Bangalore 560 059
 Mobil: +91 99 0232 2466
 Fax: +91-80-6712 9250
 bpaul01@textron.com
- **Indonesia**
GREENLEE / KLAUKE OFFICE
SOUTH EAST ASIA
 Singapore 508743
 Tel.: +65 9819 / 22 97
 Fax: +65 6748 / 1651
 cwee@greenlee.textron.com
- **Ireland**
KLAUKE UK LTD.
 Bungay Suffolk NR35 1JX
 Phone: +44 (0)1986 891519
 Fax: +44 (0)1986 896132
 uksales@klauke.textron.com
- **Israel**
SHAY A.U., LTD.
 49222 Petach Tikva
 Phone: +972 3 / 92 33 601
 Fax: +972 3 / 92 34 601
 ilans@uriel-shay.com
- **Italy**
COMMERCIALE TIEGER S.R.L.
 20159 Milan
 Phone: +39 02 / 68 86 330
 Fax: +39 02 / 66 80 2529
 comtieger@tin.it
- **Japan**
GOODMAN INC.
 Yokohama, Kanagawa 236-0037
 Phone: +81 / 45 - 701-5680
 Fax: +81 / 45 - 701-4302
 kwantanabe@goodman-inc.co.jp
- **Jordan**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- **Kazakhstan**
OOO KLAUKE RUS
 125009 Moscow
 Phone: +7 495 / 935 89 71
 Fax: +7 495 / 935 89 62
 slekومتseva@klauke.textron.com
- **Kuwait**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- **Lebanon**
TOMAD INTERNATIONAL INC.
 Beirut
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info
- **Latvia**
LAPP MILTRONIC SIA
 Riga LV 1012
 Phone: +371 / 75 01 900
 Fax: +371 / 75 01 909
 info@lappmiltronic.lv
- **Lebanon**
TOMAD INTERNATIONAL INC.
 Beirut
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info
- **Al-Bonian Group**
AL-BONIAN GROUP
 Beirut
 Phone: +961 1 / 38 57 08
 Fax: +961 1 / 38 7 14
 albonian@cyberia.net.lb
- **Lithuania**
LAPP MILTRONIC UAB
 Vilnius, LT-10306
 Phone: +370 5 / 27 80 390
 Fax: +370 5 / 27 80 397
 info@lappmiltronic.lt
- **Luxembourg**
M & A PARTNERS
 8055 Bertrange
 Phone / Fax: +352 2 / 26 36 20 46
 archit@pt.lu
- **Macedonia**
SISKON SYSTEMS ENGINEERING
 91000 Skopje
 Phone: +389 2 / 30 62 423
 Fax: +389 2 / 30 61 250
 siskon@mt.net.mk
- **Malaysia**
GREENLEE / KLAUKE OFFICE
SOUTH EAST ASIA
 Singapore 508743
 Phone: +65 9819 / 22 97
 Fax: +65 6748 / 1651
 cwee@greenlee.textron.com
- **Mexico**
REMAT, S.A. DE C.V.
 México, D.F.
 Phone: +52 / 55 5256 3440
 Fax: +52 / 55 5256 3441
 alvarobnava@aol.com
- **Montenegro**
NIDAS D.O.O.
 11000 Beograd
 Phone: +381 11 / 24 17 714
 Fax: +381 11 / 24 17 715
 nidas@eunet.rs
- **Morocco**
ETS. LOUIS GUILLAUD
 2000 Casablanca
 Phone: +212 22 / 30 59 71
 Fax: +212 22 / 31 78 88
 elg@casanet.net.ma
- **The Netherlands**
H.K. ELECTRIC BV
 5321 JZ Hedel
 Phone: +31 73 / 59 97 599
 Fax: +31 73 / 59 97 590
 info@hkelectric.nl
- **New Zealand**
GREENLEE / KLAUKE OFFICE
AUSTRALIA / NEW ZEALAND
 Pelican Waters 4551 QLD
 Phone: +61 7 / 5439 7377
 Fax: +61 7 / 5439 7577
 nellement@greenlee.textron.com
- **Nicaragua**
ABELLA GROUP
 Miami, Florida 33126 / USA
 Phone: +1 305 470 9800
 Fax: +1 305 470 2202
 ae.aespinoza@abellagroup.com
- **Norway**
MILTRONIC AS
 3036 Drammen
 Phone: +47 32 26 13 00
 Fax: +47 32 26 13 99
 info@miltronic.no
- **Oman**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- **TOMAD INTERNATIONAL INC.**
 Beirut
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info

- **Paraguay**
JAIME LARRABE
 Penalolen, Chile
 Phone: +562 / 279 0139
 Fax: +562 / 279 0139
 jaimelarrabe@yahoo.es
- **Philippines**
DULHUNTY TRADING INT'L
 1115 Quezon City
 Phone: +63 / 26 69 10 23
 Fax: +63 / 24 16 82 84
 gabatse@yahoo.com
- **Poland**
RB BREXIM SP. Z O.O.
 05-825 Marynin
 Phone: +48 22 / 73 44 380
 Fax: +48 22 / 73 44 381
 rboffice@brexim.pl
- **Portugal**
PALISSY GALVANI ELECTRICIDADE SA.
 2625-607 Vialonga
 Phone: +35 121 / 32 23 400
 Fax: +35 121 / 32 23 410
 info@palissygalvani.pt
- **Qatar**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia 
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- TOMAD INTERNATIONAL INC.**
 Beirut 
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info
- **Romania**
GERKON ELECTRO S.R.L.
 530211 Miercurea-Ciuc
 Phone: +40 266 / 37 21 08
 Fax: +40 266 / 31 22 38
 office@gerkonelectro.ro
- **Russia**
OOO KLAUKE RUS
 125009 Moscow
 Phone: +7 495 / 935 89 71
 Fax: +7 495 / 935 89 62
 sletkomtseva@klauke.textron.com
- **Saudi Arabia**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia 
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- TOMAD INTERNATIONAL INC.**
 Beirut 
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info
- **Serbia**
NIDAS D.O.O.
 11000 Beograd
 Phone: +381 11 / 24 17 714
 Fax: +381 11 / 24 17 715
 nidas@eunet.rs
- **Singapore**
GREENLEE / KLAUKE OFFICE
SOUTH EAST ASIA
 Singapore 508743
 Phone: +65 9819 / 22 97
 Fax: +65 6748 / 1651
 cwee@greenlee.textron.com
- **Slovakia**
KLAUKE Z. NITSCH S.R.O.
 14000 Praha 4 - Pankrac
 Phone: +42 02 / 61 21 3219
 Fax: +42 02 / 61 21 3218
 klauke@klauke.cz
- **Slovenia**
ISARIA D.O.O.
 1420 Trbovlje
 Phone: +386 3 / 56 31 800
 Fax: +386 3 / 56 31 802
 isaria.trbovlje@siol.net
- **South Africa**
EBERHARDT-MARTIN CC.
 2092 Newlands 
 Phone: +27 11 / 28 80 000
 Fax: +27 11 / 67 32 043
 ebm@ebm.co.za
- IMG**
 Benoni 
 Phone: +27 11 / 425 4062
 Fax: +27 11 / 425 2554
 tony@imgdistributors.co.za
- **South Korea**
KESCO CO., LTD
 Seoul 150-093
 Phone: +82 2 / 26 14 09 89
 Fax: +82 2 / 26 14 09 66
 tsoh@ikesco.com
- **Spain**
GAVE ELECTRO, S.L.
 08430 La Roca del Valles
 Phone: +34 93 / 84 24 887
 Fax: +34 93 / 84 22 755
 gave@gave.com
- **Sweden**
MILTRONIC AB
 61129 Nyköping
 Phone: +46 155 / 77 700
 Fax: +46 155 / 77 701
 info@miltronic.se
- **Switzerland**
FERRATEC AG
 8964 Rudolfstetten
 Phone: +41 56 / 64 92 121
 Fax: +41 56 / 64 92 141
 info@ferratec.ch
- **Syria**
AROYAN & KHATCHADOURIAN CO.
 Aleppo 
 Phone: +963 21 46 56 558
 Fax: +963 21 46 40 692
 a-kco@aloola.sy
- **Taiwan**
PO CHARNG CO. LTD
 Taipei 110
 Phone: +886 / 22 76 31 623
 Fax: +886 / 22 76 67 492
 kevin@pocharn.com.tw
- **Thailand**
SUMMIT ENG. AND SERVICES CO. LTD
 10400 Bangkok
 Phone: +662 / 64 22 478
 Fax: +662 / 64 23 085
 sudsuda@ses-th.com
- BE PROMT TRADING & SERVICES LTD**
 Bangkok 10100-07
 Phone: +662 / 22 54 201
 Fax: +662 / 22 54 200
 beprompt_b@yahoo.com
- **Turkey**
Kardeş Elektrik Sanayi ve Ticaret A.Ş.
 343295 Besyol-Sefaköy / Istanbul
 Phone: +90 212 / 62 49 204
 Fax: +90 212 / 59 24 810
 info@kardeselektrik.com.tr
- **Ukraine**
OOO KLAUKE RUS
 125009 Moscow
 Phone: +7 495 / 935 89 71
 Fax: +7 495 / 935 89 62
 sletkomtseva@klauke.textron.com
- **United Arab Emirates**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia 
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- TOMAD INTERNATIONAL INC.**
 Beirut 
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info
- **Uruguay**
JAIME LARRABE
 Penalolen, Chile
 Phone: +562 / 279 0139
 Fax: +562 / 279 0139
 jaimelarrabe@yahoo.es
- **Venezuela**
RB TOOLS
 Caracas 1060
 Phone: +58 212 9927491
 Fax: +58 212 264 4412
 rbtools@movistar.net.ve
- **Vietnam**
ELESCO ASIA PTE LTD
 349562 Singapore
 Phone: +65 / 67 41 42 48
 Fax: +65 67 77 36 86
 sales18@elesco.comsg
- **Yemen**
NISSAD DEVELOPMENT CO. LTD.
 1306 Nicosia 
 Phone: +357 22 / 76 50 14
 Fax: +357 22 / 76 15 35
 info@nissad.com
- TOMAD INTERNATIONAL INC.**
 Beirut 
 Phone: +961 1 / 88 49 44
 Fax: +961 1 / 88 49 29
 vahe@tomad.info



Electrical connection systems

■ Copper tubular cable lugs and connectors	24
Tubular cable lugs	26
Angle tubular cable lugs	30
Connector	34
Insulated tubular cable lugs and connectors	38
Tubular cable lugs and connectors for fine stranded conductors	41
Tubular cable lugs and compression joints for solid conductors	45
tubular cable lugs for switchgear connections	48
Tool application chart	49
■ Tubular cable lugs and connectors - nickel, stainless steel	56
Stainless steel tubular cable lugs and connectors	58
Tubular cable lugs and connectors - nickel	60
Tool application chart	63
■ Copper compression cable lugs and connectors to DIN	64
Compression cable lugs DIN 46235	66
Angle compression cable lugs	68
Compression cable lugs, special type	71
Compression joints DIN 46267, part 1 and similar versions	73
Tool application chart	78
■ Terminals, connectors and pin terminals to DIN - Cu	80
Solderless terminals DIN 46234	82
Insulated solderless terminals	84
Solderless terminals, fork and pin type	86
Insulated solderless terminals for meter connections	88
Solderless connectors DIN 46341, part 1	89
Tool application chart	91
■ Sleeves for compacted conductors and sector-shaped conductors, Cu	94
■ Aluminium compression cable lugs and connectors to DIN	100
Compression cable lugs to DIN 46329 and similar versions - Al	102
Compression joints DIN 46267, part 2 and similar versions - Al	104
Reduction compression joints - Al	106
Compression joints, full tension - Al	108
Compression cable lugs and connectors for Al/St cables DIN EN 50182 - Al	109
Tool application chart	112
■ Aluminium/copper compression cable lugs and connectors	116
Compression cable lugs - Al/Cu	118
Compression joints - Al/Cu	120
■ Clamps and screw connectors	124
Punched cable lugs - Cu	126
Screw connectors with soldering hole - CuZn	127
Parallel groove clamps for tap off connections - Cu	128
C and H-shaped clamps	130
Screw connectors for street lighting - CuZn	132
Screw connectors, high resistant aluminium alloy	133
Compact tap connectors, high resistant aluminium alloy	138
Tool application chart	141

■ Cable end sleeves	144
Cable end-sleeves to DIN 46228, part 1 and part 2	146
Insulated cable end-sleeves to DIN 46228, part 4 and similar versions	149
Insulated cable end-sleeves for short circuit resistant conductors	154
Insulated twin cable end-sleeves	154
Insulated cable end-sleeves, strips and tapes	155
Tool application chart	157
■ Cable connections, insulated and non insulated	164
Insulated terminals	166
Non-insulated receptacles	175
Flexible connectors	178
Tool application chart	184
■ Assortments	186
Assortment boxes with tubular und compression cable lugs	188
Pocket boxes with cable end-sleeves	189
Pocket boxes with insulated cable end-sleeves	190
Assortment boxes with cable end-sleeves	194
Assortment boxes with insulated cable end-sleeves	195
Assortment boxes with insulated terminals	198

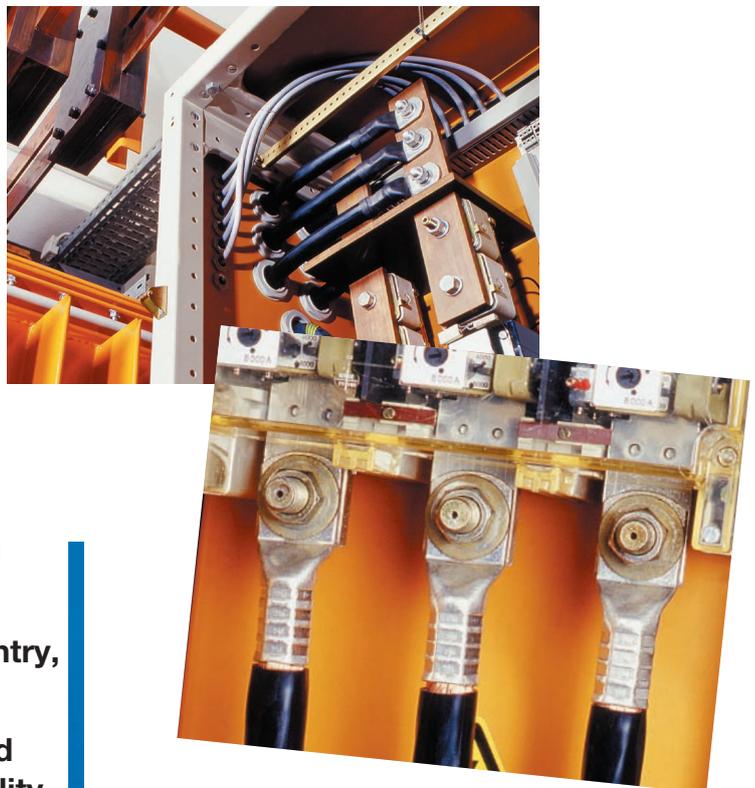


Safe connections to Klauke standards.

Copper tubular cable lugs and connectors for all applications.

Safe electrical connections are crucial. Power outages caused by faulty cable connections can cause severe damages. The power supply is interrupted. Production comes to a stand-still. Traffic is disrupted.

Tubular cable lugs and connectors from Klauke meet the highest quality requirements and satisfy international standards. Traditional applications are power supply, transportation, trade and industry and building installation technology. We are certified for German railways. We also develop and produce tailor made solutions.



- Extensive product range for low and medium-voltage applications.
- Distinct phase for easy conductor entry, burr-free edges.
- Consistent precision, high safety and rating properties thanks to high-quality pure electrolytic copper.
- Klauke coding system with manufacturer's identification, nominal cross-section and hole.

Klauke tubular cable lugs are suitable for practically every application that uses copper conductors.



► **Make sure, when using Klauke connecting materials, that you always crimp towards the cable.**

■ Connections with system *for every application.*



- ▶ Products to Klauke standards in various designs and shapes.
- ▶ Compliance with international standards, including IEC and UL.
- ▶ Solutions for cables with compacted round conductors, cables with sector-shaped conductors and to suit individual requirements.
- ▶ Plus all corresponding manual and hydraulic crimping tools.

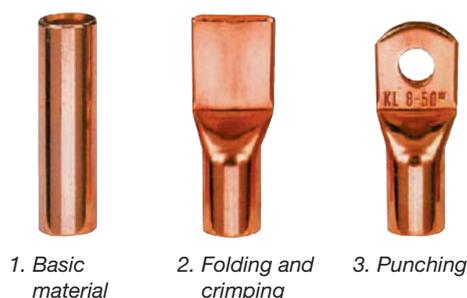


Benefits:

- ▶ The right products for every installation scenario.
- ▶ **Highest flexibility for connecting cables.**
- ▶ Standards-compliance permits international application.
- ▶ **A single source for everything** – from cable lugs to tools.
- ▶ Guarantees the correct tools for professional electrical installations.

▶ *More on Page 206.*

■ *Pure material, special processing.*



1. Basic material

2. Folding and crimping

3. Punching

- ▶ Klauke tubular cable lugs are made from quality E-Cu tubes. All suppliers are certified.
- ▶ Defined, unique material properties by annealing cable lugs.

Benefits:

- ▶ Optimised conductivity, enhanced safety and high cable lug rating thanks to high quality material.
- ▶ The **annealing of cable lugs during production** sets Klauke products apart and guarantees **outstanding processing properties** such as a defined hardness and tooling operations with **reduced effort and less wear of tools.**



4. Annealing

5. Tinned end product

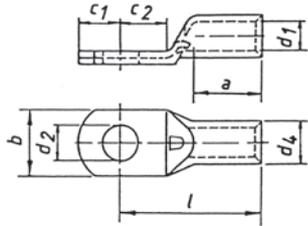
■ *Hold even under strong and severe vibrations.*

- ▶ Consistent material thickness, precise diameters and accurate fit mean optimised processing and ultimate reliability.
- ▶ Tested to DIN EN 61373 Class 1B "**Railway applications**".

Benefits:

- ▶ With professional installation of the correct types, optimised stability even with mechanically stressed or strong vibrating connections.
- ▶ Less repair and maintenance.
- ▶ Safe connections even under high load, e.g. in public transport services.





■ **Tubular cable lugs, copper 0.75 - 6 mm²**
standard type

■ for fine stranded conductors

Characteristics

- With inspection hole
- Annealed material optimises material and crimping properties
- Flat contact surface and precise screw ends for simple cable insertion

Material

■ Copper to EN 13600

Surface

■ tin plated

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	c2	l		
0.75	M3	91R3	1.3	6	6.0	3.2	2.8	3.25	4.0	12	0.060	100
	M4	91R4	1.3	6	6.5	4.3	2.8	4.00	5.0	13	0.060	100
	M5	91R5	1.3	6	7.5	5.3	2.8	4.75	5.5	14	0.060	100
1.5	M3	92R3	1.8	6	6.5	3.2	3.3	3.25	4.0	12	0.080	100
	M4	92R4	1.8	6	6.5	4.3	3.3	4.00	5.0	13	0.080	100
	M5	92R5	1.8	6	7.5	5.3	3.3	4.75	5.5	14	0.080	100
	M6	92R6	1.8	6	9.0	6.5	3.3	6.50	6.5	16	0.090	100
2.5	M3	93R3	2.3	6	7.5	3.2	4.2	3.25	4.0	12	0.120	100
	M4	93R4	2.3	6	7.5	4.3	4.2	4.00	5.0	13	0.120	100
	M5	93R5	2.3	6	8.5	5.3	4.2	4.75	5.5	14	0.130	100
	M6	93R6	2.3	6	9.5	6.5	4.2	6.50	6.5	16	0.150	100
	M8	93R8	2.3	6	13.0	8.5	4.2	7.75	9.5	20	0.180	100
4	M4	94R4	3.0	8	8.5	4.3	5.0	4.75	5.5	18	0.210	100
	M5	94R5	3.0	8	9.0	5.3	5.0	4.75	6.0	18	0.213	100
	M6	94R6	3.0	8	10.0	6.5	5.0	6.50	6.5	19	0.220	100
	M8	94R8	3.0	8	13.0	8.5	5.0	8.50	9.5	22	0.280	100
6	M4	95R4	4.0	9	9.5	4.3	6.0	5.00	5.5	18	0.290	100
	M5	95R5	4.0	9	9.5	5.3	6.0	6.00	6.0	19	0.300	100
	M6	95R6	4.0	9	10.0	6.5	6.0	7.00	6.5	19	0.300	100
	M8	95R8	4.0	9	14.0	8.5	6.0	8.50	9.5	22	0.320	100

► Tool: see chart page 49

■ Tubular cable lugs, copper 0.75 - 16 mm²
fork type



- for fine stranded conductors
- Rapid assemble through direct screw-mounting

Characteristics

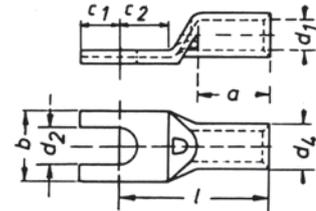
- With inspection hole
- Annealed material optimises material and crimping properties
- Flat contact surface and precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated



Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs.	
			d1	a	b	d2	d4	c1	c2	l	~ kg	pcs.
0.75	M3	91C3	1.3	6	6.0	3.2	2.8	3.25	4.0	12	0.06	100
	M4	91C4	1.3	6	6.5	4.3	2.8	4.00	5.0	13	0.05	100
	M5	91C5	1.3	6	7.5	5.3	2.8	4.75	5.5	14	0.06	100
1.5	M3	92C3	1.8	6	6.5	3.2	3.3	3.25	4.0	12	0.07	100
	M4	92C4	1.8	6	6.5	4.3	3.3	4.00	5.0	13	0.07	100
	M5	92C5	1.8	6	7.5	5.3	3.3	4.75	5.5	14	0.07	100
	M6	92C6	1.8	6	9.0	6.5	3.3	6.50	6.5	16	0.08	100
2.5	M3	93C3	2.3	6	7.5	3.2	4.2	3.25	4.0	12	0.12	100
	M4	93C4	2.3	6	7.5	4.3	4.2	4.00	5.0	13	0.11	100
	M5	93C5	2.3	6	8.5	5.3	4.2	4.75	5.5	14	0.12	100
	M6	93C6	2.3	6	9.5	6.5	4.2	6.50	6.5	16	0.10	100
4	M4	94C4	3.0	8	8.5	4.3	5.0	4.75	5.5	17	0.19	100
	M5	94C5	3.0	8	9.0	5.3	5.0	4.75	6.0	17	0.19	100
	M6	94C6	3.0	8	10.0	6.5	5.0	6.50	6.5	19	0.21	100
	M8	94C8	3.0	8	13.0	8.5	5.0	8.50	9.5	22	0.24	100
6	M4	95C4	4.0	9	9.5	4.3	6.0	5.00	5.5	18	0.27	100
	M5	95C5	4.0	9	9.5	5.3	6.0	6.00	6.0	19	0.32	100
	M6	95C6	4.0	9	10.0	6.5	6.0	7.00	6.5	19	0.27	100
	M8	95C8	4.0	9	14.0	8.5	6.0	8.50	9.0	22	0.31	100
10	M5	96C5	4.5	10	12.0	5.5	7.0	6.50	7.5	22	0.45	100
	M6	96C6	4.5	10	12.0	6.5	7.0	6.50	7.5	22	0.41	100
	M8	96C8	4.5	10	15.0	8.5	7.0	10.00	10.0	25	0.52	100
16	M5	97C5	5.5	13	12.0	5.5	8.5	5.50	6.5	26	0.81	100
	M6	97C6	5.5	13	12.0	6.5	8.5	6.25	7.5	27	0.81	100
	M8	97C8	5.5	13	15.0	8.5	8.5	8.50	9.5	29	0.90	100

► Tool: see chart page 49



■ Tubular cable lugs, copper 6 - 400 mm²
standard type

- For stranded round shaped conductors e.g. VDE 0295 Class 2
- For pre-rounded sector shaped conductors

Characteristics

- Annealed material optimises material and crimping properties
- Flat contact surface and precise screw ends for simple cable insertion

Material

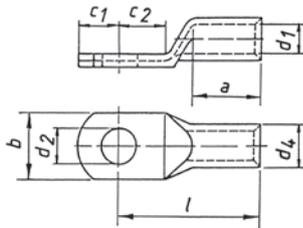
- Copper to EN 13600

Surface

- tin plated

Order info

- Also available with inspection hole, part number with "ms"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs.		
			d1	a	b	d2	d4	c1	c2	l	~ kg	pcs.	
6	M5	1R5	3.5	9	10	5.5	6.5	6.5	6.5	7.5	21	0.50	100
	M6	1R6	3.5	9	12	6.5	6.5	6.5	6.5	7.5	21	0.47	100
	M8	1R8	3.5	9	15	8.5	6.5	10.00	10.0	10.0	23	0.54	100
	M10	1R10	3.5	9	17	10.5	6.5	12.00	12.0	12.0	25	0.59	100
	M12	1R12	3.5	9	19	13.0	6.5	13.00	13.0	13.0	28	0.63	100
10	M5	2R5	4.5	10	12	5.5	7.0	6.5	6.5	7.5	22	0.50	100
	M6	2R6	4.5	10	12	6.5	7.0	6.5	6.5	7.5	22	0.49	100
	M8	2R8	4.5	10	15	8.5	7.0	10.00	10.0	10.0	25	0.58	100
	M10	2R10	4.5	10	17	10.5	7.0	12.00	12.0	12.0	27	0.62	100
	M12	2R12	4.5	10	19	13.0	7.0	13.00	13.0	13.0	29	0.64	100
16	M5	3R5	5.5	13	12	5.5	8.5	5.5	6.5	6.5	26	0.84	100
	M6	3R6	5.5	13	12	6.5	8.5	6.25	7.5	7.5	27	0.86	100
	M8	3R8	5.5	13	15	8.5	8.5	8.5	9.5	9.5	29	0.93	100
	M10	3R10	5.5	13	17	10.5	8.5	10.50	11.5	11.5	31	0.99	100
	M12	3R12	5.5	13	19	13.0	8.5	12.00	13.0	13.0	33	1.02	100
25	M5	4R5	7.0	15	14	5.5	10.0	7.5	7.5	7.5	30	1.22	25
	M6	4R6	7.0	15	14	6.5	10.0	7.5	7.5	7.5	30	1.20	100
	M8	4R8	7.0	15	16	8.5	10.0	10.00	10.0	10.0	32	1.31	100
	M10	4R10	7.0	15	18	10.5	10.0	12.00	12.0	12.0	34	1.57	100
	M12	4R12	7.0	15	19	13.0	10.0	13.00	13.0	13.0	35	1.39	25
	M14	4R14	7.0	15	21	15.0	10.0	14.50	14.5	14.5	38	1.49	25
35	M6	5R6	8.5	17	17	6.5	12.0	7.5	7.5	7.5	32	1.85	100
	M8	5R8	8.5	17	17	8.5	12.0	10.00	10.0	10.0	34	2.00	100
	M10	5R10	8.5	17	19	10.5	12.0	12.00	12.0	12.0	37	2.13	100
	M12	5R12	8.5	17	21	13.0	12.0	13.00	13.0	13.0	38	2.12	100
	M14	5R14	8.5	17	21	15.0	12.0	14.50	14.5	14.5	40	2.18	25
	M16	5R16	8.5	17	26	17.0	12.0	16.00	16.0	16.0	42	2.24	25
50	M6	6R6	10.0	19	20	6.5	14.0	10.00	10.0	10.0	37	3.00	25
	M8	6R8	10.0	19	20	8.5	14.0	10.00	10.0	10.0	37	2.93	50
	M10	6R10	10.0	19	20	10.5	14.0	12.00	12.0	12.0	39	3.08	50
	M12	6R12	10.0	19	23	13.0	14.0	13.00	13.0	13.0	43	3.23	50
	M14	6R14	10.0	19	23	15.0	14.0	14.50	14.5	14.5	45	3.32	25
	M16	6R16	10.0	19	28	17.0	14.0	16.00	16.0	16.0	46	3.38	25
	M20	6R20	10.0	19	30	21.0	14.0	19.00	19.0	19.0	48	3.46	25

■ **Tubular cable lugs, copper 6 - 400 mm²**

standard type

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	c2	l		
70	M6	7R6	12.0	21	23	6.5	16.5	10.00	10.0	43	4.49	25
	M8	7R8	12.0	21	23	8.5	16.5	10.00	10.0	43	4.38	50
	M10	7R10	12.0	21	23	10.5	16.5	12.00	12.0	44	4.54	50
	M12	7R12	12.0	21	23	13.0	16.5	13.00	13.0	46	4.63	50
	M14	7R14	12.0	21	23	15.0	16.5	14.50	14.5	48	4.76	25
	M16	7R16	12.0	21	28	17.0	16.5	16.00	16.0	50	4.24	25
	M20	7R20	12.0	21	30	21.0	16.5	19.00	19.0	53	5.09	25
95	M8	8R8	13.5	25	26	8.5	18.0	12.0	12.0	48	5.44	25
	M10	8R10	13.5	25	26	10.5	18.0	12.0	12.0	48	5.40	50
	M12	8R12	13.5	25	26	13.0	18.0	13.0	13.0	49	5.56	50
	M14	8R14	13.5	25	26	15.0	18.0	14.5	14.5	51	5.62	25
	M16	8R16	13.5	25	28	17.0	18.0	16.0	16.0	54	5.82	50
	M20	8R20	13.5	25	36	21.0	18.0	22.0	22.0	60	6.71	25
120	M8	9R8	15.0	26	28	8.5	19.5	14.0	14.0	51	6.72	25
	M10	9R10	15.0	26	28	10.5	19.5	14.0	14.0	51	6.57	50
	M12	9R12	15.0	26	28	13.0	19.5	14.0	14.0	51	6.38	50
	M14	9R14	15.0	26	28	15.0	19.5	15.0	15.0	52	6.45	25
	M16	9R16	15.0	26	30	17.0	19.5	16.0	16.0	54	6.51	50
	M20	9R20	15.0	26	36	21.0	19.5	22.0	22.0	63	7.74	25
150	M8	10R8	16.5	30	31	8.5	21.0	14.0	14.0	56	7.78	10
	M10	10R10	16.5	30	31	10.5	21.0	14.0	14.0	56	7.62	10
	M12	10R12	16.5	30	31	13.0	21.0	15.0	15.0	57	7.73	25
	M14	10R14	16.5	30	31	15.0	21.0	15.0	15.0	57	7.64	10
	M16	10R16	16.5	30	31	17.0	21.0	16.0	16.0	58	7.53	10
	M20	10R20	16.5	30	36	21.0	21.0	22.0	22.0	66	8.80	10
185	M10	11R10	19.0	30	35	10.5	24.0	18.0	18.0	65	11.75	10
	M12	11R12	19.0	30	35	13.0	24.0	18.0	18.0	65	11.82	10
	M14	11R14	19.0	30	35	15.0	24.0	18.0	18.0	65	11.39	10
	M16	11R16	19.0	30	35	17.0	24.0	18.0	18.0	65	11.24	25
	M20	11R20	19.0	30	39	21.0	24.0	22.0	22.0	69	12.00	10
240	M10	12R10	21.0	35	39	10.5	26.0	21.5	19.0	72	14.72	10
	M12	12R12	21.0	35	39	13.0	26.0	21.5	19.0	72	14.55	10
	M14	12R14	21.0	35	39	15.0	26.0	21.5	19.0	72	14.24	10
	M16	12R16	21.0	35	39	17.0	26.0	21.5	19.0	72	14.09	25
	M20	12R20	21.0	35	39	21.0	26.0	21.5	19.0	72	13.60	10
300	M12	13R12	23.5	44	43	13.0	29.5	24.0	24.0	87	23.33	5
	M14	13R14	23.5	44	43	15.0	29.5	24.0	24.0	87	23.14	5
	M16	13R16	23.5	44	43	17.0	29.5	24.0	24.0	87	22.74	5
	M20	13R20	23.5	44	43	21.0	29.5	24.0	24.0	87	22.19	5
400	M12	14R12	27.0	44	49	13.0	34.0	24.0	24.0	90	32.41	5
	M14	14R14	27.0	44	49	15.0	34.0	24.0	24.0	90	32.24	5
	M16	14R16	27.0	44	49	17.0	34.0	24.0	24.0	90	31.98	5
	M20	14R20	27.0	44	49	21.0	34.0	24.0	24.0	90	31.41	5

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

► Tool: see chart page 49



**Angle tubular cable lugs, copper, 6 - 400 mm²
90° angle**
standard type

- For stranded round shaped conductors e.g. VDE 0295 Class 2
- For pre-rounded sector shaped conductors

Characteristics

- Annealed material optimises material and crimping properties
- Flat contact surface by special angle punching technology
- Precise screw ends for simple cable insertion

Material

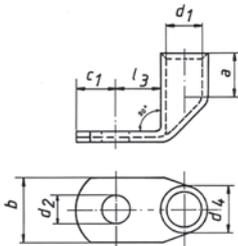
- Copper to EN 13600

Surface

- tin plated

Order info

- Also available with inspection hole, part number with "ms"



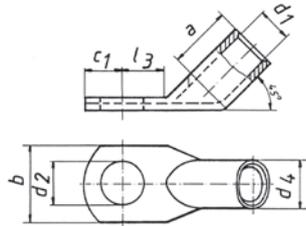
Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm							Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	l3		
6	M5	41R5	3.5	9	10	5.5	6.5	7.5	9	0.59	50
	M6	41R6	3.5	9	12	6.5	6.5	7.5	10	0.58	50
	M8	41R8	3.5	9	14	8.5	6.5	10.0	13	0.61	50
	M10	41R10	3.5	9	17	10.5	6.5	12.0	15	0.65	50
	M12	41R12	3.5	9	19	13.0	6.5	13.0	17	0.62	50
10	M5	42R5	4.5	10	12	5.5	7.0	6.5	10	0.57	50
	M6	42R6	4.5	10	12	6.5	7.0	6.5	10	0.57	50
	M8	42R8	4.5	10	15	8.5	7.0	10.0	13	0.63	50
	M10	42R10	4.5	10	17	10.5	7.0	12.0	15	0.66	50
	M12	42R12	4.5	10	19	13.0	7.0	13.0	18	0.81	50
16	M5	43R5	5.5	13	12	5.5	8.5	7.5	10	1.01	50
	M6	43R6	5.5	13	12	6.5	8.5	7.5	11	1.01	50
	M8	43R8	5.5	13	15	8.5	8.5	10.0	13	1.08	50
	M10	43R10	5.5	13	17	10.5	8.5	12.0	15	1.09	50
	M12	43R12	5.5	13	19	13.0	8.5	13.0	18	1.15	50
25	M5	44R5	7.0	15	14	5.5	10.0	7.5	11	1.40	25
	M6	44R6	7.0	15	14	6.5	10.0	7.5	11	1.32	25
	M8	44R8	7.0	15	16	8.5	10.0	10.0	13	1.44	25
	M10	44R10	7.0	15	18	10.5	10.0	12.0	15	1.49	25
	M12	44R12	7.0	15	19	13.0	10.0	13.0	18	1.44	25
	M14	44R14	7.0	15	21	15.0	10.0	14.5	20	1.55	25
35	M6	45R6	8.5	17	17	6.5	12.0	7.5	11	2.05	25
	M8	45R8	8.5	17	17	8.5	12.0	10.0	13	2.20	25
	M10	45R10	8.5	17	19	10.5	12.0	12.0	15	2.28	25
	M12	45R12	8.5	17	21	13.0	12.0	13.0	18	2.38	25
	M14	45R14	8.5	17	21	15.0	12.0	14.5	20	2.41	25
	M16	45R16	8.5	17	26	17.0	12.0	16.0	22	2.40	25
50	M6	46R6	10.0	19	20	6.5	14.0	10.0	13	3.34	25
	M8	46R8	10.0	19	20	8.5	14.0	10.0	13	3.28	25
	M10	46R10	10.0	19	20	10.5	14.0	12.0	16	3.47	25
	M12	46R12	10.0	19	23	13.0	14.0	13.0	18	3.42	25
	M14	46R14	10.0	19	23	15.0	14.0	14.5	20	3.55	25
	M16	46R16	10.0	19	28	17.0	14.0	16.0	22	3.58	25
	M20	46R20	10.0	19	30	21.0	14.0	19.0	24	3.15	25

■ **Angle tubular cable lugs, copper, 6 - 400 mm²**
90° angle
 standard type

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm							Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	l3		
70	M6	47R6	12.0	21	23	6.5	16.5	10.0	13	4.90	25
	M8	47R8	12.0	21	23	8.5	16.5	10.0	14	4.80	25
	M10	47R10	12.0	21	23	10.5	16.5	12.0	16	4.88	25
	M12	47R12	12.0	21	23	13.0	16.5	13.0	18	4.99	25
	M14	47R14	12.0	21	23	15.0	16.5	14.5	20	5.38	25
	M16	47R16	12.0	21	28	17.0	16.5	16.0	22	5.35	25
	M20	47R20	12.0	21	30	21.0	16.5	19.0	24	5.30	25
95	M8	48R8	13.5	25	26	8.5	18.0	12.0	14	5.89	25
	M10	48R10	13.5	25	26	10.5	18.0	12.0	17	5.88	25
	M12	48R12	13.5	25	26	13.0	18.0	13.0	18	5.93	25
	M14	48R14	13.5	25	26	15.0	18.0	14.5	20	6.03	25
	M16	48R16	13.5	25	28	17.0	18.0	16.0	22	6.17	25
	M20	48R20	13.5	25	36	21.0	18.0	22.0	24	6.42	25
120	M8	49R8	15.0	26	28	8.5	19.5	14.0	16	7.26	10
	M10	49R10	15.0	26	28	10.5	19.5	14.0	17	7.30	10
	M12	49R12	15.0	26	28	13.0	19.5	14.0	18	7.19	10
	M14	49R14	15.0	26	28	15.0	19.5	15.0	20	7.30	10
	M16	49R16	15.0	26	30	17.0	19.5	16.0	22	7.35	10
	M20	49R20	15.0	26	36	21.0	19.5	22.0	24	7.60	10
150	M8	50R8	16.5	30	31	8.5	21.0	14.0	16	8.41	10
	M10	50R10	16.5	30	31	10.5	21.0	14.0	17	8.27	10
	M12	50R12	16.5	30	31	13.0	21.0	15.0	18	8.34	10
	M14	50R14	16.5	30	31	15.0	21.0	15.0	20	8.52	10
	M16	50R16	16.5	30	31	17.0	21.0	16.0	22	8.62	10
	M20	50R20	16.5	30	36	21.0	21.0	22.0	24	9.10	10
185	M10	51R10	19.0	30	35	10.5	24.0	18.0	22	12.17	10
	M12	51R12	19.0	30	35	13.0	24.0	18.0	22	11.97	10
	M14	51R14	19.0	30	35	15.0	24.0	18.0	22	11.77	10
	M16	51R16	19.0	30	35	17.0	24.0	18.0	22	11.53	10
	M20	51R20	19.0	30	39	21.0	24.0	22.0	24	12.00	10
240	M10	52R10	21.0	35	39	10.5	26.0	21.5	22	15.60	10
	M12	52R12	21.0	35	39	13.0	26.0	21.5	22	15.60	10
	M14	52R14	21.0	35	39	15.0	26.0	21.5	22	15.41	10
	M16	52R16	21.0	35	39	17.0	26.0	21.5	22	15.18	10
	M20	52R20	21.0	35	39	21.0	26.0	21.5	24	14.80	10
300	M12	53R12	23.5	44	43	13.0	29.5	24.0	24	23.60	5
	M14	53R14	23.5	44	43	15.0	29.5	24.0	24	23.40	5
	M16	53R16	23.5	44	43	17.0	29.5	24.0	24	20.99	5
	M20	53R20	23.5	44	43	21.0	29.5	24.0	24	22.70	5
400	M12	54R12	27.0	44	49	13.0	34.0	24.0	24	32.53	5
	M14	54R14	27.0	44	49	15.0	34.0	24.0	24	33.40	5
	M16	54R16	27.0	44	49	17.0	34.0	24.0	24	32.60	5
	M20	54R20	27.0	44	49	21.0	34.0	24.0	24	31.80	5

❗ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 49



**Angle tubular cable lugs, copper, 6 - 400 mm²
45° angle**
standard type

- For stranded round shaped conductors e.g. VDE 0295 Class 2
- For pre-rounded sector shaped conductors

Characteristics

- Annealed material optimises material and crimping properties
- Flat contact surface by special angle punching technology
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated

Order info

- Also available with inspection hole, part number with "ms"

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm							Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	l3		
6	M5	41R545	3.5	9	10	5.5	6.5	7.5	9	0.60	50
	M6	41R645	3.5	9	12	6.5	6.5	7.5	10	0.58	50
	M8	41R845	3.5	9	14	8.5	6.5	10.0	13	0.68	50
	M10	41R1045	3.5	9	17	10.5	6.5	12.0	15	0.70	50
	M12	41R1245	3.5	9	19	13.0	6.5	13.0	17	0.70	50
10	M5	42R545	4.5	10	12	5.5	7.0	6.5	10	0.57	50
	M6	42R645	4.5	10	12	6.5	7.0	6.5	10	0.57	50
	M8	42R845	4.5	10	15	8.5	7.0	10.0	13	0.63	50
	M10	42R1045	4.5	10	17	10.5	7.0	12.0	15	0.68	50
	M12	42R1245	4.5	10	19	13.0	7.0	13.0	18	0.68	50
16	M5	43R545	5.5	13	12	5.5	8.5	7.5	10	1.01	50
	M6	43R645	5.5	13	12	6.5	8.5	7.5	11	1.06	50
	M8	43R845	5.5	13	15	8.5	8.5	10.0	13	1.15	50
	M10	43R1045	5.5	13	17	10.5	8.5	12.0	15	1.09	50
	M12	43R1245	5.5	13	19	13.0	8.5	13.0	18	1.15	50
25	M5	44R545	7.0	15	14	5.5	10.0	7.5	11	1.40	25
	M6	44R645	7.0	15	14	6.5	10.0	7.5	11	1.32	25
	M8	44R845	7.0	15	16	8.5	10.0	10.0	13	1.44	25
	M10	44R1045	7.0	15	18	10.5	10.0	12.0	15	1.49	25
	M12	44R1245	7.0	15	19	13.0	10.0	13.0	18	1.44	25
	M14	44R1445	7.0	15	21	15.0	10.0	14.5	20	1.55	25
35	M6	45R645	8.5	17	17	6.5	12.0	7.5	11	2.05	25
	M8	45R845	8.5	17	17	8.5	12.0	10.0	13	2.20	25
	M10	45R1045	8.5	17	19	10.5	12.0	12.0	15	2.28	25
	M12	45R1245	8.5	17	21	13.0	12.0	13.0	18	2.38	25
	M14	45R1445	8.5	17	21	15.0	12.0	14.5	20	2.41	25
	M16	45R1645	8.5	17	26	17.0	12.0	16.0	22	2.40	25
50	M6	46R645	10.0	19	20	6.5	14.0	10.0	13	3.43	25
	M8	46R845	10.0	19	20	8.5	14.0	10.0	13	3.28	25
	M10	46R1045	10.0	19	20	10.5	14.0	12.0	16	3.47	25
	M12	46R1245	10.0	19	23	13.0	14.0	13.0	18	3.42	25
	M14	46R1445	10.0	19	23	15.0	14.0	14.5	20	3.65	25
	M16	46R1645	10.0	19	28	17.0	14.0	16.0	22	3.76	25
	M20	46R2045	10.0	19	30	21.0	14.0	19.0	24	3.30	25

■ **Angle tubular cable lugs, copper, 6 - 400 mm²**
45° angle
 standard type

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm							Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	l3		
70	M6	47R645	12.0	21	23	6.5	16.5	10.0	13	5.06	25
	M8	47R845	12.0	21	23	8.5	16.5	10.0	14	5.06	25
	M10	47R1045	12.0	21	23	10.5	16.5	12.0	16	5.25	25
	M12	47R1245	12.0	21	23	13.0	16.5	13.0	18	5.30	25
	M14	47R1445	12.0	21	23	15.0	16.5	14.5	20	5.60	25
	M16	47R1645	12.0	21	28	17.0	16.5	16.0	22	5.61	25
	M20	47R2045	12.0	21	30	21.0	16.5	19.0	24	5.60	25
95	M8	48R845	13.5	25	26	8.5	18.0	12.0	14	6.19	25
	M10	48R1045	13.5	25	26	10.5	18.0	12.0	17	5.70	25
	M12	48R1245	13.5	25	26	13.0	18.0	13.0	18	6.67	25
	M14	48R1445	13.5	25	26	15.0	18.0	14.5	20	6.60	25
	M16	48R1645	13.5	25	28	17.0	18.0	16.0	22	6.78	25
	M20	48R2045	13.5	25	36	21.0	18.0	22.0	24	6.80	25
120	M8	49R845	15.0	26	28	8.5	19.5	14.0	16	7.92	10
	M10	49R1045	15.0	26	28	10.5	19.5	14.0	17	7.99	10
	M12	49R1245	15.0	26	28	13.0	19.5	14.0	18	7.96	10
	M14	49R1445	15.0	26	28	15.0	19.5	15.0	20	7.94	10
	M16	49R1645	15.0	26	30	17.0	19.5	16.0	22	8.26	10
	M20	49R2045	15.0	26	36	21.0	19.5	22.0	24	8.20	10
150	M8	50R845	16.5	30	31	8.5	21.0	14.0	16	9.00	10
	M10	50R1045	16.5	30	31	10.5	21.0	14.0	17	9.15	10
	M12	50R1245	16.5	30	31	13.0	21.0	15.0	18	8.75	10
	M14	50R1445	16.5	30	31	15.0	21.0	15.0	20	9.20	10
	M16	50R1645	16.5	30	31	17.0	21.0	16.0	22	9.22	10
	M20	50R2045	16.5	30	36	21.0	21.0	22.0	24	9.26	10
185	M10	51R1045	19.0	30	35	10.5	24.0	18.0	22	13.30	10
	M12	51R1245	19.0	30	35	13.0	24.0	18.0	22	13.32	10
	M14	51R1445	19.0	30	35	15.0	24.0	18.0	22	13.40	10
	M16	51R1645	19.0	30	35	17.0	24.0	18.0	22	12.80	10
	M20	51R2045	19.0	30	39	21.0	24.0	22.0	24	13.10	10
240	M10	52R1045	21.0	35	39	10.5	26.0	21.5	22	16.28	10
	M12	52R1245	21.0	35	39	13.0	26.0	21.5	22	16.80	10
	M14	52R1445	21.0	35	39	15.0	26.0	21.5	22	16.40	10
	M16	52R1645	21.0	35	39	17.0	26.0	21.5	22	16.10	10
	M20	52R2045	21.0	35	39	21.0	26.0	21.5	24	16.10	10
300	M12	53R1245	23.5	44	43	13.0	29.5	24.0	24	24.08	5
	M14	53R1445	23.5	44	43	15.0	29.5	24.0	24	24.20	5
	M16	53R1645	23.5	44	43	17.0	29.5	24.0	24	23.23	5
	M20	53R2045	23.5	44	43	21.0	29.5	24.0	24	23.50	5
400	M12	54R1245	27.0	44	49	13.0	34.0	24.0	24	34.00	5
	M14	54R1445	27.0	44	49	15.0	34.0	24.0	24	33.40	5
	M16	54R1645	27.0	44	49	17.0	34.0	24.0	24	34.28	5
	M20	54R2045	27.0	44	49	21.0	34.0	24.0	24	31.80	5

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

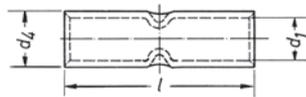
▶ Tool: see chart page 49



Butt-connector, copper 0.75 - 400 mm²
standard type



- For stranded conductors e.g. VDE 0295 Class 2
- With buttmarks for precise cable insertion



Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated

Order info

- Also available without wirestop, part number with "om"

Nominal cross section mm ²	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
		d1	d4	l		
0.75	17R	1.3	2.8	20	0.09	100
1.5	18R	1.8	3.3	25	0.12	100
2.5	19R	2.3	4.2	25	0.20	100
4	20R	3.0	5.0	25	0.26	100
6	21R	3.5	6.5	25	0.50	100
10	22R	4.5	7.0	30	0.72	100
16	23R	5.5	8.5	35	1.00	100
25	24R	7.0	10.0	40	1.41	50
35	25R	8.5	12.0	45	2.24	50
50	26R	10.0	14.0	50	3.36	50
70	27R	12.0	16.5	55	4.87	50
95	28R	13.5	18.0	60	5.91	25
120	29R	15.0	19.5	65	7.00	25
150	30R	16.5	21.0	70	8.12	10
185	31R	19.0	24.0	75	10.06	10
240	32R	21.0	26.0	85	13.82	10
300	33R	23.5	29.5	100	21.94	5
400	34R	27.0	34.0	100	29.65	5

i Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 49

■ **Parallel connector, copper 1.5 - 300 mm²**
standard type



- For connecting different cable cross-sections

Characteristics

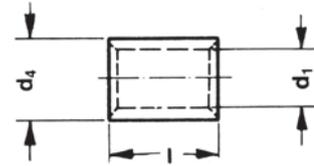
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated



Total Cross-section mm ²	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
		d1	d4	l		
1.5	148R	1.8	3.3	5	0.03	100
2.5	149R	2.3	4.2	5	0.04	100
4	150R	3.0	5.0	7	0.08	100
6	151R	4.0	6.0	7	0.09	100
10	152R	4.5	7.0	9	0.17	100
16	153R	5.5	8.5	10	0.28	100
25	154R	7.0	10.0	13	0.44	100
35	155R	8.5	12.0	16	0.78	100
50	156R	10.0	14.0	19	1.22	100
70	157R	12.0	16.5	19	1.62	50
95	158R	13.5	18.0	20	1.90	50
120	159R	15.0	19.5	22	2.28	50
150	160R	16.5	21.0	26	3.00	50
185	161R	19.0	24.0	30	4.37	50
240	162R	21.0	26.0	32	5.30	25
300	163R	23.5	29.5	36	8.05	25

► Tool: see chart page 49



T-connectors, copper 1.5 - 240 mm²
standard type

- For stranded conductors e.g. VDE 0295 Class 2
- For cable tap conductors

Characteristics

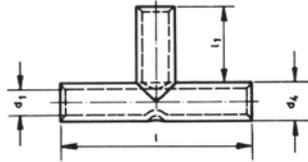
Annealed material optimises material and crimping properties
Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

tin plated



Nominal cross section mm ²	Part No.	Dimension mm				Weight/100 pcs. ~ kg	pcs.
		d1	d4	l	l1		
1.5	TV15	1.8	3.3	30	12	0.23	50
2.5	TV2.5	2.3	4.2	30	12	0.37	50
4	TV4	3.0	5.0	30	12	0.45	50
6	TV6	4.0	6.0	35	14	0.73	50
10	TV10	4.5	7.0	35	14	1.05	50
16	TV16	5.5	8.5	50	21	2.20	50
25	TV25	7.0	10.0	55	23	2.90	25
35	TV35	8.5	12.0	70	30	5.20	25
50	TV50	10.0	14.0	80	34	7.90	25
70	TV70	12.0	16.5	85	35	11.20	10
95	TV95	13.5	18.0	90	36	13.00	10
120	TV120	15.0	19.5	95	38	14.70	10
150	TV150	16.5	21.0	110	44	18.90	10
185	TV185	19.0	24.0	115	45	25.00	5
240	TV240	21.0	26.0	130	52	31.10	5

❗ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

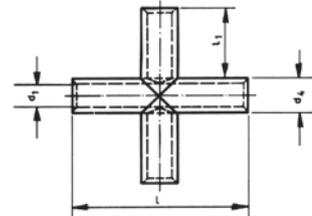
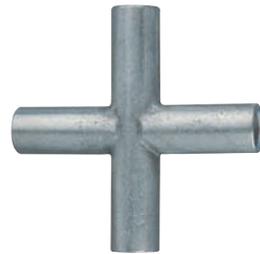
▶ Tool: see chart page 49

Cross-connector, copper 1.5 - 240 mm²

standard type



- For stranded conductors e.g. VDE 0295 Class 2
- For double cable tap conductors



Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

tin plated

Nominal cross section mm ²	Part No.	Dimension mm				Weight/100 pcs. ~ kg	pcs.
		d1	d4	l	l1		
1.5	KV15	1.8	3.3	30	12	0.320	25
2.5	KV2.5	2.3	4.2	30	12	0.490	25
4	KV4	3.0	5.0	30	12	0.650	25
6	KV6	4.0	6.0	35	14	0.950	25
10	KV10	4.5	7.0	35	14	1.350	25
16	KV16	5.5	8.5	50	21	2.950	25
25	KV25	7.0	10.0	55	23	4.000	15
35	KV35	8.5	12.0	70	30	6.900	15
50	KV50	10.0	14.0	80	34	10.400	15
70	KV70	12.0	16.5	85	35	14.600	15
95	KV95	13.5	18.0	90	36	17.100	15
120	KV120	15.0	19.5	95	38	19.400	5
150	KV150	16.5	21.0	110	44	24.100	5
185	KV185	19.0	24.0	115	45	32.100	5
240	KV240	21.0	26.0	130	52	41.100	5

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 49



Insulated tubular cable lugs, Cu 10 - 150 mm² standard type

- For stranded conductors e.g. VDE 0295 Class 2
- Is directly crimped with the insulation

Characteristics

Annealed material optimises material and crimping properties
Precise screw ends for simple cable insertion

Material

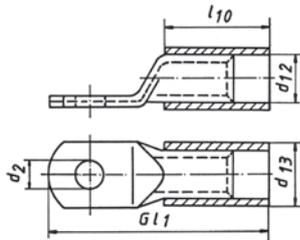
- Cable lug: Copper to EN 13600
- Insulation sleeve: PA, free of halide

Surface

tin plated

Order info

- Also available with inspection hole, part number with "ms"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Colour	Dimension mm					weight		pcs.
				d2	d12	d13	G11	l10	100 pcs. ~ kg	Total	
10	M5	602R5	■	5.5	7.0	9.0	35.5	17.0	0.50	0.548	25
	M6	602R6	■	6.5	7.0	9.0	35.5	17.0	0.49	0.538	25
	M8	602R8	■	8.5	7.0	9.0	42.0	17.0	0.58	0.628	25
	M10	602R10	■	10.5	7.0	9.0	46.0	17.0	0.62	0.668	25
	M12	602R12	■	13.0	7.0	9.0	49.0	17.0	0.64	0.688	25
16	M5	603R5	■	5.5	8.5	10.5	39.5	21.0	0.84	0.907	25
	M6	603R6	■	6.5	8.5	10.5	41.3	21.0	0.86	0.927	25
	M8	603R8	■	8.5	8.5	10.5	45.5	21.0	0.93	0.997	25
	M10	603R10	■	10.5	8.5	10.5	49.5	21.0	0.99	1.057	25
	M12	603R12	■	13.0	8.5	10.5	54.0	21.0	1.02	1.087	25
25	M5	604R5	■	5.5	10.0	12.0	45.0	24.0	1.22	1.312	25
	M6	604R6	■	6.5	10.0	12.0	46.5	24.0	1.20	1.292	25
	M8	604R8	■	8.5	10.0	12.0	51.0	24.0	1.31	1.402	25
	M10	604R10	■	10.5	10.0	12.0	55.0	24.0	1.57	1.662	25
	M12	604R12	■	13.0	10.0	12.0	57.0	24.0	1.39	1.482	25
	M14	604R14	■	15.0	10.0	12.0	61.5	24.0	1.49	1.582	25
35	M6	605R6	■	6.5	12.0	14.5	49.5	27.0	1.85	2.010	25
	M8	605R8	■	8.5	12.0	14.5	54.0	27.0	2.00	2.160	25
	M10	605R10	■	10.5	12.0	14.5	59.0	27.0	2.13	2.290	25
	M12	605R12	■	13.0	12.0	14.5	61.0	27.0	2.12	2.280	25
	M14	605R14	■	15.0	12.0	14.5	64.5	27.0	2.18	2.340	25
	M16	605R16	■	17.0	12.0	14.5	68.0	27.0	2.24	2.400	25
50	M6	606R6	■	6.5	14.0	16.5	59.0	32.0	3.00	3.220	25
	M8	606R8	■	8.5	14.0	16.5	59.0	32.0	2.93	3.150	25
	M10	606R10	■	10.5	14.0	16.5	63.0	32.0	3.08	3.300	25
	M12	606R12	■	13.0	14.0	16.5	68.0	32.0	3.23	3.450	25
	M14	606R14	■	15.0	14.0	16.5	71.5	32.0	3.32	3.540	25
	M16	606R16	■	17.0	14.0	16.5	77.0	32.0	3.38	3.600	25
	M20	606R20	■	21.0	14.0	16.5	83.5	32.0	3.46	3.680	25
70	M6	607R6	■	6.5	16.4	18.9	65.5	33.5	4.49	4.760	25
	M8	607R8	■	8.5	16.4	18.9	65.5	33.5	4.38	4.650	25
	M10	607R10	■	10.5	16.4	18.9	66.5	33.5	4.54	4.810	25
	M12	607R12	■	13.0	16.4	18.9	70.5	33.5	4.63	4.900	25
	M14	607R14	■	15.0	16.4	18.9	73.5	33.5	4.76	5.030	25
	M16	607R16	■	17.0	16.4	18.9	78.5	33.5	4.24	4.510	25
	M20	607R20	■	21.0	16.4	18.9	84.5	33.5	5.09	5.360	25

■ **Insulated tubular cable lugs, Cu 10 - 150 mm²**

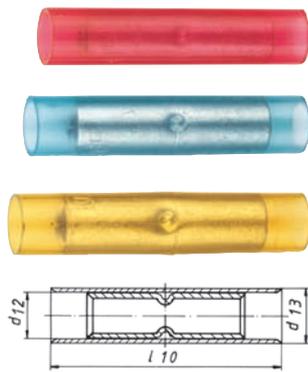
standard type

Nominal cross section mm ²	Size of bolt Ø	Part No.	Colour	Dimension mm					weight		pcs.
				d2	d12	d13	G11	l10	100 pcs. Cu	~ kg Total	
95	M8	608R8	■	8.5	17.8	20.8	74.0	40.0	5.44	5.85	25
	M10	608R10	■	10.5	17.8	20.8	74.0	40.0	5.40	5.81	25
	M12	608R12	■	13.0	17.8	20.8	76.0	40.0	5.56	5.97	25
	M14	608R14	■	15.0	17.8	20.8	79.5	40.0	5.62	6.03	25
	M16	608R16	■	17.0	17.8	20.8	84.0	40.0	5.82	6.23	25
	M20	608R20	■	21.0	17.8	20.8	96.0	40.0	6.71	7.12	25
120	M8	609R8	■	8.5	19.3	22.3	80.5	41.5	6.72	7.18	10
	M10	609R10	■	10.5	19.3	22.3	80.5	41.5	6.57	7.03	10
	M12	609R12	■	13.0	19.3	22.3	80.5	41.5	6.38	6.84	10
	M14	609R14	■	15.0	19.3	22.3	82.5	41.5	6.45	6.91	10
	M16	609R16	■	17.0	19.3	22.3	85.5	41.5	6.51	6.97	10
	M20	609R20	■	21.0	19.3	22.3	100.5	41.5	7.74	8.20	10
150	M8	610R8	■	8.5	20.8	23.8	88.0	48.0	7.78	8.36	10
	M10	610R10	■	10.5	20.8	23.8	88.0	48.0	7.62	8.20	10
	M12	610R12	■	13.0	20.8	23.8	89.0	48.0	7.73	8.31	10
	M14	610R14	■	15.0	20.8	23.8	90.0	48.0	7.64	8.22	10
	M16	610R16	■	17.0	20.8	23.8	92.0	48.0	7.53	8.11	10
	M20	610R20	■	21.0	20.8	23.8	106.0	48.0	8.80	9.38	10

ⓘ Dimensions of tubular cable lugs can be found from page 28

▶ Tool: see chart page 51





■ **Insulated butt-connector, Cu 10 - 150 mm²**
standard type

- For stranded conductors e.g. VDE 0295 Class 2
- With buttmarks for precise cable insertion
- Is directly crimped with the insulation

Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Connector: Copper to EN 13600
- Insulation sleeve: PA, free of halide

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm			weight		pcs.
			d12	d13	l10	100 pcs. ~ Cu	kg Total	
10	622R	■	7.0	9.0	42	0.72	0.84	25
16	623R	■	8.5	10.5	50	1.00	1.16	25
25	624R	■	10.0	12.0	57	1.41	1.63	25
35	625R	■	12.0	14.4	65	2.24	2.60	25
50	626R	■	14.0	16.4	72	3.36	3.81	25
70	627R	■	16.4	19.0	80	4.87	5.46	25
95	628R	■	17.8	20.8	87	5.91	6.74	25
120	629R	■	19.3	22.3	94	7.00	7.96	10
150	630R	■	20.8	23.8	103	8.12	9.32	10

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper", Dimensions of butt-connectors can be found on page 34

▶ Tool: see chart page 51

■ Tubular cable lugs, copper 10 - 300 mm²

F-Series



- For fine stranded conductors, DIN VDE 60228 (e.g. VDE 0295 Class 5 and 6)
- Flared cable entry to ease insertion



Characteristics

- Annealed material optimises material and crimping properties
- Tube dimensions suitable for fine stranded conductors
- Precise screw ends for simple cable insertion

Material

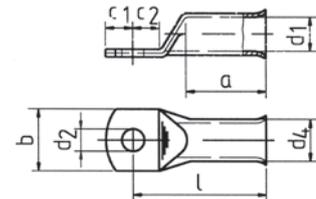
- Copper to EN 13600

Surface

- tin plated

Order info

- Also available with inspection hole, part number with "ms"



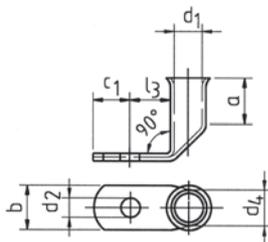
Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs.	
			d1	a	b	d2	d4	c1	c2	l	~ kg	pcs.
10	M5	702F5	5.5	14	12	5.3	8.0	6.25	7.5	27	0.72	100
	M6	702F6	5.5	14	12	6.5	8.0	6.25	7.5	27	0.71	100
	M8	702F8	5.5	14	16	8.5	8.0	8.50	9.5	29	0.77	100
	M10	702F10	5.5	14	16	10.5	8.0	10.50	11.5	31	0.82	100
	M12	702F12	5.5	14	19	13.0	8.0	12.00	13.0	32	0.82	100
16	M5	703F5	6.6	15	13	5.3	9.5	6.25	7.5	30	1.10	100
	M6	703F6	6.6	15	13	6.5	9.5	6.25	7.5	30	1.07	100
	M8	703F8	6.6	15	16	8.5	9.5	10.00	10.0	32	1.21	100
	M10	703F10	6.6	15	17	10.5	9.5	12.00	12.0	34	1.28	100
	M12	703F12	6.6	15	19	13.0	9.5	13.00	13.0	35	1.28	100
25	M5	704F5	7.9	17	15	5.3	11.0	7.50	7.5	32	1.52	25
	M6	704F6	7.9	17	15	6.5	11.0	7.50	7.5	32	1.50	100
	M8	704F8	7.9	17	17	8.5	11.0	10.00	10.0	34	1.61	100
	M10	704F10	7.9	17	17	10.5	11.0	12.00	12.0	37	1.71	100
	M12	704F12	7.9	17	19	13.0	11.0	13.00	13.0	38	1.74	25
35	M6	705F6	9.2	19	17	6.5	12.5	7.50	7.5	35	1.91	100
	M8	705F8	9.2	19	18	8.5	12.5	10.00	10.0	37	2.08	100
	M10	705F10	9.2	19	18	10.5	12.5	12.00	12.0	40	2.24	100
	M12	705F12	9.2	19	19	13.0	12.5	13.00	13.0	41	2.22	25
	M14	705F14	9.2	19	21	15.0	12.5	14.50	14.5	43	2.41	25
50	M6	706F6	11.0	21	21	6.5	15.0	10.00	10.0	41	3.54	25
	M8	706F8	11.0	21	21	8.5	15.0	10.00	10.0	41	3.44	50
	M10	706F10	11.0	21	21	10.5	15.0	12.00	12.0	43	3.64	50
	M12	706F12	11.0	21	21	13.0	15.0	13.00	13.0	46	3.73	50
	M14	706F14	11.0	21	23	15.0	15.0	14.50	14.5	48	3.89	25
	M16	706F16	11.0	21	28	17.0	15.0	16.00	16.0	50	4.02	25
70	M8	707F8	13.0	25	25	8.5	17.0	10.00	10.0	46	4.46	50
	M10	707F10	13.0	25	25	10.5	17.0	12.00	12.0	48	4.62	50
	M12	707F12	13.0	25	25	13.0	17.0	13.00	13.0	50	4.71	50
	M14	707F14	13.0	25	25	15.0	17.0	14.50	14.5	52	4.87	25
	M16	707F16	13.0	25	25	17.0	17.0	16.00	16.0	54	5.85	25
95	M8	708F8	14.5	26	28	8.5	19.0	12.00	12.0	52	6.35	25
	M10	708F10	14.5	26	28	10.5	19.0	12.00	12.0	52	6.23	50
	M12	708F12	14.5	26	28	13.0	19.0	13.00	13.0	53	6.31	50
	M14	708F14	14.5	26	28	15.0	19.0	14.50	14.5	55	6.46	25
	M16	708F16	14.5	26	28	17.0	19.0	16.00	16.0	56	6.56	50

■ **Tubular cable lugs, copper 10 - 300 mm²**

F-Series

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs.	
			d1	a	b	d2	d4	c1	c2	l	~ kg	pcs.
120	M10	709F10	16.2	30	30	10.5	21.0	14.00	14.0	57	8.31	50
	M12	709F12	16.2	30	30	13.0	21.0	15.00	15.0	58	8.39	50
	M14	709F14	16.2	30	30	15.0	21.0	15.00	15.0	58	8.06	25
	M16	709F16	16.2	30	30	17.0	21.0	16.00	16.0	59	8.17	50
	M20	709F20	16.2	30	36	21.0	21.0	22.00	22.0	66	9.56	25
150	M10	710F10	18.0	32	34	10.5	23.0	15.00	16.0	64	10.91	10
	M12	710F12	18.0	32	34	13.0	23.0	16.00	17.0	65	10.89	25
	M14	710F14	18.0	32	34	15.0	23.0	18.00	19.0	67	11.42	10
	M16	710F16	18.0	32	34	17.0	23.0	19.00	20.0	68	11.30	10
	M20	710F20	18.0	32	40	21.0	23.0	21.00	22.0	70	11.36	10
185	M12	711F12	20.6	35	39	13	26	21.5	19	72	15.40	10
	M14	711F14	20.6	35	39	15	26	21.5	19	72	15.20	10
	M16	711F16	20.6	35	39	17	26	21.5	19	72	15.00	25
	M20	711F20	20.6	35	39	21	26	21.5	19	72	14.20	10
240	M10	712F10	23.1	44	41	10,5	28	16.0	17	80	16,50	10
	M12	712F12	23.1	44	41	13	28	16.0	17	80	16.30	10
	M14	712F14	23.1	44	41	15	28	19.0	20	83	16.80	10
	M16	712F16	23.1	44	41	17	28	19.0	20	83	16.71	25
	M20	712F20	23.1	44	41	21	28	21.0	22	85	17.12	10
300	M12	713F12	26.1	44	47	13	32	19.0	22	96	25.60	5
	M14	713F14	26.1	44	47	15	32	19.0	22	96	26.56	5
	M16	713F16	26.1	44	47	17	32	19.0	22	96	25.60	5
	M20	713F20	26.1	44	47	21	32	22.0	22	96	26.24	5

► Tool: see chart page 52



■ **Angle tubular cable lugs, copper, 10 - 240 mm², 90° angle**

F-Series

- For fine stranded conductors, DIN EN 60228
- Flared cable entry to ease insertion

Characteristics

- Annealed material optimises material and crimping properties
- Flat contact surface by special angle punching technology
- Precise screw ends for simple cable insertion
- Tube dimensions suitable for fine stranded conductors

Material

- Copper to EN 13600

Surface

- tin plated

Order info

- 45° angle version also available, part number with "45"
- Also available with inspection hole, part number with "ms"

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm							Weight/ 100 pcs.	
			d1	a	b	d2	d4	c1	l3 min.	~ kg	pcs.
10	M5	742F5	5.5	14	12	5.3	8.0	6.25	7.5	0.80	50
	M6	742F6	5.5	14	12	6.5	8.0	6.25	7.5	0.78	50
	M8	742F8	5.5	14	16	8.5	8.0	9.00	9.5	0.84	50
	M10	742F10	5.5	14	16	10.5	8.0	10.50	12.0	0.88	50
	M12	742F12	5.5	14	19	13.0	8.0	12.00	13.0	0.90	50

■ **Angle tubular cable lugs, copper,**
10 - 240 mm², 90° angle
 F-Series

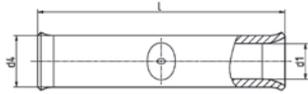
Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm							Weight/100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	c1	l3 min.		
16	M5	743F5	6.6	15	13	5.3	9.5	6.25	7.5	1.12	50
	M6	743F6	6.6	15	13	6.5	9.5	6.25	7.5	1.12	50
	M8	743F8	6.6	15	16	8.5	9.5	10.00	10.0	1.30	50
	M10	743F10	6.6	15	17	10.5	9.5	12.00	12.0	1.38	50
	M12	743F12	6.6	15	19	13.0	9.5	13.00	13.0	1.34	50
25	M5	744F5	7.9	17	15	5.3	11.0	7.50	7.5	1.52	25
	M6	744F6	7.9	17	15	6.5	11.0	7.50	7.5	1.54	25
	M8	744F8	7.9	17	17	8.5	11.0	10.00	10.0	1.80	25
	M10	744F10	7.9	17	17	10.5	11.0	12.00	12.0	1.79	25
	M12	744F12	7.9	17	19	13.0	11.0	13.00	13.0	1.76	25
35	M6	745F6	9.2	19	17	6.5	12.5	7.50	7.5	2.02	25
	M8	745F8	9.2	19	18	8.5	12.5	10.00	10.0	2.18	25
	M10	745F10	9.2	19	18	10.5	12.5	12.00	12.0	2.30	25
	M12	745F12	9.2	19	19	13.0	12.5	13.00	13.0	2.26	25
	M14	745F14	9.2	19	21	15.0	12.5	14.50	14.5	2.65	25
50	M6	746F6	11.0	21	21	6.5	15.0	10.00	10.0	3.75	25
	M8	746F8	11.0	21	21	8.5	15.0	10.00	10.0	3.57	25
	M10	746F10	11.0	21	21	10.5	15.0	12.00	12.0	3.83	25
	M12	746F12	11.0	21	21	13.0	15.0	13.00	13.0	3.74	25
	M14	746F14	11.0	21	23	15.0	15.0	14.50	14.5	4.20	25
	M16	746F16	11.0	21	28	17.0	15.0	16.00	16.0	4.35	25
70	M8	747F8	13.0	25	25	8.5	17.0	10.00	10.0	4.83	25
	M10	747F10	13.0	25	25	11.0	17.0	12.00	12.0	5.18	25
	M12	747F12	13.0	25	25	13.0	17.0	13.00	13.0	5.16	25
	M14	747F14	13.0	25	25	15.0	17.0	14.50	14.5	5.38	25
	M16	747F16	13.0	25	25	17.0	17.0	16.00	16.0	6.50	25
95	M8	748F8	14.5	26	28	8.5	19.0	12.00	12.0	6.66	25
	M10	748F10	14.5	26	28	11.0	19.0	12.00	12.0	6.04	25
	M12	748F12	14.5	26	28	13.0	19.0	13.00	13.0	6.58	25
	M14	748F14	14.5	26	28	15.0	19.0	14.50	14.5	7.24	25
	M16	748F16	14.5	26	28	17.0	19.0	16.00	16.0	7.34	25
120	M10	749F10	16.2	30	30	11.0	21.0	14.00	14.0	8.76	10
	M12	749F12	16.2	30	30	13.0	21.0	15.00	15.0	8.76	10
	M14	749F14	16.2	30	30	15.0	21.0	15.00	15.0	9.15	10
	M16	749F16	16.2	30	30	17.0	21.0	16.00	16.0	8.54	10
	M20	749F20	16.2	30	36	21.0	21.0	22.00	22.0	9.60	10
150	M10	750F10	18.0	32	34	11	23	15.0	16	11.54	10
	M12	750F12	18.0	32	34	13	23	16.0	18	11.58	10
	M14	750F14	18.0	32	34	15	23	18.0	19	11.90	10
	M16	750F16	18.0	32	34	17	23	19.0	20	11.80	10
	M20	750F20	18.0	32	40	21	23	21.0	22	12.00	10
185	M12	751F12	20.6	35	39	13	26	21.5	19	16.36	10
	M14	751F14	20.6	35	39	15	26	21.5	19	16.20	10
	M16	751F16	20.6	35	39	17	26	21.5	19	15.36	10
	M20	751F20	20.6	35	39	21	26	21.5	19	15.80	10
240	M16	752F16	23,1	44	41	17,0	28,0	19,00	20,0	17,80	5

► Tool: see chart page 52



■ **Butt-connector, copper 10 - 185 mm²**

F-Series



- For fine stranded conductors, DIN EN 60228 (e.g. VDE 0295 Class 5 and 6)
- Flared cable entry to ease insertion
- With buttmarks for precise cable insertion

Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion
- Tube dimensions suitable for fine stranded conductors

Material

- Copper to EN 13600

Surface

- tin plated

Nominal cross section mm ²	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
		d1	d4	l		
10	722F	5.5	8.0	38	0.90	100
16	723F	6.6	9.5	38	1.25	100
25	724F	7.9	11.0	38	1.56	50
35	725F	9.2	12.5	45	2.19	50
50	726F	11.0	15.0	45	3.37	50
70	727F	13.0	17.0	54	4.65	50
95	728F	14.5	19.0	56	6.05	25
120	729F	16.2	21.0	60	7.58	25
150	730F	18.0	23.0	68	9.83	10
185	731F	20,6	23.0	75	13,30	10

► Tool: see chart page 52

■ **Tubular cable lugs, copper 6 - 50 mm²**

Solid conductors version



■ For solid conductors e.g. VDE 0295 Class 1

Characteristics

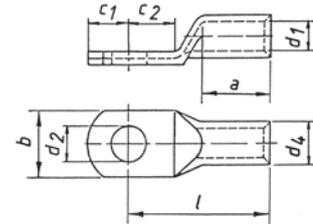
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion
- Tube dimensions suitable for solid conductors

Material

- Copper to EN 13600

Surface

- tin plated



Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs.	
			d1	a	b	d2	d4	c1	c2	l	~ kg	pcs.
6	M5	SR65	3.0	8	9.0	5.3	5	4.75	6.0	17.0	0.213	25
	M6	SR66	3.0	8	10.0	6.5	5	6.50	6.5	19.0	0.220	25
10	M6	SR106	4.0	9	10.0	6.5	6	7.00	6.5	19.0	0.300	25
	M8	SR108	4.0	9	14.0	8.5	6	8.50	9.5	22.0	0.320	25
16	M6	SR166	5.0	12	12.5	6.5	8	6.50	7.0	23.5	0.800	25
	M8	SR168	5.0	12	15.0	8.5	8	9.00	9.0	26.0	0.900	25
25	M6	SR256	6.2	15	14.0	6.5	10	7.50	7.5	30.0	1.560	25
	M8	SR258	6.2	15	16.0	8.5	10	10.00	10.0	32.0	1.700	25
35	M6	SR356	7.0	15	14.0	6.5	10	7.50	7.5	30.0	1.200	25
	M8	SR358	7.0	15	16.0	8.5	10	10.00	10.0	32.0	1.310	25
	M10	SR3510	7.0	15	18.0	10.5	10	12.00	12.0	34.0	1.570	25
50	M6	SR506	8.5	17	17.0	6.5	12	7.50	7.5	32.0	1.850	25
	M8	SR508	8.5	17	17.0	8.5	12	10.00	10.0	34.0	2.000	25
	M10	SR5010	8.5	17	19.0	10.5	12	12.00	12.0	37.0	2.130	25

► Tool: see chart page 54



■ **Butt-connector, copper 1.5 - 50 mm²**
Solid conductors version

■ For solid conductors e.g. VDE 0295 Class 1



Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion
- Tube dimensions suitable for solid conductors

Material

- Copper to EN 13600

Surface

- tin plated

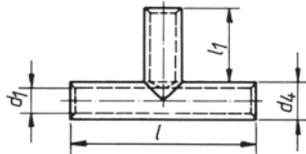
Nominal cross section mm ²	Part No.	Wire Ø	Dimension mm			Weight/100 pcs. ~ kg	pcs.
			d1	d4	l		
1.5-2.5	SV1525	1.38/1.78	1.9	3.9	25	0.210	100
4	SV4	2.25	2.4	4.4	25	0.240	100
6	SV6	2.75	3.0	5.0	25	0.275	100
10	SV10	3.55	4.0	6.0	25	0.350	100
16	SV16	4.5	5.0	8.0	35	0.960	100
25	SV25	5.65	6.2	10.0	40	1.700	50
35	SV35	6.7	7.0	10.0	40	1.420	50
50	SV50	8	8.5	12.0	70	3.550	50

► Tool: see chart page 54



■ **T-connectors, copper 1.5 - 50 mm²**
Solid conductors version

■ For solid conductors e.g. VDE 0295 Class 1



Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion
- Tube dimensions suitable for solid conductors

Material

- Copper to EN 13600

Surface

- tin plated

Nominal cross section mm ²	Part No.	Wire Ø	Dimension mm				Weight/100 pcs. ~ kg	pcs.
			d1	d4	l	l1		
1.5-2.5	STV1525	1.38/1.78	1.9	3.9	30	12	0.34	50
4	STV4	2.25	2.4	4.4	30	12	0.40	50
6	STV6	2.75	3.0	5.0	30	12	0.48	50
10	STV10	3.55	4.0	6.0	35	14	0.72	50
16	STV16	4.5	5.0	8.0	35	14	1.40	50
25	STV25	5.65	6.2	10.0	50	21	3.20	25
35	STV35	6.7	7.0	10.0	55	23	2.95	25
50	STV50	8	8.5	12.0	76	32	5.60	25

► Tool: see chart page 54

■ **Cross-connector, copper 1.5 - 50 mm²**

Solid conductors version



- For solid conductors e.g. VDE 0295 Class 1
- For double cable tap conductor

Characteristics

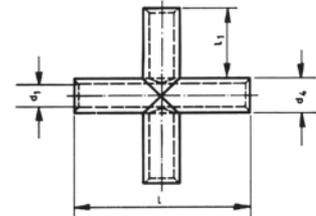
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion
- Tube dimensions suitable for solid conductors

Material

- Copper to EN 13600

Surface

- tin plated



Nominal cross section mm ²	Part No.	Wire Ø	Dimension mm				Weight/100 pcs. ~ kg	pcs.
			d1	d4	l	l1		
1.5-2.5	SKV1525	1.38/1.78	1.9	3.9	30	12	0.47	25
4	SKV4	2.25	2.4	4.4	30	12	0.56	25
6	SKV6	2.75	3.0	5.0	30	12	0.67	25
10	SKV10	3.55	4.0	6.0	35	14	0.92	25
16	SKV16	4.5	5.0	8.0	35	14	1.86	25
25	SKV25	5.65	6.2	10.0	50	21	4.20	15
35	SKV35	6.7	7.0	10.0	55	23	3.80	15
50	SKV50	8	8.5	12.0	76	32	7.35	15

► Tool: see chart page 54



Tubular cable lug for switch gear connections, copper 35 - 300 mm²
Standard type with narrow palm

- For stranded conductors e.g. VDE 0295 Class 2
- For screwing in switch cabinets with reduced connecting space

Characteristics

- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

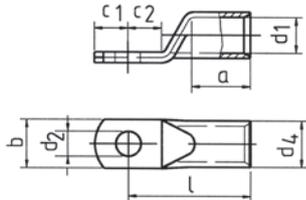
- Copper to EN 13600

Surface

- tin plated

Order info

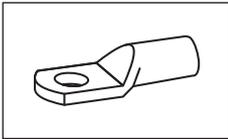
- Also available with inspection hole, part number with "ms"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm								Weight/ 100 pcs.	
			d1	a	b	d2	d4	c1	c2	l	~ kg	pcs.
35	M6	5SG6	8.5	17	15.0	6.5	12.0	7.5	7.5	32	1.78	25
50	M6	6SG6	10.0	19	15.0	6.5	14.0	10.0	10.0	37	2.95	25
	M8	6SG8	10.0	19	17.0	8.5	14.0	10.0	10.0	37	2.82	25
	M10	6SG10	10.0	19	19.0	10.5	14.0	11.5	12.0	39	3.08	25
70	M6	7SG6	12.0	21	17.0	6.5	16.5	10.0	10.0	43	4.22	25
	M8	7SG8	12.0	21	17.0	8.5	16.5	10.0	10.0	43	4.10	25
	M10	7SG10	12.0	21	19.0	10.5	16.5	11.5	12.0	44	4.45	25
	M12	7SG12	12.0	21	19.0	13.0	16.5	13.0	13.0	46	4.22	25
95	M6	8SG6	13.5	25	19.0	6.5	18.0	11.5	12.0	48	5.49	25
	M8	8SG8	13.5	25	19.0	8.5	18.0	11.5	12.0	48	5.46	25
	M10	8SG10	13.5	25	19.0	10.5	18.0	11.5	12.0	48	5.13	25
	M12	8SG12	13.5	25	19.0	13.0	18.0	13.0	13.0	49	5.15	25
120	M6	9SG6	15.0	26	19.0	6.5	19.5	11.5	14.0	51	6.16	10
	M8	9SG8	15.0	26	19.0	8.5	19.5	11.5	14.0	51	5.94	10
	M10	9SG10	15.0	26	19.0	10.5	19.5	11.5	14.0	51	5.81	10
	M12	9SG12	15.0	26	19.0	13.0	19.5	14.0	14.0	51	5.92	10
150	M6	10SG6	16.5	30	19.0	6.5	21.0	11.5	14.0	56	6.85	10
	M8	10SG8	16.5	30	19.0	8.5	21.0	11.5	14.0	56	6.80	10
	M10	10SG10	16.5	30	19.0	10.5	21.0	11.5	14.0	56	6.75	10
	M12	10SG12	16.5	30	19.0	13.0	21.0	15.0	15.0	57	7.15	10
185	M10	11SG10	19.0	30	24.5	10.5	24.0	11.5	18.0	65	10.59	10
	M12	11SG12	19.0	30	31.0	13.0	24.0	18.0	18.0	65	11.09	10
	M16	11SG16	19.0	30	31.0	17.0	24.0	18.0	18.0	65	9.76	10
240	M10	12SG10	21.0	35	31.0	10.5	26.0	11.5	19.0	72	12.70	5
	M12	12SG12	21.0	35	31.0	13.0	26.0	21.5	19.0	72	13.72	5
	M16	12SG16	21.0	35	31.0	17.0	26.0	21.5	19.0	72	13.28	5
300	M10	13SG10	23.5	44	31.0	10.5	30.0	11.5	24.0	87	19.70	5
	M12	13SG12	23.5	44	31.0	13.0	30.0	24.0	24.0	87	22.72	5
	M16	13SG16	23.5	44	31.0	17.0	30.0	24.0	24.0	87	22.50	5

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 49

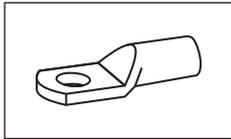


■ **Tool application chart**

Tubular cable lugs, butt-connectors, parallel connectors and T-connectors "standard type" and tubular cable lugs for switchgear connections made from Cu

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-6	K13		•							232
0.75-2.5	KP1	+KP232		•						242
	KP1L	+KP232		•						242
	EKP1	+KP232				•				298
	TEKP1	+KP232		•						263
	KPM15	+KP232		•						264
0.75-10	K50			•						245
	EK1550					•				294
	EK1550G					•				296
0.75-16	K2		•						233	
1-4	K511		•						252	
4-10	KP1	+KP242		•						242
	KP1L	+KP242		•						242
	EKP1	+KP242				•				298
	TEKP1	+KP242		•						263
	KPM15	+KP242		•						264
6-50	K5		•							235
	K05		•							238
6+10	K512		•						252	
6-120	EK354					•				300
6-185	K18			•						248
	HK6018				•					270
	EK5018L					•				304
	PK18							•		336
	THK18						•			336
	HK60UNV	+ UA18				•				286
	EK60UNVL	+ UA18					•			330
	PK60UNV	+ UA18						•		354
6-240	EK505L					•				302
6-300	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
	THK22						•			338
	HK60UNV	+ UA22				•				286
	EK60UNVL	+ UA22					•			330
	PK60UNV	+ UA22						•		354

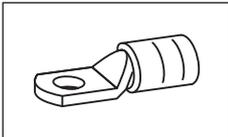
See next page



■ Tool application chart

Tubular cable lugs, butt-connectors, parallel connectors and T-connectors "standard type" and tubular cable lugs for switchgear connections made from Cu

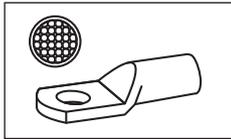
Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-120	K06		•							240
10-240	HK60VP				•					274
	EK60VPL					•				308
	PK60VP							•		340
16-95	K08		•							239
	K95		•							234
	TK95		•							235
16-300	HK60VPFT				•					275
	EK60VPFTL					•				309
	PK60VPFT							•		341
16-400	HK12025				•					276
	HK12042				•					278
	HK120U				•					280
	EK12025L					•				312
	EK12042L					•				314
	EK120UL					•				316
	HK122EL220						•			366
	HK122EL380						•			366
	PK12042							•		342
	PK120U							•		344
	HK252						•			364
	HK252EL220						•			367
	HK252EL380						•			367
	PK252							•		346
25-150	K09		•							241
35-95	K8		•							237
50-120	K6		•							236
120-240	K7		•							237
185-400	K07		•							236



■ **Tool application chart**

Insulated tubular cable lugs and butt-connectors "standard type"

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)	
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads			
10-70	EK354					•			○	300	
10-95	K18			•					○	248	
	HK6018				•				○	270	
	EK5018L					•			○	304	
	EK505L					•			○	302	
	PK18							•	○	336	
	THK18						•		○	336	
	HK60UNV + UA18					•			○	286	
	EK60UNVL + UA18						•		○	330	
PK60UNV + UA18							•	○	354		
10-150	K22			•					○	250	
	HK6022					•			○	272	
	EK6022L					•			○	306	
	PK22							•	○	338	
	THK22						•		○	338	
	HK60UNV + UA22					•			○	286	
	EK60UNVL + UA22						•		○	330	
	PK60UNV + UA22							•	○	354	
	HK12025					•			○	276	
	HK12042					•			○	278	
	HK120U					•			○	280	
	EK12025L						•		○	312	
	EK12042L						•		○	314	
	EK120UL						•		○	316	
	HK122EL220							•	○	366	
	HK122EL380							•	○	366	
	PK12042								•	○	342
	PK120U								•	○	344
	HK252							•	○	364	
	HK252EL220							•	○	367	
	HK252EL380							•	○	367	
	PK252								•	○	346

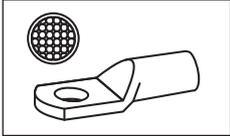


■ Tool application chart

Tubular cable lugs and butt-connectors for fine stranded conductors

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-50	EK354					•				300
	K5		•							235
	K18			•						248
	HK6018				•					270
	EK505L					•				302
	EK5018L					•				304
	PK18							•		336
	THK18							•		336
	HK60UNV	+ UA18				•				286
	EK60UNVL	+ UA18				•				330
	PK60UNV	+ UA18						•		354
10-70	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
	THK22						•			338
	HK60UNV	+ UA22				•				286
	EK60UNVL	+ UA22				•				330
	PK60UNV	+ UA22						•		354
10-240	HK60VP				•					274
	EK60VPL					•				308
	PK60VP							•		340
16-95	K95		•							234
	TK95		•							235
16-150	HK60VPFT				•					275
	HK12025				•					276
	HK12042				•					278
	HK120U				•					280
	EK60VPFTL					•				309
	EK12025L					•				312
	EK12042L					•				314
	EK120UL					•				316
	HK122EL220						•			366
	PK60VPFT							•		341
	PK12042							•		342
	PK120U							•		344

See next page

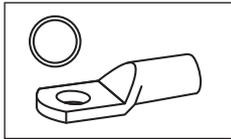


■ **Tool application chart**

Tubular cable lugs and butt-connectors for fine stranded conductors

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
16-300	HK252						•			364
	HK252EL220						•			367
	HK252EL380						•			367
	PK252							•		346
35-95	K8		•							237
50-120	K6		•							236
120-240	K7		•							237





■ Tool application chart

Tubular cable lugs and compression joints for solid conductors

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.75-16	K02		•							233
1.5-4	K93		•							231
1.5-10	K50			•						245
	EK1550					•				294
	EK1550G					•				296
1.5-16	EK354					•				300
	K18			•						248
	HK6018				•					270
	EK5018L					•				304
	PK18							•		336
	THK18						•			336
	HK60UNV + UA18					•				286
	EK60UNVL + UA18						•			330
	PK60UNV + UA18							•		354
	K22			•						250
	HK6022					•				272
	EK6022L						•			306
	PK22							•		338
	THK22							•		338
	HK60UNV + UA22					•				286
EK60UNVL + UA22						•			330	
PK60UNV + UA22							•		354	
6-10	K94		•							232
25-50*	K05		•							238

*For sizes 25 + 35 mm², use the die size 25 mm².
 For size 50 mm² use die size 35 mm².
 We recommend 2 crimps on each side.



Our specialists.

Nickel and stainless steel tubular cable lugs.

Unique situations require unique solutions. This is especially true in most of the diverse industrial sectors. For example in furnace construction or in the steel industry: Temperatures of several hundred degrees Celsius are very common here. Connections also have to meet special requirements in the chemical, food and maritime industries.

Klauke meets this demand with a host of solutions in nickel and stainless steel. These materials guarantee consistent electrical, chemical and mechanical properties at extremely high temperatures.



- Nickel tubular cable lugs and connectors, heat resistant to 650 °C.
- Acid and rust-resistant stainless steel tubular cable lugs and connectors, heat resistant to 400 °C.
- Special solutions for diverse applications.

Nickel and stainless steel tubular cable lugs cover a diverse range of applications - such as industrial and shipbuilding.



■ When it gets really hot: *Nickel*.

- ▶ Heat resistant up to 650 °C.
- ▶ Resistant to oxidation.

Benefits:

- ▶ Nickel tubular cable lugs and butt connectors are most suitable for use in heating and annealing furnaces. They retain their conductivity and failures are being excluded.
- ▶ Nickel connectors even guarantee safe electrical connections in aggressive environments.

▶ *More on Page 60.*

■ Oxidation-free and food industry-compliant: *Stainless steel*.

- ▶ Highly resistant to oxidation.
- ▶ Food industry-compliant.
- ▶ **Resistant to seawater, acids and solvents.**
- ▶ Heat resistant up to 400 °C.

Benefits:

- ▶ The cable lugs are capable of meeting the most stringent hygiene requirements in food and pharmaceutical industries.
- ▶ Stainless steel cable lugs and connectors can also be used without hesitation in both the chemical and maritime industries.
- ▶ *More on Page 58.*



■ The adequate solutions *in nickel or stainless steel*.

- ▶ Up to 95 mm² nominal cross section in nickel and stainless steel.
- ▶ **Customised solutions upon request.**

Benefits:

- ▶ We provide suitable cable lug in the fastest possible time for a host of applications.
- ▶ You can rely on Klauke's problem-solving skills, even when highly complex requirements have to be met.

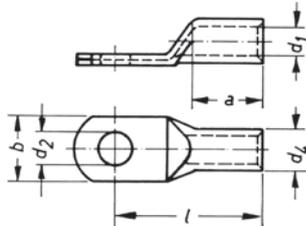


▶ *Checklist for special solutions (Page i-15)*



**■ Tubular cable lugs, stainless steel
0.5 - 95 mm²**

- For aggressive environmental factors
- Heat resistant up to 400° C



Characteristics

- Flat contact surface by special steel punching technology
- Precise screw ends for simple cable insertion

Material

- Stainless steel

Order info

- Also available in stainless steel (V4A)

Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	l		
0.5-1	M4	79V4	1.6	6	6.5	4.3	3.2	13	0.080	100
	M5	79V5	1.6	6	7.5	5.3	3.2	14	0.080	100
1.5-2.5	M4	80V4	3.0	8	9.0	4.3	5.0	17	0.260	100
	M5	80V5	3.0	8	9.0	5.5	5.0	17	0.190	100
	M6	80V6	3.0	8	9.5	6.5	5.0	19	0.215	100
4-6	M4	81V4	4.0	9	9.0	4.3	6.0	18	0.260	100
	M5	81V5	4.0	9	9.5	5.5	6.0	19	0.280	100
	M6	81V6	4.0	9	10.0	6.5	6.0	19	0.280	100
10	M5	82V5	5.0	10	12.5	5.5	8.0	22	0.710	100
	M6	82V6	5.0	10	12.5	6.5	8.0	22	0.780	100
	M8	82V8	5.0	10	15.0	8.5	8.0	25	0.780	100
16	M5	83V5	6.0	13	12.0	5.5	8.0	28	0.500	100
	M6	83V6	6.0	13	12.0	6.5	8.0	28	0.550	100
	M8	83V8	6.0	13	15.0	8.5	8.0	29	0.600	100
25	M6	84V6	7.0	15	14.0	6.5	10.0	30	1.210	50
	M8	84V8	7.0	15	16.0	8.5	10.0	32	1.850	50
35	M6	85V6	9.0	17	17.0	6.5	12.0	32	1.600	50
	M8	85V8	9.0	17	17.0	8.5	12.0	35	1.850	50
50	M6	86V6	10.0	19	20.0	6.5	14.0	37	2.800	50
	M8	86V8	10.0	19	20.0	8.5	14.0	37	2.600	50
	M10	86V10	10.0	19	20.0	10.5	14.0	39	2.800	50
	M12	86V12	10.0	19	20.0	13.0	14.0	43	2.960	50
70	M8	87V8	12.0	21	23.0	8.5	16.0	43	3.650	25
	M10	87V10	12.0	21	23.0	10.5	16.0	44	3.930	25
	M12	87V12	12.0	21	23.0	13.0	16.0	46	3.850	25
	M16	87V16	12.0	21	26.0	17.0	16.0	46	3.960	25
95	M8	88V8	14.0	25	26.0	8.5	18.0	48	4.650	25
	M10	88V10	14.0	25	26.0	10.5	18.0	48	5.610	25
	M12	88V12	14.0	25	26.0	13.0	18.0	49	5.540	25

► Tool: see chart page 63

■ **Butt-connector, stainless steel 0.5 - 95 mm²**



- For aggressive environmental factors
- Heat resistant up to 400° C

Characteristics

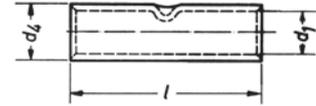
- With buttmarks for precise cable insertion
- Precise screw ends for simple cable insertion

Material

- Stainless steel

Order info

- Also available in stainless steel (V4A)



Nominal cross section mm ²	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
		d1	d4	l		
0.5-1	79R	1.6	3.2	25	0.135	50
1.5-2.5	80R	3.0	5.0	25	0.250	50
4-6	81R	4.0	6.0	25	0.325	50
10	82R	5.0	8.0	25	0.360	50
16	83R	6.0	8.0	30	0.510	50
25	84R	7.0	10.0	35	1.100	25
35	85R	9.0	12.0	40	1.560	25
50	86R	10.0	14.0	45	2.670	25
70	87R	12.0	16.0	50	3.400	25
95	88R	14.0	18.0	55	4.300	25

► Tool: see chart page 63



■ Tubular cable lugs, nickel 0.5 - 95 mm²

■ Heat resistant up to 650 °C

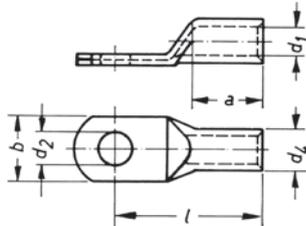


Characteristics

- Flat contact surface by special steel punching technology
- Precise screw ends for simple cable insertion

Material

- high grade nickel



Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm						Weight/100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	l		
0.5-1	M4	56N4	1.6	6	6.5	4.3	3.2	13	0.080	100
	M5	56N5	1.6	6	7.5	5.3	3.2	14	0.080	100
1.5-2.5	M4	57N4	2.3	6	7.0	4.3	3.9	13	0.105	100
	M5	57N5	2.3	6	7.5	5.3	3.9	14	0.105	100
	M6	57N6	2.3	6	9.5	6.5	3.9	16	0.130	100
4-6	M4	58N4	3.6	9	9.5	4.3	5.6	18	0.275	100
	M5	58N5	3.6	9	9.5	5.3	5.6	19	0.275	100
	M6	58N6	3.6	9	9.5	6.5	5.6	19	0.260	100
10	M5	59N5	4.5	10	12.0	5.5	6.5	21	0.340	100
	M6	59N6	4.5	10	12.0	6.5	6.5	22	0.360	100
16	M5	60N5	5.5	13	12.0	5.5	7.5	26	0.470	100
	M6	60N6	5.5	13	12.0	6.5	7.5	27	0.480	100
	M8	60N8	5.5	13	13.5	8.5	7.5	29	0.560	100
25	M6	61N6	7.0	15	14.0	6.5	10.0	30	1.200	50
	M8	61N8	7.0	15	16.0	8.5	10.0	32	1.320	50
35	M6	62N6	8.5	17	17.0	6.5	12.0	32	1.850	50
	M8	62N8	8.5	17	17.0	8.5	12.0	34	2.000	50
50	M8	63N8	10.0	19	20.0	8.5	14.0	37	2.900	50
	M10	63N10	10.0	19	20.0	10.5	14.0	39	3.100	50
70	M10	64N10	12.0	21	23.0	10.5	16.5	44	4.600	25
	M12	64N12	12.0	21	23.0	13.0	16.5	46	4.660	25
95	M10	65N10	13.5	25	26.0	10.5	18.0	48	5.550	25
	M12	65N12	13.5	25	26.0	13.0	18.0	49	5.600	25

▶ Tool: see chart page 63

■ **Tubular cable lugs, nickel 0.5 - 16 mm²**
fork type



- Heat resistant up to 650 °C
- Rapid assemble through direct screw-mounting

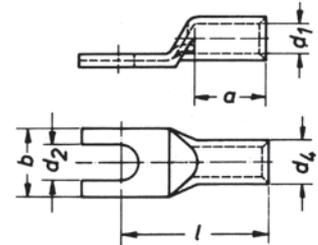


Characteristics

- Flat contact surface by special steel punching technology
- Precise screw ends for simple cable insertion

Material

- high grade nickel



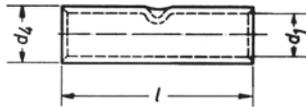
Nominal cross section mm ²	Size of bolt Ø	Part No.	Dimension mm						Weight/100 pcs. ~ kg	pcs.
			d1	a	b	d2	d4	l		
0.5-1	M4	56C4	1.6	6	6.5	4.3	3.2	13	0.070	50
	M5	56C5	1.6	6	7.5	5.3	3.2	14	0.075	50
1.5-2.5	M4	57C4	2.3	6	7.0	4.3	3.9	13	0.095	50
	M5	57C5	2.3	6	7.5	5.3	3.9	14	0.095	50
	M6	57C6	2.3	6	9.5	6.5	3.9	16	0.110	50
4-6	M4	58C4	3.6	9	9.5	4.3	5.6	18	0.250	50
	M5	58C5	3.6	9	9.5	5.3	5.6	19	0.255	50
	M6	58C6	3.6	9	9.5	6.5	5.6	19	0.235	50
10	M5	59C5	4.5	10	12.0	5.5	6.5	21	0.320	50
	M6	59C6	4.5	10	12.0	6.5	6.5	22	0.340	50
16	M5	60C5	5.5	13	12.0	5.5	7.5	26	0.440	50
	M6	60C6	5.5	13	12.0	6.5	7.5	27	0.450	50
	M8	60C8	5.5	13	13.5	8.5	7.5	29	0.520	50

► Tool: see chart page 63



■ **Butt-connector, nickel 0.5 - 16 mm²**

■ Heat resistant up to 650 °C



Characteristics

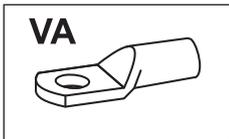
- With buttmarks for precise cable insertion
- Precise screw ends for simple cable insertion

Material

- high grade nickel

Nominal cross section mm ²	Part No.	Dimension mm			Weight/100 pcs. ~ kg	pcs.
		d1	d4	l		
0.5-1	62R	1.6	3.2	25	0.135	50
1.5-2.5	63R	2.3	3.9	25	0.170	50
4-6	64R	3.6	5.6	25	0.325	50
10	65R	4.5	6.5	25	0.360	50
16	66R	5.5	7.5	30	0.510	50

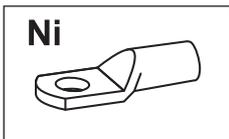
► Tool: see chart page 63



■ **Tool application chart**

Tubular cable lugs and butt-connectors made from stainless steel

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-16	K25		•							234
	EK354					•				300
10-50	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
	THK22						•			338
	HK60UNV	+ UA22				•				286
	EK60UNVL	+ UA22					•			330
	PK60UNV	+ UA22						•		354



■ **Tool application chart**

Tubular cable lugs and butt-connectors made from nickel

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-16	K25		•							234
	EK354					•				300
10-50	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
	THK22						•			338
	HK60UNV	+ UA22				•				286
	EK60UNVL	+ UA22					•			330
	PK60UNV	+ UA22						•		354

Best connections Entirely to standard.



Copper compression cable lugs and connectors to DIN.

In project business, customers often request use of standardised materials. Utilities, for example, often specify use of compression cable lugs and connectors according to DIN standards. Klauke offers numerous standard-compliant solutions.

Contrary to popular belief, DIN cable lugs differ from tubular cable lugs not only in terms of dimensions. Markings and standardised coding specify the number of crimps.



- Compression cable lugs to DIN 46235 up to 1000 mm².
- Angle compression cable lugs to DIN dimensions.
- Compression joints for non-tension connections to DIN.
- Sleeves and reducing sleeves for compacted conductors.



DIN-compliant compression cable lugs with specified identification marks for crimps.

Always to **DIN** standards.

- ▶ **Nominal cross sections up to 1000 mm².**
- ▶ Conforming to DIN standards, tested to IEC.
- ▶ Tin plated or copper finish available.
- ▶ Also with barrier.

Benefits:

- ▶ The Klauke range includes DIN compression cable lugs and connectors to suit every application.
- ▶ Copper finish versions are especially suitable for installations in overvoltage or lightning protection systems.



▶ More on Page 66.



▶ More on Page 68.

Easy, bent, improved fit.

- ▶ Compression cable lugs angled at 45° and 90°.
- ▶ Nominal cross sections up to 240 mm².

Benefits:

- ▶ You will find the right solution even **for cornered and hard to reach areas.**

Correct crimping *mark by mark.*

- ▶ All DIN compression cable lugs and connectors show markings for correct crimping.
- ▶ Designation for narrow and wide crimping.
- ▶ All compression cable lugs are annealed to **optimise material and crimping characteristics.**

Benefits:

- ▶ The designated crimp markings show you at a glance where and how often the connecting material has to be crimped.
- ▶ The annealed material flows more efficiently around the conductor during the crimping operation, thus creating a safe connection.
- ▶ Crimping is much easier and a lower mechanical load increases lifetime of tools.



- ▶ **Klauke connecting materials to DIN are designated by two different crimp markings. One for narrow crimps with 6-ton tools and the other for wide crimps with 12-ton tools.**



■ **Compression cable lugs to DIN,
Cu 6 - 1000 mm²**



Characteristics

- Manufactured according to DIN 46235
- With markings for correct crimping
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

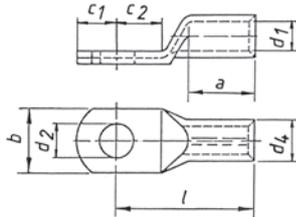
- Copper to EN 13600

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	c2	l		
6	M 5	101R5	5	3.8	10	8.5	5.3	5.5	6.5	7.5	24	0.24	100
	M 6	101R6	5	3.8	10	8.5	6.4	5.5	7.5	8.0	24	0.30	100
	M 8	*101R8	5	3.8	10	13.0	8.4	5.5	10.0	10.0	24	0.34	100
10	M 5	102R5	6	4.5	10	9.0	5.3	6.0	7.0	8.5	27	0.37	100
	M 6	102R6	6	4.5	10	9.0	6.4	6.0	7.5	8.5	27	0.36	100
	M 8	*102R8	6	4.5	10	13.0	8.4	6.0	10.0	10.0	27	0.38	100
16	M 6	103R6	8	5.5	20	13.0	6.4	8.5	7.5	8.0	36	1.19	100
	M 8	103R8	8	5.5	20	13.0	8.4	8.5	10.0	10.0	36	1.22	100
	M 10	103R10	8	5.5	20	17.0	10.5	8.5	12.0	12.0	36	1.30	100
	M 12	*103R12	8	5.5	20	18.0	13.0	8.5	13.0	13.0	36	1.27	100
25	M 6	104R6	10	7.0	20	14.0	6.4	10.0	7.5	8.0	38	1.51	50
	M 8	104R8	10	7.0	20	16.0	8.4	10.0	10.0	10.0	38	1.54	50
	M 10	104R10	10	7.0	20	17.0	10.5	10.0	12.0	12.0	38	1.62	50
	M 12	104R12	10	7.0	20	19.0	13.0	10.0	13.0	13.0	38	1.66	25
35	M 6	*105R6	12	8.2	20	17.0	6.4	12.5	7.5	8.0	42	2.77	50
	M 8	105R8	12	8.2	20	17.0	8.4	12.5	10.0	10.0	42	2.85	50
	M 10	105R10	12	8.2	20	19.0	10.5	12.5	12.0	12.0	42	2.84	50
	M 12	105R12	12	8.2	20	21.0	13.0	12.5	13.0	13.0	42	2.79	50
	M 14	*105R14	12	8.2	20	21.0	15.0	12.5	14.5	14.5	42	2.70	25
50	M 8	106R8	14	10.0	28	20.0	8.4	14.5	10.0	10.0	52	4.46	50
	M 10	106R10	14	10.0	28	22.0	10.5	14.5	12.0	12.0	52	4.48	50
	M 12	106R12	14	10.0	28	24.0	13.0	14.5	13.0	13.0	52	4.40	50
	M 14	*106R14	14	10.0	28	24.0	15.0	14.5	14.5	14.5	52	4.30	25
	M 16	106R16	14	10.0	28	28.0	17.0	14.5	16.0	16.0	52	4.57	25
70	M 8	107R8	16	11.5	28	24.0	8.4	16.5	10.0	10.0	55	5.92	50
	M 10	107R10	16	11.5	28	24.0	10.5	16.5	12.0	12.0	55	6.02	50
	M 12	107R12	16	11.5	28	24.0	13.0	16.5	13.0	13.0	55	5.89	50
	M 14	*107R14	16	11.5	28	24.0	15.0	16.5	14.5	14.5	55	5.80	25
	M 16	107R16	16	11.5	28	30.0	17.0	16.5	16.0	16.0	55	6.13	25
95	M 8	108R8	18	13.5	35	28.0	8.4	19.0	12.0	12.0	65	9.21	25
	M 10	108R10	18	13.5	35	28.0	10.5	19.0	12.0	12.0	65	8.97	50
	M 12	108R12	18	13.5	35	28.0	13.0	19.0	13.0	13.0	65	8.62	50
	M 14	*108R14	18	13.5	35	28.0	15.0	19.0	14.5	14.5	65	8.78	25
	M 16	108R16	18	13.5	35	32.0	17.0	19.0	16.0	16.0	65	9.00	50
120	M 10	109R10	20	15.5	35	32.0	10.5	21.0	15.0	16.0	70	11.40	50
	M 12	109R12	20	15.5	35	32.0	13.0	21.0	16.0	17.0	70	11.31	50
	M 14	*109R14	20	15.5	35	32.0	15.0	21.0	18.0	19.0	70	11.45	25
	M 16	109R16	20	15.5	35	32.0	17.0	21.0	19.0	20.0	70	11.24	50
	M 20	109R20	20	15.5	35	38.0	21.0	21.0	21.0	22.0	70	11.03	25

■ **Compression cable lugs to DIN,
Cu 6 - 1000 mm²**

Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	c2	l		
150	M 10	110R10	22	17.0	35	34.0	10.5	23.5	15.0	16.0	78	16.38	10
	M 12	110R12	22	17.0	35	34.0	13.0	23.5	16.0	17.0	78	16.29	25
	M 14	*110R14	22	17.0	35	34.0	15.0	23.5	19.0	20.0	78	16.38	10
	M 16	110R16	22	17.0	35	34.0	17.0	23.5	19.0	20.0	78	16.17	10
	M 20	110R20	22	17.0	35	40.0	21.0	23.5	21.0	22.0	78	15.90	10
185	M 10	111R10	25	19.0	40	37	10.5	25.5	15	16	82	18.96	10
	M 12	111R12	25	19.0	40	37	13.0	25.5	16	17	82	18.11	10
	M 14	*111R14	25	19.0	40	37	15.0	25.5	19	20	82	19.21	10
	M 16	111R16	25	19.0	40	37	17.0	25.5	19	20	82	18.74	25
	M 20	111R20	25	19.0	40	40	21.0	25.5	21	22	82	18.69	10
240	M 12	112R12	28	21.5	40	42	13.0	29.0	16	17	92	27.00	10
	M 14	*112R14	28	21.5	40	42	15.0	29.0	19	20	92	27.58	10
	M 16	112R16	28	21.5	40	42	17.0	29.0	19	20	92	27.37	25
	M 20	112R20	28	21.5	40	45	21.0	29.0	21	22	92	26.88	10
300	M 14	*113R14	32	24.5	50	46	15.0	32.0	19	22	100	33.29	5
	M 16	113R16	32	24.5	50	46	17.0	32.0	19	22	100	32.94	5
	M 20	113R20	32	24.5	50	46	21.0	32.0	22	22	100	33.24	5
400	M 14	*114R14	38	27.5	70	54	15.0	38.5	25	25	115	69.38	5
	M 16	114R16	38	27.5	70	54	17.0	38.5	25	25	115	68.54	5
	M 20	114R20	38	27.5	70	54	21.0	38.5	25	25	115	65.40	5
500	M 16	*115R16	42	31.0	70	60	17.0	42.0	25	25	125	83.31	1
	M 20	115R20	42	31.0	70	60	21.0	42.0	25	25	125	81.58	1
625	M 16	*116R16	44	34.5	80	64	17.0	44.0	25	25	135	79.60	1
	M 20	116R20	44	34.5	80	64	21.0	44.0	25	25	135	79.69	1
800	M 16	*117R16	52	40.0	100	75	17.0	52.0	30	30	165	150.00	1
	M 20	117R20	52	40.0	100	75	21.0	52.0	30	30	165	149.00	1
1000	M 16	*118R16	58	44.0	100	83	17.0	58.0	30	30	165	199.00	1
	M 20	118R20	58	44.0	100	83	21.0	58.0	30	30	165	195.00	1

▶ * = Not standardised

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 78





Angle compression cable lugs, copper, 6 - 240 mm², 90° angle

Characteristics

- Tube dimensions according to DIN 46235
- With markings for correct crimping
- Annealed material optimises material and crimping properties
- Flat contact surface by special angle punching process
- Precise screw ends for simple cable insertion

Material

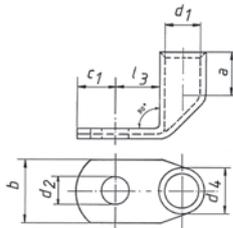
- Copper to EN 13600

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm							Weight/ 100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	l3		
6	M 5	161R5	5	3.8	10	8.5	5.3	5.5	6.5	9	0.28	50
	M 6	161R6	5	3.8	10	8.5	6.4	5.5	7.5	10	0.32	50
10	M 5	162R5	6	4.5	10	9.0	5.3	6.0	7.0	10	0.34	50
	M 6	162R6	6	4.5	10	9.0	6.4	6.0	7.5	10	0.35	50
	M 8	162R8	6	4.5	10	13.0	.0	6.0	10.0	13	0.37	50
16	M 6	163R6	8	5.5	20	13.0	6.4	8.5	7.5	11	1.20	50
	M 8	163R8	8	5.5	20	13.0	8.4	8.5	10.0	13	1.30	50
	M 10	163R10	8	5.5	20	17.0	10.5	8.5	12.0	15	1.40	50
	M 12	163R12	8	5.5	20	18.0	13.0	8.5	13.0	18	1.33	50
25	M 6	164R6	10	7.0	20	14.0	6.4	10.0	7.5	11	1.54	25
	M 8	164R8	10	7.0	20	16.0	8.4	10.0	10.0	13	1.60	25
	M 10	164R10	10	7.0	20	17.0	10.5	10.0	12.0	15	1.63	25
	M 12	164R12	10	7.0	20	19.0	13.0	10.0	13.0	18	1.70	25
35	M 8	165R8	12	8.2	20	17.0	8.4	12.5	10.0	13	2.72	25
	M 10	165R10	12	8.2	20	19.0	10.5	12.5	12.0	15	2.76	25
	M 12	165R12	12	8.2	20	21.0	13.0	12.5	13.0	18	2.85	25
	M 14	165R14	12	8.2	20	21.0	15.0	12.5	14.5	20	2.92	25
50	M 8	166R8	14	10.0	28	20.0	8.4	14.5	10.0	16	4.39	25
	M 10	166R10	14	10.0	28	22.0	10.5	14.5	12.0	16	4.46	25
	M 12	166R12	14	10.0	28	24.0	13.0	14.5	13.0	18	4.49	25
	M 14	166R14	14	10.0	28	24.0	15.0	14.5	14.5	20	4.73	25
	M 16	166R16	14	10.0	28	28.0	17.0	14.5	16.0	22	4.66	25
70	M 8	167R8	16	11.5	28	24.0	8.4	16.5	10.0	14	5.92	25
	M 10	167R10	16	11.5	28	24.0	10.5	16.5	12.0	16	6.31	25
	M 12	167R12	16	11.5	28	24.0	13.0	16.5	13.0	18	6.34	25
	M 14	167R14	16	11.5	28	24.0	15.0	16.5	14.5	20	6.50	25
	M 16	167R16	16	11.5	28	30.0	17.0	16.5	16.0	22	6.63	25
95	M 10	168R10	18	13.5	35	28.0	10.5	19.0	12.0	17	9.03	25
	M 12	168R12	18	13.5	35	28.0	13.0	19.0	13.0	18	9.27	25
	M 14	168R14	18	13.5	35	28.0	15.0	19.0	14.5	20	9.06	25
	M 16	168R16	18	13.5	35	32.0	17.0	19.0	16.0	22	9.18	25
120	M 10	169R10	20	15.5	35	32.0	10.5	21.0	15.0	17	10.41	10
	M 12	169R12	20	15.5	35	32.0	13.0	21.0	16.0	18	10.65	10
	M 14	169R14	20	15.5	35	32.0	15.0	21.0	18.0	20	10.75	10
	M 16	169R16	20	15.5	35	32.0	17.0	21.0	19.0	22	10.72	10
	M 20	169R20	20	15.5	35	38.0	21.0	21.0	21.0	24	11.00	10

■ **Angle compression cable lugs, copper, 6 - 240 mm², 90° angle**

Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm							Weight/100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	l3		
150	M 10	170R10	22	17.0	35	34	10.5	23.5	15	17	14.18	10
	M 12	170R12	22	17.0	35	34	13.0	23.5	16	18	14.33	10
	M 14	170R14	22	17.0	35	34	15.0	23.5	19	20	15.60	10
	M 16	170R16	22	17.0	35	34	17.0	23.5	19	22	15.24	10
	M 20	170R20	22	17.0	35	40	21.0	23.5	21	24	15.70	10
185	M 10	171R10	25	19.0	40	37	10.5	25.5	15	22	18.60	10
	M 12	171R12	25	19.0	40	37	13.0	25.5	16	22	18.69	10
	M 14	171R14	25	19.0	40	37	15.0	25.5	19	22	19.10	10
	M 16	171R16	25	19.0	40	37	17.0	25.5	19	22	19.00	10
	M 20	171R20	25	19.0	40	40	21.0	25.5	21	24	18.72	10
240	M 12	172R12	28	21.5	40	42	13.0	29.0	16	22	25.09	10
	M 14	172R14	28	21.5	40	42	15.0	29.0	19	22	25.70	10
	M 16	172R16	28	21.5	40	42	17.0	29.0	19	22	24.96	10
	M 20	172R20	28	21.5	40	45	21.0	29.0	21	24	25.26	10

❗ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 78

■ **Angle compression cable lugs, copper, 6 - 240 mm², 45° angle**



Characteristics

- Tube dimensions according to DIN 46235
- With markings for correct crimping
- Annealed material optimises material and crimping properties
- Flat contact surface by special angle punching process
- Precise screw ends for simple cable insertion

Material

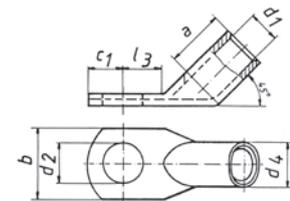
- Copper to EN 13600

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm							Weight/100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	l3		
6	M 5	161R545	5	3.8	10	8.5	5.5	5.5	6.5	9	0.32	50
	M 6	161R645	5	3.8	10	8.5	6.5	5.5	7.5	10	0.34	50
10	M 5	162R545	6	4.5	10	9.0	5.5	6.0	7.0	10	0.36	50
	M 6	162R645	6	4.5	10	9.0	6.5	6.0	7.5	10	0.35	50
	M 8	162R845	6	4.5	10	13.0	8.5	6.0	10.0	13	0.39	50
16	M 6	163R645	8	5.5	20	13.0	6.5	8.5	7.5	11	1.20	50
	M 8	163R845	8	5.5	20	13.0	8.5	8.5	10.0	13	0.28	50
	M 10	163R1045	8	5.5	20	17.0	10.5	8.5	12.0	15	1.34	50
	M 12	163R1245	8	5.5	20	18.0	13.0	8.5	13.0	18	1.35	50
25	M 6	164R645	10	7.0	20	14.0	6.5	10.0	7.5	11	1.49	25
	M 8	164R845	10	7.0	20	16.0	8.5	10.0	10.0	13	1.60	25
	M 10	164R1045	10	7.0	20	17.0	10.5	10.0	12.0	15	1.64	25
	M 12	164R1245	10	7.0	20	19.0	13.0	10.0	13.0	18	1.73	25

■ Angle compression cable lugs, copper, 6 - 240 mm², 45° angle

Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm							Weight/100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	l3		
35	M 8	165R845	12	8.2	20	17.0	8.5	12.5	10.0	13	2.72	25
	M 10	165R1045	12	8.2	20	19.0	10.5	12.5	12.0	15	2.92	25
	M 12	165R1245	12	8.2	20	21.0	13.0	12.5	13.0	18	2.98	25
	M 14	165R1445	12	8.2	20	21.0	15.0	12.5	14.5	20	3.03	25
50	M 8	166R845	14	10.0	28	20.0	8.5	14.5	10.0	13	4.63	25
	M 10	166R1045	14	10.0	28	22.0	10.5	14.5	12.0	16	4.84	25
	M 12	166R1245	14	10.0	28	24.0	13.0	14.5	13.0	18	4.94	25
	M 14	166R1445	14	10.0	28	24.0	15.0	14.5	14.5	20	4.96	25
	M 16	166R1645	14	10.0	28	28.0	17.0	14.5	16.0	22	4.92	25
70	M 8	167R845	16	11.5	28	24.0	8.5	16.5	10.0	14	6.40	25
	M 10	167R1045	16	11.5	28	24.0	10.5	16.5	12.0	16	6.76	25
	M 12	167R1245	16	11.5	28	24.0	13.0	16.5	13.0	18	6.90	25
	M 14	167R1445	16	11.5	28	24.0	15.0	16.5	14.5	20	6.72	25
	M 16	167R1645	16	11.5	28	30.0	17.0	16.5	16.0	22	6.96	25
95	M 10	168R1045	18	13.5	35	28.0	10.5	19.0	12.0	17	9.64	25
	M 12	168R1245	18	13.5	35	28.0	13.0	19.0	13.0	18	9.21	25
	M 14	168R1445	18	13.5	35	28.0	15.0	19.0	14.5	20	9.51	25
	M 16	168R1645	18	13.5	35	32.0	17.0	19.0	16.0	22	9.40	25
120	M 10	169R1045	20	15.5	35	32.0	10.5	21.0	15.0	17	11.09	10
	M 12	169R1245	20	15.5	35	32.0	13.0	21.0	16.0	18	11.45	10
	M 14	169R1445	20	15.5	35	32.0	15.0	21.0	18.0	20	11.55	10
	M 16	169R1645	20	15.5	35	32.0	17.0	21.0	19.0	22	11.76	10
	M 20	169R2045	20	15.5	35	38.0	21.0	21.0	21.0	24	11.55	10
150	M 10	170R1045	22	17.0	35	34	10.5	23.5	15	17	15.93	10
	M 12	170R1245	22	17.0	35	34	13.0	23.5	16	18	16.08	10
	M 14	170R1445	22	17.0	35	34	15.0	23.5	19	20	16.38	10
	M 16	170R1645	22	17.0	35	34	17.0	23.5	19	22	16.90	10
	M 20	170R2045	22	17.0	35	40	21.0	23.5	21	24	16.49	10
185	M 10	171R1045	25	19.0	40	37	10.5	25.5	15	22	20.16	10
	M 12	171R1245	25	19.0	40	37	13.0	25.5	16	22	19.60	10
	M 14	171R1445	25	19.0	40	37	15.0	25.5	19	22	20.05	10
	M 16	171R1645	25	19.0	40	37	17.0	25.5	19	22	19.68	10
	M 20	171R2045	25	19.0	40	40	21.0	25.5	21	24	19.95	10
240	M 12	172R1245	28	21.5	40	42	13.0	29.0	16	22	26.46	10
	M 14	172R1445	28	21.5	40	42	15.0	29.0	19	22	26.99	10
	M 16	172R1645	28	21.5	40	42	17.0	29.0	19	22	26.92	10
	M 20	172R2045	28	21.5	40	45	21.0	29.0	21	24	26.88	10

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 78

■ **Compression cable lugs DIN special types, copper, 70 - 240 mm²**

Version with two long holes in the palm



Characteristics

- Tube dimensions according to DIN 46235
- With markings for correct crimping
- Annealed material optimises material and crimping properties
- Flat contact surface by special pressing technique
- Precise screw ends for simple cable insertion

Material

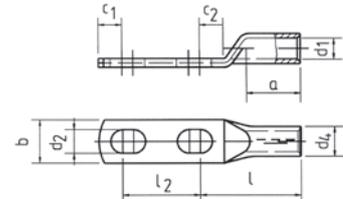
- Copper to EN 13600

Surface

- tin plated

Order info

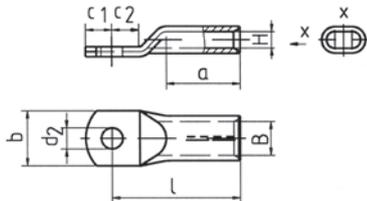
- Bright finish version also available, part number appendix "bk"



Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm									Weight/ 100 pcs. ~ kg	pcs.
				d1	a	b	d2	d4	c1	c2	l	l2		
70	2 x M 12	147D212	16	11.5	28	24	13	16.5	13	13	55	50 - 62	10.82	5
95	2 x M 12	148D212	18	13.5	35	28	13	19.0	13	13	65	50 - 62	15.24	5
120	2 x M 12	149D212	20	15.5	35	32	13	21.0	16	17	70	50 - 62	18.62	5
150	2 x M 12	150D212	22	17.0	35	34	13	23.5	16	17	78	50 - 62	26.10	5
185	2 x M 12	151D212	25	19.0	40	37	13	25.5	16	17	82	50 - 62	30.48	5
240	2 x M 12	152D212	28	21.5	40	42	13	29.0	16	17	92	50 - 62	41.52	5

ⓘ Reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 78



Compression cable lugs, special types, Cu 2 x 50 - 2 x 120 mm²

Double compression cable lug with one hole in the palm

Characteristics

- Special design for mounting of 2 multi-stranded cables according to VDE 0295 Class 2
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

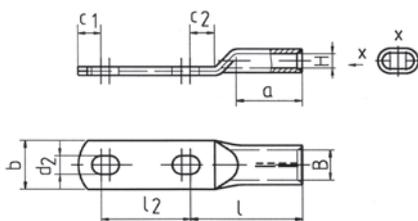
- tin plated

Order info

- Bright finish version also available, part number appendix "bk"

Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm									Weight/ 100 pcs. ~ kg	pcs.
				H	a	b	d2	B	c1	c2	l			
2 x 50	M 12	136DP12	22 DP	10.0	35	34	13	20	16	17	78	16.30	5	
2 x 70	M 12	137DP12	24 DP	11.5	40	37	13	23	16	17	82	18.90	5	
2 x 95	M 12	138DP12	29 DP	13.5	40	42	13	27	16	17	92	27.12	5	
2 x 120	M 12	139DP12	32 DP	15.5	50	48	13	31	19	22	100	33.50	5	

▶ Tool: see chart page 79



Compression cable lugs, special types, Cu 2 x 50 - 2 x 120 mm²

Double compression cable lug with two oblong holes in the palm

Characteristics

- Special design for mounting of 2 multi-stranded cables according to VDE 0295, Class 2
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion
- Flat contact surface by special pressing technique

Material

- Copper to EN 13600

Surface

- tin plated

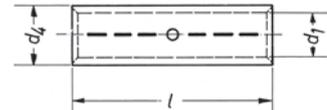
Order info

- Bright finish version also available, part number appendix "bk"

Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Dimension mm									Weight/ 100 pcs. ~ kg	pcs.
				H	a	b	d2	B	c1	c2	l	l2		
2 x 50	2 x M 12	136DP212	22 DP	10.0	35	34	13	20	16	17	78	50 – 62	23.20	5
2 x 70	2 x M 12	137DP212	24 DP	11.5	40	37	13	23	16	17	82	50 – 62	29.64	5
2 x 95	2 x M 12	138DP212	29 DP	13.5	40	42	13	27	16	17	92	50 – 62	38.50	5
2 x 120	2 x M 12	139DP212	32 DP	15.5	50	48	13	31	19	22	100	50 – 62	45.80	5

▶ Tool: see chart page 79

■ **Compression joints to DIN, copper, 6 - 1000 mm²**



■ **For non-tension connections**

Characteristics

- acc. to DIN 46267, part 1
- With markings for correct crimping
- With buttmarks for precise cable insertion
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated

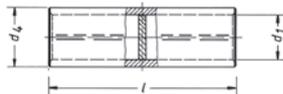
Order info

- Bright finish version also available, part number appendix "bk"

Nominal cross section mm ²	Part No.	Code	Dimension mm			Weight/100 pcs. ~ kg	pcs.
			d1	d4	l		
6	121R	5	3.8	5.5	30	0.31	100
10	122R	6	4.5	6.0	30	0.34	100
16	123R	8	5.5	8.5	50	1.45	100
25	124R	10	7.0	10.0	50	1.77	50
35	125R	12	8.2	12.5	50	2.89	50
50	126R	14	10.0	14.5	56	4.26	50
70	127R	16	11.5	16.5	56	5.41	50
95	128R	18	13.5	19.0	70	8.62	25
120	129R	20	15.5	21.0	70	9.66	25
150	130R	22	17.0	23.5	80	14.50	10
185	131R	25	19.0	25.5	85	17.00	10
240	132R	28	21.5	29.0	90	23.41	10
300	133R	32	24.5	32.0	100	29.23	5
400	134R	38	27.5	38.5	150	74.32	5
500	135R	42	31.0	42.0	160	89.09	1
625	136R	44	34.5	44.0	160	79.10	1
800	137R	52	40.0	52.0	200	151.00	1
1000	138R	58	44.0	58.0	200	198.00	1

ⓘ Reduction sleeves to connect different cross-sections can be found on page 73, reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 78



■ **Compression joints, copper, 16 - 625 mm²**

- For non-tension connections
- Barrier design with oil stop

Characteristics

- Tube dimension to DIN 46267 part 1
- With markings for correct crimping
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"

Nominal cross section mm ²	Part No.	Code	Dimension mm			Weight/100 pcs. ~ kg	pcs.
			d1	d4	l		
16	523R	8	5.5	8.5	50	1.54	25
25	524R	10	7.0	10.0	50	1.84	25
35	525R	12	8.2	12.5	50	2.99	25
50	526R	14	10.0	14.5	56	4.46	25
70	527R	16	11.5	16.5	56	5.61	25
95	528R	18	13.5	19.0	70	8.88	25
120	529R	20	15.5	21.0	70	10.06	5
150	530R	22	17.0	23.5	80	14.89	5
185	531R	25	19.0	25.5	85	17.57	5
240	532R	28	21.5	29.0	90	24.23	5
300	533R	32	24.5	32.0	100	30.15	5
400	534R	38	27.5	38.5	150	75.60	5
500	535R	42	31.0	42.0	160	92.00	1
625	536R	44	34.5	44.0	160	81.50	1

❗ Reduction sleeves to connect different cross-sections can be found on page 73, reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors, copper"

▶ Tool: see chart page 78

■ Compression joints, copper, 25 - 400 mm²



- For non-tension connections
- For copper medium-voltage cable connections 10-30 kV
- With bevelled edges for reduced winding expenditure for the assembly
- Also available as barrier design with oil stop

Characteristics

- With markings for correct crimping
- Annealed material optimises material and crimping properties
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- bright

Order info

- Tinned version also available, part number appendix "v"

Nominal cross section mm ²	Part No.	Code	Dimension mm		Number of crimps		Weight/100 pcs. ~ kg	pcs.
			d1	l	mech.	hydr.		
Normal version								
25	504R	12	7.5	60	2/2	1/1	4.08	10
35	505R	12	8.2	60	2/2	1/1	3.56	10
50	506R	14	10.0	65	3/3	1/1	4.90	10
70	507R	16	11.5	65	3/3	1/1	6.10	10
95	508R	18	13.5	90	4/4	2/2	10.98	10
120	509R	20	15.5	90	4/4	2/2	12.68	5
150	510R	22	17.0	105	4/4	2/2	18.09	5
185	511R	25	19.0	105	4/4	2/2	20.35	5
240	512R	28	21.5	125		2/2	31.64	5
300	513R	32	24.5	125		2/2	35.40	1
400	514R	38	27.5	160		3/3	75.42	1
Barrier Version								
25	504RLD	12	7.5	60	2/2	1/1	4.08	25
35	505RLD	12	8.2	60	2/2	1/1	3.56	10
50	506RLD	14	10.0	65	3/3	1/1	4.90	10
70	507RLD	16	11.5	65	3/3	1/1	6.40	10
95	508RLD	18	13.5	90	4/4	2/2	10.98	10
120	509RLD	20	15.5	90	4/4	2/2	12.68	5
150	510RLD	22	17.0	105	4/4	2/2	18.84	5
185	511RLD	25	19.0	105	4/4	2/2	20.35	5
240	512RLD	28	21.5	125		2/2	31.64	5
300	513RLD	32	24.5	125		2/2	35.40	1
400	514RLD	38	27.5	160		3/3	75.42	1

ⓘ Reduction sleeves for connecting different cross-sections can be found on page 73

▶ Tool: see chart page 78



■ Compression joints to DIN, copper, 6 - 300 mm²

■ For full tension cable connections



Characteristics

- Manufactured according to DIN 48085, part 1
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- bright



Nominal cross section mm ²	Part No.	Code	Conductor Ø	Dimension mm			Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
				d1	d4	l	mech.	hydr.		
6	*181R	6	3.00	3.5	6.5	65	4/4		1.4	10
10	182R	8	4.05	4.5	8.5	80	5/5		3.0	10
16	183R	8	5.10	5.5	8.5	95	5/5		2.8	10
25	184R	10	6.30	7.0	10.0	95	5/5		3.4	10
35	185R	12	7.50	8.2	12.5	95	5/5		5.6	10
50	186R	14	9.00	10.0	14.5	110	5/5		8.6	10
70	187R	16	10.50	11.5	16.5	110	5/5		10.8	10
95	188R	20	12.50	13.5	21.0	145	8/8	4/4	26.2	10
120	189R	22	14.00	15.0	23.5	160	8/8	4/4	36.8	10
150	190R	25	15.70	16.5	25.5	180	8/8	4/4	47.5	5
185	*191R	32	17.50	18.5	31.5	260		5/5	118.0	5
240	*192R	34	20.20	21.0	34.5	310		6/6	163.0	5
300	*193R	38	22.50	23.5	38.5	360		7/7	235.0	1

- ▶ * = Not standardised
- ▶ Tool: see chart page 78

■ Reduction sleeves, copper, 25 - 400 mm²

- For connecting different conductor cross-sections
- For use in DIN compression joints and connectors "standard type"
- For stranded conductors e.g. VDE 0295 Class 2



Characteristics

- For non-tension compression joints
- Precise screw ends for simple cable insertion

Material

- Copper to EN 13600

Surface

- bright



Nominal cross section mm ²		Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
from	to		d1	d4	l		
25	10	RH2510	4.6	6.6	25	0.358	25
25	16	RH2516	5.5	6.6	25	0.350	25

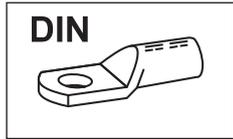
■ **Reduction sleeves, copper, 25 - 400 mm²**

Nominal cross section mm ²		Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
from	to		d1	d4	l		
35	10	RH3510	4.5	8.0	25	0.707	25
35	16	RH3516	5.5	8.0	25	0.570	25
35	25	RH3525	7.0	8.0	25	0.253	25
50	16	RH5016	5.5	9.5	33	1.326	25
50	25	RH5025	7.0	9.5	33	0.923	25
50	35	RH5035	8.5	9.5	33	0.404	25
70	25	RH7025	7.0	11.0	33	1.580	25
70	35	RH7035	8.5	11.0	33	1.102	25
70	50	RH7050	10.0	11.0	33	0.486	25
95	35	RH9535	8.5	13.0	45	2.940	25
95	50	RH9550	10.0	13.0	45	2.136	25
95	70	RH9570	11.5	13.0	45	1.100	25
120	50	RH12050	10.0	15.0	45	3.802	25
120	70	RH12070	11.5	15.0	45	2.874	25
120	95	RH12095	13.5	15.0	45	1.340	25
150	70	RH15070	11.5	16.5	53	5.008	5
150	95	RH15095	13.5	16.5	53	3.212	5
150	120	RH150120	15.5	16.5	53	1.248	5
185	95	RH18595	13.5	18.5	53	5.824	5
185	120	RH185120	15.5	18.5	53	3.756	5
185	150	RH185150	17.0	18.5	53	1.660	5
240	120	RH240120	15.5	21.0	55	7.412	5
240	150	RH240150	17.0	21.0	55	5.740	5
240	185	RH240185	19.0	21.0	55	3.036	5
300	150	RH300150	17.0	24.0	58	11.200	5
300	185	RH300185	19.0	24.0	58	8.390	5
300	240	RH300240	21.5	24.0	58	4.526	5
400	185	RH400185	19.0	27.0	80	20.100	5
400	240	RH400240	21.5	27.0	80	14.270	5
400	300	RH400300	24.5	27.0	80	8.800	5

 Please observe instructions on page i-7



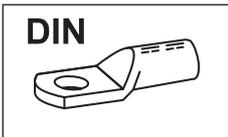
Copper compression cable lugs and connectors to DIN



■ Tool application chart

Compression cable lugs and compression joints

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
6-50	K05D		•						⬡	238
6-120	EK354					•			⬡	300
6-185	K18			•					⬡	248
	HK6018				•				⬡	270
	EK505L					•			⬡	302
	EK5018L					•			⬡	304
	PK18							•	⬡	336
	THK18						•		⬡	336
	HK60UNV + UA18				•				⬡	286
	EK60UNVL + UA18						•		⬡	330
	PK60UNV + UA18							•	⬡	354
6-240	K22			•					⬡	250
	HK6022				•				⬡	272
	EK6022L					•			⬡	306
	PK22							•	⬡	338
	THK22						•		⬡	338
	HK60UNV + UA22				•				⬡	286
	EK60UNVL + UA22						•		⬡	330
	PK60UNV + UA22							•	⬡	354
	HK12025				•				⬡	276
	HK12042				•				⬡	278
	HK120U				•				⬡	280
	EK12025L						•		⬡	312
	EK12042L						•		⬡	314
	EK120UL						•		⬡	316
	HK122EL220						•		⬡	366
	HK122EL380						•		⬡	366
	PK12042							•	⬡	342
PK120U							•	⬡	344	
10-120	K06D		•						⬡	240
16-95	K08D		•						⬡	239
16-625	HK252						•		⬡	364
	HK252EL220						•		⬡	367
	HK252EL380						•		⬡	367
	PK252							•	⬡	346
25-150	K09D		•						⬡	241
120-1000	HK45				•				⬡	365
	PK45							•	⬡	348



■ Tool application chart
Double compression cable lugs

Crimping range corresponds to nominal cross-section mm²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
2x50-2x70	K22			•					○	250
	HK6022				•				○	272
	EK6022L					•			○	306
	PK22							•	○	338
	THK22						•		○	338
	HK60UNV + UA22					•			○	286
	EK60UNVL + UA22						•		○	330
	PK60UNV + UA22							•	○	354
2x50-2x95	HK12025				•				○	276
	HK12042					•			○	278
	HK120U					•			○	280
	EK12025L						•		○	312
	EK12042L						•		○	314
	EK120UL						•		○	316
	HK122EL220						•		○	366
	HK122EL380						•		○	366
	PK12042							•	○	342
	PK120U							•	○	344
	2x50-2x120	HK252						•		○
HK252EL220							•		○	367
HK252EL380							•		○	367
PK252								•	○	346

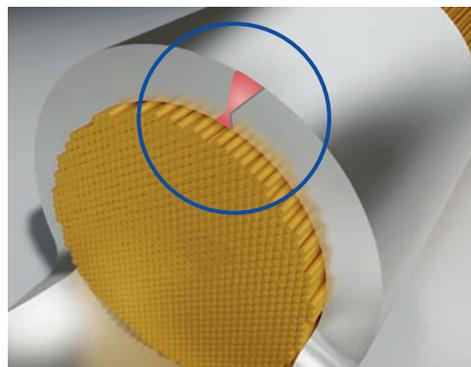
One design, a host of quality features.



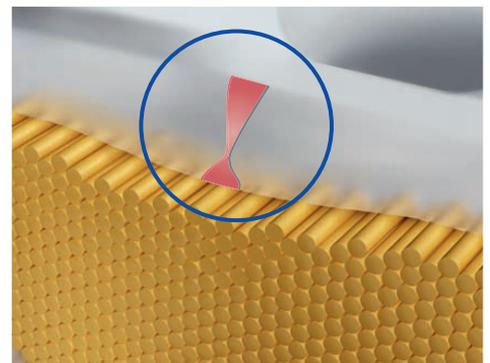
Terminals to DIN 46234 and pin cable lugs to DIN 46230.

Klauke terminals to DIN 46234 are the ideal solution for processing stranded, fine and finest stranded conductors. Depending on the application, also Klauke pin terminals to DIN 46230 offer a solution for stranded and fine stranded conductors. Special fork-type versions are also available.

All cable lugs are punched from highly conductive copper plate, hard soldered in the crimping area and equipped with a special grooved profile. The tin plated finish ensures optimised protection against oxidation. The material is designed for continuous operation up to 120 °C.



The hard-soldered crimping area guarantees optimised stability. Even after crimp operation and mechanical load the soldering does not show any sign of cracking.



- **Hard-soldered terminals and pin terminals with grooved profile in the crimping area.**
- **Versions with PA insulation free of halide.**
- **Special design for meter connection.**
- **Special connectors to DIN 46341 Form A and B.**



Quality in detail.

- ▶ With grooved profile on the inside.
- ▶ **Hard-soldered in the crimping area.**
- ▶ Terminals with nominal cross sections from 0.5 mm² to 240 mm².
- ▶ Pin terminals with nominal cross sections from 0.5 mm² to 95 mm².



Benefits:

- ▶ Higher tensile strength due to internal grooved profile.
- ▶ No chipping of terminals during indent crimping on the soldered seam.
- ▶ Multi, fine and superfine stranded conductors allow quick and trouble-free assembly.
- ▶ This comparatively short design is the ideal solution for control cabinet connections.

A host of advantages with polyamide insulation.



- ▶ Cable lugs with insulating sleeve free of halide.
- ▶ Bell entry allows "easy-entry".
- ▶ Burr-free edges.
- ▶ Entire surface tin plated.

Benefits:

- ▶ No hydrochloric acid-containing vapours in case of fire.
- ▶ **Fine stranded conductors can be inserted quickly** without individual wires being bent back.
- ▶ No reduction of cross section by bent wires.
- ▶ No damage of insulation during crimping.
- ▶ The connecting materials do not break even when crimping on the soldered seam.

▶ More on Page 84.

Meters to be connected better.

- ▶ Special designs for meter connection.

Benefits:

- ▶ The fork-type cable lugs can be connected to meters **quickly and simply**, even in tight areas.



▶ More on Page 88.

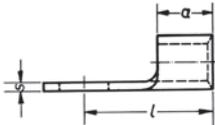
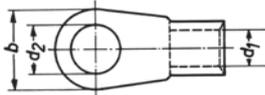


▶ We highly recommend indent crimping for terminals and pin terminals to guarantee optimal hold. Specific information can be found in the cross references on the product pages.



Solderless terminals to DIN, copper, 0.5 - 240 mm²

■ For conductors, e.g. to VDE 0295 Class 2, 5 and 6



Characteristics

- Manufactured according to DIN 46234
- hard soldered in crimping area
- With grooved profile for improved contact characteristics

Material

- Cu-ETP

Surface

- tin plated

Nominal cross section mm ²	Nominal size to DIN	Part No.	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
			d1	d2	b	l	a	s		
0.5 - 1	2.5 - 1	162025	1.6	2.8	6	11	5	0.8	0.060	100
	3 - 1	16203	1.6	3.2	6	11	5	0.8	0.060	100
	3.5 - 1	162035	1.6	3.7	6	11	5	0.8	0.055	100
	4 - 1	16204	1.6	4.3	8	12	5	0.8	0.070	100
	5 - 1	16205	1.6	5.3	10	13	5	0.8	0.090	100
	6 - 1	*16206	1.6	6.5	11	15	5	0.8	0.080	100
	8 - 1	*16208	1.6	8.4	14	17	5	0.8	0.130	100
	10 - 1	*162010	1.6	10.5	18	19	5	0.8	0.130	100
1.5 - 2.5	3 - 2.5	16303	2.3	3.2	6	11	5	0.8	0.065	100
	3.5 - 2.5	163035	2.3	3.7	6	11	5	0.8	0.065	100
	4 - 2.5	16304	2.3	4.3	8	12	5	0.8	0.080	100
	5 - 2.5	16305	2.3	5.3	10	14	5	0.8	0.090	100
	6 - 2.5	16306	2.3	6.5	11	16	5	0.8	0.110	100
	8 - 2.5	16308	2.3	8.4	14	17	5	0.8	0.130	100
	10 - 2.5	*163010	2.3	10.5	15	17	5	0.8	0.160	100
	12 - 2.5	*163012	2.3	13.0	18	19	5	0.8	0.160	100
4 - 6	4 - 6	16504	3.6	4.3	8	14	6	1.0	0.140	100
	5 - 6	16505	3.6	5.3	10	15	6	1.0	0.160	100
	6 - 6	16506	3.6	6.5	11	16	6	1.0	0.170	100
	8 - 6	16508	3.6	8.4	14	19	6	1.0	0.220	100
	10 - 6	165010	3.6	10.5	18	21	6	1.0	0.290	100
	12 - 6	*165012	3.6	13.0	18	21	6	1.0	0.280	100
10	5 - 10	16525	4.5	5.3	10	16	8	1.1	0.230	100
	6 - 10	16526	4.5	6.5	11	17	8	1.1	0.240	100
	8 - 10	16528	4.5	8.4	14	20	8	1.1	0.290	100
	10 - 10	165210	4.5	10.5	18	21	8	1.1	0.340	100
	12 - 10	165212	4.5	13.0	22	23	8	1.1	0.420	100
16	5 - 16	16535	5.8	5.3	11	20	10	1.2	0.390	100
	6 - 16	16536	5.8	6.5	11	20	10	1.2	0.380	100
	8 - 16	16538	5.8	8.4	14	22	10	1.2	0.430	100
	10 - 16	165310	5.8	10.5	18	24	10	1.2	0.500	100
	12 - 16	165312	5.8	13.0	22	26	10	1.2	0.580	100
25	5 - 25	16545	7.5	5.3	12	25	11	1.5	0.750	100
	6 - 25	16546	7.5	6.5	12	25	11	1.5	0.690	100
	8 - 25	16548	7.5	8.4	16	25	11	1.5	0.750	100
	10 - 25	165410	7.5	10.5	18	26	11	1.5	0.760	100
	12 - 25	165412	7.5	13.0	22	31	11	1.5	0.920	100
	16 - 25	165416	7.5	17.0	28	35	11	1.5	1.320	100

■ **Solderless terminals to DIN, copper, 0.5 - 240 mm²**

Nominal cross section mm ²	Nominal size to DIN	Part No.	Dimension mm						Weight/100 pcs. ~ kg	pcs.
			d1	d2	b	l	a	s		
35	6 - 35	16556	9.0	6.5	15	26	12	1.6	1.010	100
	8 - 35	16558	9.0	8.4	16	26	12	1.6	0.980	100
	10 - 35	165510	9.0	10.5	18	27	12	1.6	1.000	100
	12 - 35	165512	9.0	13.0	22	31	12	1.6	1.260	100
	16 - 35	165516	9.0	17.0	28	36	12	1.6	1.550	100
50	6 - 50	16566	11.0	6.5	18	34	16	1.8	1.650	100
	8 - 50	16568	11.0	8.4	18	34	16	1.8	1.650	100
	10 - 50	165610	11.0	10.5	18	34	16	1.8	1.600	100
	12 - 50	165612	11.0	13.0	22	36	16	1.8	1.800	100
	16 - 50	165616	11.0	17.0	28	40	16	1.8	2.100	100
70	6 - 70	16576	13.0	6.5	22	38	18	2.0	2.600	50
	8 - 70	16578	13.0	8.4	22	38	18	2.0	2.500	50
	10 - 70	165710	13.0	10.5	22	38	18	2.0	2.500	50
	12 - 70	165712	13.0	13.0	22	38	18	2.0	2.400	50
	16 - 70	165716	13.0	17.0	28	42	18	2.0	2.700	50
95	8 - 95	16588	15.0	8.4	24	42	20	2.5	4.300	50
	10 - 95	165810	15.0	10.5	24	42	20	2.5	4.100	50
	12 - 95	165812	15.0	13.0	24	42	20	2.5	3.900	50
	16 - 95	165816	15.0	17.0	28	44	20	2.5	4.100	50
120	8 - 120	16598	17.0	8.4	24	44	22	3.0	5.601	50
	10 - 120	165910	17.0	10.5	24	44	22	3.0	5.600	50
	12 - 120	165912	17.0	13.0	24	44	22	3.0	5.400	50
	16 - 120	165916	17.0	17.0	28	48	22	3.0	5.800	50
150	10 - 150	166010	19.0	10.5	30	50	24	3.2	7.600	50
	12 - 150	166012	19.0	13.0	30	50	24	3.2	7.600	50
	16 - 150	166016	19.0	17.0	30	50	24	3.2	7.500	50
185	12 - 185	166112	21.0	13.0	36	50	28	3.5	11.300	50
	16 - 185	166116	21.0	17.0	36	50	28	3.5	11.300	50
240	12 - 240	166212	23.5	13.0	38	56	32	4.0	15.900	25
	16 - 240	166216	23.5	17.0	38	56	32	4.0	15.900	25

- ▶ * = Not standardised
- ▶ Tool: see chart page 91



Insulated solderless terminals, copper, 10 - 150 mm²

- For conductors, e.g. to VDE 0295 Class 2, 5 and 6
- Is directly crimped with the insulation

Characteristics

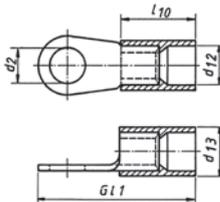
- Insulating sleeve PA, free of halide with easy-entry cable insertion
- Dimensions in tube according to DIN 46234
- With grooved profile for improved contact characteristics
- hard soldered in crimping area

Material

- Cu-ETP

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Dimension mm					weight		pcs.
			d13	d2	d12	G11	l10	100 pcs. ~ kg Cu	Total	
10	6525	■	8.6	5.3	6.7	34.0	19.0	0.27	0.27	100
	6526	■	8.6	6.5	6.7	34.0	19.0	0.24	0.28	100
	6528	■	8.6	8.4	6.7	37.5	19.0	0.29	0.33	100
	65210	■	8.6	10.5	6.7	41.5	19.0	0.34	0.38	100
	65212	■	8.6	13.0	6.7	45.5	19.0	0.42	0.46	100
16	6535	■	9.6	5.3	7.7	39.5	20.5	0.39	0.44	100
	6536	■	9.6	6.5	7.7	39.5	20.5	0.38	0.43	100
	6538	■	9.6	8.4	7.7	41.5	20.5	0.43	0.48	100
	65310	■	9.6	10.5	7.7	43.5	20.5	0.50	0.55	100
	65312	■	9.6	13.0	7.7	50.5	20.5	0.58	0.63	100
25	6545	■	13.0	5.3	11.0	40.0	20.0	0.75	0.84	50
	6546	■	13.0	6.5	11.0	42.5	20.0	0.69	0.78	50
	6548	■	13.0	8.4	11.0	43.0	20.0	0.75	0.84	50
	65410	■	13.0	10.5	11.0	45.0	20.0	0.80	0.89	50
	65412	■	13.0	13.0	11.0	51.0	20.0	0.92	1.00	50
	65416	■	13.0	17.0	11.0	59.0	20.0	1.32	1.40	50
35	6556	■	15.0	6.5	12.7	44.0	22.5	1.01	1.14	50
	6558	■	15.0	8.4	12.7	44.5	22.5	0.98	1.10	50
	65510	■	15.0	10.5	12.7	46.5	22.5	1.00	1.12	50
	65512	■	15.0	13.0	12.7	52.5	22.5	1.26	1.38	50
	65516	■	15.0	17.0	12.7	54.5	22.5	1.55	1.67	50
50	6566	■	18.0	6.5	15.4	54.5	27.5	1.65	1.90	50
	6568	■	18.0	8.4	15.4	60.5	27.5	1.65	1.90	50
	65610	■	18.0	10.5	15.4	60.5	27.5	1.60	1.85	50
	65612	■	18.0	13.0	15.4	60.5	27.5	1.80	2.05	50
	65616	■	18.0	17.0	15.4	67.5	27.5	2.10	2.35	50
70	6576	■	20.0	6.5	17.4	61.5	30.5	2.60	2.90	50
	6578	■	20.0	8.4	17.4	61.5	30.5	2.50	2.80	50
	65710	■	20.0	10.5	17.4	66.5	30.5	2.50	2.80	50
	65712	■	20.0	13.0	17.4	66.5	30.5	2.40	2.70	50
	65716	■	20.0	17.0	17.4	70.5	30.5	2.70	3.00	50
95	65810	■	23.5	10.5	20.5	70.0	34.0	4.10	4.50	25
	65812	■	23.5	13.0	20.5	70.0	34.0	3.90	4.40	25
	65816	■	23.5	17.0	20.5	76.0	34.0	4.10	4.50	25
120	65910	■	26.7	10.5	23.5	79.0	36.0	5.60	6.10	25
	65912	■	26.7	13.0	23.5	82.0	36.0	5.40	5.90	25
	65916	■	26.7	17.0	23.5	90.0	36.0	5.80	6.30	25

■ **Insulated solderless terminals, copper, 10 - 150 mm²**

Nominal cross section mm ²	Part No.	Colour	Dimension mm					weight		pcs.
			d13	d2	d12	Gl1	l10	100 pcs. Cu	~ kg Total	
150	66010	■	29.2	10.5	26.0	80.0	39.0	7.60	8.40	25
	66012	■	29.2	13.0	26.0	83.0	39.0	7.60	8.40	25
	66016	■	29.2	17.0	26.0	83.0	39.0	7.50	8.30	25

► Tool: see chart page 93

■ **Insulated pin terminals, copper, 10 - 95 mm²**



- For conductors, e.g. VDE 0295, Class 2
- Is directly crimped with the insulation

Characteristics

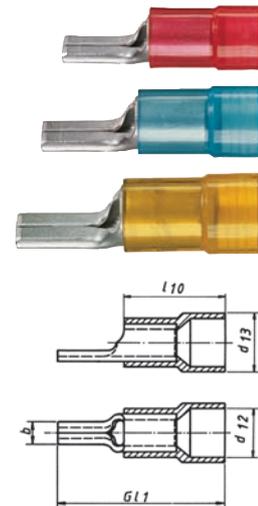
- hard soldered in crimping area
- Insulating sleeve PA, free of halide with easy-entry cable insertion
- With grooved profile for improved contact characteristics

Material

- Cu-ETP

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Dimension mm					weight		pcs.
			d13	d12	b	Gl1	l10	100 pcs. Cu	~ kg Total	
10	ST1716IS	■	9.4	7.4	4.3	33.0	19.0	0.27	0.31	100
16	ST1717IS	■	10.6	8.6	5.5	38.0	20.0	0.39	0.44	100
25	ST1718IS	■	14.5	12.5	6.8	43.5	23.5	0.63	0.73	50
35	ST1719IS	■	16.4	14.0	8.0	51.5	27.5	1.17	1.34	50
50	ST1720IS	■	18.0	15.5	9.5	59.0	33.0	1.79	2.10	50
70	ST1721IS	■	20.5	18.0	11.0	69.0	38.0	2.92	3.20	50
95	ST1722IS	■	23.5	20.7	12.5	71.0	40.0	4.30	4.70	25

► Tool: see chart page 93



■ **Solderless terminals, copper, 0.5 - 16 mm²**
fork type

■ **Rapid assemble through direct screw-mounting**

Characteristics

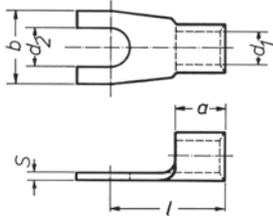
- Dimensions in tube up to 6 mm² according to DIN 46234
- hard soldered in crimping area
- With grooved profile for improved contact characteristics

Material

- Cu-ETP

Surface

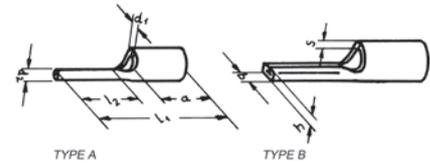
- tin plated



Nominal cross section mm ²	Nominal size to DIN	Part No.	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
			d1	d2	b	l	a	s		
0.5 - 1	3 - 1	1620C3	1.6	3.2	6.0	11.0	5.0	0.8	0.060	100
	3.5 - 1	1620C35	1.6	3.7	6.0	11.0	5.0	0.8	0.060	100
	4 - 1	1620C4	1.6	4.3	6.8	12.0	5.0	0.8	0.070	100
	5 - 1	1620C5	1.6	5.3	10.0	13.0	5.0	0.8	0.090	100
	6 - 1	1620C6	1.6	6.5	11.0	15.0	5.0	0.8	0.080	100
1.5 - 2.5	3 - 2.5	1630C3	2.3	3.2	5.5	13.8	5.0	0.8	0.065	100
	3.5 - 2.5	1630C35	2.3	3.7	6.0	11.0	5.0	0.8	0.065	100
	4 - 2.5	1630C4	2.3	4.3	6.8	12.0	5.0	0.8	0.080	100
	5 - 2.5	1630C5	2.3	5.3	10.0	14.0	5.0	0.8	0.090	100
	6 - 2.5	1630C6	2.3	6.5	11.0	16.0	5.0	0.8	0.110	100
4 - 6	4 - 6	1650C4	3.6	4.3	8.0	14.0	6.0	1.0	0.140	100
	5 - 6	1650C5	3.6	5.3	10.0	15.0	6.0	1.0	0.160	100
	6 - 6	1650C6	3.6	6.5	11.0	16.0	6.0	1.0	0.170	100
	8 - 6	1650C8	3.6	8.4	14.0	19.0	6.0	1.0	0.220	100
	10 - 6	1650C10	3.6	10.5	18.0	21.0	6.0	1.0	0.280	100
10	5 - 10	1652C5	4.3	5.3	10.0	19.0	10.0	1.0	0.240	100
	6 - 10	1652C6	4.3	6.4	11.0	21.0	10.0	1.0	0.260	100
16	6 - 16	1653C6	5.4	6.4	11.0	24.0	11.5	1.0	0.350	100
	8 - 16	1653C8	5.4	8.4	15.0	27.0	11.5	1.0	0.420	100

► Tool: see chart page 91

■ **Pin terminals lugs according to DIN, copper, 0.5 - 95 mm²**



- For conductors e.g. VDE 0295 Class 2
- Is directly crimped with the insulation

Characteristics

- Nominal cross sections 0.5 - 6 mm² manufactured according to DIN 46230
- hard soldered in crimping area
- With grooved profile for improved contact characteristics

Material

- Cu-ETP

Surface

- tin plated

Nominal cross section mm ²	Nominal size to DIN	Part No.	Type	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
				d1	d2	b	h	l1	l2	a	s		
0.5 - 1	1	ST1705	A	1.8	1,9	--	--	17.0	10	5.0	0.8	0.060	100
1.5 - 2.5	2.5	ST1710	A	2.3	1,9	--	--	17.0	10	5.0	0.8	0.072	100
4 - 6	6	ST1715	A	3.6	2,7	--	--	20.0	11	6.0	1.0	0.160	100
10	--	*ST1716	B	4.3	--	4,3	2,0	24.5	11	10.0	1.0	0.270	100
16	--	*ST1717	B	5.4	--	5,8	2,0	29.5	15	11.5	1.0	0.390	100
25	--	*ST1718	B	6.7	--	6,8	2,4	33.5	15	13.5	1.2	0.630	100
35	--	*ST1719	B	8.2	--	8,0	3,2	40.5	20	16.0	1.5	1.170	50
50	--	*ST1720	B	9.5	--	9,5	3,6	45.0	20	19.0	1.8	1.790	50
70	--	*ST1721	B	11.2	--	11,0	4,0	55.0	23	24.0	2.0	2.920	50
95	--	*ST1722	B	13.5	--	12,5	5,0	55.0	23	24.0	2.5	4.300	50

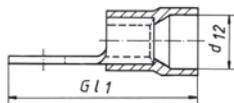
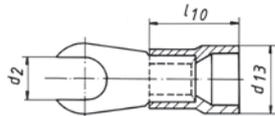
- ▶ * = Not standardised
- ▶ Tool: see chart page 91



- Insulated solderless terminals, copper, 10 - 16 mm² fork type



- Rapid assemble through direct screw-mounting
- Special design for meter connection
- Is directly crimped with the insulation



Characteristics

- With grooved profile for improved contact characteristics
- hard soldered in crimping area
- Insulating sleeve PA, free of halide

Material

- Cu-ETP

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm					weight		pcs.
			d13	d2	d12	G l 1	l10	100 pcs. ~ kg Cu	kg Total	
10	652C5	■	9.6	5.3	7.0	33.5	19.0	0.24	0.28	100
	652C6	■	9.6	6.4	7.0	33.5	19.0	0.26	0.30	100
16	653C6	■	10.6	6.4	8.6	37.5	20.5	0.35	0.40	100
	653C8	■	10.6	8.4	8.6	37.5	20.5	0.42	0.47	100

▶ Tool: see chart page 93

■ **Solderless connector to DIN, copper, 0.5 - 150 mm²**



- For connecting different conductor cross-sections

Characteristics

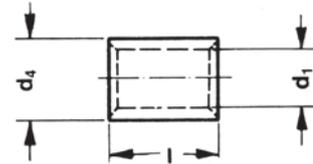
- Manufactured according to DIN 46341, part 1, form A

Material

- Copper to EN 13 600

Surface

- tin plated



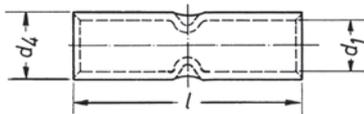
Nominal cross section mm ²	Nominal size to DIN	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
			d1	d4	l		
0.5 - 1	1	1620K	1.6	3.2	8	0.045	100
1.5 - 2.5	2.5	1630K	2.3	3.9	8	0.055	100
4 - 6	6	1650K	3.6	5.6	9	0.090	100
10	10	1652K	4.5	6.7	10	0.170	100
16	16	1653K	5.8	8.2	11	0.260	100
25	25	1654K	7.5	10.5	14	0.510	100
35	35	1655K	9.0	12.2	16	0.730	100
50	50	1656K	11.0	14.6	19	1.200	100
70	70	1657K	13.0	17.0	19	1.530	50
95	95	1658K	15.0	20.0	20	2.370	50
120	120	1659K	16.5	22.5	22	3.450	50
150	150	1660K	19.0	25.4	26	5.060	50

► Tool: see chart page 91



■ **Solderless connector to DIN, copper, 0.5 - 150 mm²**

- For conductors, e.g. VDE 0295 Class 2, 5 and 6
- With buttmarks for precise cable insertion



Characteristics

- Manufactured according to DIN 46341, part 1, form B

Material

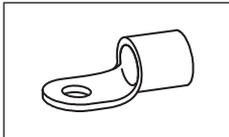
- Copper to EN 13 600

Surface

- tin plated

Nominal cross section mm ²	Nominal size to DIN	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
			d1	d4	l		
0.5 - 1	1	1620L	1.6	3.2	15	0.08	100
1.5 - 2.5	2.5	1630L	2.3	3.9	15	0.10	100
4 - 6	6	1650L	3.6	5.6	15	0.19	100
10	10	1652L	4.5	6.7	21	0.36	100
16	16	1653L	5.8	8.2	26	0.62	100
25	25	1654L	7.5	10.5	29	1.11	100
35	35	1655L	9.0	12.2	32	1.50	100
50	50	1656L	11.0	14.6	38	2.44	100
70	70	1657L	13.0	17.0	42	3.54	50
95	95	1658L	15.0	20.0	48	5.87	50
120	120	1659L	16.5	22.5	52	8.46	50
150	150	1660L	19.0	25.4	56	10.86	50

► Tool: see chart page 91



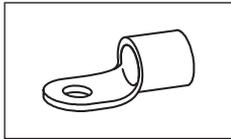
■ **Tool application chart**

**Solderless terminals to DIN 46234,
pin terminals to DIN 46230,
solderless connectors to DIN 46341, part 1**

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-6	K13		•							232
0.5-10	K50			•						245
	EK1550					•				294
	EK1550G					•				296
0.5-16	K25		•							234
0.75-2.5	KP1	+KP232		•						242
	KP1L	+KP232		•						242
	EKP1	+KP232				•				298
	TEKP1	+KP232		•						263
	KPM15	+KP232		•						264
4-10	KP1	+KP242		•						242
	KP1L	+KP242		•						242
	EKP1	+KP242				•				298
	TEKP1	+KP242		•						263
	KPM15	+KP242		•						264
10-35	EK354					•				300
10-50	EK505L					•				302
10-70	K18			•						248
	HK6018				•					270
	EK5018L					•				304
	PK18							•		336
	THK18						•			336
	HK60UNV	+ UA18			•					286
	EK60UNVL	+ UA18				•				330
	PK60UNV	+ UA18						•		354
	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
	THK22						•			338
	HK60UNV	+ UA22			•					286
	EK60UNVL	+ UA22				•				330
PK60UNV	+ UA22						•		354	
16-95	K95		•							234
	TK95		•							235

See next page

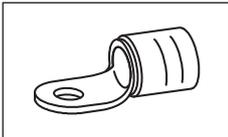
Terminals, connectors and pin terminals to DIN - Cu



■ **Tool application chart**

**Solderless terminals to DIN 46234,
pin terminals to DIN 46230,
solderless connectors to DIN 46341, part 1**

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
16-150	HK12025				•				☺	276
	HK12042				•				☺	278
	HK120U				•				☺	280
	EK12025L					•			☺	312
	EK12042L					•			☺	314
	EK120UL					•			☺	316
	HK122EL220						•		☺	366
	HK122EL380						•		☺	366
	PK12042							•	☺	342
	PK120U							•	☺	344
16-240	HK252						•		☺	364
	HK252EL220						•		☺	367
	HK252EL380						•		☺	367
	PK252							•	☺	346



■ **Tool application chart**

Insulated solderless terminals
Insulated pin terminals

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-16	K16		•						○	226
	K50			•					○	245
	EK1550					•			○	294
	EK1550G					•			○	296
	EK354						•		☾	300
10-50	K18			•					☾	248
	HK6018				•				☾	270
	EK5018L					•			☾	304
	PK18							•	☾	336
	THK18						•		☾	336
	HK60UNV + UA18				•				☾	286
	EK60UNVL + UA18					•			☾	330
	PK60UNV + UA18							•	☾	354
10-70	K22			•					☾	250
	HK6022				•				☾	272
	EK6022L					•			☾	306
	PK22							•	☾	338
	THK22						•		☾	338
	HK60UNV + UA22				•				☾	286
	EK60UNVL + UA22					•			☾	330
	PK60UNV + UA22							•	☾	354
10-95	HK12025				•				☾	276
	HK12042				•				☾	278
	HK120U				•				☾	280
	EK12025L					•			☾	312
	EK12042L					•			☾	314
	EK120UL					•			☾	316
	PK12042							•	☾	342
	PK120U							•	☾	344
10-150	HK252						•		☾	364
	HK252EL220						•		☾	367
	PK252							•	☾	346

Delivers compacted conductors to volume.

Sleeves for copper compacted round conductors and sector- shaped conductors.

The cross section dimensions of compacted round conductors are smaller than at normal round conductors at the same cross section. This causes problems with cable assembly as the cable lug or connector cannot be fitted as specified in the standards.

Problems occur with sector shaped conductors when round connecting material is applied to sector shaped conductors. Often, both cable lugs and connectors are damaged – or the conductors splice. The conductors can be crimped using sleeves for sector-shaped conductors, making them easier to process.

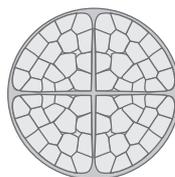


- For cables with compacted round conductors.
- For 3 core sector-shaped cables (120° angle).
- For 4 core sector-shaped cables (90° angle).

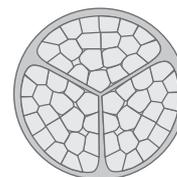


Crimping sector sleeves in three steps.

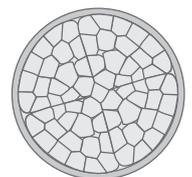
The appropriate cable types for our sleeves in cross section:



4 core sector-shaped cables



3 core sector-shaped cables



compacted round conductors

■ A nice piece of work *for compacted conductors.*

- ▶ **Sleeves for cross section compensation** on cables with compacted conductors with nominal cross sections up to 400 mm².
- ▶ For copper tubular and compression cable lugs and connectors.

Benefits:

- ▶ Connecting materials can be efficiently crimped onto compacted conductors using Klauke crimping tools - faulty connections are impossible.
- ▶ Existing crimping tools can be used. Storing of additional connecting material or expensive special solutions does not apply.



■ *Bringing sector-shaped conductors into the right form.*

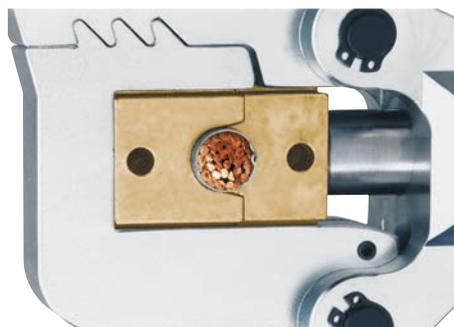
- ▶ Sleeves for sector-shaped conductors with nominal cross sections up to 240 mm².
- ▶ For 3 and 4 core sector-shaped conductors with respective angles of 120° and 90°.

Benefits:

- ▶ 3 and 4 core sector-shaped conductors with nominal cross sections up to 240 mm² can be crimped round without splicing and then processed using standard connecting materials.
- ▶ No special cable lugs or special tools required.
- ▶ *More on Page 98.*



- ▶ *To guarantee optimum hold of sleeves for compacted or sector-shaped conductors and connecting materials, the sleeves must be crimped onto the conductors using pre-rounding dies.*



Afterwards connecting material can be crimped in the usual manner.

Sleeves for compacted conductors and sector-shaped conductors, Cu



■ **Sleeves for compacted conductors, copper, 16 - 400 mm²**

For tubular cable lugs and connectors "standard type"

- For stranded, compacted conductors e.g. VDE 0295 Class 2
- Allows the usage of the Klauke Standard and DIN - Materials on compacted conductors

Characteristics

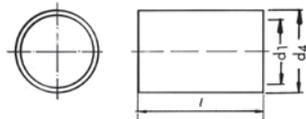
- Annealed material optimises material and crimping properties

Material

- Copper to EN 13600

Surface

- tin plated

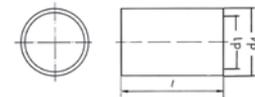


Nominal cross section mm ²	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
		d1	d4	l		
16	VHR16	5.0	5.3	11	0.024	100
25	VHR25	6.4	6.7	14	0.038	100
35	VHR35	7.7	8.2	15	0.083	100
50	VHR50	9.0	9.5	18	0.118	50
70	VHR70	10.6	11.2	19	0.173	50
95	VHR95	12.4	13.0	21	0.223	50
120	VHR120	13.9	14.5	22	0.261	50
150	VHR150	15.4	16.0	26	0.342	25
185	VHR185	17.6	18.2	26	0.396	25
240	VHR240	19.9	20.5	30	0.508	25
300	VHR300	22.4	23.0	38	0.723	10
400	VHR400	25.4	26.2	38	1.108	10

ⓘ Please observe instructions on page i-7

■ **Sleeves for compacted conductors, copper, 16 - 400 mm²**

For tubular compression cable lugs and connectors "DIN-type"



- For stranded, compacted conductors e.g. VDE 0295 Class 2
- Allows the usage of the Klauke Standard and DIN - Materials on compacted conductors

Characteristics

- Annealed material optimises material and crimping properties

Material

- Copper to EN 13600

Surface

- tin plated

Nominal cross section mm ²	Part No.	Dimension mm			Weight/100 pcs. ~ kg	pcs.
		d1	d4	l		
16	VHD16	5.0	5.3	16	0.035	100
25	VHD25	6.4	6.7	16	0.043	100
35	VHD35	7.7	8.2	17	0.094	100
50	VHD50	9.0	9.5	23	0.151	50
70	VHD70	10.6	11.2	24	0.219	50
95	VHD95	12.4	13.0	28	0.298	50
120	VHD120	13.9	14.5	30	0.357	50
150	VHD150	15.4	16.0	30	0.395	25
185	VHD185	17.6	18.2	38	0.579	25
240	VHD240	19.9	20.5	38	0.645	25
300	VHD300	22.4	23.0	48	0.913	5
400	VHD400	25.4	26.2	58	1.692	5

ⓘ Please observe instructions on page i-7

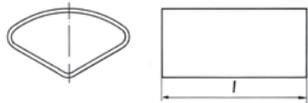
Sleeves for compacted conductors and sector-shaped conductors, Cu



■ **Sleeves for sector shaped conductors, copper, 35 - 240 mm²**

For tubular compression cable lugs and connectors "standard type" and "DIN-type"

- For 3-core sector shaped conductor (120° angle)
- Prevents sector shaped conductors from splicing during pre-rounding



Characteristics

- Annealed material optimises material and crimping properties

Material

- Copper to EN 13600

Surface

- tin plated

Nominal cross section mm ²	Part No.	mm l	Weight/ 100 pcs. ~ kg	pcs.
standard type				
35	VHR353	14	0.08	100
50	VHR503	17	0.17	50
70	VHR703	18	0.29	50
95	VHR953	22	0.45	50
120	VHR1203	23	0.49	50
150	VHR1503	25	0.58	25
185	VHR1853	25	0.80	25
240	VHR2403	30	1.04	25
DIN-Design				
35	VHD353	17.5	0.11	100
50	VHD503	25.0	0.26	50
70	VHD703	25.0	0.39	50
95	VHD953	32.0	0.66	50
120	VHD1203	32.0	0.68	50
150	VHD1503	32.0	0.74	25
185	VHD1853	35.0	1.13	25
240	VHD2403	35.0	1.22	25

ⓘ Please observe instructions on page i-7. Pre-rounding dies see Chapter "Crimping dies"

■ **Sleeves for sector shaped conductors, copper, 35 - 240 mm²**

For tubular compression cable lugs and connectors "standard type" and "DIN-type"



- For 4-core sector shaped conductor (90° angle)
- Prevents sector shaped conductors from splicing during pre-rounding

Characteristics

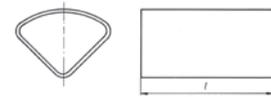
- Annealed material optimises material and crimping properties

Material

- Copper to EN 13600

Surface

- tin plated



Nominal cross section mm ²	Part No.	Dim. mm l	Weight/ 100 pcs. ~ kg	pcs.
standard type				
35	VHR354	14	0.13	100
50	VHR504	17	0.17	50
70	VHR704	18	0.28	50
95	VHR954	22	0.40	50
120	VHR1204	23	0.51	50
150	VHR1504	25	0.57	25
185	VHR1854	25	0.78	25
240	VHR2404	30	0.85	25
DIN-Design				
35	VHD354	17.5	0.11	100
50	VHD504	25.0	0.25	50
70	VHD704	25.0	0.38	50
95	VHD954	32.0	0.63	50
120	VHD1204	32.0	0.71	50
150	VHD1504	32.0	0.73	25
185	VHD1854	35.0	1.09	25
240	VHD2404	35.0	1.00	25

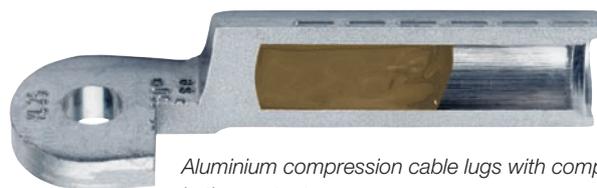
ⓘ Please observe instructions on page i-7. Pre-rounding dies see Chapter "Crimping dies"

Aluminium Optimised connections.

Aluminium compression cable lugs and connectors to DIN.

Due to their significantly lower dead weight aluminium conductors are becoming increasingly popular in power distribution applications.

The material structure is very different to copper. That's why appropriate cable lugs and connectors are required. Connecting material for aluminium comes with a special compound. During crimping this compound destroys the non-conductive oxide layer of aluminium in the crimping area allowing a perfect electrical connection.



Aluminium compression cable lugs with compound in the contact area.

- Aluminium cable lugs with DIN dimensions up to 500 mm².
- Compression cable lug with barrier to DIN 46239.
- Compression joints to DIN 46267, part 2.
- Compression joints for medium-voltage applications up to 30 kV.
- Tin plated version for connecting to copper rails.



Aluminium compression cable lugs are frequently used in power distribution.

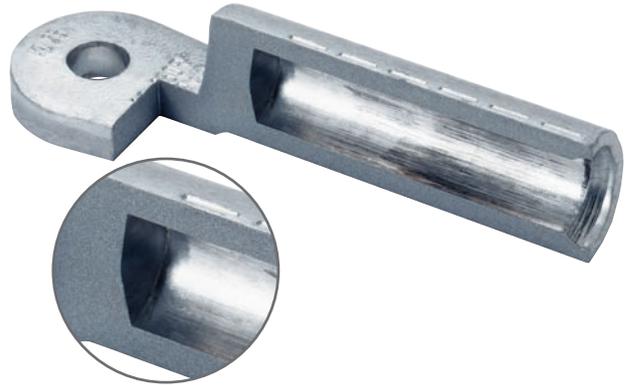


■ The right product for every aluminium conductor.

- ▶ Nominal cross sections up to 500 mm².
- ▶ **Barrier design with oil stop.**
- ▶ Tin plated designs with 20 µm layer thickness.

Benefits:

- ▶ The Klauke range offers aluminium DIN compression cable lugs to suit every application.
- ▶ The quality tin plating ensures connections to copper rails in a dry environment.



■ A quality range.



- ▶ Defined, **unique material properties** to Klauke standards.
- ▶ DIN-compliant dimensions.
- ▶ Consistent material thickness, precise diameters and accurate fit mean optimised processing and ultimate safety.

Benefits:

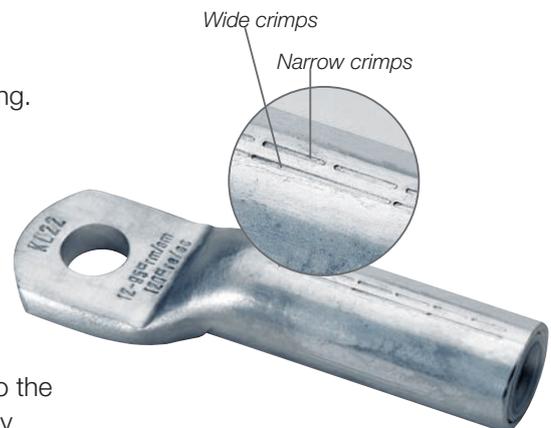
- ▶ When professionally installed the connecting material ensures optimised stability even with mechanically stressed or severely vibrating connections.
- ▶ Less repair and maintenance thanks to safe connections.
- ▶ More applications, e.g. power distribution.

■ With markings for the crimping operation.

- ▶ All DIN compression cable lugs have markings for correct crimping.
- ▶ Markings **for narrow and wide crimps.**
- ▶ Crimping dies designed for aluminium with larger contact areas than dies for copper connecting materials.

Benefits:

- ▶ You identify at a glance where and how often the connecting material has to be crimped. Errors are practically impossible.
- ▶ Dies with larger crimping width crimp wider areas of cable lugs to the conductor which compensates for aluminium's lower conductivity.



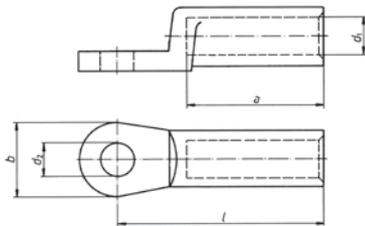
- ▶ *The compound in aluminium compression cable lugs improves the contact properties by piercing the non-conductive oxide layer. The compound also prevents oxygen penetrating the contact points avoiding re-oxidation.*



■ Compression cable lugs to DIN, Al 16 - 500 mm²



- For non-tension connections of Al cables to DIN 48201, part 1 and aluminium cables to DIN EN 50182
- Barrier design with oil stop
- Optional tin plated (20 µm) version to connect interior copper bus-bars



Characteristics

- Manufactured according to DIN 46329
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al

Surface

- bright

Order info

- Part number appendix for tinned version "v"

Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm					Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
rm/sm	se				d1	d2	b	l	a	mech.	hydr.		
16	25	M 8	*263R8	12	5.8	8.4	20	50	30	4	2	1.20	4
	25	M 10	*263R10	12	5.8	10.5	20	50	30	4	2	1.20	4
25	35	M 8	264R8	12	6.8	8.4	25	50	30	4	2	1.30	4
	35	M 10	264R10	12	6.8	10.5	25	50	30	4	2	1.24	4
	35	M 12	264R12	12	6.8	13.0	25	50	30	4	2	1.22	4
35	50	M 8	265R8	14	8.0	8.4	25	62	42	5	2	2.50	4
	50	M 10	265R10	14	8.0	10.5	25	62	42	5	2	1.98	4
	50	M 12	265R12	14	8.0	13.0	25	62	42	5	2	2.50	4
50	70	M 8	266R8	16	9.8	8.4	25	62	42	5	2	2.75	4
	70	M 10	266R10	16	9.8	10.5	25	62	42	5	2	2.70	4
	70	M 12	266R12	16	9.8	13.0	25	62	42	5	2	2.65	4
70	95	M 8	267R8	18	11.2	8.4	25	72	52	6	3	3.45	4
	95	M 10	267R10	18	11.2	10.5	25	72	52	6	3	3.80	4
	95	M 12	267R12	18	11.2	13.0	25	72	52	6	3	3.35	4
95	120	M 10	268R10	22	13.2	10.5	25	75	56	6	3	6.90	4
	120	M 12	268R12	22	13.2	13.0	25	75	56	6	3	4.92	4
	120	M 16	*268R16	22	13.2	17.0	25	75	56	6	3	6.00	4
120	150	M 10	269R10	22	14.7	10.5	30	80	56	6	3	5.95	4
	150	M 12	269R12	22	14.7	13.0	30	80	56	6	3	5.84	4
	150	M 16	269R16	22	14.7	17.0	30	80	56	6	3	6.60	4
150	185	M 10	270R10	25	16.3	10.5	30	90	60	6	3	8.50	4
	185	M 12	270R12	25	16.3	13.0	30	90	60	6	3	7.73	4
	185	M 16	270R16	25	16.3	17.0	30	90	60	6	3	7.60	4
	185	M 20	*270R20	25	16.3	21.0	30	90	60	6	3	8.20	4
185	240	M 10	271R10	28	18.3	10.5	30	91	60	6	3	11.00	4
	240	M 12	271R12	28	18.3	13.0	30	91	60	6	3	9.88	4
	240	M 16	271R16	28	18.3	17.0	30	91	60	6	3	10.10	4
	240	M 20	*271R20	28	18.3	21.0	30	91	60	6	3	10.00	4
240	300	M 10	*272R10	32	21.0	10.5	38	103	70	8	3	15.50	4
	300	M 12	272R12	32	21.0	13.0	38	103	70	8	3	13.80	4
	300	M 16	272R16	32	21.0	17.0	38	103	70	8	3	13.48	4
	300	M 20	272R20	32	21.0	21.0	38	103	70	8	3	15.00	4
300	--	M 12	273R12	34	23.3	13.0	38	103	70	8	3	17.60	1
	--	M 16	273R16	34	23.3	17.0	38	103	70	8	3	17.28	1
	--	M 20	273R20	34	23.3	21.0	38	103	70	8	3	17.40	1

■ **Compression cable lugs to DIN, Al 16 - 500 mm²**

Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm					Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
rm/sm	se				d1	d2	b	l	a	mech.	hydr.		
400	--	M 12	274R12	38	26.0	13.0	38	116	73	--	4	38.00	1
	--	M 16	274R16	38	26.0	17.0	38	116	73	--	4	37.40	1
	--	M 20	274R20	38	26.0	21.0	38	116	73	--	4	40.20	1
500	--	M 12	275R12	44	29.0	13.0	44	122	79	--	4	43.70	1
	--	M 16	275R16	44	29.0	17.0	44	122	79	--	4	43.30	1
	--	M 20	275R20	44	29.0	21.0	44	122	79	--	4	43.00	1

- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ * = Not standardised
- ▶ Tool: see chart page 112
- ▶ rm = round stranded
- ▶ se = sector solid

■ **Compression cable lugs, Al 10 - 400 mm²**



- For non-tension connections of Al cables to DIN 48201, part 1 and aluminium cables to DIN EN 50182
- For pre-rounded sm/se sector shaped conductors



Characteristics

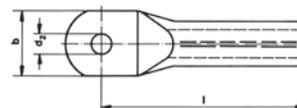
- Tube dimension to DIN 46329
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al

Surface

- bright



Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm					Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
rm/sm	se				d1	d2	b	l	a	mech.	hydr.		
10	--	M 6	202R6	10	5.0	6.5	16	52	4	2	0.86	25	
	--	M 8	202R8	10	5.0	8.5	18	52	4	2	0.88	25	
16	25	M 8	203R8	12	5.8	8.5	18	52	4	2	1.37	10	
	25	M 10	203R10	12	5.8	10.5	18	52	4	2	1.39	10	
25	35	M 8	204R8	12	6.8	8.5	18	60	4	2	1.41	10	
	35	M 10	204R10	12	6.8	10.5	18	60	4	2	1.46	10	
35	50	M 10	205R10	14	8.0	10.5	21	67	5	2	2.08	10	
	50	M 12	205R12	14	8.0	13.0	21	67	5	2	2.05	10	
50	70	M 10	206R10	16	9.8	10.5	25	72	5	2	2.68	10	
	70	M 12	206R12	16	9.8	13.0	25	72	5	2	2.73	10	
70	95	M 10	207R10	18	11.2	10.5	28	86	6	3	4.42	10	
	95	M 12	207R12	18	11.2	13.0	28	86	6	3	4.27	10	
95	120	M 10	208R10	22	13.2	10.5	32	90	6	3	7.40	4	
	120	M 12	208R12	22	13.2	13.0	32	90	6	3	7.50	4	
	120	M 16	208R16	22	13.2	17.0	34	90	6	3	7.30	4	
120	150	M 12	209R12	22	14.7	13.0	32	91	6	3	6.68	4	
	150	M 16	209R16	22	14.7	17.0	34	91	6	3	6.41	4	
150	185	M 12	210R12	25	16.3	13.0	35	103	6	3	9.64	4	
	185	M 16	210R16	25	16.3	17.0	35	103	6	3	9.24	4	
	185	M 20	210R20	25	16.3	21.0	41	103	6	3	9.40	4	
185	240	M 12	211R12	28	18.3	13.0	40	106	6	3	12.61	1	
	240	M 16	211R16	28	18.3	17.0	40	106	6	3	11.92	1	
	240	M 20	211R20	28	18.3	21.0	40	106	6	3	13.10	1	

Aluminium compression cable lugs and connectors to DIN

■ Compression cable lugs, Al 10 - 400 mm²

Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm				Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
rm/sm	se				d1	d2	b	l	mech.	hydr.		
240	300	M 12	212R12	32	21.0	13.0	45	116	8	3	18.30	1
	300	M 16	212R16	32	21.0	17.0	45	116	8	3	17.60	1
	300	M 20	212R20	32	21.0	21.0	45	116	8	3	17.30	1
300	--	M 16	213R16	34	23.3	17.0	49	124	8	3	17.50	1
	--	M 20	213R20	34	23.3	21.0	49	124	8	3	17.30	1
400	--	M 16	214R16	38	26.0	17.0	58	165	--	4	32.20	1
	--	M 20	214R20	38	26.0	21.0	58	165	--	4	31.90	1

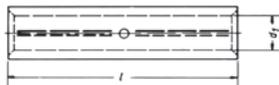
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ Tool: see chart page 112

- ▶ rm = round stranded
- ▶ se = sector solid



■ Compression joints to DIN, Al 10 - 500 mm²

- For non-tension connections of aluminium conductors to DIN EN 50182
- For pre-rounded sm/se sector shaped conductors



Characteristics

- Manufactured according to DIN 46267, part 2
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al

Surface

- bright

Nominal cross section mm ²		Part No.	Code	Dimension mm		Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
rm/sm	se			d1	l	mech.	hydr.		
10	--	*222R	10	5.0	55	3/3	--	0.95	10
16	25	*223R	12	5.8	55	3/3	--	1.40	10
25	35	224R	12	6.8	70	4/4	2/2	1.60	10
35	50	225R	14	8.0	85	5/5	2/2	2.60	10
50	70	226R	16	9.8	85	5/5	2/2	3.20	10
70	95	227R	18	11.2	105	6/6	3/3	5.30	10
95	120	228R	22	13.2	105	6/6	3/3	7.60	10
120	150	229R	22	14.7	105	6/6	3/3	7.80	10
150	185	230R	25	16.3	125	6/6	3/3	10.70	10
185	240	231R	28	18.3	125	6/6	3/3	14.30	5
240	300	232R	32	21.0	145	8/8	3/3	20.30	5
300	--	233R	34	23.3	145	8/8	3/3	22.20	1
400	--	234R	38	26.0	210	--	5/5	40.80	1
500	--	235R	44	29.0	210	--	5/5	56.00	1

- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ * = Not standardised
- ▶ Tool: see chart page 112

- ▶ rm = round stranded
- ▶ se = sector solid

■ **Compression joints, Al 10 - 400 mm²**

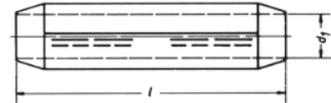


- For non-tension connections of medium-voltage aluminium cables 10-30 kV
- Also available as barrier design with oil stop
- With bevelled edges for reduced winding expenditure for the assembly



Characteristics

- Tube dimension to DIN 46267, part 2
- With markings for correct crimping
- Precise screw ends for simple cable insertion



Material

- E-Al

Surface

- bright

Nominal cross section mm ²		Part No.	Code	Dimension mm		Number of crimps		Weight/100 pcs. ~ kg	pcs.
rm/sm	se			d1	l	mech.	hydr.		
standard type									
35	50	405R	14	8.20	90	4/4	2/2	2.7	10
50	70	406R	16	10.00	90	4/4	2/2	3.4	10
70	95	407R	18	11.50	95	4/4	2/2	4.6	10
95	120	408R	22	13.50	100	4/4	2/2	6.8	10
120	150	409R	22	15.00	105	4/4	2/2	7.4	10
150	185	410R	25	16.50	105	4/4	2/2	8.7	10
185	240	411R	28	18.50	125	5/5	2/2	13.4	5
240	300	412R	32	21.30	125	5/5	2/2	15.7	5
300	--	413R	34	23.60	125	5/5	2/2	16.3	1
400	--	414R	38	26.25	150	--	3/3	25.8	1
Barrier Version									
35	50	415R	14	8.0	95	4/4	2/2	2.2	5
50	70	416R	16	9.8	95	4/4	2/2	5.6	5
70	95	417R	18	11.2	100	4/4	2/2	6.1	5
95	120	418R	22	13.2	105	4/4	2/2	9.2	5
120	150	419R	22	14.7	110	4/4	2/2	10.3	5
150	185	420R	25	16.3	110	4/4	2/2	12.0	5
185	240	421R	28	18.3	130	5/5	2/2	15.6	5
240	300	422R	32	21.0	130	5/5	2/2	19.1	5
300	--	423R	34	23.3	135	5/5	2/2	30.7	1
400	--	424R	38	26.0	165	--	3/3	30.0	1

- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ Tool: see chart page 112

- ▶ rm = round stranded
- ▶ se = sector solid



■ **Reduction compression joints, Al 25 - 400 mm²**



- For non-tension connections of medium-voltage aluminium cables 10-30 kV
- Barrier design with oil stop
- With bevelled edges for reduced winding expenditure for the assembly



Characteristics

- In nominal cross-section area tube dimension to DIN 46267, part 2
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al

Surface

- bright

Nominal cross section mm ²		Part No.	Code	Dimension mm			Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
from	to			d1	d2	l	mech.	hydr.		
35	25	425R25	14	8.0	6.8	95	4/4	2/2	2.800	5
50	25	426R25	16	9.8	6.8	95	4/4	2/2	3.630	5
50	35	426R35	16	9.8	8.0	95	4/4	2/2	3.450	5
70	25	427R25	18	11.2	6.8	100	4/4	2/2	4.975	5
70	35	427R35	18	11.2	8.0	100	4/4	2/2	4.790	5
70	50	427R50	18	11.2	9.8	100	4/4	2/2	4.420	5
95	25	428R25	22	13.2	6.8	105	4/4	2/2	8.200	5
95	35	428R35	22	13.2	8.0	105	4/4	2/2	8.000	5
95	50	428R50	22	13.2	9.8	105	4/4	2/2	7.600	5
95	70	428R70	22	13.2	11.2	105	4/4	2/2	7.350	5
120	25	429R25	22	14.7	6.8	110	4/4	2/2	8.000	5
120	35	429R35	22	14.7	8.0	110	4/4	2/2	7.800	5
120	50	429R50	22	14.7	9.8	110	4/4	2/2	7.380	5
120	70	429R70	22	14.7	11.2	110	4/4	2/2	7.100	5
120	95	429R95	22	14.7	13.2	110	4/4	2/2	6.550	5
150	25	430R25	25	16.3	6.8	110	4/4	2/2	10.700	5
150	35	430R35	25	16.3	8.0	110	4/4	2/2	10.500	5
150	50	430R50	25	16.3	9.8	110	4/4	2/2	10.100	5
150	70	430R70	25	16.3	11.2	110	4/4	2/2	9.800	5
150	95	430R95	25	16.3	13.2	110	4/4	2/2	9.500	5
150	120	430R120	25	16.3	14.7	110	4/4	2/2	8.650	5
185	25	431R25	28	18.3	6.8	130	--	2/2	16.120	5
185	35	431R35	28	18.3	8.0	130	--	2/2	15.875	5
185	50	431R50	28	18.3	9.8	130	--	2/2	15.400	5
185	70	431R70	28	18.3	11.2	130	--	2/2	15.050	5
185	95	431R95	28	18.3	13.2	130	--	2/2	14.400	5
185	120	431R120	28	18.3	14.7	130	5/5	2/2	13.700	5
185	150	431R150	28	18.3	16.3	130	5/5	2/2	13.050	5
240	25	432R25	32	21.0	6.8	130	--	2/2	21.200	5
240	35	432R35	32	21.0	8.0	130	--	2/2	20.950	5
240	50	432R50	32	21.0	9.8	130	--	2/2	20.470	5
240	70	432R70	32	21.0	11.2	130	--	2/2	20.120	5
240	95	432R95	32	21.0	13.2	130	--	2/2	19.460	5
240	120	432R120	32	21.0	14.7	130	--	2/2	18.800	5
240	150	432R150	32	21.0	16.3	130	5/5	2/2	18.125	5
240	185	432R185	32	21.0	18.3	130	5/5	2/2	17.275	5

■ **Reduction compression joints, AI 25 - 400 mm²**

Nominal cross section mm ²		Part No.	Code	Dimension mm			Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
from	to			d1	d2	l	mech.	hydr.		
300	150	433R150	34	23.3	16.3	135	5/5	2/2	21.100	1
300	185	433R185	34	23.3	18.3	135	5/5	2/2	20.120	1
300	240	433R240	34	23.3	21.0	135	5/5	2/2	18.730	1
400	185	434R185	38	26.0	18.3	165	--	3/3	34.700	1
400	240	434R240	38	26.0	21.0	165	--	3/3	32.900	1
400	300	434R300	38	26.0	23.3	165	--	3/3	31.200	1

- ▶ The specified cross-sections refer to rm/sm conductors, sm/se-conductors need to be pre-rounded.
- ▶ sm = sector stranded
- ▶ Tool: see chart page 112
- ▶ rm = round stranded
- ▶ se = sector solid

■ **Reduction compression joints, AI 16 - 240 mm²**



- For non-tension connections of aluminium conductors to DIN EN 50182
- For connecting different cross-sections



Characteristics

- Also pre-rounded sector shaped conductors
- With markings for correct crimping
- Precise screw ends for simple cable insertion



Material

- E-Al

Surface

- bright

Nominal cross section mm ²		Part No.	Code	Dimension mm			Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
from	to			d1	d2	l	mech.	hydr.		
25	16	284R16	12	7.0	5.8	75	4/4	2/2	1.53	10
35	25	285R25	14	8.2	6.8	90	5/5	2/2	2.50	10
50	25	286R25	16	10.0	6.8	90	5/5	2/2	3.24	10
50	35	286R35	16	10.0	8.0	90	5/5	2/2	3.09	10
70	25	287R25	18	11.5	6.8	110	6/6	3/3	5.50	10
70	35	287R35	18	11.5	8.0	110	6/6	3/3	5.35	10
70	50	287R50	18	11.5	9.8	110	6/6	3/3	4.96	10
95	25	288R25	22	13.5	6.8	110	6/6	3/3	9.10	10
95	35	288R35	22	13.5	8.0	110	6/6	3/3	8.90	10
95	50	288R50	22	13.5	9.8	110	6/6	3/3	8.51	10
95	70	288R70	22	13.5	11.2	110	6/6	3/3	8.15	10
120	25	289R25	22	15.0	6.8	110	6/6	3/3	8.62	10
120	35	289R35	22	15.0	8.0	110	6/6	3/3	8.43	10
120	50	289R50	22	15.0	9.8	110	6/6	3/3	8.04	10
120	70	289R70	22	15.0	11.2	110	6/6	3/3	7.66	10
120	95	289R95	22	15.0	13.2	110	6/6	3/3	7.14	10
150	35	290R35	25	16.5	8.0	130	6/6	3/3	12.59	10
150	50	290R50	25	16.5	9.8	130	6/6	3/3	12.12	10
150	70	290R70	25	16.5	11.2	130	6/6	3/3	11.70	10
150	95	290R95	25	16.5	13.2	130	6/6	3/3	11.05	10
150	120	290R120	25	16.5	14.7	130	6/6	3/3	10.49	10
185	120	291R120	28	18.5	14.7	130	6/6	3/3	13.80	5
185	150	291R150	28	18.5	16.3	130	6/6	3/3	13.19	5

Aluminium compression cable lugs and connectors to DIN

■ Reduction compression joints, Al 16 - 240 mm²

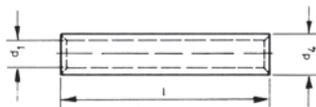
Nominal cross section mm ²		Part No.	Code	Dimension mm			Number of crimps		Weight/100 pcs. ~ kg	pcs.
from	to			d1	d2	l	mech.	hydr.		
240	95	292R95	32	21.3	13.2	150	--	3/3	22.24	5
240	120	292R120	32	21.3	14.7	150	--	3/3	21.59	5
240	150	292R150	32	21.3	16.3	150	--	3/3	20.87	5

- ▶ The specified cross-sections refer to rm/sm conductors, sm/se-conductors need to be pre-rounded.
- ▶ sm = sector stranded
- ▶ Tool: see chart page 112
- ▶ rm = round stranded
- ▶ se = sector solid



■ Compression joints to DIN, Al 16 - 300 mm², full tension

■ For full tension connections of aluminium conductors to DIN EN 50182



Characteristics

- Manufactured to DIN 48085, part 2
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al to 95 mm²
- AlMgSi 1w from 120 mm²

Surface

- bright

Nominal cross section mm ²	Part No.	Code	Conductor Ø mm	Dimension mm			Number of crimps		Weight/100 pcs. ~ kg	pcs.
				d1	d4	l	mech.	hydr.		
16	*243R	12	5.1	5.8	12.0	140	8/8	4/4	3.4	10
25	244R	12	6.3	6.8	12.0	140	8/8	4/4	2.9	10
35	245R	14	7.5	8.0	14.0	140	8/8	4/4	3.9	10
50	246R	16	9.0	10.0	16.0	155	8/8	4/4	5.2	10
70	247R	18	10.5	11.5	18.5	165	8/8	4/4	7.4	10
95	248R	22	12.5	13.5	22.0	165	8/8	4/4	12.2	10
120	249R	25	14.0	15.5	25.5	250	12/12	6/6	21.8	10
150	250R	28	15.7	16.5	28.5	300	--	7/7	34.4	10
185	251R	28	17.5	18.5	28.5	330	--	7/7	33.0	5
240	252R	34	20.2	21.5	34.5	350	--	7/7	54.0	5
300	253R	38	22.5	23.5	38.5	400	--	8/8	79.0	1

- ▶ * = Not standardised
- ▶ Tool: see chart page 112
- ▶ Tool: see chart page 113

■ **Compression joints, Al 25 - 95 mm², full tension**



■ For full tension connections of Aldrey cables according to DIN EN 50182

Characteristics

- With buttmarks for precise cable insertion
- Tube dimensions matched to aluminium steel cables
- With markings for correct crimping

Material

- AlMgSi F20

Surface

- bright



Nominal cross section mm ²	Part No.	Code	Conductor Ø mm	Dimension mm		Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
				d1	l	mech.	hydr.		
25	294AD	12	6.3	6.8	140	8/8	--	3.4	5
35	295AD	14	7.5	8.0	140	8/8	--	4.7	5
50	296AD	16	9.0	10.0	155	8/8	--	5.9	5
70	297AD	18	10.5	11.5	165	8/8	--	9.0	5
95	298AD	20	12.5	13.5	165	10/10	5/5	10.2	5

► Tool: see chart page 113

■ **Compression cable lugs, Al/St 4 - 120 mm², full tension**



■ For full tension connections of Aldrey cables according to DIN EN 50182

Characteristics

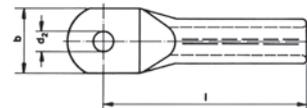
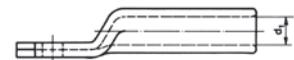
- Tube dimension matched to aluminium steel cables
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al

Surface

- bright



Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Conductor Ø mm	Dimension mm				Weight/ 100 pcs. ~ kg	pcs.
					d1	d2	b	l		
25 - 4	M 8	254R8	12	6.8	7.6	8.5	19	60	1.5	5
	M 10	254R10	12	6.8	7.6	10.5	19	60	1.5	5
	M 12	254R12	12	6.8	7.6	13.0	23	60	1.6	5
35 - 6	M 10	255R10	14	8.1	9.0	10.5	21	67	2.0	5
	M 12	255R12	14	8.1	9.0	13.0	21	67	2.2	5
50 - 8	M 10	256R10	16	9.6	10.8	10.5	22	72	2.5	5
	M 12	256R12	16	9.6	10.8	13.0	24	72	2.6	5
	M 16	256R16	16	9.6	10.8	17.0	26	72	2.7	5
70 - 12	M 10	257R10	18	11.7	12.5	10.5	26	86	4.1	5
	M 12	257R12	18	11.7	12.5	13.0	26	86	4.3	5
	M 16	257R16	18	11.7	12.5	17.0	32	86	4.4	5

Aluminium compression cable lugs and connectors to DIN

■ **Compression cable lugs, Al/St 4 - 120 mm², full tension**

Nominal cross section mm ²	Size of bolt Ø	Part No.	Code	Conduc-tor Ø mm	Dimension mm				Weight/ 100 pcs. ~ kg	pcs.
					d1	d2	b	l		
95 - 15	M 12	258R12	22	13.6	14.8	13.0	31	91	7.8	5
	M 16	258R16	22	13.6	14.8	17.0	33	91	6.6	5
120 - 20	M 12	259R12	25	15.5	16.5	13.0	37	103	9.8	5
	M 16	259R16	25	15.5	16.5	17.0	37	103	10.0	5
	M 20	259R20	25	15.5	16.5	21.0	41	103	10.1	5

▶ Tool: see chart page 114



■ **Compression joints, Al/St 4 - 120 mm²**

■ **For non-tension connections of Al/St cables to DIN EN 50182**



Characteristics

- With buttmarks for precise cable insertion
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al

Surface

- bright

Nominal cross section mm ²	Part No.	Code	Conduc-tor Ø mm	Dimension mm		Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
				d1	l	mech.	hydr.		
25 - 4	444R	12	6.8	7.6	70	4/4	2/2	1.65	5
35 - 6	445R	14	8.1	9.0	85	5/5	2/2	2.75	5
50 - 8	446R	16	9.6	10.8	85	5/5	2/2	3.70	5
70 - 12	447R	18	11.7	12.5	105	6/6	3/3	5.20	5
95 - 15	448R	22	13.6	14.8	105	6/6	3/3	8.60	5
120 - 20	449R	25	15.5	16.5	125	6/6	3/3	12.20	5

▶ Tool: see chart page 114

■ **Compression joints to DIN, Al/St 4 - 120 mm²**



■ **For full tension connections of Al/St conductors to DIN EN 50182**

Characteristics

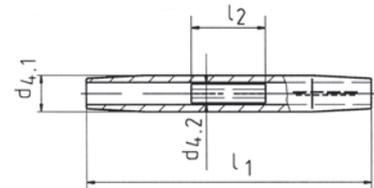
- Manufactured according to DIN 48085, part 3
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- Al sleeve: E-Al
- St sleeve: St 52

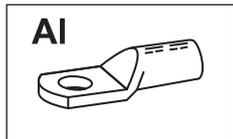
Surface

- Al sleeve: bright
- St sleeve: hot galvanised



Nominal cross section mm ²	Part No.	Conductor Ø mm	Code	Dimension mm		Number of crimps		Code	Dimension mm		Number of crimps		Weight/ 100 pcs. ~ kg	pcs.
				d4.1	l1	mech.	hydr.		d4.2	l2	mech.	hydr.		
25 - 4	454R	6.8	12	12.0	200	7/7	--	6	6.3	65	4/4	--	5	5
35 - 6	455R	8.1	14	14.0	235	8/8	--	6	6.3	75	5/5	--	7	5
50 - 8	456R	9.6	16	16.0	270	9/9	--	7	7.5	95	6/6	--	11	5
70 - 12	457R	11.7	18	18.5	270	9/9	--	9	9.5	95	6/6	--	15	5
95 - 15	458R	13.6	22	22.5	310	11/11	--	9	9.6	95	6/6	--	23	5
120 - 20	459R	15.5	25	25.0	380	13/13	6/6	13	13.0	110	7/7	4/4	36	5

► Tool: see chart page 114

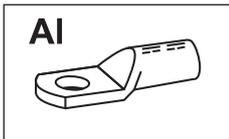


■ Tool application chart

Compression cable lugs and connectors made from E-Al

Compression joints for full-tension connections from Al conductors DIN EN 50182, 16-95 mm²

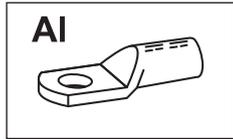
Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-70	EK354					•			⊕	300
10-150	EK505L					•			⊕	302
10-185	K18			•					⊕	248
	HK6018				•				⊕	270
	EK5018L					•			⊕	304
	PK18							•	⊕	336
	THK18						•		⊕	336
	HK60UNV + UA18				•				⊕	286
	EK60UNVL + UA18						•		⊕	330
PK60UNV + UA18							•	⊕	354	
10-240	K22			•					⊕	250
	HK6022				•				⊕	272
	EK6022L					•			⊕	306
	PK22							•	⊕	338
	THK22						•		⊕	338
	HK60UNV + UA22				•				⊕	286
	EK60UNVL + UA22						•		⊕	330
	PK60UNV + UA22							•	⊕	354
	HK12025					•			⊕	276
	HK12042					•			⊕	278
	HK120U					•			⊕	280
	EK12025L						•		⊕	312
	EK12042L						•		⊕	314
	EK120UL						•		⊕	316
	HK122EL220							•	⊕	366
	HK122EL380							•	⊕	366
	PK12042							•	⊕	342
PK120U							•	⊕	344	
10-500	HK252							•	⊕	364
	HK252EL220							•	⊕	367
	HK252EL380							•	⊕	367
	PK252							•	⊕	346
150-500	HK45				•				⊕	365
	PK45							•	⊕	348



■ **Tool application chart**

**Compression joints for full-tension connections from
Alfrey conductors to DIN EN 50182
and AI conductors to DIN EN 50182, 120-300 mm²**

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
25-50	EK354					•			⬡	300
25-95	K18			•					⬡	248
	HK6018				•				⬡	270
	EK505L					•			⬡	302
	EK5018L					•			⬡	304
	PK18							•	⬡	336
	THK18						•		⬡	336
	HK60UNV + UA18					•			⬡	286
	EK60UNVL + UA18						•		⬡	330
	PK60UNV + UA18							•	⬡	354
25-185	K22			•					⬡	250
	HK6022				•				⬡	272
	EK6022L					•			⬡	306
	PK22							•	⬡	338
	THK22						•		⬡	338
	HK60UNV + UA22					•			⬡	286
	EK60UNVL + UA22						•		⬡	330
	PK60UNV + UA22							•	⬡	354
	HK12025					•			⬡	276
	HK12042					•			⬡	278
	HK120U					•			⬡	280
	EK12025L						•		⬡	312
	EK12042L						•		⬡	314
	EK120UL						•		⬡	316
	HK122EL220							•	⬡	366
	HK122EL380							•	⬡	366
	PK12042								•	342
	PK120U								•	344
25-300	HK252						•		⬡	364
	HK252EL220						•		⬡	367
	HK252EL380						•		⬡	367
	PK252							•	⬡	346
150-300	HK45				•				⬡	365
	PK45							•	⬡	348



■ **Tool application chart**

Compression joints for full-tension connections from Al/St. cables to DIN EN 50182
Compression joints for full-tension connections to DIN 48085, part 3 for Al/St. cables to DIN EN 50182

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)		
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads				
25/4-120/20	K22			•					⬡	250		
	HK6022				•				⬡	272		
	EK6022L					•			⬡	306		
	PK22							•	⬡	338		
	THK22						•		⬡	338		
	HK60UNV	+ UA22				•			⬡	286		
	EK60UNVL	+ UA22					•		⬡	330		
	PK60UNV	+ UA22							•	⬡	354	
	HK12025					•				⬡	276	
	HK12042						•			⬡	278	
	HK120U						•			⬡	280	
	EK12025L							•		⬡	312	
	EK12042L							•		⬡	314	
	EK120UL							•		⬡	316	
	HK122EL220								•	⬡	366	
	HK122EL380								•	⬡	366	
	PK12042									•	⬡	342
	PK120U									•	⬡	344
	HK252								•	⬡	364	
	HK252EL220								•	⬡	367	
HK252EL380								•	⬡	367		
PK252									•	⬡	346	



Simple connection of two materials.

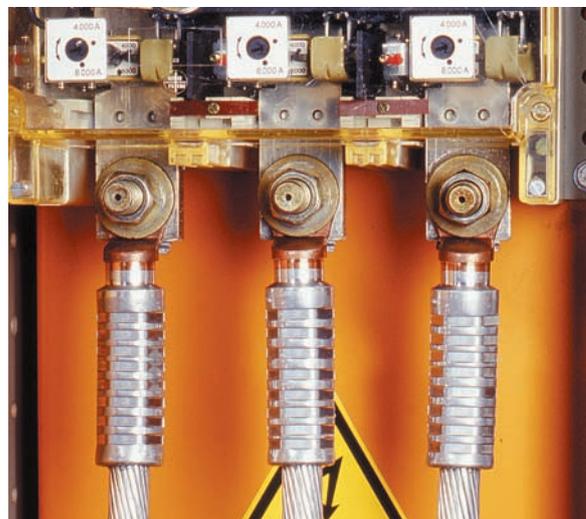
Compression cable lugs and connectors for aluminium-copper connections.

Copper's electrical properties still make it the best material for conductors and electrical connections. There are, however, also good reasons for using aluminium. The need to connect these two materials together is therefore becoming more frequent.

But because it's not that simple to join aluminium and copper and because they have a tendency to self-passivate through fast oxidation special aluminium/copper cable lugs and connectors are required. For example for connecting to distributor networks or transformer stations and also for network reconstruction.

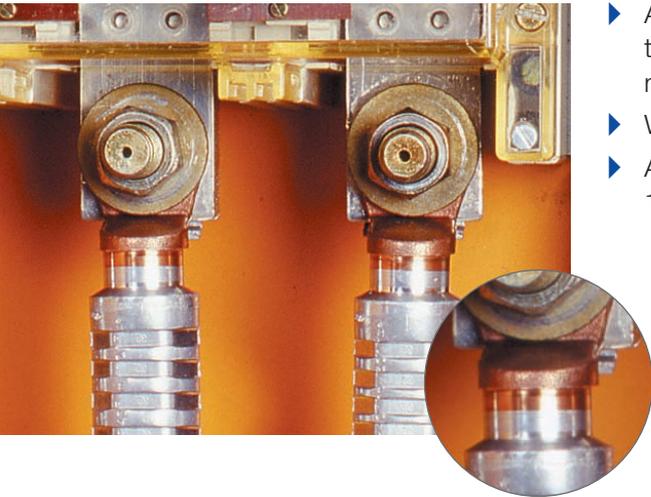


- Aluminium/copper compression cable lugs with DIN dimensions with copper palm or copper eye to 400 mm².
- Compression joints with copper connecting bolt.
- Reduction compression joints to DIN from 10 mm² to 300 mm².



The perfect solution for transitions from aluminium to copper conductors and vice versa.

■ Connecting aluminium and copper **correctly**.



- ▶ Aluminium/copper compression cable lugs for aluminium conductors to DIN 48201 and pre-rounded sector-shaped conductors with a nominal cross section up to 400 mm².
- ▶ With copper palm or copper eye.
- ▶ Aluminium/copper compression joints with nominal cross sections of 10 mm² to 300 mm².

Benefits:

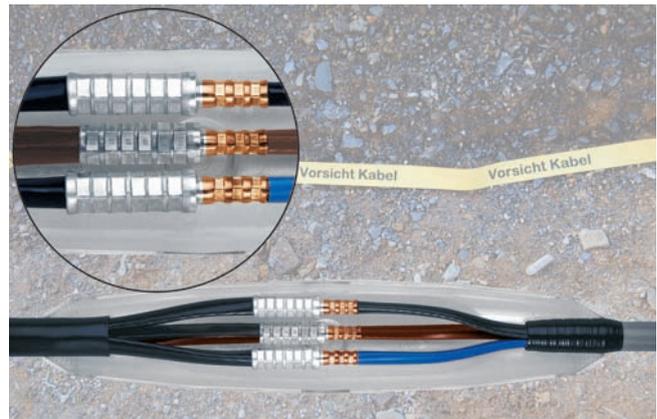
- ▶ Aluminium and copper conductors can be connected in a dry environment, **without destructive oxidation occurring between the two materials.**

■ Reduction compression joints as a solution for **different diameters**.

- ▶ Nominal cross sections from 10 mm² to 300 mm².
- ▶ For round or sector-shaped, multi-stranded and also sector-shaped solid conductors.
- ▶ For non tension connections.

Benefits:

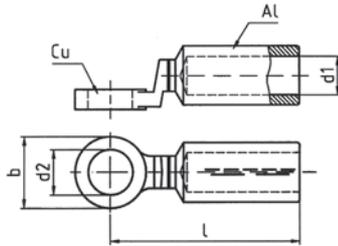
- ▶ For connecting copper and aluminium conductors a great number of compression joints is available allowing optimised compression of these conductors.
- ▶ **Different materials can be safely connected regardless of their particular dimensions.**
- ▶ Regardless of the cable type discovered in network reconstruction Klauke offers suitable connection solutions.



- ▶ *More on Page 120.*



- ▶ *For underground connections we recommend protection against moisture – using cast resin sleeves for example.*



■ Compression cable lugs, Al/Cu 16 - 300 mm²

- For non-tension connections of Al cables to DIN 48201, part 1 and aluminium cables to DIN EN 50182
- For screwing aluminium connections using copper washers in humid areas
- Barrier design with oil stop with solid copper screw-on palm

Characteristics

- For pre-rounded sector shaped conductors
- Tube dimension to DIN 46329
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al
- Copper to EN 13600

Surface

- bright

Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm				Number of crimps		weight		pcs.
rm/sm	se				d1	d2	b	l	mech.	hydr.	100 pcs. ~ kg	Total	
16	25	M 8	363R8	12	6.0	8.5	25	67.5	4	2	4.4	5.9	10
	25	M 10	363R10	12	6.0	10.5	25	67.5	4	2	4.2	5.7	10
25	35	M 8	364R8	12	6.8	8.5	25	67.5	4	2	4.4	5.8	10
	35	M 10	364R10	12	6.8	10.5	25	67.5	4	2	4.2	5.6	10
	35	M 12	364R12	12	6.8	13.0	25	67.5	4	2	3.9	5.3	10
35	50	M 8	365R8	14	8.0	8.5	25	76.5	5	2	4.4	6.3	10
	50	M 10	365R10	14	8.0	10.5	25	76.5	5	2	4.2	6.1	10
	50	M 12	365R12	14	8.0	13.0	25	76.5	5	2	3.8	5.8	10
50	70	M 8	366R8	16	9.8	8.5	25	76.5	5	2	4.4	6.4	10
	70	M 10	366R10	16	9.8	10.5	25	76.5	5	2	4.2	6.2	10
	70	M 12	366R12	16	9.8	13.0	25	76.5	5	2	3.9	5.9	10
70	95	M 10	367R10	18	11.2	10.5	25	84.5	6	3	4.2	7.4	10
	95	M 12	367R12	18	11.2	13.0	25	84.5	6	3	3.9	7.1	10
95	120	M 10	368R10	22	13.2	10.5	30	90.5	6	3	7.4	11.4	10
	120	M 12	368R12	22	13.2	13.0	30	90.5	6	3	6.8	10.8	10
	120	M 16	368R16	22	13.2	17.0	30	90.5	6	3	6.4	10.4	10
120	150	M 12	369R12	22	14.7	13.0	30	92.0	6	3	6.8	11.4	5
	150	M 16	369R16	22	14.7	17.0	30	92.0	6	3	6.4	10.8	5
150	185	M 12	370R12	25	16.3	13.0	30	104.0	6	3	6.8	13.1	5
	185	M 16	370R16	25	16.3	17.0	30	104.0	6	3	6.4	12.7	5
	185	M 20	370R20	25	16.3	21.0	35	107.5	6	3	10.1	16.4	5
185	240	M 10	371R10	28	18.3	10.5	30	105.0	6	3	10.3	18.6	5
	240	M 12	371R12	28	18.3	13.0	30	105.0	6	3	10.1	18.4	5
	240	M 16	371R16	28	18.3	17.0	30	105.0	6	3	9.3	17.6	5
	240	M 20	371R20	28	18.3	21.0	35	107.5	6	3	10.1	18.4	5

■ **Compression cable lugs, Al/Cu 16 - 300 mm²**

Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm				Number of crimps		weight		pcs.
rm/sm	se				d1	d2	b	l	mech.	hydr.	100 pcs. ~ kg Cu	Total	
240	300	M 10	372R10	32	21.0	10.5	35	118.5	8	3	12.1	22.5	5
	300	M 12	372R12	32	21.0	13.0	35	118.5	8	3	11.8	22.2	5
	300	M 16	372R16	32	21.0	17.0	35	118.5	8	3	11.0	21.4	5
	300	M 20	372R20	32	21.0	21.0	35	118.5	8	3	10.1	20.5	5
300	--	M 12	373R12	34	23.3	13.0	40	123.5	8	3	17.7	33.7	1
	--	M 16	373R16	34	23.3	17.0	40	123.5	8	3	16.9	32.9	1
	--	M 20	373R20	34	23.3	21.0	40	123.5	8	3	16.0	32.0	1

- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ Tool: see chart page 123
- ▶ rm = round stranded
- ▶ se = sector solid

■ **Compression cable lugs, Al/Cu 10 - 400 mm²**



- For non-tension connections of Al cables to DIN 48201, part 1 and aluminium cables to DIN EN 50182
- For screwing non-tension Aluminium connections using Cu-washers in humid areas



Characteristics

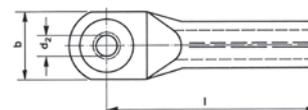
- For pre-rounded sector shaped conductors
- With Cu eye in screw-on area
- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al
- Copper to EN 13600

Surface

- bright



Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm				Number of crimps		weight		pcs.
rm/sm	se				d1	d2	b	l	mech.	hydr.	100 pcs. ~ kg Cu	Total	
10	--	M 6	302R6	10	5.0	6.5	18	52	4	2	0.260	1.20	10
	--	M 8	302R8	10	5.0	8.5	22	52	4	2	0.580	1.50	10
16	25	M 8	303R8	12	5.8	8.5	22	52	4	2	0.600	1.95	10
	25	M 10	303R10	12	5.8	10.5	25	52	4	2	0.600	2.00	10
25	35	M 8	304R8	12	6.8	8.5	22	60	4	2	0.625	2.00	10
	35	M 10	304R10	12	6.8	10.5	25	60	4	2	0.900	2.10	10
35	50	M 10	305R10	14	8.0	10.5	26	67	5	2	0.800	3.00	10
	50	M 12	305R12	14	8.0	13.0	30	67	5	2	1.120	3.10	10
50	70	M 10	306R10	16	9.8	10.5	27	72	5	2	0.900	3.60	10
	70	M 12	306R12	16	9.8	13.0	30	72	5	2	1.120	3.80	10
70	95	M 10	307R10	18	11.2	10.5	29	86	6	3	1.075	5.60	10
	95	M 12	307R12	18	11.2	13.0	32	86	6	3	1.300	5.70	10
95	120	M 10	308R10	22	13.2	10.5	32	90	6	3	1.435	10.00	5
	120	M 12	308R12	22	13.2	13.0	35	90	6	3	1.735	9.50	5
	120	M 16	308R16	22	13.2	17.0	38	90	6	3	2.655	10.00	5
120	150	M 12	309R12	22	14.7	13.0	35	91	6	3	1.810	8.70	5
	150	M 16	309R16	22	14.7	17.0	38	91	6	3	2.230	8.80	5
150	185	M 12	310R12	25	16.3	13.0	35	103	6	3	2.025	12.20	5
	185	M 16	310R16	25	16.3	17.0	41	103	6	3	2.655	12.30	5
	185	M 20	310R20	25	16.3	21.0	44	103	6	3	3.620	12.80	5

■ **Compression cable lugs, Al/Cu 10 - 400 mm²**

Nominal cross section mm ²		Size of bolt Ø	Part No.	Code	Dimension mm				Number of crimps		weight		pcs.
rm/sm	se				d1	d2	b	l	mech.	hydr.	100 pcs. ~ kg Cu	~ kg Total	
185	240	M 12	311R12	28	18.3	13.0	40	106	6	3	2.320	15.00	5
	240	M 16	311R16	28	18.3	17.0	42	106	6	3	4.975	15.50	5
	240	M 20	311R20	28	18.3	21.0	46	106	6	3	4.610	15.50	5
240	300	M 12	312R12	32	21.0	13.0	45	116	8	3	2.750	20.00	5
	300	M 16	312R16	32	21.0	17.0	45	116	8	3	3.400	21.00	5
	300	M 20	312R20	32	21.0	21.0	49	116	8	3	4.600	22.00	5
300	--	M 16	313R16	34	23.3	17.0	51	124	8	3	3.980	21.60	1
	--	M 20	313R20	34	23.3	21.0	51	124	8	3	5.510	22.20	1
400	--	M 16	314R16	38	26.0	17.0	58	165	--	4	4.200	35.00	1
	--	M 20	314R20	38	26.0	21.0	58	165	--	4	5.950	35.00	1

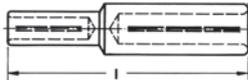
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ Tool: see chart page 123

- ▶ rm = round stranded
- ▶ se = sector solid



■ **Compression joints, Al/Cu 10 - 300 mm²**

- For non-tension connections of Al cables to DIN 48201, part 1 and aluminium cables to DIN EN 50182
- For connecting non-tension aluminium and copper connections



Characteristics

- With markings for correct crimping
- Precise screw ends for simple cable insertion

Material

- E-Al
- Copper to EN 13600

Surface

- bright

Nominal cross-section mm ²			Part No.	Code		Dimension mm			weight		pcs.
Al rm/sm	se	Cu rm/sm		Al	Cu	Al	Cu	l	100 pcs. ~ kg Cu	~ kg Total	
10	16	10	322R10	10	6	5.0	4.5	55.0	0.212	1.100	4
10	16	16	322R16	10	8	5.0	5.4	61.0	0.714	1.550	4
16	25	10	323R10	12	6	6.0	4.5	55.0	0.212	1.500	4
16	25	16	323R16	12	8	6.0	5.4	61.0	0.714	1.750	4
25	35	10	324R10	12	6	6.8	4.5	55.0	0.212	1.400	4
25	35	16	324R16	12	8	6.8	5.5	61.0	0.714	1.650	4
25	35	25	324R25	12	10	6.8	7.0	61.0	0.892	1.900	4
25	35	35	324R35	12	12	6.8	8.2	61.0	1.624	2.000	4
25	35	50	324R50	12	14	6.8	10.0	72.0	2.362	3.500	4
25/4	35	16	324R416	12	8	7.6	5.5	61.0	0.714	1.600	4
25/4	35	25	324R425	12	10	7.6	7.0	61.0	0.892	1.850	4
35	50	16	325R16	14	8	8.0	5.5	71.0	0.714	2.500	4
35	50	25	325R25	14	10	8.0	7.0	71.0	0.892	2.650	4
35	50	35	325R35	14	12	8.0	8.2	71.0	1.519	3.300	4
35	50	50	325R50	14	14	8.0	10.0	77.0	2.362	3.530	4
35/6	50	16	325R616	14	8	9.0	5.5	71.0	0.714	2.450	4
35/6	50	25	325R625	14	10	9.0	7.0	71.0	0.892	2.600	4
35/6	50	35	325R635	14	12	9.0	8.2	71.0	1.624	3.250	4

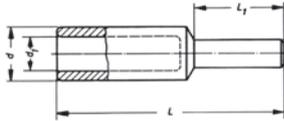
■ **Compression joints, Al/Cu 10 - 300 mm²**

Nominal cross-section mm ²			Part No.	Code		Dimension mm			weight		pcs.
Al rm/sm	se	Cu rm/sm		Al	Cu	Al	Cu	l	100 pcs. ~ Cu	kg Total	
50	70	16	326R16	16	8	9.8	5.5	71.5	0.714	2.850	4
50	70	25	326R25	16	10	9.8	7.0	71.5	0.892	3.200	4
50	70	35	326R35	16	12	9.8	8.2	71.5	1.624	3.800	4
50	70	50	326R50	16	14	9.8	10.0	77.5	2.362	4.550	4
70	95	16	327R16	18	8	11.2	5.5	79.0	0.714	4.100	4
70	95	25	327R25	18	10	11.2	7.0	79.0	0.892	3.950	4
70	95	35	327R35	18	12	11.2	8.2	79.0	1.624	4.900	4
70	95	50	327R50	18	14	11.2	10.0	85.0	2.362	5.700	4
70	95	70	327R70	18	16	11.2	11.5	86.0	2.921	7.250	4
70	95	95	327R95	18	18	11.2	13.5	95.0	4.957	9.360	4
70	95	120	327R120	18	20	11.2	15.5	99.0	5.640	10.540	4
95	120	16	328R16	22	8	13.2	5.5	79.0	0.714	6.150	4
95	120	25	328R25	22	10	13.2	7.0	79.0	0.892	6.300	4
95	120	35	328R35	22	12	13.2	8.2	79.0	1.519	6.800	4
95	120	50	328R50	22	14	13.2	10.0	85.0	2.362	8.050	4
95	120	70	328R70	22	16	13.2	11.5	87.0	3.105	8.200	4
95	120	95	328R95	22	18	13.2	13.5	95.0	4.957	10.350	4
95	120	120	328R120	22	20	13.2	15.5	95.0	5.640	11.550	4
120	150	35	329R35	22	12	14.7	8.2	81.0	1.519	7.600	4
120	150	50	329R50	22	14	14.7	10.0	87.0	2.362	7.900	4
120	150	70	329R70	22	16	14.7	11.5	89.0	3.105	8.500	4
120	150	95	329R95	22	18	14.7	13.5	97.0	4.857	11.000	4
120	150	120	329R120	22	20	14.7	15.5	97.0	5.640	10.280	4
150	185	16	330R16	25	8	16.3	5.4	91.5	0.714	7.800	4
150	185	25	330R25	25	10	16.3	6.8	91.5	0.892	8.000	4
150	185	35	330R35	25	12	16.3	8.2	91.5	1.624	8.400	4
150	185	50	330R50	25	14	16.3	10.0	98.5	2.362	10.200	4
150	185	70	330R70	25	16	16.3	11.5	99.5	3.105	10.350	4
150	185	95	330R95	25	18	16.3	13.5	107.5	4.957	12.650	4
150	185	120	330R120	25	20	16.3	15.5	107.5	5.640	13.900	4
150	185	150	330R150	25	22	16.3	17.0	124.0	8.231	16.700	4
185	240	50	331R50	28	14	18.3	10.0	99.0	2.362	12.100	1
185	240	70	331R70	28	16	18.3	11.5	100.0	3.105	13.000	1
185	240	95	331R95	28	18	18.3	13.5	108.0	4.957	14.450	1
185	240	120	331R120	28	20	18.3	15.5	108.0	5.640	13.720	1
185	240	150	331R150	28	22	18.3	17.0	113.0	8.231	19.550	1
185	240	185	331R185	28	25	18.3	19.0	116.0	9.621	21.000	1
240	300	50	332R50	32	14	21.0	10.0	110.0	2.362	16.500	1
240	300	70	332R70	32	16	21.0	11.5	111.0	3.105	18.000	1
240	300	95	332R95	32	18	21.0	13.5	119.0	4.957	19.000	1
240	300	120	332R120	32	20	21.0	15.5	119.0	5.640	20.500	1
240	300	150	332R150	32	22	21.0	17.0	124.0	8.231	23.300	1
240	300	185	332R185	32	25	21.0	19.0	127.0	9.621	25.500	1
240	300	240	332R240	32	28	21.0	21.5	128.0	12.705	30.100	1
300	--	120	333R120	34	20	23.5	15.5	119.0	5.640	27.800	1
300	--	150	333R150	34	22	23.5	17.0	124.0	8.234	31.100	1
300	--	185	333R185	34	25	23.5	19.0	127.0	9.621	32.700	1
300	--	240	333R240	34	28	23.5	21.5	128.0	12.705	37.500	1
300	--	300	333R300	34	32	23.5	24.5	134.0	16.099	41.700	1

- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ rm = round stranded
- ▶ se = sector solid

ⓘ Use for the copper side of the article DIN-Sleeve for compacted conductors, reduction sleeves to connect different cross-sections can be found on page 73, reduction sleeves for compacted conductors as well as sleeves for 3-core shaped conductors and 4-core shaped conductors see Chapter "Sleeves for compacted conductors and sector-shaped conductors - copper"

▶ Tool: see chart page 123



■ Compression joints with copper connecting bolt, Al 25 - 300 mm²

- For non-tension connections of Al cables to DIN 48201, part 1 and aluminium cables to DIN EN 50182
- For screwing non-tension Al connections in Cu clamps

Characteristics

- With markings for correct crimping
- Also pre-rounded sector shaped conductors
- Precise screw ends for simple cable insertion

Material

- E-Al
- Copper to EN 13600

Surface

- bright

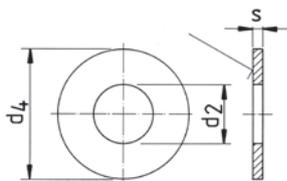
Nominal cross section mm ²		Part No.	Code	Bolt Ø mm	Conductor Ø mm	Dimension mm				weight		pcs.
rm/sm	se					dØ	d1Ø	l1	l	100 pcs. Cu	~ kg Total	
25	35	344R	12	6	6.3	12.0	6.8	20	58	0.462	1.6	10
35	50	345R	14	7	7.5	14.0	8.0	22	71	0.695	2.5	10
50	70	346R	16	8	9.0	16.0	10.0	25	74	1.037	3.3	10
70	95	347R	18	10	10.5	18.5	11.5	30	87	1.958	5.4	10
95	120	348R	22	12	12.5	23.0	13.2	33	91	3.112	8.7	10
120	150	349R	22	12	14.0	23.0	15.0	38	97	3.598	9.0	10
150	185	350R	25	12	15.8	25.5	16.5	38	108	3.598	10.9	10
185	240	351R	28	14	17.5	28.5	18.5	44	116	3.692	15.7	5
240	300	352R	32	16	20.3	32.5	21.5	44	128	7.435	21.8	5
300	--	353R	34	18	22.5	34.5	23.5	46	131	9.410	26.7	1

- ▶ sm/se-conductor needs to be pre-rounded
- ▶ sm = sector stranded
- ▶ Tool: see chart page 123

- ▶ rm = round stranded
- ▶ se = sector solid

■ Bi-metallic washer, M8 - M16

- For use with Al and Cu materials



Characteristics

- Only for use in dry areas

Material

- E-Al, one side copper plated

Size of bolt Ø	Part No.	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
		d4	d2	s		
M 8	CS818	18	8.5	1	0.09	10
M 10	CS1022	22	11.0	2	0.26	10
M 12	CS1228	28	13.0	2	0.44	10
M 14	CS1428	28	15.0	2	0.40	10
M 16	CS1635	35	17.0	2	0.66	10



■ **Tool application chart**

Compression cable lugs and connectors made from Al/Cu

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-70	EK354					•			⬡	300
10-185	K18			•					⬡	248
	HK6018				•				⬡	270
	EK5018L					•			⬡	304
	PK18							•	⬡	336
	THK18						•		⬡	336
	HK60UNV + UA18					•			⬡	286
	EK60UNVL + UA18						•		⬡	330
	PK60UNV + UA18							•	⬡	354
10-240	K22			•					⬡	250
	HK6022				•				⬡	272
	EK6022L					•			⬡	306
	PK22							•	⬡	338
	THK22						•		⬡	338
	HK60UNV + UA22					•			⬡	286
	EK60UNVL + UA22						•		⬡	330
	PK60UNV + UA22							•	⬡	354
	HK12025					•			⬡	276
	HK12042					•			⬡	278
	HK120U					•			⬡	280
	EK12025L						•		⬡	312
	EK12042L						•		⬡	314
	EK120UL						•		⬡	316
	HK122EL220							•	⬡	366
	HK122EL380							•	⬡	366
	PK12042								•	342
	PK120U								•	344
10-500	HK252						•		⬡	364
	HK252EL220						•		⬡	367
	HK252EL380						•		⬡	367
	PK252							•	⬡	346
150-500	HK45				•				⬡	365
	PK45							•	⬡	348

Simple branching and connecting.

Clamps and screw connectors.

C and H-shaped clamps as well as parallel groove clamps are used wherever power lines are branched. Screw connectors are a practical alternative for service and maintenance since they can be used across the entire cross-section spectrum. Just a few variants cover all possible connections. Screw connectors can be used on aluminium cables without compound as the special grooved profile pierces the oxide layer during the screwing operation.

The key benefit of compact tap connectors is that, provided the the specified safety precautions are taken, they can also be installed under voltage.



The H-clamps in our range are lightning current tested to EN 50164-1 Class H (100 kA 10/350 μ s).

- C and H-shaped clamps.
- Parallel groove clamps.
- Screw connectors, also barrier types, for aluminium/copper connections.
- Compact tap connectors for 3- and 4-core sector-shaped conductors.



■ Branching without splitting the conductor.

- ▶ C and H-shaped clamps with nominal cross sections from 2.5 mm² to 185 mm².
- ▶ Parallel groove clamps from 2.5 mm² to 150 mm².
- ▶ Either with or without thrust plate.

Benefits:

- ▶ **Cables can be branched into various nominal cross-sections without cutting the main conductor.**
- ▶ Thrust plates on parallel groove clamps guarantee optimal hold of the branch connection as pressure is being distributed symmetrically.
- ▶ *More on Page 128.*



■ Simply screw – and the connection is made.



- ▶ For aluminium and copper conductors.
- ▶ With nominal cross sections from 2.5 mm² to 185 mm².
- ▶ With or without shear heads.
- ▶ Special grooved profile on the inside.

Benefits:

- ▶ Suitable screw connectors for diverse applications such as street lighting or using copper sheathed wires and plastic-insulated conductors.
- ▶ **No torque wrench required** to install screw connectors with shear heads, since the screw shears off on reaching the required torque.
- ▶ During screwing the grooved profile pierces the oxide layer on the conductor guaranteeing always a perfect contact.

▶ *More on Page 132.*

■ Installation without downtimes.

- ▶ Compact tap connectors with nominal cross sections up to 185 mm².
- ▶ For 3 and 4 core sector-shaped conductors with respective angles of 120° and 90°.
- ▶ For aluminium and copper conductors.
- ▶ With or without shear heads for the main conductor.
- ▶ Can be installed to VDE under voltage using the correct Klauke tools.



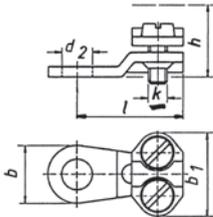
▶ *More on Page 138.*

Benefits:

- ▶ The range includes proper solutions for practically every application.
- ▶ You can install tap conductors **without disconnecting the power supply**. No interruption of production sequences operation can be sustained.
- ▶ Multi-phase tap conductors can be installed even in tight spaces without disruption of the main conductor.



▶ **Screw connectors and compact tap connectors should be protected against moisture because of varying material properties after processing.**



■ Punched cable lugs, copper, 16 - 300 mm²

- For screwing conductors to VDE 0295 Class 1 and 2, for example in lighting protection areas

Characteristics

- Also for outdoor assembly
- Available either for 2 or 4 screws

Material

- Cu-ETP
- Screws: DIN 84 / DIN 933 bronze, F 60

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"

Nominal cross section mm ²	Part No.	Number of screws	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
			d2	b	b1	h	l	k		
6 - 10	572R6	2	6.5	15.0	18.0	10	23.0	M4	1.30	50
10 - 16	573R6	2	6.5	15.0	20.5	14	27.0	M5	1,30	50
	573R8	2	8.5	15.0	20.5	14	27.0	M5	1,30	50
16 - 25	574R8	2	8.5	15.0	25.0	16	30.0	M5	2.75	50
16 - 25	584R8	4	8.5	18.5	22.5	16	36.0	M5	3.70	25
	584R10	4	10.5	19.5	22.5	16	37.0	M5	3.75	25
25 - 35	575R8	2	8.5	18.5	24.0	16	25.5	M5	2.50	50
25 - 35	585R8	4	8.5	18.5	24.0	16	38.5	M5	4.30	25
	585R10	4	10.5	21.5	24.0	16	42.0	M5	4.65	25
	585R12	4	13.0	21.5	24.0	16	42.0	M5	4.50	25
35 - 50	586R10	4	10.5	19.0	28.0	19	46.0	M6	6.75	25
	586R12	4	13.0	21.0	28.0	19	47.0	M6	6.70	25
50 - 70	587R10	4	10.5	23.5	31.0	19	51.0	M6	9.35	10
	587R12	4	13.0	23.5	31.0	19	51.0	M6	9.30	10
70 - 95	588R10	4	10.5	24.0	34.0	25	57.0	M6	12.00	10
	588R12	4	13.0	24.0	34.0	25	57.0	M6	11.85	10
95 - 150	589R10	4	10.5	30.0	42.0	32	61.0	M8	20.15	10
	589R12	4	13.0	30.0	42.0	32	61.0	M8	20.20	10
	589R16	4	17.0	30.0	42.0	32	61.5	M8	20.10	10
150 - 240	590R10	4	10.5	34.0	48.5	32	68.5	M8	24.40	5
	590R12	4	13.0	34.0	48.5	32	68.5	M8	24.35	5
	590R16	4	17.0	34.0	48.5	32	68.5	M8	24.30	5
	590R20	4	21.0	36.0	48.5	32	70.5	M8	24.25	5
185 - 300	592R12	4	13.0	32.0	50.0	37	68.5	M8	27.95	5
	592R16	4	17.0	32.0	50.0	37	68.5	M8	28.00	5
	592R20	4	21.0	34.5	50.5	37	70.0	M8	27.95	5

■ **Tube screw connectors, CuZn 6 - 300 mm²**

Characteristics

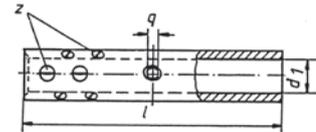
- A firm connection needs to be soldered
- With soldering hole and retaining screws for simple processing

Material

- CuZn 40 Pb 2
- Screws: DIN 551 steel

Surface

- tin plated



Nominal cross section mm ²	Part No.	Dimension mm				Weight/ 100 pcs. ~ kg	pcs.
		d1	l	Ø q	z*		
6	551R	3.5	25	3.3	2	0.60	10
10	552R	4.5	30	3.3	2	1.20	10
16	553R	5.5	40	4.2	4	1.90	10
25	554R	7.0	45	4.2	4	2.85	10
35	555R	8.5	45	5.0	4	3.00	10
50	556R	10.0	48	5.0	4	4.00	10
70	557R	12.0	52	6.8	4	6.30	10
95	558R	13.5	55	6.8	4	8.05	10
120	559R	15.0	60	6.8	4	9.90	10
150	560R	17.0	64	6.8	4	11.80	5
185	561R	19.0	70	6.8	10	14.30	5
240	562R	21.0	70	6.8	10	15.50	5
300	563R	24.0	75	6.8	10	19.30	1

► z = Number of set screws

■ **Screw T-connectors, CuZn 4 - 95 mm²**

Characteristics

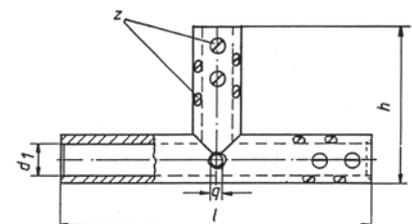
- A firm connection needs to be soldered
- With soldering hole and retaining screws for simple processing

Material

- CuZn 40 Pb 2
- Screws: DIN 551 steel

Surface

- tin plated

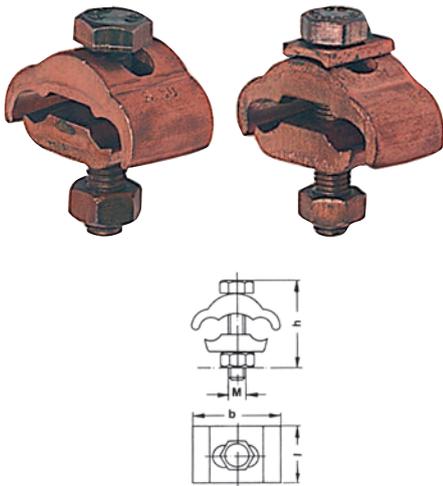


Nominal cross section mm ²	Part No.	Dimension mm				Weight/ 100 pcs. ~ kg	pcs.	
		d1	h	l	Ø q			
4 - 6	TAS6	3.0	18	30	2.5	3	1.05	10
10	TAS10	4.5	25	40	3.5	3	2.15	10
16	TAS16	5.5	27	42	3.5	6	2.50	10
25	TAS25	7.0	29	45	4.5	6	3.70	10

■ **Screw T-connectors, CuZn 4 - 95 mm²**

Nominal cross section mm ²	Part No.	Dimension mm					Weight/ 100 pcs. ~ kg	pcs.
		d1	h	l	Ø q	z*		
35	TAS35	8.5	32	52	4.5	6	4.30	10
50	TAS50	10.0	34	56	6.0	9	7.40	10
70	TAS70	12.0	41	62	6.5	9	9.80	5
95	TAS95	13.5	44	68	7.0	9	12.80	5

▶ z = Number of set screws



■ **Parallel groove clamps, Cu 2.5 - 95 mm²**

- For screwing conductors to VDE 0295 Class 1 and 2, for example in lighting protection areas

Characteristics

- Also for outdoor assembly
- Version with 1 screw
- Available either with or without thrust plate
- With thrust plate for uniform pressure distribution in different cross-section pairings

Material

- Cu-ETP
- Screw: high tensile copper alloy F 60
- Nut: Copper

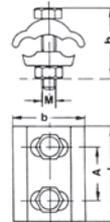
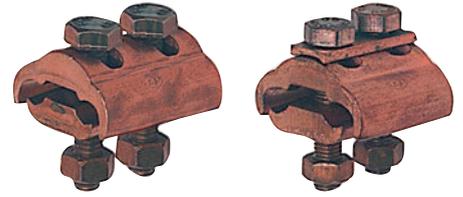
Surface

- bright

Nominal cross section mm ²	Part No.	Dimension mm				Weight/ 100 pcs. ~ kg	pcs.
		b	h	l	M		
Without thrust plate							
2,5 - 16	SAK10	19.5	16	16	M5	2.10	10
2,5 - 25	SAK12	25.0	21	18	M6	4.10	10
	SAK14	25.0	22	18	M7	3.95	10
6 - 35	SAK16	28,0	23	20	M7	6,0	10
6 - 50	SAK18	32.5	26	20	M7	8,0	10
	SAK20	33,5	27	22	M8	8,6	10
6 - 70	SAK22	37,5	29	24	M8	11,1	5
10 - 95	SAK24	41,0	36	28	M8	15,6	5
With thrust plate							
2,5 - 16	SAK11	19.5	16	16	M5	2,6	10
2,5 - 25	SAK13	25.0	21	18	M6	4.30	10
	SAK15	25.0	22	18	M7	4,6	10
6 - 35	SAK17	28,0	23	20	M7	6,3	10
6 - 50	SAK19	32.5	26	20	M7	7,9	10
	SAK21	33,5	27	22	M8	9,1	10
6 - 70	SAK23	37	29	24	M8	11,6	5
10 - 95	SAK25	45	36	31	M10	19.6	5

■ **Parallel groove clamps, Cu 2.5 - 150 mm²**

- For screwing conductors to VDE 0295 Class 1 and 2, for example in lighting protection areas



Characteristics

- Also for outdoor assembly
- Version with 2 screws
- Available either with or without thrust plate
- With thrust plate for uniform pressure distribution in different cross-section pairings

Material

- Cu-ETP
- Screw: high tensile copper alloy F 60
- Nut: Copper

Surface

- bright

Nominal cross section mm ²	Part No.	Dimension mm					Weight/ 100 pcs. ~ kg	pcs.
		b	A	h	l	M		
Without thrust plate								
2,5 - 16	SAK30	20,5	13,0	16	24	M5	3,7	10
2,5 - 25	SAK32	25,5	13,5	21	27	M6	6,4	10
	SAK34	25,0	15,0	22	30	M7	7,7	10
6 - 35	SAK36	30,0	15,0	23	30	M7	8,5	10
6 - 50	SAK38	33	16,0	26	32	M7	12,3	10
10 - 50	SAK40	32,5	18,0	27	36	M8	12,9	10
6 - 70	SAK42	37	19,0	29	38	M8	18,1	5
10 - 95	SAK44	45,0	25,5	36	46	M10	28,7	5
16 - 150	SAK46	52,5	26,0	40	52	M10	37,4	5
With thrust plate								
2,5 - 16	SAK31	19,5	13,0	16	22	M5	4,1	10
2,5 - 25	SAK33	25,5	14,0	21	27	M6	7,0	10
	SAK35	25,0	15,0	22	30	M7	7,9	10
6 - 35	SAK37	30,0	16,0	23	32	M7	10,2	10
6 - 50	SAK39	33,0	17,0	26	32	M7	12,8	10
10 - 50	SAK41	32,5	18,0	27	34,5	M8	14,7	10
6 - 70	SAK43	37,0	19,0	29	38,5	M8	19,1	5
10 - 95	SAK45	41,0	20	36	43	M8	25,0	5
16 - 150	SAK47	52,5	26,0	40	52	M10	39,0	5



C-type clamps, Cu 16 - 95 mm²

- For branching identical cross-sections e.g. to VDE 0295 Class 1 and 2
- No need to split the main conductor

Characteristics

- Conductivity optimised by compound

Material

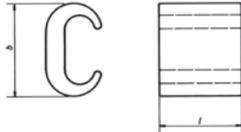
- Cu-ETP

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"



Conductor size		Part No.	Dimension mm		Weight/100 pcs.	
Main conductor rm/re	Junction rm/re		b	l	~ kg	pcs.
16/25	16/25	CK16	16.0	15	0.94	25
25/35	25/35	CK25	20.0	16	1.68	25
35/50	35/50	CK35	25.7	22	3.42	25
50/-	50/-	CK50	28.0	23	4.88	25
70/-	70/-	CK70	34.0	28	9.69	10
95/-	95/-	CK95	35.0	28	7.30	10

- ▶ rm = round stranded
- ▶ Tool: see chart page 141

- ▶ re = round solid



C-type Clamps, Cu 2.5 - 185 mm²

Multi-purpose clamps

- For branching unidentical conductor cross-sections, e.g. to VDE 0295, Class 1 and 2
- No need to split the main conductor

Characteristics

- Conductivity optimised by compound

Material

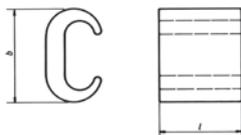
- Cu-ETP

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"



Conductor size		Part No.	Dimension mm		Weight/100 pcs.	
Main conductor rm/re	Junction rm/re		b	l	~ kg	pcs.
2,5 - 4/2,5 - 4	2,5 - 4/2,5 - 4	MCK44	9.8	8	0.185	25
6 - 10/10	4 - 6/4 - 10	MCK1010	12.0	12	0.460	25
10 - 16/16	4 - 10/4 - 10	MCK1016	19.0	17	1.900	25
16 - 25/25	4 - 10/4 - 10	MCK1025	19.0	17	1.900	25
16 - 25/25 - 35	16 - 25/16 - 35	MCK3535	20.0	17	1.750	25
35/50	4 - 25/4 - 25	MCK2550	24.8	23	4.400	25
35/50	16 - 35/25 - 50	MCK5050	26.5	23	4.200	25
50 - 70/-	4 - 35/4 - 35	MCK3570	33.8	28	10.700	10

■ **C-type Clamps, Cu 2.5 - 185 mm²**

Multi-purpose clamps

Conductor size		Part No.	Dimension mm		Weight/ 100 pcs. ~ kg	pcs.
Main conductor rm/re	Junction rm/re		b	l		
95/-	16 - 35	MCK3595	41.0	30	15.000	10
95/-	35 - 70	MCK7095	41.0	30	14.000	10
120/-	35 - 120	MCK120120	45.0	30	16.550	10
150/-	70 - 150	MCK150150	53.0	35	23.000	5
185/-	95 - 185	MCK185185	60.0	40	33.000	5

▶ rm = round stranded

▶ re = round solid

▶ Tool: see chart page 141

■ **H-type clamps, Cu 70 - 120 mm²**



■ For branching identical cross-sections e.g. to VDE 0295 Class 2

■ No need to split the main conductor



Characteristics

- H-shape allows simple processing
- Conductivity optimised by compound

Material

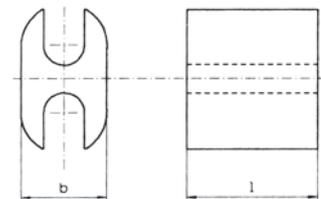
- Cu-ETP

Surface

- tin plated

Order info

- Bright finish version also available, part number appendix "bk"



Conductor size		Part No.	Dimension mm		Weight/ 100 pcs. ~ kg	pcs.
Main conductor rm	Junction rm		b	l		
70	70	AH7070	17,0	28,0	6,5	25
95	95	AH9595	22,0	30,0	10,0	25
120	120	AH120120	24,0	25,0	9,8	25

▶ rm = round stranded

▶ Tool: see chart page 142

■ **Compound for clamps**

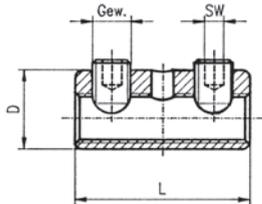
■ Optimum conductivity for processing

Characteristics

- Water-resistant, with corundum for destroying the oxidation layer on contact surfaces



Part No.	Net content/electrical outlet (kg)
KF125	0.125



Screw connectors, 6 - 35 mm²

For shielded copper wires

- Small dimensions for shielded copper wires, for example
- For connecting identical and different conductor cross-sections

Characteristics

- Special grooved profile inside for removing the oxidation layer when screwing
- With inspection hole for monitoring cable entry

Material

- Insulated body: brass (CuZn)
- Screws: stainless steel, tin plated

Surface

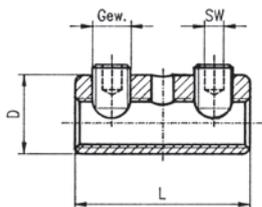
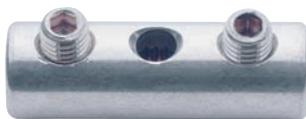
- tin plated

Nominal cross section mm ²		Part No.	Dimension mm		Bolt data				Weight/ 100 pcs. ~ kg	pcs.
rm	re		L	D	No.:	flats mm	Thread DIN 13	Md Nm		
6 - 25	6 - 35	SV100	40	14	2	4	M8x1	10	3.9	4

▶ rm = round stranded

▶ re = round solid

ⓘ Please observe instructions on page i-9



Screw connectors, 2.5 - 16 mm²

For street lighting

- Very small dimensions for street lighting, for example
- For connecting identical and different conductor cross-sections

Characteristics

- Special grooved profile inside for removing the oxidation layer when screwing
- With inspection hole for monitoring cable entry

Material

- Insulated body: brass (CuZn)
- Screws: stainless steel, tin plated

Surface

- tin plated, optional bright finish

Nominal cross section mm ²		Part No.	Dimension mm		Bolt data			Weight/ 100 pcs. ~ kg	pcs.
rm	re		L	D	No.:	flats mm	Thread DIN 13		
2.5 - 10	2.5 - 16	SV200	30	10	2	2.5	M5x1.5	1.35	4
2.5 - 10	2.5 - 16	SV200BK	30	10	2	2.5	M5x1.5	1.35	4

▶ rm = round stranded

▶ re = round solid

ⓘ Please observe instructions on page i-9

■ **Screw connectors, 2.5 - 185 mm²**

- For connecting identical and different conductor cross-sections
- Also for connecting different conductor types and materials, e.g. to VDE 0295 Class 1 and 2 and Al conductors to DIN 48201 part 1



Characteristics

- Special grooved profile inside for removing the oxidation layer when screwing
- With inspection hole for monitoring cable entry (disimilar materials must not come into contact)
- Either with or without shear head, shear head partly fixed
- Version with 2 screws

Material

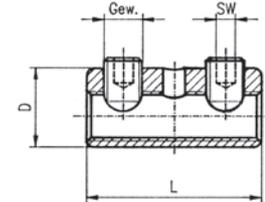
- Insulated body: high resistant aluminium alloy
- Screws: copper alloy, tin plated

Surface

- copper finish or tin plated

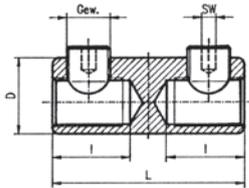
Order info

- * = fixed version, part number appendix "NL"
- Version with fixed countersink shear head, part number appendix "VK"



Nominal cross section mm ² rm/sm	Nominal cross section mm ² rm(v)/re/se	Part No.	Dimension mm		flats mm	Bolt data		Weight/ 100 pcs. ~ kg	pcs.
			L	D		Thread DIN 13	Md Nm		
without shear head, bright									
6 - 25	6 - 35	SV303	40	14	4	M8x1	8	1.5	4
6 - 35	6 - 50	SV300	40	16	4	M10x2	8	1.7	4
25 - 95	25 - 95	SV301	55	25	5	M12x16	20	6.6	4
--	35 - 150	SV308	70	28	6	M18x1.5	25	11.3	4
35 - 185	35 - 185	SV302	80	32	6	M18x1.5	25	16	4
without shear head, tin plated									
6 - 25	6 - 35	SV303V	40	14	4	M8x1	8	1.5	4
Cu 2.5/Al 6 - 35	Cu 2.5/Al 6 - 50	SV300V	40	16	4	M10x2	8	1.7	4
16 - 35	16 - 50	SV307V	57	22	5	M10x1.5	15	4.7	4
25 - 95*	25 - 95	SV301V	55	25	5	M12x16	20	6.6	4
35 - 185	35 - 185	SV302V	80	32	6	M18x1.5	25	16	4
with shear head, bright									
6 - 25	6 - 35	*SV303AK	40	14	4	M8x1	8	1.5	1
6 - 35	--	SV304AKNL	40	16	4	M10x1	8	1.7	4
16 - 35	16 - 50	SV307AKNL	57	22	5	M10x1.5	15	4.7	4
25 - 95	25 - 95	SV301AK	55	25	5	M12x16	20	6.6	4
35 - 185	35 - 185	SV302AK	80	32	6	M18x1.5	25	16	4
with shear head, tin plated									
Cu 2.5/Al 6 - 35	Cu 2.5/Al 6 - 50	SV304AKNLV	40	16	4	M10x1	8	1.7	4
25 - 95	25 - 95	**SV301AKV	25	55	5	M12x16	20	6.6	4
35 - 185	35 - 185	SV302AKV	80	32	6	M18x1.5	25	16	4

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
 - ▶ sm = sector stranded
 - ▶ sm/se-conductor needs to be pre-rounded
 - ▶ re = round solid
 - ▶ se = sector solid
- ⓘ Please observe instructions on page i-9



Screw connectors, 2.5 - 185 mm²

version with barrier

- For connecting identical and different conductor cross-sections
- Also for connecting different conductor types and materials, e.g. to VDE 0295 Class 1 and 2 and Al conductors to DIN 48201 part 1

Characteristics

- Special grooved profile inside for removing the oxidation layer when screwing
- Either with or without shear head, shear head partly fixed
- Version with 2 screws and barrier

Material

- Insulated body: high resistant aluminium alloy
- Screws: copper alloy, tin plated

Surface

- copper finish or tin plated

Order info

- * = fixed version, part number appendix "NL"
- Version with fixed countersink shear head, part number appendix "VK"

Nominal cross section mm ² rm/sm	Nominal cross section mm ² rm(v)/re/se	Part No.	Dimension mm			Bolt data			Weight/ 100 pcs.	
			L	I	D	flats mm	Thread DIN 13	Md Nm	~ kg	pcs.
without shear head, bright										
6 - 35	6 - 50	SV315	40	17.5	16	4	M10x1	8	1.7	4
25 - 95	25 - 95	SV309	55	22	25	5	M12x1	20	6.6	4
--	35 - 150	SV320	70	31	28	6	M18x1.5	25	11.3	4
35 - 185	35 - 185	SV310	80	32	32	6	M18x1.5	25	16	4
without shear head, tin plated										
Cu 2.5/Al 6 - 35	Cu 2.5/Al 6 - 50	SV315V	40	17.5	16	4	M10x1	8	1.7	4
25 - 95	25 - 95	SV309V	55	22	25	5	M12x1	20	6.6	4
--	35 - 150	SV320V	70	31	28	6	M18x1.5	25	11.3	4
35 - 185	35 - 185	SV310V	80	32	32	6	M18x1.5	25	16	4
with shear head, bright										
6 - 25	6 - 35	SV311AKNL	40	17.5	14	4	M8x1	8	1.5	4
6 - 35	--	SV312AKNL	40	17.5	16	4	M10x1	8	1.7	4
25 - 95	25 - 95	SV309AK	55	22	25	5	M12x1	20	6.6	4
35 - 185	35 - 185	SV310AKV	80	32	32	6	M18x1.5	25	16	4
70 - 150	95 - 150	SV322AKVK	80	32	32	6	M18x1.5	25	21.6	4
with shear head, tin plated										
Cu 2.5/Al 6-35	Cu 2.5/Al 6-50	SV312AKNLV	40	17.5	16	4	M10x1	8	1.7	4
16 - 35	16 - 50	SV319AKNLV	57	24	22	4	M12x1	15	7.6	4
25 - 95	25 - 95	**SV309AKV	55	22	25	5	M12x1	20	6.6	4
35 - 185	35 - 185	**SV310AKV	80	32	32	6	M18x1.5	25	16	4

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded

- ▶ re = round solid
- ▶ se = sector solid

ⓘ Please observe instructions on page i-9

■ **Screw connectors, 25 - 185 mm²**

- For connecting identical and different conductor cross-sections
- Also for connecting different conductor types and materials, e.g. to VDE 0295 Class 1 and 2 and Al conductors to DIN 48201 part 1



Characteristics

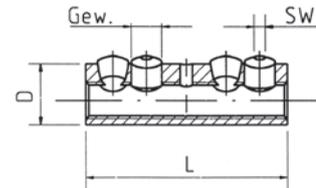
- Special grooved profile inside for removing the oxidation layer when screwing
- With inspection hole for monitoring cable entry (disimilar materials must not come into contact)
- Either with or without shear head
- Version with 4 screws

Material

- Insulated body: high resistant aluminium alloy
- Screws: copper alloy, tin plated

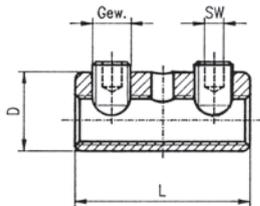
Surface

- copper finish or tin plated



Nominal cross section mm ² rm/sm	Nominal cross section mm ² rm(v)/re/se	Part No.	Dimension mm		flats mm	Bolt data		Weight/ 100 pcs. ~ kg	pcs.
			L	D		Thread DIN 13	Md Nm		
without shear head, bright									
25 - 95	25 - 95	SV305	92	25	5	M12x1	20	12	4
35 - 185	35 - 185	SV306	108	32	6	M18x1.5	25	25	4
without shear head, tin plated									
25 - 95	25 - 95	SV305V	92	25	5	M12x1	20	12	4
35 - 185	35 - 185	SV306V	108	32	6	M18x1.5	25	25	4
with shear head, bright									
25 - 95	25 - 95	SV305AK	92	25	5	M12x1	20	12	4
35 - 185	35 - 185	SV306AK	108	32	6	M18x1.5	25	25	4
with shear head, tin plated									
25 - 95	25 - 95	SV305AKV	92	25	5	M12x1	20	12	4
35 - 185	35 - 185	SV306AKV	108	32	6	M18x1.5	25	25	4

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-9



Insulated screw connector, 6 - 185 mm²

- For connecting identical and different conductor cross-sections
- Also for connecting different conductor types and materials, e.g. to VDE 0295 Class 1 and 2 and Al conductors to DIN 48201 part 1

Characteristics

- Special grooved profile inside for removing the oxidation layer when screwing
- With inspection hole for monitoring cable entry (disimilar materials must not come into contact)
- Insulated body
- Version with 2 screws, without barrier
- Either with or without shear head

Material

- Insulated body: high resistant aluminium alloy
- Screws: copper alloy, tin plated

Surface

- copper finish or tin plated

Nominal cross section mm ² rm/sm	Nominal cross section mm ² rm(v)/re/se	Part No.	Dimension mm		Bolt data			Weight/ 100 pcs. ~ kg	pcs.
			L	D	flats mm	Thread DIN 13	Md Nm		
without shear head, bright									
6 - 25	6 - 35	SV400	40	14	4	M8x1	8	1.7	4
25 - 95	25 - 95	SV410	55	25	5	M12x1	20	6	4
35 - 185	35 - 185	SV420	80	32	6	M18x1.5	25	14.5	4
without shear head, tin plated									
16 - 35	16 - 50	*SV405V	57	22	5	M10x1.5	15	5	4
35 - 185	35 - 185	SV420V	80	32	6	M18x1.5	25	14.5	4
with shear head, bright									
25 - 95	25 - 95	SV410AK	55	25	5	M12x1	20	6	4
35 - 185	35 - 185	SV420AK	80	32	6	M18x1.5	25	14.5	4

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
 - ▶ sm = sector stranded
 - ▶ sm/se-conductor needs to be pre-rounded
 - ▶ re = round solid
 - ▶ se = sector solid
- i** Please observe instructions on page i-9

■ Insulated screw connector, 25 - 185 mm²

version with barrier

- For connecting identical and different conductor cross-sections
- Also for connecting different conductor types and materials, e.g. to VDE 0295 Class 1 and 2 and Al conductors to DIN 48201 part 1



Characteristics

- Special grooved profile inside for removing the oxidation layer when screwing
- Insulated body
- Version with 2 screws and barrier
- Either with or without shear head

Material

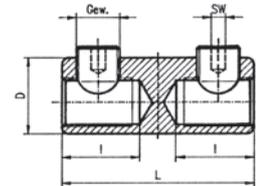
- Insulated body: high resistant aluminium alloy
- Screws: copper alloy, tin plated

Surface

- bright

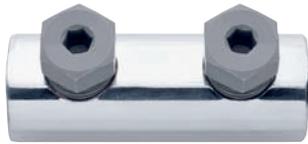
Order info

- Version with fixed countersink shear head, part number appendix "VK"



Nominal cross section mm ² rm/sm	Nominal cross section mm ² rm(v)/re/se	Part No.	Dimension mm			Bolt data			Weight/ 100 pcs.		
			L	I	D	flats mm	Thread DIN 13	Md Nm	~ kg	pcs.	
Without shear head											
25 - 95	25 - 95	SV430	55	22	25	5	M12x1	20	6.6	4	
35 - 185	35 - 185	SV440	80	32	32	6	M18x1.5	25	16.0	4	
With shear head											
25 - 95	25 - 95	SV430AK	55	22	25	5	M12x1	20	6.6	4	
35 - 185	35 - 185	SV440AK	80	32	32	6	M 18 x 1.5	25	16.0	4	

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-9



Screw connectors, 25 - 95 mm²

For insulated conductors

- For connecting identical and different conductor cross-sections
- Also for connecting different conductor types and materials, e.g. to VDE 0295 Class 1 and 2 and Al conductors to DIN 48201 part 1

Characteristics

- Version with 2 shear-off screws
- With shear head

Material

- Insulated body: high resistant aluminium alloy
- Screws: copper alloy, tinned and greased

Surface

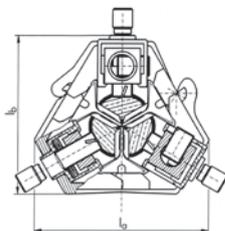
- bright, optional tin plated

Nominal cross section mm ²		Part No.	Dimension mm L	External hexagon	Internal hexagon	Tightening torque Nm	Weight/ 100 pcs. ~ kg	pcs.
rm/sm	rm(v)/re/se							
25-70	25-95	SV501	70	SW17	SW6	25	6.6	4
25-70	25-95	SV501V	70	SW17	SW6	25	6.6	4

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-9

Insulated tools according to VDE 0680 part 2/3.78

For correct assembly we recommend use of our hexagonal and torque wrenches and expander wedges. Length of handles of hexagonal wrenches guarantees correct torque. The torque wrench achieves the required torque value.



Compact tap connectors with shear heads, 3L

For three conductor cable

- To VDE, can be installed under voltage with corresponding fully-insulated assembly tools
- Suitable for main and branch conductors made from Al and Cu

Characteristics

- With shear heads, fixed type, for main conductor

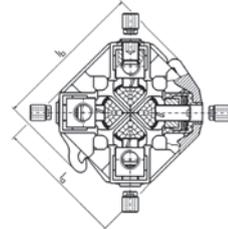
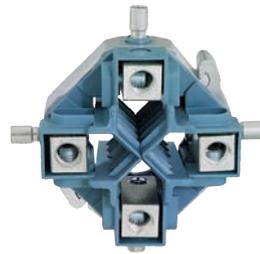
Nominal cross-section mm ²				Tap conductor		Part No.	Clamp data Dimension mm			Bolts			Weight/ 100 pcs. ~ kg	pcs.
Main conductor				rm/sm	rm(v)/re/se		la	lb	Width:	Circle Ø		Thread DIN 13		
Cu rm/sm	Cu rm(v)/re/se	Al rm/sm	Al rm(v)/re/se			90				flats mm				
70 - 150	70 - 150	70 - 150	70 - 150	6 - 70	6 - 95	KSK1503	84	76	45	5	M10x1/M10	0.35	1	

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-10

■ Compact tap connectors with shear heads, 4L

For four conductor cable

- To VDE, can be installed under voltage with corresponding fully-insulated assembly tools
- Suitable for main and branch conductors made from Al and Cu



Characteristics

- With shear heads, fixed type, for main conductor

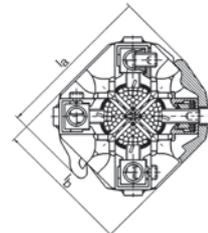
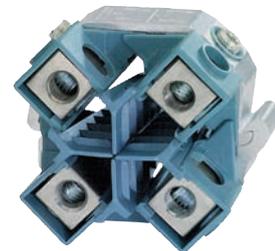
Nominal cross-section mm ²				Tap conductor		Part No.	Clamp data Dimension mm			Bolts			Weight/ 100 pcs. ~ kg	pcs.	
Cu rm/sm	Main conductor Cu rm(v)/re/se		Al rm/sm	Al rm(v)/re/se	rm/sm		rm(v)/re/se	la	lb	Width:	Circle Ø	flats mm			Thread DIN 13
70 - 150	70 - 150	70 - 150	70 - 150	70 - 150	6 - 70	6 - 95	KSK1504	107	90	46	110	5	M10x1/M10	0.63	1
70 - 150	70 - 150	70 - 150	70 - 185	70 - 185	6 - 35	6 - 50	KSK1854	107	90	52	106	5	M10x1/M10	0.58	1

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-10

■ Compact tap connectors, 4L

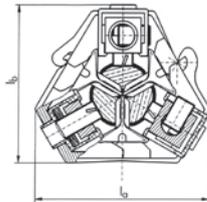
For four conductor cable

- To VDE, can be installed under voltage with corresponding fully-insulated assembly tools
- Suitable for main and branch conductors made from Al and Cu



Nominal cross-section mm ²				Tap conductor		Part No.	Clamp data Dimension mm			Bolts			Weight/ 100 pcs. ~ kg	pcs.	
Cu rm/sm	Main conductor Cu rm(v)/re/se		Al rm/sm	Al rm(v)/re/se	rm/sm		rm(v)/re/se	la	lb	Width:	Circle Ø	flats mm			Thread DIN 13
25 - 50	25 - 50	25 - 50	25 - 50	25 - 70	6 - 35	6 - 50	KSK504	88	75	50	91	5	M10x1/M10	0.46	1

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-10



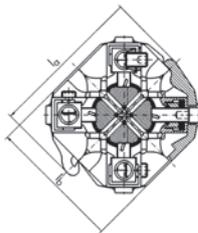
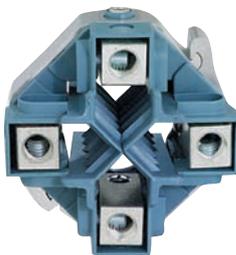
■ Compact tap connectors, 3L

For three conductor cable

- To VDE, can be installed under voltage with corresponding fully-insulated assembly tools
- Suitable for main and branch conductors made from Al and Cu

Nominal cross-section mm ²				Tap conductor		Part No.	Clamp data Dimension mm			Bolts			Weight/ 100 pcs. ~ kg	pcs.
Cu rm/sm	Main conductor		Al	rm/sm	rm(v)/re/se		la	lb	Width:	Circle Ø	flats mm	Thread DIN 13		
70 - 150	Cu rm(v)/re/se	Al rm/sm	Al rm(v)/re/se	6 - 70	6 - 95	SKR1503	84	76	45	90	5	M10x1/M10	0.38	1

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-10



■ Compact tap connectors, 4L

For four conductor cable

- To VDE, can be installed under voltage with corresponding fully-insulated assembly tools
- Suitable for main and branch conductors made from Al and Cu

Nominal cross-section mm ²				Tap conductor		Part No.	Clamp data Dimension mm			Bolts			Weight/ 100 pcs. ~ kg	pcs.
Cu rm/sm	Main conductor		Al	rm/sm	rm(v)/re/se		la	lb	Width:	Circle Ø	flats mm	Thread DIN 13		
70 - 95	Cu rm(v)/re/se	Al rm/sm	Al rm(v)/re/se	6 - 35	6 - 50	SKR1204	90	77	50	93	5	M10x1/M10	0.46	1
70 - 120	70 - 120	70 - 120	70 - 150	6 - 35	6 - 50	SKR150504	93	80	50	62	5	M10x1/M10	0.46	1
70 - 120	70 - 120	70 - 150	70 - 150	6 - 70	6 - 95	SKR1504	107	90	46	110	5	M10x1/M10	0.62	1
95 - 150	95 - 150	95 - 150	95 - 150	16 - 120	16 - 150	SKR1501504	118	118	93	120	5	M12x1/M12	1.34	1
95 - 150	95 - 150	95 - 150	95 - 185	6 - 70	6 - 95	SKR1854	107	96	46	114	5	M10x1/M10	0.58	1

- ▶ rm = round multi-stranded, rm (v) = round multi-stranded compacted
- ▶ sm = sector stranded
- ▶ sm/se-conductor needs to be pre-rounded
- ▶ re = round solid
- ▶ se = sector solid
- ⓘ Please observe instructions on page i-10



■ Tool application chart

C-Clamps

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
4-35	EK354					•				300
4-50	K18			•						248
	HK6018				•					270
	EK5018L					•				304
	PK18							•		336
	THK18						•			336
	HK60UNV + UA18					•				286
	EK60UNVL + UA18						•			330
	PK60UNV + UA18							•		354
	K22				•					250
	HK6022					•				272
	EK6022L						•			306
	PK22							•		338
	THK22						•			338
	HK60UNV + UA22					•				286
	EK60UNVL + UA22						•			330
PK60UNV + UA22							•		354	
10-70	HK12025				•					276
	HK12042					•				278
	HK120U					•				280
	EK12025L					•				312
	EK12042L					•				314
	EK120UL					•				316
	HK122EL220						•			366
	HK122EL380						•			366
	PK12042							•		342
	PK120U							•		344
10-185	HK252						•			364
	HK252EL220						•			367
	HK252EL380						•			367
	PK252							•		346



■ Tool application chart

H-Clamps

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
70-120	HK12025				•				○	276
	HK12042				•				○	278
	HK120U				•				○	280
	EK12025L					•			○	312
	EK12042L					•			○	314
	EK120UL					•			○	316
	HK122EL220						•		○	366
	HK122EL380						•		○	366
	PK12042							•	○	342
	PK120U							•	○	344
	HK252						•		○	364
	HK252EL220						•		○	367
	HK252EL380						•		○	367
	PK252							•	○	346

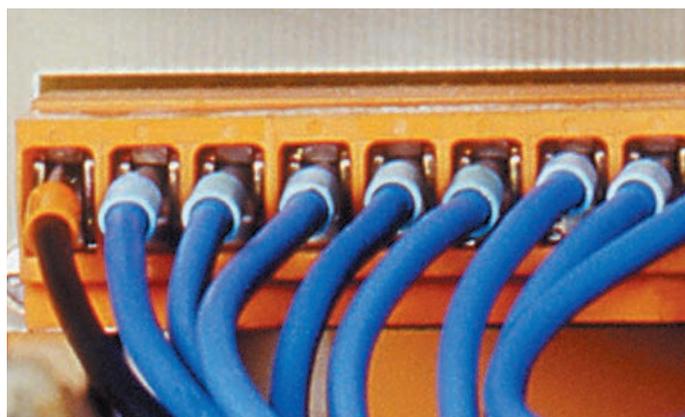


No more *spliced conductors.*

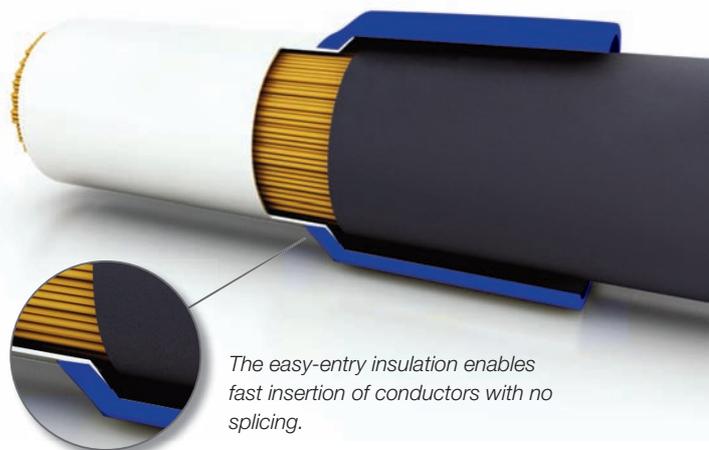
Non-insulated and insulated cable end sleeves.

Crimped cable end sleeves avoid splicing of individual wires of fine and finest stranded copper conductors. In addition insertion of cables into connectors is much easier and guarantees good electrical connections in the clamps.

Cable end sleeves are made from high quality electrolytic copper and are tin or silver plated to prevent oxidation.



- Non-insulated cable end sleeves to DIN 46228, part 1.
- Insulated cable end sleeves to DIN 46228, part 4, with CSA testing.
- Insulated twin cable end sleeves for conductor loops.
- Insulated cable end-sleeves for short circuit-resistant conductors.



The easy-entry insulation enables fast insertion of conductors with no splicing.



■ *Non-insulated cable end sleeves in all sizes and lengths.*

- ▶ With nominal cross sections from 0.25 mm² to 240 mm².
- ▶ Also silver plated design.



Benefits:

- ▶ Fine and finest stranded conductors up to a nominal cross section of 240 mm² can be crimped without splicing and within DIN range into standardized measures.
- ▶ The silver plated design provides excellent conductivity and outstanding contact properties and are the ideal solution for applications in aggressive environments.
- ▶ Klauke crimping profiles, such as the special trapezoid crimp, enable crimping with thinned, compacted or fine stranded conductors.

■ *Polypropylene makes the difference.*



- ▶ Insulated cable end sleeves with nominal cross-sections from 0.14 mm² to 150 mm².
- ▶ Calibrated cable end sleeves **can be used in fully-automated cable harness processing.**
- ▶ Designs to DIN 46228 part 4 and two further colour codes.
- ▶ In various lengths.
- ▶ With easy-entry polypropylene insulation for continuous rating to 105 °C.
- ▶ Free of halide
- ▶ CSA-tested designs.
- ▶ With nominal cross-sections from 1.5 mm² to 16 mm² for short circuit-resistant conductors.

Benefits:

- ▶ The conductors **can be connected to the clamps better and faster** after crimping.
- ▶ Calibrated precision.
- ▶ Easy-entry polypropylene insulation for simple conductor insertion.
- ▶ Halide-free insulation prevents hydrochloric acid-containing vapours from developing in case of fire.
- ▶ Permanent safe installation with heat and age-resistant plastic collars.

■ *Simple, multiple population.*

- ▶ Twin cable end sleeves with nominal cross sections from 0.25 mm² to 16 mm².
- ▶ In different lengths.
- ▶ DIN colour code.
- ▶ Free of halide polypropylene insulation.
- ▶ CSA-tested.

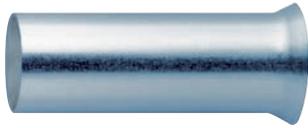


Benefits:

- ▶ In tight areas twin cable end sleeves are often the only alternative for conductor loops.
- ▶ **The solution for multiple configuration of clamps.**

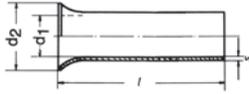


Cable end sleeves



■ Cable end-sleeves to DIN, copper, 0.25 - 240 mm²

- For fine and superfine stranded conductors, e.g. VDE 0295 Class 5 and 6
- Also in silver plated design



Characteristics

- Manufactured according to DIN 46228, part 1
- Burr-free, with expansion for simple cable insertion

Material

- Copper to EN 13600

Surface

- tin plated
- optional silver plated

Nominal cross section mm ²	Part No.		Dimension mm				Weight/ 1000 pcs. ~ kg	pcs.
	tin plated	silver plated	d1	d2	l	s		
0.25	*695V	*695	0.75	1.7	5	0.15	0.02	1000
	*697V	*697	0.75	1.7	7	0.15	0.03	1000
0.34	*705V	*7050	0.85	1.8	5	0.15	0.02	1000
	*707V	*707	0.85	1.8	7	0.15	0.03	1000
0.5	71S6V	71S6	1.00	2.1	6	0.15	0.03	1000
	*71S8V	*71S8	1.00	2.1	8	0.15	0.04	1000
	71S10V	71S10	1.00	2.1	10	0.15	0.05	1000
0.75	716V	716	1.20	2.3	6	0.15	0.04	1000
	*718V	*718	1.20	2.3	8	0.15	0.05	1000
	7110V	7110	1.20	2.3	10	0.15	0.06	1000
	*7112V	*7112	1.20	2.3	12	0.15	0.08	1000
	*7115V	*7115	1.20	2.3	15	0.15	0.09	1000
1	72S6V	72S6	1.40	2.5	6	0.15	0.04	1000
	*72S8V	*72S8	1.40	2.5	8	0.15	0.06	1000
	72S10V	72S10	1.40	2.5	10	0.15	0.07	1000
	*72S12V	*72S12	1.40	2.5	12	0.15	0.08	1000
	*72S15V	*72S15	1.40	2.5	15	0.15	0.10	1000
1.5	*726V	*726	1.70	2.8	6	0.15	0.05	1000
	727V	727	1.70	2.8	7	0.15	0.06	1000
	*728V	*728	1.70	2.8	8	0.15	0.07	1000
	7210V	7210	1.70	2.8	10	0.15	0.09	1000
	7212V	7212	1.70	2.8	12	0.15	0.10	1000
	*7215V	*7215	1.70	2.8	15	0.15	0.13	1000
	7218V	7218	1.70	2.8	18	0.15	0.15	1000
	*7220V	*7220	1.70	2.8	20	0.15	0.17	1000
2.5	737V	737	2.20	3.4	7	0.15	0.08	1000
	*738V	*738	2.20	3.4	8	0.15	0.09	1000
	7310V	7310	2.20	3.4	10	0.15	0.11	1000
	7312V	7312	2.20	3.4	12	0.15	0.13	1000
	*7315V	*7315	2.20	3.4	15	0.15	0.17	1000
	7318V	7318	2.20	3.4	18	0.15	0.20	1000
	*7320V	*7320	2.20	3.4	20	0.15	0.22	1000
4	*748V	*748	2.80	4.0	8	0.20	0.14	1000
	749V	749	2.80	4.0	9	0.20	0.16	1000
	*7410V	*7410	2.80	4.0	10	0.20	0.17	1000
	7412V	7412	2.80	4.0	12	0.20	0.20	1000
	7415V	7415	2.80	4.0	15	0.20	0.27	1000
	7418V	7418	2.80	4.0	18	0.20	0.32	1000
	*7420V	*7420	2.80	4.0	20	0.20	0.35	1000

■ **Cable end-sleeves to DIN, copper,
0.25 - 240 mm²**

Nominal cross section mm ²	Part No.		Dimension mm				Weight/ 1000 pcs. ~ kg	pcs.	
	tin plated	silver plated	d1	d2	l	s			
6	7510V	7510	3.50	4.7	10	0.20	0.23	100	
	7512V	7512	3.50	4.7	12	0.20	0.27	100	
	7515V	7515	3.50	4.7	15	0.20	0.34	100	
	7518V	7518	3.50	4.7	18	0.20	0.40	100	
	*7520V	*7520	3.50	4.7	20	0.20	0.45	100	
	*7525V	*7525	3.50	4.7	25	0.20	0.56	100	
10	*7610V	*7610	4.5	5.8	10	0.2	0.27	100	
	7612V	7612	4.5	5.8	12	0.2	0.33	100	
	7615V	7615	4.5	5.8	15	0.2	0.41	100	
	7618V	7618	4.5	5.8	18	0.2	0.49	100	
	*7620V	*7620	4.5	5.8	20	0.2	0.55	100	
	*7625V	*7625	4.5	5.8	25	0.2	0.68	100	
16	7712V	7712	5.8	7.5	12	0.2	0.43	100	
	7715V	7715	5.8	7.5	15	0.2	0.53	100	
	7718V	7718	5.8	7.5	18	0.2	0.60	100	
	*7720V	*7720	5.8	7.5	20	0.2	0.70	100	
	7725V	7725	5.8	7.5	25	0.2	0.87	100	
	7732V	7732	5.8	7.5	32	0.2	1.11	100	
25	*7812V	*7812	7.3	9.5	12	0.3	0.80	50	
	7815V	7815	7.3	9.5	15	0.3	0.99	50	
	7818V	7818	7.3	9.5	18	0.3	1.18	50	
	*7820V	*7820	7.3	9.5	20	0.3	1.31	50	
	7825V	7825	7.3	9.5	25	0.3	1.63	50	
	*7828V	*7828	7.3	9.5	28	0.3	1.82	50	
	7832V	7832	7.3	9.5	32	0.3	2.07	50	
	*7912V	*7912	8.3	11.0	12	0.3	0.90	50	
*7915V	*7915	8.3	11.0	15	0.3	1.12	50		
35	7918V	7918	8.3	11.0	18	0.3	1.34	50	
	*7920V	*7920	8.3	11.0	20	0.3	1.48	50	
	*7922V	*7922	8.3	11.0	22	0.3	1.63	50	
	7925V	7925	8.3	11.0	25	0.3	1.80	50	
	*7930V	*7930	8.3	11.0	30	0.3	2.20	50	
	7932V	7932	8.3	11.0	32	0.3	2.35	50	
	50	8018V	8018	10.5	13.0	18	0.3	1.69	50
		*8022V	*8022	10.5	13.0	22	0.3	2.05	50
8025V		8025	10.5	13.0	25	0.3	2.32	50	
*8030V		*8030	10.5	13.0	30	0.3	2.77	50	
8032V		8032	10.5	13.0	32	0.3	2.95	50	
70	*8122V	*8122	12.7	15.0	22	0.4	3.31	25	
	*8125V	*8125	12.7	15.0	25	0.4	3.75	25	
	*8130V	*8130	12.7	15.0	30	0.4	4.48	25	
	*8132V	*8132	12.7	15.0	32	0.4	4.78	25	
95	*8225V	*8225	14.7	17.0	25	0.4	4.32	25	
	*8230V	*8230	14.7	17.0	30	0.4	5.17	25	
	*8232V	*8232	14.7	17.0	32	0.4	5.17	25	
	*8234V	*8234	14.7	17.0	34	0.4	5.84	25	
120	*8330V	*8330	16.7	19.0	30	0.5	7.35	25	
	*8332V	*8332	16.7	19.0	32	0.5	7.83	25	
	*8334V	*8334	16.7	19.0	34	0.5	8.31	25	
	*8338V	*8338	16.7	19.0	38	0.5	9.28	25	
	*8340V	*8340	16.7	19.0	40	0.5	9.76	25	
150	*8432V	*8432	18.7	21.0	32	0.5	8.75	25	
	*8434V	*8434	18.7	21.0	34	0.5	9.28	25	
	*8438V	*8438	18.7	21.0	38	0.5	10.36	25	
	*8440V	*8440	18.7	21.0	40	0.5	10.89	25	



Cable end sleeves

■ Cable end-sleeves to DIN, copper, 0.25 - 240 mm²

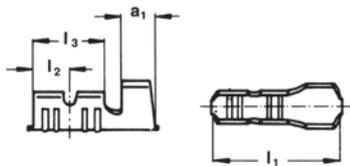
Nominal cross section mm ²	Part No.		Dimension mm				Weight/ 1000 pcs. ~ kg	pcs.
	tin plated	silver plated	d1	d2	l	s		
185	*8532V	*8532	20.2	23.5	32	0.6	11.38	25
	*8540V	*8540	20.2	23.5	40	0.6	14.17	25
240	*8634V	*8634	23.0	24.0	34	0.5	11.25	25
	*8640V	*8640	23.0	24.0	40	0.5	13.23	25

- ▶ * = Not standardised
- ▶ Tool: see chart page 157



■ Cable end-sleeves to DIN, 0.5 - 2.5 mm²

- For fine and superfine stranded conductors, e.g. VDE 0295 Class 5 + 6



Characteristics

- Manufactured according to DIN 46228, part 2

Material

- brass (CuZn)

Surface

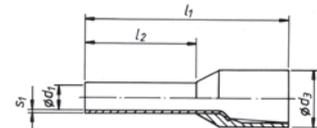
- tin plated

Nominal cross section mm ²	Nominal size to DIN	Part No.	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			l1	l2	l3	a1	s		
0.5-1	B 1 - 7	SH271	11	3.5	7	2.5	0.3	0.20	100
1.5	B 1.5 - 7	SH272	11	3.5	7	2.5	0.3	0.23	100
2.5	B 2.5 - 7	SH273	11	3.5	7	2.5	0.3	0.32	100

- ▶ Tool: see chart page 159

■ Insulated cable end-sleeves to DIN, 0.5 - 150 mm²

- For fine and superfine stranded conductors
- Colour-coding and tube dimensions to DIN 46228, part 4



Characteristics

- Manufactured according to DIN 46228, part 4
- free of halide
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

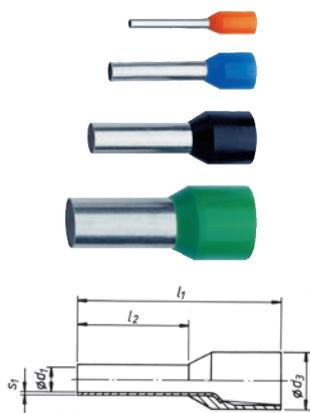
Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			d1	d3	l1	l2	s1		
0.5	*4696	□	1.0	3.1	12	6	0.15	0.070	1000
	4698	□	1.0	3.1	14	8	0.15	0.070	1000
	GR4698	□	1.0	3.1	14	8	0.15	0.070	500
	46910	□	1.0	3.1	16	10	0.15	0.085	1000
0.75	4706	■	1.2	3.3	12	6	0.15	0.080	1000
	4708	■	1.2	3.3	14	8	0.15	0.080	1000
	GR4708	■	1.2	3.3	14	8	0.15	0.080	500
	47010	■	1.2	3.3	16	10	0.15	0.100	1000
	47012	■	1.2	3.3	18	12	0.15	0.105	1000
1	4716	■	1.4	3.5	12	6	0.15	0.090	1000
	4718	■	1.4	3.5	14	8	0.15	0.100	1000
	GR4718	■	1.4	3.5	14	8	0.15	0.100	500
	47110	■	1.4	3.5	16	10	0.15	0.120	1000
	47112	■	1.4	3.5	18	12	0.15	0.125	1000
1.5	4726	■	1.7	4.0	12	6	0.15	0.105	1000
	4728	■	1.7	4.0	14	8	0.15	0.110	1000
	GR4728	■	1.7	4.0	14	8	0.15	0.110	500
	47210	■	1.7	4.0	16	10	0.15	0.130	1000
	47212	■	1.7	4.0	18	12	0.15	0.150	1000
	47218	■	1.7	4.0	24	18	0.15	0.190	1000
2.5	4738	■	2.2	4.7	14	8	0.15	0.150	1000
	GR4738	■	2.2	4.7	14	8	0.15	0.150	500
	47312	■	2.2	4.7	18	12	0.15	0.200	1000
	47318	■	2.2	4.7	24	18	0.15	0.250	1000
4	47410	■	2.8	5.4	17	10	0.20	0.210	100
	47412	■	2.8	5.4	20	12	0.20	0.250	100
	47418	■	2.8	5.4	26	18	0.20	0.320	100
6	47512	■	3.5	6.9	20	12	0.20	0.350	100
	47518	■	3.5	6.9	26	18	0.20	0.460	100
10	47612	■	4.5	8.4	22	12	0.20	0.450	100
	47618	■	4.5	8.4	28	18	0.20	0.650	100
16	47712	■	5.8	9.6	24	12	0.20	0.650	100
	47718	■	5.8	9.6	28	18	0.20	0.800	100
25	47816	■	7.3	12.0	30	16	0.20	1.600	50
	47818	■	7.3	12.0	32	18	0.20	1.700	50
	47822	■	7.3	12.0	36	22	0.20	2.000	50
35	47916	■	8.3	13.5	30	16	0.20	1.900	50
	47918	■	8.3	13.5	32	18	0.20	2.100	50
	47925	■	8.3	13.5	39	25	0.20	2.500	50

Cable end sleeves

■ Insulated cable end-sleeves to DIN,
0.5 - 150 mm²

Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			d1	d3	l1	l2	s1		
50	48020	■	10.3	16.0	36	20	0.30	3.300	50
	48025	■	10.3	16.0	40	25	0.30	3.600	50
70	*48121	■	13.5	17.2	37	21	0.40	4.620	25
95	*48225	■	14.7	19.2	44	25	0.40	6.000	25
120	*48327	■	16.7	21.4	48	27	0.45	7.850	25
150	*48432	■	19.5	25.0	58	32	0.50	12.330	25

- ▶ * = Not standardised
- ▶ Tool: see chart page 159



■ Insulated cable end-sleeves 0.14 - 50 mm²

According to colour code 1

- For fine and superfine stranded conductors



Characteristics

- Tube dimensions to DIN 46228, part 4
- free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

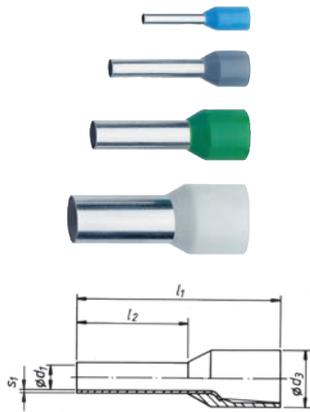
Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			d1	d3	l1	l2	s1		
0.14	166GR	■	0.7	2.3	10.4	6	0.12	0.035	1000
	166GRL	■	0.7	2.3	12.4	8	0.12	0.040	1000
0.25	167H	■	0.8	2.3	10.4	6	0.15	0.045	1000
	167HL	■	0.8	2.3	12.4	8	0.15	0.050	1000
0.34	168T	■	0.8	2.5	10.4	6	0.15	0.045	1000
	168TL	■	0.8	2.5	12.4	8	0.15	0.050	1000
0.5	1690K	■	1.0	3.0	12.0	6	0.15	0.070	1000
	1690	■	1.0	3.0	14.0	8	0.15	0.070	1000
	GR1690	■	1.0	3.0	14.0	8	0.15	0.070	500
	1690H	■	1.0	3.0	16.0	10	0.15	0.085	1000
0.75	170WK	□	1.2	3.2	12.4	6	0.15	0.080	1000
	170W	□	1.2	3.2	14.6	8	0.15	0.080	1000
	GR170W	□	1.2	3.2	14.6	8	0.15	0.080	500
	170WH	□	1.2	3.2	16.4	10	0.15	0.100	1000
	170WL	□	1.2	3.2	18.4	12	0.15	0.105	1000
1	171GK	■	1.4	3.5	12.4	6	0.15	0.090	1000
	171G	■	1.4	3.5	14.6	8	0.15	0.100	1000
	GR171G	■	1.4	3.5	14.6	8	0.15	0.100	500
	171GH	■	1.4	3.5	16.4	10	0.15	0.120	1000
	171GL	■	1.4	3.5	18.4	12	0.15	0.125	1000

■ **Insulated cable end-sleeves 0.14 - 50 mm²**

According to colour code 1

Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg.	pcs.
			d1	d3	l1	l2	s1		
1.5	172RK	■	1.7	4.0	12.0	6	0.15	0.105	1000
	172RO	■	1.7	4.0	14.6	8	0.15	0.110	1000
	GR172RO	■	1.7	4.0	14.6	8	0.15	0.110	500
	172RH	■	1.7	4.0	16.4	10	0.15	0.130	1000
	172RM	■	1.7	4.0	18.4	12	0.15	0.140	1000
	172RL	■	1.7	4.0	24.4	18	0.15	0.190	1000
2.5	173B	■	2.3	4.9	15.2	8	0.15	0.150	1000
	GR173B	■	2.3	4.9	15.2	8	0.15	0.150	500
	173BH	■	2.3	4.9	19.0	12	0.15	0.200	1000
	173BL	■	2.3	4.9	25.0	18	0.15	0.250	1000
4	174GR	■	2.9	5.5	16.5	10	0.15	0.210	100
	174GRH	■	2.9	5.5	19.5	12	0.15	0.250	100
	174GRL	■	2.9	5.5	25.5	18	0.15	0.320	100
6	175S	■	3.5	6.3	20.0	12	0.20	0.350	100
	175SL	■	3.5	6.3	26.0	18	0.20	0.460	100
10	176E	■	4.5	8.0	21.5	12	0.20	0.450	100
	176EL	■	4.5	8.0	27.5	18	0.20	0.650	100
16	177GR	■	5.8	9.6	22.2	12	0.20	0.650	100
	177GRL	■	5.8	9.6	28.2	18	0.20	0.800	100
25	178BR	■	7.3	12.1	29.0	16	0.20	1.600	50
	178BRL	■	7.3	12.1	35.0	22	0.20	2.000	50
35	179B	■	8.3	13.6	30.0	16	0.20	1.900	50
	179BL	■	8.3	13.6	39.0	25	0.20	2.500	50
50	1800	■	10.3	16.4	36.4	20	0.35	3.300	50
	1800L	■	10.3	16.4	41.4	25	0.35	4.000	50

► Tool: see chart page 159



■ **Insulated cable end-sleeves 0.14 - 25 mm²**

According to colour code 2

■ **For fine and superfine stranded conductors**

Characteristics

- Tube dimensions to DIN 46228, part 4
- free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			d1	d3	l1	l2	s1		
0.14	1666	■	0.7	2.4	10.4	6	0.12	0.035	1000
	1668	■	0.7	2.4	12.4	8	0.12	0.040	1000
0.25	1676	■	0.8	2.5	11.0	6	0.15	0.045	1000
	1678	■	0.8	2.5	13.0	8	0.15	0.050	1000
0.34	1686	■	0.8	2.5	11.0	6	0.15	0.045	1000
	1688	■	0.8	2.5	13.0	8	0.15	0.050	1000
0.5	1696	□	1.0	3.1	11.0	6	0.15	0.070	1000
	1698	□	1.0	3.1	13.0	8	0.15	0.080	1000
	GR1698	□	1.0	3.1	13.0	8	0.15	0.080	500
0.75	1706	■	1.2	3.2	11.5	6	0.15	0.080	1000
	1708	■	1.2	3.2	13.5	8	0.15	0.095	1000
	GR1708	■	1.2	3.2	13.5	8	0.15	0.095	500
1	1716	■	1.4	3.4	11.5	6	0.15	0.085	1000
	1718	■	1.4	3.4	13.5	8	0.15	0.100	1000
	GR1718	■	1.4	3.4	13.5	8	0.15	0.100	500
1.5	1726	■	1.7	3.9	11.5	6	0.15	0.100	1000
	1728	■	1.7	3.9	13.5	8	0.15	0.120	1000
	GR1728	■	1.7	3.9	13.5	8	0.15	0.120	500
	17210	■	1.7	3.9	16.4	10	0.15	0.130	1000
	17212	■	1.7	3.9	18.4	12	0.15	0.140	1000
	17218	■	1.7	3.9	22.8	18	0.15	0.220	1000
2.5	1738	■	2.2	4.7	14.5	8	0.15	0.140	1000
	GR1738	■	2.2	4.7	14.5	8	0.15	0.140	500
	17312	■	2.2	4.7	19.0	12	0.15	0.200	1000
	17318	■	2.2	4.7	24.0	18	0.15	0.280	1000
4	17410	■	2.8	5.5	16.5	10	0.20	0.260	100
	17412	■	2.8	5.5	20.0	12	0.20	0.300	100
	17418	■	2.8	5.5	25.5	18	0.20	0.390	100
6	17512	■	3.5	7.0	20.0	12	0.20	0.410	100
	17518	■	3.5	7.0	26.0	18	0.20	0.530	100
10	17612	■	4.5	8.4	21.5	12	0.20	0.550	100
	17618	■	4.5	8.4	27.0	18	0.20	0.710	100
16	17712	□	5.8	9.8	23.5	12	0.20	0.660	100
	17718	□	5.8	9.8	29.0	18	0.20	0.850	100
25	17816	■	7.3	12.0	28.0	16	0.20	1.500	50
	17818	■	7.3	12.0	30.0	18	0.20	1.550	50
	17822	■	7.3	12.0	34.0	22	0.20	2.000	50

■ **Insulated cable end-sleeves with lug**
0.5 - 2.5 mm²



- For fine and superfine stranded conductors
- With identification symbols, 6 identification rings maximum

Characteristics

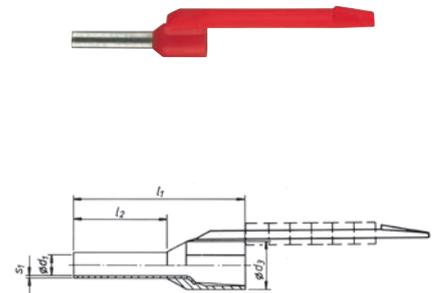
- Tube dimensions to DIN 46228, part 4
- Insulated, free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			d1	d3	l1	l2	s1		
0.5	3698	□	1.0	3.1	13.0	8	0.15	0.16	1000
0.75	3708	■	1.2	3.2	13.5	8	0.15	0.16	1000
1	3718	■	1.4	3.4	13.5	8	0.15	0.18	1000
1.5	3728	■	1.7	3.9	13.5	8	0.15	0.20	1000
2.5	3738	■	2.2	4.7	14.5	8	0.15	0.22	1000

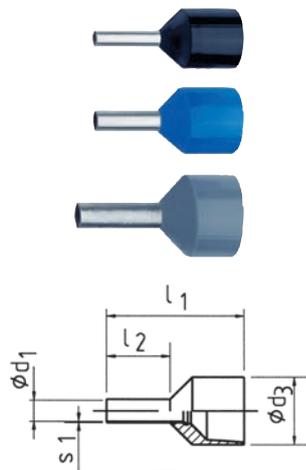
▶ Tool: see chart page 159

Identification symbols, 200 each per symbol



Symbol	numbers 0-9	letters A-Z	mark +	mark -	Fork
Part No.	380/0 to 9	380/A to Z	380/+	380/-	A300

Cable end sleeves



■ Insulated cable end-sleeves for short circuit resistant conductors 1.5 - 16 mm²

■ For short circuit resistant conductors (e.g. NSGAFÖU)

Characteristics

- Insulated, free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

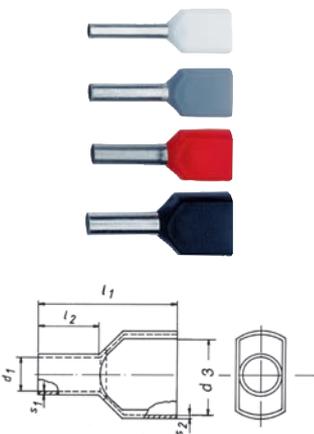
- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 1000 pcs. ~ kg	pcs.
			d1	d3	l1	l2	s1		
1.5	4328	■	1.8	8.1	17.5	8	0.15	0.22	100
	43210	■	1.8	8.1	19.5	10	0.15	0.27	100
2.5	4338	■	2.3	8.6	17.5	8	0.15	0.24	100
	43312	■	2.3	8.6	21.5	12	0.15	0.36	100
4	43410	■	2.9	10.5	19.5	10	0.20	0.36	100
6	43512	■	3.6	11.0	23.0	12	0.20	0.49	100
10	43612	■	4.6	11.7	24.0	12	0.20	0.65	100
16	43712	■	6.0	14.4	25.5	12	0.20	0.93	100

► Tool: see chart page 159



■ Insulated twin cable end-sleeves 0.25 - 16 mm²

■ For fine and superfine stranded conductors
 ■ For multi purpose use of of clamps

Characteristics

- Insulated, free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm						pcs.
			d1	d3	l1	l2	s1	s2	
0,25	8678	■	1,15	1,8/3,4	15,0	8	0,15	0,25	1000
0,34	8688	■	1,15	1,8/3,4	15,0	8	0,15	0,25	1000
0,5	8698	□	1,50	2,5/4,7	15,0	8	0,15	0,25	1000
0.75	8708	■	1.80	2.8/5.0	15.0	8	0.15	0.25	1000
	87010	■	1.80	2.8/5.0	17.0	10	0.15	0.25	1000
1	8718	■	2.05	3.4/5.4	15.0	8	0.15	0.30	1000
	87110	■	2.05	3.4/5.4	17.0	10	0.15	0.30	1000
1.5	8728	■	2.30	3.6/6.6	16.0	8	0.15	0.30	1000
	87212	■	2.30	3.6/6.6	20.0	12	0.15	0.30	1000

■ **Insulated twin cable end-sleeves**
0.25 - 16 mm²

Nominal cross section mm ²	Part No.	Colour	Dimension mm						
			d1	d3	l1	l2	s1	s2	pcs.
2.5	87310	■	2.90	4.2/7.8	18.5	10	0.20	0.30	100
	87313	■	2.90	4.2/7.8	21.5	13	0.20	0.30	100
4	87412	■	3.80	4.9/8.8	23.0	12	0.20	0.30	100
6	87514	■	4.90	6.9/10.0	26.0	14	0.20	0.40	100
10	87614	■	6.50	7.2/13.0	26.0	14	0.20	0.40	100
16	87714	■	8.30	9.6/18.4	30.0	14	0.20	0.40	100

► Tool: see chart page 162

■ **Insulated cable end-sleeves 0.5 - 2.5 mm², Strips**



■ For fine and superfine stranded conductors

Characteristics

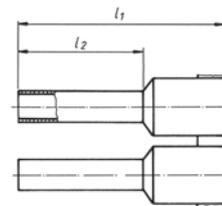
- Colour-coding and tube dimension to DIN 46228, part 4
- free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Dimension mm		pcs.
			l1	l2	
0.5	ST9698	□	14	8	500
0.75	ST9708	■	14	8	500
1	ST9718	■	14	8	500
1.5	ST9728	■	14	8	500
2.5	ST9738	■	14	8	500



Insulated cable end-sleeves 0.5 - 2.5 mm², small spool

- For fine and superfine stranded conductors

Characteristics

- Colour-coding and tube dimension to DIN 46228, part 4
- Insulated, free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm		pcs.
			l1	l2	
0.5	BAK9698	□	14	8	1100
0.75	BAK9708	■	14	8	1100
1	BAK9718	■	14	8	800
1.5	BAK9728	■	14	8	800
2.5	BAK9738	■	14	8	500



Insulated cable end-sleeves 0.5 - 2.5 mm², large spool

- For fine and superfine stranded conductors

Characteristics

- Colour-coding and tube dimension to DIN 46228, part 4
- Insulated, free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

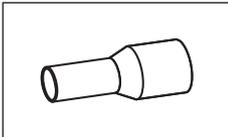
Material

- Copper to EN 13600
- Synthetic material: polypropylene

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm		pcs.
			l1	l2	
0.5	BAG9698	□	14	8	10000
0.75	BAG9708	■	14	8	10000
1	BAG9718	■	14	8	7500
1.5	BAG9728	■	14	8	7500
2.5	BAG9738	■	14	8	5000



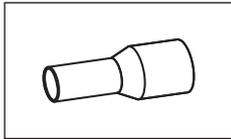
■ **Tool application chart**

**Cable end sleeves
acc. to DIN 46228, part 1**

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.14-2.5	K1		•							214
	K48		•							215
0.14-6	K32		•							216
	K37		•							217
	KP1	+KP312		•						242
	KP1L	+KP312		•						242
	EKP1	+KP312				•				298
	TEKP1	+KP312		•						263
	KPM15	+KP312		•						264
	0.14-10	K303		•						220
0.14-10	KP1	+KP303		•						242
	KP1L	+KP303		•						242
	EKP1	+KP303				•				298
	TEKP1	+KP303		•						263
	KPM15	+KP303		•						264
	0.14-50	K50			•					245
0.14-50	EK1550					•				294
	EK1550G					•				296
0.25-6	K38ERGO		•						218	
0.5-2.5	K4		•						212	
0.5-6	K36		•							215
	K382		•							218
0.5-16	K3		•						213	
1.5-6	K46		•							212
	KP1	+KP351		•						242
	KP1L	+KP351		•						242
	EKP1	+KP351				•				298
	TEKP1	+KP351		•						263
	KPM15	+KP351		•						264
6-16	K34		•						216	
10-16	KP1	+KP304		•						242
	KP1L	+KP304		•						242
	EKP1	+KP304				•				298
	TEKP1	+KP304		•						263
	KPM15	+KP304		•						264

See next page

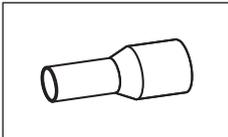
Cable end sleeves



■ Tool application chart

Cable end sleeves
acc. to DIN 46228, part 1

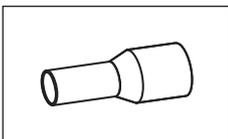
Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-16	KP1	+KP352		•					○	242
	KP1L	+KP352		•					○	242
	EKP1	+KP352				•			○	298
	TEKP1	+KP352		•					○	263
	KPM15	+KP352		•					○	264
10-25	K39		•						□	217
10-35	K35		•						□	213
10-50	K271		•						□	220
	K28		•						□	221
	EK354					•			□	300
	EK505L					•			□	302
10-95	K18			•					□ □	248
	HK6018				•				□ □	270
	EK5018L					•			□ □	304
	PK18							•	□ □	336
	THK18						•		□ □	336
	HK60UNV	+ UA18			•				□ □	286
	EK60UNVL	+ UA18				•			□ □	330
	PK60UNV	+ UA18						•	□ □	354
10-150	THK22						•		□ □	338
10-240	K22			•					□ □	250
	HK6022				•				□ □	272
	EK6022L					•			□ □	306
	PK22							•	□ □	338
	HK60UNV	+ UA22			•				□ □	286
	EK60UNVL	+ UA22				•			□ □	330
	PK60UNV	+ UA22						•	□ □	354
25-240	HK12025				•				□ □	276
	HK12042				•				□ □	278
	PK12042							•	□ □	342
	PK120U							•	□ □	344
	HK252						•		□ □	364
	PK252							•	□ □	346
	HK120U				•				□ □	280
	EK12025L					•			□ □	312
	EK12042L					•			□ □	314
	EK120UL					•			□ □	316
50-95	K272		•						□	221
	K29		•						□	222



■ **Tool application chart**

Cable end-sleeves to DIN 46228, part 2

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5x2.5	K66		•							214
	KP1	+KP66		•						242
	KP1L	+KP66		•						242
	EKP1	+KP66				•				298
	TEKP1	+KP66		•						263
	KPM15	+KP66		•						264



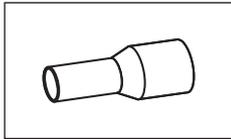
■ **Tool application chart**

**Insulated cable end-sleeves to DIN 46228, part 4,
Insulated cable end-sleeves for short circuit resistant conductors**

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.14-2.5	K1		•							214
	K48		•							215
0.14-6	K32		•							216
	K37		•							217
	KP1	+KP312		•						242
	KP1L	+KP312		•						242
	EKP1	+KP312				•				298
	TEKP1	+KP312		•						263
	KPM15	+KP312		•						264
0.14-10	K303		•							220
	KP1	+KP303		•						242
	KP1L	+KP303		•						242
	EKP1	+KP303				•				298
	TEKP1	+KP303		•						263
	KPM15	+KP303		•						264
0.14-50	K50			•						245
	EK1550					•				294
	EK1550G					•				296
0.25-6	K38ERGO		•							218

See next page

Cable end sleeves

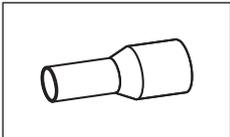


■ Tool application chart

Insulated cable end-sleeves to DIN 46228, part 4, Insulated cable end-sleeves for short circuit resistant conductors

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-2.5	K4		•							212
0.5-6	K36		•							215
	K382		•							218
0.5-16	K3		•							213
1.5-6	K46		•							212
	KP1	+KP351		•						242
	KP1L	+KP351		•						242
	EKP1	+KP351				•				298
	TEKP1	+KP351		•						263
	KPM15	+KP351		•						264
6-16	K34		•							216
10-16	KP1	+KP304		•						242
	KP1L	+KP304		•						242
	EKP1	+KP304				•				298
	TEKP1	+KP304		•						263
	KPM15	+KP304		•						264
	KP1	+KP352		•						242
	KP1L	+KP352		•						242
	EKP1	+KP352				•				298
	TEKP1	+KP352		•						263
	KPM15	+KP352		•						264
10-25	K39		•							217
10-35	K35		•							213
10-50	K271		•							220
	K28		•							221
	EK354					•				300
10-95	K18			•						248
	HK6018				•					270
	EK5018L					•				304
	PK18							•		336
	THK18						•			336
	HK60UNV	+ UA18			•					286
	EK60UNVL	+ UA18				•				330
	PK60UNV	+ UA18						•		354

See next page



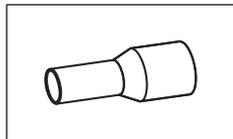
■ **Tool application chart**

**Insulated cable end-sleeves to DIN 46228, part 4,
Insulated cable end-sleeves for short circuit resistant conductors**

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
10-150	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
	THK22						•			338
	HK60UNV + UA22					•				286
	EK60UNVL + UA22						•			330
	PK60UNV + UA22							•		354
25-150	HK12025				•					276
	HK12042					•				278
	HK120U					•				280
	EK12025L						•			312
	EK12042L						•			314
	EK120UL						•			316
	HK122EL220						•			366
	HK122EL380						•			366
	PK12042							•		342
	PK120U							•		344
	HK252						•			364
	HK252EL220						•			367
	HK252EL380						•			367
	PK252							•		346
50-95	K272		•							221
	K29		•							222



Cable end sleeves



■ Tool application chart

Insulated twin cable end-sleeves

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
2x0.5 – 2x2.5	K32		•							216
	K382		•							218
	K38ERGO		•							218
	KP1	+KP312		•						242
	KP1L	+KP312		•						242
	EKP1	+KP312				•				298
	TEKP1	+KP312		•						263
	KPM15	+KP312		•						264
2x0.5 – 2x4	K303		•							220
	K36		•							215
	KP1	+KP303		•						242
	KP1L	+KP303		•						242
	EKP1	+KP303				•				298
	TEKP1	+KP303		•						263
	KPM15	+KP303		•						264
2x4 – 2x6	K34		•							216
	KP1									242
	EKP1	+KP304				•				298
	TEKP1	+KP304		•						263
2x4 – 2x16	K271		•							220
	K28		•							221
	EK354					•				300
	K18			•						248
	HK6018				•					270
	EK505L					•				302
	EK5018L					•				304
	PK18							•		336
	THK18						•			336
	HK60UNV	+ UA18			•					286
	EK60UNVL	+ UA18				•				330
	PK60UNV	+ UA18						•		354
	THK22						•			338
	K22			•						250
	HK6022				•					272
	EK6022L					•				306
	PK22							•		338
HK60UNV	+ UA22			•					286	
EK60UNVL	+ UA22				•				330	
PK60UNV	+ UA22						•		354	



Small parts, great impact.

Insulated and non-insulated cable connections.

To guarantee ultimate safety at all times specific quality and precision criteria - not to be underestimated - exist for use of insulated and non-insulated cable connections. We often hear about technical failures being caused by faulty connections. That's why quality is so important. Because when it comes to electrical connections minor causes can have major expensive consequences.

For optimum processing of Klauke connecting materials, we therefore recommend the use of Klauke tools. A harmonised system for professional users in trade and industry.



- Insulated and non-insulated cable connections for professional user.
- Free of halide insulation.
- Insulated connectors, heat resistant to 105 °C.
- Hard-soldered in the crimping area.



The Klauke range comprises various designs of both insulated and non-insulated cable connections for diverse applications.

Heat resistant insulation to 105 °C.

- ▶ Cable connections with nominal cross-sections from 0.1 mm² to 6 mm².
- ▶ Free of halide and heat resistant to 105 °C.
- ▶ Simple processing thanks to easy-entry insulation.
- ▶ **Hard-soldered in the crimping area.**
- ▶ Grooved inside profile.

Benefits:

- ▶ The use of these optimised quality materials guarantees reliable electrical connections.
- ▶ Electrical conductivity is maintained even at higher temperatures.
- ▶ Free of halide, barely flammable polyamide insulation releases no toxic vapours in the event of fire.
- ▶ Easy-entry polypropylene insulation for simple conductor insertion.
- ▶ High-tensile strength thanks to grooved profile in the crimping area permits higher mechanical continuous stress.



Receptacles with strain relief.



▶ More on Page 170.

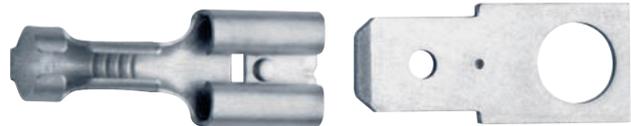
- ▶ Standardised connectors with 2.8; 4.8; 6.3 and 9.5 mm tab width.
- ▶ With grooved profile and additional copper ring in the insulation area.
- ▶ Multi type receptacles.
- ▶ Fully-insulated receptacles.

Benefits:

- ▶ Standardised tabs enable use of a broad range of applications including control installations and machine wiring.
- ▶ **The grooved profile increases the hold in the crimping area.**
- ▶ The connections relieved by copper rings in the crimping area withstand stresses and vibrations.

With detent point for defined pulling forces.

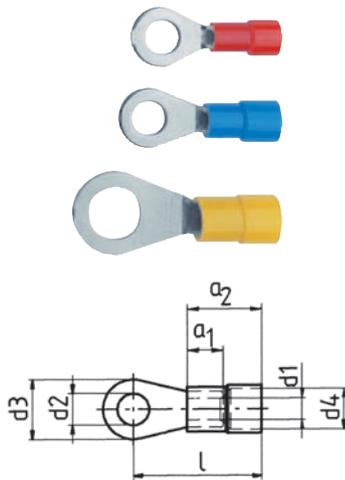
- ▶ Receptacle with detent point.
- ▶ For harmonised flexible cables.
- ▶ Receptacles also available in bronze.



Benefits:

- ▶ The additional detent point increases the mechanical rating and **guarantees that the connections will withstand the defined pulling forces even after repeated pulling actions.**
- ▶ Thanks to the material's improved spring characteristics connectors with bronze receptacles have a higher contact strength and withstand mechanical stresses especially at high temperatures.

▶ More on Page 173.



Insulated solderless terminals, 0.1 - 6 mm²

- For fine and superfine stranded conductors
- Hard-soldered in the crimping area

Characteristics

- Manufactured according to DIN 46237 with flared insulation sleeve
- free of halide
- Heat resistant to 105° C
- Easy-Entry insulation for simple cable insertion

Material

- Cu-ETP
- Insulation sleeve: PA

Surface

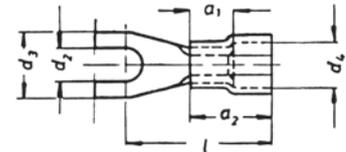
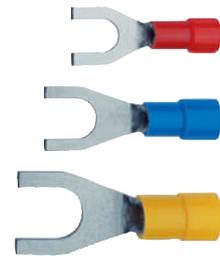
- tin plated

Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
				d1	d2	d3	d4	l	a1	a2	s		
0.1-0.4	*6192	■	--	1.0	2.3	5.0	2.2	14.0	--	--	0.5	0.020	100
	*61925	■	--	1.0	2.6	5.0	2.2	14.0	--	--	0.5	0.020	100
	*6193	■	--	1.0	3.3	5.0	2.2	14.0	--	--	0.5	0.020	100
	*61935	■	--	1.0	3.8	6.5	2.2	16.0	--	--	0.5	0.025	100
	*6194	■	--	1.0	4.4	7.0	2.2	16.0	--	--	0.5	0.025	100
	*6195	■	--	1.0	5.4	8.0	2.2	15.0	--	--	0.5	0.025	100
0.5-1	62025	■	2.5-1	1.6	2.8	6.0	4,5	16.5	5	10.5	0.8	0.060	100
	6203	■	3.0-1	1.6	3.2	6.0	4,5	16.5	5	10.5	0.8	0.060	100
	62035	■	3.5-1	1.6	3.7	6.0	4,5	16.5	5	10.5	0.8	0.550	100
	6204	■	4.0-1	1.6	4.3	8.0	4,5	17.5	5	10.5	0.8	0.070	100
	6205	■	5.0-1	1.6	5.3	10.0	4,5	18.5	5	10.5	0.8	0.090	100
	*6206	■	--	1.6	6.5	11.0	4,5	20.5	5	10.5	0.8	0.080	100
	*6208	■	--	1.6	8.4	14.0	4,5	22.5	5	10.5	0.8	0.130	100
	*62010	■	--	1.6	10.5	18.0	4,5	24.5	5	10.5	0.8	0.130	100
1.5-2.5	6303	■	3.0-2.5	2.3	3.2	6.0	5,1	17.5	5	11.5	0.8	0.065	100
	63035	■	3.5-2.5	2.3	3.7	6.0	5,1	17.5	5	11.5	0.8	0.065	100
	6304	■	4.0-2.5	2.3	4.3	8.0	5,1	18.5	5	11.5	0.8	0.080	100
	6305	■	5.0-2.5	2.3	5.3	10.0	5,1	20.5	5	11.5	0.8	0.090	100
	6306	■	6.0-2.5	2.3	6.5	11.0	5,1	22.5	5	11.5	0.8	0.110	100
	6308	■	8.0-2.5	2.3	8.4	14.0	5,1	23.5	5	11.5	0.8	0.130	100
	*63010	■	--	2.3	10.5	18.0	5,1	25.5	5	11.5	0.8	0.160	100
	4-6	6504	■	4.0-6	3.6	4.3	8.0	6,5	20.5	6	12.5	1.0	0.140
6505		■	5.0-6	3.6	5.3	10.0	6,5	21.5	6	12.5	1.0	0.160	100
6506		■	6.0-6	3.6	6.5	11.0	6,5	22.5	6	12.5	1.0	0.170	100
6508		■	8.0-6	3.6	8.4	14.0	6,5	25.5	6	12.5	1.0	0.220	100
65010		■	10.0-6	3.6	10.5	18.0	6,5	27.5	6	12.5	1.0	0.290	100

▶ * = Not standardised

▶ Tool: see chart page 184

Insulated solderless terminals 0.1 - 6 mm²
fork type



- For fine and superfine stranded conductors
- Hard-soldered in the crimping area
- Rapid assemble through direct screw-mounting

Characteristics

- Manufactured according to DIN 46237 with flared insulation sleeve
- free of halide
- Heat resistant to 105° C

Material

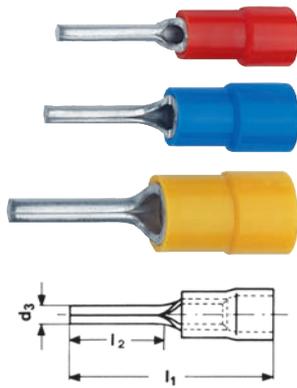
- Cu-ETP
- Insulation sleeve: PA

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
				d1	d2	d3	d4	l	a1	a2	s		
0.1-0.4	*619C3	■	--	--	3.2	5.0	--	14.0	--	--	0.5	0.020	100
0.5-1	620C3	■	3.0-1	1.6	3.2	6.0	4,5	16.5	5	10.5	0.8	0.060	100
	620C35	■	3.5-1	1.6	3.7	6.8	4,5	17.5	5	10.5	0.8	0.060	100
	620C4	■	4.0-1	1.6	4.3	6.8	4,5	17.5	5	10.5	0.8	0.070	100
	620C5	■	5.0-1	1.6	5.3	10.0	4,5	18.5	5	10.5	0.8	0.090	100
	*620C6	■	--	1.6	6.5	11.0	4,5	20.5	5	10.5	0.8	0.080	100
1.5-2.5	630C3	■	3.0-2.5	2.3	3.2	6.0	5,1	17.5	5	11.5	0.8	0.060	100
	630C35	■	3.5-2.5	2.3	3.7	6.8	5,1	18.5	5	11.5	0.8	0.065	100
	630C4	■	4.0-2.5	2.3	4.3	6.8	5,1	18.5	5	11.5	0.8	0.080	100
	630C5	■	5.0-2.5	2.3	5.3	10.0	5,1	20.5	5	11.5	0.8	0.090	100
	630C6	■	6.0-2.5	2.3	6.5	11.0	5,1	22.5	5	11.5	0.8	0.110	100
4-6	650C4	■	4.0-6	3.6	4.3	8	6,5	20.5	6	12.5	1.0	0.140	100
	650C5	■	5.0-6	3.6	5.3	10	6,5	21.5	6	12.5	1.0	0.160	100
	650C6	■	6.0-6	3.6	6.5	11	6,5	22.5	6	12.5	1.0	0.170	100
	650C8	■	8.0-6	3.6	8.4	14	6,5	25.5	6	12.5	1.0	0.220	100
	650C10	■	10.0-6	3.6	10.5	18	6,5	27.5	6	12.5	1.0	0.280	100

- ▶ * = Not standardised
- ▶ Tool: see chart page 184



Insulated pin terminals 0.1 - 6 mm²

- For fine and superfine stranded conductors
- Hard-soldered in the crimping area
- With Easy-Entry insulation for simple conductor insertion

Characteristics

- Manufactured according to DIN 46231 with flared insulation sleeve
- free of halide
- Heat resistant to 105° C

Material

- Cu-ETP

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	Dimension mm							Weight/100 pcs. ~ kg	pcs.
				d3	d4	l1	l2	a1	a2	s		
0.1-0.4	*704	Yellow	--	1.4	--	18.0	9.0	--	--	0.5	0.020	100
0.5-1	*705K	Red	1	1.9	4,5	18.0	6.0	5	10.5	0.8	0.060	100
	705	Red	1	1.9	4,5	22.0	10.0	5	10.5	0.8	0.065	100
1.5-2.5	*710K	Blue	2.5	1.9	5,1	19.5	6.5	5	11.5	0.8	0.060	100
	710	Blue	2.5	1.9	5,1	23.0	10.0	5	11.5	0.8	0.065	100
	*710L	Blue	2.5	1.9	5,1	27.5	16.0	5	11.5	0.8	0.100	100
4-6	715	Yellow	6	2.7	6,5	26.0	11.0	6	12.5	1.0	0.160	100

- ▶ * = Not standardised
- ▶ Tool: see chart page 184



Insulated pin receptacles, 0.5 - 6 mm²

- For fine and superfine stranded conductors
- High quality bronze material provides optimum spring characteristic and improved contact strength

Characteristics

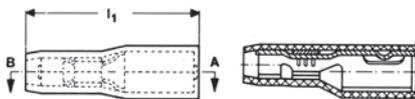
- Insulation sleeve: PVC
- Colour-coding for cross-section assignment

Material

- CuSnZn (bronze)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Tab Ø	Dimension mm		Weight/100 pcs. ~ kg	pcs.
				l1	s		
0.5-1	920	Red	4	22	0.35	0.060	100
1.5-2.5	930	Blue	5	22	0.38	0.120	100
4-6	950	Yellow	5	22	0.38	0.125	100

- ▶ Tool: see chart page 184

■ **Insulated pin connectors 0.5 - 6 mm²**

- For fine and superfine stranded conductors

Characteristics

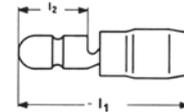
- Insulation sleeve: PVC
- Colour-coding for cross-section assignment

Material

- CuZn (brass)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Tab Ø	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
				l1	l2	s		
0.5-1	1020	■	4	22	9	0.38	0.060	100
1.5-2.5	1030	■	5	22	9	0.38	0.075	100
4-6	1050	■	5	22	9	0.40	0.110	100

► Tool: see chart page 184

■ **Insulated pin receptacles, 0.5 - 6 mm²**

- For fine and superfine stranded conductors
- High quality bronze material provides optimum spring characteristic and improved contact strength

Characteristics

- Insulation sleeve: PA, free of halide
- Insulated
- Colour-coding for conductor cross-section assignment

Material

- CuSnZn (bronze)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Tab Ø	Dimension mm		Weight/ 100 pcs. ~ kg	pcs.
				l1	s		
0.5-1	920V	■	4	24	0.38	0.065	100
1.5-2.5	930V	■	5	24	0.38	0.130	100
4-6	950V	■	5	27	0.40	0.150	100

► Tool: see chart page 184



Insulated pin connectors 0.5 - 6 mm²

- For fine and superfine stranded conductors
- High quality bronze material provides optimum spring characteristic and improved contact strength

Characteristics

- Insulation sleeve: PA, free of halide
- Insulated
- Colour-coding for cross-section assignment

Material

- CuSnZn (bronze)

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Tab Ø	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
				l1	l2	s		
0.5-1	1020V	■	4	25	11	0.38	0.065	100
1.5-2.5	1030V	■	5	25	11	0.38	0.080	100
4-6	1050V	■	5	27	13	0.40	0.120	100

► Tool: see chart page 184



Insulated receptacles 0.5 - 6 mm²

- For fine and superfine stranded conductors

Characteristics

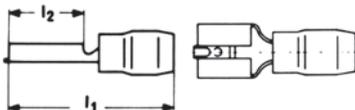
- Manufactured to DIN 46245, part 1 – 3 and similar versions
- Insulation sleeve: PVC / PA, free of halide

Material

- CuZn (brass)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	Tab Thickn.	Tab Width	Dimension mm			Insulation material	Weight/ 100 pcs. ~ kg	pcs.
						l1	l2	s			
0.5-1	8201	■		0.5	2.8	17.5	8.0	0.30	PVC	0.035	100
	8201A	■		0.8	2.8	17.5	8.0	0.30	PVC	0.045	100
	8202	■		0.5	4.8	18.0	6.0	0.35	PVC	0.065	100
	8203	■	4.8 – 1	0.8	4.8	18.0	6.0	0.35	PVC	0.065	100
	720	■	6.3 – 1	0.8	6.3	22.0	7.5	0.45	PVC	0.090	100
	7208	■		0.8	7.7	25.0	9.5	0.40	PVC	0.110	100
1.5-2.5	8301	■		0.5	2.8	18.0	8.0	0.35	PA	0.050	100
	8301A	■		0.8	2.8	18.0	8.0	0.35	PA	0.060	100
	8302	■		0.5	4.8	18.0	6.0	0.35	PVC	0.070	100
	8303	■	4.8 – 1	0.8	4.8	18.0	6.0	0.35	PVC	0.070	100
	730	■	6.3 – 2.5	0.8	6.3	21.0	7.4	0.45	PVC	0.090	100
	7308	■		0.8	7.7	25.0	9.5	0.45	PVC	0.115	100

■ **Insulated receptacles 0.5 - 6 mm²**

Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	Tab Thickn.	Tab Width	Dimension mm			Insulation material	Weight/ 100 pcs. ~ kg	pcs.
						l1	l2	s			
4-6	8503	■		0.8	4.8	23.0	7.5	0.45	PA	0.138	100
	750	■	6.3 – 6	0.8	6.3	21.0	7.5	0.45	PVC	0.100	100
	7509	■		1.2	9.5	26.5	12.0	0.45	PVC	0.150	100

► Tool: see chart page 184

■ **Insulated receptacles 0.5 - 6 mm²**

- For fine and superfine stranded conductors
- High quality bronze material provides optimum spring characteristic and improved contact strength

Characteristics

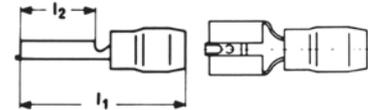
- DIN 46245, part 1 – 3 and similar versions
- Insulation sleeve: PVC
- Colour-coding for cross-section assignment

Material

- CuSnZn (bronze)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	Tab Thickn.	Tab Width	Dimension mm			Insulation material	Weight/ 100 pcs. ~ kg	pcs.
						l1	l2	s			
0.5-1	720BZ	■	6.3 – 1	0.8	6.3	22	7.5	0.45	PVC	0.09	100
1.5-2.5	730BZ	■	6.3 – 2.5	0.8	6.3	21	7.4	0.45	PVC	0.09	100
4-6	750BZ	■	6.3 – 6	0.8	6.3	21	7.5	0.45	PVC	0.10	100

► Tool: see chart page 184

■ **Insulated receptacles, multiple type 0.5 - 6 mm²**

- For fine and superfine stranded conductors

Characteristics

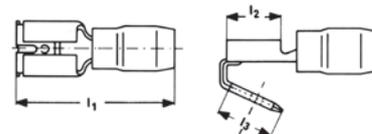
- Insulation sleeve: PVC
- Colour-coding for cross-section assignment

Material

- CuZn (brass)

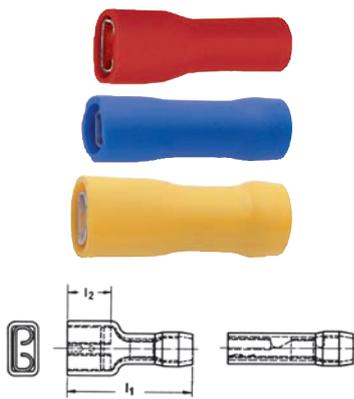
Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Tab Thickn.	Tab Width	Dimension mm				Insulation material	Weight/ 100 pcs. ~ kg	pcs.
					l1	l2	l3	s			
0.5-1	720AZ	■	0.8	6.3	22	7.5	8	0.4	PVC	0.11	100
1.5-2.5	730AZ	■	0.8	6.3	22	7.5	8	0.4	PVC	0.11	100
4-6	750AZ	■	0.8	6.3	25	8.0	8	0.4	PVC	0.18	100

► Tool: see chart page 184



■ **Insulated receptacles 0.5 - 6 mm²**

■ **For fine and superfine stranded conductors**

Characteristics

- With solid dielectric insulation
- Insulation sleeve: PVC / PA, free of halide
- Colour-coding for cross-section assignment

Material

- CuZn (brass)

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Tab Thickn.	Tab Width	Dimension mm			Insulation material	Weight/ 100 pcs. ~ kg	pcs.
					l1	l2	s			
0.5-1	8201V	■	0.5	2.8	19.0	5.5	0.25	PA	0.07	100
	8201AV	■	0.8	2.8	19.0	5.5	0.25	PA	0.07	100
	8202V	■	0.5	4.8	20.0	7.0	0.30	PVC	0.10	100
	8203V	■	0.8	4.8	20.0	7.0	0.30	PVC	0.10	100
	720V	■	0.8	6.3	21.0	7.5	0.45	PVC	0.08	100
1.5-2.5	8301V	■	0.5	2.8	20.0	8.0	0.35	PVC	0.14	100
	8301AV	■	0.8	2.8	20.0	8.0	0.35	PVC	0.14	100
	8302V	■	0.5	4.8	20.5	7.0	0.30	PVC	0.11	100
	8303V	■	0.8	4.8	20.5	7.0	0.30	PVC	0.11	100
	730V	■	0.8	6.3	21.0	7.5	0.45	PVC	0,15	100
4-6	8502V	■	0.5	4.8	20.5	9.5	0.40	PVC	0.15	100
	8503V	■	0.8	4.8	20.5	9.5	0.40	PVC	0.15	100
	750V	■	0.8	6.3	25.5	11.5	0.45	PVC	0.16	100

► Tool: see chart page 184

■ **Insulated tabs 0.5 - 6 mm²**

■ For fine and superfine stranded conductors

Characteristics

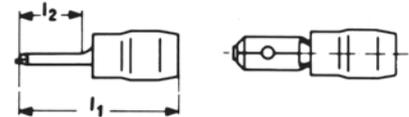
- Insulation sleeve: PVC / PA, free of halide
- Colour-coding for cross-section assignment

Material

- CuZn (brass)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Tab Thickn.	Tab Width	Dimension mm			Insulation material	Weight/ 100 pcs. ~ kg	pcs.
					l1	l2	s			
0.5-1	8201C	■	0.5	2.8	22.0	11.5	0.4	PA	0.040	100
	8201B	■	0.8	2.8	14.6	5.5	0.4	PVC	0.060	100
	8202B	■	0.5	4.8	22.0	11.5	0.5	PA	0.070	100
	8203B	■	0.8	4.8	22.0	11.5	0.4	PA	0.070	100
	820	■	0.8	6.3	22.0	8.0	0.4	PVC	0.060	100
1.5-2.5	8302B	■	0.5	4.8	22.0	11.5	0.5	PA	0.070	100
	8303B	■	0.8	4.8	22.0	11.5	0.4	PA	0.070	100
	830	■	0.8	6.3	22.0	8.0	0.4	PVC	0.065	100
4-6	8502B	■	0.5	4.8	24.5	10.5	0.4	PA	0.120	100
	8503B	■	0.8	4.8	24.5	10.5	0.4	PA	0.120	100
	850	■	0.8	6.3	22.0	8.0	0.4	PVC	0.110	100

► Tool: see chart page 184

■ **Insulated closed end-splices 1.5 - 6 mm²**

■ For fine and superfine stranded conductors

Characteristics

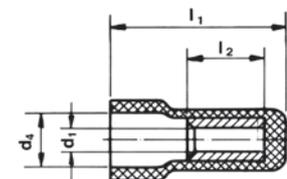
- Insulation sleeve: PA, free of halide
- Colour-coding for cross-section assignment

Material

- Cu-ETP

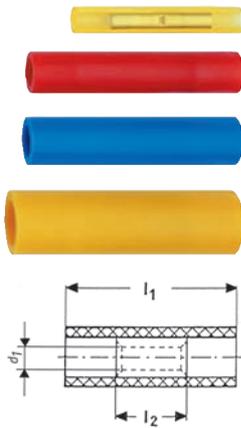
Surface

- tin plated



Nominal cross section mm ²	Part No.	Colour	Dimension mm					Weight/ 100 pcs. ~ kg	pcs.
			d1	d2	l1	l2	s		
1.5-2.5	1130	■	2.3	5.2	16	7	0.8	0.05	100
4-6	1150	■	3.6	7.0	18	7	1.0	0.14	100

► Tool: see chart page 184



■ Insulated butt connectors 0.1 - 6 mm²

- For fine and superfine stranded conductors
- With buttmarks for precise cable insertion

Characteristics

- Insulation sleeve: PA, free of halide
- Colour-coding for cross-section assignment

Material

- Cu-ETP

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
			d1	l1	l2		
0.1-0.4	669	Yellow	1.2	20	12	0.030	100
0.5-1	670	Red	1.6	25	15	0.090	100
1.5-2.5	680	Blue	2.3	25	15	0.115	100
4-6	700	Orange	3.6	27	15	0.250	100

► Tool: see chart page 184



■ Insulated butt connectors 0.5 - 6 mm²

- For fine and superfine stranded conductors
- With buttmarks for precise cable insertion
- With waterproof heat shrink insulation

Characteristics

- Insulation sleeve: PE
- Special crimping tool with colour-coding for cross-section assignment

Material

- Cu-ETP

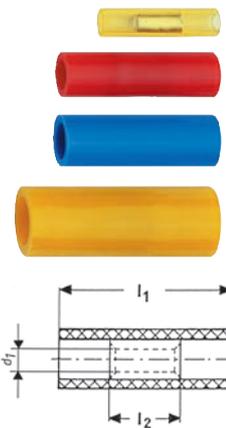
Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
			d1	l1	l2		
0.5-1	670WS	Red	1.6	36	15	0.12	100
1.5-2.5	680WS	Blue	2.3	36	15	0.15	100
4-6	700WS	Orange	3.4	41	15	0.25	100

► Tool: see chart page 184

Insulated parallel compression joints
0.1 - 6 mm²



- For fine and superfine stranded conductors

Characteristics

- Insulation sleeve: PA, free of halide
- Colour-coding for cross-section assignment

Material

- Cu-ETP

Surface

- tin plated

Nominal cross section mm ²	Part No.	Colour	Dimension mm			Weight/ 100 pcs. ~ kg	pcs.
			d1	l1	l2		
0.1-0.4	769	Yellow	1.2	13	5	0.020	100
0.5-1	770	Red	1.6	17	7	0.030	100
1.5-2.5	780	Blue	2.3	17	7	0.035	100
4-6	790	Orange	3.6	21	7	0.105	100

▶ Tool: see chart page 184

Non-insulated receptacles 0.5 - 6 mm²

- For fine and superfine stranded conductors



Characteristics

- Manufactured to DIN 46247, part 1 – 3 and similar versions
- Non-insulated

Material

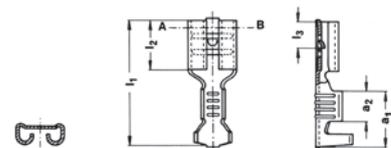
- CuZn (brass)

Surface

- tin plated

Order info

- * = This part is available in nickel-plated steel; part number appendix "ST"



Nominal cross section mm ²	Part No.	Nominal size to DIN	Tab Thickn.	Tab Width	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
					l1	l2	l3	a1	a2	s		
0.5-1	18251	--	0.5	2.8	12.5	5.0	3.3	5.0	2.8	0.30	0.025	100
	18251A	--	0.8	2.8	12.5	5.0	3.3	5.5	2.5	0.30	0.025	100
	18201A	B 2.8 – 1	0.8	2.8	14.0	6.3	3.3	5.5	2.5	0.25	0.025	100
	18202	--	0.5	4.8	15.6	6.0	3.8	6.0	3.4	0.35	0.050	100
	18203	4.8 – 1	0.8	4.8	15.6	6.0	3.8	6.0	3.4	0.35	0.050	100
	1720	6.3 – 1	0.8	6.3	19.0	7.4	4.0	8.5	4.5	0.45	0.085	100
1.5-2.5	18303	4.8 – 2.5	0.8	4.8	15.6	6.0	3.8	6.0	3.4	0.35	0.055	100
	*1730	6.3 – 2.5	0.8	6.3	19.0	7.4	4.0	8.5	4.5	0.45	0.082	100
4-6	*1750	6.3 - 6	0.8	6.3	19.0	7.4	4.0	8.5	4.5	0.45	0.100	100

▶ Tool: see chart page 185



■ **Non-insulated receptacles, multiple type 0.5 - 2.5 mm²**

- For fine and superfine stranded conductors

Characteristics

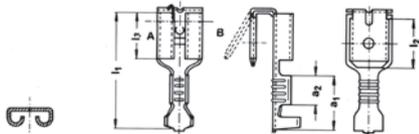
- Manufactured to DIN 46247, part 1 – 3 and similar versions

Material

- CuZn (brass)

Surface

- tin plated



Nominal cross section mm ²	Part No.	Tab Thickn.	Tab Width	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
				l1	l2	l3	a1	a2	s		
0.5-1	18203AZ	0.8	4.8	15.6	7	6.0	6.0	3.4	0.38	0.09	100
1.5-2.5	18303AZ	0.8	4.8	15.6	7	6.0	6.0	3.4	0.38	0.09	100
	1730AZ	0.8	**6,3	19.2	8	7.5	8.5	4.5	0.38	0.13	100

- ▶ * = according to DIN 46345
- ▶ Tool: see chart page 185



■ **Non-insulated receptacles 0.5 - 6 mm²**

- For fine and superfine stranded conductors

Characteristics

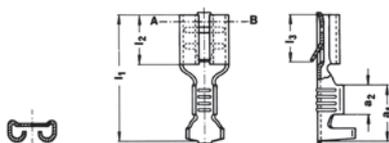
- Manufactured to DIN 46340, sheet 3
- With latch to engage in housing

Material

- CuZn (brass)

Surface

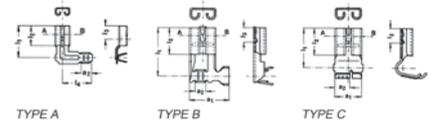
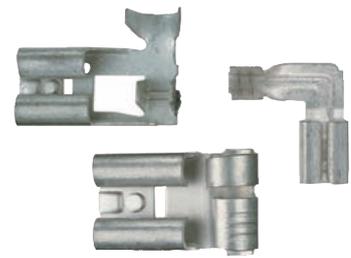
- tin plated



Nominal cross section mm ²	Part No.	Tab Thickn.	Tab Width	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
				l1	l2	l3	a1	a2	s		
0.5-1	2720	0.8	6.3	19.2	7.4	7	8.5	4.5	0.38	0.070	100
1.5-2.5	2730	0.8	6.3	19.2	7.4	7	8.5	4.5	0.38	0.075	100
4-6	2750	0.8	6.3	19.2	7.4	7	8.5	4.5	0.38	0.090	100

- ▶ Tool: see chart page 185

■ **Non-insulated receptacles with lateral conductor connector 0.5 - 2.5 mm²**



■ **For fine and superfine stranded conductors**

Characteristics

■ Non-insulated

Material

■ CuZn (brass)

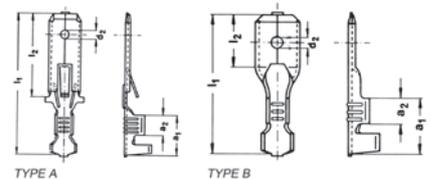
Surface

■ tin plated

Nominal cross section mm ²	Part No.	Type	Tab Thickn.	Tab Width	Dimension mm							Weight/ 100 pcs. ~ kg	pcs.
					l1	l2	l3	l4	a1	a2	s		
0.5-1	3720	B	0.8	6.3	12.50	7.4	4.0	7.2	11.0	3.0	0.38	0.080	100
0.5-1.5	3725	C	0.8	6.3	11.00	7.4	4.0	7.2	7.5	4.0	0.45	0.085	100
1.5-2.5	3735	B	0.8	6.3	13.50	7.0	4.0	7.2	11.0	3.0	0.38	0.085	100

► Tool: see chart page 185

■ **Non-insulated tabs 0.5 - 6 mm²**



■ **For fine and superfine stranded conductors**

Characteristics

■ Non-insulated

Material

■ CuZn (brass)

Surface

■ tin plated

Nominal cross section mm ²	Part No.	Nominal size to DIN	Type	Tab Thickn.	Tab Width	Dimension mm					Weight/ 100 pcs. ~ kg	pcs.
						d2	l1	l2	a1	a2		
0.5-1	2235	DIN 46244	A	0.8	2.8	1.30	22.5	12.7	6.0	3.2	0.045	100
	2220	DIN 46343 B 6.3 - 1 part 3	A	0.8	6.3	1.65	28.0	16.0	8.2	4.0	0.085	100
1.5-2.5	1830	DIN 46248 A 6.3 - 2.5 part 3	B	0.8	6.3	1.65	20.0	8.0	9.0	4.5	0.065	100
	2230	DIN 46343 B 6.3 - 2.5 part 3	A	0.8	6.3	1.65	28.0	16.0	8.2	4.0	0.090	100
4-6	2250	DIN 46343 B 6.3 - 6 part 3	A	0.8	6.3	1.65	28.0	16.0	8.2	4.0	0.100	100

► Tool: see chart page 185

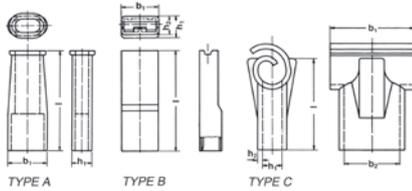


■ Insulating sleeves 0.5 - 6 mm²

■ For non insulated tabs

Material

■ see table shown below



Nominal cross section mm ²	Part No.	Colour	Nominal size to DIN	for Part No.	Type	Dimension mm			Insulation material	Weight/ 100 pcs. ~ kg	pcs.
						l	b1	h1			
0.5-1	2755	□	2.8	1825,18251,18251A, 18,201.18201A	A	20.0	6.5	4.0	PE	0.015	100
0.5-1.5	2760	□	4.8	18202,18203	A	20.0	7.0	5.0	PE	0.015	100
1.5-2.5	2765	■	4.8	18302,18303	A	20.0	9.5	5.5	PE	0.025	100
0.5-2.5	2770	□	6.3	1720,1730	A	23.0	12.5	8.5	PE	0.035	100
	2775	□	6.3	1820,1830	A	25.0	9.5	5.0	PE	0.030	100
0.5-4	2780	□	6.3	1720,1730,1820,1830	A	25.0	9.5	6.0	PE	0.030	100
0.5-6	2785	□		1720,1730,1750,2720, 2730,2750	B	24.5	9.2	5.6	PA	0.055	100
	2790	□		3720,3725,3735	C	15.0	13.5	3.1	PVC	0.060	100

■ **Non-insulated tabs**

Characteristics

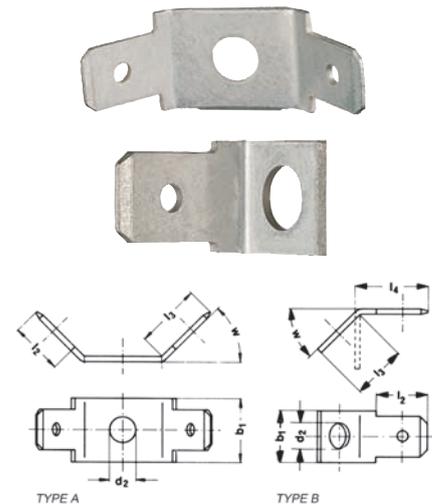
- Manufactured to DIN 46342 part 1 – 3 and similar versions
- Dimensions in the plug sector to DIN 46244

Material

- CuZn (brass)

Surface

- tin plated



Part No.	Nominal size to DIN	Type	Tab Thickn.	Tab Width	Dimension mm						Weight/ 100 pcs. ~ kg	pcs.
					d2	l2	l3	l4	b1	w		
2040	--	A	0.8	2.8	3.2	5.5	6.5	--	5.0	60°	0.040	100
2045	--	A	0.8	6.3	4.3	8.0	10.0	--	10.0	45°	0.160	100
2060	--	B	0.8	6.3	4.3	8.0	8.0	10.7	8.0	30°	0.085	100
2070	--	B	0.8	6.3	3.2	8.0	8.0	10.7	8.0	45°	0.085	100
2075	--	B	0.8	6.3	4.1	8.0	8.0	10.7	8.0	45°	0.085	100
2080	B 6.3 - 0.8	B	0.8	6.3	4.3	8.0	8.5	10.7	8.0	45°	0.085	100
2083	--	B	0.8	6.3	5.3	8.0	8.5	10.7	8.0	45°	0.080	100
2090	--	B	0.8	6.3	5.3	8.0	8.0	10.7	8.0	45°	0.080	100
2100	--	B	0.8	6.3	2.5	8.0	5.7	11.5	7.5	90°	0.075	100
2105	--	B	0.8	6.3	3.2	8.0	8.0	11.5	8.0	90°	0.085	100
2115	C 6.3 - 0.8	B	0.8	6.3	4.3	8.0	8.0	11.5	8.0	90°	0.090	100

■ **Non-insulated tabs**

Characteristics

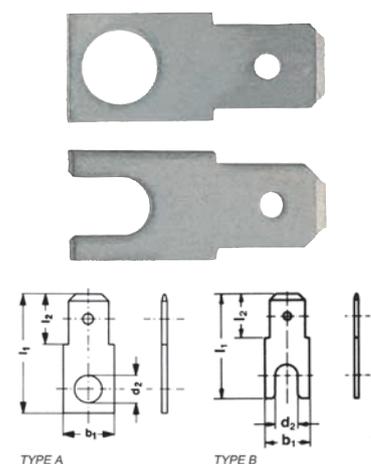
- Dimensions in the plug sector to DIN 46244

Material

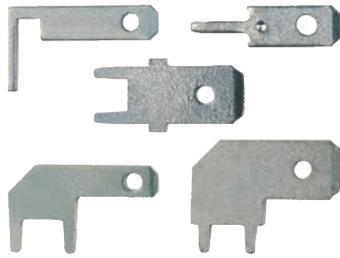
- CuZn (brass)

Surface

- tin plated



Part No.	Nominal size to DIN	Type	Tab Thickn.	Tab Width	Dimension mm					Weight/ 100 pcs. ~ kg	pcs.
					d2	l1	l2	b1	s		
2123	--	A	0.8	2.8	3.1	13	5.5	4.5	0.8	0.028	100
2140	A 6.3 - 0.8	A	0.8	6.3	4.3	19.0	8.0	8.0	0.8	0.086	100
2145	--	A	0.8	6.3	5.3	19.0	8.0	8.0	0.8	0.080	100



TYPE A



TYPE B



TYPE C



TYPE D



TYPE E

■ Non-insulated tabs

Characteristics

- Dimensions in the plug sector to DIN 46244
- For soldering in printed circuits

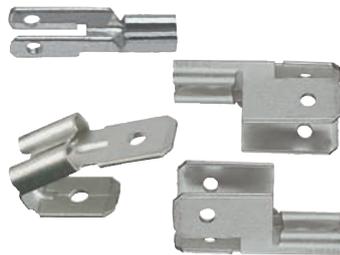
Material

- CuZn (brass)

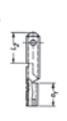
Surface

- tin plated

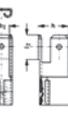
Part No.	Type	Tab Thickn.	Tab Width	Dimension mm								Weight/ 100 pcs. ~ kg	pcs.
				l1	l2	l3	l4	b1	b2	b3	s		
2010	A	0.8	2.8	10.5	6.5	--	--	--	--	--	0.8	0.015	100
2020	C	0.5	2.8	--	7.1	8	13.4	1.0	5	--	0.5	0.025	100
2025	C	0.8	2.8	--	7.1	8	13.4	1.0	5	--	0.8	0.040	100
2030	D	0.8	6.3	16.5	8.0	4	--	3.5	5	6.4	0.8	0.065	100
2035	E	0.8	6.3	16.0	8.0	3	12.0	3.8	5	6.2	0.8	0.085	100



TYPE A



TYPE C



TYPE D

■ Non-insulated multiple tabs

Characteristics

- Dimensions in the plug sector to DIN 46244

Material

- CuZn (brass)

Surface

- tin plated

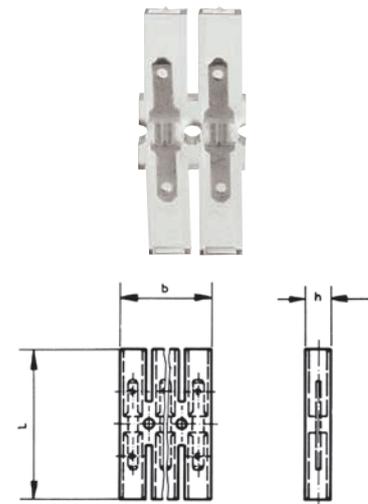
Part No.	Type	Tab Thickn.	Tab Width	Dimension mm									Weight/ 100 pcs. ~ kg	pcs.
				l1	l2	l3	a1	b2	b3	h	w	s		
735	A	0.8	2.8	16.0	6.7	--	5	3.2	3.1	--	--	0.38	0.060	100
755	C	0.8	4.8	20.0	7.0	7.0	--	4.4	--	8.0	--	0.38	0.155	100
725	D	0.8	6.3	--	8.0	7.5	--	--	--	--	15°	0.38	0.115	100
775	C	0.8	6.3	20.5	12	7.5	--	--	--	9.6	--	0.38	0.200	100

■ **Flexible connectors**

With connector width 2.8 x 0.8 mm

Characteristics

- With tabs 2.8 x 0.8 mm
- 1, 2 and 12-poles
- Further poles on request



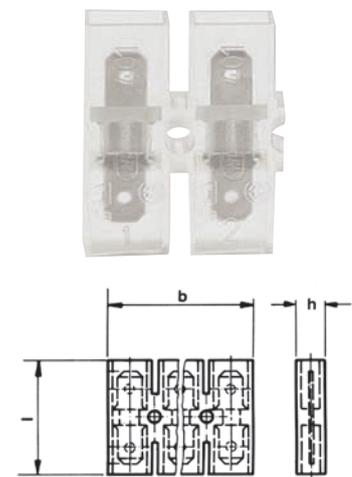
Part No.	Tab Thickn.	Tab Width	Poles	Dimension mm				Insulation material	Bolt size in mm		Weight/ 100 pcs. ~ kg	pcs.
				l	b	h	s		Distance	Ø		
8101	0.8	2.8	1	35	7.5	5.5	0.8	PVC	--	--	0.2	100
8102	0.8	2.8	2	35	15.0	5.5	0.8	PVC	0	2.7	0.3	50
81012	0.8	2.8	12	35	88.0	5.5	0.8	PVC	75	2.7	1.6	10

■ **Flexible connectors**

With connector width 4.8 x 0.8 mm

Characteristics

- With tabs 4.8 x 0.8 mm
- 1, 2 and 12-poles
- Further poles on request



Part No.	Tab Thickn.	Tab Width	Poles	Dimension mm				Insulation material	Bolt size in mm		Weight/ 100 pcs. ~ kg	pcs.
				l	b	h	s		Distance	Ø		
8051	0.8	4.8	1	28	12.5	6.6	0.8	PVC	--	--	0.25	100
8052	0.8	4.8	2	28	25.0	6.6	0.8	PVC	--	3.2	0.50	50
80512	0.8	4.8	12	28	142.0	6.6	0.8	PVC	120	3.2	2.80	10

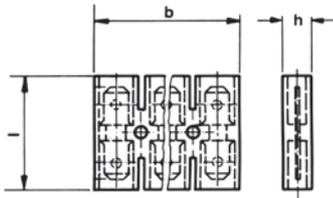


Flexible connectors

With connector width 6.3 x 0.8 mm

Characteristics

- With tabs 6.3 x 0.8 mm
- 1, 2 and 12-poles
- Further poles on request



Part No.	Tab Thickn.	Tab Width	Poles	Dimension mm				Insulation material	Bolt size in mm		Weight/ 100 pcs. ~ kg	pcs.
				l	b	h	s		Distance	Ø		
8001	0.8	6.3	1	28	12.5	6.6	0.8	PVC	--	--	0.30	100
8002	0.8	6.3	2	28	25.0	6.6	0.8	PVC	--	3.7	0.55	50
80012	0.8	6.3	12	28	142.0	6.6	0.8	PVC	120	3.7	3.20	10

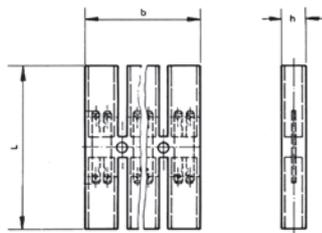


Polyamide connectors

With connector width 6.3 and 2.8 x 0.8 mm

Characteristics

- With tabs 2.8 x 0.8 mm and 6.3 x 0.8 mm
- 1, 2 and 12-poles
- Further poles on request



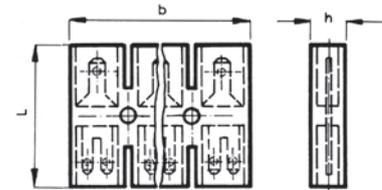
Part No.	Tab Thickn.	Tab Width	Poles	Dimension mm				Insulation material	Bolt size in mm		Weight/ 100 pcs. ~ kg	pcs.
				l	b	h	s		Distance	Ø		
8011	0.8	6.3 and 2 x 2.8	1	50	10.0	7.5	0.8	Polyamid	--	--	0.25	100
8012	0.8	6.3 and 2 x 2.8	2	50	22.5	7.5	0.8	Polyamid	--	3.1	0.50	50
80112	0.8	6.3 and 2 x 2.8	12	50	147.5	7.5	0.8	Polyamid	125	3.1	3.10	10

■ **Flexible circuit distributors**

With connector width 2.8 x 0.8 mm

Characteristics

- With tabs 2.8 x 0.8 mm
- 1, 2 and 12-poles
- Further poles on request



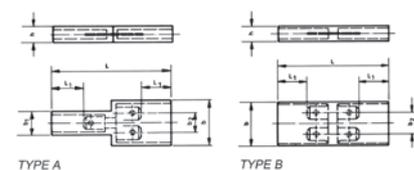
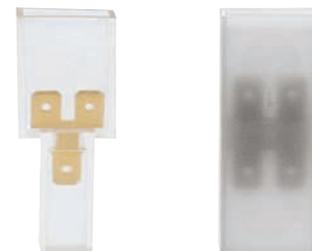
Part No.	Tab Thickn.	Tab Width	Poles	Dimension mm				Insulation material	Bolt size in mm		Weight/ 100 pcs. ~ kg	pcs.
				l	b	h	s		Distance	Ø		
8151	0.8	2.8	1	28	12.5	7	0.8	PVC	--	--	0.25	100
8152	0.8	2.8	2	28	25.0	7	0.8	PVC	--	3.2	0.50	50
81512	0.8	2.8	12	28	147.0	7	0.8	PVC	123	3.2	2.80	10

■ **Flexible circuit distributors**

With connector width 6.3 x 0.8 mm

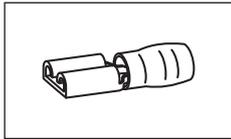
Characteristics

- With tabs 6.3 x 0.8 mm



Part No.	Type	Tab Thickn.	Tab Width	Dimension mm							Insulation material	Weight/ 100 pcs. ~ kg	pcs.
				l	l1	b	b1	b2	h	s			
816	A	0.8	6.3	53	15	21	11.3	9	7.5	0.8	PVC	0.60	10
817	B	0.8	6.3	51	13	20	11.3	9	7.0	0.8	PVC	0.65	10

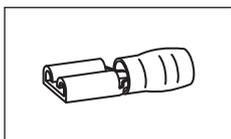
Cable connections, insulated and non insulated



■ Tool application chart

Insulated cable connections,

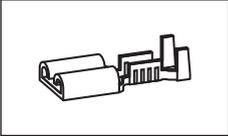
Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.1-1	K80		•						○	224
	KP1	+KP80		•					○	242
	KP1L	+KP80		•					○	242
	EKP1	+KP80				•			○	298
	TEKP1	+KP80		•					○	263
	KPM15	+KP80		•					○	264
0.5-2.5	K81		•						○	224
	KP1	+KP81		•					○	242
	KP1L	+KP81		•					○	242
	EKP1	+KP81				•			○	298
	TEKP1	+KP81		•					○	263
	KPM15	+KP81		•					○	264
0.5-6	K10		•						○	222
	K14		•						○	223
	K15		•						○	223
	K50			•					○	245
	EK1550					•			○	294
	EK1550G					•			○	296
	K82		•						○	225
	K85ERGO		•						○	225
4-6	KP1	+KP83		•					○	242
	KP1L	+KP83		•					○	242
	EKP1	+KP83				•			○	298
	TEKP1	+KP83		•					○	263
	KPM15	+KP83		•					○	264



■ Tool application chart

Butt-connector with heat shrink insulation

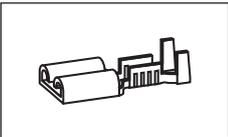
Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-6	K50			•					○	245
	EK1550					•			○	294
	EK1550G					•			○	296



■ **Tool application chart**

Non-insulated receptacles, straight type

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.1-1	K572		•						☺	227
	K67		•						☺	228
0.1-6	K50			•					☺	245
	EK1550					•			☺	294
	EK1550G					•			☺	296
0.5-2.5	K582		•						☺	227
	K65		•						☺	229
	K68		•						☺	231
0.5-6	K592		•						☺	228
	K60		•						☺	226
	K62		•						☺	229



■ **Tool application chart**

Non-insulated receptacles, with lateral conductor connector

Crimping range corresponds to nominal cross-section mm ²	Crimping tools		Tool type						Crimp profile	Page (Tool)
	Tools	Crimping head/ Adapter	Mechanical crimping tools	mechanical, electrical, pneumatic, crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
3820/1 /1A	K50			•					☺	245
	EK1550					•			☺	294
	EK1550G					•			☺	296
3720 3735	K50			•					☺	245
	EK1550					•			☺	294
	EK1550G					•			☺	296
	K63		•						☺	230
	SKP6				•				☺	243
3725	K50			•					☺	245
	EK1550					•			☺	294
	EK1550G					•			☺	296
	K64		•						☺	230
	SKP6				•				☺	243

Klauke®

Everything in its place.

Pocket boxes and assortment boxes.

Connecting materials and crimping tools immediately at hand assorted and safely stored. Klauke assortment boxes offer you these benefits. The pocket boxes from impact-resistant plastic are designed that the connecting materials remain in their pockets even after a crash or strong vibrations. You save time stay calm and don't lose any material.

Needless to say, the assortment boxes also come empty. You can use them for your own particular range of Klauke connecting materials.



- Pocket boxes from impact-resistant plastic with cable end sleeves.
- Assortment boxes with tubular and compression cable lugs, cable end sleeves and insulated cable connections with appropriate stripping and crimping tool.

The Klauke assortment boxes come either full or empty for individual contents.



■ Cable end sleeves assorted in pocket boxes.



- ▶ For cable end sleeves with or without insulation.
- ▶ Rotating chute with zero positioning and detent.
- ▶ **From impact-resistant plastic.**
- ▶ Pocket boxes with raised edge.

Benefits:

- ▶ The cable end sleeves are assorted for direct use. No need to search and quick progressing.
- ▶ Thanks to the practical chute the required number is always taken.
- ▶ The pocket boxes are the ideal solution for rough site operation.
- ▶ The raised edge makes it easier to top up the pocket boxes. The boxes can also be stacked.

■ Practical assortments of connecting materials and tools .

- ▶ Matched to the most frequent applications.
- ▶ Compartments close flush with the lid.
- ▶ **In shock-proof insensitive hammered paint.**
- ▶ Sturdy designs for use on construction sites.

Benefits:

- ▶ You get a perfectly matched assortment of tools and connecting materials.
- ▶ Users always have the right materials at hand.
- ▶ The materials remain in the correct compartment during transportation even in the event of a crash or strong vibrations.



- ▶ *All assortment boxes are also available empty for individual filling.*



■ **SK 65 B**

Assortment box with tubular cable lugs standard type 6 - 50 mm² and crimping tool K05

Characteristics

- Sturdy steel carrying case with lock and handle
- Dimensions: 400x250x50 mm

Item		Part No.	
Assortment box with tubular cable lugs "standard type" and crimping tool K05		SK65B	
Steel carrying case		SK65L	
Scope of supply	Description	Quantity	Page
K05	Mechanical crimping tool for tubular cable lugs and connectors, standard type 6 - 50 mm ²	1	
1R6	Tubular cable lugs 6 mm ² , M6	25	
1R8	Tubular cable lugs 6 mm ² , M8	25	
2R6	Tubular cable lugs 10 mm ² , M6	25	
2R8	Tubular cable lugs 10 mm ² , M8	25	
3R10	Tubular cable lugs 16 mm ² , M10	25	
4R10	Tubular cable lugs 25 mm ² , M10	25	
4R8	Tubular cable lugs 25 mm ² , M8	25	
5R8	Tubular cable lugs 35 mm ² , M8	20	
5R10	Tubular cable lugs 35 mm ² , M10	20	
6R10	Tubular cable lugs 50 mm ² , M10	20	
6R12	Tubular cable lugs 50 mm ² , M12	20	



■ **SK 50 B**

Assortment box with compression cable lugs DIN 46235 6 - 50 mm² and crimping tool K 05 D

Characteristics

- Sturdy steel carrying case with lock and handle
- Dimensions: 400x250x50 mm

Item		Part No.	
Assortment box with compression cable lugs DIN 46235 and crimping tool K 05 D		SK50B	
Steel carrying case		SK65L	
Scope of supply	Description	Quantity	Page
K05D	Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 6 - 50 mm ²	1	
101R5	Compression cable lugs 6 mm ² , M5	50	
101R6	Compression cable lugs 6 mm ² , M6	50	
102R5	Compression cable lugs 10 mm ² , M5	50	
102R6	Compression cable lugs 10 mm ² , M6	50	
103R8	Compression cable lugs 16 mm ² , M8	25	
103R10	Compression cable lugs 16 mm ² , M10	25	
104R8	Compression cable lugs 25 mm ² , M8	25	
104R10	Compression cable lugs 25 mm ² , M10	25	
105R8	Compression cable lugs 35 mm ² , M8	20	
105R10	Compression cable lugs 35 mm ² , M10	20	
106R10	Compression cable lugs 50 mm ² , M10	15	
106R12	Compression cable lugs 50 mm ² , M12	15	

■ **ST 21 B**

Pocket box with cable end-sleeves 0.5 - 2.5 mm² to DIN 46228 part 1

Characteristics

- Pocket box from impact-resistant plastic, stackable and resealable



Item		Part No.	
Pocket box with cable end-sleeves 0.5 - 2.5 mm ² to DIN 46228 part 1		ST21B	
Pocket box		ST21L	
Scope of supply	Description	Quantity	Page
71S6V	Cable end-sleeves 0.5 mm ²	1000	
716V	Cable end-sleeves 0.75 mm ²	500	
72S6V	Cable end-sleeves 1 mm ²	500	
727V	Cable end-sleeves 1.5 mm ²	500	
737V	Cable end-sleeves 2.5 mm ²	500	

■ **ST 23 B**

Pocket box with cable end-sleeves 0.25 - 1 mm² to DIN 46228 part 1

Characteristics

- Pocket box from impact-resistant plastic, stackable and resealable



Item		Part No.	
Pocket box with cable end-sleeves 0.25 - 1 mm ² to DIN 46228 part 1		ST23B	
Pocket box		ST23L	
Scope of supply	Description	Quantity	Page
695V	Cable end-sleeves 0.25 mm ²	1000	
705V	Cable end-sleeves 0.34 mm ²	1000	
716V	Cable end-sleeves 0.75 mm ²	1000	
71S6V	Cable end-sleeves 0.5 mm ²	500	
72S6V	Cable end-sleeves 1 mm ²	500	

■ **ST 22 B**

Pocket box with cable end-sleeves 4 - 16 mm² to DIN 46228 part 1

Characteristics

- Pocket box from impact-resistant plastic, stackable and resealable



Item		Part No.	
Pocket box with cable end-sleeves 4 - 16 mm ² to DIN 46228 part 1		ST22B	
Pocket box		ST22L	
Scope of supply	Description	Quantity	Page
749V	Cable end-sleeves 4 mm ²	200	
7512V	Cable end-sleeves 6 mm ²	100	
7612V	Cable end-sleeves 10 mm ²	70	
7712V	Cable end-sleeves 16 mm ²	70	



■ **ST 15 B**

Pocket box with insulated twin cable end-sleeves 2 x 0.75 - 2 x 2.5 mm²

Characteristics

- Pocket box from impact-resistant plastic, stackable and resealable

Item		Part No.		
Pocket box with insulated twin cable end-sleeves 2 x 0.75 - 2 x 2.5 mm ²		ST15B		
Pocket box		ST15L		
Scope of supply	Colour	Description	Quantity	Page
8708	□	Twin cable end-sleeves 2 x 0.75 mm ²	50	
8718	■	Twin cable end-sleeves 2 x 1 mm ²	50	
8728	■	Twin cable end-sleeves 2 x 1.5 mm ²	50	
87310	■	Twin cable end-sleeves 2 x 2.5 mm ²	50	



■ **ST 1 B**

Pocket box with insulated cable end-sleeves 0.5 - 2.5 mm²

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.5 - 2.5 mm ²		ST1B		
Pocket box		ST1L		
Scope of supply	Colour	Description	Quantity	Page
1690	■	Cable end-sleeves 0.5 mm ²	50	
170W	□	Cable end-sleeves 0.75 mm ²	100	
171G	■	Cable end-sleeves 1 mm ²	100	
172RO	■	Cable end-sleeves 1.5 mm ²	100	
173B	■	Cable end-sleeves 2.5 mm ²	50	



■ **ST 11 B**

Pocket box with insulated cable end-sleeves 0.5 - 2.5 mm²

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.5 - 2.5 mm ²		ST11B		
Pocket box		ST11L		
Scope of supply	Colour	Description	Quantity	Page
4698	□	Cable end-sleeves 0.5 mm ²	50	
4708	□	Cable end-sleeves 0.75 mm ²	100	
4718	■	Cable end-sleeves 1 mm ²	100	
4728	■	Cable end-sleeves 1.5 mm ²	100	
4738	■	Cable end-sleeves 2.5 mm ²	50	

■ **ST 31 B**

Pocket box with insulated cable end-sleeves 0.5 - 2.5 mm²

Characteristics

- Pocket box made from impact-resistant plastic



Item		Part No.		
Pocket box with insulated cable end-sleeves 0.5 - 2.5 mm ²		ST31B		
Pocket box		ST31L		
Scope of supply	Colour	Description	Quantity	Page
1698	□	Cable end-sleeves 0.5 mm ²	50	
1708	□	Cable end-sleeves 0.75 mm ²	100	
1718	■	Cable end-sleeves 1 mm ²	100	
1728	■	Cable end-sleeves 1.5 mm ²	100	
1738	■	Cable end-sleeves 2.5 mm ²	50	

■ **ST 12 B**

Pocket box with insulated cable end-sleeves 4 - 16 mm² to DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic



Item		Part No.		
Pocket box with insulated cable end-sleeves 4 - 16 mm ² to DIN 46228 part 4		ST12B		
Pocket box		ST12L		
Scope of supply	Colour	Description	Quantity	Page
47410	■	Cable end-sleeves 4 mm ²	50	
47512	■	Cable end-sleeves 6 mm ²	20	
47612	■	Cable end-sleeves 10 mm ²	20	
47712	■	Cable end-sleeves 16 mm ²	10	

■ **ST 2 B**

Pocket box with insulated cable end-sleeves 4 - 16 mm²

Characteristics

- Pocket box made from impact-resistant plastic



Item		Part No.		
Pocket box with insulated cable end-sleeves 4 - 16 mm ²		ST2B		
Pocket box		ST2L		
Scope of supply	Colour	Description	Quantity	Page
174GR	■	Cable end-sleeves 4 mm ²	50	
175S	■	Cable end-sleeves 6 mm ²	20	
176E	■	Cable end-sleeves 10 mm ²	20	
177GR	■	Cable end-sleeves 16 mm ²	10	



■ **ST 32 B**

Pocket box with insulated cable end-sleeves 4 - 16 mm²

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 4 - 16 mm ²		ST32B		
Pocket box		ST32L		
Scope of supply	Colour	Description	Quantity	Page
17410	Orange	Cable end-sleeves 4 mm ²	50	
17512	Green	Cable end-sleeves 6 mm ²	20	
17612	Brown	Cable end-sleeves 10 mm ²	20	
17712	Grey	Cable end-sleeves 16 mm ²	10	



■ **ST 3 B**

Pocket box with insulated cable end-sleeves 0.25 - 1 mm²

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.25 - 1 mm ²		ST3B		
Pocket box		ST3L		
Scope of supply	Colour	Description	Quantity	Page
167H	Light Blue	Cable end-sleeves 0.25 mm ²	30	
168T	Teal	Cable end-sleeves 0.34 mm ²	30	
1690	Orange	Cable end-sleeves 0.5 mm ²	30	
170W	White	Cable end-sleeves 0.75 mm ²	30	
171G	Yellow	Cable end-sleeves 1 mm ²	30	



■ **ST 13 B**

Pocket box with insulated cable end-sleeves 0.25 - 1 mm² to DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic
- * = Not standardised

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.25 - 1 mm ² to DIN 46228 part 4		ST13B		
Pocket box		ST13L		
Scope of supply	Colour	Description	Quantity	Page
167H	Light Blue	Cable end-sleeves 0.25 mm ²	30	
168T	Teal	Cable end-sleeves 0.34 mm ²	30	
4698	White	Cable end-sleeves 0.5 mm ²	30	
4708	Grey	Cable end-sleeves 0.75 mm ²	30	
4718	Red	Cable end-sleeves 1 mm ²	30	

■ **ST 33 B**

Pocket box with insulated cable end-sleeves 0.25 - 1 mm²

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.25 - 1 mm ²		ST33B		
Pocket box		ST33L		
Scope of supply	Colour	Description	Quantity	Page
1676	■	Cable end-sleeves 0.25 mm ²	30	
1686	■	Cable end-sleeves 0.34 mm ²	30	
1698	□	Cable end-sleeves 0.5 mm ²	30	
1708	■	Cable end-sleeves 0.75 mm ²	30	
1718	■	Cable end-sleeves 1 mm ²	30	



■ **GR 4698 DO**

Pocket box with insulated cable end-sleeves 0.5 mm² to DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.5 mm ² to DIN 46228 part 4		GR4698DO		
Scope of supply	Colour	Description	Quantity	Page
4698	□	Cable end-sleeves 0.5 mm ²	1000	



■ **GR 4728 DO**

Pocket box with insulated cable end-sleeves 1.5 mm² DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 1.5 mm ² DIN 46228 part 4		GR4728DO		
Scope of supply	Colour	Description	Quantity	Page
4728	■	Cable end-sleeves 1.5 mm ²	1000	



■ **GR 4708 DO**

Pocket box with insulated cable end-sleeves 0.75 mm² DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic

Item		Part No.		
Pocket box with insulated cable end-sleeves 0.75 mm ² DIN 46228 part 4		GR4708DO		
Scope of supply	Colour	Description	Quantity	Page
4708	□	Cable end-sleeves 0.75 mm ²	1000	





■ **GR 4738 DO**

Pocket box with insulated cable end-sleeves 2.5 mm² DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic

Item			Part No.	
Pocket box with insulated cable end-sleeves 2.5 mm ² DIN 46228 part 4			GR4738DO	
Scope of supply	Colour	Description	Quantity	Page
4738	■	Cable end-sleeves 2.5 mm ²	1000	



■ **GR 4718 DO**

Pocket box with insulated cable end-sleeves 1 mm² DIN 46228 part 4

Characteristics

- Pocket box made from impact-resistant plastic

Item			Part No.	
Pocket box with insulated cable end-sleeves 1 mm ² DIN 46228 part 4			GR4718DO	
Scope of supply	Colour	Description	Quantity	Page
4718	■	Cable end-sleeves 1 mm ²	1000	



■ **ST 5 L**

Assortment of empty pocket boxes

- **Made from impact-resistant plastic**

Item	Part No.
Assortment of empty pocket boxes	ST5L



■ **SK 30 B**

Assortment box, steel, with cable end-sleeves 0.75 - 2.5 mm² to DIN 46228 part 1 and crimping tool K 48

Characteristics

- Dimensions: 200x140x40 mm

Item		Part No.	
Assortment box with cable end-sleeves 0.75 - 2.5 mm ² to DIN 46228 part 1 and crimping tool K 48		SK30B	
Steel carrying case		SK30L	
Scope of supply	Description	Quantity	Page
K48	Mechanical crimping tool for cable end-sleeves 0.14 - 2.5 mm ²	1000	
716V	Cable end-sleeves 0.75 mm ²	1000	
72S6V	Cable end-sleeves 1 mm ²	1000	
727V	Cable end-sleeves 1.5 mm ²	1000	
737V	Cable end-sleeves 2.5 mm ²	1000	

■ **SK 32 B**

Assortment box, steel, with cable end-sleeves 0.5 - 16 mm² to DIN 46228 part 1 and crimping tool K 3

Characteristics

- Dimensions: 285x155x45 mm



Item		Part No.	
Assortment box with cable end-sleeves 0.5 - 16 mm ² to DIN 46228 part 1 and crimping tool K 3		SK32B	
Steel carrying case		SK32L	
Scope of supply	Description	Quantity	Page
K3	Mechanical crimping tool for cable end-sleeves 0.5 - 16 mm ²	1	
716V	Cable end-sleeves 0.75 mm ²	1000	
72S6V	Cable end-sleeves 1 mm ²	1000	
727V	Cable end-sleeves 1.5 mm ²	1000	
737V	Cable end-sleeves 2.5 mm ²	500	
749V	Cable end-sleeves 4 mm ²	500	
7510V	Cable end-sleeves 6 mm ²	500	
7618V	Cable end-sleeves 10 mm ²	250	
7718V	Cable end-sleeves 16 mm ²	150	

■ **SK 45 B**

Assortment box, steel, with insulated cable end-sleeves 0.75 - 2.5 mm² DIN 46228 Part 4 and crimping tool K 48

Characteristics

- Dimensions: 200x140x40 mm



Item		Part No.		
Assortment box with insulated cable end-sleeves 0.75 - 2.5 mm ² to DIN 46228, part 4 and crimping tool K 48		SK45B		
Steel carrying case		SK30L		
Scope of supply	Colour	Description	Quantity	Page
K48		Mechanical crimping tool for cable end-sleeves 0.14 - 2.5 mm ²	1	
4708	■	Cable end-sleeves 0.75 mm ²	300	
4718	■	Cable end-sleeves 1 mm ²	300	
4728	■	Cable end-sleeves 1.5 mm ²	300	
4738	■	Cable end-sleeves 2.5 mm ²	200	



■ **SK 47 B**

Assortment box, steel, with insulated cable end-sleeves 0.75 - 16 mm² DIN 46228 Part 4 and crimping tool K 3

Characteristics

- Dimensions: 285x155x45 mm

Item		Part No.		
Assortment box with insulated cable end-sleeves 0.75 - 16 mm ² to DIN 46228, part 4 and crimping tool K 3		SK47B		
Steel carrying case		SK32L		
Scope of supply	Colour	Description	Quantity	Page
K3		Mechanical crimping tool for cable end-sleeves 0.5 - 16 mm ²	1	
4708	■	Cable end-sleeves 0.75 mm ²	200	
4718	■	Cable end-sleeves 1 mm ²	200	
4728	■	Cable end-sleeves 1.5 mm ²	200	
4738	■	Cable end-sleeves 2.5 mm ²	200	
47410	■	Cable end-sleeves 4 mm ²	100	
47512	■	Cable end-sleeves 6 mm ²	100	
47618	■	Cable end-sleeves 10 mm ²	100	
47718	■	Cable end-sleeves 16 mm ²	50	



■ **SK 43 B**

Assortment box, steel, with insulated cable end-sleeves 0.75 - 2.5 mm² DIN 46228, part 4 and twin cable end-sleeves and stripping tool K 41 and crimping tool K 32

Characteristics

- Dimensions: 370x210x40 mm

Item		Part No.		
Assortment box with insulated cable end-sleeves 0.75 - 2.5 mm ² DIN 46228, part 4 and twin cable end-sleeves and stripping tool K 41 and crimping tool K 32		SK43B		
Steel carrying case		SK43L		
Scope of supply	Colour	Description	Quantity	Page
K41		Stripping tool 0.1 - 6 mm ²	1	
K32		Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.14 - 6 mm ²	1	
4708	■	Cable end-sleeves 0.75 mm ²	500	
4718	■	Cable end-sleeves 1 mm ²	500	
4728	■	Cable end-sleeves 1.5 mm ²	500	
4738	■	Cable end-sleeves 2.5 mm ²	300	
8708	■	Twin cable end-sleeves 2 x 0.75 mm ²	200	
8718	■	Twin cable end-sleeves 2 x 1 mm ²	200	
8728	■	Twin cable end-sleeves 2 x 1.5 mm ²	200	
87310	■	Twin cable end-sleeves 2 x 2.5 mm ²	100	

■ **SK 30/3 P**

Assortment box, plastic, with insulated cable end-sleeves 0.5 - 10 mm² DIN 46228 Part 4 as well as stripping tool K 43/2 and crimping tool K30/3

Characteristics

- Dimensions: 395x295x106 mm



Item		Part No.		
Assortment box with insulated cable end-sleeves 0.5 - 10 mm ² to DIN 46228, part 4 and crimping tool K 43/2 and crimping tool K30/3		SK303P		
Scope of supply	Colour	Description	Quantity	Page
K432		Automatic wire stripping tool	1	
K303		Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.08 - 10 mm ²	1	
4698	<input type="checkbox"/>	Cable end-sleeves 0.5 mm ²	400	
4708	<input type="checkbox"/>	Cable end-sleeves 0.75 mm ²	400	
4718	<input type="checkbox"/>	Cable end-sleeves 1 mm ²	400	
4728	<input type="checkbox"/>	Cable end-sleeves 1.5 mm ²	400	
4738	<input type="checkbox"/>	Cable end-sleeves 2.5 mm ²	200	
47410	<input type="checkbox"/>	Cable end-sleeves 4 mm ²	200	
47512	<input type="checkbox"/>	Cable end-sleeves 6 mm ²	100	
47612	<input type="checkbox"/>	Cable end-sleeves 10 mm ²	100	

■ **SK 30/3 S**

Assortment box, plastic, with insulated cable end-sleeves 0.5 - 10 mm² DIN 46228 Part 4 and crimping tool K 30/3

Characteristics

- Dimensions: 275x230x83 mm



Item		Part No.		
Assortment box with insulated cable end-sleeves 0.5 - 10 mm ² to DIN 46228, part 4 and crimping tool K 30/3		SK303S		
Scope of supply	Colour	Description	Quantity	Page
K303		Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.08 - 10 mm ²	1	
4698	<input type="checkbox"/>	Cable end-sleeves 0.5 mm ²	100	
4708	<input type="checkbox"/>	Cable end-sleeves 0.75 mm ²	100	
4718	<input type="checkbox"/>	Cable end-sleeves 1 mm ²	100	
4728	<input type="checkbox"/>	Cable end-sleeves 1.5 mm ²	100	
4738	<input type="checkbox"/>	Cable end-sleeves 2.5 mm ²	50	
47410	<input type="checkbox"/>	Cable end-sleeves 4 mm ²	50	
47512	<input type="checkbox"/>	Cable end-sleeves 6 mm ²	30	
47612	<input type="checkbox"/>	Cable end-sleeves 10 mm ²	30	



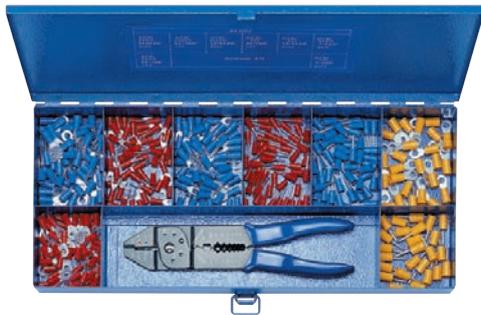
■ **MK 210 B**

Assortment box, steel, with insulated cable connections 0.5 - 6 mm² and crimping tool K 10

Characteristics

- Dimensions: 250x155x40 mm

Item		Part No.		
Assortment box with insulated cable connections 0.5 - 6 mm ² and crimping tool K 10		MK210B		
Steel carrying case		MK210L		
Scope of supply	Colour	Description	Quantity	Page
K10		Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	1	
620C4	■	Solderless terminals 0.5 - 1 mm ²	50	
6305	■	Solderless terminals 1.5 - 2.5 mm ²	50	
710	■	Pin terminals 1.5 - 2.5 mm ²	50	
6505	■	Solderless terminals 4 - 6 mm ²	25	



■ **MK 220 B**

Assortment box, steel, with insulated cable connections 0.5 - 6 mm² and crimping tool K 10

Characteristics

- Dimensions: 370x160x40 mm

Item		Part No.		
Assortment box with insulated cable connections 0.5 - 6 mm ² and crimping tool K 10		MK220B		
Steel carrying case		MK220L		
Scope of supply	Colour	Description	Quantity	Page
K10		Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	1	
6205	■	Solderless terminals 0.5 - 1 mm ²	50	
6305	■	Solderless terminals 1.5 - 2.5 mm ²	50	
620C4	■	Solderless terminals 0.5 - 1 mm ²	50	
630C4	■	Solderless terminals 1.5 - 2.5 mm ²	50	
705	■	Pin terminals 0.5 - 1 mm ²	50	
710	■	Pin terminals 1.5 - 2.5 mm ²	50	
6505	■	Solderless terminals 4 - 6 mm ²	25	
715	■	Pin terminals 4 - 6 mm ²	25	

■ MK 230 B

Assortment box, steel, with insulated cable connections 0.5 - 6 mm² and crimping tool K 10

Characteristics

- Dimensions: 366x230x51 mm



Item		Part No.		
Assortment box with insulated cable connections 0.5 - 6 mm ² and crimping tool K 10		MK230B		
Steel carrying case		MK230L		
Scope of supply	Colour	Description	Quantity	Page
K10		Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	1	
6204	■	Solderless terminals 0.5 - 1 mm ²	50	
6205	■	Solderless terminals 0.5 - 1 mm ²	50	
6206	■	Solderless terminals 0.5 - 1 mm ²	50	
6304	■	Solderless terminals 1.5 - 2.5 mm ²	50	
6305	■	Solderless terminals 1.5 - 2.5 mm ²	50	
6306	■	Solderless terminals 1.5 - 2.5 mm ²	50	
670	■	Butt-connectors 0.5 - 1 mm ²	50	
680	■	Butt-connectors 1.5 - 2.5 mm ²	50	
705	■	Pin terminals 0.5 - 1 mm ²	50	
710	■	Pin terminals 1.5 - 2.5 mm ²	50	
730	■	Receptacles 1.5 - 2.5 mm ²	50	
830	■	Tabs 1.5 - 2.5 mm ²	50	
620C4	■	Solderless terminals 0.5 - 1 mm ²	50	
630C4	■	Solderless terminals 1.5 - 2.5 mm ²	50	
715	■	Pin terminals 4 - 6 mm ²	25	
700	■	Butt-connectors 4 - 6 mm ²	25	
6505	■	Solderless terminals 4 - 6 mm ²	25	
6506	■	Solderless terminals 4 - 6 mm ²	25	
650C6	■	Solderless terminals 4 - 6 mm ²	25	

■ SK 82 S

Assortment box, plastic, with insulated cable connections 0.5 - 2.5 mm² and crimping tool K 82



Item		Part No.		
Assortment box with insulated cable connections 0.5 - 2.5 mm ² and crimping tool K 82		SK82S		
Scope of supply	Colour	Description	Quantity	Page
K82		Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	1	
6204	■	Solderless terminals 0.5 - 1 mm ²	20	
6205	■	Solderless terminals 0.5 - 1 mm ²	20	
670	■	Butt-connectors 0.5 - 1 mm ²	20	
720	■	Receptacles 0.5 - 1 mm ²	20	
6304	■	Solderless terminals 1.5 - 2.5 mm ²	20	
6305	■	Solderless terminals 1.5 - 2.5 mm ²	20	
680	■	Butt-connectors 1.5 - 2.5 mm ²	20	
730	■	Receptacles 1.5 - 2.5 mm ²	20	



■ **SK 82 P**

Assortment box, plastic with insulated cable connections 0.5 - 6 mm² and stripping tool and crimping tool K 82

Characteristics

- Dimensions 395x295x106 mm

Item		Part No.		
Assortment box with insulated cable connections 0.5 - 6 mm ² and stripping tool and crimping tool K 82		SK82P		
Scope of supply	Colour	Description	Quantity	Page
K41		Stripping tool 0.1 - 6 mm ²	1	
K82		Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	1	
6204	■	Solderless terminals 0.5 - 1 mm ²	50	
6205	■	Solderless terminals 0.5 - 1 mm ²	50	
670	■	Butt-connectors 0.5 - 1 mm ²	50	
720	■	Receptacles 0.5 - 1 mm ²	50	
6304	■	Solderless terminals 1.5 - 2.5 mm ²	50	
6305	■	Solderless terminals 1.5 - 2.5 mm ²	50	
680	■	Butt-connectors 1.5 - 2.5 mm ²	50	
730	■	Receptacles 1.5 - 2.5 mm ²	50	
6505	■	Solderless terminals 4 - 6 mm ²	20	
6506	■	Solderless terminals 4 - 6 mm ²	20	
700	■	Butt-connectors 4 - 6 mm ²	20	
715	■	Pin terminals 4 - 6 mm ²	20	
620C4	■	Solderless terminals 0.5 - 1 mm ²	20	
630C4	■	Solderless terminals 1.5 - 2.5 mm ²	20	
705	■	Pin terminals 0.5 - 1 mm ²	20	
710	■	Pin terminals 1.5 - 2.5 mm ²	20	



■ **SK 30 L**

Steel carrying case, empty

Characteristics

- 4 small and 1 large additional compartments with lock
- For optional storage of crimping tools type K1, K4, K46 and K48
- Dimensions 200x140x40 mm
- Weight: 1.2 kg

Item	Part No.
Steel carrying case	SK30L



■ **SK 32 L**

Steel carrying case, empty

Characteristics

- 8 small and 1 large additional compartments with lock
- For optional storage of crimping tools type K3 and K35
- Dimensions 285x155x45 mm
- Weight: 1.3 kg

Item	Part No.
Steel carrying case	SK32L

■ **SK 4 L**

Steel carrying case, empty

Characteristics

- 6 small and 1 large additional compartments with lock
- For optional storage of crimping tools type K02, K2, K16, K25, K28 and K29
- Dimensions 370x160x40 mm
- Weight: 1.4 kg

Item	Part No.
Steel carrying case	SK4L



■ **SK 43 L**

Steel carrying case, empty

Characteristics

- 8 small and 2 large additional compartments with lock
- For storage of crimping tool K 32 and stripping tool K 41
- Dimensions 370x210x40 mm
- Weight: 1.9 kg

Item	Part No.
Steel carrying case	SK43L



■ **MK 55**

Steel carrying case, empty

Characteristics

- 8 small and 1 large additional compartments with lock
- For storage of 8 pairs of dies and crimping tool K50
- Dimensions 245x130x37 mm
- Weight: 0.7 kg

Item	Part No.
Steel carrying case	MK55



■ **MK 210 L**

Steel carrying case, empty

Characteristics

- 4 small and 1 large additional compartments with lock
- For storage of crimping tools K 10 or K 82
- Dimensions 250x155x40 mm
- Weight: 1.0 kg

Item	Part No.
Steel carrying case	MK210L





■ **MK 220 L**

Steel carrying case, empty

Characteristics

- 8 small and 1 large additional compartments with lock
- For storage of crimping tools K 10 or K 82
- Dimensions 370x160x40 mm
- Weight: 1.4 kg

Item	Part No.
Steel carrying case	MK220L



■ **MK 230 L**

Steel carrying case, empty

Characteristics

- 19 small and 1 large additional compartments with lock and handle
- For storage of crimping tools K 10 or K 82
- Dimensions 366x230x51 mm
- Weight: 2.4 kg

Item	Part No.
Steel carrying case	MK230L



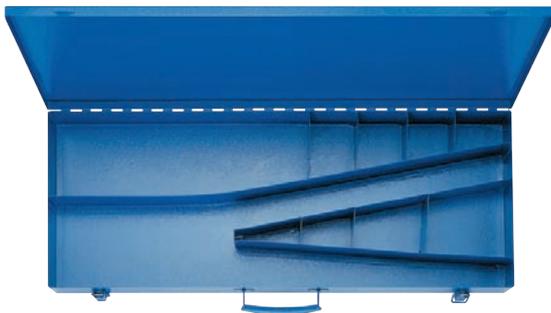
■ **SK 65 L**

Steel carrying case, empty

Characteristics

- 12 small and 1 large additional compartments with lock and handle
- For storage of crimping tools of type K 05
- Dimensions 400x250x50 mm
- Weight: 2.3 kg

Item	Part No.
Steel carrying case	SK65L



■ **SK 120 L**

Steel carrying case, empty

Characteristics

- 8 small and 1 large additional compartments with lock and handle
- For storage of crimping tools of types K 06, K 08 and K 09 or cable cutters K 105/1
- Dimensions 680x265x65 mm
- Weight: 4.7 kg

Item	Part No.
Steel carrying case	SK120L

■ **MK 18**

Steel carrying case, empty

Characteristics

- 34 small and 1 large additional compartments with lock and handle
- For storage of 34 pairs of dies and crimping tool K 18
- Dimensions 605x300x50 mm
- Weight: 4.6 kg

Item	Part No.
Steel carrying case	MK18



■ **MK 22**

Steel carrying case, empty

Characteristics

- 17 small and 1 large additional compartments with lock and handle
- For storage of 17 pairs of dies and crimping tool K 22
- Dimensions 600x220x65 mm
- Weight: 3.5 kg

Item	Part No.
Steel carrying case	MK22



■ **MK 17**

Steel carrying case, empty

Characteristics

- 12 small and 1 large additional compartments with lock and handle
- For storage of 12 pairs of dies and crimping tool K 35/4
- Dimensions 415x250x68 mm
- Weight: 3.0 kg

Item	Part No.
Steel carrying case	MK17



■ **MK/KP 1**

Plastic case, empty

Characteristics

- For storage of crimping tools KP1 and KP1L and 10 crimping heads of the Klauke Pro Series
- With lock and handle
- Dimensions 395x295x106 mm
- Weight: 1.0 kg

Item	Part No.
Plastic case	MK KP1





■ **MKU**

Steel carrying case, empty

Characteristics

- With additional compartment for dies with lock and handle
- For storage of hydraulic crimping tools HK12/2, HK25/2 or HK45
- Dimensions 810x310x210 mm
- Weight: 10.0 kg

Item	Part No.
Steel carrying case	MKU



■ **TT2**

Carrying bag, empty

Characteristics

- Material: Cordura
- Weight: 0.48 kg

Item	Part No.
Carrying bag	TT2



■ **TT4**

Carrying bag, empty

Characteristics

- Weight: 0.73 kg

Item	Part No.
Carrying bag	TT4







Crimping and cutting tools

■ Mechanical crimping and cutting tools	208
Mechanical crimping tools	212
Mechanical crimping tools with interchangeable dies	242
Mechanical crimping tools for the photovoltaic	253
Mechanical cutting tools	255
■ Electric and pneumatic crimping tools	262
■ Hand-operated hydraulic crimping, cutting and universal tools	266
Hydraulic crimping tools, hand operated	270
Hydraulic cutting tools, hand operated	282
Hydraulic universal tool, hand operated	286
■ Battery-operated crimping, cutting and universal tools	288
Battery powered crimping tools	294
Battery powered cutting tools	318
Battery powered universal tools	330
■ Hydraulic crimping, cutting and universal heads	334
Hydraulic crimping heads	336
Hydraulic cutting heads	349
Hydraulic universal head	354
■ Hydraulic drive units	356
■ Hydraulic systems	362
Hydraulic crimping systems	364
Safety cutting units	372
■ Accessories for hydraulic tools	374
Batteries and mains sets	375
Battery chargers	377
■ Force and pressure gauge systems	382



Powerful crimping and cutting, *by hand.*

Mechanical tools for crimping and cutting.

The diversity of conductor types and connecting material demand a great number of different standards for crimping and cutting tools. Klauke offers the right solutions for all applications.

All mechanical crimping and cutting tools are made from the highest quality materials, are rust-proof and surface-finished. These products are set apart by their extremely long service life. Unique precision and high quality material guarantee safe and, most important, long-lasting electrical connections. The tools's ergonomic handles and perfected drives optimise transmission of the hand force.



- Crimping tools for Klauke connecting material with nominal cross sections from 0.08 to 300 mm².
- Optimised profile forms for all applications.
- Cutting tools for aluminium and copper cables up to Ø 100 mm.
- Fully-insulated cutting tools up to 1000 V to DIN EN 60900.



■ Single-action *crimping and cutting tools.*

- ▶ Easy to use.
- ▶ Ergonomic handles.
- ▶ Lightweight.
- ▶ Clear designation of crimping profiles with nominal cross-sections.

Benefits:

- ▶ The crimping operations are limited by the stop – just push through and the crimp is made.
- ▶ The ergonomic handles and low tool weight facilitate **optimised force transmission**, fatigue proof operation and enhanced efficiency.
- ▶ Confusion of crimp profiles and faulty crimps are eliminated because of clear crimp profile identification.



■ Force-supported *crimping and cutting tools.*

- ▶ Optimised force transmission with lever mechanism.
- ▶ Precise drives, precise crimping force.
- ▶ High quality blades.
- ▶ Crimping tools with adjustable pre-tensioning force.
- ▶ Made from high-grade special steel.

Benefits:

- ▶ Lever mechanism facilitates low-force, fatigue proof operations.
- ▶ High-precision tools produce **exact crimping results** and safe electrical connections.
- ▶ Constant crimping force and consistent crimp quality, even after many years of tool use.

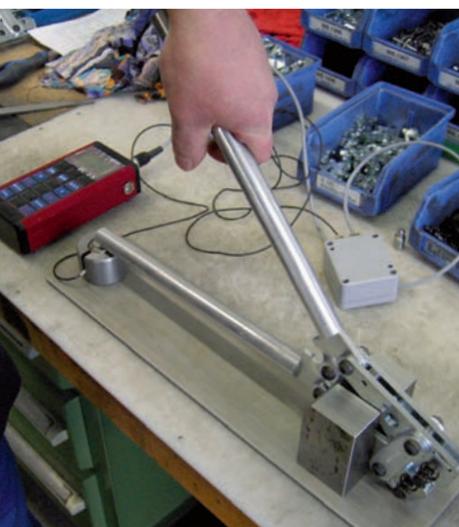


■ Two-handed *crimping and cutting tools.*

- ▶ Two-handed tools for higher crimping and cutting power.
- ▶ **Power-optimised drives with factory-tested pre-tension.**
- ▶ Designs with telescope handles.
- ▶ Crimping tools with ratchet.

Benefits:

- ▶ Easy crimping and cutting of large cross-sections.
- ▶ Applied force is effectively converted into crimping or cutting force.
- ▶ Tools with telescopic handle are compact enough for any tool box.
- ▶ The lever extension of telescopic handles optimises force development for crimping and cutting large cross sections.
- ▶ The ratchet facilitates standardised processes and guarantees high safety.



■ *Tools for cable end sleeves:
Which tool for which cable end sleeve?*

Cross-section max. mm ²	Tool							Front crimping	Side crimping	Single-action	Force-supported
2,5	K4	✓							✓	✓	
	K66*						✓		✓		✓
	K1		✓						✓	✓	
	K48		✓						✓	✓	
6	K46	✓							✓	✓	
	K36		✓					✓		✓	
	K32		✓					✓			✓
	K37		✓						✓		✓
	K38/2				✓			✓			✓
	K31/2*		✓						✓		✓
	K38Ergo				✓			✓			✓
	K50 ¹⁾		✓						✓		✓
	KP35/1						✓		✓		✓
	10	K30/3				✓				✓	
KP30/3					✓				✓		✓
16	K3	✓							✓	✓	
	K34		✓					✓			✓
	KP30/4				✓				✓		✓
	KP35/2						✓		✓		✓
25	K39		✓					✓		✓	
35	K35	✓						✓	✓		
50	K27/1			✓					✓		✓
	K28		✓						✓		✓
	K35/4 ¹⁾		✓						✓		✓
95	K27/2			✓					✓		✓
	K29		✓						✓		✓
240	K18 ¹⁾		✓	✓					✓		✓
	K22 ¹⁾		✓	✓					✓		✓

K = Crimping tool KP = Pro series crimping head ¹⁾ Interchangeable dies * also available as Pro series

■ *One series, many heads:* **Klaue[®]pro**

- ▶ Mechanical basic tools with standardised mounting for interchangeable crimping heads.
- ▶ Crimping heads in closed design with parallel guided crimping jaws.

Benefits:

- ▶ High flexibility with interchangeable heads – for service applications.
- ▶ **High precision** with parallel guided crimping jaws and hence safe crimping of copper tubular cable lugs, solderless terminals, cable end sleeves, insulated cable connections, non-insulated receptacles, BNC connectors and turned pin connectors and receptacles.
- ▶ All heads also suitable for hydraulic, pneumatic and electrical tools of the Klaue Pro series.



▶ *More on Page 242.*

■ Crimping tools with interchangeable dies.



- ▶ Crimping tools are compatible with dies in the corresponding Klauke range.
- ▶ **Quick-change dies for all applications.**

Special features and benefits of each tool:

- ▶ K 507 with two pairs of interchangeable dies in the pinch for fast change without searching.
- ▶ K 50 with parallel guided crimping jaws for high precision and safe crimps.
- ▶ K 35/4, K 18 and K 22 with telescopic handles, reduces space required for transport and optimises lever force when crimping and cutting.



■ Which cutting tool for which application?

Type	max. Ø mm ¹⁾	Copper/aluminium stranded	Copper, fine	VDE, insulated	Open head	Closed head	Single-acting drive	Force-supported drive
K100	14	✓	✓		✓		✓	
K102	20		✓		✓		✓	
K130	30	✓	✓		✓		✓	
K150	50	✓	✓		✓		✓	
K230	39	✓	✓	✓	✓		✓	
K250	50	✓	✓	✓	✓		✓	
K101/1	26	✓	✓		✓			✓
K105/1	26	✓	✓		✓			✓
K201/1	26	✓	✓	✓	✓			✓
K101/2	38	✓	✓		✓			✓
K18 (S18)	18	✓			✓			✓
K106/1	32	✓				✓		✓
K106/2	52	✓				✓		✓
K103/1	60	✓				✓		✓
K104/1	100	✓				✓		✓

¹⁾ The exact cutting capacity depends on the cable or rope type.





K 4

Mechanical crimping tool for cable end-sleeves 0.5 - 2.5 mm²



- Indent crimping for round clamp opening
- Spring-supported tool opening

Characteristics

- One crimp profile per cross-section
- Lateral insertion
- Exact cross-section assignment
- Ergonomic handles

Technical data	
Crimping range:	0.5-2.5 mm ²
Length:	150 mm
Weight:	0.16 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 0.5 - 2.5 mm ²	K4

Accessories	Part No.	Page
Steel carrying case	SK30L	200



K 46

Mechanical crimping tool for cable end-sleeves 1.5 - 6 mm²



- Indent crimping for round clamp opening
- Spring-supported tool opening

Characteristics

- One crimp profile per cross-section
- Lateral insertion
- Exact cross-section assignment
- Ergonomic handles

Technical data	
Crimping range:	1.5-6 mm ²
Length:	150 mm
Weight:	0.16 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 1.5 - 6 mm ²	K46

Accessories	Part No.	Page
Steel carrying case	SK30L	200

K 3

Mechanical crimping tool for cable end-sleeves 0.5 - 16 mm²

- Indent crimping for round clamp opening
- With wire cutter

Characteristics

- One crimp profile per cross-section
- Lateral insertion
- Exact cross-section assignment
- Ergonomic handles

Technical data	
Crimping range:	0.5-16 mm ²
Length:	230 mm
Weight:	0.24 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 0.5 - 16 mm ²	K3

Accessories	Part No.	Page
Steel carrying case	SK32L	200



K 35

Mechanical crimping tool for cable end-sleeves 10 - 35 mm²

- Indent crimping for round clamp opening
- For large cross-sections to 35 mm²

Characteristics

- One crimp profile per cross-section
- Lateral insertion
- Exact cross-section assignment
- Ergonomic handles

Technical data	
Crimping range:	10-35 mm ²
Length:	230 mm
Weight:	0.24 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 10 - 35 mm ²	K35

Accessories	Part No.	Page
Steel carrying case	SK32L	200





■ K 66

Mechanical crimping tool for cable end-sleeves 0.5 - 2.5 mm²



- Roll-crimping for cable end-sleeves DIN 46228, sheet 2
- Spring-supported tool opening
- Crimping of conductor and insulation in one step

Characteristics

- With ratchet
- Lateral insertion
- Exact cross-section assignment

Technical data	
Crimping range:	0.5-2.5 mm ²
Length:	240 mm
Weight:	0.65 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 0.5 - 2.5 mm ²	K66

Accessories	Part No.	Page
Steel carrying case	MK210L	201



■ K 1

Mechanical crimping tool for cable end-sleeves 0.14 - 2.5 mm²



- Trapezoid crimping suitable for box terminals
- Spring-supported tool opening
- With cutter and wire stripper

Characteristics

- One crimp profile per cross-section
- Lateral insertion
- Exact cross-section assignment
- Ergonomic handles
- Interchangeable stripping blades

Technical data	
Crimping range:	0.14-2.5 mm ²
Length:	175 mm
Weight:	0.19 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 0.14 - 2.5 mm ²	K1

Accessories	Part No.	Page
Steel carrying case	SK30L	200

■ **K 48**

Mechanical crimping tool for cable end-sleeves 0.14 - 2.5 mm²

- Trapezoid crimping suitable for box terminals
- Spring-supported tool opening

Characteristics

- One crimp profile per cross-section
- Lateral insertion
- Exact cross-section assignment
- Ergonomic handles

Technical data	
Crimping range:	0.14-2.5 mm ²
Length:	150 mm
Weight:	0.16 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 0.14 - 2.5 mm ²	K48

Accessories	Part No.	Page
Steel carrying case	SK30L	200



■ **K 36**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.5 - 6 mm²

- Spring-supported tool opening

Characteristics

- Two crimping profiles with the cross-section areas 0.5 - 2.5mm² and 4 - 6 mm²
- Front insertion
- Ergonomic handles

Technical data	
Crimping range total:	0.5-6 mm ²
Length:	200 mm
Weight:	0.22 kg
Crimping range Profile 1: cable end-sleeves: Twin cable end-sleeves:	0.5-2.5 mm ² 2 x 0.5 – 2 x 1.5 mm ²
Crimping range Profile 2: cable end-sleeves: Twin cable end-sleeves:	4-6 mm ² 2 x 2.5 – 2 x 4 mm ²

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.5 - 6 mm ²	K36

Accessories	Part No.	Page
Steel carrying case	SK32L	200





■ **K 32**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves
0.14 - 6 mm²



- Trapezoid crimping suitable for box terminals
- Spring-supported tool opening

Characteristics

- One crimping profile for cross-sections from 0.14-6 mm²
- With ratchet
- Front insertion
- Non-slip handles

Technical data	
Crimping range total:	0.14 - 6 mm ²
cable end-sleeves:	0.14 - 6 mm ²
Twin cable end-sleeves:	2 x 0.5 – 2 x 2.5 mm ²
Length:	210 mm
Weight:	0.35 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.14 - 6 mm ²	K32

Accessories	Part No.	Page
Steel carrying case	SK43L	201



■ **K 34**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves
6 - 16 mm²



- Trapezoid crimping suitable for box terminals
- Spring-supported tool opening

Characteristics

- One crimping profile for cross-sections from 6 - 16 mm²
- With ratchet
- Front insertion
- Non-slip handles

Technical data	
Crimping range total:	6 - 16 mm ²
cable end-sleeves:	6 - 16 mm ²
Twin cable end-sleeves:	2 x 4 – 2 x 6 mm ²
Length:	210 mm
Weight:	0.5 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves	K34

Accessories	Part No.	Page
Steel carrying case	SK43L	201

■ **K 37**

Mechanical crimping tool for cable end-sleeves 0.14 - 6 mm²

- Trapezoid crimping suitable for box terminals
- Tool pre-tensioning adjustable

Characteristics

- One crimp profile per cross-section
- With ratchet
- Lateral insertion
- Exact cross-section assignment

Technical data	
Crimping range:	0.14-6 mm ²
Length:	200 mm
Weight:	0.36 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 0.14 - 6 mm ²	K37

Accessories	Part No.	Page
Steel carrying case	SK43L	201



■ **K 39**

Mechanical crimping tool for cable end-sleeves 10 - 25 mm²

- Trapezoid crimping suitable for box terminals
- Tool pre-tensioning adjustable

Characteristics

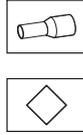
- One crimp profile per cross-section
- With ratchet
- Lateral insertion
- Exact cross-section assignment

Technical data	
Crimping range:	10-25 mm ²
Length:	200 mm
Weight:	0.36 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 10 - 25 mm ²	K39

Accessories	Part No.	Page
Steel carrying case	SK43L	201





■ **K 38/2**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves
0.5 - 6 mm²

- Square crimping suitable for box terminals and spring clamp technology
- Tool pre-tensioning adjustable

Characteristics

- One crimping profile for cross-sections from 0.5 - 6 mm²
- Accurate drive
- With ratchet
- Front insertion

Technical data	
Crimping range total:	0.5-6 mm ²
cable end-sleeves:	0.5-6 mm ²
Twin cable end-sleeves:	2 x 0.5 – 2 x 2.5 mm ²
Length:	190 mm
Weight:	0.3 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.5 - 6 mm ²	K382

Accessories	Part No.	Page
Steel carrying case	SK43L	201



■ **K 38 ERGO**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves
0.25 - 6 mm²

- Square crimping suitable for box terminals and spring clamp technology
- Ergonomic design
- Low hand crimping force

Characteristics

- Accurate drive with ratchet
- Front insertion
- Reduced space requirement for processing
- Automatic cross-section range adjustment from 0.25 - 6 mm²
- Max. length of cable end-sleeves to be crimped 18 mm, from 12 mm in two stages

Technical data	
Crimping range total:	0.25-6 mm ²
cable end-sleeves:	0.25-6 mm ²
Twin cable end-sleeves:	2 x 0.5 – 2 x 2.5 mm ²
Length:	190 mm
Weight:	0.3 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.25 - 6 mm ²	K38ERGO

■ **K 38 ERGO Set**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves in plastic case 0.25 - 6 mm²



- Square crimping suitable for box terminals and spring clamp technology
- Ergonomic design
- Low hand crimping force
- Practical tool chest

Characteristics

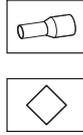
- Accurate drive with ratchet
- Front insertion
- Reduced space requirement for processing
- Automatic cross-section range adjustment from 0.25 - 6 mm²
- Max. length of cable end-sleeves to be crimped 18 mm, from 12 mm in two stages



Technical data	
Crimping range total:	0.25-6 mm ²
cable end-sleeves:	0.25-6 mm ²
Twin cable end-sleeves:	2 x 0.5 – 2 x 2.5 mm ²
Length:	160 mm
Total weight:	0.74 kg
Case dimension:	235 x 180 x 50 mm

Item		Part No.		
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves in plastic case 0.25 - 6 mm ²		K38ERGOSET		
Scope of supply	Colour	Description	Quantity	Page
K38ERGO		Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.25 - 6 mm ²	1	
4698	□	Cable end-sleeves 0.5 mm ²	100	
4708	■	Cable end-sleeves 0.75 mm ²	100	
4718	■	Cable end-sleeves 1 mm ²	100	
4728	■	Cable end-sleeves 1.5 mm ²	100	





■ **K 30/3**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.08 - 10 mm²

- **Square crimping suitable for box terminals and spring clamp technology**

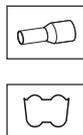
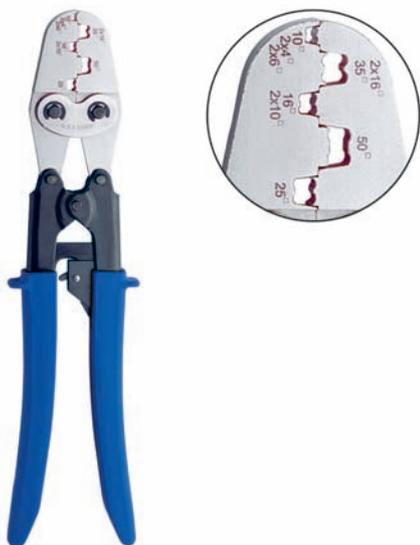
Characteristics

- One crimping profile for cross-sections from 0.08 - 10 mm²
- With ratchet
- Lateral insertion
- Exact cross-section assignment
- Non-slip handles

Technical data	
Crimping range total:	0.08-10 mm ²
cable end-sleeves:	0.08-10 mm ²
Twin cable end-sleeves:	2 x 0.5 – 2 x 4 mm ²
Length:	190 mm
Weight:	0.3 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 0.08 - 10 mm ²	K303

Accessories	Part No.	Page
Steel carrying case	SK30L	200



■ **K 27/1**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 6 - 50 mm²

- **Trapezoid crimping suitable for box terminals**
- **Special type, especially suitable for fine stranded conductors**

Characteristics

- One crimp profile per cross-section from 6 - 50 mm²
- With ratchet
- Lateral insertion
- Exact cross-section assignment

Technical data	
Crimping range total:	6-50 mm ²
cable end-sleeves:	10-50 mm ²
Twin cable end-sleeves:	2 x 6 – 2 x 16 mm ²
Length:	335 mm
Weight:	0.8 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 6 - 50 mm ²	K271

Accessories	Part No.	Page
Steel carrying case	SK4L	201

■ **K 27/2**

Mechanical crimping tool for cable end-sleeves 50 - 95 mm²

- Trapezoid crimping suitable for box terminals
- Special type, especially suitable for fine stranded conductors
- For large cross-sections to 95 mm²

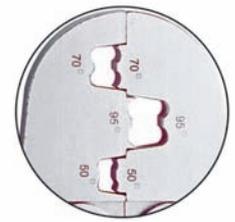
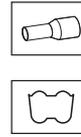
Characteristics

- One crimp profile per cross-section from 50 - 95 mm²
- With ratchet
- Lateral insertion
- Exact cross-section assignment

Technical data	
Crimping range:	50-95 mm ²
Length:	335 mm
Weight:	0.8 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 50 - 95 mm ²	K272

Accessories	Part No.	Page
Steel carrying case	SK4L	201



■ **K 28**

Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 4 - 50 mm²

- Trapezoid crimping suitable for box terminals

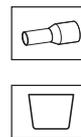
Characteristics

- One crimp profile per cross-section from 4 - 50 mm²
- With ratchet
- Lateral insertion
- Exact cross-section assignment

Technical data	
Crimping range total:	4-50 mm ²
cable end-sleeves:	10-50 mm ²
Twin cable end-sleeves:	2 x 4 – 2 x 16 mm ²
Length:	335 mm
Weight:	0.8 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves and twin cable end-sleeves 4 - 50 mm ²	K28

Accessories	Part No.	Page
Steel carrying case	SK4L	201





■ K 29

Mechanical crimping tool for cable end-sleeves 50 - 95 mm²

- Trapezoid crimping suitable for box terminals
- For large cross-sections to 95 mm²

Characteristics

- One crimp profile per cross-section from 50 - 95 mm²
- With ratchet
- Lateral insertion

Technical data	
Crimping range:	50-95 mm ²
Length:	335 mm
Weight:	0.8 kg

Item	Part No.
Mechanical crimping tool for cable end-sleeves 50 - 95 mm ²	K29

Accessories	Part No.	Page
Steel carrying case	SK4L	201



■ K 10

Mechanical crimping tool for insulated cable connections 0.5 - 6 mm²

- Oval crimping
- To shorten screws M2.6 - M5
- With wire stripper and cutter

Characteristics

- Stripping and crimping is done in two operations
- Wire stripping for sizes 0.5 – 6 mm²

Technical data	
Crimping range total:	0.5-6 mm ²
Yellow insulation sleeve:	4.0-6.0 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Blue insulation sleeve:	1.5-2.5 mm ²
Length:	210 mm
Weight:	0.19 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	K10

Accessories	Part No.	Page
Steel carrying case	MK210L	201

■ K 14

Mechanical crimping tool for insulated cable connections 0.5 - 6 mm²

- **Oval crimping**
- **Spring-supported tool opening**
- **With wire stripper and cutter**

Characteristics

- Three-stage positioning
- Exact cross-section assignment
- Adjustable tool pre-tensioning

Technical data	
Crimping range total:	0.5-6 mm ²
Yellow insulation sleeve:	4.0-6.0 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Blue insulation sleeve:	1.5-2.5 mm ²
Length:	215 mm
Weight:	0.5 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	K14

Accessories	Part No.	Page
Steel carrying case	MK210L	201



■ K 15

Mechanical crimping tool for insulated cable connections 0.5 - 6 mm²

- **Double crimping, oval shape**
- **Spring-supported tool opening**
- **With wire stripper and cutter**

Characteristics

- Three-stage positioning
- Exact cross-section assignment
- Adjustable tool pre-tensioning

Technical data	
Crimping range total:	0.5-6 mm ²
Yellow insulation sleeve:	4.0-6.0 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Blue insulation sleeve:	1.5-2.5 mm ²
Length:	215 mm
Weight:	0.5 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	K15

Accessories	Part No.	Page
Steel carrying case	MK210L	201





■ K 80

Mechanical crimping tool for insulated cable connections 0.1 - 1 mm²



- Double crimping, oval shape
- Crimping of conductor and insulation in one step
- Tool pre-tensioning adjustable

Characteristics

- Accurate drive
- With ratchet
- Colour-coded cross-section assignment

Technical data	
Crimping range total:	0.1-1 mm ²
Yellow insulation sleeve:	0.1-0.4 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Length:	195 mm
Weight:	0.38 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.1 - 1 mm ²	K80

Accessories	Part No.	Page
Steel carrying case	SK43L	201



■ K 81

Mechanical crimping tool for insulated cable connections 0.5 - 2.5 mm²



- Double crimping, oval shape
- Crimping of conductor and insulation in one step
- Tool pre-tensioning adjustable

Characteristics

- Accurate drive
- With ratchet
- Colour-coded cross-section assignment

Technical data	
Crimping range total:	0.5-2.5 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Blue insulation sleeve:	1.5-2.5 mm ²
Length:	195 mm
Weight:	0.38 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.5 - 2.5 mm ²	K81

Accessories	Part No.	Page
Steel carrying case	SK43L	201

■ **K 82**

Mechanical crimping tool for insulated cable connections 0.5 - 6 mm²

- **Double crimping, oval shape**
- **Crimping of conductor and insulation in one step**
- **Tool pre-tensioning adjustable**

Characteristics

- Accurate drive
- With ratchet
- Colour-coded cross-section assignment

Technical data	
Crimping range total:	0.5 - 6 mm ²
Yellow insulation sleeve:	4.0-6.0 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Blue insulation sleeve:	1.5-2.5 mm ²
Length:	225 mm
Weight:	0.55 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	K82

Accessories	Part No.	Page
Steel carrying case	MK210L	201



■ **K 85**

Mechanical crimping tool for insulated cable connections 0.5 - 6 mm²

- **Double crimping, oval shape**
- **Crimping of conductor and insulation in one step**
- **Tool pre-tensioning adjustable**

Characteristics

- Energy-efficient ergonomic drive
- With ratchet
- Colour-coded cross-section assignment

Technical data	
Crimping range total:	0.5-6 mm ²
Yellow insulation sleeve:	4.0-6.0 mm ²
Red insulation sleeve:	0.5-1.0 mm ²
Blue insulation sleeve:	1.5-2.5 mm ²
Length:	220 mm
Weight:	0.52 kg

Item	Part No.
Mechanical crimping tool for insulated cable connections 0.5 - 6 mm ²	K85





■ **K 16**

Mechanical crimping tool for insulated solderless terminals 10 - 16 mm²

- **Oval crimping**
- **Special crimping tool for meter connections**

Characteristics

- With ratchet
- Exact cross-section assignment

Technical data	
Crimping range total:	10-16 mm ²
Red insulation sleeve:	10 mm ²
Blue insulation sleeve:	16 mm ²
Length:	305 mm
Weight:	0.61 kg

Item	Part No.
Mechanical crimping tool for insulated solderless terminals 10 - 16 mm ²	K16

Accessories	Part No.	Page
Steel carrying case	SK4L	201



■ **K 60**

Mechanical crimping tool for non-insulated tabs and receptacles 0.5 - 6 mm²

- **Roll-crimping**
- **To shorten screws M2.5 - M6**

Characteristics

- Crimping of conductor and insulation in two steps
- Wire stripping for cross-sections 0.75 – 6 mm²
- Tab width 2.8, 4.8 and 6.3 mm

Technical data	
Crimping range:	0.5-6 mm ²
Length:	225 mm
Weight:	0.2 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 0.5 - 6 mm ²	K60

Accessories	Part No.	Page
Steel carrying case	MK210L	201

■ **K 57/2**

Mechanical crimping tool for non-insulated tabs and receptacles
2.8 mm tab width 0.1 - 1 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening
- Tool pre-tensioning adjustable

Characteristics

- With ratchet
- Exact cross-section assignment

Technical data	
Crimping range:	0.1-1 mm ²
Length:	220 mm
Weight:	0.55 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 2.8 mm tab width 0.1 - 1 mm ²	K572



■ **K 58/2**

Mechanical crimping tool for non-insulated tabs and receptacles
4.8 mm tab width 0.5 - 2.5 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening
- Tool pre-tensioning adjustable

Characteristics

- With ratchet
- Exact cross-section assignment

Technical data	
Crimping range:	0.5-2.5 mm ²
Length:	220 mm
Weight:	0.55 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 4.8 mm tab width 0.5 - 2.5 mm ²	K582





■ **K 59/2**

Mechanical crimping tool for non-insulated tabs and receptacles
6.3 mm tab width 0.5 - 6 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening
- Tool pre-tensioning adjustable

Characteristics

- With ratchet

Technical data	
Crimping range:	0.5-6 mm ²
Length:	220 mm
Weight:	0.51 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 6.3 mm tab width 0.5 - 6 mm ²	K592



■ **K 67**

Mechanical crimping tool for non-insulated tabs and receptacles
2.8 mm tab width 0.1 - 1 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening

Characteristics

- With ratchet

Technical data	
Crimping range:	0.1-1 mm ²
Length:	210 mm
Weight:	0.5 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 2.8 mm tab width 0.1 - 1 mm ²	K67

Accessories	Part No.	Page
Steel carrying case	MK210L	201

K 65

Mechanical crimping tool for non-insulated tabs and receptacles
4.8 mm tab width 0.5 - 2.5 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening

Characteristics

- With ratchet

Technical data	
Crimping range:	0.5-2.5 mm ²
Length:	265 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 4.8 mm tab width 0.5 - 2.5 mm ²	K65

Accessories	Part No.	Page
Steel carrying case	MK210L	201



K 62

Mechanical crimping tool for non-insulated tabs and receptacles
6.3 mm connector width 0.5 - 6 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening

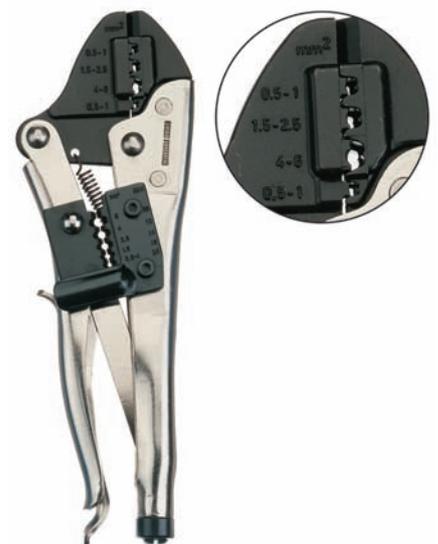
Characteristics

- Wire stripping for sizes 0.5 – 6 mm² and wire cutter
- Tool pre-tensioning adjustable

Technical data	
Crimping range:	0.5-6 mm ²
Length:	215 mm
Weight:	0.5 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 0.5 - 6 mm ²	K62

Accessories	Part No.	Page
Steel carrying case	MK210L	201





■ **K 63**

Mechanical crimping tool for non-insulated tabs and receptacles
6.3 mm connector width 0.5 - 2.5 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step

Characteristics

- With ratchet
- Excellent leverage

Technical data	
Crimping range:	0.5-2.5 mm ²
Length:	265 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 0.5 - 2.5 mm ² with lateral conductor connector	K63



■ **K 64**

Mechanical crimping tool for non-insulated tabs and receptacles
6.3 mm connector width 0.5 - 1.5 mm² with lateral conductor connector

- Roll-crimping
- Crimping of conductor and insulation in one step

Characteristics

- With ratchet
- Excellent leverage

Technical data	
Crimping range:	0.5-1.5 mm ²
Length:	265 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 0.5 - 1.5 mm ² with lateral conductor connector	K64

■ **K 68**

Mechanical crimping tool for non-insulated tabs and receptacles
6.3 mm connector width 0.5 - 2.5 mm²

- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening

Characteristics

- With ratchet

Technical data	
Crimping range:	0.5-2.5 mm ²
Length:	265 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool for non-insulated tabs and receptacles 6.3 mm tab width 0.5 - 2.5 mm ²	K68



■ **K 93**

Mechanical crimping tool for tubular cable lugs and connectors for solid conductors 1.5 - 4 mm²

- Hexagonal crimping
- Tool pre-tensioning adjustable

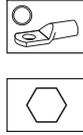
Characteristics

- Accurate drive
- With ratchet
- Exact cross-section assignment
- Non-slip handles

Technical data	
Crimping range:	1.5-4 mm ²
Length:	220 mm
Weight:	0.56 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors for solid conductors 1.5 - 4 mm ²	K93





■ **K 94**

Mechanical crimping tool for tubular cable lugs and connectors for solid conductors 6 - 10 mm²

- Hexagonal crimping
- Tool pre-tensioning adjustable

Characteristics

- Accurate drive
- With ratchet
- Exact cross-section assignment
- Non-slip handles

Technical data	
Crimping range:	6-10 mm ²
Length:	220 mm
Weight:	0.56 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors for solid conductors 6 - 10 mm ²	K94



■ **K 13**

Mechanical crimping tool 0.5 - 6 mm²

- Indent crimping
- To shorten screws M2.6 - M5
- With wire stripper and cutter

Characteristics

- For tubular cable lugs and connectors, as well as solderless terminals DIN 46234 and pin terminals DIN 46230

Technical data	
Crimping range:	0.5-6 mm ²
Length:	210 mm
Weight:	0.23 kg

Item	Part No.
Mechanical crimping tool 0.5 - 6 mm ²	K13

Accessories	Part No.	Page
Steel carrying case	MK210L	201

■ **K 2**

Mechanical crimping tool for tubular cable lugs and connectors, standard type 0.75 - 16 mm²

- Indent crimping
- Spring-supported tool opening

Characteristics

- With ratchet
- Exact cross-section assignment

Technical data	
Crimping range:	0.75-16 mm ²
Length:	325 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors, standard type 0.75 - 16 mm ²	K2

Accessories	Part No.	Page
Steel carrying case	SK4L	201



■ **K 02**

Mechanical crimping tool for tubular cable lugs and connectors for solid conductors 0.75 - 16 mm²

- Indent crimping
- Spring-supported tool opening
- for tubular cable lugs and connectors for solid conductors

Characteristics

- With ratchet
- Exact cross-section assignment

Technical data	
Crimping range:	0.75-16 mm ²
Length:	325 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors for solid conductors 0.75 - 16 mm ²	K02

Accessories	Part No.	Page
Steel carrying case	SK4L	201





■ K 25

Mechanical crimping tool 0.5 - 16 mm²



- Indent crimping
- Spring-supported tool opening
- For solderless terminals DIN 46234, pin terminals DIN 46230
- For nickel tubular cable lugs and connectors as well as stainless steel Tubular cable lugs and connectors



Characteristics

- With ratchet
- Exact cross-section assignment

Technical data	
Crimping range:	0.5-16 mm ²
Length:	325 mm
Weight:	0.6 kg

Item	Part No.
Mechanical crimping tool 0.5 - 16 mm ²	K25

Accessories	Part No.	Page
Steel carrying case	SK4L	201



■ K 95

Mechanical crimping tool 16 - 95 mm²



- Indent crimping



Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- For solderless terminals DIN 46234, pin terminals DIN°46230
- With revolving dies
- Excellent leverage



Technical data	
Crimping range:	16-95 mm ²
Length:	630 mm
Weight:	3.6 kg

Item	Part No.
Mechanical crimping tool 16 - 95 mm ²	K95

■ **TK 95**

Mechanical crimping tool 16 - 95 mm²

- Indent crimping
- For workbench mounting

Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- For solderless terminals DIN 46234, pin terminals DIN°46230
- With revolving dies
- Excellent leverage

Technical data	
Crimping range:	16-95 mm ²
Length:	700 mm
Weight:	3.9 kg

Item	Part No.
Mechanical crimping tool 16 - 95 mm ²	TK95



■ **K 5 / K 5 SP**

Mechanical crimping tool 6 - 50 mm²

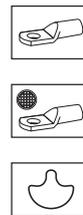
- Indent crimping

Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- With revolving dies
- Exact cross-section assignment

Technical data	
Crimping range:	6-50 mm ²
Length:	600 mm
Weight:	2.4 kg

Item	Part No.
Mechanical crimping tool 6 - 50 mm ²	K5
Mechanical crimping tool 6 - 50 mm ² , with ratchet	K5SP





■ **K 6 / K 6 SP**

Mechanical crimping tool 50 - 120 mm²



■ **Indent crimping**



Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- With revolving dies
- Exact cross-section assignment
- Telescopic lever handles

Technical data	
Crimping range:	50-120 mm ²
Length:	970 mm
Weight:	4.4 kg

Item	Part No.
Mechanical crimping tool 50 - 120 mm ²	K6
Mechanical crimping tool 50 - 120 mm ² , with ratchet	K6SP



■ **K 07 / K 07 SP**

Mechanical crimping tool 185 - 400 mm²



■ **Indent crimping**

■ **Extremely wide cross section range up to 400 mm²**



Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- With revolving dies
- Exact cross-section assignment
- Telescopic lever handles

Technical data	
Crimping range:	185-400 mm ²
Length:	975 mm
Weight:	4.7 kg

Item	Part No.
Mechanical crimping tool 185 - 400 mm ²	K07
Mechanical crimping tool 185 - 400 mm ² , with ratchet	K07SP

■ **K 7 / K 7 SP**

Mechanical crimping tool 120 - 240 mm²

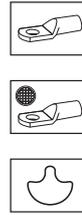
- Indent crimping
- Large cross section range up to 240 mm²

Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- With revolving dies
- Exact cross-section assignment
- Telescopic lever handles

Technical data	
Crimping range:	120-240 mm ²
Length:	975 mm
Weight:	4.6 kg

Item	Part No.
Mechanical crimping tool 120 - 240 mm ²	K7
Mechanical crimping tool 120 - 240 mm ² , with ratchet	K7SP



■ **K 8 / K 8 SP**

Mechanical crimping tool 35 - 95 mm²

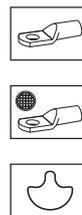
- Indent crimping

Characteristics

- For tubular cable lugs and connectors "standard type"
- For tubular cable lugs and compression joints for fine stranded conductors
- With revolving dies
- Exact cross-section assignment
- Telescopic lever handles

Technical data	
Crimping range:	35-95 mm ²
Length:	970 mm
Weight:	4.4 kg

Item	Part No.
Mechanical crimping tool 35 - 95 mm ²	K8
Mechanical crimping tool 35 - 95 mm ² , with ratchet	K8SP





■ **K 05 / K 05 SP**

Mechanical crimping tool for tubular cable lugs and connectors, standard type 6 - 50 mm²

- Hexagonal crimping
- Energy-efficient drive

Characteristics

- With revolving dies
- Exact cross-section designation on the dies

Technical data	
Crimping range:	6-50 mm ²
Length:	390 mm
Weight:	1.1 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors, standard type 6 - 50 mm ²	K05
Mechanical crimping tool with ratchet for tubular cable lugs and connectors, standard type 6 - 50 mm ²	K05SP

Accessories	Part No.	Page
Steel carrying case	SK65L	202



■ **K 05 D / K 05 D SP**

Mechanical crimping tool for tubular cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 6 - 50 mm²

- Hexagonal crimping
- Energy-efficient drive

Characteristics

- With revolving dies
- Exact cross-section designation on the dies

Technical data	
Crimping range:	6-50 mm ²
Length:	390 mm
Weight:	1.1 kg

Item	Part No.
Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 6 - 50 mm ²	K05D
Mechanical crimping tool with ratchet for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 6 - 50 mm ²	K05DSP

Accessories	Part No.	Page
Steel carrying case	SK65L	202

■ **K 08 / K 08 SP**

Mechanical crimping tool for tubular cable lugs and connectors, standard type 16 - 95 mm²

- Hexagonal crimping
- Energy-efficient drive

Characteristics

- With revolving dies
- Exact cross-section designation on the dies

Technical data	
Crimping range:	16-95 mm ²
Length:	530 mm
Weight:	1.8 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors, standard type 16 - 95 mm ²	K08
Mechanical crimping tool with ratchet for tubular cable lugs and connectors, standard type, 16 - 95 mm ²	K08SP



■ **K 08 D / K 08 DSP**

Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 16 - 95 mm²

- Hexagonal crimping
- Energy-efficient drive

Characteristics

- With revolving dies
- Energy-efficient drive
- Exact cross-section designation on the dies

Technical data	
Crimping range:	16-95 mm ²
Length:	530 mm
Weight:	1.8 kg

Item	Part No.
Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 16 - 95 mm ²	K08D
Mechanical crimping tool with ratchet for tubular cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 16 - 95 mm ²	K08DSP





■ **K 06 / K 06 SP**

Mechanical crimping tool for tubular cable lugs and connectors, standard type 10 - 120 mm²

- Hexagonal crimping
- Energy-efficient drive

Characteristics

- With revolving dies
- Exact cross-section designation on the dies

Technical data	
Crimping range:	10-120 mm ²
Length:	650 mm
Weight:	2.9 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors, standard type 10 - 120 mm ²	K06
Mechanical crimping tool with ratchet for tubular cable lugs and connectors, standard type 10 - 120 mm ²	K06SP

Accessories	Part No.	Page
Steel carrying case	SK120L	202



■ **K 06 D / K 06 D SP**

Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 10 - 120 mm²

- Hexagonal crimping
- Energy-efficient drive

Characteristics

- With revolving dies
- Energy-efficient drive
- Exact cross-section designation on the dies

Technical data	
Crimping range:	10-120 mm ²
Length:	650 mm
Weight:	2.9 kg

Item	Part No.
Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 10 - 120 mm ²	K06D
Mechanical crimping tool with ratchet for tubular cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 10 - 120 mm ²	K06DSP

Accessories	Part No.	Page
Steel carrying case	SK120L	202

■ K 09 / K 09 SP

Mechanical crimping tool for tubular cable lugs and connectors, standard type 25 - 150 mm²

- Hexagonal crimping
- Large cross section range up to 150 mm²
- Energy-efficient drive

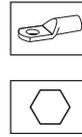
Characteristics

- With revolving dies
- Exact cross-section designation on the dies

Technical data	
Crimping range:	25-150 mm ²
Length:	650 mm
Weight:	2.9 kg

Item	Part No.
Mechanical crimping tool for tubular cable lugs and connectors, standard type 25 - 150 mm ²	K09
Mechanical crimping tool with ratchet for tubular cable lugs and connectors, standard type 25 - 150 mm ²	K09SP

Accessories	Part No.	Page
Steel carrying case	SK120L	202



■ K 09 D / K 09 D SP

Mechanical crimping tool for tubular cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 25 - 150 mm²

- Hexagonal crimping
- Large cross section range up to 150 mm²
- Energy-efficient drive

Characteristics

- With revolving dies
- Exact cross-section designation on the dies

Technical data	
Crimping range:	25-150 mm ²
Length:	650 mm
Weight:	2.9 kg

Item	Part No.
Mechanical crimping tool for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 25 - 150 mm ²	K09D
Mechanical crimping tool with ratchet for compression cable lugs and connectors (acc. to DIN 46235 / DIN 46267, part 1) 25 - 150 mm ²	K09DSP

Accessories	Part No.	Page
Steel carrying case	SK120L	202





■ KP 1 / KP 1 L

Mechanical basic tool of the Klauke Pro Series

- Easy change of crimping head without tools
- Compatible with all crimping heads of the Klauke Pro-Series

Characteristics

- Standardised mounting of crimping heads,
- With ratchet

Technical data		
	KP 1	KP 1 L
Length:	151 mm	207 mm
Weight:	0.2 kg	0.3 kg
Item	Part No.	
Mechanical basic tool of the Klauke Pro Series, 151 mm long	KP1	
Mechanical basic tool of the Klauke Pro Series, 207 mm long	KP1L	
Accessories	Part No.	Page
Plastic case	MKKP1	203

	Crimping range mm ²	Crimp profile	Part No.
Crimping heads for cable end sleeves			
Cable end-sleeves, trapezoid crimping	0.14 - 6		KP312
Cable end-sleeves, square crimping	0.08 - 10		KP303
Cable end-sleeves, square crimping	10 - 16		KP304
Cable end-sleeves, round crimping	0.14 - 2.5		KP350
Cable end-sleeves, round crimping for narrow spaces	1.5 - 6		KP351
Cable end-sleeves, round crimping for narrow spaces	10 - 16		KP352
Cable end-sleeves DIN 46228, part 2, roll-crimping	0.5 - 2.5		KP66
Crimping heads for insulated cable connections			
Insulated terminals (yellow and red)	0.1 - 1		KP80
Insulated terminals (red and blue)	0.5 - 2.5		KP81
Insulated terminals (red, yellow, blue)	0.5 - 6		KP82
Insulated terminals (yellow)	4 - 6		KP83
Crimping heads for cable lugs and solderless terminals			
tubular cable lugs and solderless terminals	0.5 - 6		KP232
tubular cable lugs and solderless terminals	4 - 10		KP242
Crimping heads for photovoltaic			
Connectors for photovoltaic 3 mm Ø	2.5 - 4		KP90MC31
Crimping heads for receptacles			
Part No. 3720, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1		KP631
Part No. 3725, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1.5		KP64
Part No. 3735, receptacles 6.3 x 0.8 mm with lateral conductor connector	1.5 - 2.5		KP632
For receptacles 2.8 mm tab width	0.1 - 1		KP67
For receptacles 4.8 mm tab width	0.5 - 2.5		KP65
For receptacles 6.3 mm tab width	0.5 - 2.5		KP68

■ **SKP 1**

Crimping head set of the Klauke Pro-Series

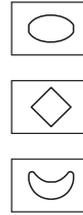
- Easy change of crimping head without tools
- Crimping of conductor and insulation in one step
- Spring-supported tool opening

Characteristics

- Parallel guided crimping heads
- With ratchet

Technical data	
Dimension:	250 x 115 x 40 mm
Weight:	0.8 kg

Item	Part No.	
Crimping head set of the Klauke Pro-Series	SKP1	
Scope of supply	Part No.	Page
Mechanical basic tool of the Klauke Pro Series, 151 mm long	KP1	242
Crimping head for insulated terminals (red and blue) 0.5 – 2.5 mm ²	KP81	242
Crimping head for cable end-sleeves 0.14 - 10 mm ² , square crimping	KP303	242
Crimping head for non-insulated cable lugs and solderless terminals 0.5 – 6 mm ²	KP232	242



■ **SKP 6**

Crimping head set of the Klauke Pro-Series

- Easy change of crimping head without tools
- Roll-crimping
- Crimping of conductor and insulation in one step
- Spring-supported tool opening

Characteristics

- Parallel guided crimping heads
- For crimping of non-insulated receptacles with lateral conductor connector
- With ratchet

Technical data	
Dimension:	250 x 115 x 40 mm
Weight:	0.8 kg

Item	Part No.	
Crimping head set of the Klauke Pro-Series	SKP6	
Scope of supply	Part No.	Page
Mechanical basic tool of the Klauke Pro Series, 151 mm long	KP1	242
Crimping head for Part No. 3720	KP631	242
Crimping head for Part No. 3735	KP632	242
Crimping head for Part No. 3725	KP64	242





■ **K 507**

Mechanical crimping tool for interchangeable dies

- **Fast, change of crimping die, no tools required, without readjustment by special fixing system**
- **Additional crimping dies integrated in the handle**

Characteristics

- With ratchet
- Tool pre-tensioning adjustable

Technical data	
Length:	220 mm
Weight:	0.6 kg

Item	Part No.	
Mechanical crimping tool for interchangeable dies	K507	
Scope of supply	Part No.	Page
Crimping die for insul. connectors 0.5 - 6 mm ²	IS5071	
Crimping die for cable end-sleeves 0.5 - 10 mm ²	AE501	390
Crimping die for solderless terminals 0.5 - 10 mm ²	Q501	390

■ K 50

Crimping tool for interchangeable dies 0.75 - 10 mm²

- **Parallel guided crimping jaws**
- **Fast, change of crimping die without readjustment by special fixing system**
- **Precise fit for crimping dies**

Characteristics

- Optimised force transmission
- With ratchet
- Non-slip handles

Technical data	
Length:	220 mm
Weight:	0.6 kg

Item	Part No.
Crimping tool for interchangeable dies 0.75 - 10 mm ²	K50

Accessories	Part No.	Page
Steel carrying case	MK55	201



Available dies for K 50

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Copper tubular cable lugs and connectors, standard design		0.75 - 10		390
Tubular cable lugs and compression joints for solid conductors		1.5 - 10		390
Terminals, connectors and pin terminals to DIN.-.Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and pin terminals (DIN 46230)		0.5 - 10		390
Cable end sleeves				
Cable end sleeves		0.14 - 50		390
Cable connections, insulated and non-insulated				
Non-insulated receptacles		0.1 - 6		391
BNC connector (connector for coax cable) RG 58, 59, 62, 71				391
Turned pin connectors and receptacles		0.1 - 4		391
Insulated terminals		0.1 - 16		390





■ **K 35/4**

Crimping tool for interchangeable dies 6 - 150 mm²

- **Change of crimping dies without tools**
- **Fast, change of crimping die without readjustment by special fixing system**
- **Optimised for cable glands and panel building**

Characteristics

- With telescopic handles
- Head rotates 360°

Technical data	
Length:	Stepless 420-590 mm
Weight:	1.9 kg

Item	Part No.
Crimping tool for interchangeable dies 6 - 150 mm ²	K354

Accessories	Part No.	Page
Steel carrying case	MK17	203

Available dies for K 35/4

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		6 - 150		392
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10 - 70		392
Tubular cable lugs and connectors for fine stranded conductors		10 - 35		392
Tubular cable lugs and compression joints for solid conductors		1.5 - 16		393
Tubular cable lugs and connectors, Ni, VA				
Stainless steel tubular cable lugs and connectors	VA 	0.5 - 16		393
Nickel tubular cable lugs and connectors	Ni 	0.5 - 16		393
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	6 - 120		393
Terminals, connectors and pin terminals to DIN-.Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and pin terminals (DIN 46230) to DIN		10 - 35		393
Insulated solderless terminals and connectors		10 - 16		394
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm – 150se / 120sm		394
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 70		394
Compression joints for full-tension connections of Aldrey conductors acc. to DIN EN 50182	Al 	25 - 50		394
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 70		394
Clamps and screw connectors				
Clamps, C-type		4 - 35		395
Cable end sleeves				
Cable end sleeves		10 - 50		395
Twin cable end-sleeves		2 x 4 - 2 x 16		395
Cable end-sleeves, for fine stranded conductors		10 - 50		395
Twin cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		396





■ **K 18**

Crimping tool for interchangeable dies acc. to DIN 48083, sheet 1
6 - 185 mm²

- **Change of crimping dies without tools**
- **Fast, change of crimping die without readjustment by special fixing system**
- **Optimised for cable glands and panel building**

Characteristics

- Narrow crimping
- With telescopic handles
- C-head rotates 360°

Technical data	
Length:	Stepless 580-830 mm
Weight:	2.5 kg

Item	Part No.
Crimping tool for interchangeable dies acc. to DIN 48083, sheet 1, 6 - 185 mm ²	K18

Accessories	Part No.	Page
Steel carrying case	MK18	203

Available dies for K 18

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		6 - 185		401
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10 - 95		401
Tubular cable lugs and connectors for fine stranded conductors		10 - 50		402
Tubular cable lugs and connectors for solid conductors		1.5 - 16		402
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and compression joints acc. to DIN	DIN 	6 - 185		402
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and Pin terminals (DIN 46230)		10 - 70		402
Insulated solderless terminals		10 - 50		403
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm – 240se / 185sm		403
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors	Al 	10 - 185		403
Compression joints for full-tension connections of Aldrey conductors acc. to DIN EN 50182	Al 	25 - 95		404
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 185		403
Clamps and screw connectors				
Clamps, C-type		4 - 50		404
Cable end sleeves				
Cable end sleeves		10 - 95		404
Twin cable end-sleeves		2 x 4 - 2 x 16		404
Cable end-sleeves, for fine stranded conductors		10 - 95		405
Twin cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		405
Cutting die		Ø 18 mm		405

Please observe the restrictions in the technical index when crimping connectors!





■ **K 22**

Crimping tool for interchangeable dies 6 - 300 mm²

- **Change of crimping dies without tools**
- **Fast, change of crimping die without readjustment by special fixing system**
- **Optimised for cable glands and panel building**

Characteristics

- Narrow crimping
- Large cross section by half shell dies
- With telescopic handles
- Flip top style C-head rotates 360°

Technical data	
Length:	Stepless 560-860 mm
Weight:	2.5 kg

Item	Part No.
Crimping tool for interchangeable dies 6 - 300 mm ²	K22

Accessories	Part No.	Page
Steel carrying case	MK22	203

Available dies for K 22

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable-lugs and connectors "standard type", tubular cable lugs for switchgear connections		6-300		406
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10-150		406
Tubular cable lugs and connectors fine stranded conductors		10-70		407
Tubular cable lugs and connectors for solid conductors		1.5-16		407
Tubular cable lugs and connectors, Ni, VA				
Stainless steel tubular cable lugs and connectors	VA 	0,5 - 16		407
Nickel tubular cable lugs and connectors	Ni 	10 - 50		407
Copper compression cable lugs and connectors to DIN				
Compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	6-300		407
Double compression cable lugs	DIN 	2 x 50 - 2 x 70		408
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		10-70		408
Insulated solderless terminals		10-70		408
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm- 300se/240sm		408
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10-240		409
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25-185		409
Compression joints DIN 48085, part 3 for Al-/steel conductors DIN EN 50182	Al 	25 / 4- 120 / 20		409
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10-240		409
Clamps and screw connectors				
Clamps, C-type		4-50		410
Clamps, H-type		70		410
Cable end sleeves				
Cable end sleeves		10-240		410
Twin cable end-sleeves		2 x 4 - 2 x 16		411
Cable end-sleeves, for fine stranded conductors		10-240		411
Twin cable end-sleeves for fine stranded conductors		2 x 4 - 2 x 16		411

Please observe the restrictions in the technical index when crimping connectors!



■ **K 511 / K 512**

Mechanical crimping tools 1 - 10 mm²

- **Parallel guided crimping jaws**
- **Suitable for gas-proof crimping**

Characteristics

- Non-insulated tubular cable lugs, ring and fork type
- Parallel and butt-connectors
- Optimised force transmission
- With ratchet
- Non-slip handles

Technical data		
	K 511	K 512
Crimping range:	1 - 4 mm ²	6 + 10 mm ²
Length:	270 mm	270 mm
Weight:	0,7 kg	0,7 kg

Item	Part No.
Mechanical crimping tool 1 - 4 mm ²	K511
Mechanical crimping tool 6 + 10 mm ²	K512



■ **DN-K 74/2**

Mechanical crimping tool for BNC connector, coax cable RG 58, RG 59, RG 62 and RG 71

- **Hexagonal crimping**
- **Tool pre-tensioning adjustable**

Characteristics

- With ratchet

Technical data	
Item	Part No.
Mechanical crimping tool for BNC connector, coax cable RG 58, RG 59, RG 62 and RG 71	DNK742

■ **KP90 MC3 2**

Mechanical crimping tool for Multi-Contact-Plug-in system MC3 2.5 - 6 mm²



■ **Parallel guided crimping jaws**

Characteristics

- Accurate drive
- With ratchet
- With precision stop
- Optimised force transmission
- Non-slip handles

Technical data	
Crimping range total:	2.5-6 mm ²
Multi-Contact-Plug-in system:	2.5-6 mm ² MC3
Length:	270 mm
Weight:	735 g

Item	Part No.
Mechanical crimping tool for Multi-Contact-Plug-in system MC3 2.5 - 6 mm ²	K90MC32



■ **K90 MC4 1**

Mechanical crimping tool for Multi-Contact-Plug-in system MC4 1.5 - 4 mm²



■ **Parallel guided crimping jaws**

Characteristics

- Accurate drive
- With ratchet
- With precision stop
- Optimised force transmission
- Non-slip handles

Technical data	
Crimping range total:	1.5 - 4 mm ²
Multi-Contact-Plug-in system:	MC4 1.5 - 4 mm ²
Weight:	735 g

Item	Part No.
Mechanical crimping tool for Multi-Contact-Plug-in system MC4 1.5 - 4 mm ²	K90MC41





■ **K90 MC4 2**

Mechanical crimping tool for Multi-Contact-Plug-in system
MC4 2.5 - 6 mm²

■ **Parallel guided crimping jaws**

Characteristics

- Accurate drive
- With ratchet
- With precision stop
- Optimised force transmission
- Non-slip handles

Technical data	
Crimping range total:	2.5-6 mm ²
Multi-Contact-Plug-in system:	2.5-6 mm ² MC4
Length:	270 mm
Weight:	735 g

Item	Part No.
Mechanical crimping tool for Multi-Contact-Plug-in system MC4 2.5 - 6 mm ²	K90MC42

■ **K 100**

Hand-operated cutting tool for Cu and Al cables to Ø 14 mm

- For fine and multi-stranded cables

Characteristics

- Short design

Technical data	
Cutting range:	max. Ø 14 mm e.g. 1 x 50 mm ² H07VK
Length:	280 mm
Weight:	0.55 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 14 mm	K100



■ **K 102**

Hand cutting tool for Ø to 20 mm

- For fine and multi stranded stranded Cu cables acc. to VDE 0295, Class 5 + 6

Characteristics

- Non-slip handles

Technical data	
Cutting range:	max. Ø 20 mm e.g. 1 x 95 mm ² H07V-K
Length:	200 mm
Weight:	0.35 kg

Item	Part No.
Hand cutting tool for Ø to 20 mm	K102





■ **K 106/1**

Hand-operated cutting tool for Cu and Al cables to Ø 32 mm

■ **For earth, plastic and rubber cables**

Characteristics

- One hand operation
- Optimum force transmission thanks to 2-setting ratchet system
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 32 mm e.g. 4 x 35 mm ² NYY
Length:	250 mm
Weight:	0.55 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 32 mm	K1061



■ **K 106/2**

Hand-operated cutting tool for Cu and Al cables to Ø 50 mm

■ **For earth, plastic and rubber cables**

Characteristics

- One hand operation
- Optimum force transmission thanks to 2-setting ratchet system
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 50 mm e.g. 4 x 120 mm ² NYY
Length:	280 mm
Weight:	0.74 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 50 mm	K1062

■ **K 103/1**

Hand-operated cutting tool for Cu and Al cables to Ø 60 mm

- For earth, plastic and rubber cables
- Extremely high cutting range up to 60 mm diameter

Characteristics

- Two hand operation
- Optimum force transmission thanks to 2-setting ratchet system
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 60 mm e.g. 4 x 240 mm ² NAYY
Length:	720 mm
Weight:	4.5 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 60 mm	K1031



■ **K 104/1**

Hand-operated cutting tool for Cu and Al cables to Ø 100 mm

- For earth, plastic and rubber cables
- Extremely high cutting range up to 100 mm diameter

Characteristics

- Two hand operation
- Optimum force transmission thanks to 2-setting ratchet system
- Large cutting range
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 100 mm e.g. 4 x 400 mm ² NAYY
Length:	870 mm
Weight:	5.7 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 100 mm	K1041





K 130

Hand-operated cutting tool for Cu and Al cables to Ø 30 mm

- High performance because of specially designed flat cutting blades
- Also for fine stranded conductors e.g. VDE 0295 Class 5

Characteristics

- Two hand operation
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 30 mm e.g. 4 x 35 mm ² NYY
Length:	570 mm
Weight:	1.7 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 30 mm	K130



K 230

Hand-operated cutting tool for Cu and Al cables to Ø 30 mm

- High performance because of specially designed flat cutting blades
- 1000 V insulated acc. to IEC 60900
- Also for fine stranded conductors e.g. VDE 0295 Class 5

Characteristics

- Two hand operation
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 30 mm e.g. 4 x 35 mm ² NYY
Length:	570 mm
Weight:	2.1 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 30 mm	K230

■ **K 150**

Hand-operated cutting tool for Cu and Al cables to Ø 50 mm

- **High performance because of specially designed flat cutting blades**
- **Also for fine stranded conductors e.g. VDE 0295 Class 5**

Characteristics

- Two hand operation
- Large cutting range
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 50 mm e.g. 4 x 120 mm² NYY
Length:	710 mm
Weight:	3 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 50 mm	K150



■ **K 250**

Hand-operated cutting tool for Cu and Al cables to Ø 50 mm

- **High performance because of specially designed flat cutting blades**
- **1000 V fully insulated acc. to IEC 60900**
- **Also for fine stranded conductors e.g. VDE 0295 Class 5**

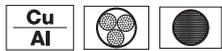
Characteristics

- Two hand operation
- Large cutting range
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 50 mm e.g. 4 x 120 mm² NYY
Length:	710 mm
Weight:	3.7 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 50 mm	K250





K1011E

■ **K 101/1**

Hand-operated cutting tool for Cu and Al cables to Ø 26 mm

- **Interchangeable cutting head**
- **Also for fine stranded conductors e.g. VDE 0295 Class 5**

Characteristics

- Two hand operation
- Excellent leverage
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 26 mm e.g. 4 x 25 mm ² NYY
Length:	570 mm
Weight:	1.8 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 26 mm	K1011

Scope of supply	Part No.	Page
Cable cutter head	K1011E	



K1011E

■ **K 105/1**

Hand-operated cable cutter for Cu and Al cables to Ø 26 mm
Length 350 - 520 mm stepless

- **Interchangeable cutting head**
- **Also for fine stranded conductors e.g. VDE 0295 Class 5**

Characteristics

- Two hand operation
- Excellent leverage
- Tool with telescopic handles
- Not suitable for cutting steel or steel wire

Technical data	
Cutting range:	max. Ø 26 mm e.g. 4 x 25 mm ² NYY
Length:	Stepless 350-520 mm
Weight:	1.4 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 26 mm	K1051

Scope of supply	Part No.	Page
Steel carrying case	SK120L	202
Cable cutter head	K1011E	

■ K 201/1

Hand-operated cable cutter for Cu and Al cables to Ø 26 mm
Length 570 mm

- 1000 V fully insulated acc. to IEC 60900
- Interchangeable cutting head
- Also for fine stranded conductors e.g. VDE 0295 Class 5

Characteristics

- Two hand operation
- Excellent leverage
- Not suitable for cutting steel or steel wire

Technical data	
Length:	570 mm
Weight:	2 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 26 mm	K2011

Scope of supply	Part No.	Page
Cable cutter head	K1011E	



K1011E

■ K 101/2

Hand-operated cutting tool for Cu and Al cables to Ø 38 mm

- Interchangeable cutting head
- Also for fine stranded conductors e.g. VDE 0295 Class 5

Characteristics

- Two hand operation
- Excellent leverage
- Large cutting range
- Telescopic lever handles
- Not suitable for cutting steel or steel wire

Technical data	
Length:	930 mm
Weight:	4.2 kg

Item	Part No.
Hand-operated cutting tool for Cu and Al cables to Ø 38 mm	K1012

Scope of supply	Part No.	Page
Cable cutter head	K1012E	



K1012E

Special drives for even higher speed.

Electric and pneumatic crimping tools.

In addition to various hydraulic tools the Klauke range also includes electromechanic resp. pneumatic tools. The tools are compatible with **Klauke^{pro}** series heads and offer versatile applications.

The high crimping speed of the KPM15 pneumatic crimping tool makes it suitable for standard production of individual contacts and also for use in control cabinets.

The optional foot switch allows stationary applications as a bench-mounted tool.



- Electric-powered bench crimping tool compatible with **Klauke^{pro}** series heads.
- Pneumatic crimping tool compatible with **Klauke^{pro}** series heads and 50-series dies.
- Especially suitable for cable harness assembly.

TEKP1

Stationary basic tool, Klauke Pro-Series

- **Transportable worktop crimping device**
- **Compatible with all crimping heads of the Klauke Pro-Series**
- **Continuous operation**

Characteristics

- Easy change of crimping head without tools
- Safety switch
- Two-stage system with tooling and crimping function

Klauke^{pro}



Technical data	
Crimping cycle:	approx. 1 s (depending on size)
Mains voltage:	220 - 240 V
Dimension:	approx. 280 x 230 x 410 mm
Weight:	13.0 kg

Item	Part No.
Stationary basic tool including foot switch and mains cable	TEKP1

	Crimping range mm ²	Crimp profile	Part No.
Crimping heads for cable end sleeves			
 Cable end-sleeves, trapezoid crimping	0.14 - 6		KP312
 Cable end-sleeves, square crimping	0.08 - 10		KP303
 Cable end-sleeves, square crimping	10 - 16		KP304
 Cable end-sleeves, round crimping	0.14 - 2.5		KP350
 Cable end-sleeves, round crimping for narrow spaces	1.5 - 6		KP351
 Cable end-sleeves, round crimping for narrow spaces	10 - 16		KP352
 Cable end-sleeves DIN 46228, part 2, roll-crimping	0.5 - 2.5		KP66
Crimping heads for insulated cable connections			
 Insulated terminals (yellow and red)	0.1 - 1		KP80
 Insulated terminals (red and blue)	0.5 - 2.5		KP81
 Insulated terminals (red, yellow, blue)	0.5 - 6		KP82
 Insulated terminals (yellow)	4 - 6		KP83
Crimping heads for cable lugs and solderless terminals			
 tubular cable lugs and solderless terminals	0.5 - 6		KP232
 tubular cable lugs and solderless terminals	4 - 10		KP242
Crimping heads for photovoltaic			
 Connectors for photovoltaic 3 mm Ø	2.5 - 4		KP90MC31
Crimping heads for receptacles			
 Part No. 3720, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1		KP631
 Part No. 3725, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1.5		KP64
 Part No. 3735, receptacles 6.3 x 0.8 mm with lateral conductor connector	1.5 - 2.5		KP632
 For receptacles 2.8 mm tab width	0.1 - 1		KP67
 For receptacles 4.8 mm tab width	0.5 - 2.5		KP65
 For receptacles 6.3 mm tab width	0.5 - 2.5		KP68





■ **KPM 15**

Pneumatic basic tool of the Klauke Pro-Series

- **Compatible with all crimping heads of the Klauke Pro-Series**
- **Easy change of crimping head without tools**

Characteristics

- Head rotates 360°
- Ergonomic design for one hand operation
- Integrated, disengageable ratchet
- Optional worktop stand, including foot switch

Technical data	
Permissible pressure range:	6 - 8 bar
Air consumption/cycle at 6 bar	0.72 l
Crimping cycle:	max. 1 s, depending on pressure set
Length:	280 cm
Diameter:	65 mm
Weight:	1.5 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.
Pneumatic basic tool of the Klauke Pro-Series in a plastic case	KPM15

Accessories	Part No.	Page
Adapter for Klauke Pro-Series crimping heads	KPM15PRO	264
Worktop stand, including foot switch	KPM15TH	264



■ **KPM 15 PRO**

Adapter for Klauke Pro-Series crimping heads

Characteristics

- Compatible with all crimping heads of the Klauke Pro-Series

Item	Part No.
Adapter for Klauke Pro-Series crimping heads	KPM15PRO



■ **KPM 15 TH**

Worktop stand, including foot switch

- **Adjustable worktop with ball-point mounting system**

Characteristics

- For mounting the pneumatic basic tool KPM 15

Item	Part No.
Worktop stand, including foot switch	KPM15TH

	Crimping range mm ²	Crimp profile	Part No.
Crimping heads for cable end sleeves			
 Cable end-sleeves, trapezoid crimping	0.14 - 6		KP312
 Cable end-sleeves, square crimping	0.08 - 10		KP303
 Cable end-sleeves, square crimping	10 - 16		KP304
 Cable end-sleeves, round crimping	0.14 - 2.5		KP350
 Cable end-sleeves, round crimping for narrow spaces	1.5 - 6		KP351
 Cable end-sleeves, round crimping for narrow spaces	10 - 16		KP352
 Cable end-sleeves DIN 46228, part 2, roll-crimping	0.5 - 2.5		KP66
Crimping heads for insulated cable connections			
 Insulated terminals (yellow and red)	0.1 - 1		KP80
 Insulated terminals (red and blue)	0.5 - 2.5		KP81
 Insulated terminals (red, yellow, blue)	0.5 - 6		KP82
 Insulated terminals (yellow)	4 - 6		KP83
Crimping heads for cable lugs and solderless terminals			
 tubular cable lugs and solderless terminals	0.5 - 6		KP232
 tubular cable lugs and solderless terminals	4 - 10		KP242
Crimping heads for photovoltaic			
 Connectors for photovoltaic 3 mm Ø	2.5 - 4		KP90MC31
Crimping heads for receptacles			
 Part No. 3720, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1		KP631
 Part No. 3725, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1.5		KP64
 Part No. 3735, receptacles 6.3 x 0.8 mm with lateral conductor connector	1.5 - 2.5		KP632
 For receptacles 2.8 mm tab width	0.1 - 1		KP67
 For receptacles 4.8 mm tab width	0.5 - 2.5		KP65
 For receptacles 6.3 mm tab width	0.5 - 2.5		KP68



Klauke®

Increased force for fast crimping and cutting.

Hand-operated hydraulic crimping and cutting tools.

Klauke hand-operated hydraulic tools are the most convenient and safest types to generate precise and high operating forces by hand. The ergonomic design and lightweight aluminium handles permit frequent fatigue proof operations.

All tools feature a two-stage hydraulic system with fast feed and power stroke when reaching counter pressure. Once the crimping or cutting operation is complete the crimping jaws and/or cutting blades open automatically and retract to the original position – another plus for safety and comfort.



- Ergonomic design and lightweight.
- Automatic retraction when crimping or cutting operation is complete.
- Crimping tools from 55 kN to 120 kN crimping force.
- Cutting tools up to Ø 85 mm.
- Universal tool for crimping, cutting and punching.



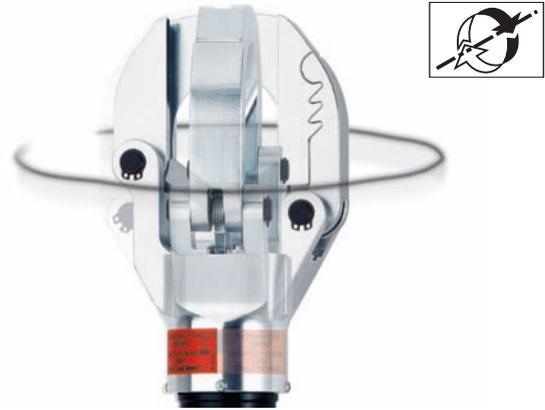
*Two-stage hydraulic system
and ergonomic design for
enhanced efficiency.*

Hydraulic tools, hand-operated: compact, innovative and safe.

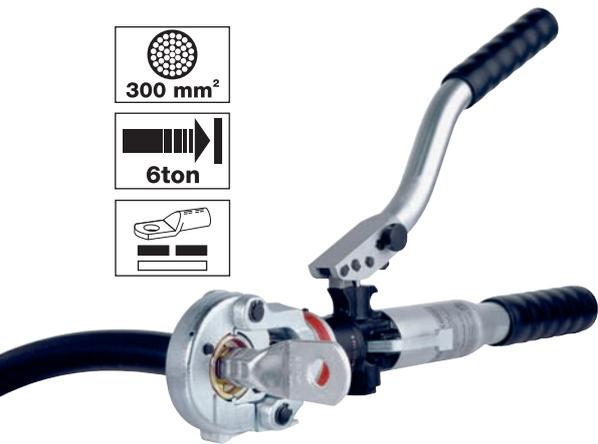
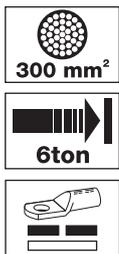
- ▶ 2-stage hydraulics with fast feed and power stroke during operation and **automatic retraction** when crimp is complete or cable has been cut.
- ▶ Ergonomic design and low weight.
- ▶ Rotating heads.

Benefits:

- ▶ Automatic retraction starts once crimping operation is complete. This avoids bad crimps and increases safety – subsequent crimping and cutting operations can be started faster. Design and weight facilitate fatigue proof operations.
- ▶ The **rotating heads allow ergonomic and safe operations**, even in difficult areas.
- ▶ The innovative 2-stage hydraulics ensures faster crimping and cutting with less effort.



Optimised handling with 6-ton crimping tools.



- ▶ Aluminium pump lever and housing result in low weight.
- ▶ Compact design.
- ▶ Designed for nominal cross sections up to 300 mm².
- ▶ For Klauke 18 and 22 dies series.

Benefits:

- ▶ **Extremely easy to handle**, even with frequent operations in tight areas – installing underground cable joints or processing switch gears.
- ▶ Versatile applications with the broad range in Klauke's DIN-compliant 18 and 22 series.

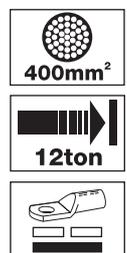
12 tons for increased productivity.

- ▶ Very large crimping area up to 400 mm².
- ▶ **For wide crimps** with dies from the Klauke 13 series.

Benefits:

- ▶ The wide crimping function boosts productivity and saves time since less crimping operations are required as with 6-ton crimping tools.
- ▶ Typical applications include power technology and cable harness assembly.

- ▶ *More on Page 276.*



■ Quad-point indent crimping – centering guaranteed.



- ▶ Ideal for crimping tubular cable lugs on fine and finest stranded conductors with nominal cross sections up to 300 mm².
- ▶ No dies required.
- ▶ The tools with quad-point indent crimping feature a patented Klauke centering system.
- ▶ Tools with open and flip-top crimping head.

Benefits:

- ▶ All standard fine and finest stranded conductors are being processed safely and conveniently with these tools.
- ▶ Since quad-point indent crimping tools require no die change they are suitable for a great number of cable lugs and connectors and various types and sizes of cables they are often used for assembly purposes.
- ▶ The guide system guarantees highest user safety, **since conductor and connecting material remain centered during crimping operation** and bad crimps are practically excluded.

■ An universal tool

Klauke[®]multi



- ▶ More on Page 286.

- ▶ **One head for crimping, cutting and punching.**
- ▶ Adapter for crimping dies of most Klauke series.
- ▶ Various cutting dies for aluminium and copper conductors with and without armoring.
- ▶ Special dies for cutting threaded rods and DIN rails.
- ▶ Punching adapter for Greenlee punching tools.
- ▶ Die for punching DIN rails.

Benefits:

- ▶ All standard operations can be accomplished with just one tool. Repair and service teams in particular appreciate the weight advantage.
- ▶ Only dies and/or adapters need to be changed for various applications. Within seconds you turn a crimping tool into a cutting or punching tool.
- ▶ This boosts efficiency especially when it comes to assembly applications.
- ▶ All adapters and dies are compatible with all tools in the Klauke Multi range.

Fast and safe cutting of aluminium/steel cables:

HSG 45 and HSG 55

- ▶ High cutting capacities.
- ▶ Suitable for cables up to Ø 45 mm and/or Ø 55 mm.
- ▶ **For armoured copper and aluminium cables and for aluminium/steel cables.**
- ▶ Extremely sturdy cutting heads.

Benefits:

- ▶ One tool for diverse applications.
- ▶ This cutting head is set apart by its high stability even under extreme load.
- ▶ The tools are suitable as an universal cutting tool for practically every cable up to Ø 55 mm.



All hand-operated hydraulic cutting tools at a glance.

Tool	Cutting range ¹⁾ Ø	Head type	Material				Features
			Cu, Al Stranded	Cu, Al Armoured	Al/St, St solid	Cu, Al, solid	
HSG45	45 mm	Closed	✓	✓	✓	✓	Suitable for all standard cables up to Ø 45 mm – steel armoured.
HSG50	48 mm	Closed	✓	✓ ²⁾			Compact and lightweight cutting tool.
HSG55	55 mm	Closed	✓	✓	✓	✓	With 120 kN cutting force for ACSR cables up to Ø 55 mm.
HSG85/2	85 mm	Closed	✓	✓ ²⁾			Extremely wide cutting range.
HK60UNV+UC26	26 mm	Closed	✓	✓ ²⁾			Universal tool with various dies for cutting, crimping and punching.
HK60UNV+UC40	40 mm		✓	✓ ²⁾			
HK60UNV+UCACSR	40 mm		✓	✓	✓	✓	
			✓	✓	✓	✓	

¹⁾ The exact cutting capacity depends on the type of cable or rope.

²⁾ Sheet metal and wire armouring, Cu



HSG45



HSG 50



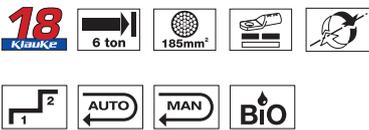
HSG 55



HSG 85/2



HK 60 UNV



■ HK 60/18

Hand hydraulic crimping tool 6 - 185 mm²

- For dies acc. to DIN 48083, sheet 1
- Crimping dies are connected by spring - cannot get lost

Characteristics

- For interchangeable dies, series 18, narrow crimping
- Closed crimping head, flip top style, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	60 kN
Crimping range:	6 - 185 mm ²
Stroke:	14 mm
Length:	470 mm
Weight:	3.0 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Hand hydraulic crimping tool 6 - 185 mm ²	HK6018	
Scope of supply	Part No.	Page
Steel carrying case for HK 60/18 and 8 crimping dies	MK6018	

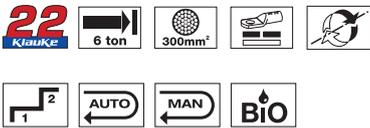
Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 18	MA18	383
Force sensor 70 kN	TF70L	383

Available dies for HK 60/18

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		6 - 185		401
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10 - 95		401
Tubular cable lugs and connectors for fine stranded conductors		10 - 50		402
Tubular cable lugs and connectors for solid conductors		1.5 - 16		402
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and compression joints acc. to DIN	DIN 	6 - 185		402
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and Pin terminals (DIN 46230)		10 - 70		402
Insulated solderless terminals		10 - 50		403
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm – 240se / 185sm		403
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors	Al 	10 - 185		403
Compression joints for full-tension connections of Aldrey conductors acc. to DIN EN 50182	Al 	25 - 95		404
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 185		403
Clamps and screw connectors				
Clamps, C-type		4 - 50		404
Cable end sleeves				
Cable end sleeves		10 - 95		404
Twin cable end-sleeves		2 x 4 - 2 x 16		404
Cable end-sleeves, for fine stranded conductors		10 - 95		405
Twin cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		405
Cutting die		Ø 18 mm		405

Please observe the restrictions in the technical index when crimping connectors!





■ HK 60/22

Hand hydraulic crimping tool 6 - 300 mm²

- Large crimping range up to 300 mm²
- Slim crimping head - ideal when space is critical

Characteristics

- For interchangeable dies, series 22, narrow crimping
- Closed crimping head, flip top style, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	60 kN
Crimping range:	6 - 300 mm ²
Stroke:	17 mm
Length:	460 mm
Weight:	3.3 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Hand hydraulic crimping tool 6 - 300 mm ²	HK6022	
Hand hydraulic crimping tool UL-certified 6 - 300 mm ²	HK6022W	
Scope of supply	Part No.	Page
Steel carrying case for HK 60/22 or HK 60/22 W and 17 pairs of crimping dies	MK6022	

Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 22	MA22	383
Force sensor 70 kN	TF70L	383

Available dies for HK 60/22

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable-lugs and connectors "standard type", tubular cable lugs for switchgear connections		6-300		406
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10-150		406
Tubular cable lugs and connectors fine stranded conductors		10-70		407
Tubular cable lugs and connectors for solid conductors		1.5-16		407
Tubular cable lugs and connectors, Ni, VA				
Stainless steel tubular cable lugs and connectors	VA 	0,5 - 16		407
Nickel tubular cable lugs and connectors	Ni 	10 - 50		407
Copper compression cable lugs and connectors to DIN				
Compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	6-300		407
Double compression cable lugs	DIN 	2 x 50 - 2 x 70		408
Terminals, connectors and pin terminals to DIN.-.Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		10-70		408
Insulated solderless terminals		10-70		408
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm- 300se/240sm		408
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10-240		409
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25-185		409
Compression joints DIN 48085, part 3 for Al-/steel conductors DIN EN 50182	Al 	25 / 4- 120 / 20		409
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10-240		409
Clamps and screw connectors				
Clamps, C-type		4-50		410
Clamps, H-type		70		410
Cable end sleeves				
Cable end sleeves		10-240		410
Twin cable end-sleeves		2 x 4 - 2 x 16		411
Cable end-sleeves, for fine stranded conductors		10-240		411
Twin cable end-sleeves for fine stranded conductors		2 x 4 - 2 x 16		411

Please observe the restrictions in the technical index when crimping connectors!



HK 60 VP

Hand hydraulic crimping tool 10 - 240 mm²

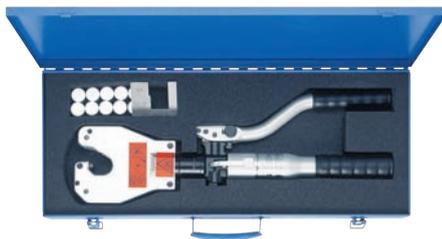
- Suitable for crimping tubular cable lugs and connectors "standard type" and tubular cable lugs and fine and superfine stranded conductors to 240 mm²
- The patented centering system guarantees every time optimum crimping results

Characteristics

- quad-point indent crimping feature with patented centering system, no dies required
- Open crimping head, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable



Technical data	
Crimping force:	55 kN
Crimping range:	10 - 240 mm ²
Length:	525 mm
Weight:	4.1 kg
Ambient temperature:	-20° C to +40° C



Item	Part No.
Hand hydraulic crimping tool 10 - 240 mm ²	HK60VP
Scope of supply	Part No. Page
Steel carrying case for HK 60 VP or HK 60 VP/FT	MK60VP

Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter VP	MAVP	383
Force sensor 70 kN	TF70L	383
Gauge and 10 testcylinder	TS10B	

Suitable for	Connection material	Crimping range mm ²	Crimp profile
Tubular cable-lugs "standard type", Tubular cable-lugs for switch gear connections		10 - 240	
Connectors "standard type"		10 - 120	
Tubular cable-lugs for fine stranded conductors		10 - 240	
Connectors for fine stranded conductors		10 - 95	

HK 60 VP/FT

Hand hydraulic crimping tool 16 - 300 mm²

- Suitable for crimping tubular cable lugs and connectors "standard type" and tubular cable lugs and fine and superfine stranded conductors to 240 mm²
- The patented centering system guarantees every time optimum crimping results
- Closed crimping head - ideal for utility lines construction

Characteristics

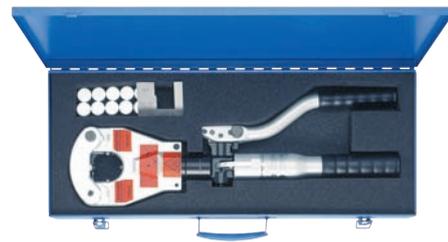
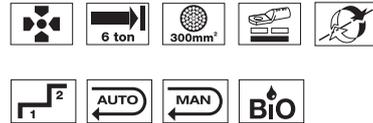
- quad-point indent crimping feature with patented centering system, no dies required
- Closed crimping head with bolt interlock, rotatable, flip top style
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

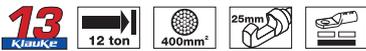
Technical data	
Crimping force:	55 kN
Crimping range:	16 - 300 mm ²
Length:	535 mm
Weight:	4.1 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.
Hand hydraulic crimping tool 16 - 300 mm ²	HK60VPFT
Scope of supply	Part No. Page
Steel carrying case for HK 60 VP or HK 60 VP/FT	MK60VP

Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter VP	MAVP	383
Force sensor 70 kN	TF70L	383
Gauge and 10 testcylinder	TS10B	

Suitable for	Connection material	Crimping range mm ²	Crimp profile
Tubular cable-lugs and connectors "standard type" Tubular cable lugs for switch gear connection		16 - 300	
Tubular cable lugs and compression joints for fine stranded conductors		16 - 300	





■ **HK 120/25**

Hand hydraulic crimping tool 16 - 400 mm²

- **Very large crimping range to 400 mm²**
- **Up to 60% less crimping operations due to wide crimping compared to 6 ton tools**

Characteristics

- For 13-series interchangeable dies, wide crimping
- Open C-crimping head, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	120 kN
Crimping range:	16 - 400 mm ²
Stroke:	25 mm
Length:	510 mm
Weight:	5.4 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.
Hand hydraulic crimping tool 16 - 400 mm ²	HK12025
Scope of supply	Part No. Page
Steel carrying case for HK 120/25 and 18 pairs of crimping dies	MK12025

Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 13	MA120	383
Force sensor 130 kN	TF130L	383

Available dies for HK 120/25

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Butt connectors "standard type"		16 - 185		413
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN		16 - 300		413
Compression joints DIN 46267, part 1		16 - 150		414
Double compression cable lugs		2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN		10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²		25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182		25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors		10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





■ HK 120/42

Hand hydraulic crimping tool 16 - 400 mm²

- **Very large crimping range to 400 mm²**
- **Up to 60% less crimping operations due to wide crimping compared to 6 ton tools**
- **C-head with 42 mm opening width**

Characteristics

- For 13-series interchangeable dies, wide crimping
- Open C-crimping head, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	120 kN
Crimping range:	16 - 400 mm ²
Stroke:	42 mm
Length:	560 mm
Weight:	5.9 kg
Ambient temperature:	-20° C to +40° C



13
Klauke



Item	Part No.	
Hand hydraulic crimping tool 16 - 400 mm ²	HK12042	
Scope of supply	Part No.	Page
Steel carrying case for HK 120/42 and 15 pairs of crimping dies	MK12042	

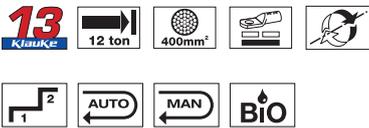
Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 13	MA120	383
Force sensor 130 kN	TF130L	383

Available dies for HK 120/42

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN	DIN 	16 - 300		413
Double compression cable lugs	DIN 	2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Pre-rounding dies				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182	Al 	25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





HK 120 U

Hand hydraulic crimping tool 16 - 400 mm²

- H-head for deep groove crimping
- Up to 60% less crimping operations due to wide crimping compared to 6 ton tools

Characteristics

- For 13-series interchangeable dies, wide crimping
- Closed H-crimping head, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	120 kN
Crimping range:	16 - 400 mm ²
Stroke:	20 mm
Length:	540 mm
Weight:	5.2 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.
Hand hydraulic crimping tool 16 - 400 mm ²	HK120U
Scope of supply	Part No. Page
Steel carrying case for HK 120 U and 11 pairs of crimping dies	MK120U

Accessories	Part No.	Page
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 13	MA120	383
Force sensor 130 kN	TF130L	383

Available dies for HK 120 U

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN	DIN 	16 - 300		413
Double compression cable lugs	DIN 	2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182	Al 	25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





HSG 45

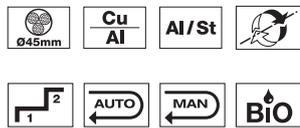
Hand-operated cutting tool Ø 45 mm

- Cuts armoured copper and aluminium cables and Al/St cables (ACSR)
- Also suitable for round material made of Al, Cu and Steel
- Extremely sturdy design

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when cut is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	max. Ø 45 mm (e.g. Al/St cable 570/40)
Cutting force:	60 kN
Length:	560 mm
Weight:	4.9 kg
Ambient temperature:	-20° C up to +40° C



Item	Part No.	
Hand-operated cutting tool Ø 45 mm	HSG45	
Scope of supply	Part No.	Page
Steel carrying case for HSG 45 or HSG 50	MK50	

Accessories	Part No.	Page
Outer, fixed blade	ESG45EF	
Inner, moving blade	ESG45ES1	



ESG45EF



ESG45ES1

HSG 50

Hand-operated cutting tool Ø 48 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Low weight

Characteristics

- Closed cutting head, flip top style, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when cut is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	max. Ø 48 mm (e. g. 4 x 120 mm ² NYY)
Cutting force:	60 kN
Length:	540 mm
Weight:	3.5 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.
Hand-operated cutting tool Ø 48 mm	HSG50
Scope of supply	Part No. Page
Steel carrying case for HSG 45 or HSG 50	MK50

Accessories	Part No.	Page
Outer, fixed blade	ESG50EF1	
Inner, moving blade	ESG50ES	



ESG50EF1



ESG50ES



HSG 55

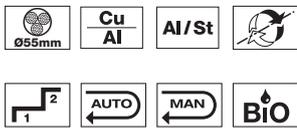
Hand-operated cutting tool Ø 55 mm

- Cuts armoured copper and aluminium cables and Al/St cables (ACSR)
- Also suitable for round material made of Al, Cu and Steel
- 120 kN Cutting force for maximum output

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Easy handling by handles
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when cut is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	max. Ø 55 mm
Cutting force:	120 kN
Length:	approx. 605 mm
Weight:	7,3 kg
Ambient temperature:	-20° C up to +40° C



Item	Part No.	Page
Hand-operated cutting tool Ø 55 mm	HSG55	
Scope of supply	Part No.	Page
Steel carrying case	MK55	201



Accessories	Part No.	Page
Outer fixed blade	ESG55EF	
Inner, moving blade	ESG55ES	



ESG55EF



ESG55ES

HSG 85/2

Hand-operated cutting tool Ø 85 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Large cutting range
- High user safety through cutting head with bolt interlock

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Handle enables easy handling
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when cut is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	max. Ø 85 mm
Length:	approx. 677 mm
Weight:	4,9 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.
Hand-operated cutting tool Ø 85 mm	HSG852
Scope of supply	Part No. Page
Steel carrying case for HSG 85	MK85

Accessories	Part No.	Page
Outer fixed blade	ESG85EF1	
Inner, moving blade	ESG85ES1	



ESG85EF1



ESG85ES1





Klauke® multi

HK 60 UNV

Hydraulic universal tool, hand operated

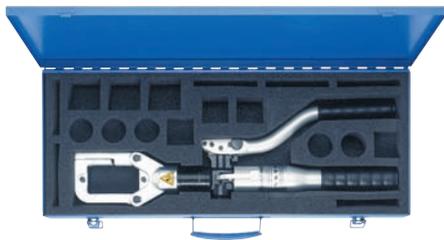
- One head for crimping, cutting and punching
- Adapter for crimping dies of the Klauke Series 5, 18 and 22
- Various cutting dies for aluminium and copper conductors with and without armouring as well as Al/St-Cables (ACSR)
- Dies for cutting threaded rods and DIN rails
- Punching adapter for Greenlee punching tools
- Dies to punch DIN rails

Characteristics

- Universal head flip-top style, rotatable
- Light weight due to high quality aluminium housing
- 2-stage hydraulic system with fast feed and power stroke
- Automatic retraction when operation is complete
- Manual retract in case of need
- Environmentally-friendly hydraulic oil, quickly biodegradable



Technical data	
Crimping force:	60 kN
Crimping range:	6 - 300 mm²
Stroke:	42 mm
Cutting range:	max. Ø 40 mm²
Punching capacity:	up to Ø 64 mm round up to 92 x 92 mm square
Length:	540 mm
Weight:	3.5 kg
Ambient temperature:	-20° C to +40° C



Item	Part No.
Hydraulic universal tool, hand operated	HK60UNV
Scope of supply	Part No. Page
Steel carrying case for HK 60 UNV, adapter and dies	MK60UNV

Adapter	Application: crimping	Part No.
	Adapter for crimping dies of Klauke Series 5 e.g.: EK 50/5-L	UA5
	Adapter for crimping dies of Klauke Series 18 e.g.: K18 / EK 50/18-L / PK18 / HK6018 / THK18	UA18
	Adapter for crimping dies of Klauke Series 22 e.g.: K22 / EK 60/22-L / PK22 / HK6022 / THK22	UA22
Adapter	Application: cutting	Part No.
	Cutting dies for cutting ACSR cables (Al/St cable) acc. to DIN EN 50182 and EHS guy wire. UCACSR up to max. Ø 40 mm	UCACSR
	Cutting dies for cutting multistranded, non armoured Cu/Al cables. Not for fine stranded cables. up to Ø 26 mm	UC26
	up to Ø 40 mm	UC40
Adapter	Application: punching	Part No.
	Punching adapter for holes in mild steel 3.0 mm. up to Ø 64 mm round up to 92 x 92 mm square up to 46 x 92 mm rectangular	UA6P
Adapter	Special applications:	Part No.
	Cutting dies for cutting threaded rods: Thread, metric M5	UCM5
	Thread, metric M6	UCM6
	Thread, metric M8	UCM8
	Thread, metric M10	UCM10
	Thread, metric M12	UCM12
	Thread, inch 1/4"	UCUNC14
	Thread, inch 3/8"	UCUNC38
	Thread, inch 1/2"	UCUNC12
	Cutting dies for DIN rails: DIN rails 35 x 15	UCD3515
	DIN rails 32 x 15 x 9	UCD3215
	DIN rails 35 x 7.5	UCD3575
	Cutting dies for cutting: DIN rail 2980	UCN2980
	Dies for punching DIN rails: (35 x 15; 32 x 15 x 9; 35 x 7.5)	UPD6
	Cutting die for laminated copper busbars including insulation, max. width 37.5 mm	UCF



More intelligence. Higher performance. And more ergonomic.

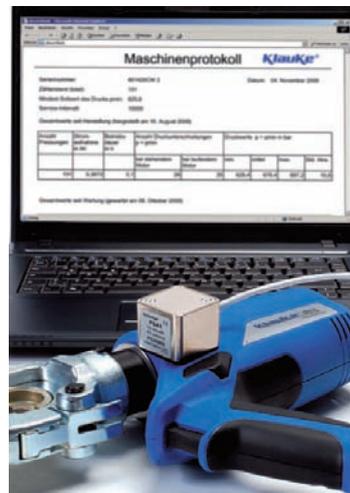


Battery-powered crimping and cutting tools.

Battery-powered crimping and cutting tools represent the most convenient solution for crimping and cutting applications. The required force is applied by the touch of a button. The tools require only one-hand-operation.

All tools feature a two-stage hydraulic system with fast feed which converts automatically to power stroke. After completed crimping or cutting the automatic retract function starts and can be stopped again by pressing the switch (MRS).

The automatic retract interrupt function (ARS) is especially convenient for fast multiple crimps for full tension connections.



By means of the separate USB adapter PGA1 all datas of crimping operations can be readout for quality control by the optical interface and issued as a PDF document at PC or Laptop.

- The latest tool generation with Intelligent Pressing System IPS.
- Convenient single head operating concept.
- Crimping tools from 10 kN to 120 kN crimping force.
- Cutting tools to Ø 105 mm, also for armoured cables.
- High-performance 18 Volt Li-ion batteries with extremely short charging time.



The new generation of our battery-powered tools features an integrated pressure sensor determining pressure reached during each crimping operation. This **Intelligent Pressing System** – IPS for short – indicates deviations immediately by visual and audible signals. Working with Klauke tools is getting even safer.



The hydraulic oil in our tools is considered environmentally-friendly and quickly biodegradable.

■ High-performance: 18 Volt Li-ion technology.

- ▶ Powerful 18 V Li-ion batteries with high capacity.
- ▶ Extremely **short charging time** with innovative charging technology.
- ▶ Batteries have very low self-discharging effect.
- ▶ Powerful motors for maximum performance.

Benefits:

- ▶ The high energy density of the Li-ion batteries allows more operations per charge than with conventional batteries.
- ▶ The extremely short charging time of 15 min (RAL1 with 1.3 Ah) and/or 22 min (RAL2 with 3.0 Ah) reduce waiting time to a minimum.
- ▶ The low self-discharge means practically continuous tool availability.
- ▶ The powerful motors allow even faster work – a benefit that should not be underestimated especially where tools are in permanent use.



18V
Li-Ion



■ Spot on: see more with work area illumination.

- ▶ Integrated high-performance LED for work area illumination.
- ▶ More reliable grip thanks to new 2-component housing with soft linings.
- ▶ Optimised, balanced tool housing.

Benefits:

- ▶ The integrated high-power LED provides optimum illumination in all working areas and ensures additional safety and comfort.
- ▶ Thanks to the new 2-component housing tools lie even better in the hand – pressure points and tool slippage are practically excluded.
- ▶ The balanced tool housing makes handling much easier – fatigue proof work is guaranteed.



2K



easy



■ Small dimensions, huge performance: **Klauke® mini**

- ▶ Ergonomic design for convenient one-hand operation.
 - ▶ Lightweight, from 1.3 kg including battery.
 - ▶ Fast crimping cycles of 2 to 4 seconds allow efficient work.
- ▶ Versatile applications for crimping, pressing and for cutting cable and bolts.

Benefits:

- ▶ Design and low weight permit use even **in tight areas**, for example in control cabinets.
- ▶ Fast crimping cycles allow efficient and precision work.
- ▶ Thanks to the versatile applications, the Klauke® mini series offers the right solution for practically every field:



■ Mini with added value: **Klauke® mini+** the new generation.



- ▶ All benefits of the proven and established Klauke® mini design – now as a 5-ton tool.
- ▶ Large crimping range up to 240 mm².
- ▶ Additional technical features, integrated pressure measurement, 2-component housing, work area illumination and 18 V Li-ion technology.

Benefits:

- ▶ The Klauke® mini+ combines a host of established benefits with the technical features of the new Safety Plus generation – ensuring work in the tightest spaces even more efficient and, thanks to IPS, safer too.
- ▶ With 240 mm², the Klauke® mini+ has the largest crimping range for rod-shaped crimping tools thus guaranteeing optimised productivity.



	Tool		Crimping force	Crimping range	Series				Features
Crimping/ pressing	EK P 1	Klauke® mini	10 kN	0,1 – 10 (50) ¹⁾ mm ²	Klauke® pro				Longest lifetime, even in continuous use.
	EK 15/50		13 kN	0,1 – 16 (50) ¹⁾ mm ²	50 Klauke				Parallel guided crimping jaws create perfect consistent crimps.
	EK 15/50G		13 kN	0,1 – 16 (50) ¹⁾ mm ²	50 Klauke				Angled head for improved handling.
	EK 35/4		35 kN	0.5 – 150 mm ²	4 Klauke				Large crimping range and saving in power than conventional tools.
	EK 50/5-L	Klauke® mini+	50 kN	6 – 240 mm ²	5 Klauke				Very large crimping range up to 240 mm ² .
	EK 50/18-L		50 kN	6 – 185 mm ²	18 Klauke				The only rod-shaped tool for standardised dies to DIN 48083, page 1.
	Tool		Cutting force	Cutting range Ø ²⁾	Head type	Cu, Al	Al/St	St Solid	Features
Cable cutting	ES 20	Klauke® mini	23 kN	20 mm	Open	✓	✓		Suitable for Al/St ropes.
	ES 32		15 kN	32 mm	Open	✓			For aluminium and copper cables up to Ø 32 mm.
	ES 32F		15 kN	32 mm	Open	✓			Ideal solution for finest stranded conductors.
Bolt cutting	EBS 8	Klauke® mini	15 kN	8 mm	Open			✓	For cutting wire mesh cable trays and steel bolts.
	EBS 12		35 kN	12 mm	Open			✓	

¹⁾ Value in brackets denotes cable end sleeves.

²⁾ The exact cutting capacity depends on the type of cable or rope.

■ KLAUKE® ultra – ultra safe, ultra efficient.



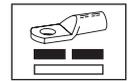
▶ More on Page 306.

- ▶ The guide system guarantees highest user safety since conductor and connecting material remain centered during crimping operation and bad crimps are practically excluded.
- ▶ ARS saves you time as the piston stroke is reduced to a minimum during subsequent crimping operations.

▶ 6-ton tools in the Klauke® ultra series for 22-series dies and for dieless quad-point indent crimping with nominal cross-sections of up to 300 mm².

▶ All tools with Intelligent Pressing System IPS

- ▶ 4-point indent crimping with Klauke's patented centering system and automatic retract stop (ARS) – the ideal solution for crimping tubular cable lugs on fine and fines stranded conductors.



Benefits:

- ▶ The 6 ton tools are comparatively lightweight and hence easy to handle.

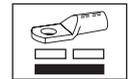


■ KLAUKE® ultra+ the Power-Plus packages.

- ▶ 12 ton tools in the Klauke® ultra+ series for 13-series dies, for deep groove crimps and dieless indent crimps.
- ▶ **Wide crimping** using dies from Klauke's 13-series.
- ▶ With IPS, ARS, more powerful motors and balanced housing for more intelligence more power and more comfort.

Benefits:

- ▶ The wide crimping profiles of the 13-series dies reduce number of crimps required up to 60 % compared with narrow crimping profiles of 6 ton tools.
- ▶ The new features and characteristics make the use of our crimping tools much simpler and, thanks to IPS, safer too.



■ The all-rounder: **Klauke[®] multi**

- ▶ One head for crimping, cutting and punching.
- ▶ In 6 and 12 ton designs.
- ▶ Adapter for crimping dies of most Klauke ranges.
- ▶ Various cutting dies for aluminium and copper conductors with and without armouring.
- ▶ Special dies for cutting threaded rods and DIN rails.
- ▶ Punching adapter for Greenlee punching tools.
- ▶ Die for punching DIN rails.



Benefits:

- ▶ **All standard operations can be accomplished with just one tool.** This creates a weight advantage especially for repair and service teams.
- ▶ The 6 ton design is set apart by its low weight and extremely easy handling.
- ▶ The 12 ton tool offers wider crimping ranges and higher punching capacities.
- ▶ Only dies and/or adapters need to be changed for the various applications. A crimping tool can be turned into a cutting or punching tool within seconds.
- ▶ This boosts efficiency especially when it comes to assembly applications.
- ▶ All adapters and dies are compatible with the tools in the Klauke[®] multi range.



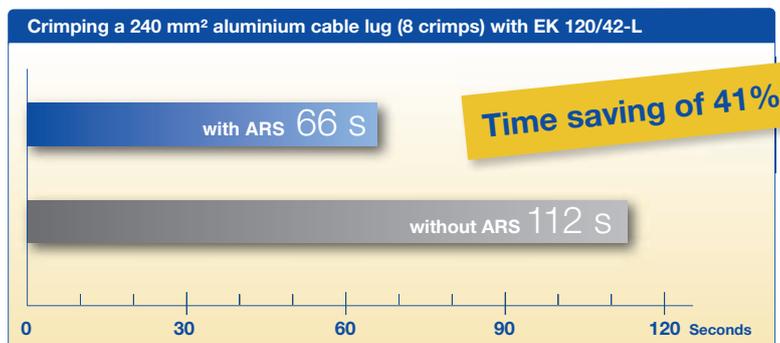
■ Save time and energy – facilitated by the retract stop.



- ▶ The new tool generation includes – depending on tool – either MRS, MRS+ or ARS retract interruption.
- ▶ The return interrupt allows the automatic retract to stop after completion of a cut or crimp. There are three different variations:
 - a) Manual with cutting tools (MRS).
 - b) Automatic with teach-in function on multi-tools (MRS+).
 - c) Fully-automatic with crimping tools (ARS).

Benefits:

- ▶ The MRS function speeds cable-cutting operations as the blades only open as appropriate to perform the next cut.
- ▶ With the Klauke[®] multi, the MRS+ function allows the retract stop position to be programmed so that subsequent crimping operations can be performed as quick as possible.
- ▶ For multiple applications the ARS function allows the crimping tools to open automatically as far as needed for the next crimping operation to be started – with no time loss.
- ▶ **The smaller strokes reduce the energy requirement which in turn increases the number of crimps and cuts per battery charge.**



Powerful tools for cables up to Ø 105 mm.



- ▶ **High cutting capacities up to Ø 105 mm.**
- ▶ Remarkable lightweight for tools in this performance and size class.
- ▶ Sturdy cutting heads in open and closed design.
- ▶ All tools with manual retract stop MRS.

Benefits:

- ▶ Klauke offers the right battery-powered cutting tools for all standard cables and conductors up to Ø 105 mm and Al/St ropes up to Ø 55 mm.
- ▶ Despite their relatively low weight the high stability of the cutting heads mean they perform well even under extreme load.
- ▶ The MRS function enables the piston to be precisely interrupted at any position. During the next cut therefore only the stroke required for cutting needs to be actuated. Saving you time and energy – and producing more cuts from each battery charge.

Improved cutting using the right tools.

Tool	Cutting range ¹⁾ Ø	Head type	Material				Features
			Cu/Al Stranded	Cu/Al Armoured	Al/St, St solid	Cu/Al, solid	
ESG45L 	45 mm	Closed	✓	✓	✓	✓	Especially for Al/St ropes of up to Ø 45 mm.
ESG50L 	48 mm	Closed	✓	✓ ²⁾			Compact lightweight cutting tool.
ESG55L 	55 mm	Closed	✓	✓	✓	✓	With 120 kN cutting force for all cables and Al/St ropes up to Ø 55 mm.
ES65L 	65 mm	Open	✓	✓ ²⁾			Ideal for cutting earth cables up to Ø 65 mm.
ESG85L 	85 mm	Closed	✓	✓ ²⁾			For cutting copper and aluminium cables up to Ø 85 mm.
ES85L 	85 mm	Open	✓	✓ ²⁾			For cutting telecommunication and earth cables up to Ø 85 mm.
ESG105L 	105 mm	Closed	✓	✓		✓ ²⁾	Very wide cutting range up to Ø 105 mm – also for armoured cables.
ES105L 	105 mm	Open	✓	✓			Also for fine stranded cables up to Ø 105 mm.

¹⁾ The exact cutting capacity depends on the type of cable or rope.

²⁾ Sheet metal and wire armouring, Cu





■ **EK 15/50**

Battery powered crimping tool 0.75 - 10 mm²

- Steel head for extreme long life time
- Parallel guided crimping dies

Characteristics

- For interchangeable dies, series 50
- Open crimping head, rotatable
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Fast crimping cycles for efficient operations
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data

Crimping force:	13 kN
Crimping range:	0.75 - 10 mm ²
Crimping cycle:	approx. 2 s
Number of crimps:	approx. 220 for 10 mm ² Cu
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah, NiMH
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	1,7 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Battery powered crimping tool 0.75 - 10 mm ²	EK1550	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Battery 9.6 V / 3.0 Ah NiMH	RAM3	375
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 50	MA50	383
Force sensor 70 kN	TF70L	383
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377

Available dies for EK 15/50

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Copper tubular cable lugs and connectors, standard design		0.75 - 10		390
Tubular cable lugs and compression joints for solid conductors		1.5 - 10		390
Terminals, connectors and pin terminals to DIN-.Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and pin terminals (DIN 46230)		0.5 - 10		390
Insulated solderless terminals, insulated pin terminals		0.1 - 16		391
Cable end sleeves				
Cable end sleeves		0.14 - 50		390
Cable connections, insulated and non-insulated				
Insulated terminals		0.1 - 16		390
Non-insulated receptacles		0.1 - 6		391
BNC connector (connector for coax cable) RG 58, 59, 62, 71				391
Turned pin connectors and receptacles		0.1 - 4		391





■ **EK 15/50 G**

Battery powered crimping tool 0.75 - 10 mm²

- Slim crimping head - ideal when space is critical

Characteristics

- For interchangeable dies, series 50
- Open crimping head, rotatable
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Fast crimping cycles for efficient operations
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	13 kN
Crimping range:	0.75 - 10 mm ²
Crimping cycle:	approx. 2 s
Number of crimps:	approx. 220 for 10 mm ² Cu
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah, NiMH
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	1,6 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Battery powered crimping tool 0.75 - 10 mm ²	EK1550G	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Battery 9.6 V / 3.0 Ah NiMH	RAM3	375
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 50	MA50	383
Force sensor 70 kN	TF70L	383
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377

Available dies for EK 15/50 G

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Copper tubular cable lugs and connectors, standard design		0.75 - 10		390
Tubular cable lugs and compression joints for solid conductors		1.5 - 10		390
Terminals, connectors and pin terminals to DIN-.Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and pin terminals (DIN 46230)		0.5 - 10		390
Insulated solderless terminals, insulated pin terminals		0.1 - 16		391
Cable end sleeves				
Cable end sleeves		0.14 - 50		390
Cable connections, insulated and non-insulated				
Insulated terminals		0.1 - 16		390
Non-insulated receptacles		0.1 - 6		391
BNC connector (connector for coax cable) RG 58, 59, 62, 71				391
Turned pin connectors and receptacles		0.1 - 4		391





■ **EKP 1**

Battery powered crimping tool 0.5 - 10 mm²

- Basic tool, Klauke Pro-Series
- Change of crimping heads without tools

Characteristics

- Compatible with all crimping heads of the Klauke Pro-Series
- Crimping heads rotatable
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Fast crimping cycles for efficient operations
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	10 kN
Crimping range:	0.5 - 10 mm ²
Crimping cycle:	approx. 2 s
Number of crimps:	approx. 220 for 10 mm ² Cu
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah, NiMH
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	1,3 kg
Ambient temperature:	-20 °C up to +40 °C

Item	Part No.	
Battery powered crimping tool 0.5 - 10 mm ²	EKP1	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KKEKP1B	

Accessories	Part No.	Page
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377
Battery 9.6 V / 3.0 Ah NiMH	RAM3	375
USB adapter	PGA1	385

	Crimping range mm ²	Crimp profile	Part No.
Crimping heads for cable end sleeves			
 Cable end-sleeves, trapezoid crimping	0.14 - 6		KP312
 Cable end-sleeves, square crimping	0.08 - 10		KP303
 Cable end-sleeves, square crimping	10 - 16		KP304
 Cable end-sleeves, round crimping	0.14 - 2.5		KP350
 Cable end-sleeves, round crimping for narrow spaces	1.5 - 6		KP351
 Cable end-sleeves, round crimping for narrow spaces	10 - 16		KP352
 Cable end-sleeves DIN 46228, part 2, roll-crimping	0.5 - 2.5		KP66
Crimping heads for insulated cable connections			
 Insulated terminals (yellow and red)	0.1 - 1		KP80
 Insulated terminals (red and blue)	0.5 - 2.5		KP81
 Insulated terminals (red, yellow, blue)	0.5 - 6		KP82
 Insulated terminals (yellow)	4 - 6		KP83
Crimping heads for cable lugs and solderless terminals			
 tubular cable lugs and solderless terminals	0.5 - 6		KP232
 tubular cable lugs and solderless terminals	4 - 10		KP242
Crimping heads for photovoltaic			
 Connectors for photovoltaic 3 mm Ø	2.5 - 4		KP90MC31
Crimping heads for receptacles			
 Part No. 3720, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1		KP631
 Part No. 3725, receptacles 6.3 x 0.8 mm with lateral conductor connector	0.5 - 1.5		KP64
 Part No. 3735, receptacles 6.3 x 0.8 mm with lateral conductor connector	1.5 - 2.5		KP632
 For receptacles 2.8 mm tab width	0.1 - 1		KP67
 For receptacles 4.8 mm tab width	0.5 - 2.5		KP65
 For receptacles 6.3 mm tab width	0.5 - 2.5		KP68





■ **EK 35/4**

Battery powered crimping tool 6 - 150 mm²

- Large cross section range up to 150 mm²
- Slim crimping head - ideal when space is critical

Characteristics

- For interchangeable dies, series 4, narrow crimping
- Closed crimping head, flip top style, rotatable
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Fast crimping cycles for efficient operations
- Quick motor stop for high application safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	35 kN
Crimping range:	6 - 150 mm ²
Crimping cycle:	3 s up to 4 s (depending on cross section)
Number of crimps:	approx. 140 for 120 mm ² Cu
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah, NiMH
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	1,7 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Battery powered crimping tool 6 - 150 mm ²	EK354	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Battery 9.6 V / 3.0 Ah NiMH	RAM3	375
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 4	MA4	383
Force sensor 70 kN	TF70L	383
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377

Available dies for EK 35/4

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		6 - 150		392
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10 - 70		392
Tubular cable lugs and connectors for fine stranded conductors		10 - 35		392
Tubular cable lugs and compression joints for solid conductors		1.5 - 16		393
Tubular cable lugs and connectors, Ni, VA				
Stainless steel tubular cable lugs and connectors	VA 	0,5 - 16		407
Nickel tubular cable lugs and connectors	Ni 	10 - 50		407
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	6 - 120		393
Terminals, connectors and pin terminals to DIN-.Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and pin terminals (DIN 46230) to DIN		10 - 35		393
Insulated solderless terminals and connectors		10 - 16		394
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm – 150se / 120sm		394
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 70		394
Compression joints for full-tension connections of Aldrey conductors acc. to DIN EN 50182	Al 	25 - 50		394
Clamps and screw connectors				
Clamps, C-type		4 - 35		395
Cable end sleeves				
Cable end sleeves		10 - 50		395
Twin cable end-sleeves		2 x 4 - 2 x 16		395
Cable end-sleeves, for fine stranded conductors		10 - 50		395
Twin cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		396





EK 50/5-L

Battery powered crimping tool 6 - 240 mm²

- **Most powerful crimping tool of the Klauke mini series - very large crimping area up to 240 mm²**
- **Increased safety, performance and comfort through "Intelligent Pressing System" (IPS)**

Characteristics

- For interchangeable dies, series 5, narrow crimping
- Closed crimping head, flip top style, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with visual and audible signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Lightweight for effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for fast crimping cycles and efficient operations
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	50 kN
Stroke / opening width:	12 mm
Crimping range:	6 - 240 mm ²
Crimping cycle:	4 s up to 5 s (depending on cross section)
Number of crimps:	approx. 300 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	1.3 Ah, Li-Ion
Charging time:	15 min.
Weight incl. batteries:	2,4 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Battery powered crimping tool 6 - 240 mm ²	EK505L	
Scope of supply	Part No.	Page
Battery 18 V / 1.3 Ah, Li-Ion (23.4 Wh)	RAL1	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK50L	

Accessories	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 5	MA5	383
Force sensor 70 kN	TF70L	383

Available dies for EK 50/5-L

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors		6 - 240		397
Insulated tubular cable lugs and connectors Insulated pin terminals		10 - 95		397
Tubular cable lugs and connectors for fine stranded conductors		10 - 50		397
Copper compression cable lugs and connectors to DIN		6 - 185		398
Terminals, connectors and pin terminals to DIN.-.Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and pin terminals (DIN 46230) to DIN		10 - 50		398
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10 sm / 300 se / 240 sm		398
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN		10 - 150		398
Compression cable lugs for full tension connections of Aldrey conductors according to DIN EN 50182		25 - 95		399
Clamps and screw connectors				
Clamps, C-type		16 - 35		399
Cable end sleeves				
Cable end sleeves		10 - 50		399
Twin cable end-sleeves		2 x 4 - 2 x 16		399
Cable end sleeves		10 - 50		399
Twin cable end sleeves, for "compacted" fine stranded conductors		2 x 4 - 2 x 16		400





■ EK 50/18-L

Battery powered crimping tool 6 - 185 mm²

- For dies acc. to DIN 48083, sheet 1
- Increased safety, performance and comfort through "Intelligent Pressing System" (IPS)
- With automatic retract stop (ARS) for fast crimping cycles

Characteristics

- For interchangeable dies, series 18, narrow crimping
- Open C-crimping head, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with visual and audible signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Lightweight for effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for fast crimping cycles and efficient operations
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



18
Klauke

5 ton

185mm²



ELECTRONIC



PDF

easy

2K



18V
Li-Ion

Energy Save



AUTO

MAN



SERVICE



Technical data

Crimping force:	50 kN
Stroke / opening width:	17 mm
Crimping range:	6 - 185 mm ²
Crimping cycle:	5 s up to 6 s (depending on cross section)
Number of crimps:	approx. 160 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	1.3 Ah, Li-Ion
Charging time:	15 min.
Weight incl. batteries:	2.8 kg
Ambient temperature:	-20° C to +40° C

Item	Part No.	
Battery powered crimping tool 6 - 185 mm ²	EK5018L	
Scope of supply	Part No.	Page
Battery 18 V / 1.3 Ah, Li-Ion (23.4 Wh)	RAL1	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK50L	

Accessories	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 18	MA18	383
Force sensor 70 kN	TF70L	383

Available dies for EK 50/18-L

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		6 - 185		401
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10 - 95		401
Tubular cable lugs and connectors for fine stranded conductors		10 - 50		402
Tubular cable lugs and connectors for solid conductors		1.5 - 16		402
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and compression joints acc. to DIN	DIN 	6 - 185		402
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and Pin terminals (DIN 46230)		10 - 70		402
Insulated solderless terminals		10 - 50		403
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm – 240se / 185sm		403
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors	Al 	10 - 185		403
Compression joints for full-tension connections of Aldrey conductors acc. to DIN EN 50182	Al 	25 - 95		404
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 185		403
Clamps and screw connectors				
Clamps, C-type		4 - 50		404
Cable end sleeves				
Cable end sleeves		10 - 95		404
Twin cable end-sleeves		2 x 4 - 2 x 16		404
Cable end-sleeves, for fine stranded conductors		10 - 95		405
Twin cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		405
Cutting die		Ø 18 mm		405

Please observe the restrictions in the technical index when crimping connectors!





EK 60/22-L

Battery powered crimping tool 6 - 300 mm²

- Superior performance by special strong motor, 2-stage-Hydraulic system and 18V / 3,0 Ah Li-Ion Battery
- Large crimping range up to 300 mm²
- Slim crimping head - ideal when space is critical

Characteristics

- For interchangeable dies, series 22, narrow crimping
- Closed crimping head, flip top style, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with visual and audible signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	60 kN
Stroke / opening width:	17 mm
Crimping range:	6 - 300 mm ²
Crimping cycle:	3 s up to 5 s (depending on cross section)
Number of crimps:	approx. 300 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	4,2 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered crimping tool 6 - 300 mm ²	EK6022L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 22	MA22	383
Force sensor 70 kN	TF70L	383

Available dies for EK 60/22-L

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable-lugs and connectors "standard type", tubular cable lugs for switchgear connections		6-300		406
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10-150		406
Tubular cable lugs and connectors fine stranded conductors		10-70		407
Tubular cable lugs and connectors for solid conductors		1.5-16		407
Tubular cable lugs and connectors, Ni, VA				
Stainless steel tubular cable lugs and connectors	VA 	0,5 - 16		407
Nickel tubular cable lugs and connectors	Ni 	10 - 50		407
Copper compression cable lugs and connectors to DIN				
Compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	6-300		407
Double compression cable lugs	DIN 	2 x 50 - 2 x 70		408
Terminals, connectors and pin terminals to DIN.-.Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		10-70		408
Insulated solderless terminals		10-70		408
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm- 300se/240sm		408
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10-240		409
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25-185		409
Compression joints DIN 48085, part 3 for Al-/steel conductors DIN EN 50182	Al 	25 / 4- 120 / 20		409
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10-240		409
Clamps and screw connectors				
Clamps, C-type		4-50		410
Clamps, H-type		70		410
Cable end sleeves				
Cable end sleeves		10-240		410
Twin cable end-sleeves		2 x 4 - 2 x 16		411
Cable end-sleeves, for fine stranded conductors		10-240		411
Twin cable end-sleeves for fine stranded conductors		2 x 4 - 2 x 16		411

Please observe the restrictions in the technical index when crimping connectors!



■ EK 60 VP-L

Battery powered crimping tool 10 - 240 mm²

- Suitable for crimping tubular cable lugs and connectors "standard type" and fine and superfine stranded conductors to 240 mm²
- The patented centering system guarantees every time optimum crimping results
- With automatic retract stop (ARS) for fast crimping cycles

Characteristics

- indent crimping feature with patented centering system, no dies required
- Open crimping head, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	55 kN
Crimping range:	10 - 240 mm ²
Crimping cycle:	3 s up to 6 s (depending on cross section)
Number of crimps:	approx. 300 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	4,8 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	Page
Battery powered crimping tool 10 - 240 mm ²	EK60VPL	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
Gauge and 10 testcylinder	TS10B	
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter VP	MAVP	383
Force sensor 70 kN	TF70L	383

EK 60 VP/FT-L

Battery powered crimping tool 16 - 300 mm²



- The patented centering system guarantees every time optimum crimping results
- Closed crimping head - ideal for utility lines construction
- With automatic retract stop (ARS) for fast crimping cycles

Characteristics

- quad-point indent crimping feature with patented centering system, no dies required
- Closed crimping head with bolt interlock, rotatable, flip top style
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with visual and audible signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable




Technical data	
Crimping force:	55 kN
Crimping range:	16 - 300 mm ²
Crimping cycle:	3 s up to 6 s (depending on cross section)
Number of crimps:	approx. 300 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	4,9 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered crimping tool 16 - 300 mm ²	EK60VPFTL	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
Gauge and 10 testcylinder	TS10B	
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter VP	MAVP	383
Force sensor 70 kN	TF70L	383

Battery-operated crimping, cutting and universal tools

Application for EK60VPL



Suitable for	Connection material	Crimping range mm ²	Crimp profile
Tubular cable-lugs "standard type", Tubular cable-lugs for switch gear connections		10 - 240	
Connectors "standard type"		10 - 120	
Tubular cable-lugs for fine stranded conductors		10 - 240	
Connectors for fine stranded conductors		10 - 95	

Application for EK60VPLFTL



Suitable for	Connection material	Crimping range mm ²	Crimp profile
Tubular cable-lugs and connectors "standard type" Tubular cable lugs for switch gear connection		16 - 300	
Tubular cable lugs and compression joints for fine stranded conductors		16 - 300	

■ EK 120 ID-L

Battery powered crimping tool 35 - 500 mm²



- Indent crimping for superfine stranded conductors up to 500 mm²
- Without die change multi-purpose application

Characteristics

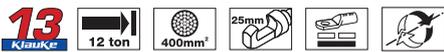
- indent crimping, no dies required
- Closed crimping head, flip top style, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with visual and audible signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



Technical data	
Crimping force:	108 kN
Stroke / opening width:	52 mm
Crimping range:	35 - 500 mm ²
Crimping cycle:	10 s up to 11 s (depending on cross section)
Number of crimps:	approx. 115 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6,8 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered crimping tool 35 - 500 mm ²	EK120IDL	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Force sensor 130 kN	TF130L	383



■ **EK 120/25-L**

Battery powered crimping tool 10 - 400 mm²

- For 12 ton tool remarkable easy handling thanks to optimum weight distribution
- Very large crimping range to 400 mm²
- Up to 60% less crimping operations due to wide crimping compared to 6 ton tools

Characteristics

- For 13-series interchangeable dies, wide crimping
- Open C-crimping head, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	120 kN
Stroke / opening width:	25 mm
Crimping range:	10 - 400 mm ²
Crimping cycle:	7 s up to 8 s (depending on cross section)
Number of crimps:	approx. 115 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6,6 kg
Ambient temperature:	-20° C up to +40° C

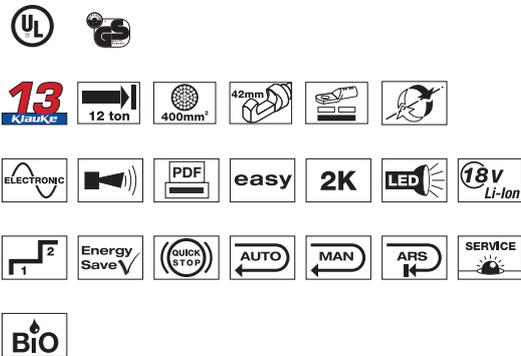
Item	Part No.	
Battery powered crimping tool 10 - 400 mm ²	EK12025L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 13	MA120	383
Force sensor 130 kN	TF130L	383

Available dies for EK 120/25-L

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Butt connectors "standard type"		16 - 185		413
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN		16 - 300		413
Compression joints DIN 46267, part 1		16 - 150		414
Double compression cable lugs		2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN		10 - 240		415
Aluminium connectors		10 - 120		415
Compression joints connections for Al-dreht conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²		25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182		25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors		10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!



■ EK 120/42-L

Battery powered crimping tool 10 - 400 mm²

- **C-Head with 42 mm opening width and very wide crimping range to 400 mm²**
- **Up to 60% less crimping operations due to wide crimping compared to 6 ton tools**
- **Easy handling by optimum weight distribution**

Characteristics

- For 13-series interchangeable dies, wide crimping
- Open C-crimping head, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	120 kN
Stroke / opening width:	42 mm
Crimping range:	10 - 400 mm ²
Crimping cycle:	8 s up to 9 s (depending on cross section)
Number of crimps:	approx. 115 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6,8 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	Page
Battery powered crimping tool 10 - 400 mm ²	EK12042L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 13	MA120	383
Force sensor 130 kN	TF130L	383

Available dies for EK 120/42-L

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN	DIN 	16 - 300		413
Double compression cable lugs	DIN 	2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN-.Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182	Al 	25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





EK 120 U-L

Battery powered crimping tool 10 - 400 mm²

- H-head for deep groove crimping
- Up to 60% less crimping operations due to wide crimping compared to 6 ton tools

Characteristics

- For 13-series interchangeable dies, wide crimping
- Closed H-crimping head, rotatable
- Electronic control and monitoring of crimping operation
- Integrated pressure measurement with visual and audible signals in case of failure
- Evaluation function using optical interface and USB-Adapter
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Li-ion batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful crimping process
- Quick motor stop for high user safety
- Automatic retraction when crimping is complete
- Manual retract in case of need
- Automatic retract stop (ARS) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Crimping force:	120 kN
Stroke / opening width:	20 mm
Crimping range:	10 - 400 mm ²
Crimping cycle:	7 s up to 8 s (depending on cross section)
Number of crimps:	approx. 115 for 150 mm ² Cu DIN
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6,0 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered crimping tool 10 - 400 mm ²	EK120UL	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385
Digital meter for force and pressure measurement	TC1S	383
Measuring adapter Series 13	MA120	383
Force sensor 130 kN	TF130L	383

Available dies for EK 120 U-L

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN	DIN 	16 - 300		413
Double compression cable lugs	DIN 	2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182	Al 	25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





■ ES 20

Battery powered hydraulic cutting tool Ø 20 mm

- For cutting Al/St conductors (ACSR) to DIN EN 50182, solid Al/Cu cables to VDE 0295, Class 1 and laminated copper busbars
- Sturdy design

Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



ES20E

Technical data	
Cutting range:	stranded up to Ø 20 mm (depending on cable/conductor type)
Cutting force:	23 kN
Cutting time:	4 s up to 6 s (depending on cable size)
Number of cuts:	approx. 180 for ACSR Cable 120/20
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	2.0 kg
Ambient temperature:	-20 °C up to +40 °C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 20 mm	ES20	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Spare blades-set for ES20	ES20E	
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377
USB adapter	PGA1	385

■ **ES 32 / ES 32 F**

Battery powered hydraulic cutting tools Ø 32 mm

- Cuts multi-stranded copper and aluminium cables (ES 32)
- Cuts fine and superfine stranded copper cables (ES 32 F)
- Slim cutting head - ideal when space is critical

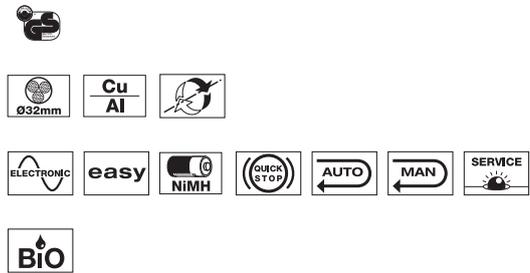
Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	ES32: stranded up to Ø 32 mm (e.g. 4 x 50 mm ² NYN) ES32F: fine stranded up to Ø 32 mm (e.g. H07V-K 1 x 240 mm ²)
Cutting force:	15 kN
Cutting time:	8 s up to 10 s (depending on cable size)
Number of cuts:	approx. 90 for H07V-K 1x240 mm ²
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	2.0 kg
Ambient temperature:	-20 °C up to +40 °C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 32 mm	ES32	
Battery powered hydraulic cutting tool Ø 32 mm, superfine stranded	ES32F	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Spare blades-set for ES 32	ES32E	
Spare blades-set for ES 32 F	ES32FE	
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377
USB adapter	PGA1	385



ES32E



ES32FE



Klauke® mini



■ **EBS 8**

Battery powered hydraulic cutting tool Ø 8 mm

- For cutting cable channels, bolts and steel wire, medium-hard (e.g. ST 37)
- Slim cutting head - ideal when space is critical

Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	max. Ø 8 mm
Cutting force:	15 kN
Cutting time:	2 s (depending on cable size)
Number of cuts:	approx. 300 for 5 mm
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	1.3 kg
Ambient temperature:	-20 °C up to +40 °C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 8 mm	EBS8	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377
USB adapter	PGA1	385

■ **EBS 12**

Battery powered hydraulic cutting tool Ø 12 mm

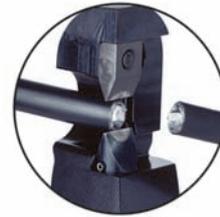
- For cutting bolts and steel wire, medium-hard (e.g. ST 37)
- Slim cutting head - ideal when space is critical

Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic design for convenient one-hand operation
- Lightweight for effortless operations
- Powerful NiMH-Battery technology
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



Klauke® mini



Technical data	
Cutting range:	max. Ø 12 mm
Cutting force:	45 kN
Cutting time:	4 s (depending on cable size)
Number of cuts:	approx. 60 for 12 mm
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah
Charging time:	40 min. (15 min. with quick charger)
Weight incl. batteries:	1.9 kg
Ambient temperature:	-20 °C up to +40 °C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 12 mm	EBS12	
Scope of supply	Part No.	Page
Battery 9.6 V / 2.0 Ah NiMH	RAM2	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377
Plastic case 450 x 370 x 105 mm	KK35B2	

Accessories	Part No.	Page
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5	377
USB adapter	PGA1	385





ESG45EF



ESG45ES1

■ ESG 45-L

Battery powered hydraulic cutting tool Ø 45 mm

- Cuts armoured copper and aluminium cables and Al/St cables (ACSR)
- Also suitable for round material made of Al, Cu and Steel
- Extremely sturdy design

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

Technical data	
Cutting range:	max. Ø 45 mm (e.g. Al/St cable 570/40)
Cutting force:	60 kN
Cutting time:	8 s up to 18 s (depending on cable size)
Number of cuts:	approx. 150 for Al/St-Cable 570/40
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	5.7 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 45 mm	ESG45L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
Outer, fixed blade	ESG45EF	
Inner, moving blade	ESG45ES1	
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385

■ ESG 50-L

Battery powered hydraulic cutting tool Ø 48 mm



- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Low weight

Characteristics

- Closed cutting head, flip top style, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



Technical data	
Cutting range:	max. Ø 48 mm (e.g. 4 x 120 mm ² NYY)
Cutting force:	60 kN
Cutting time:	8 s up to 20 s (depending on cable size)
Number of cuts:	approx. 140 cuts for 4 x 120 mm ² NYY
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	4.7 kg
Ambient temperature:	-20° C up to +40° C



Item	Part No.
Battery powered hydraulic cutting tool Ø 48 mm	ESG50L
Scope of supply	Part No. Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2 376
Quick-charger for 18V Li-Ion-Batteries	LGL1 378
Plastic case	KK120L

Accessories	Part No.	Page
Outer, fixed blade	ESG50EF1	
Inner, moving blade	ESG50ES	
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385



ESG50EF1



ESG50ES



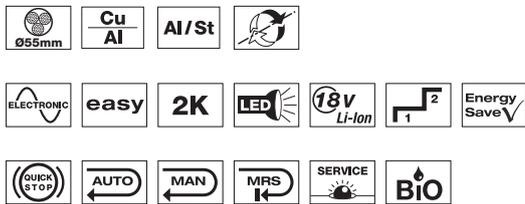
■ ESG 55-L

Battery powered hydraulic cutting tool Ø 55 mm

- Cuts armoured copper and aluminium cables and Al/St cables (ACSR)
- Also suitable for round material made of Al, Cu and Steel
- 120 kN Cutting force for maximum output

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



ESG55EF



ESG55ES

Technical data	
Cutting range:	max. Ø 55 mm
Cutting force:	120 kN
Cutting time:	10 s up to 19 s (depending on cable size)
Number of cuts:	dependent on cable type
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	8.0 kg
Ambient temperature:	-20° C up to + 40° C

Item	Part No.	Page
Battery powered hydraulic cutting tool Ø 55 mm	ESG55L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
Outer fixed blade	ESG55EF	
Inner, moving blade	ESG55ES	
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385

■ **ES 65-L**

Battery powered hydraulic cutting tool Ø 65 mm



- **Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)**
- **Also suitable for fine stranded cable**

Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



ES65E

Technical data	
Cutting range:	max. Ø 65 mm
Cutting force:	40 kN
Cutting time:	dependent on cable type
Number of cuts:	dependent on cable type
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6.3 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 65 mm	ES65L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
18 V Mains adapter for 115 V or 230 V voltage	NG2	376
Spare blade	ES65E	
USB adapter	PGA1	385



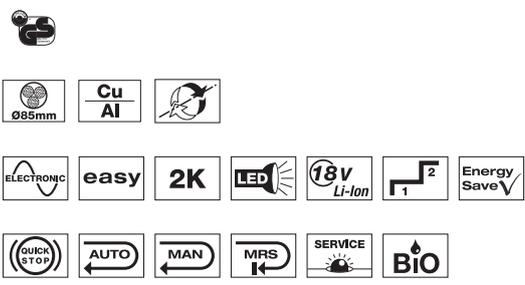
ESG 85-L

Battery powered hydraulic cutting tool Ø 85 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Large cutting range
- High user safety through cutting head with bolt interlock

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



Technical data	
Cutting range:	max. Ø 85 mm (e.g. 4 x 240 mm ² NYY)
Cutting force:	60 kN
Cutting time:	dependent on cable type
Number of cuts:	dependent on cable type
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6.5 kg
Ambient temperature:	-20° C up to +40° C



ESG85EF1



ESG85ES1

Item	Part No.	Page
Battery powered hydraulic cutting tool Ø 85 mm	ESG85L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
Outer fixed blade	ESG85EF1	
Inner, moving blade	ESG85ES1	
18 V mains adapter for 115 V Voltage	NG2115	376
USB adapter	PGA1	385

■ ES 85-L

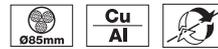
Battery powered hydraulic cutting tool Ø 85 mm



- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Large cutting range
- Suitable for fine stranded cable and Telecommunication cable

Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



ES85E

Technical data	
Cutting range:	max. Ø 85 mm (e.g. 4 x 240 mm ² NYT)
Cutting force:	30 kN
Cutting time:	dependent on cable type
Number of cuts:	dependent on cable type
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	6.9 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 85 mm	ES85L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120L	

Accessories	Part No.	Page
Spare blade	ES85E	
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385



Klauke® ultra+

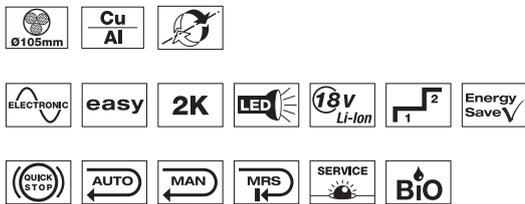
ESG 105-L

Battery powered hydraulic cutting tool Ø 105 mm

- Cuts copper and aluminium cables (for armoured cables)
- 120 kN Cutting force for extremely wide cutting range up to Ø 105 mm
- Remarkable lightweight for tools in this performance class

Characteristics

- Closed cutting head with bolt interlock, rotatable, flip top style
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable



ESG105EF



ESG105ES

Technical data	
Cutting range:	max. Ø 105 mm
Cutting force:	120 kN
Cutting time:	dependent on cable type
Number of cuts:	dependent on cable type
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	10.3 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	Page
Battery powered hydraulic cutting tool Ø 105 mm	ESG105L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Steel carrying case	MK105L	

Accessories	Part No.	Page
Outer fixed blade	ESG105EF	
Inner, moving blade	ESG105ES	
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385



■ ES 105-L

Battery powered hydraulic cutting tool Ø 105 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Extremely wide cutting range up to Ø 105 mm – also for fine stranded cables
- Remarkable lightweight for tools in this performance class

Characteristics

- Open cutting head, rotatable
- Electronic control and monitoring of cutting operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful cutting operation
- Quick motor stop for high user safety
- Automatic retraction when cut is complete
- Manual retract in case of need
- Manual retract stop (MRS) for efficient operations
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter
- Environmentally-friendly hydraulic oil, quickly biodegradable

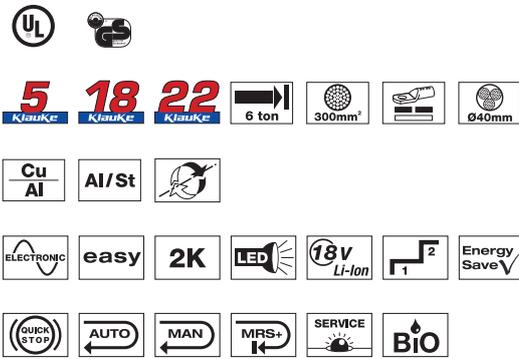


ES105E

Technical data	
Cutting range:	max. Ø 105 mm
Cutting force:	74 kN
Cutting time:	dependent on cable type
Number of cuts:	dependent on cable type
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight incl. batteries:	9.4 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered hydraulic cutting tool Ø 105 mm	ES105L	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Steel carrying case	MK105L	

Accessories	Part No.	Page
Spare blade	ES105E	
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385



EK 60 UNV-L

Battery powered universal tool 6 - 300 mm²

- One head for crimping, cutting and punching
- Adapter for crimping dies of the Klauke Series 5, 18 and 22
- Various cutting dies for Al- and Cu- cables with and without armouring as well as Al/St-Cables (ACSR)
- Dies for cutting threaded rods and DIN rails
- Punching adapter for Greenlee punching tools
- Dies to punch DIN rails

Characteristics

- Universal head flip-top style, rotatable
- Electronic control and monitoring of operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful operation
- Quick motor stop for high user safety
- Automatic retraction when operation is complete
- Manual retract in case of need
- Manual retract stop with "teach-in" (MRS+) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter

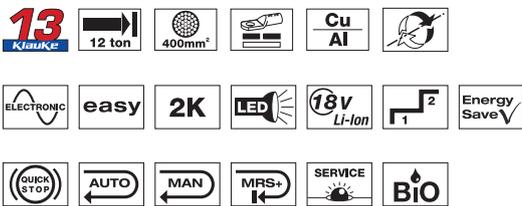
Technical data	
Crimping force:	60 kN
Stroke:	42 mm
Crimping range:	6 - 300 mm ²
Crimping cycle:	3 s up to 5 s (depending on cross section)
Number of crimps:	approx. 300 for 150 mm ² Cu DIN
Cutting range:	max. Ø 40 mm
Number of cuts:	approx. 110 cuts for 4 x 70 mm ² NYY
Punching capacity:	up to Ø 64 mm round up to 92 x 92 mm square
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight:	4,6 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered universal tool 6 - 300 mm ²	EK60UNVL	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120UNVL	

Accessories	Part No.	Page
18 V mains adapter for 230 V Voltage	NG2230	376
USB adapter	PGA1	385

Adapter	crimping	Part No.
	Adapter for crimping dies of Klauke Series 5 e.g.: EK 50/5-L	UA5
	Adapter for crimping dies of Klauke Series 18 e.g.: K18 / EK 50/18-L / PK18 / HK6018 / THK18	UA18
	Adapter for crimping dies of Klauke Series 22 e.g.: K22 / EK 60/22-L / PK22 / HK6022 / THK22	UA22
Adapter	cutting	Part No.
	Cutting dies for cutting ACSR cables (Al/St cable) acc. to DIN EN 50182 and EHS guy wire. UCACSR up to max. Ø 40 mm	UCACSR
	Cutting dies for cutting multistranded, non armoured Cu/Al cables. Not for fine stranded cables. up to Ø 26 mm	UC26
	up to Ø 40 mm	UC40
Adapter	punching	Part No.
	Punching adapter for holes in mild steel 3.0 mm. up to Ø 64 mm round up to 92 x 92 mm square up to 46 x 92 mm rectangular	UA6P
Adapter	Special applications	Part No.
	Cutting dies for cutting threaded rods: Thread, metric M5	UCM5
	Thread, metric M6	UCM6
	Thread, metric M8	UCM8
	Thread, metric M10	UCM10
	Thread, metric M12	UCM12
	Thread, inch 1/4"	UCUNC14
	Thread, inch 3/8"	UCUNC38
	Thread, inch 1/2"	UCUNC12
	Cutting dies for DIN rails: DIN rails 35 x 15	UCD3515
	DIN rails 32 x 15 x 9	UCD3215
	DIN rails 35 x 7.5	UCD3575
	Cutting dies for cutting: DIN rail 2980	UCN2980
	Dies for punching DIN rails: (35 x 15; 32 x 15 x 9; 35 x 7.5)	UPD6
	Cutting die for laminated copper busbars including insulation, max. width 37.5 mm	UCF





■ **EK 120 UNV-L**

Battery powered universal tool 10 - 400 mm²

- One head for crimping, cutting and punching
- Adapter for crimping dies of Klauke Series 13
- Various cutting dies for Al- and Cu- cables with and without armouring as well as Al/St-Cables (ACSR)
- Dies for cutting threaded rods and DIN rails
- Punching adapter for Greenlee punching tools
- Dies to punch DIN rails

Characteristics

- Universal head flip-top style, rotatable
- Electronic control and monitoring of operation
- One-button operating concept for controlling all tooling functions
- Ergonomic 2-component plastic housing with soft linings for comfortable and safe one hand operation
- Balanced centre of gravity for easy handling and effortless operations
- LED for workplace illumination
- High-performance 18V Lithium-ions batteries with high capacity and extremely short charging time
- High-performance motors for maximum operating speed
- 2-stage hydraulic system with fast feed and power stroke
- Energy saving function by stopping motor after successful operation
- Quick motor stop for high user safety
- Automatic retraction when operation is complete
- Manual retract in case of need
- Manual retract stop with "teach-in" (MRS+) for positioning control in case of multiple crimpings
- Light diode for maintenance control, charge level indicator of the batteries and for data transmission via USB-Adapter

Technical data	
Crimping force:	108 kN
Stroke:	42 mm
Crimping range:	10 - 400 mm ²
Crimping cycle:	depending on size
Number of crimps:	approx. 110 for 150 mm ² Cu DIN
Cutting range:	max. Ø 40 mm
Number of cuts:	depending on size
Punching capacity:	up to Ø 144 mm round up to 138 x 138 mm square
Battery voltage:	18 V
Battery capacity:	3.0 Ah, Li-Ion
Charging time:	22 min.
Weight:	6,3 kg
Ambient temperature:	-20° C up to +40° C

Item	Part No.	
Battery powered universal tool 10 - 400 mm ²	EK120UNVL	
Scope of supply	Part No.	Page
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Plastic case	KK120UNVL	

Accessories	Part No.	Page
18 V Mains adapter for 115 V or 230 V voltage	NG2	376
USB adapter	PGA1	385

Adapter	crimping	Part No.
	Adapter for crimping dies e.g.: EK 120/42-L, PK 120/42, THK 120 etc.	UA5
Adapter	cutting	Part No.
	Cutting dies for cutting ACSR cables (Al/St cable) acc. to DIN EN 50182 and EHS guy wire. UCACSR up to max. Ø 40 mm	UCACSR
	Cutting dies for cutting multistranded, non armoured Cu/Al cables. Not for fine stranded cables. up to Ø 26 mm	UC26
	up to Ø 40 mm	UC40
Adapter	punching	Part No.
	Punching adapter for holes in mild steel 3.0 mm. up to Ø 144 mm round up to 138 x 138 mm square up to 68 x 138 mm rectangular	UA6P
Adapter	Special applications	Part No.
	Cutting dies for cutting threaded rods: Thread, metric M5	UCM5
	Thread, metric M6	UCM6
	Thread, metric M8	UCM8
	Thread, metric M10	UCM10
	Thread, metric M12	UCM12
	Thread, inch 1/4"	UCUNC14
	Thread, inch 3/8"	UCUNC38
	Thread, inch 1/2"	UCUNC12
	Cutting dies for DIN rails: DIN rails 35 x 15	UCD3515
	DIN rails 32 x 15 x 9	UCD3215
	DIN rails 35 x 7.5	UCD3575
	Cutting dies for cutting: DIN rail 2980	UCN2980
	Dies for punching DIN rails: (35 x 15; 32 x 15 x 9; 35 x 7.5)	UPD6
	Cutting die for laminated copper busbars including insulation, max. width 37.5 mm	UCF



Many heads, even more potentials.

Crimping, cutting and universal heads for modular systems.

Klauke crimping, cutting and universal heads can be individually configured with Klauke system pumps for special applications. We offer an extensive range as well as crimping tools for workbench mounting.

Typical applications for workbench-mounted tools include cable harness assembly and assembly preparations.



- Crimping heads with crimping forces of 55 kN to 450 kN.
- Cutting heads up to Ø 120 mm.
- Individually configurable using drive units with 700 bar pressure.
- Hydraulic crimping tools for workbench mounting for Klauke 18, 22 and 13 die series.

The correct crimping head for every application.

Tool	Crimping force	Crimping range	Series	Features
PK 18 	60 kN	6 – 185 mm ²	18 Klauke	For standardised crimping dies to DIN 48083, sheet 1.
PK 22 	60 kN	6 – 300 mm ²	22 Klauke	Slim crimping head – ideal when space is critical.
PK 60 VP 	55 kN	10 – 240 mm ²		"The patented centering system guarantees every time optimum crimping results.
PK 60 VP/FT 	55 kN	16 – 300 mm ²		Closed crimping head – ideal for utility lines construction.
PK 120/42 	120 kN	10 – 400 mm ²	13 Klauke	42 mm opening width.
PK 120 U 	120 kN	10 – 400 mm ²	13 Klauke	H-head for deep groove crimping.
PK 25/2 	250 kN	16 – 625 mm ²	25 Klauke	For standardised crimping dies to DIN 48083, sheet 3.
PK 45 	450 kN	120 – 1000 mm ²	45 Klauke	Sturdy construction.
THK 18 	60 kN	6 – 185 mm ²	18 Klauke	For workbench mounting, BG-compliant design.
THK 22 	60 kN	6 – 300 mm ²	22 Klauke	
THK 120 	120 kN	10 – 400 mm ²	13 Klauke	

Improved cutting using the correct cutting heads.

Tool	Cutting force	Cutting range ¹⁾ Ø	Head type	Material				Features
				Cu/Al, stranded	Cu/Al Armoured	Al/St St Solid	Cu/Al, solid	
SDG 45 	60 kN	45 mm	Closed	✓	✓	✓	✓	Especially for Al/St ropes of up to Ø 45 mm.
SDG 50 	60 kN	48 mm	Closed	✓	✓ ²⁾			For stranded Al and Cu cables.
SDG 55 	120 kN	55 mm	Closed	✓	✓	✓	✓	With 120 kN cutting force for all cables and Al/St ropes up to Ø 55 mm.
SDK 65 	42 kN	65 mm	Open	✓	✓ ²⁾			Ideal for cutting earth cables up to Ø 65 mm.
SDG 85/2 	60 kN	85 mm	Closed	✓	✓ ²⁾			For cutting copper and aluminium cables up to Ø 85 mm.
SDK 85 	30 kN	85 mm	Open	✓	✓ ²⁾			For cutting telecommunication and earth cables up to Ø 85 mm.
SDG 105 	120 kN	105 mm	Closed	✓	✓		✓ ²⁾	Very wide cutting range up to Ø 105 mm – also for armoured cables.
SDK 105 	74 kN	105 mm	Open	✓	✓			Also for fine stranded cables up to Ø 105 mm.
SDK 120 	55 kN	120 mm	Open	✓	✓ ^{2)∞}			Extremely large cutting range up to Ø 120 mm.

¹⁾ The exact cutting capacity depends on the type of cable or rope.

²⁾ Sheet metal and wire armouring, Cu



■ **PK 18**

Hydraulic crimping head 6 - 185 mm²

- For dies acc. to DIN 48083, sheet 1
- Crimping dies are connected by spring - cannot get lost

Characteristics

- For interchangeable dies, series 18, narrow crimping
- Closed crimping head with quick coupling, flip top style, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	60 kN
Crimping range:	6 - 185 mm ²
Stroke / opening width:	17 mm
Operating pressure:	max. 700 bar
Length:	310 mm
Weight:	3.2 kg

Item	Part No.
Hydraulic crimping head 6 - 185 mm ²	PK18
Scope of supply	Part No.
Carrying bag	TT2



18
Klauke



■ **THK 18**

Hydraulic crimping tool for work bench mounting 6 - 185 mm²

- For dies acc. to DIN 48083, sheet 1
- For workbench mounting
- BG-compliant version

Characteristics

- For interchangeable dies, series 18, narrow crimping
- Quick action coupling
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	60 kN
Crimping range:	6 - 185 mm ²
Operating pressure:	max. 700 bar
Dimension:	220 x 160 x 120 mm (H x B x T)
Weight:	8.2 kg

Item	Part No.
Hydraulic crimping tool for work bench mounting 6 - 185 mm ²	THK18

18
Klauke

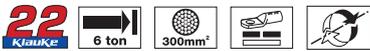


Available dies for PK 18 and THK 18

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		6 - 185		401
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10 - 95		401
Tubular cable lugs and connectors for fine stranded conductors		10 - 50		402
Tubular cable lugs and connectors for solid conductors		1.5 - 16		402
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and compression joints acc. to DIN	DIN 	6 - 185		402
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors (DIN 46341) and Pin terminals (DIN 46230)		10 - 70		402
Insulated solderless terminals		10 - 50		403
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm – 240se / 185sm		403
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors	Al 	10 - 185		403
Compression joints for full-tension connections of Aldrey conductors acc. to DIN EN 50182	Al 	25 - 95		404
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 185		403
Clamps and screw connectors				
Clamps, C-type		4 - 50		404
Cable end sleeves				
Cable end sleeves		10 - 95		404
Twin cable end-sleeves		2 x 4 - 2 x 16		404
Cable end-sleeves, for fine stranded conductors		10 - 95		405
Twin cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		405
Cutting die		Ø 18 mm		405

Please observe the restrictions in the technical index when crimping connectors!





PK 22

Hydraulic crimping head 6 - 300 mm²

- Large crimping range up to 300 mm²
- Slim crimping head - ideal when space is critical

Characteristics

- For interchangeable dies, series 22, narrow crimping
- Closed crimping head with quick coupling, flip top style, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	60 kN
Crimping range:	6 - 300 mm ²
Stroke / opening width:	17 mm
Operating pressure:	max. 700 bar
Length:	305 mm
Weight:	3.0 kg

Item	Part No.	
Hydraulic crimping head 6 - 300 mm ²	PK22	
Hydraulic crimping head, UL-certified version, 6 - 300 mm ²	PK22W	
Scope of supply	Part No.	Page
Carrying bag	TT2	



THK 22

Hydraulic crimping tool for work bench mounting 6 - 300 mm²

- Large crimping range up to 300 mm²
- For workbench mounting
- BG-compliant version

Characteristics

- For interchangeable dies, series 22, narrow crimping
- Quick action coupling
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	60 kN
Crimping range:	6 - 300 mm ²
Operating pressure:	max. 700 bar
Dimension:	220 x 160 x 120 mm (H x B x T)
Weight:	8.8 kg

Item	Part No.
Hydraulic crimping tool for work bench mounting 6 - 300 mm ²	THK22

Available dies for PK22 and THK 22

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable-lugs and connectors "standard type", tubular cable lugs for switchgear connections		6-300		406
Insulated cable lugs and compression joints, "standard type", insulated pin terminals		10-150		406
Tubular cable lugs and connectors fine stranded conductors		10-70		407
Tubular cable lugs and connectors for solid conductors		1.5-16		407
Tubular cable lugs and connectors, Ni, VA				
Stainless steel tubular cable lugs and connectors	VA 	0,5 - 16		407
Nickel tubular cable lugs and connectors	Ni 	10 - 50		407
Copper compression cable lugs and connectors to DIN				
Compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	6-300		407
Double compression cable lugs	DIN 	2 x 50 - 2 x 70		408
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		10-70		408
Insulated solderless terminals		10-70		408
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm- 300se/240sm		408
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10-240		409
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25-185		409
Compression joints DIN 48085, part 3 for Al-/steel conductors DIN EN 50182	Al 	25 / 4- 120 / 20		409
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10-240		409
Clamps and screw connectors				
Clamps, C-type		4-50		410
Clamps, H-type		70		410
Cable end sleeves				
Cable end sleeves		10-240		410
Twin cable end-sleeves		2 x 4 - 2 x 16		411
Cable end-sleeves, for fine stranded conductors		10-240		411
Twin cable end-sleeves for fine stranded conductors		2 x 4 - 2 x 16		411

Please observe the restrictions in the technical index when crimping connectors!





PK 60 VP

Hydraulic crimping head 10 - 240 mm²

- Suitable for crimping tubular cable lugs and connectors "standard type" and tubular cable lugs and fine and superfine stranded conductors to 240 mm²
- The patented centering system guarantees every time optimum crimping results

Characteristics

- Quad-point indent crimping
- No dies required, wide crimping
- Open crimping head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	55 kN
Crimping range:	10 - 240 mm ²
Operating pressure:	max. 700 bar
Length:	305 mm
Weight:	2.8 kg

Item	Part No.	
Hydraulic crimping head 10 - 240 mm ²	PK60VP	
Scope of supply	Part No.	Page
Carrying bag	TT2	

Suitable for	Connection material	Crimping range mm ²	Crimp profile
Tubular cable-lugs "standard type", Tubular cable-lugs for switch gear connections		10 - 240	
Connectors "standard type"		10 - 120	
Tubular cable-lugs for fine stranded conductors		10 - 240	
Connectors for fine stranded conductors		10 - 95	



■ **PK 60 VP/FT**

Hydraulic crimping head 16 - 300 mm²

- Suitable for crimping tubular cable lugs and connectors "standard type" and tubular cable lugs and fine and superfine stranded conductors to 300 mm²
- The patented centering system guarantees every time optimum crimping results
- Closed crimping head - ideal for utility lines construction

Characteristics

- Quad-point indent crimping
- No dies required, wide crimping
- Closed crimping head with quick coupling, flip top style, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results



Technical data	
Crimping force:	55 kN
Crimping range:	16 - 300 mm ²
Operating pressure:	max. 700 bar
Length:	315 mm
Weight:	2.8 kg



Item	Part No.	
Hydraulic crimping head 16 - 300 mm ²	PK60VPFT	
Scope of supply	Part No.	Page
Carrying bag	TT2	

Suitable for	Connection material	Crimping range mm ²	Crimp profile
Tubular cable-lugs and connectors "standard type" Tubular cable lugs for switch gear connection		16 - 300	
Tubular cable lugs and compression joints for fine stranded conductors		16 - 300	



■ **PK 120/42**

Hydraulic crimping head 10 - 400 mm²

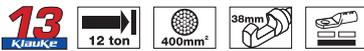
- Large crimping range up to 400 mm²
- C-head with 42 mm opening width
- Up to 60% less crimping operations due to wide crimping compared to 6 ton tools

Characteristics

- For 13-series interchangeable dies, wide crimping
- Crimping head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	120 kN
Crimping range:	10 - 400 mm ²
Stroke / opening width:	42 mm
Operating pressure:	max. 700 bar
Length:	335 mm
Weight:	4.5 kg

Item	Part No.	Page
Hydraulic crimping head 10 - 400 mm ²	PK12042	
Scope of supply	Part No.	Page
Carrying bag	TT2	



■ **THK 120**

Hydraulic crimping tool for work bench mounting 10 - 400 mm²

- Large crimping range up to 400 mm²
- For workbench mounting
- BG-compliant version

Characteristics

- For 13-series interchangeable dies, wide crimping
- Quick action coupling
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	120 kN
Crimping range:	10 - 400 mm ²
Operating pressure:	max. 700 bar
Dimension:	285 x 160 x 110 mm (H x B x T)
Weight:	12.0 kg

Item	Part No.
Hydraulic crimping tool for work bench mounting 10 - 400 mm ²	THK120



Available dies for PK 120/42 and THK 120

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN	DIN 	16 - 300		413
Double compression cable lugs	DIN 	2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182	Al 	25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





■ **PK 120 U**

Hydraulic crimping head 10 - 400 mm²

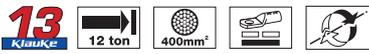
- **H-head for deep groove crimping**
- **Up to 60% less crimping operations due to wide crimping compared to 6 ton tools**

Characteristics

- For 13-series interchangeable dies, wide crimping
- H-Form crimping head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	120 kN
Crimping range:	10 - 400 mm ²
Stroke / opening width:	20 mm
Operating pressure:	max. 700 bar
Length:	320 mm
Weight:	3.7 kg

Item	Part No.	Page
Hydraulic crimping head 10 - 400 mm ²	PK120U	
Scope of supply	Part No.	Page
Carrying bag	TT2	



Available dies for PK 120 U

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable lugs and connectors, "standard type", tubular cable lugs for switchgear connections		16 - 400		412
Insulated cable lugs and compression joints, "standard type"		10 - 150		412
Tubular cable lugs and connectors for fine stranded conductors		16 - 150		413
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs and connectors to DIN	DIN 	16 - 300		413
Double compression cable lugs	DIN 	2 x 50 - 2 x 95		413
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 150		414
Insulated solderless terminals		10 - 95		414
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		414
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	10 - 240		415
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 185 mm ²	Al 	25 - 185		415
Compression joints acc. to DIN 48085, part 3 for Al/St-cable acc. to DIN EN 50182	Al 	25 / 4 - 120 / 20		415
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors	Al/Cu 	10 - 240		415
Clamps and screw connectors				
Clamps, C-type		10 - 70		416
Clamps, H-type		70 - 120		416
Cable end sleeves				
Cable end sleeves		25 - 240		417
Cable-end sleeves special trapezoid crimp for fine stranded conductors		25 - 240		417

Please observe the restrictions in the technical index when crimping connectors!





■ **PK 25/2**

Hydraulic crimping head 16 - 625 mm²

- For dies acc. to DIN 48083, sheet 3
- Very large crimping range to 625 mm²

Characteristics

- For 25-series interchangeable dies, wide crimping
- Crimping head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	250 kN
Crimping range:	16 - 625 mm ²
Stroke / opening width:	20 mm
Operating pressure:	max. 700 bar
Length:	335 mm
Weight:	5.3 kg

Item	Part No.	
Hydraulic crimping head 16 - 625 mm ²	PK252	
Scope of supply	Part No.	Page
Carrying bag	TT2	



Available dies for PK 25/2

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper tubular cable lugs and connectors				
Tubular cable-lugs and connectors "standard type", tubular cable lugs for switchgear connections		16 - 400		418
Copper insulated cable lugs and connectors, insulated pin terminals		10 - 150		418
Tubular cable lugs and connectors for fine stranded conductors		16 - 300		419
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	16 - 625		419
Double compression cable lugs	DIN 	2 x 50 - 2 x 120		419
Terminals, connectors and pin terminals to DIN.-Cu				
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN		16 - 240		420
Insulated solderless terminals		10 - 150		420
Sleeves for compacted conductors and sector-shaped conductors, copper				
Pre-rounding dies for sector-shaped Al and Cu conductors		10sm - 300sm		420
Aluminium compression cable lugs and connectors to DIN				
Aluminium/copper compression cable lugs and connectors acc. to DIN	Al 	10 - 500		421
Compression joints connections for Aldrey-conductors DIN EN 50182, Al-conductors DIN EN 50182, 120 – 300 mm ²	Al 	25 - 300		421
Compression joints DIN 48085, part 3 for Al-conductors DIN EN 50182	Al 	25 / 4 - 120 / 20		421
Aluminium/copper compression cable lugs and connectors				
Aluminium/copper compression cable lugs and connectors acc. to DIN	Al/Cu 	10 - 500		421
Clamps and screw connectors				
Clamps, C-type		10 - 185		422
Clamps, H-type		70 - 120		422
Cable end sleeves				
Cable end sleeves		25 - 240		423
Cable-end sleeves special trapezoid crimp for "compacted" fine stranded conductors		25 - 240		423

Please observe the restrictions in the technical index when crimping connectors!





PK 45

Hydraulic crimping head 120 - 1,000 mm²

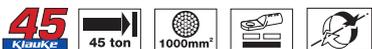
- **Very large crimping range to 1,000 mm²**
- **Sturdy construction**

Characteristics

- For 45-series interchangeable dies, wide crimping
- Crimping head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping results

Technical data	
Crimping force:	450 kN
Crimping range:	120 - 1,000 mm ²
Operating pressure:	max. 700 bar
Height:	265 mm
Weight:	10.3 kg

Item	Part No.	
Hydraulic crimping head 120 - 1,000 mm ²	PK45	
Scope of supply	Part No.	Page
Carrying bag	TT2	



Available dies for PK 45

Suitable for	Connection material	Crimping range mm ²	Crimp profile	Page
Copper compression cable lugs and connectors to DIN				
Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN	DIN 	120 - 1000		424
Aluminium compression cable lugs and connectors to DIN				
Aluminium compression cable lugs and connectors to DIN	Al 	150 - 500		424
Compression joints for full tension connections of Al-conductors acc. to DIN EN 50182	Al 	150 - 300		424

SDG 45

Hydraulic cutting head Ø 45 mm

- **Cuts armoured copper and aluminium cables and Al/St cables (ACSR)**
- **Also suitable for round material made of Al, Cu and Steel**
- **Extremely sturdy design**

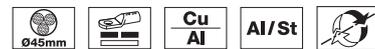
Characteristics

- Closed head with bolt interlock, flip open jaws
- Cutting head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for the best possible cutting results

Technical data	
Cutting range:	max. Ø 45 mm (e.g. Al/St cable 570/40)
Cutting force:	60 kN
Operating pressure:	max. 700 bar
Length:	340 mm
Weight:	3.8 kg

Item	Part No.	
Hydraulic cutting head Ø 45 mm	SDG45	
Scope of supply	Part No.	Page
Carrying bag	TT2	

Accessories	Part No.	Page
Outer, fixed blade	ESG45EF	
Inner, moving blade	ESG45ES1	



ESG45EF



ESG45ES1

SDG 50

Hydraulic cutting head Ø 48 mm

- **Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)**
- **Low weight**

Characteristics

- Closed crimping head, flip top style
- Cutting head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive units with 700 bar operating pressure for the best possible cutting results

Technical data	
Cutting range:	max. Ø 48 mm (e.g. 4 x 120 mm² NYN)
Cutting force:	60 kN
Operating pressure:	max. 700 bar
Length:	330 mm
Weight:	2.5 kg

Item	Part No.	
Hydraulic cutting head Ø 48 mm	SDG50	
Scope of supply	Part No.	Page
Carrying bag	TT2	204

Accessories	Part No.	Page
Outer, fixed blade	ESG50EF1	
Inner, moving blade	ESG50ES	



ESG50EF1



ESG50ES



SDG 55

Hydraulic cutting head Ø 55 mm

- Cuts armoured copper and aluminium cables and Al/St cables (ACSR)
- Also suitable for round material made of Al, Cu and Steel
- 120 kN Cutting force for maximum output

Characteristics

- Closed cutting head with bolt interlock, flip top style, under no pressure, rotates 360°, with quick coupling
- For connecting to hydraulic drive unit with 700 bar operating pressure
- Ergonomic handling through handle

Technical data	
Cutting range:	max. Ø 55 mm
Cutting force:	120 kN
Operating pressure:	max. 700 bar
Length:	380 mm
Weight:	5.6 kg



ESG55EF



ESG55ES

Item	Part No.	Page
Hydraulic cutting head Ø 55 mm	SDG55	
Scope of supply	Part No.	Page
Carrying bag	TT2	204

Accessories	Part No.	Page
Outer fixed blade	ESG55EF	
Inner, moving blade	ESG55ES	



SDK 65

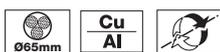
Hydraulic cutting head Ø 65 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Also suitable for fine stranded cable

Characteristics

- Open cutting head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive unit with 700 bar operating pressure
- High ground stability by double stops

Technical data	
Cutting range:	max. Ø 65 mm
Cutting force:	42 kN
Operating pressure:	max. 700 bar
Length:	425 mm
Weight:	4.7 kg



ES65E

Item	Part No.	Page
Hydraulic cutting head Ø 65 mm	SDK65	
Scope of supply	Part No.	Page
Carrying bag	TT2	204

Accessories	Part No.	Page
Spare blade	ES65E	

■ SDG 85/2

Hydraulic cutting head Ø 85 mm



- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- High user safety through cutting head with bolt interlock
- Exceptionally light and compact design

Characteristics

- Closed cutting head with bolt interlock, flip top style, under no pressure, rotates 360°, with quick coupling
- For connecting to hydraulic drive unit with 700 bar operating pressure
- Handle enables easy handling

Technical data	
Cutting range:	max. Ø 85 mm
Cutting force:	60 kN
Operating pressure:	max. 700 bar
Length:	445 mm
Weight:	4.3 kg

Item	Part No.
Hydraulic cutting head Ø 85 mm	SDG852
Scope of supply	Part No. Page
Carrying bag	TT2 204

Accessories	Part No.	Page
Outer fixed blade	ESG85EF1	
Inner, moving blade	ESG85ES1	



ESG85EF1



ESG85ES1

■ SDK 85

Hydraulic cutting head Ø 85 mm



- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Suitable for fine stranded cable and Telecommunication cable
- Exceptionally light and compact design

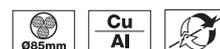
Characteristics

- Open cutting head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive unit with 700 bar operating pressure
- High ground stability by double stops
- Uniform cut by knife guide

Technical data	
Cutting range:	max. Ø 85 mm
Cutting force:	30 kN
Operating pressure:	max. 700 bar
Length:	450 mm
Weight:	5,2 kg

Item	Part No.
Hydraulic cutting head Ø 85 mm	SDK85
Scope of supply	Part No. Page
Carrying bag	TT2 204

Accessories	Part No.	Page
Spare blade	ES85E	



ES85E



SDG 105

Hydraulic cutting head Ø 105 mm

- Cuts copper and aluminium cables (for armoured cables)
- 120 kN Cutting force for extremely wide cutting range up to Ø 105 mm
- Exceptionally light and compact design

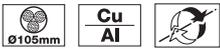
Characteristics

- Closed cutting head with bolt interlock, under no pressure, rotates 360°
- For connecting to hydraulic drive unit with 700 bar operating pressure
- Compact design permits cutting also in constricted places
- Easy handling by user handle

Technical data	
Cutting range:	max. Ø 105 mm
Cutting force:	120 kN
Operating pressure:	max. 700 bar
Length:	432 mm
Weight:	7,7 kg

Item	Part No.	Page
Hydraulic cutting head Ø 105 mm	SDG105	
Scope of supply	Part No.	Page
Carrying bag	TT2	204

Accessories	Part No.	Page
Outer fixed blade	ESG105EF	
Inner, moving blade	ESG105ES	



ESG105EF



ESG105ES



SDK 105

Hydraulic cutting head Ø 105 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Extremely wide cutting range up to Ø 105 mm – also for fine stranded cables
- Exceptionally light and compact design

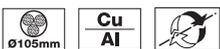
Characteristics

- Open cutting head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive unit with 700 bar operating pressure
- High ground stability by double stops

Technical data	
Cutting range:	max. Ø 105 mm
Cutting force:	74 kN
Operating pressure:	max. 700 bar
Length:	510 mm
Weight:	7,7 kg

Item	Part No.	Page
Hydraulic cutting head Ø 105 mm	SDK105	
Scope of supply	Part No.	Page
Carrying bag	TT4	204

Accessories	Part No.	Page
Spare blade	ES105E	



ES105E

■ **SDK 120**

Hydraulic cutting head Ø 120 mm



- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Extremely wide cutting range up to Ø 120 mm – also for fine stranded cables
- Exceptionally light and compact design

Characteristics

- Open cutting head with quick coupling, under no pressure, rotates 360°
- For connecting to hydraulic drive unit with 700 bar operating pressure
- High ground stability by double stops



Technical data	
Cutting range:	max. Ø 120 mm
Cutting force:	55 kN
Operating pressure:	max. 700 bar
Length:	538 mm
Weight:	8,7 kg



Item	Part No.
Hydraulic cutting head Ø 120 mm	SDK120
Scope of supply	Part No.
Carrying bag	TT4



ES120E

Accessories	Part No.	Page
Spare blade	ES120E	



Klauke® multi



PK 60 UNV

Hydraulic universal head

- One head for crimping, cutting and punching
- Adapter for crimping dies of the Klauke Series 5, 18 and 22
- Various cutting dies for aluminium and copper conductors with and without armouring as well as Al/St-Cables (ACSR)
- Dies for cutting threaded rods and DIN rails
- Punching adapter for Greenlee punching tools
- Dies to punch DIN rails

Characteristics

- Universal head with quick coupling, under no pressure, rotates 360°, flip top style
- For connecting to hydraulic drive units with 700 bar operating pressure for best possible crimping, cutting and punching results

Technical data

Crimping force:	60 kN
Stroke / opening width:	20 mm
Operating pressure:	max. 700 bar
Length:	350 mm
Weight:	2.4 kg



5
Klauke

18
Klauke

22
Klauke



Cu
Al

Al/St



Item	Part No.	
Hydraulic universal head	PK60UNV	
Scope of supply	Part No.	Page
Carrying bag	TT2	204

Adapter	crimping	Part No.
	Adapter for crimping dies of Klauke Series 5 e.g.: EK 50/5-L	UA5
	Adapter for crimping dies of Klauke Series 18 e.g.: K18 / EK 50/18-L / PK18 / HK6018 / THK18	UA18
	Adapter for crimping dies of Klauke Series 22 e.g.: K22 / EK 60/22-L / PK22 / HK6022 / THK22	UA22
Adapter	cutting	Part No.
	Cutting dies for cutting ACSR cables (Al/St cable) acc. to DIN EN 50182 and EHS guy wire. UCACSR up to max. Ø 40 mm	UCACSR
	Cutting dies for cutting multistranded, non armoured Cu/Al cables. Not for fine stranded cables. up to Ø 26 mm	UC26
	up to Ø 40 mm	UC40
Adapter	punching	Part No.
	Punching adapter for holes in mild steel 3.0 mm. up to Ø 64 mm round up to 92 x 92 mm square up to 46 x 92 mm rectangular	UA6P
Adapter	Special applications	Part No.
	Cutting dies for cutting threaded rods: Thread, metric M5	UCM5
	Thread, metric M6	UCM6
	Thread, metric M8	UCM8
	Thread, metric M10	UCM10
	Thread, metric M12	UCM12
	Thread, inch 1/4"	UCUNC14
	Thread, inch 3/8"	UCUNC38
	Thread, inch 1/2"	UCUNC12
	Cutting dies for DIN rails: DIN rails 35 x 15	UCD3515
	DIN rails 32 x 15 x 9	UCD3215
	DIN rails 35 x 7.5	UCD3575
	Cutting dies for cutting: DIN rail 2980	UCN2980
	Dies for punching DIN rails: (35 x 15; 32 x 15 x 9; 35 x 7.5)	UPD6
	Cutting die for laminated copper busbars including insulation, max. width 37.5 mm	UCF

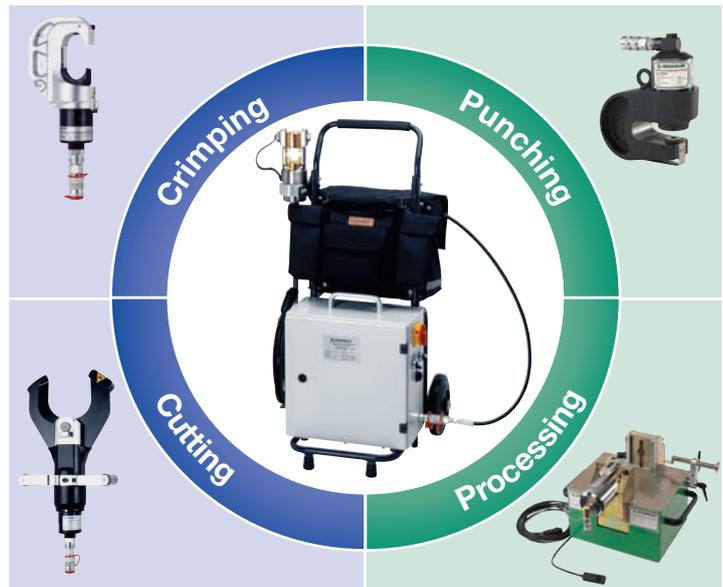


Drive with system.

Hydraulic drive units for Klauke tools.

Klauke stands for connections with system. This stands for both tool and connecting material combinations as well as for individual components within hydraulic tools and systems. All system pumps are capable of driving all Klauke crimping, cutting and universal heads. In addition individual types with appropriate functions can also be connected to the Bus Bar Tool centre.

All system pumps are precisely matched to Klauke tools and generate 700 bar pressure.



■ System pumps with 700 bar pressure.

- Foot pumps
- Electric pumps for 115 V to 400 V
- Battery-powered pumps

■ For driving:

- Crimping heads and crimping tools for workbench mounting
- Cutting heads
- Bus Bar Tool Centre

*Currently the only electro-hydraulic drive unit on the market the **EHP 4** offers the option of regulating the piston feed speed. This enables the selection of the optimum speed for every application.*

■ **FHP 2**

Foot pump 700 bar

- **Two stage hydraulics**
- **Manual retraction in case of need and at high pressure end**
- **Sturdy design**

Characteristics

- For the operation of hydraulic crimping and cutting heads
- Automatic pressure switch off
- High-pressure hose, 2 m

Technical data	
Operating pressure:	max. 700 bar
Weight:	12.0 kg

Item	Part No.
Foot pump 700 bar	FHP2



Accessories	Part No.	Page
High-pressure hose, 2m	HS22	380
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383

■ **PHD 1**

Pneumatic hydraulic booster

- **For use in explosion-proof areas**
- **Manual retraction in case of need and at high pressure end**

Characteristics

- For the operation of hydraulic crimping and cutting heads
- High-pressure hose, 2 m

Technical data	
Required air pressure:	max. 6 bar
Operating pressure:	max. 630 bar
Weight:	6.3 kg

Item	Part No.
Pneumatic hydraulic booster	PHD1





■ **EHP 2**

Electro hydraulic drive units, 700 bar

- **Compact design, lightweight**
- **High capacity**

Characteristics

- Available with 3-phase motor
- For the operation of hydraulic crimping and cutting heads
- High-pressure hose, 2 m
- Connecting cable, 10 m
- Three-stage safety foot switch
- Electronic control
- 70% power-on time

Technical data	
Version:	3-phase motor
Rated output:	0.75 kW
Motor voltage:	360 V - 440 V / 50 Hz
Capacity:	0.82 l/min
Operating pressure:	max. 700 bar
Weight:	22.9 kg

Item	Part No.
Hydraulic drive unit 400 V mains voltage	EHP2380

Accessories	Part No.	Page
Transport trolley	TW50	378
Two hand safety control system	ZST3	379
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383

■ **EHP 3**

Electro hydraulic drive units, 700 bar

- **Continuous operation**
- **High capacity**
- **Compact design**

Characteristics

- 3-phase version
- For the operation of hydraulic crimping and cutting heads
- High-pressure hose, 2 m
- Connecting cable, 10 m
- Three-stage safety foot switch
- Electronic control

Technical data	
Version:	3-phase motor
Rated output:	1.1 kW
Motor voltage:	360 V - 440 V / 50 - 60 Hz
Capacity:	0.9 l/min
Operating pressure:	max. 700 bar
Weight:	40.9 kg
Operating mode:	100% power-on time (ED)

Item	Part No.	
Hydraulic drive unit	EHP3	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Foot switch + connecting cable, 4m	FTA1	379

Accessories	Part No.	Page
Transport trolley	TW50	378
Two hand safety control system	ZST3	379
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383





EHP 4

Electro hydraulic drive unit

- **Manually adjustable piston stroke speed / delivery volume of the pump**
- **Closed, compact and lockable housing (IP54 or higher) to protect against humidity, dust and unauthorised manipulation**
- **High capacity**

Characteristics

- Compatibility with hydraulic crimping and cutting heads of Klauke
- To connect busbar tool centre with Adapter CMGSK
- For use in conjunction with the LSK 120 with adapter CMGSK for punching bus bars
- Compatibility with Greenlee punching tools (Round and special shape punches) with Adapter CMGSK

Order info

- The hydraulic drive units can be individually configured as customer-specific system.

Technical data			
	EHP 4/115	EHP 4/230	EHP 4/400
Version:	Alternating current	Alternating current	3-phase motor
Rated output:	0.75 kW	0.75 kW	0.75 kW
Motor voltage:	115V / 50 Hz	230V / 50 Hz	400V / 50 Hz
Capacity:	0.82 l/min	0.82 l/min	0.82 l/min
Operating pressure:	max. 700 bar	max. 700 bar	max. 700 bar
Weight:	28.3 kg	28.3 kg	28.3 kg
Operating mode:	70% power-on time	70% power-on time	70% power-on time

Item	Part No.
Electro-Hydraulic drive unit 115V	EHP4115
Electro-Hydraulic drive unit 230V	EHP4230
Electro-Hydraulic drive unit 400V	EHP4400

Accessories	Part No.	Page
Two hand safety control system	ZST3	379
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383
Adapter Klauke gland to Greenlee connector	CMGSK	

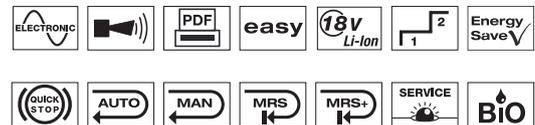
■ AHP 700-L / AHP 700-LC

Battery powered hydraulic drive units, 700 bar

- **Compact and lightweight design** For mobile field application
- **High capacity**
- **Suitable for operating single acting crimping and cutting tools of 700 bar pressure**

Characteristics

- Selector switch for crimping, cutting and punching operations
- Shock proof housing made of fibreglass reinforced Polyamid
- Large display indicates function selection, pressure readings, battery condition and diagnosis information
- Two powerful 18V Li-Ion batteries of high capacity
- Powerful motor for maximum operating speed
- Automatic retraction
- Manual retract override button
- Manual retraction stop with „teach in“ (MRS+)
- Remote control with cable for easy operation of the drive unit
- Integrated storage pocket for remote control
- LED for maintenance control, charge level indication of batteries and for data transmission via USB adapter
- Environmentally friendly hydraulic oil, quickly biodegradable
- All high pressure hoses are supplied with coupling plug and coupling sleeve, filled with oil
- Cushioned shoulder strap for optimum wearing comfort



Technical data	
Operating pressure:	max. 700 bar
Oil volume:	approx. 800 ml
Battery voltage:	18V
Flow rate low pressure range:	up to 0.9 l/min
Flow rate high pressure range:	0.3 l/min
Battery voltage:	3.0 Ah, Li-Ion
Battery capacity:	22 min.
Weight with two batteries:	approx. 6.4 kg
Type of protection:	IP 43
Ambient temperature:	-15°C up to +40°C
Dimensions (LxWxH):	330 x 160 x 280 mm

Item	Part No.
Battery-operated hydraulic drive unit with Cejn coupling	AHP700L
Battery-operated hydraulic drive unit with China coupling	AHP700LC
Scope of supply	Part No.
2 batteries 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2
Quick charger for 18V Li-Ion-batteries	LGL1
High pressure hose, 2m, filled with oil	HSOEL2*
Adjustable cushioned shoulder strap	TG3
Carrying bag for batteries and charger	TT2
Remote control with 1.5 m cable	HTA4
Accessories	Part No.
High pressure hose, 3m, filled with oil	HSOEL3*
High pressure hose, 4m, filled with oil	HSOEL4*
High pressure hose, 5m, filled with oil	HSOEL5*
High pressure hose, 6m, filled with oil	HSOEL6*
High pressure hose, 8m, filled with oil	HSOEL8*
High pressure hose, 10m, filled with oil	HSOEL10*
18 V mains adapter for 230 V	NG2230
USB adapter	PGA1
Digital meter for force and pressure measurement	TC1U
Two-hand safety control	ZST4
Foot switch	FTA4
Pressure sensor 1000 bar	TP1000

* for AHP700LC part number appendix "C"



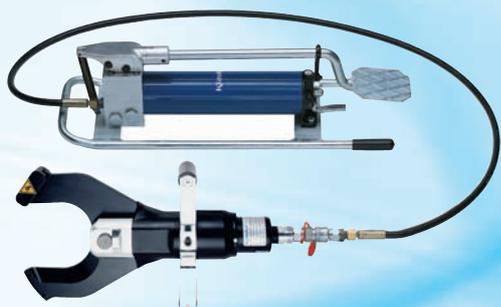
System solutions

for special requirements.

Hydraulic systems for crimping, cutting, bending and punching.

Hydraulic systems offer a great number of applications: crimping especially large connecting materials, cutting cables with large diameters or cutting live cables in case of failure. The scope of supply includes drive units, tools, high-pressure hoses and transport aids such as boxes or trolleys.

Thanks to the various drive types, e.g. with foot pump and/or electric or petrol motor-driven hydraulic pumps there are manifold solutions for every application.



- Hydraulic crimping system to 450 kN.
- Hydraulic cutting systems to Ø 120 mm.
- GS-tested safety cutting tools.



■ Ideal for large cross sections and diameters.

- ▶ Crimping systems with 450 kN crimping force for nominal cross sections up to 1000 mm².
- ▶ Hydraulic cutting systems for copper and aluminium cables without armouring up to Ø 120 mm.
- ▶ Extremely sturdy crimping and cutting heads.
- ▶ **Systems can be configured** with various hose lengths from 2 m to 10 m.
- ▶ Drive with foot pump or 230 V and/or 400 V electric pumps and also with hydraulic pumps with combustion engine.



Benefits:

- ▶ Perfectly matched crimping and cutting systems are available for frequent applications.
- ▶ Systems with foot pumps work without an external power supply and are ideal for mobile use.
- ▶ Crimping and cutting systems with electric pumps offer increased comfort.
- ▶ Systems with combustion engine are always used where no external power source is available.
- ▶ The various hose lengths allow optimised adjustment to individual working situations.

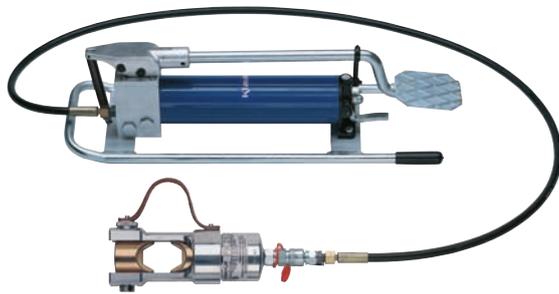
■ Safe cutting operations even in case of failure.

- ▶ Tested safety cutting devices for cutting live cables in case of failure.
- ▶ Tested tools certified to GS.
- ▶ With electro hydraulic drive or with foot pump.

Benefits:

- ▶ Increased safety **since live cables can be cut without risk.**
- ▶ These cutting tools tested by government safety organisation offer highest safety for the user.
- ▶ Thanks to its compact design the electro-hydraulic version is much lighter than alternative systems.





HK 25/2

Hydraulic crimping tool with foot pump 16 - 625 mm²

- Extremely wide cross section range up to 625 mm²
- Hydraulic system with 250 kN crimping force
- Foot pump with two-stage hydraulics

Characteristics

- For 25-series interchangeable dies, wide crimping
- H-Form crimping head with quick coupling, under no pressure, rotates 360°
- High-pressure hose, 2 m
- Manual retraction in case of need and at high pressure end

Order info

- The wide choice of available dies for the crimping head can be found in the catalog under Part-Number PK252.

Technical data	
Crimping force:	250 kN
Crimping range:	16 - 625 mm ²
Operating pressure:	max. 700 bar
Weight:	17.6 kg

Item	Part No.	
Hydraulic crimping tool with foot pump 16 - 625 mm ²	HK252	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Steel carrying case	MKU	204

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383



■ **HK 45**

Hydraulic crimping tool with foot pump 120 - 1,000 mm²

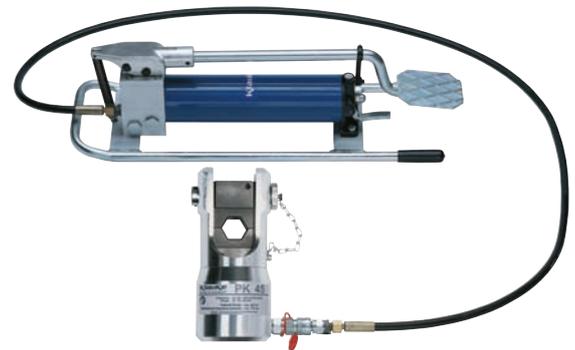
- **Extremely large cross section range to 1,000 mm²**
- **Hydraulic system with 450 kN crimping force**
- **Foot pump with two-stage hydraulics**

Characteristics

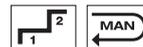
- For 45-series interchangeable dies, wide crimping
- Crimping head, H-shape with quick coupling
- Manual retraction in case of need and at high pressure end
- High-pressure hose, 2 m

Order info

- The wide choice of available dies can be found in the catalog under Part-Number PK45.



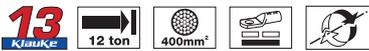
Technical data	
Crimping force:	450 kN
Crimping range:	120 - 1,000 mm ²
Operating pressure:	max. 700 bar
Weight:	23.0 kg



Item	Part No.	
Hydraulic crimping tool with foot pump 120 - 1000 mm ²	HK45	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Steel carrying case	MKU	204

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383





■ **HK 12/2**

Hydraulic crimping tool, combination with hydraulic drive units
16 - 400 mm²

- Large cross section range up to 400 mm²
- C-head with 42 mm opening width
- For portable use

Characteristics

- For 13-series interchangeable dies, wide crimping
- C-Form crimping head with quick coupling, under no pressure, rotates 360°
- Electronic control available either with 3-phase motor or with AC motor
- High-pressure hose, 2 m
- Connecting cable, 10 m

Order info

- The wide choice of available dies can be found in the catalog under Part-Number PK12042.

Technical data		
	HK 12/2 EL/380	HK 12/2 EL/220
Version:	3-phase motor 400 V	AC motor 230 V
Rated output:	0.75 kW	0.75 kW
Motor voltage:	360 V - 440 V / 50 Hz	230 V / 50 Hz
Capacity:	0.82 l/min	0.9 l/min
Crimping range:	16 - 400 mm ²	16 - 400 mm ²
Crimping force:	120 kN	120 kN
Operating pressure:	max. 700 bar	max. 700 bar
Weight:	44.5 kg	52.8 kg

Item	Part No.	
Hydraulic crimping tool with electric Hydraulic unit 400 V mains voltage	HK122EL380	
Hydraulic crimping tool with electric Hydraulic unit 230 V mains voltage	HK122EL220	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Foot switch + connecting cable, 4m	FTA1	379
Transport trolley	TW50	378

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383

■ HK 25/2

Hydraulic crimping tool, combination with hydraulic drive units
16 - 625 mm²

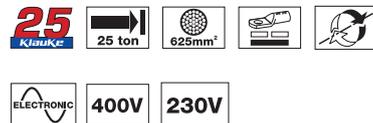
- Extremely wide cross section range up to 625 mm²
- Crimping head, H-shape
- For portable use

Characteristics

- For 25-series interchangeable dies, wide crimping
- H-Form crimping head with quick coupling, under no pressure, rotates 360°
- Electronic control available either with 3-phase motor or with AC motor
- High-pressure hose, 2 m
- Connecting cable, 10 m

Order info

- The wide choice of available dies can be found in the catalog under Part-Number PK252.



Technical data		
	HK 25/2 EL/380	HK 25/2 EL/220
Version:	3-phase motor 400 V	AC motor 230 V
Rated output:	0.55 kW	0.75 kW
Motor voltage:	360 V - 440 V / 50 Hz	230 V / 50 Hz
Capacity:	0.82 l/min	0.9 l/min
Crimping range:	16 - 625 mm ²	16 - 625 mm ²
Crimping force:	250 kN	250 kN
Operating pressure:	max. 700 bar	max. 700 bar
Weight:	45.9 kg	53.0 kg

Item	Part No.	
Hydraulic crimping tool with electric Hydraulic unit 400 V mains voltage	HK252EL380	
Hydraulic crimping tool with electric Hydraulic unit 230 V mains voltage	HK252EL220	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Foot switch + connecting cable, 4m	FTA1	379
Transport trolley	TW50	378

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383



AS 65 FHP

Hydraulic cutting tool with foot pump Ø 65 mm

- Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)
- Also suitable for fine stranded cable
- Foot pump with two-stage hydraulics

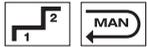
Characteristics

- Open cutting head with quick coupling, under no pressure, rotates 360°
- High-pressure hose, 2 m
- Manual retraction in case of need and at high pressure end

Technical data	
Cutting range:	max. Ø 65 mm
Cutting force:	42 kN
Weight:	16.7 kg
Operating pressure:	max 700 bar

Item	Part No.	
Hydraulic cutting tool with foot pump Ø 65 mm	AS65FHP	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Steel carrying case	MKU	204

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383
Spare blade	ES65E	



ES65E

■ **AS 105 FHP / AS 120 FHP**

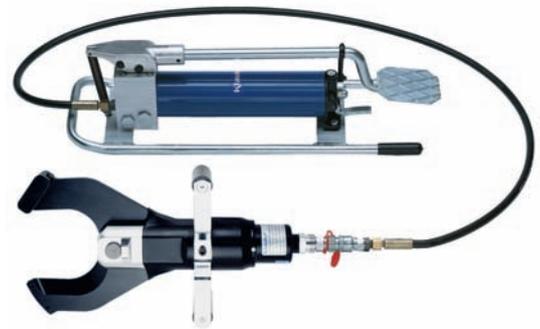
Hydraulic cutting tool with foot pump Ø 105 mm or Ø 120 mm



- **Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)**
- **Suitable for fine stranded cable and Telecommunication cable**
- **Foot pump with two-stage hydraulics**

Characteristics

- Open cutting head with quick coupling, under no pressure, rotates 360°
- High-pressure hose, 2 m
- Manual retraction in case of need and at high pressure end



Technical data		
	AS105FHP	AS120FHP
Cutting range:	max. Ø 105 mm	max. Ø 120 mm
Cutting force:	74 kN	55 kN
Weight:	19.7 kg	20.7 kg
Operating pressure:	max. 700 bar	max. 700 bar

Item	Part No.	
Hydraulic cutting tool with foot pump Ø 105 mm	AS105FHP	
Hydraulic cutting tool with foot pump Ø 120 mm	AS120FHP	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Steel carrying case	MKU	204

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383
Spare blade	ES105E	

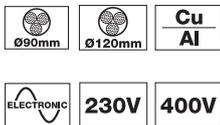


ES105E



ES120E





K2021E



K2022E

■ **K 303**

Hydraulic cutting tool with electro hydraulic drive unit

- **Cuts copper and aluminium cables with light weight steel armoured (depending on cable type)**
- **Wide cutting range from Ø 90 mm or Ø 120 mm**
- **For portable use**

Characteristics

- Open cutting head with quick couplings
- Cable cutter closes and opens hydraulically
- Electronic control available either with 3-phase motor or with AC motor
- High-pressure hoses, 2 m
- Connecting cable, 10 m

Technical data				
	K 303/1-380	K 303/1-220	K 303/2-380	K 303/2-220
Version:	3-phase motor 400 V	AC motor 230 V	3-phase motor 400 V	AC motor 230 V
Rated output:	0.75 kW	0.75 kW	0.75 kW	0.75 kW
Motor voltage:	360 V - 440 V / 50 Hz	230 V / 50 Hz	360 V - 440 V / 50 Hz	230 V / 50 Hz
Capacity:	1.5 l/min	0.9 l/min	1.5 l/min	0.9 l/min
Cutting range:	max. Ø 90 mm (depending on cable type)	max. Ø 90 mm (depending on cable type)	max. Ø 120 mm (depending on cable type)	max. Ø 120 mm (depending on cable type)
Operating pressure:	max. 700 bar	max. 700 bar	max. 700 bar	max. 700 bar
Weight:	54.0 kg	54.0 kg	58.2 kg	57.0 kg

Item	Part No.	
Hydraulic cutting tool with electric hydraulic unit to max. Ø 90 mm, 400 V mains voltage	K3031380	
Hydraulic cutting tool with electric hydraulic unit to max. Ø 90 mm, 230 V mains voltage	K3031220	
Hydraulic cutting tool with electric hydraulic unit to max. Ø 120 mm, 400 V mains voltage	K3032380	
Hydraulic cutting tool with electric hydraulic unit to max. Ø 120 mm, 230 V mains voltage	K3032220	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Transport trolley	TW50	378

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383
Spare blades for cutting range Ø 90 mm	K2021E	
Spare blades for cutting range Ø 120 mm	K2022E	

■ K 404

Hydraulic cutting tool with petrol engine

- Hydraulic pump driven by petrol engine
- Wide cutting range from Ø 90 mm or Ø 120 mm
- For portable use

Characteristics

- Open cutting head with quick couplings
- Cable cutter closes and opens hydraulically
- Electronic control
- High-pressure hoses, 2 m

Technical data		
	K 404/1	K 404/2
Version:	1 cyl. 4-stroke engine, 3 kW	1 cyl. 4-stroke engine, 3 kW
Capacity:	1.5 l/min	1.5 l/min
Cutting range:	max. Ø 90 mm	max. Ø 120 mm
Operating pressure:	max. 700 bar	max. 700 bar
Weight:	64.0 kg	66.5 kg

Item	Part No.	
Hydraulic cutting tool with petrol engine max. Ø 90 mm	K4041	
Hydraulic cutting tool with petrol engine max. Ø 120 mm	K4042	
Scope of supply	Part No.	Page
High-pressure hose, 2m	HS22	380
Transport trolley	TW50	378

Accessories	Part No.	Page
High-pressure hose, 3m	HS23	380
High-pressure hose, 4m	HS24	380
High-pressure hose, 5m	HS25	380
High-pressure hose, 6m	HS26	380
High-pressure hose, 8m	HS28	380
High-pressure hose, 10m	HS210	380
Digital meter for force and pressure measurement	TC1S	383
Pressure sensor 1000 bar	TP1000	383
Spare blades for cutting range Ø 90 mm	K2021E	
Spare blades for cutting range Ø 120 mm	K2022E	



K2021E



K2022E





■ **SSG**

Hydraulic safety cutting devices with foot pump

- **BG-tested safety cutting unit guarantees safe cuts of live copper and aluminium cables without steel armouring up to a rated voltage of 60 kV**
- **Single-conductor live cables without steel armouring can be cut under voltage of up to 110 kV/60Hz**

Characteristics

- Cutting head with quick coupling, rotatable
- Two stage hydraulics
- Manual retraction in case of need and at high pressure end
- Safety high-pressure hose, 10 m

Technical data			
	SSG 85/3	SSG 90/2	SSG 120/2
Head type:	Closed	Open	Open
Cutting range:	max. Ø 85 mm (depending on cable type)	max. Ø 90 mm (depending on cable type)	max. Ø 120 mm (depending on cable type)
Operating pressure:	625 bar	625 bar	625 bar
Hydraulic oil:	"Special oil Rivolta S.B.H.11"	"Special oil Rivolta S.B.H.11"	"Special oil Rivolta S.B.H.11"
Weight:	26.0 kg	31.0 kg	32.0 kg
Ambient temperature:	-20° C to +40° C	-20° C to +40° C	-20° C to +40° C

Item	Part No.	
Safety cutting unit max. Ø 85 mm	SSG853	
Safety cutting unit max. Ø 90 mm	SSG902	
Safety cutting unit max. Ø 120 mm	SSG1202	
Scope of supply	Part No.	Page
Safety/high pressure hose, 10 m		
Earthing with rigid case		

Accessories	Part No.	Page
Heat shield cover 1.80 m x 1.80 m	HSD1	
Heat shield cover 1.20 m x 0.90 m	HSD2	
Heat shield cover 0.45 m x 0.60 m	HSD3	

■ **ESSG 85/3**

Battery powered safety cutting unit, Ø 85 mm

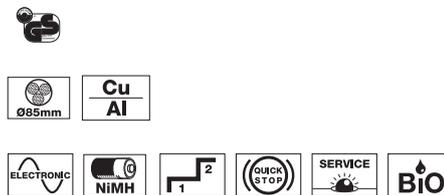
- **BG-tested safety cutting unit guarantees safe cuts of live copper and aluminium cables without steel armouring up to rated voltage of 60 kV**
- **Single-conductor lives cables without steel armouring can be cut under voltage of up to 110 kV/60Hz**
- **High-performance 3.0 Ah NiMH battery**

Characteristics

- 2-stage hydraulic system with fast feed and power stroke
- Quick motor stop for high user safety
- Electronic control
- Light diode for maintenance control and charge level indicator of the batteries
- Light diode display for service intervals after 250 cuts
- High-pressure hose, 10 m



Technical data	
Cutting range:	max. Ø 85 mm (depending on cable type)
Operating pressure:	625 bar
Hydraulic oil:	"Special oil Rivolta S.B.H.11" High-grade biologically degradable, non-hazardous to waters
Weight:	9.92 kg
Battery voltage:	12 V
Battery capacity:	3.0 Ah, approx. 17 cuts (4 x 240 mm ² NYN)
Charging time:	40 - 60 min
Ambient temperature:	-20° C to +40° C



Item	Part No.	
Battery powered safety cutting unit max Ø 85 mm	ESSG853	
Scope of supply	Part No.	Page
Battery 12 V / 3.0 Ah NiMH	RA5	375
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F	377

Accessories	Part No.	Page
Heat shield cover 1.80 m x 1.80 m	HSD1	
Heat shield cover 1.20 m x 0.90 m	HSD2	
Heat shield cover 0.45 m x 0.60 m	HSD3	



Power packs, hoses and more for your tools.

Accessories for hydraulic tools.

The accessories for our hydraulic tools give you greater flexibility when using Klauke tools. Additional operating components as well as high-pressure hoses in various lengths allow individual system solutions. The NG2 power supply unit turns every 18 V tool into a mains-powered tool in no time – also for use in continuous operation.

The new generation of batteries for our tools offers a great number of benefits. With a rated voltage of 18 V and a capacity of 3.0 Ah these batteries provide 50% more power than previous models for even more crimps and cuts. They are also much lighter and thanks to Li-ion technology a memory effect while charging and discharging is excluded. Due to a minimum self-discharge of the batteries the tools are practically always ready for use.



- Batteries and chargers for Klauke hydraulic tools.
- Power packs for 115 V and 230 V.
- Hand and foot control units.
- Hoses, sleeves, connectors and nipples.



The power packs in NG2/230 and NG2/115 are capable of operating all tools in the Klauke® mini+, Klauke® ultra, Klauke® ultra+ and Klauke® multi series.

■ **RAM 2**

Battery 9.6 V / 2.0 Ah NiMH (19.6 Wh)

Characteristics

- For battery powered tools of Klauke-Mini Series
- Environmentally friendly by NiMH technology

Technical data	
Battery voltage:	9.6 V
Battery capacity:	2.0 Ah
Charging time:	40 / 15 min with LG4F / LG5
Cell technology:	NiMH
Weight:	0.4 kg

Item	Part No.
Battery 9.6 V / 2.0 Ah NiMH	RAM2



■ **RAM 3**

Battery 9.6 V / 3.0 Ah NiMH (28.8 Wh)

Characteristics

- For battery powered tools of Klauke-Mini Series
- Environmentally friendly by NiMH technology
- High battery capacity

Technical data	
Battery voltage:	9.6 V
Battery capacity:	3.0 Ah
Charging time:	40 / 15 min with LG4F / LG5
Cell technology:	NiMH
Weight:	0.5 kg

Item	Part No.
Battery 9.6 V / 3.0 Ah NiMH	RAM3



■ **RA 5**

Battery 12 V / 3.0 Ah NiMH (36 Wh)

Characteristics

- Compatible with all KLAUKE 12 V battery powered tools
- Environmentally friendly by NiMH technology
- High battery capacity

Technical data	
Battery voltage:	12 V
Battery capacity:	3.0 Ah
Charging time:	40 / 15 min with LG4F / LG5
Cell technology:	NiMH
Weight:	0.6 kg

Item	Part No.
Battery 12 V / 3.0 Ah NiMH	RA5





RAL 1

Battery 18 V / 1.3 Ah, Li-Ion (23.4 Wh)

Characteristics

- For battery powered tools of Klauke-Mini+ Series
- No Memory - Effect
- Extremely low self-discharge
- Light weight (40% lighter than comparable NiMH-Batteries)

Technical data	
Battery voltage:	18 V
Battery capacity:	1.3 Ah
Charging time:	15 min with LGL1
Cell technology:	Li-Ion
Weight:	0.4 kg

Item	Part No.
Battery 18 V / 1.3 Ah, Li-Ion (23.4 Wh)	RAL1



RAL 2

Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)

Characteristics

- For battery powered tools of Klauke-Mini+, Klauke Ultra, Klauke Ultra+ and Klauke Multi Series
- No Memory - Effect
- Extremely low self-discharge
- Light weight (40% lighter than comparable NiMH-Batteries)

Technical data	
Battery voltage:	18 V
Battery capacity:	3.0 Ah
Charging time:	22 min with LGL1
Cell technology:	Li-Ion
Weight:	0.6 kg

Item	Part No.
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2



NG 2

18 V Mains adapter for 115 V or 230 V voltage

Characteristics

- For all Klauke tools with 18 V all-mains sets
- Temperature protection
- Current limiter
- Overload protection 250 V

Technical data	
Voltage range:	18 V
Mains supply:	115 V / 230 V
Weight:	0,8 kg

Item	Part No.
18 V mains adapter for 115 V Voltage	NG2115
18 V mains adapter for 230 V Voltage	NG2230

■ **LG 4F**

Charger for NiCd and NiMH batteries, 230 V mains power

Characteristics

- For all Klauke 9.6 V and 12 V batteries

Technical data	
Voltage range:	7.2V / 9.6V / 12V / 14.4V DC
Mains supply:	230 V AC
Charging time:	40 - 60 min
Weight:	0.5 kg

Item	Part No.
Charger for NiCd and NiMH batteries, 230 V mains power	LG4F



■ **LG 5**

Quick charger for NiCd and NiMH batteries

Characteristics

- For all Klauke 9.6 V and 12 V batteries

Technical data	
Voltage range:	7.2V / 9.6V / 12V / 14.4V DC
Mains supply:	230 V AC
Charging time:	NiCd: 10 - 60 min, NiMH: 20 - 30 min
Weight:	1.3 kg

Item	Part No.
Quick charger for NiCd and NiMH batteries, 230 V mains power	LG5



■ **LG 6**

12 V car charger for NiCd and NiMH batteries

Characteristics

- For all Klauke 9.6 V and 12 V batteries
- Connection to car cigarette lighter

Technical data	
Voltage range:	7.2V / 9.6V / 12V / 14.4V DC
Mains supply:	12 V DC
Charging time:	NiCd: 45 - 70 min, NiMH: 45-75 min
Weight:	0.6 kg

Item	Part No.
12 V car charger for NiCd and NiMH batteries	LG6





■ **LGL 1**

Quick-charger for 18V Li-Ion-Batteries

Characteristics

- For all Klauke Li-Ion Batteries with 18 V

Technical data	
Voltage range:	18 V
Mains supply:	230 V AC
Charging time:	15 / 22 min with RAL1 / RAL2
Weight:	1.0 kg

Item	Part No.
Quick-charger for 18V Li-Ion-Batteries	LGL1



■ **LGL 2**

12V car charger for 18V Li-Ion-Batteries

Characteristics

- For all Klauke Li-Ion Batteries with 18 V
- Connection to car cigarette lighter

Technical data	
Voltage range:	18 V
Mains supply:	12 V
Charging time:	30 / 60 min with RAL1 / RAL2
Weight:	1.0 kg

Item	Part No.
12V car charger for 18V Li-Ion-Batteries	LGL2



■ **TW 50**

Transport trolley

Characteristics

- For electro hydraulic drive units EHP4/115, EHP4/230 and EHP4/400
- Weight: 10.9 kg

Item	Part No.
Transport trolley	TW50

■ **TW150**

Transport trolley

Characteristics

- For electro hydraulic drive units
- Weight: 8.7 kg

Item	Part No.
Transport trolley	TW150



■ **ZST 3**

Two hand safety control system

Characteristics

- For electro hydraulic drive units: EHP 2, EHP 3
- Connecting cable, 10 m

Item	Part No.
Two hand safety control system	ZST3



■ **FTA 1**

Foot switch

Characteristics

- For hydraulic drive units: EHP 2, EHP 3, EHP 4, HK 12/2 EL, HK 25/2 EL
- Connecting cable, 10 m

Item	Part No.
Foot switch + connecting cable, 4m	FTA1





■ **T 15**

Hydraulic oil

Characteristics

- For all hydraulic pumps, exception: safety cutting units
- Environmentally-friendly hydraulic oil, quickly biodegradable
- 5 l canister

Item	Part No.
Special Hydraulic oil, 5 l	T15



■ **HS 2**

High-pressure hoses

Characteristics

- For hydraulic crimping/cutting systems and drive units
- For connecting to: FHP 2, PHD 1, EHP 2, EHP 3, EHP 5, HK 12/2 EL, HK 25/2 EL, AS 65 FHP, AS 105 FHP, AS 120 FHP, K 303/1, K 303/2, K 404, HK25/2, HK 45

Item	Part No.
High-pressure hose, 2m	HS22
High-pressure hose, 3m	HS23
High-pressure hose, 4m	HS24
High-pressure hose, 5m	HS25
High-pressure hose, 6m	HS26
High-pressure hose, 8m	HS28
High-pressure hose, 10m	HS210



■ **KST 2**

Coupler plug

Characteristics

- For hydraulic crimping/cutting systems and drive units
- Including adapter
- Suitable for high-pressure hoses HS2

Item	Part No.
Coupler plug	KST2

■ **KMF 1 / KMF 2**

Coupler

Characteristics

- **KMF 1:**
For connecting to hydraulic crimping/cutting heads:
PK 18, PK 22, PK 120/42, PK 120 U, PK 25/2, PK 45, PK 60 VP, PK 60 VP/FT, PK 60 UNV, THK 18, THK 22, THK 120, SDG 45, SDG 50, SDG 55, SDG 85/2, SDG 105, SDK 65, SDK 85, SDK 105, SDK 120
For hydraulic systems:
HK 12/2, HK 25/2, HK 45, HK 12/2 EL, HK 25/2 EL, K 303/1, K 303/2, K 404
- **KMF 2:**
For connecting to high-pressure hoses for hydraulic cutting tools:
K 303/1, K 303/2, K 404
- Includes barrel nipple



Item	Part No.
Coupler for crimping and cutting heads	KMF1
Coupler for high-pressure hoses	KMF2

■ **DNP 2**

Barrel nipple

Characteristics

- For connecting resp. extending high-pressure hoses of series HS 2



Item	Part No.
Barrel nipple	DNP2



Guarantee quality, by tool check.



Force and pressure measuring systems for hydraulic crimping tools.

Klauke hydraulic tools meet the highest quality standards. To maintain this guarantee especially frequently used tools and drive units must be inspected on a regular basis. With its various sensors and adapters the TC 1 S is a powerful system for measuring force and pressure.

In enterprises that have a distinct quality management system for example in the engineering technology sector customers often expect proof of the tools' actual crimping forces. This Klauke measuring system offers the option of measuring and documentation of the required values at site.



- Measuring systems for inspecting hydraulic tools and drive units.
- For inspection and documentation under the quality management system.

■ **TC 1 S**

Digital meter for force and pressure measurement

Characteristics

- For force and pressure sensors
- Optional:
Measuring adapter for measuring the crimping force of hydraulic crimping tools



Item	Part No.
Digital meter for force and pressure measurement	TC1S

Accessories	Part No.	Page
Charger 115V	TCC115	
Charger 230V	TCC230	

Measuring Adapter	Tool Series	Required sensor:	Part No.
	Series 50 EK 15/50, EK 15/50 G etc.	TF70L	MA50
	Series 4 EK 35/4	TF70L	MA4
	Series 5 EK 50/5-L etc.	TF70L	MA5
	Series 18 HK 60/18, EK 18 PLUS etc.	TF70L	MA18
	Series 22 HK 60/22, EK 22 PLUS etc.	TF70L	MA22
	Quad-point indent crimping HK 60 VP, EK 60 VP/FT PLUS etc.	TF70L	MAVP
	Series 13 HK 120/25, EK 120/42 etc.	TF130L	MA120

■ **TF**

Force sensor for measuring the crimping force



Characteristics

- For connecting to TC 1 S with appropriate measuring adapter

Item	Part No.
Force sensor 70 kN	TF70L
Force sensor 130 kN	TF130L



■ **TP 1000 / TPC 15**

Pressure sensor and connecting cable for measuring oil pressure to 1000 bar

Characteristics

- For connecting to TC 1 S

Item	Part No.
Pressure sensor 1000 bar	TP1000
Connection cable for pressure sensor TP1000	TPC15



Intelligent recording for the Safety Plus generation.



Our "Safety Plus" battery-powered hydraulic crimping tools are set apart mainly by their intelligent additional functions. The technical highlight is the "Intelligent Pressing System" with integrated pressure sensor which permanently monitors the hydraulic crimp force of every crimping operation. The tools signal deviations from the specified crimping pressure or operating faults with a warning beep and flashing LEDs. For the user this means maximum safety at every single crimping operation. The new PGA1 USB Adapter and the PGAWIN software make the "Safety Plus" model series even more intelligent and working with these tools even safer.

All Safety Plus tools are factory-fitted as standard with an optical interface which enables the crimping operation to be read out at PC or laptop. The operating mode is very simple: The recording head is simply linked to a computer with USB stick. All important crimping and machine datas are transferred

from the tool to the computer and displayed as a test certificate indicating date and time as pdf document. By this the trouble-free function of the hydraulic tool is being documented. User errors such as an early stop and retract of the hydraulics or other faults that could prevent correct crimps are displayed. The test certificates are approved by QS systems.



Maschinenprotokoll **Klauke®**

Firma: Elektro Schmidt Datum: 23. März 2010
 Bearbeiter: Michael Meyer Uhrzeit: 09:40:38
 Projekt: Wopark West, Anlage 3

Seriennummer: 734966C021
 Zahnstand (total): 729
 Mindest Sollwert des Drucks pmin: 520,1
 Service-Intervall: 10000

Gesamtwerte seit Herstellung (hergestellt am 07. Januar 2010)

Anzahl Pressungen	Stromaufnahme in Ah	Betriebsdauer in h	Anzahl Druckunterschreitungen		Druckwerte p > pmin in bar			
			bei manuellem Rücklauf (vorliegender Motor)	bei automatischem Rücklauf (aufleuender Motor)	min.	mittel	max.	Std. Abw.
729	4,7938	0,73	0	0	536,1	549,3	564,4	6,3

Werte seit letzter Wartung (gewartet am 17. März 2010)

Anzahl Pressungen	Stromaufnahme in Ah	Betriebsdauer in h	Anzahl Druckunterschreitungen		Druckwerte p > pmin in bar			
			bei manuellem Rücklauf (vorliegender Motor)	bei automatischem Rücklauf (aufleuender Motor)	min.	mittel	max.	Std. Abw.
81	0,2341	0,05	0	0	538,0	550,1	563,2	6,1

Letzte Druckunterschreitungen

Zahnstand (total)	erreichter Druck bei manuellem Rücklauf (vorliegender Motor)
0	0
0	0
0	0
0	0
0	0

Zahnstand (total)	erreichter Druck bei automatischem Rücklauf (aufleuender Motor)
0	0
0	0
0	0
0	0
0	0

Bemerkung: 23. März 2010 Datum

Installation ordnungsgemäß durchgeführt.
 Unterschrift: *Michael Meyer*

■ PGA1

USB adapter

- Easy connection for PC via USB-Interface
- Free downloading of Software "PGAWIN" via www.klauke.com
- Statistical evaluation of average crimping process of hydraulic crimping tools

Characteristics

- Documentation of trouble-free function of hydraulic crimping tools using "Intelligent Pressing System" - IPS
- Statistical evaluation of crimping process
- Suitable to read data from Klauke product line "Generation Safety Plus" and the previous models with light diode
- Transmission of crimping and machine data of tool on the computer
- Test certificate as PDF-Document with display of date and time

Technical data	
System requirements:	From Version Windows XP
Length	1.80 m (USB-Cable)
Version:	USB 2.0
Weight:	315 g

Item	Part No.
USB adapter	PGA1





**Crimping dies**

■ Series 50	390
■ Series 4	392
■ Series 5	397
■ Series 18	401
■ Series 22	406
■ Series 13	412
■ Series 25	418
■ Series 45	424



Seven series

for every type of crimp

Crimping dies for Klauke crimping tools.

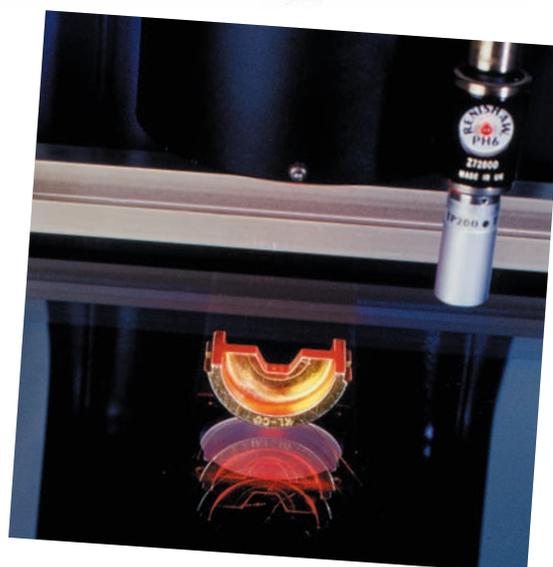
Klauke crimping are characterized by their outstanding durability and highest precision. Only high-quality material is used in production. Precision is the key to production. The dies are subject to a rigid quality control. All dies are bright polished to achieve best possible crimping results.

We offer a broad range of crimping dies for all Klauke tools with interchangeable dies. We guarantee safe electrical connections subject to the use of matched Klauke tools, Klauke dies and Klauke connecting material.

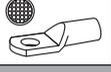
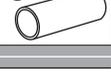
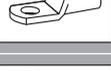
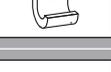
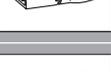


Silver-coloured dies for aluminium yellow-chromed for copper.

- Eight series of dies are perfectly matched to Klauke tools.
- The correct crimping types for every connecting material.
- Polished profiled surfaces for maximum crimping results.
- Dies for copper and aluminium differ in colour.

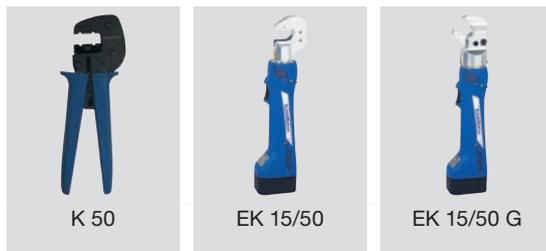


In the production of Klauke crimping dies precision is everything.

Connecting material	50	4	5	18	22	13	25	45
								
	0.75 – 10 mm ²	6 – 150 mm ²	6 – 240 mm ²	6 – 185 mm ²	6 – 300 mm ²	16 – 400 mm ²	16 – 400 mm ²	
		10 – 70 mm ²	10 – 95 mm ²	10 – 95 mm ²	10 – 150 mm ²	10 – 150 mm ²	10 – 150 mm ²	
		10 – 50 mm ²	10 – 50 mm ²	10 – 50 mm ²	10 – 70 mm ²	16 – 150 mm ²	16 – 300 mm ²	
	1.5 – 10 mm ²	1.5 – 16 mm ²		1.5 – 16 mm ²	1.5 – 16 mm ²			
	VA	0.5 – 16 mm ²			10 – 50 mm ²			
	Ni	0.5 – 16 mm ²			10 – 50 mm ²			
	DIN	6 – 120 mm ²	6 – 185 mm ²	6 – 185 mm ²	6 – 300 mm ²	16 – 300 mm ²	16 – 625 mm ²	120 – 1000 mm ²
	0.5 – 10 mm ²	10 – 35 mm ²	10 – 50 mm ²	10 – 70 mm ²	10 – 70 mm ²	16 – 150 mm ²	16 – 240 mm ²	
	10 – 16 mm ²	10 – 16 mm ²		10 – 50 mm ²	10 – 70 mm ²	10 – 95 mm ²	10 – 150 mm ²	
		10sm ¹⁾ - 150se ²⁾ / 120sm ¹⁾	10sm ¹⁾ - 300se ²⁾ / 240sm ¹⁾	10sm ¹⁾ - 240se ²⁾ / 185sm ¹⁾	10sm ¹⁾ - 300se ²⁾ / 240sm ¹⁾	10sm ¹⁾ - 300sm ¹⁾	10sm ¹⁾ - 300sm ¹⁾	
	Al	10 – 70 mm ²	10 – 150 mm ²	10 – 185 mm ²	10 – 240 mm ²	10 – 240 mm ²	10 – 500 mm ²	150 – 500 mm ²
	Al/Cu	10 – 70 mm ²		10 – 185 mm ²	10 – 240 mm ²	10 – 240 mm ²	10 – 500 mm ²	150 – 500 mm ²
		4 – 35 mm ²	16 – 35 mm ²	4 – 50 mm ²	4 – 50 mm ²	10 – 70 mm ²	10 – 185 mm ²	
	0.14 – 50 mm ²	10 – 50 mm ²	10 – 95 mm ²	10 – 95 mm ²	10 – 240 mm ²	25 – 240 mm ²	25 – 240 mm ²	
	0.1 – 16 mm ²							
	0.1 – 6 mm ²							
BNC plugs	RG 58, RG 59, RG 62, RG 71							
Turned pin connectors and receptacles	0.1 – 4 mm ²							

¹⁾ Sector shaped stranded.

²⁾ Sector shaped solid.



K 50

EK 15/50

EK 15/50 G



■ **Crimping dies R 50**



Suitable for:

- Copper tubular cable lugs and connectors, standard design

mm ²	Part No.		
0.75-2.5	R501		
4-10	R502		



■ **Crimping dies M 50**



Suitable for:

- Copper tubular cable lugs and compression joints for solid conductors

mm ²	Part No.		
1.5-4	M50154		
6-10	M50610		



■ **Crimping dies Q 50**



Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN - Cu
- Copper solderless connectors (DIN 46341) acc. to DIN

mm ²	Part No.		
0.5-10	Q501		



■ **Crimping dies AE 50**



Suitable for:

- Cable end sleeves

mm ²	Part No.		
0.14-6	AE501		
10-25	AE502		
35-50	AE503		



■ **Crimping dies IS 50**



Suitable for:

- Insulated cable connections, double crimping

mm ²	for part	Part No.	
0.5-6		IS501	
0.1-1	8201-8,201B	IS503	

■ Crimping dies IS 50

Suitable for:

- Insulated cable connections, single crimping

mm ²	for part	Part No.	
10-16		IS502	
0.5-2.5	670 WS 680 WS	IS504	
4-6	700 WS	IS505	



■ Crimping dies CR 50

Suitable for:

- Non-insulated receptacles

mm ²	for part	Part No.	Tab width mm
0,25-6		CR501	2,8 / 6,3
0,5-2,5		CR502	4,8
0.5-1	38201, 38,201A	CR503	2.8
0.5-2.5	3720, 3735	CR504	6.3
0.5-1.5	3725	CR505	6.3



■ Crimping dies BNC 50

Suitable for:

- For stud and shielded sleeves
- BNC plugs for coax cable RG 58, 59, 62 and 71

Part No.			
BNC501			



■ Crimping dies SB 50

Suitable for:

- Turned pin receptacles
- Pin connectors

mm ²	Part No.		
0.1-1 1.5-2.5 4	SB501		





■ **Crimping dies HR 4**

Suitable for:

- Copper tubular cable lugs and connectors, standard design
- tubular cable lugs for switchgear connections



mm ²	Part No.	Crimp width mm	
6	HR46	5	
10	HR410	5	
16	HR416	5	
25	HR425	5	
35	HR435	5	
50	HR450	5	
70	HR470	5	
95	HR495	5	
120	HR4120	5	
150	HR4150	5	



■ **Crimping dies HIS 4**

Suitable for:

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



mm ²	Part No.	Crimp width mm	
10	HIS410	5	
16	HIS416	5	
25	HIS425	5	
35	HIS435	5	
50	HIS450	5	
70	HIS470	5	



■ **Crimping dies HF 4**

Suitable for:

- Tubular cable lugs and connectors for fine stranded conductors



mm ²	Part No.		
10	HF410		
16	HF416		
25	HF425		
35	HF435		



■ Crimping dies HM 4

Suitable for:

- Tubular cable lugs and compression joints for solid conductors

mm ²	Part No.	Crimp width mm	
1.5-2.5 4	HM4154		
6-10	HM4610		
16	HM416		



■ Crimping dies HN 4

Suitable for:

- Nickel tubular cable lugs and connectors
- Stainless steel tubular cable lugs and connectors

mm ²	Part No.		
0.5-1	HN4051		
1.5 - 2.5	HN41525		
4-6	HN446		
10	HN410		
16	HN416		



■ Crimping dies HD 4

Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

mm ²	Part No.	Code	Crimp width mm
6	HD46	5	5
10	HD410	6	5
16	HD416	8	5
25	HD425	10	5
35	HD435	12	5
50	HD450	14	5
70	HD470	16	5
95	HD495	18	5
120	HD4120	20	5



■ Crimping dies HQ 4

Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN - Cu
- Copper solderless connectors (DIN 46341) acc. to DIN

mm ²	Part No.		
10	HQ410		
16	HQ416		
25	HQ425		
35	HQ435		





■ Crimping dies HISQ 4



Suitable for:

- Insulated solderless terminals and pin terminals

mm ²	Part No.		
10	HISQ410		
16	HISQ416		



■ Crimping dies HRU 4



Suitable for:

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors

mm ² se	mm ² sm	Part No.	Conductor Ø mm	Pre-rounding width mm
	10	HRU410	4.1	9
	16	HRU416	5.1	9
35	25	HRU43525	6.3	9
50	35	HRU45035	7.5	9
70	50	HRU47050	9.0	9
95	70	HRU49570	10.5	9
120	95	HRU412095	12.5	9
150	120	HRU4150120	14.0	9



■ Crimping dies HA 4



Suitable for:

- Aluminium compression cable lugs and connectors to DIN

mm ²	Part No.	Code	Crimp width mm
10	HA410	10	7
16-25	HA41625	12	7
35	HA435	14	7
50	HA450	16	7
70	HA470	18	7



■ Crimping dies HAD 4



Suitable for:

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182

mm ²	Part No.	Code	Crimp width mm
25	HAD425	12	7
35	HAD435	14	7
50	HAD450	16	7

■ **Crimping dies HC 4 / HMC 4**

Suitable for:

- Clamps, C-type

mm ²	Part No.	Crimp width mm	
16	HC416	5	
25	HC425	5	
4-4	HMC44	5	
10-10	HMC410	5	
10-16	HMC435	5	
10-25			
35-35			



■ **Crimping dies HAE 4**

Suitable for:

- Cable end sleeves

mm ²	Part No.	Crimp width mm	
10	HAE410	10	
16	HAE416	10	
25	HAE425	10	
35	HAE435	10	
50	HAE450	10	



■ **Crimping dies HZAE 4**

Suitable for:

- Twin cable end-sleeves

mm ²	Part No.	Crimp width mm	
2 x 4	HZAE44	10	
2 x 6	HZAE46	10	
2 x 10	HZAE410	10	
2 x 16	HZAE416	10	



■ **Crimping dies HAES 4**

Suitable for:

- Cable end sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
10	HAES410	10	
16	HAES416	10	
25	HAES425	10	
35	HAES435	10	
50	HAES450	10	





■ Crimping dies HZAES 4



Suitable for:

- Twin cable end-sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
2 x 4	HZAES44	10	
2 x 6	HZAES46	10	
2 x 10	HZAES410	10	
2 x 16	HZAES416	10	



EK 505 L



■ **Crimping dies HR 5**

Suitable for:

- Copper tubular cable lugs and connectors, standard design

mm ²	Part No.	Crimp width mm	
6 + 35	HR5635	5	
10 + 50	HR51050	5	
16 + 70	HR51670	5	
25 + 95	HR52595	5	
120	HR5120	5	
150	HR5150	5	
185	HR5185	5	
240	HR5240	5	



■ **Crimping dies HIS 5**

Suitable for:

- Insulated tubular cable lugs and connectors
- Insulated pin terminals

mm ²	Part No.	Crimp width mm	
10	HIS510	5	
16	HIS516	5	
25	HIS525	5	
35	HIS535	5	
50	HIS550	5	
70	HIS570	5	
95	HIS595	5	



■ **Crimping dies HF 5**

Suitable for:

- Tubular cable lugs and connectors for fine stranded conductors

mm ²	Part No.		
10			
16	HF516		
25	HF525		
35	HF535		
50	HF550		





■ **Crimping dies HD 5**



Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267)

mm ²	Part No.	Code	Crimp width mm
6 + 35	HD5635	5 + 12	5
10 + 50	HD51050	6 + 14	5
16 + 70	HD51670	8 + 16	5
25 + 95	HD52595	10 + 18	5
120	HD5120	20	5
150	HD5150	22	5
185	HD5185	25	5



■ **Crimping dies HQ 5**



Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN

mm ²	Part No.		
10	HQ510		
16	HQ516		
25	HQ525		
35	HQ535		
50	HQ550		



■ **Crimping dies HRU 5**



Suitable for:

- Pre-rounding dies for sector-shaped Al- and Cu-conductors
- 3- and 4-core sector-shaped conductors

mm ² se	mm ² sm	Part No.	Conductor Ø mm	Pre-rounding width mm
	10	HRU510	4,1	12
	16	HRU516	5,1	12
35	25	HRU53525	6,3	12
50	35	HRU55035	7,5	12
70	50	HRU57050	9	12
95	70	HRU59570	10,5	12
120	95	HRU512095	12,5	12
150	120	HRU5150120	14	12
185	150	HRU5185150	15,7	12
240	185	HRU5240185	17,5	12
300	240	HRU5300240	20,3	12



■ **Crimping dies HA 5**



Suitable for:

- Aluminium compression cable lugs and connectors to DIN

mm ²	Part No.	Code	Crimp width mm
10	HA510	10	7
16-25	HA51625	10	7
35	HA535	14	7
50	HA550	16	7
70	HA570	18	7
95-120	HA595120	22	7
150	HA5150	25	7

■ **Crimping dies HAD 5**



Suitable for:

- Compression joints for full tension connections of Aldrey conductors according to DIN EN 50182

mm ²	Part No.	Code	Crimp width mm
25	HAD525	12	7
35	HAD535	14	7
50	HAD550	16	7
70	HAD570	18	7
95	HAD595	20	7

■ **Crimping dies HC 5**



Suitable for:

- Clamps, C-type

mm ²	Part No.	Crimp width mm	
16	HC516	5	
25	HC525	5	
35	HC535	5	

■ **Crimping dies HAE 5**



Suitable for:

- Cable end sleeves

mm ²	Part No.	Crimp width mm	
10	HAE510	20	
16	HAE516	20	
25	HAE525	20	
35	HAE535	20	
50	HAE550	20	
70	HAE570	20	
95	HAE595	20	

■ **Crimping dies HZAE 5**



Suitable for:

- Twin cable end-sleeves

mm ²	Part No.	
2 x 4	HZAE54	
2 x 6	HZAE56	
2 x 10	HZAE510	
2 x 16	HZAE516	



■ **Crimping dies HAES 5**



Suitable for:

- Cable end sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
10	HAES510	20	
16	HAES516	20	
25	HAES525	20	
35	HAES535	20	
50	HAES550	20	
70	HAES570	20	
95	HAES590	20	



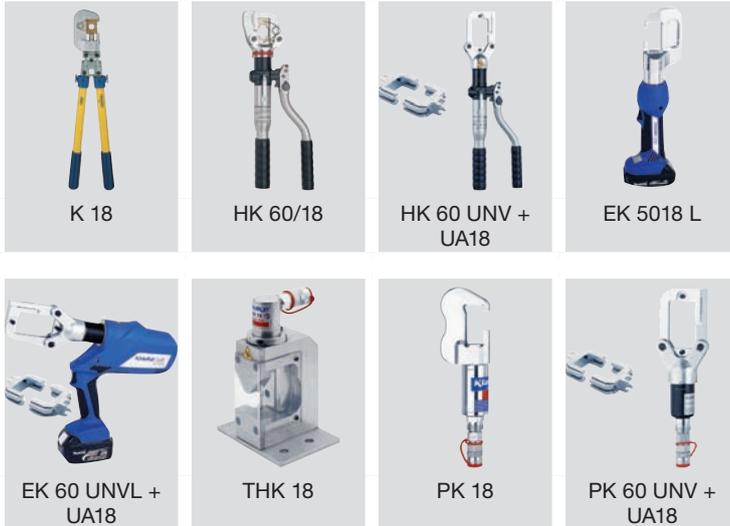
■ **Crimping dies HZAES 5**



Suitable for:

- Twin cable end-sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
2 x 4	HZAES54	20	
2 x 6	HZAES56	20	
2 x 10	HZAES510	20	
2 x 16	HZAES516	20	



■ Crimping dies R

Suitable for:

- Copper tubular cable lugs and connectors, standard design
- tubular cable lugs for switchgear connections

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8



mm ²	Part No.	Crimp width mm	
6	R6	5	
10	R10	5	
16	R16	5	
25	R25	5	
35	R35	5	
50	R50	5	
70	R70	5	
95	R95	5	
120	R120	5	
150	R150	5	
185	R185	5	

■ Crimping dies IS

Suitable for:

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



mm ²	Part No.	Crimp width mm	
10	IS10	5	
16	IS16	5	
25	IS25	5	
35	IS35	5	
50	IS50	5	
70	IS70	5	
95	IS95	5	



■ Crimping dies F



Suitable for:

- Tubular cable lugs and connectors for fine stranded conductors

mm ²	Part No.		
10	F10		
16	F16		
25	F25		
35	F35		
50	F50		



■ Crimping dies M



Suitable for:

- Tubular cable lugs and compression joints for solid conductors

mm ²	Part No.	Crimp width mm	
1.5-4	M154		
6-10	M610		
16	M16		



■ Crimping dies D



Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8

mm ²	Part No.	Code	Crimp width mm
6	D6	5	5
10	D10	6	5
16	D16	8	5
25	D25	10	5
35	D35	12	5
50	D50	14	5
70	D70	16	5
95	D95	18	5
120	D120	20	5
150	D150	22	5
185	D185	25	5



■ Crimping dies Q



Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN
- Copper solderless connectors (DIN 46341) acc. to DIN

mm ²	Part No.		
10	Q10		
16	Q16		
25	Q25		
35	Q35		
50	Q50		
70	Q70		

■ Crimping dies ISQ

Suitable for:

- Insulated solderless terminals and pin terminals

mm ²	Part No.		
10	ISQ10		
16	ISQ16		
25	ISQ25		
35	ISQ35		
50	ISQ50		

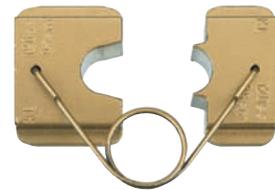


■ Crimping dies RU

Suitable for:

- Pre-rounding dies for sector-shaped Al- and Cu-conductors
- 3- and 4-core sector-shaped conductors

mm ² se	mm ² sm	Part No.	Conductor Ø mm	Pre-rounding width mm
	10	RU10	4.1	19.5
	16	RU16	5.1	19.5
35	25	RU3525	6.3	19.5
50	35	RU5035	7.5	19.5
70	50	RU7050	9.0	19.5
95	70	RU9570	10.5	19.5
120	95	RU12095	12.5	19.5
150	120	RU150120	14.0	19.5
185	150	RU185150	15.8	19.5
240	185	RU240185	17.5	19.5



■ Crimping dies A

Suitable for:

- Aluminium compression cable lugs and connectors to DIN
- Aluminium/copper compression cable lugs and connectors acc. to DIN

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8

mm ²	Part No.	Code	Crimp width mm
10	A10	10	7
16-25	A1625	12	7
35	A35	14	7
50	A50	16	7
70	A70	18	7
95-120	A95120	22	7
150	A150	25	7
185	A185	28	7





■ **Crimping dies AD**



Suitable for:

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8

mm ²	Part No.	Code	Crimp width mm
25	AD25	12	7
35	AD35	14	7
50	AD50	16	7
70	AD70	18	7
95	AD95	20	7



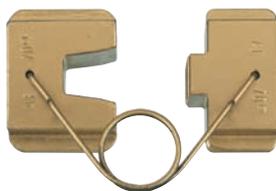
■ **Crimping dies C / MC**



Suitable for:

- Clamps, C-type

mm ²	Part No.	Crimp width mm	
16	C16	5	
25	C25	5	
35	C35	5	
50	C50	5	
4-4	MC4	5	
10-16	MC10	5	
10-16 10-25 10-35	MC35	5	



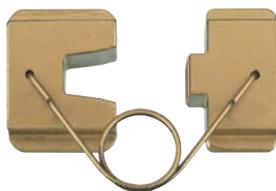
■ **Crimping dies AE**



Suitable for:

- Cable end sleeves

mm ²	Part No.	Crimp width mm	
10	AE10	20	
16	AE16	20	
25	AE25	20	
35	AE35	20	
50	AE50	20	
70	AE70	20	
95	AE95	20	



■ **Crimping dies ZAE**



Suitable for:

- Twin cable end-sleeves

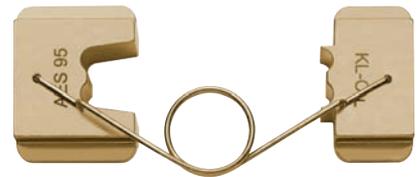
mm ²	Part No.	Crimp width mm	
2 x 4	ZAE4	20	
2 x 6	ZAE6	20	
2 x 10	ZAE10	20	
2 x 16	ZAE16	20	

■ **Crimping dies AES**

Suitable for:

- Cable end sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
10	AES10	20	
16	AES16	20	
25	AES25	20	
35	AES35	20	
50	AES50	20	
70	AES70	20	
95	AES95	20	

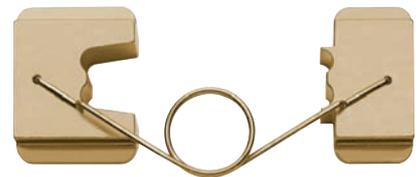


■ **Crimping dies ZAES**

Suitable for:

- Twin cable end-sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
4	ZAES4	20	
6	ZAES6	20	
10	ZAES10	20	
16	ZAES16	20	



■ **Cutting die**

- For stranded Al and Cu cables

Part No.	Cutting range mm		
S18	18		





■ Crimping dies R 22



Suitable for:

- Copper tubular cable lugs and connectors, standard design
- tubular cable lugs for switchgear connections

mm ²	Part No.	Crimp width mm	
6	R226	5	
10	R2210	5	
16	R2216	5	
25	R2225	5	
35	R2235	5	
50	R2250	5	
70	R2270	5	
95	R2295	5	
120	R22120	5	
150	R22150	5	
185	R22185	5	
240	R22240	5	
300	R22300	5	



■ Crimping dies IS 22



Suitable for:

- Insulated tubular cable lugs and connectors
- Insulated pin terminals

mm ²	Part No.	Crimp width mm	
10	IS2210	5	
16	IS2216	5	
25	IS2225	5	
35	IS2235	5	
50	IS2250	5	
70	IS2270	5	
95	IS2295	5	
120	IS22120	5	
150	IS22150	5	

■ Crimping dies F 22

Suitable for:

- Tubular cable lugs and connectors for fine stranded conductors

mm ²	Part No.		
10	F2210		
16	F2216		
25	F2225		
35	F2235		
50	F2250		
70	F2270		



■ Crimping dies M 22

Suitable for:

- Tubular cable lugs and compression joints for solid conductors

mm ²	Part No.	Crimp width mm	
1.5-4	M22154		
6-10	M22610		
16	M2216		



■ Crimping dies N 22

Suitable for:

- Nickel tubular cable lugs and connectors
- Stainless steel tubular cable lugs and connectors

mm ²	Part No.		
10	N2210		
16	N2216		
25	N2225		
35	N2235		
50	N2250		



■ Crimping dies D 22

Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

mm ²	Part No.	Code	Crimp width mm
6	D226	5	5
10	D2210	6	5
16	D2216	8	5
25	D2225	10	5
35	D2235	12	5
50	D2250	14	5
70	D2270	16	5
95	D2295	18	5
120	D22120	20	5
150	D22150	22	5
185	D22185	25	5
240	D22240	28	5
300	D22300	25	5





■ Crimping dies DP 22



Suitable for:

- Double compression cable lugs

mm ²	Part No.	Crimp width mm	
2 x 50	DP2250	5	
2 x 70	DP2270	5	



■ Crimping dies Q 22



Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN - Cu
- Copper solderless connectors (DIN 46341) acc. to DIN

mm ²	Part No.		
10	Q2210		
16	Q2216		
25	Q2225		
35	Q2235		
50	Q2250		
70	Q2270		



■ Crimping dies ISQ 22



Suitable for:

- Insulated solderless terminals and pin terminals

mm ²	Part No.		
10	ISQ2210		
16	ISQ2216		
25	ISQ2225		
35	ISQ2235		
50	ISQ2250		
70	ISQ2270		



■ Crimping dies RU 22



Suitable for:

- Pre-rounding of sector-shaped Al- and Cu-conductors
- 3- and 4-core sector-shaped conductors

mm ² se	mm ² sm	Part No.	Conductor Ø mm	Pre-rounding width mm
	10	RU2210	4.1	19.5
	16	RU2216	5.1	19.5
35	25	RU223525	6.3	19.5
50	35	RU225035	7.5	19.5
70	50	RU227050	9.0	19.5
95	70	RU229570	10.5	19.5
120	95	RU2212095	12.5	19.5
150	120	RU22150120	14.0	19.5
185	150	RU22185150	15.8	19.5
240	185	RU22240185	17.5	19.5
300	240	RU22300240	20.3	19.5

■ **Crimping dies A 22**

Suitable for:

- Aluminium compression cable lugs and connectors to DIN
- Aluminium/copper compression cable lugs and connectors acc. to DIN

mm ²	Part No.	Code	Crimp width mm
10	A2210	10	7
16-25	A221625	12	7
35	A2235	14	7
50	A2250	16	7
70	A2270	18	7
95-120	A2295120	22	7
150	A22150	25	7
185	A22185	28	7
240	A22240	32	5
300	A22300	34	5



■ **Crimping dies AD 22**

Suitable for:

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182
- Al-conductor DIN EN 50182, 120 - 185 mm²

mm ²	Part No.	Code	Crimp width mm
25	AD2225	12	7
35	AD2235	14	7
50	AD2250	16	7
70	AD2270	18	7
95	AD2295	20	7
120	AD22120	25	7
150-185	AD22150185	28	7



■ **Crimping dies AST 22**

Suitable for:

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Aluminium compression

mm ²	Part No.	Code	Crimp width mm
25-4	AST2225	12	7
35-6	AST2235	14	7
50-8	AST2250	16	7
70-12	AST2270	18	7
95-15	AST2295	22	7
120-20	AST22120	25	7





■ **Crimping dies ST 22**



Suitable for:

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Steel crimping

mm ²	Part No.	Code	Crimp width mm
25-4 35-6	ST2246	6	5
50-8	ST228	7	5
70-12 95-15	ST221215	9	5
120-20	ST2220	13	5



■ **Crimping dies C 22 / MC 22**



Suitable for:

- Clamps, C-type

mm ²	Part No.	Crimp width mm
16	C2216	5
25	C2225	5
35	C2235	5
50	C2250	5
4-4	MC224	5
10-10	MC2210	5
10-16 10-25 35-35	MC2235	5



■ **Crimping dies H 22**



Suitable for:

- Clamps, H-type

mm ²	Part No.	Crimp width mm
70	H2270	5



■ **Crimping dies AE 22**



Suitable for:

- Cable end sleeves

Note:

- * = except THK 22

mm ²	Part No.	Crimp width mm
10	AE2210	20
16	AE2216	20
25	AE2225	20
35	AE2235	20
50	AE2250	20
70	AE2270	20
95	AE2295	20
120	AE22120	20
150	AE22150	20
185*	AE22185	20
240*	AES22240	20

■ **Crimping dies ZAE 22**

Suitable for:

- Twin cable end-sleeves

mm ²	Part No.	Crimp width mm	
2 x 4	ZAE224	20	
2 x 6	ZAE226	20	
2 x 10	ZAE2210	20	
2 x 16	ZAE2216	20	



■ **Crimping dies AES 22**

Suitable for:

- Cable end sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

Note:

- * = except THK 22

mm ²	Part No.	Crimp width mm	
10	AES2210	20	
16	AES2216	20	
25	AES2225	20	
35	AES2235	20	
50	AES2250	20	
70	AES2270	20	
95	AES2295	20	
120	AES22120	20	
150	AES22150	20	
185*	AES22185	20	
240*	AES22240	20	



■ **Crimping dies ZAES 22**

Suitable for:

- Twin cable end-sleeves
- Special trapezoid crimp for "compacted" conductors

mm ²	Part No.	Crimp width mm	
2 x 4	ZAES224	20	
2 x 6	ZAES226	20	
2 x 10	ZAES2210	20	
2 x 16	ZAES2216	20	





HK 120/25

HK 120/42

HK 120 U

EK 120/25-L

EK 120/42 L

EK 120 U-L

HK 12/2

HK 12/2 EL

PK 120/42

PK 120 U



■ **Crimping dies HR 13**



Suitable for:

- Copper tubular cable lugs and connectors, standard design
- tubular cable lugs for switchgear connections

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8

mm ²	Part No.	Crimp width mm	
16	HR1316	10	
25	HR1325	10	
35	HR1335	10	
50	HR1350	13	
70	HR1370	13	
95	HR1395	14	
120	HR13120	14	
150	HR13150	14	
185	HR13185	11	
240	HR13240	11	
300	HR13300	11	
400	HR13400	5	



■ **Crimping dies HIS 13**



Suitable for:

- Insulated tubular cable lugs and connectors
- Insulated pin terminals

mm ²	Part No.	Crimp width mm	
10	HIS1310	5	
16	HIS1316	5	
25	HIS1325	5	
35	HIS1335	5	
50	HIS1350	5	
70	HIS1370	5	
95	HIS1395	5	
120	HIS13120	5	
150	HIS13150	5	

■ **Crimping dies HF 13**

Suitable for:

- Tubular cable lugs and connectors for fine stranded conductors

mm ²	Part No.		
16	HF1316		
25	HF1325		
35	HF1335		
50	HF1350		
70	HF1370		
95	HF1395		
120	HF13120		
150	HF13150		



■ **Crimping dies HD 13**

Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8

mm ²	Part No.	Code	Crimp width mm
16	HD1316	8	10
25	HD1325	10	10
35	HD1335	12	10
50	HD1350	14	13
70	HD1370	16	13
95	HD1395	18	14
120	HD13120	20	14
150	HD13150	22	10
185	HD13185	25	10
240	HD13240	28	10
300	HD13300	32	10



■ **Crimping dies HDP 13**

Suitable for:

- Double compression cable lugs

mm ²	Part No.	Crimp width mm	
2 x 50	HDP1350		
2 x 70	HDP1370		
2 x 95	HDP1395		





■ Crimping dies HQ 13



Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN - Cu
- Copper solderless connectors (DIN 46341) acc. to DIN

mm ²	Part No.		
16	HQ1316		
25	HQ1325		
35	HQ1335		
50	HQ1350		
70	HQ1370		
95	HQ1395		
120	HQ13120		
150	HQ13150		



■ Crimping dies HISQ 13



Suitable for:

- Insulated solderless terminals and pin terminals

mm ²	Part No.		
10	HISQ1310		
16	HISQ1316		
25	HISQ1325		
35	HISQ1335		
50	HISQ1350		
70	HISQ1370		
95	HISQ1395		



■ Crimping dies HRU 13



Suitable for:

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors

mm ² se	mm ² sm	Part No.	Conductor Ø mm	Pre-rounding width mm
	10	HRU1310	4.1	35
	16	HRU1316	5.1	35
35	25	HRU133525	6.3	35
50	35	HRU135035	7.5	35
70	50	HRU137050	9.0	35
95	70	HRU139570	10.5	35
120	95	HRU1312095	12.5	35
150	120	HRU13150120	14.0	35
185	150	HRU13185150	15.8	35
240	185	HRU13240185	17.5	35
300	240	HRU13300240	20.3	35
	300	HRU13300SM	22.5	35

■ Crimping dies HA 13

Suitable for:

- Aluminium compression cable lugs and connectors to DIN
- Aluminium/copper compression cable lugs and connectors acc. to DIN

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8



mm ²	Part No.	Code	Crimp width mm
10	HA1310	10	12
16-25	HA131625	12	12
35	HA1335	14	12
50	HA1350	16	12
70	HA1370	18	12
95-120	HA1395120	22	14
150	HA13150	25	14
185	HA13185	28	14
240	HA13240	32	5

■ Crimping dies HAD 13

Suitable for:

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182
- Al-conductor acc. to DIN EN 50182, 120 - 185 mm²

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8



mm ²	Part No.	Code
25	HAD1325	12
35	HAD1335	14
50	HAD1350	16
70	HAD1370	18
95	HAD1395	20
120	HAD13120	25
150-185	HAD13150185	28

■ Crimping dies HAST 13

Suitable for:

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Aluminium compression

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8



mm ²	Part No.	Code
25-4	HAST1325	12
35-6	HAST1335	14
50-8	HAST1350	16
70-12	HAST1370	18
95-15	HAST1395	22
120-20	HAST13120	25



■ **Crimping dies HST 13**



Suitable for:

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Steel crimping

Note:

- For connectors see assembly instructions for connector materials (general notes) in the technical index, Page i-8

mm ²	Part No.	Code	Crimp width mm
25-4 35-6	HST1346	6	12
50-8	HST138	7	12
70-12 95-15	HST131215	9	12
120-20	HST1320	13	12



■ **Crimping dies HAH 13**



Suitable for:

- Clamps, H-type

mm ²	Part No.	Crimp width mm	
70	HAH1370	30	
95	HAH1395	30	
120	HAH13120	30	



■ **Crimping dies HC 13 / HMC 13**



Suitable for:

- Clamps, C-type

mm ²	Part No.	Crimp width mm	
16	HC1316	16	
25	HC1325	17	
35	HC1335	20	
50	HC1350	20	
70	HC1370	20	
10 - 10	HMC1310	13	
10 - 16 10 - 25 35 - 35	HMC1335	18	
25 - 50 50 - 50	HMC1350	20	
35 - 70	HMC1370	20	

■ **Crimping dies HAE 13**

Suitable for:

- Cable end sleeves

mm ²	Part No.	Crimp width mm	
25	HAE1325	20	
35	HAE1335	20	
50	HAE1350	26	
70	HAE1370	26	
95	HAE1395	26	
120	HAE13120	26	
150	HAE13150	26	
185	HAE13185	26	
240	HAE13240	26	



■ **Crimping dies HAES 13**

Suitable for:

- Cable end sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
25	HAES1325	20	
35	HAES1335	20	
50	HAES1350	26	
70	HAES1370	26	
95	HAES1395	26	
120	HAES13120	26	
150	HAES13150	26	
185	HAES13185	26	
240	HAES13240	26	





■ **Crimping dies HR 25**

Suitable for:

- Copper tubular cable lugs and connectors, standard design
- tubular cable lugs for switchgear connections



mm ²	Part No.	Crimp width mm	
16	HR2516	10	
25	HR2525	10	
35	HR2535	10	
50	HR2550	13	
70	HR2570	13	
95	HR2595	15	
120	HR25120	15	
150	HR25150	20	
185	HR25185	20	
240	HR25240	20	
300	HR25300	20	
400	HR25400	20	



■ **Crimping dies HIS 25**

Suitable for:

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



mm ²	Part No.	Crimp width mm	
10	HIS2510	7	
16	HIS2516	7	
25	HIS2525	8	
35	HIS2535	8	
50	HIS2550	10	
70	HIS2570	12	
95	HIS2595	14	
120	HIS25120	14	
150	HIS25150	16	

■ **Crimping dies HF 25**

Suitable for:

- Tubular cable lugs and connectors for fine stranded conductors

mm ²	Part No.		
16	HF2516		
25	HF2525		
35	HF2535		
50	HF2550		
70	HF2570		
95	HF2595		
120	HF25120		
150	HF25150		
185	HF25185		
240	HF25240		
300	HF25300		



■ **Crimping dies HD 25**

Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

mm ²	Part No.	Code	Crimp width mm
16	HD2516	8	10
25	HD2525	10	10
35	HD2535	12	10
50	HD2550	14	13
70	HD2570	16	13
95	HD2595	18	14
120	HD25120	20	14
150	HD25150	22	15
185	HD25185	25	15
240	HD25240	28	15
300	HD25300	32	17
400	HD25400	38	17
500	HD25500	42	17
625	HD25625	44	15



■ **Crimping dies HDP 25**

Suitable for:

- Double compression cable lugs

mm ²	Part No.	Crimp width mm	
2 x 50	HDP2550	15	
2 x 70	HDP2570	15	
2 x 95	HDP2595	15	
2 x 120	HDP25120	15	





■ **Crimping dies HQ 25**



Suitable for:

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN - Cu
- Copper solderless connectors (DIN 46341) acc. to DIN

mm ²	Part No.		
16	HQ2516		
25	HQ2525		
35	HQ2535		
50	HQ2550		
70	HQ2570		
95	HQ2595		
120	HQ25120		
150	HQ25150		
185	HQ25185		
240	HQ25240		



■ **Crimping dies HISQ 25**



Suitable for:

- Insulated solderless terminals and pin terminals

mm ²	Part No.		
10	HISQ2510		
16	HISQ2516		
25	HISQ2525		
35	HISQ2535		
50	HISQ2550		
70	HISQ2570		
95	HISQ2595		
120	HISQ25120		
150	HISQ25150		



■ **Crimping dies HRU 25**



Suitable for:

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors

mm ² se	mm ² sm	Part No.	Conductor Ø mm	Pre-rounding width mm
	10	HRU2510	4.1	40
	16	HRU2516	5.1	40
35	25	HRU253525	6.3	40
50	35	HRU255035	7.5	40
70	50	HRU257050	9.0	40
95	70	HRU259570	10.5	40
120	95	HRU2512095	12.5	40
150	120	HRU25150120	14.0	40
185	150	HRU25185150	15.8	40
240	185	HRU25240185	17.5	40
300	240	HRU25300240	20.3	40
	300	HRU25300SM	22.5	40

■ **Crimping dies HA 25**

Suitable for:

- Aluminium compression cable lugs and connectors to DIN
- Aluminium/copper compression cable lugs and connectors acc. to DIN

mm ²	Part No.	Code	Crimp width mm
10	HA2510	10	12
16-25	HA251625	12	12
35	HA2535	14	12
50	HA2550	16	12
70	HA2570	18	12
95-120	HA2595120	22	14
150	HA25150	25	14
185	HA25185	28	14
240	HA25240	32	17
300	HA25300	34	17
400	HA25400	38	17
500	HA25500	44	15



■ **Crimping dies HAD 25**

Suitable for:

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182
- Al-conductor acc. to DiN EN 50182, 120 - 300 mm²

mm ²	Part No.	Code	Crimp width mm
25	HAD2525	12	12
35	HAD2535	14	12
50	HAD2550	16	12
70	HAD2570	18	12
95	HAD2595	20	14
120	HAD25120	25	14
150-185	HAD25150185	28	14
240	HAD25240	34	17
300	HAD25300	38	17



■ **Crimping dies HAST 25**

Suitable for:

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Aluminium compression

mm ²	Part No.	Code	Crimp width mm
25-4	HAST2525	12	12
35-6	HAST2535	14	12
50-8	HAST2550	16	12
70-12	HAST2570	18	12
95-15	HAST2595	22	14
120-20	HAST25120	25	14





■ **Crimping dies HST 25**



Suitable for:

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Steel crimping

mm ²	Part No.	Code	Crimp width mm
25-4 35-6	HST2546	6	14
50-8	HST258	7	14
70-12 95-15	HST251215	9	14
120-20	HST2520	13	14



■ **Crimping dies HAH 25**



Suitable for:

- Clamps, H-type

mm ²	Part No.	Crimp width mm	
70	HAH2570	20	
95	HAH2595	20	
120	HAH25120	20	



■ **Crimping dies HC 25 / HMC 25**



Suitable for:

- Clamps, C-type

mm ²	Part No.	Crimp width mm	
16	HC2516	16	
25	HC2525	17	
35	HC2535	20	
50	HC2550	20	
70	HC2570	20	
95	HC2595	20	
10-16 10-25 35-35	HMC2535	18	
25-50 50-50	HMC2550	20	
35-70	HMC2570	20	
35-95 70-95	HMC2595	20	
120-120	HMC25120	20	
150-150	HMC25150	20	
185-185	HMC25185	20	

■ **Crimping dies HAE 25**

Suitable for:

- Cable end sleeves

mm ²	Part No.	Crimp width mm	
25	HAE2525	20	
35	HAE2535	20	
50	HAE2550	26	
70	HAE2570	26	
95	HAE2595	26	
120	HAE25120	26	
150	HAE25150	26	
185	HAE25185	26	
240	HAE25240	26	



■ **Crimping dies HAES 25**

Suitable for:

- Cable end sleeves
- Special trapezoid crimp for "compacted" fine stranded conductors

mm ²	Part No.	Crimp width mm	
25	HAES2525	20	
35	HAES2535	20	
50	HAES2550	26	
70	HAES2570	26	
95	HAES2595	26	
120	HAES25120	26	
150	HAES25150	26	
185	HAES25185	26	
240	HAES25240	26	





■ **Crimping dies HD 45**

Suitable for:

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN



mm ²	Part No.	Code	Crimp width mm
120	HD45120	20	15
150	HD45150	22	15
185	HD45185	25	15
240	HD45240	28	15
300	HD45300	32	17
400	HD45400	38	17
500	HD45500	42	17
625	HD45625	44	17
800	HD45800	52	20
1000	HD451000	58	20



■ **Crimping dies HA 45**

Suitable for:

- Aluminium compression cable lugs and connectors to DIN



mm ²	Part No.	Code	Crimp width mm
150	HA45150	25	15
185	HA45185	28	15
240	HA45240	32	17
300	HA45300	34	20
400	HA45400	38	20
500	HA45500	44	20



■ **Crimping dies HAD 45**

Suitable for:

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182
- Al-conductor acc. to DIN EN 50182, 150 - 300 mm²



mm ²	Part No.	Code	Crimp width mm
150-185	HAD45150185	28	20
240	HAD45240	34	20
300	HAD45300	38	20







Hand tools

■ VDE tools	428
Pliers	430
Screwdrivers	434
Assortments and sets	436
Safety tools	440
Tool chest	444
■ Standard tools	446
Pliers	448
Electronic/precision mechanic's tools	452
Screwdrivers	453
Bits, holders and adapters	456
Assortments and sets	459
Measuring and marking	465
Basic tools	469
Tool chest	473
■ Wire stripping tools	480
■ Stripping tools	484
■ Stripping tools for communication technology	490



Klauke®

Heavy-duty insulation up to 1000 V.

**Tested and approved VDE tools
from Klauke.**

Every Klauke VDE tool is produced and tested as per the latest directives of the safety test methods according to EN/IEC 60900 (VDE 0682 Part 201). All VDE tools are rated to 1500 volt DC and 1000 volt AC.



Klauke pliers have been granted the IF Product Design Award.



- VDE Pliers.
- VDE Side cutters.
- VDE Cable cutters.
- VDE Screwdrivers.



The impact-resistant hard core optimises the durability of the tools. The handle also offers the option of using the screwdriver as a lever. Another special feature is the profile stamp that clearly identifies the tools.



■ Everything under control, even under voltage.

- ▶ Pliers with **heavy-duty hand protection** to protect against flying sparks.
- ▶ A cold impact test (at -25 °C), a test of the adhesive strength of the insulation (with 500 N) and a single voltage test in a water bath (10,000 V/AC) are carried out in accordance with EN/IEC 60900.
- ▶ 2-component safety handle.

Benefits:

- ▶ The heavy-duty hand protection provides added safety when working under voltage.
- ▶ Guaranteed protection even under extreme conditions.
- ▶ Non-slip overlay thanks to matched elastomers.

■ Correct turnings for +/- applications.

- ▶ Special blade shape especially for +/- applications

Benefits:

- ▶ Damage to screw heads by wrong blades is avoided.
- ▶ The head profile causes a torque-dependent, compared with Phillips screws lower axial counter force which drives the screwdriver from the slot prior breaking of the screw.



▶ More on Page 434.



■ More force, less effort for quick cuts.

- ▶ Cutting surfaces with special flute section.
- ▶ Extended cutting edges.

Benefits:

- ▶ The extended cutting edges combined with the special flute section allow **quick and easy cuts** with comparatively little effort.

■ Handle with all the trimmings:

Ergonomic design, impact protection and nameplate.

- ▶ Ergonomically-designed handle with impact protection.
- ▶ Integrated nameplate on the inside of the handle.

Benefits:

- ▶ Improved force transmission during work.
- ▶ No damage to the tools when dropped.
- ▶ No confusion with other tools thanks to simple identification.



VDE tools



VDE Cable cutters

- New wave profile for longer service life

Suitable for:

- Stripping and cutting of copper and aluminium cables
- Cable cross-section up to 50 mm², cable up to Ø 16 mm (KL010160IS)
- Cable cross-section up to 70 mm², cable up to Ø 25 mm (KL010210IS)

Characteristics

- Adjustable joint

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Cable cutters	KL010160IS	160	225	1
VDE Cable cutters	KL010210IS	210	340	1



VDE Heavy-duty combination plier

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Holds flat and round material
- Blades for hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Heavy-duty combination plier	KL020165IS	165	200	1
VDE Heavy-duty combination plier	KL020180IS	180	255	1
VDE Heavy-duty combination plier	KL020205IS	205	280	1



VDE Heavy-duty combination plier angled

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Holds flat and round material
- Blades for hard and soft wires

Characteristics

- Angled head

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Heavy-duty combination plier angled	KL026205IS	180	285	1

VDE Side cutters

- New wave profile for longer service life

Suitable for:

- Soft copper and aluminium, plastic up to Ø 5.0 / 6.0 / 7.0 mm
- Hard wire, wire cable fibre, steel wire up to Ø 1.7 / 2.0 / 2.5 mm
- Cable - multiconductors, single core and stranded Ø 8 / 11 / 13 mm

Characteristics

- High cutting performance on hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Side cutters	KL040145IS	145	160	1
VDE Side cutters	KL040160IS	160	220	1
VDE Side cutters	KL040180IS	180	255	1



VDE Side cutters

- 4 Functions Cutting - stripping - crimping - bending

Suitable for:

- Cable - multiconductors, single core and stranded Ø 4.0 mm
- Hard wire and steel wire up to Ø 1.0 mm
- Soft copper and aluminium wire, plastic up to Ø 2.0 mm
- Stripping 1.5 mm² and 2.5 mm² of single and stranded conductors

Characteristics

- Inductive hardened precision cutting edges for fine wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Side cutters	KL042190IS	190	240	1



VDE Electricians heavy duty side cutter

- New wave profile for longer service life

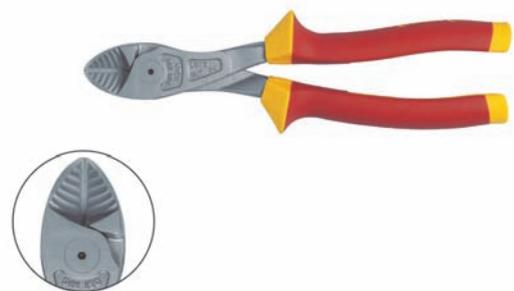
Suitable for:

- Piano wire up to Ø 2.5 mm

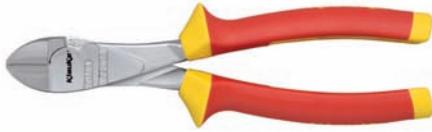
Characteristics

- Inductive hardened precision cutting edges for fine wires
- Ergonomically-shaped handle for improved power transmission
- 18° angled cutter head

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Electricians heavy duty side cutter	KL044200IS	200	280	1



VDE tools



VDE Heavy duty side cutters

- New wave profile for longer service life
- Increased force transmission through ergonomically formed shank

Suitable for:

- Hard wire, wire cable fibre, steel wire up to Ø 2.6 / 2.8 / 3.5 mm
- Piano wire, spring steel wire up to Ø 2.2 / 2.5 / > 3.0 mm
- Medium-hard wire up to Ø 3.7 / 4.0 / 4.5 mm

Characteristics

- High cutting performance on hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Heavy duty side cutters	KL045180IS	180	285	1
VDE Heavy duty side cutters	KL045200IS	200	310	1
VDE Heavy duty side cutters	KL045240IS	240	420	1



VDE Telephone pliers, straight

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Soft copper and aluminium wire, plastic up to Ø 2.5 mm
- Medium-hard wire, nails, wire nails up to Ø 3.2 mm
- Hard wire and steel wire up to Ø 2.2 mm

Characteristics

- With wire cutter for hard and soft wires
- Serrated jaws

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Telephone pliers, straight	KL050205IS	205	215	1



VDE Telephone pliers, bent

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Soft copper and aluminium wire, plastic up to Ø 2.5 mm
- Medium-hard wire, nails, wire nails up to Ø 3.2 mm
- Hard wire and steel wire up to Ø 2.2 mm

Characteristics

- With wire cutter for hard and soft wires
- Serrated jaws
- 45° angled flat-round jaws

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Telephone pliers, bent	KL055205IS	205	215	1

■ VDE Wire stripper

Suitable for:

- Cable - multiconductors, single core and stranded 10.0 mm²
- Cable - multiconductors, single core and stranded Ø 5.0 mm

Characteristics

- With adjustment screw

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Wire stripper	KL060160IS	160	185	1



■ Waterpump plier 1000 V

- Jaw width 50 mm
- Integrated hand protection

Characteristics

- Ratchet adjustment
- Box joint
- Teeth additionally inductive hardened

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Waterpump plier 1000 V	KL070250IS	250	385	1



■ Automatic wire stripper, 1000 V

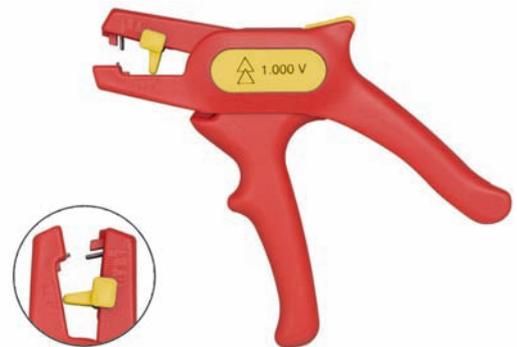
Suitable for:

- Flexible and solid conductors from 0.2 - 6 mm²

Characteristics

- VDE-tested for safe working on live conductors up to 1000 V
- Adjustable length stop from 5 - 12 mm

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Wire stripper 1000 V	KL760180IS	215	127	1



VDE tools

■ VDE Screwdrivers for Torx screws



Item	Part No.	Dimension	Blade length mm	weight g	pcs.
VDE-Torx-Screwdrivers	KL150TX10IS	100 x Tx 10	100	45	1
VDE-Torx-Screwdrivers	KL150TX15IS	100 x Tx 15	100	45	1
VDE-Torx-Screwdrivers	KL150TX20IS	100 x Tx 20	100	69	1
VDE-Torx-Screwdrivers	KL150TX25IS	100 x Tx 25	100	69	1
VDE-Torx-Screwdrivers	KL150TX30IS	100 x Tx 30	115	96	1



■ VDE Screwdriver for slotted screws



Item	Part No.	Dimensions mm	Blade length mm	weight g	pcs.
VDE Slotted screwdriver	KL1007525IS	75 x 2,5 x 0,4	75	22	1
VDE Slotted screwdriver	KL10010030IS	100 x 3,0 x 0,5	100	28	1
VDE Slotted screwdriver	KL10010035IS	100 x 3,5 x 0,6	100	30	1
VDE Slotted screwdriver	KL10010040IS	100 x 4,0 x 0,8	100	44	1
VDE Slotted screwdriver	KL10012555IS	125 x 5,5 x 1,0	125	70	1
VDE Slotted screwdriver	KL10015065IS	150 x 6,5 x 1,2	150	86	1
VDE Slotted screwdriver	KL10017580IS	175 x 8,0 x 1,2	175	135	1



■ VDE Screwdriver for cross-slotted screws (Phillips) PH1, PH2, PH3



Item	Part No.	Dimension	Blade length mm	weight g	pcs.
VDE Cross slotted screwdriver Phillips PH	KL110PH1IS	80 x PH 1	80	52	1
VDE Cross slotted screwdriver Phillips PH	KL110PH2IS	100 x PH 2	100	80	1
VDE Cross slotted screwdriver Phillips PH	KL110PH3IS	150 x PH 3	150	145	1



■ **VDE Screwdrivers for cross-slotted screws
Pozidriv PZ1, PZ2, PZ3**

Item	Part No.	Dimension	Blade length mm	weight g	pcs.
VDE Cross slotted screwdriver Pozidriv PZ	KL120PZ1IS	80 x PZ 1	80	49	1
VDE Cross slotted screwdriver Pozidriv PZ	KL120PZ2IS	100 x PZ 2	100	76	1
VDE Cross slotted screwdriver Pozidriv PZ	KL120PZ3IS	150 x PZ 3	150	140	1



■ **VDE Screwdrivers for plus/minus screws
Z1, Z2**

■ **Plus/Minus-Blade for switch gears**

Item	Part No.	Dimension	Blade length mm	weight g	pcs.
VDE-Plus/minus screwdriver	KL130PM1IS	80 x Z1	80	52	1
VDE-Plus/minus screwdriver	KL130PM2IS	100 x Z2	100	80	1



■ **VDE Screwdrivers for hexagon head screws**

Item	Part No.	Dimensions mm	for thread	weight g	pcs.
VDE-Hexagon head screwdriver	KL14055IS	5,5	M3	73	1
VDE-Hexagon head screwdriver	KL14060IS	6	M3.5	74	1
VDE-Hexagon head screwdriver	KL14070IS	7	M4	106	1
VDE-Hexagon head screwdriver	KL14080IS	8	M5	109	1
VDE-Hexagon head screwdriver	KL140100IS	10	M6	137	1
VDE-Hexagon head screwdriver	KL140130IS	13	M8	155	1



VDE tools



■ **Voltage tester with heavy duty handle, single-pole VDE 0680 150V - 250V**

Suitable for:

- Slotted screws 3.0 x 0.8 mm
- For voltage detection

Characteristics

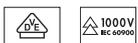
- Single-pole
- With heavy duty handle

Item	Part No.	Dimensions mm	Blade length mm	weight g	pcs.
Single-pole voltage tester	KL19073IS	3,0 x 0,8	73	30	1



■ **VDE Plier set, 3-pce.**

Item	Part No.	
VDE Plier set, 3-pce.	KL303IS	
Scope of supply	Part No.	Page
VDE Heavy-duty combination plier	KL020180IS	430
VDE Side cutters	KL040160IS	431
VDE Telephone pliers, straight	KL050205IS	432



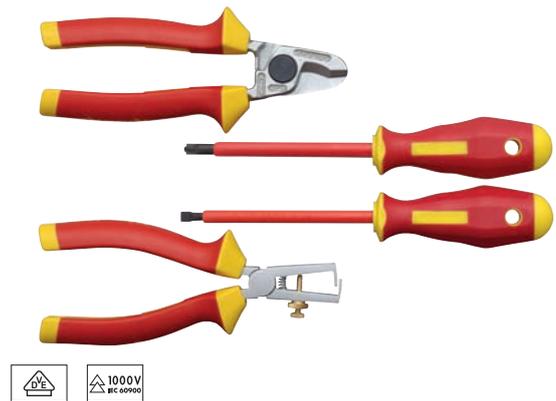
■ **VDE Plier set, 4-pce.**

Item	Part No.	
VDE Plier set, 4-pce.	KL304IS	
Scope of supply	Part No.	Page
VDE Heavy-duty combination plier	KL020180IS	430
VDE Side cutters	KL040160IS	431
VDE Telephone pliers, straight	KL050205IS	432
VDE Wire stripper	KL060160IS	433



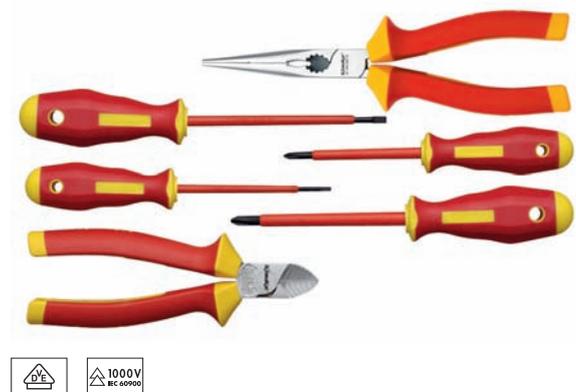
■ Plier/screwdriver set, 4-pce.

Item		Part No.	
Plier/screwdriver set, 4-pce.		KL305IS	
Scope of supply		Part No.	Page
VDE Cable cutters		KL010160IS	430
VDE Wire stripper		KL060160IS	433
VDE Slotted screwdriver	⊖	KL10010035IS	434
VDE-Plus/minus screwdriver	⊕/⊖	KL130PM1IS	435



■ Plier/screwdriver set, 6-pce.

Item		Part No.	
Plier/screwdriver set, 6-pce.		KL306IS	
Scope of supply		Part No.	Page
VDE Telephone pliers, straight		KL050205IS	432
VDE Side cutters		KL040160IS	431
VDE Cross slotted screwdriver Phillips PH	⊕	KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH	⊕	KL110PH2IS	434
VDE Slotted screwdriver	⊖	KL1007525IS	434
VDE Slotted screwdriver	⊖	KL10010040IS	434



■ VDE Screwdriver set, 3-pce.

Item		Part No.	
VDE Screwdriver set, 3-pce.		KL391IS	
Scope of supply		Part No.	Page
VDE Cross slotted screwdriver Phillips PH	⊕	KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH	⊕	KL110PH2IS	434
VDE Slotted screwdriver	⊖	KL10010035IS	434



VDE tools



■ VDE Screwdriver set, 3-pce.

Item	Part No.	
VDE Screwdriver set, 3-pce.	KL392IS	
Scope of supply	Part No.	Page
VDE Cross slotted screwdriver Pozidriv PZ	⊕⊖ KL120PZ1IS	435
VDE Cross slotted screwdriver Pozidriv PZ	⊕⊖ KL120PZ2IS	435
VDE Slotted screwdriver	⊖ KL10010040IS	434



■ VDE Screwdriver set, 3-pce.

Item	Part No.	
VDE Screwdriver set, 3-pce.	KL393IS	
Scope of supply	Part No.	Page
VDE-Plus/minus screwdriver	⊕⊖ KL130PM1IS	435
VDE-Plus/minus screwdriver	⊕⊖ KL130PM2IS	435
Single-pole voltage tester	⊖ KL19073IS	436



■ VDE Screwdriver set, 6-pce.

Item	Part No.	
VDE Screwdriver set, 6-pce.	KL390IS	
Scope of supply	Part No.	Page
VDE Cross slotted screwdriver Phillips PH	⊕⊖ KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH	⊕⊖ KL110PH2IS	434
VDE Slotted screwdriver	⊖ KL1007525IS	434
VDE Slotted screwdriver	⊖ KL10010040IS	434
VDE Slotted screwdriver	⊖ KL10012555IS	434
Single-pole voltage tester	⊖ KL19073IS	436



■ VDE Screwdriver set, 6-pce.

Characteristics

- Slotted screwdriver 75 x 2.5 / 100 x 4.0 mm / 125 x 5.5 mm
- Voltage testers
- Single component handle
- Screwdriver Philips PH1 + PH2

Item	Part No.
VDE Screwdriver set, 6-pce.	KL399IS



■ Klauke E-smart box 12-pce.

- 12 IEC Exchangeable blade set for all applications incl. contactless voltage tester

Characteristics

- Secure grip of blades in the handle by automatic locking to prevent unintentional withdrawall
- Snap-on rotating cap and soft coating zone for use as a precision tool
- Blades can be re-ordered individually
- Safety tools acc. to EN/IEC 60900 - all screwdrivers checked with 1,000V

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Klauke E-smart box	KL300IS		900	1
Scope of supply			Part No.	Page
Blade 2.5 x 0.4 mm			KLE300IS1	480
Blade 3.5 x 0.6 mm			KLE300IS3	480
Blade 4.0 x 0.8 mm			KLE300IS4	480
Blade 5.5 x 1.0 mm			KLE300IS5	480
Blade PH 1			KLE300IS6	480
Blade PH 2			KLE300IS7	480
Blade PZ 2			KLE300IS8	480
Blade TX 10			KLE300IS9	480
Blade TX 15			KLE300IS10	480
Blade plus/minus Z 1			KLE300IS13	480
Blade plus/minus Z 2			KLE300IS14	480
E-Smart Handle 93 x 32 mm			KLE300IS12	480





■ NH safety handle with guard

Suitable for:

- NH- fuses Size 00-3

Characteristics

- With non-slip protection and protective guard
- Designation: 1000 V
- Acc. to DIN VDE 0680/4
- Made from impregnated leather



Item	Part No.	weight g	Packing unit/pcs
NH safety handle with guard	KL600	470	1



■ Electrician's safety helmet

Characteristics

- acc. to DIN EN 397
- 440 V AC
- Designation: 1000 V
- Head size adjustable



Item	Part No.	weight g	Packing unit/pcs
Electrician's safety helmet	KL602GELB	370	1



■ Electricians face protection shield

Characteristics

- Acc. to VDE
- Designation 1000 V



Item	Part No.	weight g	Packing unit/pcs
Electricians face protection shield	KL603	195	1

■ **Insulating floor mat**

Characteristics

- Safety mat for high voltage areas
- Tested acc. to DIN 0303, part 21
- Sure-footed
- Non-slip
- Safety mat for safe working with live parts in high voltage areas up to 1000 Volt

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Insulating floor mat	KL620S1000	1000x1000x4	5300	1



■ **Rubber cover**

Characteristics

- Designation: 1000 Volt
- Penetration resistant
- Tested acc. to DIN VDE 0680, part 1
- Insulating cover
- Test voltage: 5 kV/1 min.
- Upper and lower side flat

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Rubber cover	KL625A500	500x500x1,6	440	1
Rubber cover	KL625A1000	1000x1000x1,6	1900	1



■ **Plastic clamp**

- To fix rubber cover

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Plastic clamp	KL628	150	70	1



■ **Safety gloves**



Characteristics

- acc. to DIN EN 60903
- Size 09 / Size 10
- For working in voltage ranges up to 1000 Volt

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Safety gloves	KL60509	Size 09	250	1
Safety gloves	KL60510	Size 10	250	1



■ **Cotton gloves (cotton)**

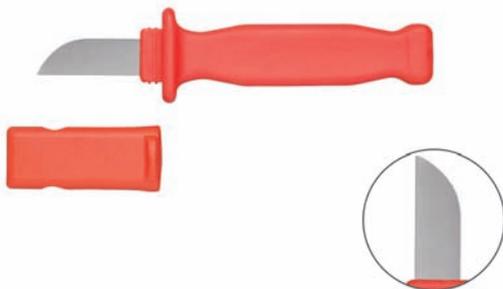


Suitable for:

- For use with safety gloves

Item	Part No.	weight g	Packing unit/pcs
Cotton gloves	KL605U	50	1

■ **Cable knife, straight**



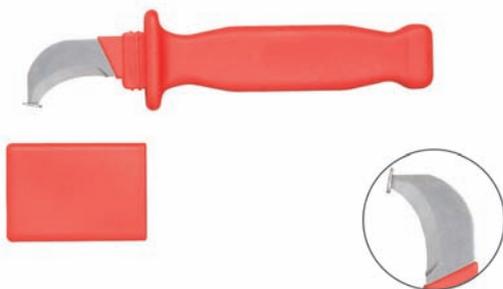
Characteristics

- Blade length: 50 mm
- With straight, strong blade and safety cap

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Cable knife, straight	KL640GK	200	105	1



■ **Electricians knife**



Characteristics

- Special blade tip to protect insulation of conductor
- Safety cap
- Blade length: 40 mm
- With hooked blade

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electricians knife	KL642HK	190	100	1

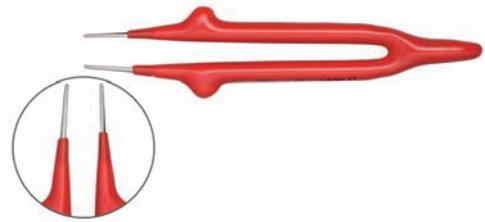


■ **Tweezers**

Characteristics

- With 2-layers of protective insulation
- Non-slip protection
- Straight and pointed tips

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tweezers	KL690130	130	30	1



■ **Cleaning brush**

- All plastic

Item	Part No.	weight g	Packing unit/pcs
Cleaning brush	KL698	75	1



■ **Hexagonal wrench**

Item	Part No.
Hexagonal wrench SW 5	K601
Hexagonal wrench SW 6	K602



■ **Hexagonal wrench**

Item	Part No.
Hexagonal wrench SW 5	K606
Hexagonal wrench SW 6	K607



■ **Guide wedge**

Item	Part No.
Guide wedge	K610





Torque wrench 20 Nm

Item	Part No.
Torque wrench 20 Nm	K615
Hexagonal bit SW 5	K6151
Hexagonal bit SW 6	K6152



VDE-Tool chest, 28-piece

Characteristics

- Hard-shell tool case, red
- Comprising 27-tools, partially VDE tested tools acc. to DIN EN 60900

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE-Tool chest, 28-piece	KL880B26IS	515x420x230	9800	1
Scope of supply			Part No.	Page
Waterpump plier 1000 V			KL070250IS	433
VDE Heavy-duty combination plier			KL020180IS	430
VDE Side cutters			KL040160IS	431
VDE Electricians heavy duty side cutter			KL044200IS	431
VDE Telephone pliers, straight			KL050205IS	432
VDE Wire stripper			KL060160IS	433
VDE Cable cutters			KL010160IS	430
VDE Slotted screwdriver			KL1007525IS	434
VDE Slotted screwdriver			KL10010035IS	434
VDE Slotted screwdriver			KL10010040IS	434
VDE Slotted screwdriver			KL10012555IS	434
VDE Cross slotted screwdriver Phillips PH			KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH			KL110PH2IS	434
VDE Cross slotted screwdriver Pozidriv PZ			KL120PZ1IS	435
VDE Cross slotted screwdriver Pozidriv PZ			KL120PZ2IS	435
VDE-Plus/minus screwdriver			KL130PM1IS	435
VDE-Plus/minus screwdriver			KL130PM2IS	435
Single-pole voltage tester			KL19073IS	436
Cable knife, straight			KL640GK	442
Rubber cover			KL625A1000	441
Plastic clamp			KL628	441
Safety gloves			KL60510	442
Cotton gloves			KL605U	442
Tweezers			KL690130	443
Cleaning brush			KL698	443
Control cabinet spirit level			KL420200	465
Wire stripper 1000 V			KL760180IS	433
Tool chest, empty			KL880L	444



Tool chest red, empty

- Red, hard-shell

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, empty	KL880L	515x420x230	4400	1



Klauke®

Innovative. Functional.
And ergonomic.

Top quality tools made in Germany.

The Klauke tool range covers standard tools, safety tools, measuring and marking tools based on latest laser technology.



Pliers and VDE pliers have been granted with the IF Product Design Award.



Impact-resistant core throughout.

- Pliers, screwdrivers.
- Bits, holders and adapters.
- Basic tools, safety tools.
- Measuring and marking tools.



*Maximum integration:
Impact protection and marking field in the handles.*

■ Special handle for grip and cushion.

- ▶ Protection by safety cushion at the end of handle.
- ▶ Secure positioning thanks to **non-slip handle material**.
- ▶ Ergonomically-designed handles.

Benefits:

- ▶ The safety cushion protects the pliers from damage even when dropped.
- ▶ Pliers won't slip even when placed on inclines.
- ▶ Specially-designed handles for increased force. Efficiency is also improved.



■ The correct blade for every screw.



▶ More on Page 454.

- ▶ Available in 8 different shapes.
- ▶ Ergonomically designed two-component handles.
- ▶ All screwdrivers are also available VDE approved.

Benefits:

- ▶ The Klauke range offers **a suitable screwdriver for every screw type**.
- ▶ The two-component handles developed specifically for Klauke tools, impress with pleasant haptic and outstanding torque transfer.



▶ More on Page 466.

■ Precise measuring – quickly and easy.

- ▶ Small and convenient.
- ▶ Simple operation.
- ▶ Illuminated display.

Benefits:

- ▶ Thanks to its compact dimensions the device fits into any pocket.
- ▶ Easy operation enables **precise and quick measuring** within a range of up to 100 m.
- ▶ The illuminated display allows values to be easily read off even in the dark.





■ Cable cutters

- New wave profile for longer service life

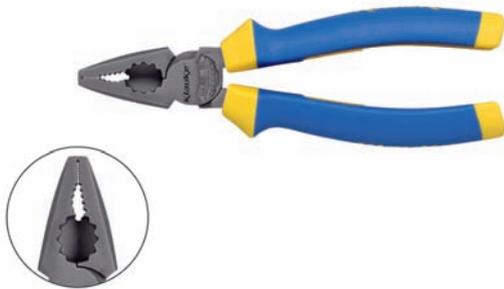
Suitable for:

- Stripping and cutting of copper and aluminium cables
- Cable cross-section up to 50 mm², cable up to Ø 16 mm (KL010160)
- Cable cross-section up to 70 mm², cable up to Ø 25 mm (KL010210)

Characteristics

- Adjustable joint

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Cable cutters	KL010160	160	250	1
Cable cutters	KL010210	210	335	1



■ Heavy-duty combination plier

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Holds flat and round material
- Blades for hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Heavy-duty combination plier	KL025165	165	200	1
Heavy-duty combination plier	KL025180	180	260	1
Heavy-duty combination plier	KL025205	205	285	1



■ Heavy-duty combination plier angled

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Holds flat and round material
- Blades for hard and soft wires

Characteristics

- Angled head

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
VDE Heavy-duty combination plier angled	KL026205	180	285	1



■ Long flat nose plier

- Serrated jaws

Characteristics

- With long, flat jaws

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Long flat nose plier	KL030160	160	175	1

■ **Long round nose plier**

- Serrated jaws
- Anti-slip, rounded precision tips

Characteristics

- With long, round jaws

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Long round nose plier	KL035160	160	165	1



■ **Side cutters**

- New wave profile for longer service life

Suitable for:

- Soft copper and aluminium, plastic up to Ø 5.0 / 6.0 / 7.0 mm
- Hard wire, wire cable fibre, steel wire up to Ø 1.7 / 2.0 / 2.5 mm
- Cable - multiconductors, single core and stranded Ø 8 / 11 / 13 mm

Characteristics

- High cutting performance on hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Side cutters	KL040145	145	160	1
Side cutters	KL040160	160	220	1
Side cutters	KL040180	180	255	1



■ **Heavy duty side cutters**

- New wave profile for longer service life
- Increased force transmission through ergonomically formed shank

Suitable for:

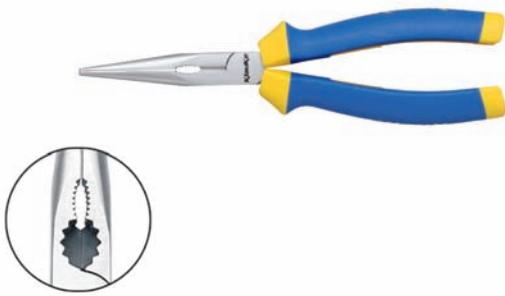
- Hard wire and steel wire up to Ø 2.6 / 2.8 mm
- Piano wire up to Ø 2.2 / 2.5 mm
- Medium-hard wire up to Ø 3.7 / 4.0 mm

Characteristics

- High cutting performance on hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Heavy duty side cutters	KL045180	180	280	1
Heavy duty side cutters	KL045200	200	310	1





■ Telephone pliers, straight

- With combination spanner from 11 - 17 mm (M8 - M10)

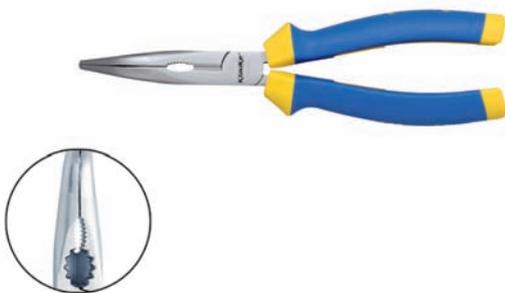
Suitable for:

- Soft copper and aluminium wire, plastic up to Ø 2.5 mm / > 2.5 mm
- Medium-hard wire, nails, wire nails up to Ø 1.6 / 3.2 mm
- Hard wire and steel wire up to Ø 2.2 mm (only KL050205)

Characteristics

- Straight, flat-round jaws
- With wire cutter for hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Telephone pliers, straight	KL050170	170	165	1
Telephone pliers, straight	KL050205	205	215	1



■ Telephone pliers, bent

- With combination spanner from 11 - 17 mm (M8 - M10)

Suitable for:

- Soft copper and aluminium wire, plastic up to Ø 2.5 mm / > 2.5 mm
- Medium-hard wire, nails, wire nails up to Ø 1.6 / 3.2 mm (KL055205)

Characteristics

- Serrated jaws
- 45° angled flat-round jaws
- With wire cutter for hard and soft wires

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Telephone pliers, bent	KL055170	170	165	1
Telephone pliers, bent	KL055205	205	215	1



■ Wire stripper

Suitable for:

- Cable - multiconductors, single core and stranded up to 10.0 mm²
- Cable - multiconductors, single core and stranded Ø 5.0 mm
- With opening spring and V-shaped cutting edges

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Wire stripper	KL060160	160	185	1

Waterpump plier

- Jaw width 50 mm
- Integrated hand protection

Characteristics

- Ratchet adjustment
- Box joint
- Double serrated jaws
- Teeth additionally inductive hardened
- Plastic coated handles (KL070250G)
- 2-component handle (KL070250)

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Waterpump plier	KL070250G	250	355	1
Waterpump plier	KL070250	250	395	1



Waterpump plier

- Jaw width 35 mm
- Integrated hand protection

Characteristics

- Ratchet adjustment
- Box joint
- Double serrated jaws
- Plastic coated handles (KL0721806 / KL0722506 / KL0723006)
- 2-component handle (KL072250)

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Waterpump plier	KL072180G	180	190	1
Waterpump plier	KL072250G	250	300	1
Waterpump plier	KL072300G	300	530	1
Waterpump plier	KL072250	250	350	1



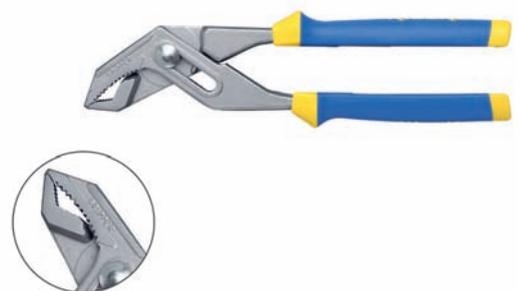
Waterpump plier, grooved

- Jaw width 50 mm
- Double grooved joint and safety stop

Characteristics

- Optimum pivot point - lower effort
- Plastic coated handles (Only KL075250G)
- Non-slip overlay due to matched elastomers
- 2-component handle (KL075250)

Item	Part No.	Dimension	Jaw width mm	weight g	Packing unit/pcs
Waterpump plier, grooved	KL075250G	250	45	390	1
Waterpump plier, grooved	KL075250	250	45	433	1





■ Basin wrench

- Large jaw opening adjustable from 0 - 53 mm
- Integrated hand protection

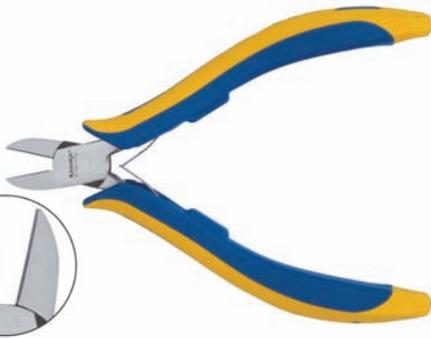
Suitable for:

- Smooth polished jaws

Characteristics

- Push-button adjustment
- Box joint
- Plastic coated handles

Item	Part No.	Dimension	Jaw width mm	weight g	Packing unit/ pcs
Basin wrench	KL078250G	250	53	375	1



■ Electronic side cutters, with facet

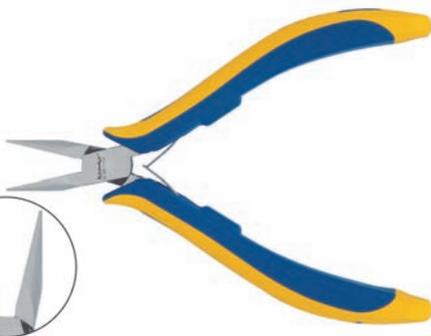
Characteristics

- ESD - electrical discharging
- with electrical discharging grips
- Precision plier for high precision work
- double leaf spring with low friction
- abduct of electrostatic energy
- Surface resistance amounts 1 to 100 MΩm

Note:

- Attention!
ESD grips do not protect against voltage.

Item	Part No.	Dimensions mm	weight g	Packing unit/ pcs
Electronic side cutters, with facet	KL040115EL	115	62	1
Electronic side cutters, without facet	KL040115ELW	115	60	1



■ Electronic chain nose plier

Suitable for:

- for gripping small items
- forming of wires

Characteristics

- ESD - electrical discharging
- with electrical discharging grips
- Smooth inside jaws, edges rounded
- with electrical discharging grips
- abduct of electrostatic energy
- Surface resistance amounts to 1 to 100 MΩm

Note:

- Attention!
ESD grips do not protect against voltage.

Item	Part No.	Dimensions mm	weight g	Packing unit/ pcs
Electronic chain nose plier	KL050115EL	115	64	1



■ **Electronic side cutters, without wire trapping spring**

- clearance angle 21°

Characteristics

- With opening spring
- Cutting edges additionally induction hardened
- 2-component handle
- for wires up to Ø 1.3 mm



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electronic side cutters, without wire trapping spring	KL040128EL	128	64	1
Electronic side cutter, with wire trapping spring	KL040128ELH	128	66	1

■ **Electronic assortment, 7-pieces**

Characteristics

- Holder with exchangeable blades for slotted screws 1.5 to 4.0 mm
- Cross-slotted PH-screws PH000 to PH1
- Cross-slotted PZ-screws PZ0 to PZ1
- 2-component handle

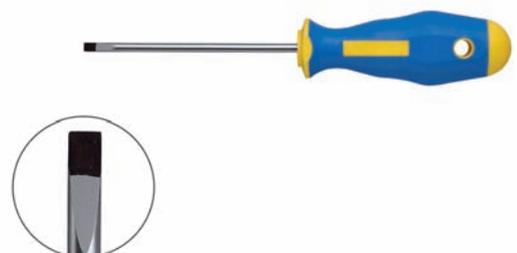


Item	Part No.	weight g	Packing unit/pcs
Electronic assortment, 7-pieces	KL350	161	1

Scope of supply		Part No.	Page
Blade 1.5 x 0.25 - 3.0 x 0.5 mm		KLE3501	497
Blade 2.0 x 0.4 - 3.5 x 0.6 mm		KLE3502	497
Blade 2.5 x 0.4 - 4.0 x 0.8 mm		KLE3503	497
Blade PH 000 - PH 00		KLE3504	497
Blade PH 0 - PH 1		KLE3505	497
Blade PZ 0 - PZ 1		KLE3506	497
Tool holder 95 x 14 mm		KLE3507	497

■ **Slotted screwdrivers**

Item	Part No.	Dimension	Blade length mm	weight g	pcs.
Slotted screwdrivers, 75 mm	KL1007525	2,5 x 0,4	75	26	1
Slotted screwdrivers, 80 mm	KL1008030	3,0 x 0,5	80	28	1
Slotted screwdrivers, 100 mm	KL10010035	3,5 x 0,6	100	32	1
Slotted screwdrivers, 100 mm	KL10010040	4,0 x 0,8	100	45	1
Slotted screwdrivers	KL10012555	5,5 x 1,0	125	71	1
Slotted screwdrivers	KL10015065	6,5 x 1,2	150	89	1
Slotted screwdrivers, 175 mm	KL10017580	8,0 x 1,2	175	129	1



■ Workshop screwdriver for slotted screws

■ With hexagonal shank



Item	Part No.	Dimensions mm	Blade length mm	weight g	pcs.
Workshop screwdriver, 100 mm	KL10510055	5,5 x 1,0	100	74	1
Workshop screwdriver, 125 mm	KL10512565	6,5 x 1,2	125	100	1
Workshop screwdriver, 150 mm	KL10515080	8,0 x 1,2	150	162	1

■ Cross slotted screwdriver PZ1, PZ2, PZ3



Item	Part No.	Dimension	Blade length mm	weight g	pcs.
Cross-slotted screws (Pozidriv) PZ	KL120PZ1	PZ 1	80	51	1
Cross-slotted screws (Pozidriv) PZ	KL120PZ2	PZ 2	100	79	1
Cross-slotted screws (Pozidriv) PZ	KL120PZ3	PZ 3	150	138	1

■ Cross slotted screwdriver PH1, PH2, PH3

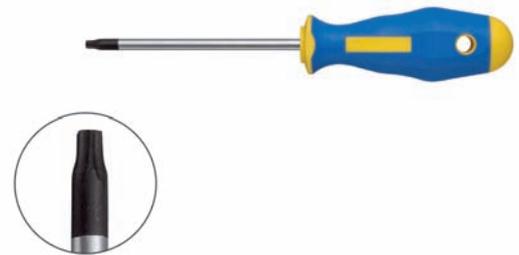


Item	Part No.	Dimension	Blade length mm	weight g	pcs.
Cross-slotted screws (Phillips) PH	KL110PH1	PH 1	80	51	1
Cross-slotted screws (Phillips) PH	KL110PH2	PH 2	100	79	1
Cross-slotted screws (Phillips) PH	KL110PH3	PH 3	150	138	1

■ **Torx screwdrivers**

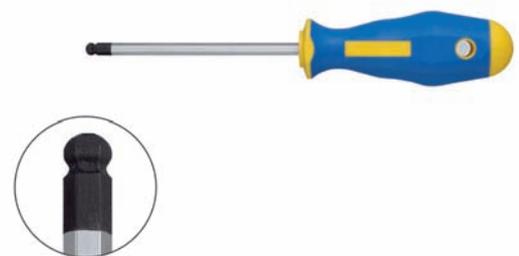
For Torx TR (Tamper Resistant)

Item	Part No.	Dimension	Blade length mm	weight g	pcs.
Torx screwdrivers	KL150TR10	Tx TR 10	100	46	1
Torx screwdrivers	KL150TR15	Tx TR 15	100	48	1
Torx screwdrivers	KL150TR20	Tx TR 20	100	69	1
Torx screwdrivers	KL150TR25	Tx TR 25	100	69	1
Torx screwdrivers	KL150TR30	Tx TR 30	115	97	1
Torx screwdrivers	KL150TR40	Tx TR 40	125	129	1



■ **Screwdrivers, ball-point**

Item	Part No.	Dimensions mm	Blade length mm	weight g	pcs.
Screwdrivers, ball-point	KL160KI3	3	100	29	1
Screwdrivers, ball-point	KL160KI4	4	100	49	1
Screwdrivers, ball-point	KL160KI5	5	100	76	1
Screwdrivers, ball-point	KL160KI6	6	125	91	1
Screwdrivers, ball-point	KL160KI8	8	150	152	1



■ **Carburettor screwdriver**

Item	Part No.	Dimensions mm	Blade length mm	weight g	pcs.
Carburettor screwdriver, slotted screws	KL1002555	5,5 x 1,0	25	35	1



■ **Carburettor screwdriver**



Item	Part No.	Dimension	Blade length mm	weight g	pcs.
Carburettor screwdriver, cross-slotted	KL11025PH1	PH 1	25	35	1



■ **Screwdriver-Bits, 1/4" 73 mm**

Characteristics

- Shank 1/4" (6.3) DIN3126
- Dimensions 0.6 x 3.5 mm



Item	Part No.	Dimensions mm	Blade length mm	weight g	Number Parts	Packing unit/ pcs
Bit for slotted screws	KL2007335	0,6x3,5	73	16	2	1
Bit for slotted screws	KL2007340	0,8x4,0	73	18	2	1
Bit for slotted screws	KL2007355	1,0x5,5	73	26	2	1
Bit for slotted screws	KL2007365	1,2x6,5	73	34	2	1



■ **Screwdriver-Bits, 1/4" 73 mm**

Suitable for:

- Cross-slotted PZ-screws (Pozidriv) PZ 1 + PZ 2

Characteristics

- Shank 1/4" (6.3) DIN3126



Item	Part No.	Dimension	Blade length mm	weight g	Number Parts	Packing unit/ pcs
Bit for cross-slotted screws (Pozidriv)	KL22073PZ1	PZ 1	73	22	2	1
Bit for cross-slotted screws (Pozidriv)	KL22073PZ2	PZ 2	73	30	2	1



■ **Screwdriver-Bits, 1/4" 73 mm**

Suitable for:

- Cross-slotted PH-screws (Phillips) PH 1 + PH 2

Characteristics

- Shank 1/4" (6.3) DIN3126

Item	Part No.	Dimension	Blade length mm	weight g	Number Parts	Packing unit/ pcs
Bit for cross-slotted screws (Phillips)	KL21073PH1	PH 1	73	22	2	1
Bit for cross-slotted screws (Phillips)	KL21073PH2	PH 2	73	30	2	1



■ **Screwdriver-Bits, 1/4" 73 mm**

Suitable for:

- Torx screws

Characteristics

- Shank 1/4" (6.3) DIN3126

Item	Part No.	Dimension	Blade length mm	weight g	Number Parts	Packing unit/ pcs
Bit for Torx screws	KL25073TX10	TX 10	73	22	2	1
Bit for Torx screws	KL25073TX15	TX 15	73	22	2	1
Bit for Torx screws	KL25073TX20	TX 20	73	25	2	1
Bit for Torx screws	KL25073TX25	TX 25	73	25	2	1
Bit for Torx screws	KL25073TX27	TX 27	73	25	2	1
Bit for Torx screws	KL25073TX30	TX 30	73	30	2	1
Bit for Torx screws	KL25073TX40	TX 40	73	40	2	1



■ **Screwdriver-Bits, 1/4" 73 mm**

Suitable for:

- Plus/minus screws Z 1 + Z 2

Characteristics

- Shank 1/4" (6.3) DIN3126

Item	Part No.	Dimension	Blade length mm	weight g	Number Parts	Packing unit/ pcs
Bit for plus/minus screws	KL23073PM1	Z 1	73	20	2	1
Bit for plus/minus screws	KL23073PM2	Z 2	73	30	2	1



■ **Magnetic holder for Screwdriver-Bits, 1/4" 58 mm**

Characteristics

- Shank 1/4" (6.3) DIN3126
- Strong magnet

Item	Part No.	Dimensions mm	weight g	Packing unit/ pcs
Magnetic holder	KL290	58	32	1





■ **Mechanical bit holder, 1/4" 52 mm**

Characteristics

- Shank 1/4" (6.3) DIN3126
- With quick-change chuck

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Mechanical bit holder	KL291	52	30	1



■ **Adapter 1/4" 50 mm**

- Shank E 6.3 and 1/4" socket wrench

Suitable for:

- Drive for socket wrenches

Characteristics

- Shank 1/4" (6.3)

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Adapter 1/4"	KL295	50	15	1



■ **Adapter 3/8" 50 mm**

- Shank E 6.3 and 3/8" socket wrench

Suitable for:

- Drive for socket wrenches

Characteristics

- Shank 1/4" (6.3), shank 3/8" 10

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Adapter 3/8"	KL296	50	22	1

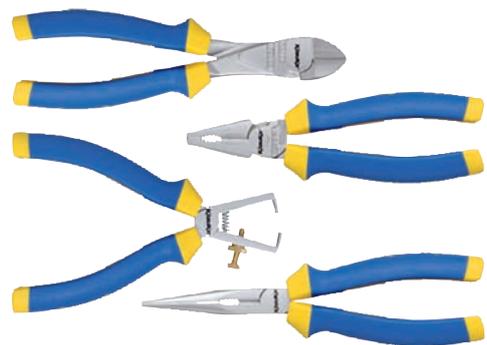
■ Plier set, 3-pieces

Item	Part No.	weight g	Packing unit/pcs
Plier set, 3-pieces	KL303	790	1
Scope of supply		Part No.	Page
Heavy-duty combination plier		KL025180	448
Side cutters		KL040160	449
Telephone pliers, straight		KL050205	450



■ Plier set, 4-pieces

Item	Part No.	weight g	Packing unit/pcs
Plier set, 4-pieces	KL304	1050	1
Scope of supply		Part No.	Page
Heavy-duty combination plier		KL025180	448
Side cutters		KL040160	449
Telephone pliers, straight		KL050205	450
Wire stripper		KL060160	450



■ Plier set, 3-pieces

Item	Part No.	weight g	Packing unit/pcs
Plier set, 3-pieces	KL310	1100	1
Scope of supply		Part No.	Page
Heavy-duty combination plier		KL025180	448
Heavy duty side cutters		KL045200	449
Waterpump plier		KL072250	451



■ Plier set, 3-pieces

Item	Part No.	weight g	Packing unit/pcs
Plier set, 3-pieces	KL315	1000	1
Scope of supply		Part No.	Page
Basin wrench		KL078250G	452
Waterpump plier		KL072180G	451
Waterpump plier		KL072250G	451





■ Screwdriver set, 3-pieces

Item	Part No.	weight g	Packing unit/pcs	
Screwdriver set, 3-pieces	KL380	425	1	
Scope of supply			Part No.	Page
Workshop screwdriver, 100 mm			KL10510055	454
Workshop screwdriver, 125 mm			KL10512565	454
Workshop screwdriver, 150 mm			KL10515080	454



■ Torx Screwdriver set, 3-pieces

Item	Part No.	weight g	Packing unit/pcs	
Torx Screwdriver set, 3-pieces	KL385	385	1	
Scope of supply			Part No.	Page
Torx screwdrivers			KL150TR15	455
Torx screwdrivers			KL150TR20	455
Torx screwdrivers			KL150TR25	455



■ Socket head bit set 1/4", 28-pieces

- 16 Bits: C 6.3 x 25m / PH1 / PH2 / PZ1 / PZ2 / PZ3 / SW3 / SW4 / SW5 / SW6 / 3.5 x 0.6 / 5.5 x 0.8 / 6.5 x 1.2 / T15 / T20 / T25 / T30
- 1 Quick-change chuck
- 7 socket head spanners: 5 mm / 5,5 mm / 6 mm / 7 mm / 8 mm / 10 mm / 13 mm
- 1 Adapter 1/4"
- 1 Extension 1/4"
- 1 Extension for socket head spanner
- 1 ratchet

Item	Part No.	weight g	Number of parts	Packing unit/pcs
Socket head bit set 1/4", 28-pieces	KL360	1130	28	1
Scope of supply		Part No.	Page	
16-piece Bit set C 6.3 1/4"		KLE3601		
7-piece Socket set 1/4"		KLE3602		
Adapter 1/4" x 25 mm		KLE3603		
Adapter 1/4" x 150 mm		KLE3604		
Extension 75 mm		KLE3605		
Ratchet 1/4" neutral		KLE3606		
1K Smart handle 105 x 39 mm		KLE3607		

■ **Allen key set, 7-pieces**

- In practical holder

Characteristics

- SW 2 / SW 2.5 / SW 3 / SW 4 / SW 5 / SW 6 / SW 8

Item	Part No.	Dimension	weight g	Number of parts	Packing unit/ pcs
Allen key set	KL370	SW 2 - 8	171	7	1



■ **Ball point allen key set, 9-pieces**

- In plastic holder

Characteristics

- SW 1.5 / SW 2 / SW 2,5 / SW 3 / SW 4 / SW 5 / SW 6 / SW 8 / SW 10

Item	Part No.	Dimension	weight g	Number of parts	Packing unit/ pcs
Allen key set, ball point	KL375	SW 1.5 - 10	273	9	1



■ **Torque-wrench set, 14-pieces**

0.6 - 1.5 NM

Suitable for:

- Slotted, cross-slotted, Torx and plus/minus screws, Pozidriv

Characteristics

- Precise release when reaching the set torque
- In practical holder

Item	Part No.	weight g	Number of parts	Packing unit/ pcs
Torque-wrench set, 14-pieces	KL38715	1048	14	1
Scope of supply	Part No.		Page	
NM blade TX 6 x 170 mm		KLE387151		
NM blade PH 0 x 170 mm		KLE3871510		
NM blade PZ 0 x 170 mm		KLE3871511		
NM blade magnetic 170 mm		KLE3871512		
NM handle 0.6 - 1.5 Nm		KLE3871513		
NM blade TX 7 x 170 mm		KLE387152		
NM blade TX 8 x 170 mm		KLE387153		
NM blade Tx IP 7 x 170 mm		KLE387155		
NM blade Tx IP 8 x 170 mm		KLE387156		
NM blade Tx IP 9 x 170 mm		KLE387157		
NM blade 3.0 x 0.5 x 170 mm		KLE387158		
NM blade 3.5 x 0.6 x 170 mm		KLE387159		
NM blade Z1 x 170 mm		KLE3883014		
Adjusting spanner		KLE3871514		





■ **Torque wrench set, 14-pieces**

1.5 - 3.0 Nm

Suitable for:

- Slotted, cross-slotted, Torx and plus/minus screws, Pozidriv

Characteristics

- Torque range from 1.5 - 3.0 Nm
- Easy torque adjustment
- Precise release when reaching the set torque
- Black tip for precision fit
- In practical holder

Item	Part No.	weight g	Number of parts	Pack- ing unit/ pcs
Torque wrench set, 14-pieces	KL38830	1066	14	1
Scope of supply		Part No.		Page
NM blade 4.0 x 0.8 x 170 mm	⊖	KLE388301		
NM blade Tx IP 10 x 170 mm	⊕	KLE3883010		
NM blade Tx IP 15 x 170 mm	⊕	KLE3883011		
NM blade magnetic 170 mm		KLE3883012		
NM handle		KLE3883013		
NM blade Z1 x 170 mm	⊕	KLE3883014		
NM blade 72 x 170 mm	⊕	KLE3883015		
NM blade PH 1 x 170 mm	⊕	KLE388302		
NM blade PH 2 x 170 mm	⊕	KLE388303		
NM blade PZ 1 x 170 mm	⊕	KLE388304		
NM blade PZ 2 x 170 mm	⊕	KLE388305		
NM blade TX 10 x 170 mm	⊕	KLE388307		
NM blade TX 15 x 170 mm	⊕	KLE388308		
Adjusting spanner		KLE3871514		

■ **Torque wrench set, 14-pieces**

3.0 - 5.4 Nm

- Exchangeable blades for greatest flexibility in all areas of use
- Easy torque adjustment
- Precise release when reaching the set torque
- Best performance, up to 100% above DIN values

Suitable for:

- Slotted, cross-slotted, Torx and plus/minus screws, Pozidriv

Characteristics

- Torque range from 3.0 - 5.4 Nm
- Easy torque adjustment
- Precise release when reaching the set torque
- Black tip for precision fit
- In practical holder



Item	Part No.	weight g	Number of parts	Packing unit/ pcs
Torque wrench set, 14-pieces	KL38954	1066	14	1
Scope of supply		Part No.	Page	
NM blade 4.0 x 0.8 x 170 mm		KLE388301		
NM blade PH 1 x 170 mm		KLE388302		
NM blade PH 2 x 170 mm		KLE388303		
NM blade PZ 1 x 170 mm		KLE388304		
NM blade PZ 2 x 170 mm		KLE388305		
NM blade TX 15 x 170 mm		KLE388308		
NM blade TX 20 x 170 mm		KLE389541		
NM blade TX 25 x 170 mm		KLE389542		
NM blade Tx IP 10 x 170 mm		KLE3883010		
NM blade Tx IP 15 x 170 mm		KLE3883011		
NM blade magnetic 170 mm		KLE3883012		
NM handle		KLE3895413		
NM blade 72 x 170 mm		KLE3883015		
Adjustment tool		KLE387514		

■ **Bit assortment, 6-piece, 1/4" x 73 mm**

Characteristics

- KL330: 0.5 x 3 mm / 0.6 x 3.5 mm / 0.8 x 4 mm / 1.0 x 5.5 / PH 1 / PH 2
- KL331: PZ1 / PZ2 / PZ3 / PH1 / PH2 / PH3
- KL335: Tx10 / Tx15 / Tx20 / Tx25 / Tx30 / Tx40
- Shank 1/4" (6.3) DIN3126

Item	Part No.	Blade length mm	weight g	Number of parts	Packing unit/ pcs
Bit set	KL330	73	120	6	1
Bit set	KL331	73	120	6	1
Torx bit set	KL335	73	120	6	1





■ **Bit-Box-Swift, 7-piece, 1/4" 25 mm**

Suitable for:

- KL340: 1.0 x 5.5 mm / 1.2 x 6.5 mm / PZ 1 / PZ 2 / PH 1 / PH 2
- KL345: Tx10 / Tx15 / Tx20 / Tx25 / Tx30 / Tx40

Characteristics

- Shank 1/4" (6.3) DIN3126
- Sizes: 1.0 x 5.5 mm / 1.2 x 6.5 mm / PZ 1 / PZ 2 / PH 1 / PH 2
- In practical holder
- Incl. magnetic holder



Item	Part No.	Blade length mm	weight g	Number of parts	Packing unit/ pcs
Bit box Swift	KL340	25	75	7	1
Torx bit box Swift	KL345	25	75	7	1



■ **Combination spanner set, 12-pieces**

Characteristics

- Width across flats SW 8/9/10/11/12/13/14/15/16/17/19/22 mm
- Material: Chromium-Vanadium
- Surface: chrome-plated

Item	Part No.	Dimensions mm	weight g	Packing unit/ pcs
Combination spanner set	KL365	SW 8 - 22	1055	1

■ **Control cabinet spirit level, 200 mm**

Characteristics

- Spirit level, torpedo type, horizontal, vertical and 45° levels

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Control cabinet spirit level	KL420200	200x42x17	65	1



■ **Aluminium spirit level, 400 mm**

Characteristics

- With vertical and horizontal levels

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Aluminium spirit level	KL425400	400 x 40 x 15	210	1
Aluminium spirit level	KL425600	600 x 40 x 15	305	1



■ **Folding rule, 2 m**

Characteristics

- White/yellow
- No. of links 10

Item	Part No.	weight g	Packing unit/pcs
Folding rule	KL402	126	1



■ **Measuring tape, 3 m**

Characteristics

- With 3 functions: Length, inside dimension and circles

Item	Part No.	weight g	Packing unit/pcs
Measuring tape	KL403	124	1





■ Leica hand laser meter Disto D2

- Measuring distances up to 60 m calculate distance and results using the world's smallest laser distance meter

Technical data	
Range (for longer distances, use target signal)	0.05 m to 60 m
Measuring accuracy	± 1.5 mm
Smallest display unit	1 mm
Laser class:	II
Laser type	635 nm, < 1 mW
Automatic stop	in 180 s
Display light	•
Continuous measurement	•
Addition/Subtraction	•
Indirect measurement using Pythagoras	•
Minimum and maximum measurement	•
Multifunctional end piece	•
Batteries	Type AAA 2x1.5 V
Dimension and weight	111 x 43 x 23 mm, 100 g
Temperature range:	
Storage	-25° C to +70° C
Operation	0° C to +40° C
Call-up last measurements	10

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Leica Hand laser meter Disto D2	KLHLMD2	111 x 43 x 23	100	1

Leica hand laser meter Disto D3

- Fast distance measuring up to 100 m also distance over obstacles and the exact determination of the angle



Technical data	
Measuring accuracy typical	± 1.0 mm
Range	0.05 to 100 m
Power Range Technology	•
Distance in m Ø Laser point in mm	10, 50, 100 m 6, 30, 60 mm
Minimum and maximum measurement	•
Continuous measurement	•
Addition/Subtraction	•
Multiple unplug function	•
Indirect measurement using Pythagoras	•
Horizontal distance using incline sensor	•
Incline sensor	
Measuring range	± 45°
Accuracy for laser beam	± 0,3°
Accuracy for housing	± 0,3°
Units in the incline sensor	± 0,0°, 0,00%
Automatic release	•
Automatic display/keypad illumination	•
Measuring units	0.000 m, 0.000° m, 0.00 m, 0.00 ft, 0' 00" 1/32, 0.0 in, 0 1/32 in
Measurements per battery unit	up to 5,000
Multifunctional end piece	•
Tripod socket	•
Batteries	Type AAA 2x 1.5V
Splash water / dust proof IP 54	•
Dimensions	125 x 45 x 24 mm
Weight incl. batteries	110 g

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Leica hand laser meter Disto D3	KLHLMD3	45 x 125 x 24	110	1



■ **Carpenter's pencil**

Characteristics

- oval shape
- pointed



Item	Part No.	weight g	Packing unit/pcs
Carpenter's pencil	KL449	10	1

■ **Marking pen**

- Permanent marker Multimark
- Fine tip for 0.6 mm



Characteristics

- Black

Item	Part No.	weight g	Packing unit/pcs
Marking pen	KL440F	10	1

■ **Chalk for chalk line**

Characteristics

- 100 g bottle



Item	Part No.	weight g	Packing unit/pcs
Chalk for chalk line, red	KL451ROT	100	1
Chalk for chalk line, blue	KL451BLAU	100	1

■ **Chalk line**

Suitable for:

- The drawing of lines for cable installation

Characteristics

- Cord: 15 m



Item	Part No.	weight g	Packing unit/pcs
Chalk line	KL450	380	1

■ **Universal cabinet key, subkey Electro**

- Subkey "Elektro": for all standard control cabinet closures with double swivel lock

Characteristics

- Inner square 5, 6 and 7 - 8 mm
- Triangular 9 mm
- Double pin keys 3 - 5 mm
- Including 1/4" bit retainer
- with radiator valve key



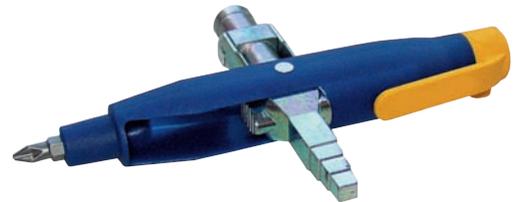
Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Universal cabinet key, subkey Electro	KL510	145	120	1



■ **Universal cabinet key, subkey Shop**

Characteristics

- With outside square 6 - 9 mm
- Triangular 8 mm
- Square socket 5 and 8 mm
- Including 1/4" bit retainer
- with radiator valve key



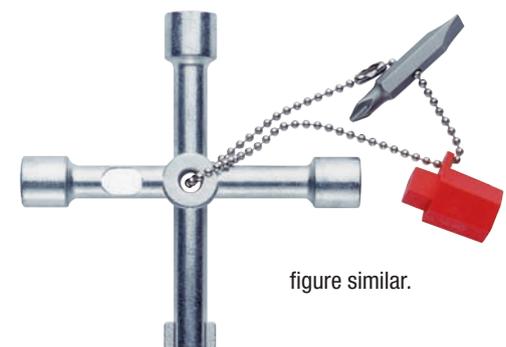
Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Universal cabinet key, subkey Shop	KL515	150	125	1



■ **Multi key**

Characteristics

- With chain and adapter
- Square socket 7 - 8 mm
- Triangular 8 - 9 mm
- Double pin keys 3 - 5 mm
- Half-moon



Item	Part No.	weight g	Packing unit/pcs
Multi key	KL505	95	1





■ Control cabinet key

Characteristics

- With chain and adapter
- With square socket 5, 6 mm, 7 - 8 mm
- Triangular 7 - 8 mm
- Double pin keys 3 - 5 mm
- Slotted screws 1.0 - 7 mm
- Cross-slotted PH 2

Item	Part No.	weight g	Packing unit/pcs
Control cabinet key	KL500	75	1

■ Engineers hammer



- Steel-forged head
- Ground finish
- With protective nylon shroud

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Engineers hammer	KL580300	370	300	1
Engineers hammer	KL580500	610	500	1

■ Sledge hammer



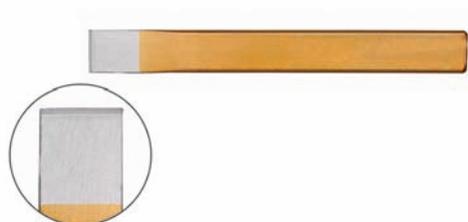
- Steel-forged head
- Ground finish
- With protective nylon shroud

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Sledge hammer, 1,000 g	KL5821000	1150	1000	1
Sledge hammer, 1,250 g	KL5821250	1400	1250	1

■ Jointing chisel

Characteristics

- Chromium-Vanadium steel, air-hardened
- Safety heads, annealed



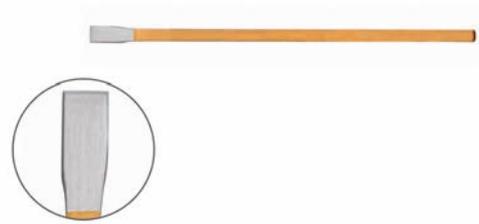
Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Jointing chisel	KL584230	230 x 26 x 7	250	1

■ **Electricians chisel**

Characteristics

- Chromium-Vanadium steel, air-hardened
- Safety heads, annealed

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electricians chisel	KL585200	200	90	1
Electricians chisel	KL585250	250	120	1



■ **Safety handle for jointing chisel**

Suitable for:

- Part KL584230

Item	Part No.	weight g	Packing unit/pcs
Safety handle for jointing chisel	KL586	110	1



■ **Electricians knife**

Characteristics

- Hinged, with plastic handle

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electricians knife	KL540	80	115	1



■ **Hand saw**

Characteristics

- With fixed wooden handle

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Hand saw	KL559	290	95	1
Metal saw blades	KL550ES	150	2	12



■ **Universal saw**



Characteristics

- With fibreglass reinforced plastic handle

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Universal saw	KL550	250	170	1
Metal saw blades	KL550ES	150	2	12

■ **Combination scissors**



Suitable for:

- e.g. round or flat material from copper, aluminium, plastic, paper, cardboard, leather

Characteristics

- Serrated cutting edges
- With safety lock

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Combination scissors	KL545	190	100	1

■ **Universal knife**



Characteristics

- With adjustable and replaceable blades

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Universal knife	KL542		305	1
Spare blade	KL542ES	60x19x0,5	8	1

■ **Cutter knife**



Characteristics

- Knife with knock-off blades, all 9 mm

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Cutter knife	KL544	9	45	1
Spare blade	KL544ES		5	1

■ **Safety goggles in nylon bag**

Characteristics

- with replaceable lenses
- Simple and fast replacement
- Can be turned into sunglasses



Item	Part No.	weight g	Packing unit/pcs
Safety goggles in nylon bag	KL604	33	1
Sun protection lenses for KL604	KL604S	23	1

■ **Tool chest, 21-piece**

Characteristics

- Comprising 20-tools, partially VDE tested tools acc. to DIN EN 60900
- Hard-shell case, black



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, 21-piece	KL800B21	485x405x236	7800	1
Scope of supply			Part No.	Page
Waterpump plier			KL072250G	451
VDE Heavy-duty combination plier			KL020180IS	430
VDE Side cutters			KL040160IS	431
VDE Telephone pliers, straight			KL050205IS	432
VDE Wire stripper			KL060160IS	433
Workshop screwdriver, 100 mm		⊖	KL10510055	454
Workshop screwdriver, 125 mm		⊖	KL10512565	454
VDE Slotted screwdriver		⊖	KL1007525IS	434
VDE Slotted screwdriver		⊖	KL10010040IS	434
VDE Slotted screwdriver		⊖	KL10012555IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH2IS	434
VDE-Plus/minus screwdriver		⊕⊖	KL130PM1IS	435
VDE-Plus/minus screwdriver		⊕⊖	KL130PM2IS	435
Single-pole voltage tester		⊖	KL19073IS	436
Engineers hammer			KL580500	470
Jointing chisel			KL584230	470
Electricians chisel			KL585250	471
Hand saw			KL559	471
Electricians knife			KL540	471
Folding rule			KL402	465
Carpenter's pencil			KL449	468
Tool chest, empty			KL800L	477





■ **Tool chest, 20-piece**

Characteristics

- Comprising 19-tools, partially VDE tested tools acc. to DIN EN 60900
- Hard-shell case, black

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, 20-piece	KL810B20	505x410x200	8400	1
Scope of supply			Part No.	Page
Waterpump plier			KL072250G	451
VDE Heavy-duty combination plier			KL020180IS	430
VDE Heavy duty side cutters			KL045200IS	432
VDE Telephone pliers, straight			KL050205IS	432
VDE Slotted screwdriver		⊖	KL1007525IS	434
VDE Slotted screwdriver		⊖	KL10010040IS	434
VDE Slotted screwdriver		⊖	KL10012555IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH2IS	434
VDE Cross slotted screwdriver Pozidriv PZ		⊕	KL120PZ1IS	435
VDE Cross slotted screwdriver Pozidriv PZ		⊕	KL120PZ2IS	435
VDE-Plus/minus screwdriver		⊕	KL130PM1IS	435
VDE-Plus/minus screwdriver		⊕	KL130PM2IS	435
Single-pole voltage tester		⊖	KL19073IS	436
Measuring tape			KL403	465
Engineers hammer			KL580500	470
Universal saw			KL550	472
Cutter knife			KL544	472
Carpenter's pencil			KL449	468
Tool chest, empty			KL810L	477

■ **Tool chest, 28-piece**

Characteristics

- Comprising 27-tools, partially VDE tested tools acc. to DIN EN 60900
- Hard-shell case, black



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, 28-piece	KL820B28	515x420x230	9900	1
Scope of supply			Part No.	Page
Waterpump plier			KL072250G	451
VDE Heavy-duty combination plier			KL020180IS	430
VDE Electricians heavy duty side cutter			KL044200IS	431
VDE Telephone pliers, straight			KL050205IS	432
VDE Cable cutters			KL010160IS	430
Electronic side cutters, without wire trapping spring			KL040128EL	453
Workshop screwdriver, 100 mm		⊖	KL10510055	454
Workshop screwdriver, 125 mm		⊖	KL10512565	454
VDE Slotted screwdriver		⊖	KL1007525IS	434
VDE Slotted screwdriver		⊖	KL10010035IS	434
VDE Slotted screwdriver		⊖	KL10010040IS	434
VDE Slotted screwdriver		⊖	KL10012555IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH2IS	434
VDE Cross slotted screwdriver Pozidriv PZ		⊕	KL120PZ1IS	435
VDE Cross slotted screwdriver Pozidriv PZ		⊕	KL120PZ2IS	435
VDE-Plus/minus screwdriver		⊕	KL130PM1IS	435
VDE-Plus/minus screwdriver		⊕	KL130PM2IS	435
Single-pole voltage tester		⊖	KL19073IS	436
Allen key set, ball point			KL375	461
Control cabinet key			KL500	470
Measuring tape			KL403	465
Engineers hammer			KL580500	470
Universal saw			KL550	472
Cutter knife			KL544	472
Electricians knife			KL540	471
Carpenter's pencil			KL449	468
Control cabinet spirit level			KL420200	465
Tool chest, empty			KL820L	478





■ **Professional roller trolley, 88-piece**

■ **88- pcs. equipped with tools for the daily use**

Characteristics

- With 4-section telescopic handle, up to 1050 mm
- Document compartment in lid
- Double aluminium frame
- Large rubber casters
- Case shell from non-breakable X-ABS
- loads up to 40 kg
- Hinges for case lid lock

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Professional roller trolley, 88-piece	KL890TB88	470x210x355	15500	1
Scope of supply			Part No.	Page
VDE Heavy-duty combination plier			KL020180IS	430
VDE Electricians heavy duty side cutter			KL044200IS	431
VDE Telephone pliers, straight			KL050205IS	432
VDE Wire stripper			KL060160IS	433
VDE Slotted screwdriver		⊖	KL1007525IS	434
VDE Slotted screwdriver		⊖	KL10010040IS	434
VDE Slotted screwdriver		⊖	KL10012555IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH1IS	434
VDE Cross slotted screwdriver Phillips PH		⊕	KL110PH2IS	434
VDE Cross slotted screwdriver Pozidriv PZ		⊕	KL120PZ1IS	435
VDE Cross slotted screwdriver Pozidriv PZ		⊕	KL120PZ2IS	435
Single-pole voltage tester		⊖	KL19073IS	436
VDE-Plus/minus screwdriver		⊕	KL130PM1IS	435
VDE-Plus/minus screwdriver		⊕	KL130PM2IS	435
VDE Cable cutters			KL010210IS	430
Waterpump plier			KL070250	451
Bit set			KL330	463
Combination spanner set			KL365	464
Socket head bit set 1/4", 28-pieces			KL360	460
Universal cabinet key, subkey Electro			KL510	469
Universal saw			KL550	472
Mechanical crimping tool for interchangeable dies			K507	244
Folding rule			KL402	465
Carpenter's pencil			KL449	468
Allen key set			KL370	461
Engineers hammer			KL580300	470
Safety goggles in nylon bag			KL604	473
Marking pen			KL440F	468
GT-85E bipolar voltage tester with LCD display			52049407	584
Professional roller trolley			KL890TL	478
NETcat® Micro + 200EP			NC100EP	637
CSJ-100 jaw meter, open			52020887	617

■ **Engineers professional case, 15-piece**

- Engineers basic equipment, partially with VDE tools

Characteristics

- Material: Polytex
- Adjustable carrying belt with shoulder strap
- two large side pockets
- 2 large 90° folding side compartments
- Front side compartment: DIN A4 document sleeve, 17 slots for tools and measuring instruments, 1 small part pocket
- Rear side compartment: 4 large slots, 28 elastic straps, separate main compartment for laptop 17", additionally split by removable centre panel



Item	Part No.	weight g	Packing unit/pcs	
Engineers professional case	KL900B15	4300	1	
Scope of supply		Part No.	Page	
VDE Screwdriver set, 6-pce.		KL390IS	438	
VDE-Plus/minus screwdriver		KL130PM1IS	435	
VDE-Plus/minus screwdriver		KL130PM2IS	435	
Electricians knife with hooked blade		KL745HK	487	
Round cable stripper		KL710	487	
VDE Electricians heavy duty side cutter		KL044200IS	431	
VDE Telephone pliers, straight		KL050205IS	432	
VDE Heavy-duty combination plier		KL020165IS	430	
Measuring tape		KL403	465	
Engineers combination bag		KL900L	478	

■ **Tool chest, empty**

Characteristics

- Black, hard-shell

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, empty	KL800L	485x405x235	3750	1



■ **Tool chest, empty**

Characteristics

- Black, hard-shell

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, empty	KL810L	505x410x200	4100	1





■ **Tool chest, empty**

Characteristics

- Black, hard-shell

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Tool chest, empty	KL820L	515x420x230	4400	1



■ **Professional roller trolley, empty**

Characteristics

- With 4-section telescopic handle, up to 1050 mm
- Document compartment in lid
- Double aluminium frame
- Large rubber casters
- Case shell from non-breakable X-ABS
- 2 compartments for business cards
- Two straps for writing instruments

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Professional roller trolley	KL890TL	470x210x355	6600	1



■ **Nylon tool holder, empty**

Characteristics

- Material: Polytex
- Accepts up to 11 tools

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Nylon tool holder, empty	KL910L	200x200x50	100	1



■ **Engineers combination bag**

For laptop and tools

Characteristics

- Material: Polytex
- Adjustable carrying belt with shoulder strap
- two large side pockets
- 2 large 90° folding side compartments
- Front side compartment: DIN A4 document sleeve, 17 slots for tools and measuring instruments, 1 small part pocket
- Rear side compartment: 4 large slots, 28 elastic straps, separate main compartment for laptop 17", additionally split by removable centre panel

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Engineers combination bag	KL900L	330x440x200	2600	1

■ **Profi-installer's pocket**

Characteristics

- Upper rotating metal rods, with sponge rubber-handle
- Completely covered bag
- With grip recess
- Adjustable carrying belt with shoulder pad
- Robust plastic tracks
- Outdoor connections: 1 large lockable label pocket with 2 accessory boxes, 9 pockets, 2 Velcro® for fix spirit level etc. Indoor connections: 3 compartments, 14 straps



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Profi-installer's pocket	KL920L	350 x 200 x 200	2600	1



Klauke®

Insulation easily stripped.

Stripping tools for professional use.

Thousands of conductors are stripped every day. Mostly using professional tools. But also often in a hurry using a sharp blade. A standard action for many craftsmen but with potential serious consequences for electrical connections: Conductors and insulation are damaged or specified stripping lengths are not respected – the connections no longer meet requirements.

The use of professional stripping tools prevent such mistakes. Procedures can be standardised. The quality of connections remains consistent. Klauke stripping tools are designed for professional use and are characterized by their extremely long durability.



Standardised stripping ...

- Automatic wire stripping tools.
- For stripping ranges from 0.02 mm² to 25 mm².
- Also one-hand operation for larger cross sections.



... by simple adjustment of the tools.

■ Ergonomically-designed handle and interchangeable blade cassettes: K 432.



- ▶ **Ergonomically-designed rubber-coated handles.**
- ▶ Made from reinforced fibre glass special plastic.
- ▶ Automatic adjustment of the cable cross-section.
- ▶ Interchangeable blade cassettes for flexible and solid conductors and also for PVC and PTFE insulation.

Your benefits:

- ▶ The ergonomically-designed rubber coated handles guarantee comfortable user-friendly operation.
- ▶ The reinforced fibre glass special plastic increases durability.
- ▶ High flexibility with interchangeable blade cassettes.

■ KL 765 PV: Solar cables easily processed.

- ▶ For stripping all standard flexible cables from 1.5 to 6.0 mm² in the solar technology.
- ▶ 5-fold adjustable fine setting.
- ▶ With integrated side cutter.

Your benefits:

- ▶ **Just with one tool nearly all solar technology cables can be processed.**
- ▶ Simple stripping – even with multi-layer insulation.
- ▶ Cables up to Ø 3.0 mm



■ Stripping V-shapes with KL 760180.



- ▶ For flexible and solid conductors from 0.2 mm² to 6 mm².
- ▶ Adjustable length stop from 5 mm to 12 mm.

Your benefits:

- ▶ **The V-shaped blade enables precise stripping of flexible conductors.**
- ▶ The required stripping length can be set precisely – also to individual requirements.
- ▶ Type for working under live voltage: KL 760180IS.





■ K43/2 Automatic stripping tool

Stripping range 0.02 - 10 mm²

- Self-regulating cutting and stripping tool for standard cable and conductor

Characteristics

- Easily replaceable blade system
- Precise adjustability for stripping of thin insulations without damaging the conductor
- Integrated side cutter

Item	Part No.	Stripping range mm ²	weight g	Packing unit/pcs
Automatic wire stripping tool	K432	0.02 - 10	140	1

Accessories	Part No.	Page
Interchangeable die black for wire stripper K432 0.02 - 10 mm ²	K432E	
Interchangeable die set red for wire stripper K432 For PTFE-insulated conductors 0.02 - 4 mm ²	K432E2	
Interchangeable die set blue for wire stripper K432 up to 16 mm ²	K432E3	



■ K 44 Automatic wire stripper

Stripping range 1 - 25 mm²

- Automatic wire stripping tool with adjustable stop

Characteristics

- Stripping length up to 22 mm

Item	Part No.	Stripping range mm ²	weight g	Packing unit/pcs
Automatic wire stripping tool with adjustable stop	K44	1-25	680	1



■ Wire stripper

- For all standard flexible and solid conductors from 0.2 - 6 mm²

Characteristics

- Adjustable length stop from 5 - 12 mm
- Integrated easy to reach side cutter up to max. 2 mm Ø

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Wire stripper	KL760180	180	130	1

■ Wire stripper

- All standard round and flat cables
- Fine adjustment (5-way) on various cable types and cable diameters

Suitable for:

- Flat cable: baring and stripping 2 or 3-core PVC-insulated flat cables from 0.75 - 4 mm²
- Round cable: Baring and stripping flexible cables in the range of 0.5 - 16 mm² (20-6 AWG), solid conductors 0.5 - 10 mm² (20-8 AWG)

Characteristics

- Optical length dimension 8-24 mm (5/16-1 inch)
- Integrated side cutter to max. 3 mm Ø

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Wire stripper	KL765FR215	180	205	1



■ Automatic wire stripper for all standard round cables used in the solar technology sector

Suitable for:

- Baring and stripping of all standard, flexible cables from 1.5 mm² - 6.0 mm² (15-9 AWG) in the solar technology sector.

Characteristics

- 5-fold adjustable fine setting
- Integrated side cutter to max. 3 mm Ø
- Optical linear measure 8 - 24 mm, 5/16 - 1 inch.

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Automatic wire stripper for photovoltaic	KL765PV	180	205	1



Klauke®

Quick and easy wire stripping.

Stripping tools for round, moisture-proof and coaxial cables.

Round, moisture-proof and coaxial cables often get stripped using knives. Certainly a quick way but is it also an effective one? The insulation of the individual wires can get damaged. The risk of injury is high. And in terms of precision the cuts are anything but exemplary.

Klauke's special stripping tools eliminate these problems. You can strip a cable in just one action. Very fast. Very simple. And very safe.



Stripping and splitting in one operation.

- Stripping tools for round and moisture-proof cables.
- Wire stripper for coaxial cables.
- Up to Ø 40 mm.





■ *K 400: for cables up to Ø 40 mm.*

- ▶ **Interchangeable hooks** for diameters from 6 mm to 25 mm and 20 mm to 40 mm.
- ▶ Blade always rebounds to its original position.
- ▶ Also suitable for window cuts.

Your benefits:

- ▶ High flexibility due to a broad range of cable diameters.
- ▶ No damage to cutting blade high durability.
- ▶ Time saving as window cuts for tap conductors can be made quickly and precisely.

■ *Stepless for Ø from 4 mm to 28 mm: KL 745 HK.*

- ▶ Stepless adjustment of cutting depth.
- ▶ For all standard round cables from Ø 4 mm to 28 mm.
- ▶ Removable reducing adapter of extremely wear-resistant plastic.
- ▶ With hook blade and spare blade in the handle shell.

Your benefits:

- ▶ No damage to the inner conductors.
- ▶ One tool **for virtually all standard cables** in building installation and in switch board construction.



■ *Short and flush wire stripping: KL 710*

- ▶ For round and moisture-proof cables from Ø 8 mm to 13 mm.
- ▶ For flush stripping even **in tight areas**.
- ▶ No need to adjust cutting depth.

Your benefits:

- ▶ One tool allows fast, flush stripping of a wide range of cables in ceilings or walls and also in junction or distribution boxes and switch cabinets.



Stripping tools



■ **Professional stripping tool for stripping profile K 400**

Cable Stripper with exchangeable hooks
Width of 4.5 - 40 mm

Characteristics

- Max. cutting depth: 4.5 mm
- Max. stripping diameter: 21 mm (small hook)
- Max. stripping diameter: 40 mm (large hook)

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Cable Stripper with exchangeable hooks	K400	200 x 93 x 33	120	1



■ **Electricians knife without blade**

Characteristics

- Every cable knife contains a spare blade inside the handle.
- Precise, fast and safe baring of all standard round cables
- No damage to inner conductor due to stepless adjustment of cutting depth

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electricians knife without blade	KL740416	4 - 16	70	1
Electricians knife without blade	KL740828	8 - 28	70	1



■ **Electricians knife with straight blade**

■ **Precise, fast and safe stripping of all standard round cables from 4 - 28 mm Ø**

Characteristics

- Every cable knife contains a spare blade inside the handle
- Including protective cover for the blade
- Removable reducing adapter made from extremely abrasion-resistant plastic (POM)
- No damage to inner conductor due to stepless adjustment of cutting depth

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electricians knife with straight blade	KL745GK	4 - 28	80	1

Electricians knife with hooked blade

- **Precise, fast and safe stripping of all standard round cables from 4 - 28 mm Ø**

Characteristics

- Every cable knife contains a spare blade inside the handle
- Including protective cover for the blade
- Removable reducing adapter made from extremely abrasion-resistant plastic (POM)
- No damage to inner conductor due to stepless adjustment of cutting depth



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Electricians knife with hooked blade	KL745HK	4 - 28	80	1
Spare blades	KL749ES		2	1

Round cable stripper

- **For Round and continental type cables from 8 -13 mm Ø (e.g. NYM 3 x 1.5 mm² till 5 x 2.5 mm²)**
- **Flush stripping even in hard-to-reach areas, e.g. ceiling and walls, junction and distribution boxes, switch cabinets etc.**

Characteristics

- Non-slip and safe working due to ergonomic handle
- No need to adjust the cutting depth



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Round cable stripper	KL710	8 - 13	43	1

Multi stripper

Characteristics

- Universal stripping tool for the following functions:
- Round cut
- Longitudinal cut
- Stripping
- cutting



Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Multi stripper	KL730	8 - 13	77	1



■ Photovoltaic-Stepper

- In pocket size for all standard PV-Cable up to 8.5 mm
- Replaceable blade system

Characteristics

- Knife protected
- Easy handling

Item	Part No.	Dimensions mm	weight g	Packing unit/pcs
Photovoltaic-Stepper	KL735PV	8.5	40	1



Professional processing of coax and twisted-pair cables.

Tools for communication technology.

Our range offers quality professional tools for preparing coaxial cables and data lines. Procedures can be standardised. The quality of connections or joints is improved faults are prevented and complaints are being omitted.

The tools come either individually for retrofitting or in complete sets. Everything you need for dressing coaxial cables and data lines is at hand with just one grip.



*Quick and easy
cable dressing
with Greenlee
professional tools.*

- Wire cutters for cross-sections up to 10 mm².
- Stripping tools for two and three-stage stripping.
- Crimping tool for BNC, F and F compression plugs.



■ Kwik-Stripper Coax UTP/STP wire stripping tool

Kwik Stripper with CATV and UTP/STP holder

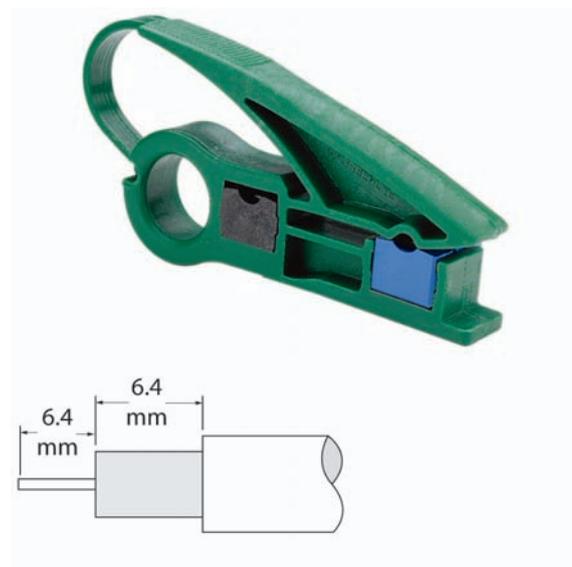
■ Interchangeable knife holders

Characteristics

- RG6/RG59 holder for stripping cable sheath to 6.4 mm and insulator to 6.4 mm
- The UTP/STP holder strips 4-pair UTP/STP cables without damaging the individual conductors
- Spare holder integrated into tool
- Extra large finger opening
- Colour-coded holder, blue for UTP/STP and black for coaxial cable
- Prepared stops eliminate the need for additional measuring and calibration

Item	Part No.
Kwik-Stripper Coax UTP/STP wire stripping tool	50456776

Accessories	Part No.	Page
Spare holder UTP/STP	50456679	594
Spare cassette RG6 & RG59	50455800	594
Spare cassette RG7 & RG11	50455818	594



■ Coax stripper

■ No need to adjust the cutting depth

Suitable for:

- Flexible cables, e.g. 3 x 0.75 mm², 10 mm² and 16 mm²

Characteristics

- Step-by-step stripping of all standard coaxial cables (e.g. antenna and transmission cables) from 4.8 - 7.5 mm external diameter

Item	Part No.
Coax stripper	KL720





■ Kwik Stripper Coax wire stripping tool - 2 stage

- Preset for 3 different cable types

Characteristics

- Removes braiding and insulator to 6.4 mm
- Dresses coaxial cable types RG58, RG59, RG62 and RG6 and many more
- Blade adjustable to cutting depth
- Quick and simple interchangeable blade holder
- Frame takes only 2-stage holders

Item	Part No.
Kwik Stripper™ Coax wire stripping tool - 2 stage	50455761

Accessories	Part No.	Page
Spare holder - 2 stage	50450409	



■ Kwik Stripper Coax wire stripping tool - 3 stage

- Preset for 3 different cable types

Characteristics

- Dresses coaxial cable types RG58, RG59, RG62 and RG6 and many more
- Blade adjustable to cutting depth
- Quick and simple interchangeable blade holder
- The frame takes both 2 and 3 stage holders

Item	Part No.
Kwik Stripper™ Coax wire stripping tool - 3 stage	50455770

Accessories	Part No.	Page
Spare holder - 3 stage	50450395	
Spare holder - 2 stage	50450409	

■ Crimping tool for XFC F-type compression plug

Special crimping tool for weather-resistant F-type compression plug

Characteristics

- Ergonomic handles
- Adjustable to all makes of compression plug
- Dual protection with external sleeve and internal O-ring
- Sleeves colour-coded for simple identification
- Simple processing with practically all compression tools
- Less effort than traditional hex-crimping

Item	Part No.
Crimping tool for XFC F-type compression plug	50608073



Accessories	Part No.	Page
XFC plug for RG6, 50 piece, black	50125869	493
XFC plug for RG6, four-way screen, 50 piece, blue	50125907	493
XFC plug for RG59, 50 piece, red	50125940	493

■ Wire stripping tool DN-AW2

Special peeling and stripping tool for data, control and communication conductors

Suitable for:

- Stripping: 0.25 - 0.8 mm diameter

Characteristics

- 6 presetable diameters 0.25 mm; 0.3 mm; 0.4 mm; 0.5 mm; 0.6 mm; 0.8 mm
- Integrated cable cutter and length stop

Item	Part No.
Wire stripping tool DN-AW2	DNAW2





■ Wire stripping tool DN-AW3

Precision wire stripping tool for peeling signal, telephone, AV, control and data transmission cables made from copper and optical fibre

- 9 adjustable cutting depths

Characteristics

- Cable capacity: 2.5 - 11 mm diameter
- Insulation thickness: up to 1 mm
- Interchangeable blade holder
- Incl. a holder with spare blade

Item	Part No.
Wire stripping tool DN-AW3	DNAW3

Accessories	Part No.	Page
Spare holder for DN-AW3	DNAW3M	494



■ Ratchet crimping tool for telephone lines

- Integrated cutting and stripping tool for ribbon cable

Suitable for:

- Modular connectors of type RJ10 4P4C, RJ11 6P4C, RJ12 6P6C and RJ45 8P8C

Characteristics

- The full radius ratchet mechanism permits consistent terminations with each operation
- Straight access guarantees consistent crimp connection
- Ergonomic handle for easy operation

Item	Part No.
Ratchet crimping tool for telephone lines	50455753







Holemaking tools

■ Round and special shape punches	498
Standard punch systems	500
Slug Buster® slug splitting punches	502
SLUG-SPLITTER® Punches (stainless steel)	503
Special shape punches	506
■ Punching tools and sets	518
Mechanical and hydraulic punching tools	520
Knockout punch sets	527
■ Hole saws	536
HSS bi-metal hole saws	538
carbide tipped hole saws	543
■ Bits and step bits	548



Die-free
after every punching operation!



Efficient punching with Slug Buster® and Slug Splitter®.

Greenlee punching tools are characterized by extremely high-quality workmanship. Long durability and ease of use go together without saying.

The standard tools as well as the Slug Buster® range are suitable for punching steel, aluminium and plastic. The Slug Splitter® range is also suitable for stainless steel.



Fix the die and start punching.



- For holes from 12.5 mm to 143.7 mm.
- For sheet metal up to 3.5 mm thickness.
- Extremely high capacity and long durability.
- For hydraulic and manual operation.

Efficient punching and splitting: *Slug Buster® and Slug Splitter®.*

- ▶ Patented punching profile **splits the slugs into two halves.**
- ▶ Innovative cutting edges reduce effort.

Benefits:

- ▶ The slugs fall free from the die saving you time.
- ▶ Increased efficiency resulting from fast operations with little effort.
- ▶ Extended lifetime.



▶ More on Page 502.

Fits any tool:

Greenlee tools are compatible.

- ▶ All **punching tools are compatible** and can be used with punch drivers from other manufacturers.

Benefits:

- ▶ The investment framework remains manageable.



Our punching tools at a glance:

	Mild steel/ Aluminium/ Plastic	Stain- less steel	Self- centering	Splits the slugs	Manual	Hydraulic	Dimensions in mm	Material thickness
Standard	✓				✓	✓	12,5 – 143,7	≤3 mm
Slug Buster®	✓			✓	✓	✓	12,5 – 64	≤3 mm
Slug Splitter®	✓	✓		✓		✓	15,2 – 64	≤3.5 mm
Slug Splitter SC™	✓	✓	✓	✓		✓	22,5 – 61,5	≤3.5 mm

Standard punch systems

Ball bearing draw stud reduces working force



Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill \varnothing 9.7 mm 50360183
- Draw stud 19 mm, pilot drill \varnothing 20.5 mm 50344030

Scope of supply

- Punch unit including punch, die and draw stud for manual operation

Punch size			Max. material thickness mm	Complete Unit	Individual parts for manual operation					Draw studs + accessories for hydraulic units				
True dimension mm	Standard size				Punch	Die	Draw stud with ball bearing	ball bearing nut	Spacer Spacer	Draw studs			Adapter sleeves 19.0/28.6	
	Pg	ISO								Mild steel				LS 50 LFLEX LS 60-L
12.7	Pg 7		1.5	50024086	50069969	50042351	50042181							
14.3			1.5	50024337	50042300	50042297	50042181							
15.2	Pg 9		2.0	50211153	50213164	50320025	50000420							
15.9			1.5	50024094	50042238	50042246	50042181							
16.2		ISO 16	2.0	50351923	50351931	50351621	50000420				50300430		50300430	
18.6			2.0	50188860	50177001	50320033	50000420				50300430		50300430	
19.1			2.0	50206672	50039989	50039997	50000420				50300430		50300430	
20.4	Pg 13	ISO 20	2.0	50188879	50176978	50320041	50000420				50300430		50300430	
20.6			2.0	50206680	50042262	50042254	50000420				50300430		50300430	
22.5	Pg 16		3.5	50225634	51040060	51147220	50000420				50300430		50300430	
23.8			2.0	50253417	50042386	50042378	50000420				50300430		50300430	
25.4		ISO 25	2.0	50206702	50039865	50351648	50000420				50300430		50300430	
27.0			2.0	50253425	50042408	50042424	50000420				50300430		50300430	
28.3	Pg 21		3.5	50225642	51040080	51069720	50040405				50300430		50300430	
28.3	Pg 21		2.0	50369105	50368826	50320068	50000420				50300430		50300430	
28.6			2.0	50206710	50039903	50039911	50000420				50300430		50300430	
30.5			1.5	50365061	50362828	50362798	50000420				50300430		50300430	
31.8			1.5	50206737	50040022	50040030	50000420				50300430		50300430	
32.5		Pg 32	3.5	50244760	50244590	50351680	50040405				50318721		50318721	
33.4			1.5	50253441	50065874	50065866	50000420				50318721		50318721	
34.6			3.5	50225650	50040103	50040111	50040405				50318721		50318721	
34.9			3.5	50254278	50047345	50047353	50040405				50318721		50318721	
37.0	Pg 29		3.5	50188909	50183311	50320084	50040405				50318721		50318721	
38.1			3.5	50254286	50047361	50070444	50040405				50318721		50318721	
40.5		ISO 40	3.5	50244779	50244620	50351591	50040405				50318721		50318721	
41.3			3.5	50253492	50042513	50042505	50040405				50318721		50318721	
43.2			3.5	50225669	51069740	50040138	50040405				50318721		50318721	
44.5			3.5	50253506	50042572	50042564	50040405				50318721		50318721	
47.0			3.5	50188917	50176870	50320092	50040421				50318721		50318721	
47.6			3.5	50253514	50042483	50042491	50040421				50318721		50318721	
49.6			3.5	50225677	50069780	50040618	50040421				50318721		50318721	
50.8		ISO 50	3.5	50206761	50042327	50351613	50040421				50318721		50318721	
54.0	Pg 42		3.5	50206788	50042459	50361732	50040421				50318721		50318721	
57.2			3.5	50253603	50040588	50040596	50040421				50318721		50318721	

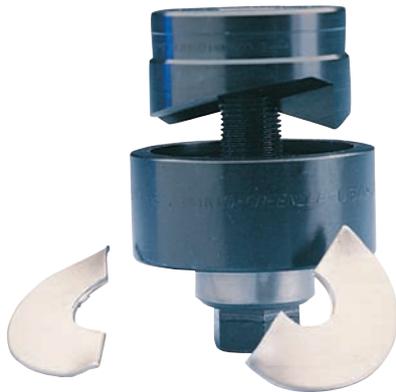
Round and special shape punches

Punch size			Max. material thickness mm	Complete Unit	Individual parts for manual operation					Draw studs + accessories for hydraulic units			
True dimension mm	Standard size				Punch	Die	Draw stud with ball bearing	ball bearing nut	Spacer Spacer	Draw studs			Adapter sleeves 19.0/28.6
	Pg	ISO								Mild steel		LS 50 LFLEX	
60.0	Pg 48		3.5	50188925	50176900	50320114	50040421						
61.5			3.5	50225685	50040626	50040634	50040421						
63.5		ISO 63	3.5	50206796	50042343	50042335	50040421						
66.7			3.5	50212141	50042521	50069977	50041886	50041878			52045040	52045040	
69.9			3.5	50253611	50042475	50042467	50041886	50041878			52045040	52045040	
70.6			3.5	50253832	50024450	50024434	50040421				52045040	52045040	
74.0			3.5	50199757	50041754	50041770	50041886	50041878			52045040	52045040	
76.2			3.5	50253727	50042599	50042580	50041886	50041878			52045040	52045040	
79.4			3.5	50254030	50063634	50063626	50041886	50041878			52045040	52045040	
82.0			3.5	50186353	50189050	50189069	50041886	50041878			52045040	52045040	
89.8			3.5	50199765	50041800	50041835	50041886	50041878			52045040	52045040	
95.3			3.5	50212168	50052659	50052667	50041886	50041878			52045040	52045040	
102.7			3.5	50199773	50046535	50046527	50046799	50046853	50046861		52045040		50031708
115.4			3.5	50199781	50046551	50046543	50046799	50046853	50046861		52045040		50031708
120.0			3.5	50215191	50214896	50214918	50046799	50046853	50046861		52045040		50031708
144.1			3.5	50199803	50054473	50054481	50046799	50046853	50046861		52045040		50031708



■ Slug Buster® slug splitting punches

- Unique punch profile
- Splitted slugs fall free and can be removed easily



Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill \varnothing 9.7 mm 50360183
- Draw stud 19 mm, pilot drill \varnothing 20.5 mm 50344030

Scope of supply

- Patented punch unit includes punch, die and draw stud for manual and hydraulic operation

Order info

- * 50042181 Screw without ball-bearing

Punch size			Max. material thickness mm	Complete Unit	Individual parts for manual operation			Draw studs	
True dimension mm	Standard size				Punch	Die	Draw stud with ball bearing		LS 60 Plus 50159062 50250973
	Pg	ISO							
12.5	Pg 7	ISO 12	1.5	50067273	50067281	50067290	50042181		
15.2	Pg 9		2.0	50319892	50319698	50320025	50000420	50300430	50300430
16.2		ISO 16	2.0	50351770	50351630	50351621	50000420	50300430	50300430
18.6	Pg 11		2.0	50319906	50319701	50320033	50000420	50300430	50300430
20.4	Pg 13	ISO 20	2.0	50319914	50319710	50320041	50000420	50300430	50300430
22.5	Pg 16		2.0	50319620	50317563	51147220	50000420	50300430	50300430
25.4		ISO 25	2.0	50351788	50351656	50351648	50000420	50300430	50300430
28.3	Pg 21		3.0	50319639	50317571	50069721	50040405	50318721	52045040
28.3	Pg 21		2.0	50319930	50319736	50320068	50000420	50300430	50300430
30.5			3.5	50365088	50362844	50362798	50000420	50300430	50300430
30.5			3.5	50602462	50602373	50362780	50040405	50318721	52045040
32.5		ISO 32	3.5	50351796	50351699	50351680	50040405	50318721	52045040
34.6			3.5	50319647	50317580	50040111	50040405	50318721	52045040
37.0	Pg 29		3.5	50319957	50319752	50320084	50040405	50318721	52045040
40.5		ISO 40	3.5	50351800	50351583	50351591	50040405	50318721	52045040
43.2			3.5	50319655	50317598	50040138	50040405	50318721	52045040
47.0	Pg 36		3.5	50319965	50319760	50320092	50040421	50318721	52045040
49.6			3.5	50319663	50317601	50040618	50040421	50318721	52045040
50.8		ISO 50	3.5	50351818	50351605	50351613	50040421	50318721	52045040
54.0	Pg 42		3.5	50361716	50361724	50361732	50040421	50318721	52045040
60.0	Pg 48		3.5	50319981	50319787	50320114	50040421	50318721	52045040
61.5			3.5	50319671	50317610	50040634	50040421	50318721	52045040
64.0		ISO 63	3.5	50351826	50351672	50351664	50040421	50318721	52045040

■ SLUG-SPLITTER® punch set (stainless steel)

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Stainless, mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 11.1 mm, pilot drill Ø 12.7 mm 50344102
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Scope of supply

- Heavy duty punch unit including punch and die

Order info

- * Slug Splitter SC® - self-centering



Punch size			Max. material thickness mm*	Complete Unit	Spare parts		Draw studs for hydraulic units LS 60 Plus 50159062 50250973 50342916 50342991
True dimension mm	Standard size				Punch	Die	
	Pg	ISO	Stainless steel				
15.2	Pg 9		2.5	50069519	50311174	50311263	50294512
16.2		ISO 16	2.5	50069527	50045997	50045989	50294512
18.6	Pg 11		2.5	50069535	50311190	50311280	50294512
20.4	Pg 13	ISO 20	2.5	50069543	50311204	50311298	50294512
22.5	Pg 16		3.5	50069551*	50281542*	50281550*	50294512
25.4		ISO 25	3.5	50069560	50046020	50046012	50294512
28.3	Pg 21		3.5	50069578*	50281569*	50281577*	50294520
30.5			3.5	50069586	50364901	50364898	50294520
32.5		ISO 32	3.5	50069594	50046055	50046039	50294520
34.6			3.5	-	50281585*	50281593*	50294520
37.0	Pg 29		3.5	50069608	50311220	50311352	50294520
40.5		ISO 40	3.5	50069616	50046080	50046071	50294520
43.2			3.5	-	50281607*	50281615*	50294520
47.0	Pg 36		3.5	50069624	50311239	50311310	50294520
49.6			3.5	-	50281623*	50281631*	50294520
50.8		ISO 50	3.5	50069632	50046110	50046098	50294520
54.0	Pg 42		3.5	50069640	50311247	50311328	50294520
60.0	Pg 48		3.5	50069659	50311255	50311336	50294520
61.5			3.5	-	50281658*	50281666*	50294520
64.0		ISO 63	3.5	50069667	50046144	50046136	50294520

■ Draw studs for manual operation

- To re-order draw studs, simply compare the existing ones with the ones illustrated here.
- Sizes given are diameter x length
- Subject to tolerance deviations

Order info

- To increase service life, we recommend to lubricate the draw studs with Greenlee assembly paste no. 50115472



Item	Part No.
Draw studs for manual operation 28.6 X 190 mm	50046799



Item	Part No.
Draw studs for manual operation 19.0 X 140 mm	50041886



Item	Part No.
Draw studs for manual operation 19.0 X 75 mm	50040421



Item	Part No.
Draw stud for manual operation 19.0 x 55 mm	50040405



Item	Part No.
Draw stud for manual operation 9.5 x 40 mm	50000420



Item	Part No.
Draw studs for manual operation 6.5 X 35 mm	50042181

■ Draw studs for hydraulic operation

Order info

- To increase service life, we recommend to lubricate the draw studs with Greenlee assembly paste no. 50115472

Item	Part No.
Adapter 28.6 x 76 mm	50031708



Item	Part No.
Draw studs for hydraulic operation 9.5 X 71 mm	50300430



Item	Part No.
Draw studs for hydraulic operation 19.0 X 137 mm	52045040



Item	Part No.
Draw studs for hydraulic operation 19.0 X 105 mm	50318721



Item	Part No.
Draw studs Ø 19 x 140 mm	50294520



Item	Part No.
Draw studs Ø 11.1 x 108 mm	50294512



Item	Part No.
Draw studs 9.5 to 19 mm	52042827



Item	Part No.
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672
Adapter 19.0 x 48 mm with internal thread 6.3 mm	50601148
Adapter 19.0 x 48 mm with internal thread 12.7 mm	50601679





■ Rectangular punches

Suitable for:

- Mild steel, plastic and aluminium up to 3 mm thick and stainless steel up to 1.5 mm
- Punching of burr-free openings

Operation:

- Manual and hydraulic

Predrilling:

- Ø 9.7 mm pilot drill 50360183
- Ø 12.7 mm pilot drill 50344102
- Ø 15.9 mm pilot drill 50344030
- Ø 30.2 mm pilot drill 50364146

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut

Order info

- * = only for use with hydraulic punch drivers 50159062, 50250973, LS60L and LS50LFLEX
- ** = only for use with hydraulic punch drivers 50159062 and 50250973



Counter nut

Punch

Die

Draw studs

Ball bearing nut

Punch size mm	Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
				Punch	Die	Draw studs	ball bearing nut	Counter nut		
11.1 x 22.2	1.5	Hand/hydr.	50600257	50600265	50600273	50601156	50601202	50052446	9.7	50601148
17.0 x 19.0	2.0	Hand/hydr.	50610281		50600303	50344218	50347330	50046381	12.7	50339672
19.1 x 29.0	2.0	Hand/hydr.	50600311	50600320	50600338	50601172	50601652	50602586	15.9	50601679
19.1 x 33.3	2.0	Hand/hydr.	50600346	50600354	50600362	50601172	50601652	50602586	15.9	50601679
21.9 x 25.9	2.0	Hand/hydr.	50600370	50600389	50600397	50601172	50601652	50602586	15.9	50601679
22.0 x 30.0	2.0	Hand/hydr.	50600400	50600419	50600427	50601172	50601652	50602586	15.9	50601679
22.0 x 42.0	2.0	Hand/hydr.	50600435	50600451	50600460	50601172	50601652	50602586	15.9	50601679
25.1 x 29.0	2.0	Hand/hydr.	50600478	50600486	50600494	50601172	50601652	50602586	15.9	50601679
31.8 x 35.1	2.0	Hand/hydr.	50600508	50600516	50600524	50601172	50601652	50602586	15.9	50601679
29.0 x 71.0	3.0	Hydr.	52045296						30.2	
30.0 x 90.0	3.0	Hydr.	52045297						30.2	
33.3 x 66.7	3.0	Hydr.	50600532	50600540	50600559	50601180		50602357	30.2	
35.0 x 52.0	3.0	Hydr.	50600567	50600575	50600583	50601180		50602357	30.2	
35.0 x 65.0	3.0	Hydr.	50600591	50600605	50600613	50601180		50602357	30.2	
35.0 x 82.0	2.0	Hydr.*	50600621	50600630	50600648	50601180		50602357	30.2	
35.0 x 112.0	2.0	Hydr.*	50600656	50600664	50600672	50601180		50602357	30.2	
46.0 x 92.0	3.0	Hydr.*	50600680	50600699	50600702	50601180		50602357	30.2	
57.2 x 88.9	3.0	Hydr.*	50600710	50600729	50600737	50601180		50602357	30.2	
68.0 x 138.0	2.0	Hydr.**	50600745	50600753	50600761	50601180		50602357	30.2	

■ Square punches

Suitable for:

- Mild steel, plastic and aluminium up to 3 mm thick and stainless steel up to 1.5 mm
- Punching of burr-free openings

Operation:

- Manual and hydraulic

Predrilling:

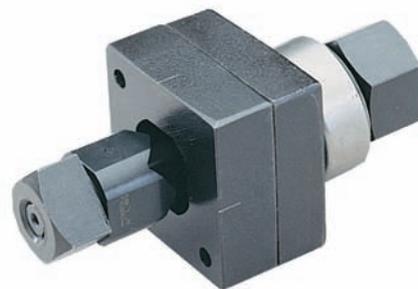
- Ø 9.7 mm pilot drill 50360183
- Ø 12.7 mm pilot drill 50344102
- Ø 15.9 mm pilot drill 50344030
- Ø 30.2 mm pilot drill 50364146

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut

Order info

- * = only for use with hydraulic punch drivers 50159063, 50250973, LS60L and LS50LFLEX
- ** = only for use with hydraulic punch drivers 50159063 and 50250973



Counter nut

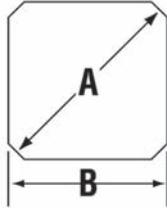
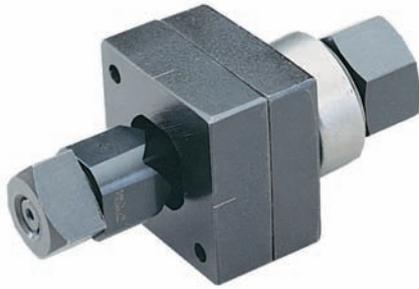
Punch

Die

Draw studs

Ball bearing nut

Punch size mm	Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
				Punch	Die	Draw studs	ball bearing nut	Counter nut		
12.7 x 12.7	1.5	Hand/hydr.	50600010	50600028	50600036	52020113	50601202	50052446	9.5	50601148
15.9 x 15.9	2.0	Hand/hydr.	50600044			52020113	50347330	50046381	12.7	50339672
19.1 x 19.1	2.0	Hand/hydr.	50610076	50600087	50600095	52020113	50347330	50046381	12.7	50339672
22.4 x 22.4	2.0	Hand/hydr.	50610106			52020113	50347330	50046381	12.7	50339672
24.0 x 24.0	2.0	Hand/hydr.	50610137	50600141	50600150	52020113	50347330	50046381	12.7	50339672
25.4 x 25.4	2.0	Hand/hydr.	50600168	50600176	50600184	50601172	50601652	50602586	15.9	50601679
45.0 x 45.0	3.0	Hydr.	50115723	50767640	50767657	52055901		52055905	30.2	
46.0 x 46.0	3.0	Hydr.	50600192	50600206	50600214	50601180		50602357	30.2	
50.8 x 50.8	3.0	Hydr.	50601687	50601695	50601709	50601180		50602357	30.2	
68.0 x 68.0	3.0	Hydr.	50601717	50601725	50601733	50601180		50602357	30.2	
92.0 x 92.0	3.0	Hydr.*	50601741	50601750	50601768	50601180		50602357	30.2	
104.8 x 104.8	2.0	Hydr.*	50601776	50601784	50601792	50601180		50602357	30.2	
138.0 x 138.0	2.0	Hydr.**	50602349	50600230	50600249	50601180		50602357	30.2	



■ Special square punch with flattened corners

Suitable for:

- Mild steel, plastic and aluminium up to 2 mm thick
- Punching of burr-free openings

Operation:

- Manual and hydraulic

Predrilling:

- \varnothing 12.7 mm pilot drill 50344102

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut



Counter nut

Punch

Die

Draw studs

Ball bearing nut

Punch size mm		Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole \varnothing mm	Optionally available Adapter for hydr. punch drivers
A	B				Punch	Die	Draw studs	ball bearing nut	Counter nut		
22.5	20.1	Mild steel 2.0	Hand/hydr.	50611257	50611264	50601270	52020113	50347330	50046381	12.7	50339672

Oiltight punch

Suitable for:

- Mild steel, plastic and aluminium up to 3 mm thick

Operation:

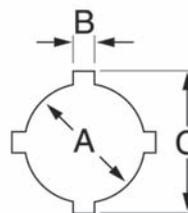
- Manual and hydraulic

Predrilling:

- Ø 15.9 mm pilot drill 50344030

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut



Counter nut

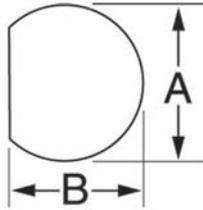
Punch

Die

Draw studs

Ball bearing nut

Punch size mm			Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
A	B	C				Punch	Die	Draw studs	ball bearing nut	Counter nut		
22.5	3.2	25.4	2.0	Hand/hydr.	50602381	50602390	50602500	50601172	50601652	50602586	15.9	50601679
30.5	4.8	36.0	3.0	Hand/hydr.	50602420	50602438	50602497	50601172	50601652	50602586	15.9	50601679



■ "D" special shape punch

Suitable for:

- Mild steel, plastic and aluminium up to 2 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Ø 12.7 mm pilot drill 50344102

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut

Order info

- 50610809 and 50610830 available only as punch unit



Counter nut

Punch

Die

Draw studs

Ball bearing nut

Punch size mm		Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
A	B				Punch	Die	Draw studs	ball bearing nut	Counter nut		
12.7	11.9	2.0	Hand/hydr.	50600770	50600788	51600790	50601156	50601202	50052446	9,5	50601148
15.9	15.1	2.0	Hand/hydr.	50610809			50601130	50347330	50046381	12.7	50339672
19,1	17,9		Hand/hydr.	50610830			50601130	50347330	50046381	12,7	50339672

■ Double-"D" special shape punch

Suitable for:

- Mild steel, plastic and aluminium up to 2 mm thick

Operation:

- Manual and hydraulic

Predrilling:

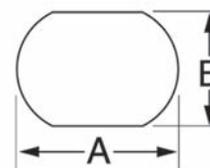
- Ø 15.9 mm pilot drill 50344030

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut

Order info

- All punches available only as punch unit



Counter nut

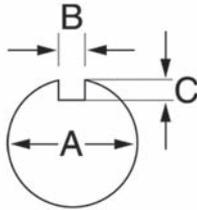
Punch

Die

Draw studs

Ball bearing nut

Punch size mm		Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
A	B				Mild steel	Punch	Die	Draw studs	ball bearing nut		
19.5	16.3	2.0	Hand/hydr.	50610861			52020113	50347330	50046381	12,7	50339672
20.2	17.6	2.0	Hand/hydr.	50610892			52020113	50347330	50046381	12,7	50339672
23.2	19.2	2.0	Hand/hydr.	50610922			52020113	50347330	50046381	12,7	50339672
23.2	20.2	2.0	Hand/hydr.	50600958			52020113	50347330	50046381	12,7	50339672
34.9	28.6	2.0	Hand/hydr.	50600982			50601660	50601652	50602586	23,8	50601679



■ Keyway punch

Suitable for:

- Mild steel, plastic and aluminium up to 2 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- \varnothing 23.8 mm pilot drill 50300083

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut



Counter nut

Punch

Die

Draw studs

Ball bearing nut

Punch size mm		Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation					Mounting hole \varnothing mm	Optionally available Adapter for hydr. punch drivers
A	B				Punch	Die	Draw studs	ball bearing nut	Counter nut		
12.2	1.4	1.5	Hand/hydr.	50601016	51601020	51601030	50601156	50601202	50052446	9,5	50601148
29.7	3.1	2.0	Hand/hydr.	50601040	51601050	51601060	50601660	50601652	50602586	23,8	50601679
32.1	4.0	2.0	Hand/hydr.	50601075	51601080	51601090	50601660	50601652	50602586	23,8	50601679
33.7	2.6	2.0	Hand/hydr.	50601105	51601110	50601121	50601660	50601652	50602586	23,8	50601679

■ Cylinder lock punch

Suitable for:

- Mild steel up to 1.5 mm thick and aluminium up to 3.5 mm

Operation:

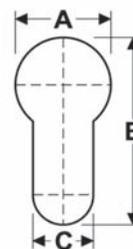
- Manual and hydraulic

Predrilling:

- Ø 12.7 mm pilot drill 50344102

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut



Counter nut

Punch

Die

Draw studs

Ball bearing nut

Punch size mm			Max. material thickness mm	Operation	Complete Unit	Individual parts for manual operation						Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
A	B	C				Punch	Die	Draw studs	ball bearing nut	Counter nut	Spacer Spacer		
17.0	33.3	10.5	Mild steel	Hand/hydr.	50053078	50053027	50053035	50053043	50347330	90500113	50053051	12,7	50339672

■ Sub-Min-D-punch

Suitable for:

- Mild steel up to 1.5 mm thick and aluminium up to 3.5 mm
- Front or rear mounting

Operation:

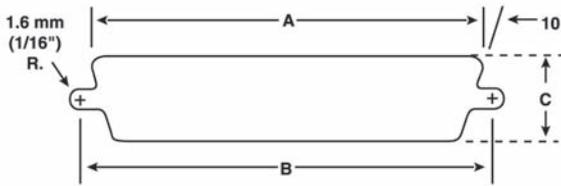
- Manual and hydraulic

Predrilling:

- Ø 12.7 mm pilot drill 50344102

Scope of supply

- Punch unit including punch, die, draw stud, counter nut and ball-bearing nut



Standard	Number Pole	Operation	Complete Unit	Dimension mm			Individual parts for manual operation					Optionally available Adapter for hydr. punch drivers
				A	B	C	Punch	Die	Draw studs	ball bearing nut	Counter nut	
229	9	Hand/hydr.	50344366	20.0	24.9	11.9	50344412	50351966	52020113	50347330	50046381	50339672
231	15	Hand/hydr.	50344374	28.6	33.3	11.9	50344420	50351974	52020113	50347330	50046381	50339672
RS232	25	Hand/hydr.	50344200	42.0	47.1	11.9	50344188	50351982	52020113	50347330	50046381	50339672
234	37	Hand/hydr.	50344293	58.3	63.4	11.9	50344277	50351990	52020113	50347330	50046381	50339672
238	50	Hand/hydr.	50344447	55.9	61.0	14.7	50344439	50352008	52020113	50347330	50046381	50339672

■ **Special shape punches for heavy duty connectors**

Suitable for:

- Mild steel up to 3 mm thick and aluminium up to 3.5 mm

Operation:

- Hydraulic

Predrilling:

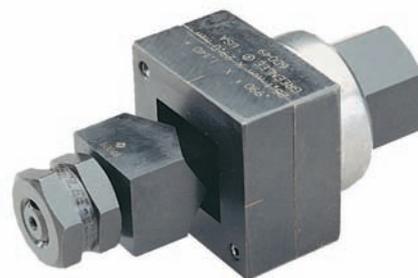
- Ø 30.2 mm pilot drill 50364146

Characteristics

- Rectangular punches for heavy duty connectors feature a drilling jig built into the die, for drilling the 4 locating holes.

Scope of supply

- Punch unit including punch, die, draw stud and counter nut



Punch size mm	Max. material thickness mm Mild steel	Operation	Complete Unit	Individual parts for manual operation					Mounting hole Ø mm	Optionally available Adapter for hydr. punch drivers
				Punch	Die	Draw studs	ball bearing nut	Counter nut		
36,0 x 52,0	3,0	Hydraulic	52033816			52033836		52033844	30,2	
36,0 x 65,0	3,0	Hydraulic	52033817			52033836		52033844	30,2	
36,0 x 86,0	3,0	Hydraulic	52033818			52033836		52033844	30,2	
36,0 x 91,0	3,0	Hydraulic	52033819			52033836		52033844	30,2	
36,0 x 112,0	3,0	Hydraulic	52033820			52033836		52033844	30,2	
46,0 x 86,0	3,0	Hydraulic	52033831			52033836		52033844	30,2	
46,0 x 112,0	3,0	Hydraulic	52033832			52033836		52033844	30,2	

■ Draw studs for special shaped punches

Order info

- To increase service life, we recommend to lubricate the draw studs with Greenlee assembly paste no. 50115472



Item	Part No.
Draw studs for special shape punch 19.0 x 171 mm	50601180



Item	Part No.
Draw studs for special shape punch 12.7 x 117 mm	50601660



Item	Part No.
Draw studs for special shape punch 12.7 x 117 mm	50601172



Item	Part No.
Draw studs for special shape punch 9.5 x 135 mm	50053043



Item	Part No.
Draw studs for special shape punch 9.5 x 93 mm	50601130



Item	Part No.
Draw studs 9.5 x 95 mm	50601164



Item	Part No.
Draw studs for special shape punch 9.5 x 88 mm	50344218



Item	Part No.
Draw studs for special shape punch 6.3 x 87 mm	50601156

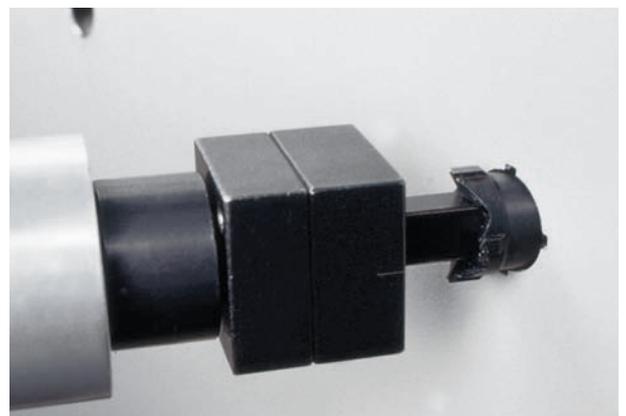


Force for punching up to 143.7 mm.

Hydraulic punch drivers for manual and battery powered operation.

Whether hand, foot or battery operated all hydraulic punch drivers serve one purpose only: to punch holes. Yet contrary to popular opinion personal preferences have very little to do with choosing a punch driver. Punch drivers are suitable for different applications or for holes up to certain sizes.

In addition punch drivers offer specific benefits being more or less important for applications concerned.



Greenlee punching tools facilitate punching operations in different shapes and sizes.

- Hydraulic punch drivers for hand operation with straight head.
- Hydraulic punch drivers for hand operation with angled and rotating head.
- Hydraulic punch drivers for foot operation.
- Hydraulic punch drivers for battery and mains operation.

■ Battery-powered punch driver for every angle: LS 50-L FLEX

- ▶ Compact design with high punching force and automatic limit switch.
- ▶ head rotates 135° in both directions.

Benefits:

- ▶ The combination of compact design and high punching force allows punching of comparatively large holes.
- ▶ The rotating head **allows operations in hard to reach areas.**
- ▶ The integrated control **increases wear and tear and lifetime of tools and thus saves money.**



■ LS 60-L: Punches 60 mm (PG48) holes in 8 seconds and stops automatically.



- ▶ Punches 60 mm (PG48) holes in mild steel up to 3 mm in just 8 seconds.
- ▶ **Integrated micro processor control stops once punching operation is complete.**

Benefits:

- ▶ Significantly faster punching operations save you time.
- ▶ The integrated control **increases wear and tear and lifetime tools and thus saves money.**

▶ More on Page 518.

■ Generates force for holes up to 143.7 mm.

- ▶ Foot pump and ram – punching capacity 110 kN.
- ▶ Suitable for very large holes.

Benefits:

- ▶ Foot operation **frees both hands to operate punch.**
- ▶ The high punching capacity allows punching holes up to 143.7 mm diameter round or 138 mm x 138 mm square.



■ Benefits of hydraulic punch drivers.

	Hand operation	Foot operation	Battery/mains operation	Max. hole, round	Max. hole, square	Max. punching force	Automatic stop
Quick Draw™	✓			64 mm	68 x 68 mm	80 kN	
Quick Draw™ 90°	✓			64 mm	68 x 68 mm	80 kN	
LS 50-L FLEX			✓	80 mm	92 x 92 mm	50 kN	✓
LS 60-L			✓	96 mm	104.8 x 104.8 mm	60 kN	✓
Hydraulic punch driver with hand pump	✓			143.7 mm	138 x 138 mm	110 kN	
Hydraulic punch driver with foot pump		✓		143.7 mm	138 x 138 mm	110 kN	

■ Keyway punch

Time-saving punching of slots for anti-twist protected parts

Suitable for:

- Mild steel up to 3 mm thick
- Manual operation



Item	Part No.
Keyway punch	50265342
Spare	Part No.
Spare punch for keyway punch	50265369
Spare die for keyway punch	50265385

■ Hydraulic punch driver Kwik Draw™ 7804E

- – ideal for fast, straight-on front panel punching
- Compact design



Suitable for:

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64 mm Ø)

Characteristics

- Hydraulic punch driver with straight head



Technical data	
Dimension:	Length with draw studs 50300431 397 mm, length without draw studs 321 mm
Punching force:	80 kN
Weight:	2.5 kg

Item	Part No.	
Kwik Draw™ 7804E	50342916	
Scope of supply	Part No.	Page
Hand hydraulic punch driver 7804E	50342886	
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	502
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	
Plastic case	50352024	

■ Hydraulic punch driver Kwik Draw™ 7904E

- – ideal for fast, straight-on front panel punching
- Head rotates 180° for maximum flexibility
- Hydraulic punch driver with 90° head

Suitable for:

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64 mm Ø)

Characteristics

- Compact design

Technical data	
Dimension:	324 mm
Punching force:	80 kN
Weight:	3.35 kg

Item	Part No.	
Kwik Draw 90™ 7904E	50342991	
Scope of supply	Part No.	Page
Hand hydraulic punch driver 7904E	50337866	
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	502
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
Adapter	50336972	
Plastic case	50352024	



■ Manual hydraulic driver

- Flexible head for multi-purpose use even in hard-to-reach areas
- Complete set incl. draw studs, pilot drill and spacer in plastic case

Suitable for:

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64mm Ø)

Characteristics

- Pivoted and slewable

Technical data	
Dimension:	max. 340 x 150 x 85 mm
Punching force:	80 kN
Weight:	5 kg
Revolving/rotatable	360°

Item	Part No.	
Hand-Hydraulic punching set ISO 16 - 40	52033843	
Scope of supply	Part No.	Page
Draw studs 9.5 to 19 mm	52042827	505
HSS Co5 step bits	52049371	
Spacer, short	50032488	
Plastic case		





■ Battery powered punch driver LS 60-L

Eletro-hydraulic punch driver with microprocessor control

- Automatic stop makes the punching tools last longer
- Automatic retraction
- Automatic battery charge status detection
- Lithium-Ion battery technology

Suitable for:

- Punches up to 104.8 x 104.8 mm mild steel and 2.0 mm thick
- Punches 92 x 92 mm or 46 x 92 mm, 68 x 68 mm or ISO 63 (64 mm Ø) round in 3 mm mild steel
- Suitable for 96 mm round - 2.5 mm in mild steel
- Suitable for Slug Splitter up to 64 mm round - 2.5 mm stainless steel

Technical data	
Punching force:	60 kN
Punching capacity:	Special shape punch 104.8 x 104.8 mm (ST37 2 mm) Round punches 96 mm (ST37 2.5 mm / VA 1.5 mm)
Weight:	3.9 kg
Punching time:	5s at Ø 22.5 mm, 3mm mild steel 12s at Ø 61.5 mm, 3 mm mild steel 90 punches/battery at Ø 22.5 mm and 3.5 mm mild steel 170 punches/battery at Ø 22.5 mm and 3.5 mm mild steel 250 punches/battery at Ø 22.5 mm and 2.5 mm mild steel
Head outside diameter:	73 mm
Piston stroke:	22 mm
Total height:	321 mm
Width:	75 mm

Item	Part No.	
Battery powered punch driver LS 60 L	LS60L	
Scope of supply	Part No.	Page
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	
Spacer, short	50032488	
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	506
HSS Co5 step bits	52049371	
Plastic case	KKLS60LGL	
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376

Accessories	Part No.	Page
Impulse charger 230V	LG4FGL	

■ **Battery powered punch driver LS 50-L FLEX**

Flexible battery-powered hydraulic punch driver



- **Rotating head**
- **Lithium-Ion battery technology**
- **Punching capacity:**
Special shape punch 92 x 92 mm (ST37 2 mm)
Round punches 80 mm (ST37 3 mm / VA 2 mm)
- **automatic limit stop**
- **punching force 50 kN**
- **Weight incl. batteries (3 Ah/18V) 2.9 kg**
- **Complete set incl. draw studs, pilot drill and spacer, battery and charger in case**



Technical data	
Capacity	120 punch operations at Ø 22.5 mm, 3.4 mm mild steel resp. 190 punch operations at Ø 22.5 mm, 3 mm mild steel resp. 280 punch operations at Ø 22.5 mm, 2.5 mm mild steel
Punching force:	50 kN
Weight:	approx. 2.9 kg
Drive motor:	DC-permanent field motor
Battery voltage:	18 V DC
Battery capacity:	3 Ah (RAL2/BL1830) or 1.5 Ah (RAL1/BL1815)
Charging time:	22 min. (RAL2/BL1830) or 15 min. (RAL1/BL1815)
Punching time:	5 s at Ø 22.5 mm, 3 mm mild steel 6 s at Ø 63.5 mm, 3 mm mild steel
Hydraulic oil:	Rivolta S.B.H. 11
Ambient temperature:	-20° C up to +40° C
Sound level	70.6 dB (A) in 1 m distance

Item	Part No.	
Battery powered punch driver LS 50-L FLEX	LS50LFLEX	
Scope of supply	Part No.	Page
Quick-charger for 18V Li-Ion-Batteries	LGL1	378
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	376
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
HSS Co5 step bits	52049371	
Draw studs 9.5 to 19 mm	52042827	505
Plastic case	KK50LFLEX	



Hydraulic punch driver

With handpump, hose and cylinder

Compact design

Suitable for:

- All punches
- Up to 143.7 mm round and 138 x 138 mm square
- Suitable up to 3.5 mm mild steel and 3.5 mm stainless steel (depending on punch size)

Operation:

- Hydraulic

Characteristics

- With handpump, hose and cylinder
- Covers ranges up to 138 x 138 mm

Technical data	
Punching force:	110 kN
Weight:	8.3 kg

Item	Part No.	
Hydraulic punch driver with handpump, hose and cylinder	50159062	
Scope of supply	Part No.	Page
Hydraulic cylinder	50170910	
Draw studs 9.5 to 19 mm	52042827	505
Spacer, short	50032488	
Spacer bush, centre	50032496	
Spacer, long	50069047	
Kwik Stepper™ step bit 12.7 mm	50344102	550
Hydraulic hand pump 767	50132849	561
High pressure hose	50063022	
Draw studs for hydraulic operation 19.0 X 137 mm	52045040	505

Hydraulic punch drivers

With footpump, hose and cylinder

Suitable for:

- For all punches
- Up to 143.7 mm round and 138 x 138 mm square
- Suitable up to 3.5 mm mild steel and 3.5 mm stainless steel (depending on punch size)

Operation:

- Hydraulic

Characteristics

- With footpump, hose and cylinder
- Covers ranges up to 138 x 138 mm



Technical data	
Punching force:	110 kN
Weight:	15.2 kg

Item	Part No.	
Hydraulic punch drivers with footpump, hose and cylinder	50250973	
Scope of supply	Part No.	Page
Hydraulic cylinder	50170910	
Spacer, short	50032488	
Spacer bush, centre	50032496	
Spacer, long	50069047	
Kwik Stepper™ step bit 12.7 mm	50344102	550
Hydraulic foot pump 1725	50313533	561
High-pressure hose 6.4 mm x 3 m	50377299	562
Draw studs 9.5 to 19 mm	52042827	505
Draw studs for hydraulic operation 19.0 X 137 mm	52045040	505

Assembly paste

Suitable for:

- Statically and dynamically high stressed thread connections

Characteristics

- Increases service life - for statically and dynamically highly stressed thread connections
- 30 g tube

Item	Part No.
Assembly paste	50115472





C-frame punch driver

Fast, one shot punching - no predrilling of pilot holes required

Characteristics

- Punching capacity to 3 mm mild steel, punching range 15.2 to 34.6 mm
- For operation we recommend the hydraulic footpump 1725, Part No. 50313533, the handpump 767, Part No. 50132849 or the electro-hydraulic pump Part No. 50052799

Technical data	
Throat:	200 mm
Weight:	6.8 kg

Item	Part No.	Page
Portable C-frame punch driver 1731	50159119	
Scope of supply	Part No.	Page
Punch adapter 9.5 mm	50132768	
Punch adapter 19 mm	50132776	
Punch Pg 16	51040060	
Punch Pg 21	51040080	
Stamp 34.6 mm	50040103	
Die Pg 16 (22.5 mm)	50120875	
Die Pg 21 (28.3 mm)	50120867	
Die 34.6 mm	50120859	
Metal box	50166344	

Accessories	Part No.	Page
Punch Pg 9 (15.2 mm)	50213164	



C-frame punch driver

Suitable for:

- For use with standard punches and dies, punching range 15.2 to 115.4 mm

Characteristics

- Punching capacity to 3 mm mild steel, punching range 15.2 to 115.4 mm
- For operation we recommend the hydraulic handpump 755, Part No. 50156772 or the electro-hydraulic pump 50052799

Technical data	
Throat:	200 mm
Weight:	27 kg

Item	Part No.	Page
Portable C-frame punch driver 1732	50273612	
Scope of supply	Part No.	Page
Die adapter 9.5 mm	50117912	
Die adapter 19 mm	50117904	
Die adapter 28.6 mm	50117890	
Die adapter 9.5 mm	50132660	
Die adapter 19 mm	50132679	
Die adapter 28.6 mm	50132687	
Hexagon nut	90542657	
Metal box	50273353	

Hydraulic punching head LSK 120

Basic tool

- Fast and precise cutting
- Punching in just a few seconds
- Compact design permits working in tight areas

Suitable for:

- For punching aluminium and copper up to 10 mm thick.
- Hole diameters: 6.5 - 17 mm
- Centric punching: 120 mm max. material width

Technical data	
Max. operating pressure	max. 700 bar
Max. compressive force	160 kN
Dimensions (L x B x H):	234 x 174 x 88 mm
Weight:	approx. 9.5 kg

Item	Part No.
Hydraulic punching head LSK 120	50052110

Accessories	Part No.	Page
Punches and dies Ø 6.5 mm	50052276	527



Accessories	Part No.	Page
Metal box	50052390	

Slug Buster® punch set

Complete set for all ranges from ISO 16 - 40

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Item	Part No.	
Slug Buster® slug splitting set ISO 16 to 40	50366920	
Scope of supply	Part No.	Page
Slug Buster Punch Set ISO 16-40	50356178	533
Draw stud for manual operation 9.5 x 40 mm	50000420	
Draw stud for manual operation 19.0 x 55 mm	50040405	
Ratchet	50349410	
Kwik Stepper™ step bit 9.7 mm	50360183	550
Plastic case	50366866	





■ Slug Buster® punch set

Complete set for all ranges from PG 9-21 and 30.5 mm

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Item	Part No.	
Slug Buster® slug splitting set PG9-21 and 30.5 mm	50366904	
Scope of supply	Part No.	Page
Slug Buster® slug splitting set PG9-21 and 30.5 mm	50323989	534
Draw stud for manual operation 9.5 x 40 mm	50000420	
Ratchet	50349410	
Kwik Stepper™ step bit 9.7 mm	50360183	550
Plastic case	50366866	



■ Slug Buster® punch set

Complete set for all ranges from ISO 16 - 63

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Item	Part No.	
Slug Buster® slug splitting set ISO 16 to 63	50366939	
Scope of supply	Part No.	Page
Slug Buster Punch Set ISO 16-63	50068920	534
Draw stud for manual operation 9.5 x 40 mm	50000420	
Draw stud for manual operation 19.0 x 55 mm	50040405	
Ratchet	50349410	
Kwik Stepper™ step bit 9.7 mm	50360183	550
Plastic case	50366866	

■ **Slug Buster® punch set**

Complete set for all ranges from PG 9-48 and 30.5 mm

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030



Item	Part No.		
Slug Buster® slug splitting set PG9-48 and 30.5 mm	50366912		
Scope of supply	Part No.	Page	
Draw stud for manual operation 9.5 x 40 mm	50000420		
Ratchet	50349410		
Slug Buster® slug splitting set PG9-48 and 30.5 mm	50328034	535	
Plastic case	50366882		

■ **SLUG-SPLITTER® punch set (stainless steel) ISO 16-40**

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Stainless, mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030
Draw stud 11.1 mm, pilot drill Ø 12.7 mm 50344102



Item	Part No.		
Slug Slitter® punch set (stainless steel) ISO16/20/25/32/40	50766803		
Scope of supply	Part No.	Page	
SLUG-SPLITTER® punch set (stainless steel) ISO 16	50069527	503	
SLUG-SPLITTER® punch set (stainless steel) ISO 20	50069543	503	
SLUG-SPLITTER® punch set (stainless steel) ISO 25	50069560	503	
SLUG-SPLITTER® punch set (stainless steel) ISO 32	50069594	503	
SLUG-SPLITTER® punch set (stainless steel) ISO 40	50069616	503	
Draw studs Ø 11.1 x 108 mm	50294512	503	
Draw studs Ø 19 x 140 mm	50294520	503	
Plastic case	50766810	530	





■ SLUG-SPLITTER® punch set (stainless steel) ISO 16-63

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Stainless, mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030
- Draw stud 11.1 mm, pilot drill Ø 12.7 mm 50344102

Item	Part No.	
Slug-Splitter® punch set (stainless steel) ISO16/20/25/32/40/50/63	50766797	
Scope of supply	Part No.	Page
SLUG-SPLITTER® punch set (stainless steel) ISO 16	50069527	503
SLUG-SPLITTER® punch set (stainless steel) ISO 20	50069543	503
SLUG-SPLITTER® punch set (stainless steel) ISO 25	50069560	503
SLUG-SPLITTER® punch set (stainless steel) ISO 32	50069594	503
SLUG-SPLITTER® punch set (stainless steel) ISO 40	50069616	503
SLUG-SPLITTER® punch set (stainless steel) ISO 50	50069632	503
SLUG-SPLITTER® punch set (stainless steel) ISO 63	50069667	503
Draw studs Ø 11.1 x 108 mm	50294512	503
Draw studs Ø 19 x 140 mm	50294520	503
Plastic case	50766810	530

■ Plastic case

For Slug Buster® and Slug Splitter® slug splitting sets

Suitable for:

- Slug Buster® slug splitting sets 50356178, 50068920, 50323989 and 50328034
- Dimensions: 255 x 75 x 200 mm

Item	Part No.
Plastic case	50766810



■ Slug Buster® hand hydraulic punch driver set

Complete set for all ranges from PG 9-21 and 30.5 mm

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030



Item	Part No.	
Slug Buster® hand hydraulic punch driver set PG 9 to 21 and 30.5 mm	50356119SET	
Scope of supply	Part No.	Page
Hand hydraulic punch driver 7804E	50342886	
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	506
Slug Buster® slug splitting set PG9-21 and 30.5 mm	50323989	534
Plastic case	50352024	

■ Slug Buster® hand hydraulic punch driver set

Complete set for all ranges from PG 9-21 and 30.5 mm

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030



Item	Part No.	
Slug Buster® hand hydraulic punch driver set PG 9 to 21 and 30.5 mm	50356151SET	
Scope of supply	Part No.	Page
Hand hydraulic punch driver 7904E	50337866	
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	502
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	506
Slug Buster® slug splitting set PG9-21 and 30.5 mm	50323989	534
Plastic case	50352024	



■ Slug Buster® hand hydraulic punch driver set

Complete set for all ranges from ISO 16 - 40

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Item	Part No.	
Slug Buster® hand hydraulic punch driver set ISO 16 to 40	50356143SET	
Scope of supply	Part No.	Page
Hand hydraulic punch driver 7804E	50342886	
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	506
Slug Buster Punch Set ISO 16-40	50356178	533
Plastic case	50352024	



■ Slug Buster® hand hydraulic punch driver set

Complete set for all ranges from ISO 16 - 40

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Item	Part No.	
Slug Buster® hand hydraulic punch driver set ISO 16 to 40	50356160SET	
Scope of supply	Part No.	Page
Hand hydraulic punch driver 7904E	50337866	
Draw studs for hydraulic operation 9.5 X 71 mm	51300430	
Draw studs for hydraulic operation 19.0 X 105 mm	50318721	502
Spacer, short	50032488	
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	506
Slug Buster Punch Set ISO 16-40	50356178	533
Plastic case	50352024	

Manual hydraulic driver

including SB-Punch ISO 16 - 40

- Flexible head for multi-purpose use even in hard-to-reach areas
- Complete set incl. SB ISO 16 - 40, draw studs, pilot drill and spacer in plastic case

Suitable for:

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (Ø 64mm)

Item	Part No.	
Hand-Hydraulic punching set ISO 16 - 40	52034233	
Scope of supply	Part No.	Page
TC-5 Nylon carrying case with belt loop	50075888	618
Draw studs 9.5 to 19 mm	52042827	505
HSS Co5 step bits	52049371	
Spacer, short	50032488	
Plastic case		
Slug Buster Punch Set ISO 16-40	50356178	533



Slug Buster® punch set

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Mild steel, plastic and aluminium up to 3 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Scope of supply

- Complete system consisting of punch and die in 5 sizes

Item	Part No.	
Slug Buster Punch Set ISO 16-40	50356178	
Accessories	Part No.	Page
Plastic case	50766810	530



■ Slug Buster® punch set

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Scope of supply

- Complete system consisting of punch and die in 7 sizes

Item	Part No.
Slug Buster Punch Set ISO 16-63	50068920

Accessories	Part No.	Page
Plastic case	50766810	530



■ Slug Buster® punch set

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Scope of supply

- Complete system consisting of punch and die in 6 sizes

Item	Part No.
Slug Buster® slug splitting set PG9-21 and 30.5 mm	50323989

Accessories	Part No.	Page
Plastic case	50766810	530



■ Slug Buster® punch set

- Unique punch profile
- Splitted slugs fall free and can be removed easily

Suitable for:

- Mild steel, plastic and aluminium up to 3.5 mm thick

Operation:

- Manual and hydraulic

Predrilling:

- Draw stud 9.5 mm, pilot drill Ø 9.7 mm 50360183
- Draw stud 19 mm, pilot drill Ø 20.5 mm 50344030

Scope of supply

- Complete system consisting of punch and die in 9 sizes

Item	Part No.
Slug Buster® slug splitting set PG9-48 and 30.5 mm	50328034

Accessories	Part No.	Page
Plastic case	50766810	530



Deep cuts,

fast change.



Bi-metal and carbide tipped hole saws and arbors.

The ability to saw holes in different materials means the frequent use of hole saws. These tools are characterized by extremely long durability. Their design enables a quick and simple change of hole saws.



- For nominal dimensions from 14 mm to 152 mm.
- Suitable for various materials.

Countersink hole saws ensure burr free holes for easy mounting of electrical outlets.

■ A solid back plate for precise concentricity.

▶ Solid back plate for increased stability.

- ▶ For installing wall outlets, halogen lightings etc.

Benefits:

- ▶ The reinforced back plate gives additional stability creating more precise holes.
- ▶ Hole saws are multi-purpose tools meaning less tools needed.



■ A little more:

Cutting depth up to 41.3 mm.

- ▶ Cutting depth of 41.3 mm.
- ▶ For steel sheet, cast iron, brass, aluminium, fibreglass, wood and plastic.

Benefits:

- ▶ These hole saws achieve deeper cuts than tools from other suppliers.
- ▶ You need **just one hole saw for a range of materials.**



■ For fast change: *Kwik Change™*.

- ▶ **Kwik change arbors** for rapid mounting of hole saws.
- ▶ Ejector spring makes removal of slugs easier.

Benefits:

- ▶ Kwik change arbors reduce tooling time thus saving you time as well.
- ▶ Easy removal of slugs – speeding drilling operations.



▶ More on Page 543.



■ The multi-purpose tool:

HKP carbide tipped hole saw.

- ▶ Optimised chip clearance.
- ▶ **Suitable for a range of materials.**

Benefits:

- ▶ Safe and fast operations.
- ▶ One tool for many applications.



Hole saws



HSS hole saws

- Heavy duty back plate reduces vibration and ensures concentric running

Suitable for:

- For mild steel, cast iron, brass, aluminium, fibreglass, wood and plastic

Characteristics

- Positive rake variable pitch design provides faster, easier cutting
- Variable pitch design
- Max. cutting depth 41.3 mm
- Tooth hardness Rc 65-68

Order info

- Arbors have to be ordered separately, not included in scope of supply

Part No.	Nominal size mm	True dimension mm	Standard size		Shanks as required	weight g	Recommended cutting speed r.p.m.			
			Pg	ISO			Steel sheet	Cast iron	Brass	Aluminium
50191314	14	14.3			50371576 or 50371550 or 50385224 or 50028006	46	580	400	790	900
50191322	16	15.9	Pg 9			46	550	365	730	825
50191330	17	17.5		ISO 16		46	500	330	665	750
50191349	19	19.0	Pg 11			46	460	300	600	690
50191357	22	20.6	Pg 13			46	425	280	560	635
50191365	22	22.2	Pg 16			46	390	260	520	585
50191373	24	23.8				46	370	245	495	555
50191381	25	25.4		ISO 25		46	350	235	470	525
50191403	27	27.0				46	325	215	435	480
50191411	29	28.6	Pg 21			46	300	200	400	450
50191438	30	30.2			91	285	190	380	425	
50191446	32	31.7			50028006 or 50371568 or 50371541 or 50028014	91	275	180	360	410
50191454	33	33.3		ISO 32		91	260	175	345	390
50191462	35	35.0				46	250	165	330	375
50191470	37	36.5	Pg 29			91	240	160	315	360
50191489	38	38.1				91	230	150	300	345
50191497	40	39.7				91	220	145	290	330
50191500	41	41.3		ISO 40		91	210	140	280	315
50191519	43	42.9				137	205	135	270	305
50191527	44	44.4				91	195	130	260	295
50191535	46	46.0				91	190	125	250	285
50191543	48	47.6	Pg 36		137	180	120	240	270	
50191551	51	50.8			91	170	115	230	255	

Part No.	Nominal size mm	True dimension mm	Standard size		Shanks as required	weight g	Recommended cutting speed r.p.m.			
			Pg	ISO			Steel sheet	Cast iron	Brass	Aluminium
50191578	52	52.4			50371568 or 50028014	137	165	110	220	245
50191586	54	54.0	Pg 42			137	160	105	210	240
50191594	57	57.2				137	150	100	200	225
50191608	59	58.7				227	150	100	195	225
50191616	60	60.3	Pg 48			137	140	95	190	220
50191624	63	63.5		ISO 63		137	135	90	180	205
50191632	65	65.0				182	130	85	175	200
50191640	67	66.7				182	130	85	170	195
50361694	68	68.0				182	125	80	160	185
50191659	70	69.8				182	125	80	160	185
50191667	73	73.0				182	120	80	160	180
50361708	74	74.0				182	115	75	150	170
50191675	76	76.2				227	115	75	150	170
50191683	79	79.4				50371568 oder 50028014	227	110	70	140
50191691	83	82.5			273		105	70	140	155
50191705	86	85.7			273		100	65	130	150
50191713	89	88.9			273		95	65	130	145
50191721	92	92.1			273		95	60	120	140
50191748	95	95.2			318		90	60	120	135
50191756	98	98.4			318		90	60	120	135
50191764	102	101.6			318		85	55	110	130
50191772	105	104.8			363		80	55	110	120
50191780	108	108.0			363		80	55	110	120
50191799	111	111.1			363		80	50	100	120
50191802	114	114.3			409		75	50	100	105
50191810	121	120.6			499		75	50	95	95
50191829	127	127.0			545		65	45	90	90
50191837	140	139.7			545	60	35	85	85	
50191845	152	152.4			636	55	35	75	75	



Hole saws



HSS hole saw set

Item	Part No.
HSS bi-metal hole saw set (830 PG)	50292099
HSS bi-metal hole saw set (830)	50191926
HSS hole saw set	50069330
HSS hole saw set	50069314

Part No.	Description	Nominal size mm	50292099 (830 Pg)	50191926 (830)	50069314	50069330
50191322	HSS hole saw set	16	•			
50191349	HSS hole saw set	19	•			
50191357	HSS hole saw set	22	•			
50191365	HSS bi-metal hole saw	22	•	•		
50191411	HSS hole saw set	29	•	•		
50191438	HSS hole saw set	30	•			
50191489	HSS hole saw set	38	•			
50191543	HSS hole saw set	48	•			
50191616	HSS hole saw set	60	•			
50191462	HSS hole saw set	35				
50191527	HSS hole saw set	44		•		
50191551	HSS hole saw set	51		•		
50191624	HSS hole saw set	63		•		
50191675	HSS hole saw set	76				
50191721	HSS hole saw set	92				
50191772	HSS hole saw set	105				
50191802	HSS hole saw set	114				
50191616	HSS hole saw set	60	•			
50191675	HSS hole saw set	76				
50191691	HSS hole saw set	83			•	•
50361694	HSS hole saw set	68			•	•
50371576	Arbor for HSS bi-metal hole saws			•		
50371550	Arbor for HSS bi-metal hole saws		•	•		
50371568	Arbor for HSS bi-metal hole saws		•	•		
50069292	SDS arbor for HSS hole saws				•	
50371819	Plastic case		•	•		
50302361	Plastic case					
50069306	Plastic case				•	•

■ Electro set with countersink

Suitable for:

- Steel, non-ferrous metal, aluminium, cast iron, stainless steel, wood, plastic and building materials

Scope of supply

- Consisting of hole saws 35 mm, 68 mm, 75 mm, countersink for 68 mm hole saw, arbor with pilot drill and counter nut for hole saws 32 - 152 mm and spare HSS pilot drill Ø 6.35 mm

Characteristics

- Sockets can be mounted flush with the wall.
- Ejector spring for all hole saws from Ø 52 mm
- Countersink with two specially-hardened cutting teeth

Item	Part No.
Electro set with countersink 35/68/75 mm	50125630



■ HSS bi-metal hole saw set ISO 16 to 63

Suitable for:

- Steel, non-ferrous metal, aluminium, cast iron, wood, plastic and building materials

Scope of supply

- ISO 16 - 63, incl. 7 hole saws and arbors 50371568 and 50371550

Characteristics

- Variable pitch design
- Cutting depth: 40 - 45 mm

Item	Part No.
HSS bi-metal hole saw set ISO 16 to 63	50069497



■ Arbor for HSS bi-metal hole saws

Suitable for:

- Sizes from 14 mm - 30 mm



Arbor mm	Hole saws Ø mm	including Pilot drill	Part No.	Additionally available Pilot drill
6.4 mm	14 - 30 mm	50376233	50371576	
7.9 mm	14 - 30 mm	50382567	50385224	
11.1 mm	14 - 30 mm	50376233	50371550	50385267

■ Arbor for HSS bi-metal hole saws

Suitable for:

- Sizes from 32 mm - 51 mm
- Sizes from 32 mm - 152 mm



Arbor mm	Hole saws Ø mm	including Pilot drill	Part No.	Additionally available Pilot drill
7.9 mm	32 - 51 mm	50376233	50371541	50385267
11.1 mm	32 - 152 mm	50376233	50371568	50385267

■ SDS arbor for HSS hole saws

Suitable for:

- Sizes from 32 mm - 152 mm
- Sizes from 14 mm - 30 mm



Arbor mm	Hole saws Ø mm	including Pilot drill	Part No.	Additionally available Pilot drill
SDS	32 - 152 mm	50382567	50069292	50385267
SDS	14 - 30 mm	50382567	50069691	50385267

■ Kwik Change carbide tipped hole saw

- Kwik change arbor allows to change cutter heads with a simple push and turn

Suitable for:

- Steel, stainless steel, non-ferrous metals, plastics, light building boards and wood to 4.5 mm thick

Characteristics

- Ejector spring makes removal of slug easier
- Triangular shank 9.5 mm 50057529
- Triangular shank 12.7 mm 50057537

Order info

- Arbors not within scope of supply, please order separately



Part No.	Nominal size mm	True dimension mm	Standard size		Shanks
			Pg	ISO	
50057529					50057529
50057537					50057529
50057618					50057529
50057626					50057529
50056913	16	15.9	Pg 9		50057529
50056921					50057529
50056930	19	19.0	Pg 11		50057529
50056948	21	20.6	Pg 13	ISO 20	50057529
50056956	22	22.2	Pg 16		50057529
50056964	27	27.0			50057529
50059572	27	27.0			50057529
50056972	29	28.6	Pg 21		50057529
50056980	31	31.0			50057529
50056999	32	31.8			50057529
50059580	34	33.3			50057529
50057006	35	34.9			50057529
50059599	37	36.5	Pg 29		50057529
50057014	38	38.1			50057529
50057022	45	44.4			50057529
50057030	51	50.8		ISO 50	50057529
50059602	54	54.0	Pg 42		50057529
50057049	58	57.2			50057537
50057057	64	63.5		ISO 63	50057537
50057065	67	66.7			50057537
50057073	76	76.2			50057537



■ Kwik Change carbide tipped hole saw set

- Kwik change arbor allows to change cutter heads with a simple push and turn

Suitable for:

- Steel, stainless steel, non-ferrous metals, plastics, light building boards and wood to 4.5 mm thick

Characteristics

- Arbor 50057529
- Ejector spring makes removal of slug easier

Item	Part No.
Kwik Change carbide tipped saw set PG 16, PG 21, 35 mm, 45 mm, ISO 50	50057669
Kwik Change carbide tipped saw set PG 16, PG 21, 35 mm	50058207

■ Kwik Change arbor

Suitable for:

- Sizes 16 mm - 58 mm; 60 mm - 76 mm



Item	Part No.
Kwik Change arbor 16 - 58 mm	50057529
Kwik Change arbor 60 - 76 mm	50057537
Pilot drill for arbor 50057529	50057618
Pilot drill for arbor 50057537	50057626

■ HKP carbide tipped hole saw

- Easy chip removal with extra wide tooth pitch
- No clogging or burning of carbide teeth

Suitable for:

- Wood, chipboard, coated chipboard, pressboard, PVC, fibreglass, plaster board, porous concrete, claystone and clay tiles

Characteristics

- Groove permits easy removal of the drilling core
- Maximum cutting depth: 60 mm
- Flute covers two third of the total length

Item	Part No.
HKP carbide tipped hole saw 35 mm without arbor	52033834
HKP carbide tipped hole saw 68 mm without arbor	52033835
HKP carbide tipped hole saw 74 mm without arbor	52033837
HKP carbide tipped hole saw set 35, 68 and 74 mm incl. triangular arbor, SDS arbor, HSS and HM pilot drill	52033833
HKP carbide tipped set 68 mm incl. triangular arbor, HSS and HM pilot drill, countersink	52034333



Accessories	Part No.	Page
Triangular shank, 70 mm long, shank diameter 13 mm	52034328	



■ Carbide tipped hole saw

- Carbide tipped cutting edges for long service life and clean cuts
- Changeable cobalt steel pilot drill with unique tip to prevent long chips

Characteristics

- Cuts quick, clean and accurate holes in stainless steel, copper, aluminium and steel
- Flange stop prevents over drilling
- Maximum cutting depth: 10 mm
- Maximum material thickness: 4 mm

Part No.	True dimension mm	Minimum chuck size mm	Standard size		Recommended cutting speed r.p.m.	
			Pg	ISO	Stainless steel	Steel sheet
50383248	19.0	6.4	Pg 11		550	800
50383256	20.6	6.4	Pg 13	ISO 20	510	740
50383264	22.2	6.4	Pg 16		475	690
50383272	25.4	9.5		ISO 25	415	600
50383280	28.6	9.5	Pg 21		370	535
50383299	30.5	9.5			345	500
50383302	31.7	9.5			330	485
50383310	35.0	9.5			300	435
50383329	38.1	9.5			275	400
50383337	44.4	9.5			235	340
50383345	50.8	9.5		ISO 50	205	300
50383361	63.5	12.7		ISO 63	165	240

■ Interchangeable pilot drill for carbide tipped hole saws

Suitable for:

- Wood, aluminium, steel, plastic and fibreglass



Item	Part No.
Interchangeable pilot drill for carbide tipped hole saws 19 mm to 50.8 mm	50383892
Interchangeable pilot drill for carbide tipped hole saws 63.5 mm	50383906

■ Carbide tipped hole saw set

- Carbide tipped cutting edges for long service life and clean cuts
- Changeable cobalt steel pilot drill with unique tip to prevent long chips

Characteristics

- Cuts quick, clean and accurate holes in stainless steel, copper, aluminium and steel
- Flange stop prevents over drilling
- Maximum cutting depth: 10 mm
- Maximum material thickness: 4 mm

Item	Part No.	
Carbide tipped hole saw set PG 16, PG 21 and 35 mm	50035991	
Scope of supply	Part No.	Page
Carbide tipped hole saw 22.2 mm	50383264	546
Carbide tipped hole saw 28.6 mm	50383280	546
Carbide tipped hole saw 35 mm	50383310	546
Plastic case		
Pilot drill		



Step by step *burr-free.*

Precise step bits milled using the latest CNC technology.

For burr-free drilling of sheet metal, pipes, non-ferrous metals, stainless steel and plastics.

Step bits are top quality products and manufactured to latest standards using CNC technology.



- For holes from 3.2 mm to 40 mm.
- Suitable for a broad range of materials.
- With spiral flute and edge breaker.



Step bits are suitable for a wide range of materials and surfaces.

■ Burr-free thanks to the edge breaker: Kwik Stepper™ step bits.

- ▶ For the burr-free drilling and reaming of sheet metal, pipes, non-ferrous metals, stainless steel and plastics.
- ▶ **Centering, drilling and deburring in one operation.**



Benefits:

- ▶ Step bits are multi-purpose tools and can be used for a wide range of materials.



■ Spiral flute for more holes and less effort.

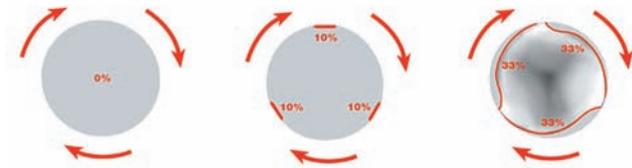
- ▶ Spiral flute (DBGM) means less effort needed **and improves cutting performance.**

Benefits:

- ▶ Less effort means less wear and tear.
- ▶ The holes are more precise and operation is trouble free.

■ 90 % transmission zone, no slipping ROTASTOP®.

- ▶ Tool change in seconds.
- ▶ **Maximum torque transmission.**
- ▶ 90 % transmission zone on the drills.



Benefits:

- ▶ No more drill slippage making your work more efficient.
- ▶ Tool change more efficient and faster.
- ▶ Improved power transmission.

■ Benefits of the individual bits.

Step bits	Hole diameter mm Ø	Step sizes mm Ø	Length mm	Number of steps	Shank Ø mm	Rota-stop®
50344013	3,2 – 12,7	3,2 / 4,0 / 4,8 / 5,6 / 6,4 / 7,1 / 7,9 / 8,7 / 9,5 / 10,3 / 11,1 / 11,9 / 12,7	80	13	6,4	
50364022	4,8 – 12,7	4,8 / 6,4 / 7,9 / 9,5 / 11,1 / 12,7	80	6	6,4	
50344110	22,2	22,2	85	1	9,5	
50344030	4,8 – 22,2	4,8 / 6,4 / 7,9 / 9,5 / 11,1 / 12,7 / 14,3 / 15,9 / 17,5 / 19,1 / 20,6 / 22,2	85	12	9,5	
50300083	22,2 – 28,6	12,7 / 22,2 / 28,6	57	3	9,5	
50364146	22,2 – 34,9	22,2 / 28,6 / 31,0 / 31,8 / 34,9	73	5	9,5	
50360183	9,7	Pilot drill for Greenlee draw studs Ø 9.5 mm	40	1	6,4	
50344102	12,7	Pilot drill for Greenlee draw studs Ø 11.1 mm	40	1	6,4	
50360205	Pg 7 – 21	Pg7 / Pg9 / Pg11 / Pg13.5 / Pg16 / Pg21 / Pg30.5	90	7	9,5	
50360221	ISO 16 – 32	For ISO dimensions 16 / 20 / 25 / 32	80	4	9,5	
50069845	4 – 12	4,0 / 5,0 / 6,0 / 7,0 / 8,0 / 9,0 / 10,0 / 11,0 / 12,0	80	9	6,0	✓
50069853	4 – 20	4,0 / 6,0 / 8,0 / 10,0 / 12,0 / 14,0 / 16,0 / 18,0 / 20,0	67	9	8,0	✓
50069861	6 – 30	6.0 – 30.0 (2.0 mm steps)	98	13	10,0	✓
50069870	6 – 36	6.0 – 36.0 (3.0 mm steps)	82	11	12,0	✓
50069888	ISO 12 – 40	For ISO sizes 12 / 16 / 20 / 25 / 32 / 40	110	6	12,0	✓

■ Kwik Stepper™ step bit

Suitable for:

- Burrfree drilling of steel sheets, pipes, non-ferrous metals, stainless steel and plastic

Characteristics

- For burr-free drilling of metal plates, pipes, non-ferrous metals, stainless steel and plastics.
- Drilling range from 3.2 mm - 34.9 mm



Part No.	Drilling range mm Ø	Step sizes mm Ø	Total length mm	Number of steps	Shank mm Ø
50344013	3.2-12.7	3.2 / 4.0 / 4.8 / 5.6 / 6.4 / 7.1 / 7.9 / 8.7 / 9.5 / 10.3 / 11.1 / 11.9 / 12.7	80	13	6.4
50364022	4.8-12.7	4.8 / 6.4 / 7.9 / 9.5 / 11.1 / 12.7	80	6	6.4
50344110	22.2	22.2	85	1	9.5
50344030	4.8-22.2	4.8 / 6.4 / 7.9 / 9.5 / 11.1 / 12.7 / 14.3 / 15.9 / 17.5 / 19.1 / 20.6 / 22.2	85	12	9.5
50300083	22.2-28.6	12.7 / 22.2 / 28.6	57	3	9.5
50364146	22.2-34.9	22.2 / 28.6 / 31.0 / 31.8 / 34.9	73	5	9.5
50360183	9.7	For drilling pilot holes for Greenlee draw studs	40	1	6.4
50344102	12.7	For drilling pilot holes for Greenlee draw studs	40	1	6.4
50360205	Pg 7-21	For conduit threads (through holes) Pg7 / Pg9 / Pg11 / Pg13.5 / Pg16 / Pg21 / 30.5	90	7	9.5
50360221	ISO 16-32	For ISO sizes 16 / 20 / 25 / 32	80	4	9.5

■ Kwik Stepper™ step bit with ROTASTOP® shank

- Longer lifetime
- Less force needed
- Improved cutting performance
- Smooth cutting
- Minimum burr

Suitable for:

- Burrfree drilling of steel sheets, pipes, non-ferrous metals, stainless steel and plastic

Characteristics

- Drilling range from 4 mm - 40.5 mm



Part No.	Drilling range mm Ø	Step sizes mm Ø	Total length mm	Number of steps	Shank mm Ø
50069845	4-12	4.0 / 5.0 / 6.0 / 7.0 / 8.0 / 9.0 / 10.0 / 11.0 / 12.0	80	9	6.0
50069853	4-20	4.0 / 6.0 / 8.0 / 10.0 / 12.0 / 14.0 / 16.0 / 18.0 / 20.0	67	9	8.0
50069861	6-30	6.0 / 8.0 / 10.0 / 12.0 / 14.0 / 16.0 / 18.0 / 20.0 / 22.0 / 24.0 / 26.0 / 28.0 / 30.0	98	13	10.0
50069870	6-36	6.0 / 9.0 / 12.0 / 15.0 / 18.0 / 21.0 / 24.0 / 27.0 / 30.0 / 33.0 / 36.0	82	11	12.0
50069888	ISO 12-40	For ISO sizes 12 / 16 / 20 / 25 / 32 / 40	110	6	12.0

■ Combi bit set in plastic box M3 - M10

- Drill, tap and deburr in one operation

Suitable for:

- For use with mild steel, stainless steel, non-ferrous metals and plastics

Characteristics

- Nominal diameter corresponds to the max. material thickness

Item	Part No.	
Combi bit set in plastic box M3 - M10	50116304	
Scope of supply	Part No.	Page
Combi bit M3	50116312	551
Combi bit M4	50116320	551
Combi bit M5	50116339	551
Combi bit M6	50116347	551
Combi bit M8	50116355	551
Combi bit M10	50116363	551
Combi bit holder	50116371	551



■ Kwik Stepper™ step bit set in metal box

- Longer lifetime
- Less force needed
- Improved cutting performance
- Smooth cutting
- Minimum burr

Suitable for:

- Burrfree drilling of steel sheets, pipes, non-ferrous metals, stainless steel and plastic

Characteristics

- Drilling range from 4 mm - 30 mm

Item	Part No.	
Kwik Stepper™ step bit set in metal box	50069900	
Scope of supply	Part No.	Page
Kwik Stepper™ step bit with ROTASTOP® shank	50069845	551
Kwik Stepper™ step bit with ROTASTOP® shank 4 - 20 mm	50069853	551
Kwik Stepper™ step bit with ROTASTOP® shank 6 - 30 mm	50069861	551







Production tools

- **Special cutting tools** 554
- **Machining tools for bus bars** 558
- **Pumps and pump accessories** 561



On-site processing and installation.

Tools and systems for plant and control cabinet construction.

In plant and control cabinet construction apart from tools for dressing and connecting cables also tools for other applications are needed. The Greenlee range offers for the machining of bus bars solutions which facilitate processing operations which normally are not possible on site.

High quality portable DIN rail cutters and wiring duct cutters for fast on site operations.



- **Bus Bar Tool Centre for stationary and portable operations.**
- **Wiring duct cutters for plastic ducts.**
- **Appliances for processing DIN rails.**
- **Various drive units.**

■ *Bus bars* for on site operations.

- ▶ One compact tool for bending, cutting, punching and offsetting copper bus bars up to 120 mm x 12 mm.
- ▶ Compact design and low weight.
- ▶ Easy handling and change of tools.



Benefits:

- ▶ One tool for all bus bar operations, **all operations to be completed quickly everywhere.**
- ▶ Suitable for solid and laminated bus bars.
- ▶ All working operations can easily be completed with just one tool with a flick of the wrist.



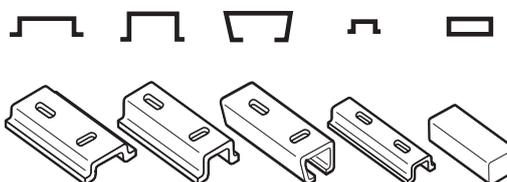
▶ More on Page 558.

■ Easy cutting and punching of *DIN rails*.

- ▶ For all standard DIN rails.
- ▶ 5 profiles in standard range.
- ▶ Other profiles on request at no extra cost.

Benefits:

- ▶ All standard DIN rails can be processed on site.
- ▶ Even the standard range offers a variety of applications.
- ▶ You get **exactly the right solution for every profile at no extra cost.**



■ *Wiring ducts* fast and clean cuts.



- ▶ Wiring duct cutter for plastic channels up to 125 mm width and 2.5 mm thickness.
- ▶ Burr-free cutting.
- ▶ 90° angle cutting.

Benefits:

- ▶ Wiring channels can be **processed everywhere** with this tool.
- ▶ Maximum precision during processing prevents mistakes and defects.
- ▶ Wiring ducts can be precisely processed with just a few operations.

▶ More on Page 557.



■ PVC pipe cutter

Ratchet type, cutting range to 40 mm

Technical data	
Cutting range:	to 40 mm
Item	Part No.
PVC pipe cutter	50042530
Spare blade	50003550



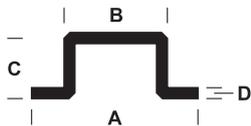
■ DIN rail cutting and punching tool

- For burr-free cutting and punching
- Less force needed
- Includes die plate holder with 5 profiles
- Special profiles available upon request at no extra charge

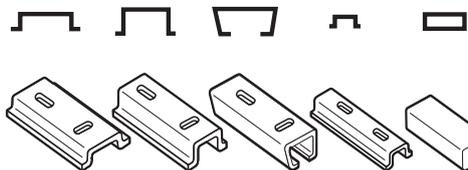
Suitable for:

- Punches vertical and horizontal mounting holes 6.4 x 12.0 mm
- With holes for workbench assembly
- Adapter available for hydraulic operation

Item	Part No.	
DIN rail cutting and punching tool	50115413	
Scope of supply	Part No.	Page
Hand lever	50115421	
Length stop 1 m	50115430	
Cutting die set	50115448	
Centering mask	50115456	
Fixing device	50115537	



A - 35,0 mm	A - 35,0 mm	A - 34,0 mm	A - 15,0 mm	A - 10,0 mm
B - 27,0 mm	B - 27,0 mm		B - 10,5 mm	
C - 7,5 mm	C - 15,0 mm	C - 15,0 mm	C - 5,5 mm	C - 3,0 mm
D - 1,0 mm	D - 1,5 mm		D - 1,0 mm	



Accessories	Part No.	Page
Special cutting die set upon request		

■ Wiring conduit cutter

- Burr-free cutting
- 90° angle cutting

Characteristics

- Standard plastic profile with 2.5 mm wall thickness and up to 125 mm width
- Less effort
- Blade easily replaceable
- Maintenance free

Technical data	
Cutting width:	125 mm
Dimension:	285 x 280 x 290 mm
Length of rail guide:	1,000 mm
Length of hand lever:	500 mm
Wiring duct (wall thickness):	2.5 mm

Item	Part No.	
Wiring conduit cutter	50125699	
Scope of supply	Part No.	Page
Hand lever		
Length stop		
Scale		
Stainless steel support plate		





■ Bus bar tool centre

- Basic tool for bending, punching and cutting solid and laminated bus bars up to 120 x 12 mm
- Compact design and low weight

Characteristics

- Crimping force: 185kN at 700 bar
- Max. operating pressure: 700 bar
- Dimensions (LxBxH): 480 x 500 x 360 mm
- Weight: 51kg
- Max. pump conveying capacity: 1.5 l/min
- Required oil volume: 0.15 l

Item	Part No.
Bus bar tool centre	50052241



■ Bending tools

- For Al/Cu materials to max. 120 x 12 mm
- Bending radius 5.0 und 8.0 mm

Characteristics

- max. bending angle 100°
- Weight: 7.1 kg

Item	Part No.
Bending tool 5.0 mm, bending radius	50052250
Bending tool 8.0 mm, bending radius	50052268



■ Punching tool I

- For hole diameters from 6.5 - 21 mm
- For Al/Cu solid bars up to max. 12 mm and steel to 10 mm thick

Characteristics

- Weight: 4.5 kg

Item	Part No.
Punching tool I	50052128

■ Punch and die holder for punching tool I

Characteristics

- For Al/Cu solid rails to max. 12 mm

Item	Part No.
Punches and dies Ø 6.5 mm	50052276
Punches and dies Ø 8.5 mm	50052284
Punches and dies Ø 11.0 mm	50052292
Punches and dies Ø 13.0 mm	50052306
Punches and dies Ø 15.0 mm	50052314
Punches and dies Ø 17.0 mm	50052322
Punches and dies Ø 21.0 mm	50052330
Oblong punch and die 6.5 x 13 mm	50052349
Oblong punch and die 8.5 x 16 mm	50052357
Oblong punch and die 11.0 x 20 mm	50052365
Oblong punch and die 13.0 x 20 mm	50052373
Oblong punch and die 17.0 x 20 mm	50052381



■ Punching tool III

- Al/Cu solid and laminated bus bars to max. 12 mm and steel to 10 mm thick

Characteristics

- For hole diameters from 6.5 - 21 mm
- Weight: 4.5 kg

Item	Part No.
Punching tool III	50766919



■ Punch and die holder for punching tool I

Characteristics

- Al/Cu solid and laminated bus bars to max. 12 mm and

Item	Part No.
Punches and dies Ø 6.5 mm	50115286
Punches and dies Ø 8.5 mm	50115294
Punches and dies Ø 11.0 mm	50115308
Punches and dies Ø 13.0 mm	50115316
Punches and dies Ø 15.0 mm	50115324
Punches and dies Ø 17.0 mm	50115332
Punches and dies Ø 21.0 mm	50115340
Oblong punch and die 6.5 x 13 mm	50115359
Oblong punch and die 8.5 x 16 mm	50115367
Oblong punch and die 11.0 x 20 mm	50115375
Oblong punch and die 13.0 x 20 mm	50115383
Oblong punch and die 17.0 x 20 mm	50115391





■ Cutting tool

Characteristics

- For Al/Cu materials to max. 120 x 12 mm
- Weight: 5.3 kg

Item	Part No.
Cutting tool	50052144



■ Offset tool

- Insert plates
- Maximum tool offset 12 mm (Al/Cu)

Characteristics

- For Al/Cu materials max. 120 x 12 mm
- Dimensions (LxBxH): 175 x 90 x 135 mm
- Weight: 10.0 kg

Item	Part No.
Offset tool	50052152



■ Aluminium box (empty)

Characteristics

- Suitable for storing accessories
- Dimensions (LxBxH): 350 x 250 x 200 mm
- Weight: 4.3 kg

Item	Part No.
Aluminium box (empty)	50052160

■ Hydraulic hand pump 767

- Light, portable hand pump

Characteristics

- In combination with punch cylinder 17091 for all hole sizes
- All-purpose - works in every position
- Incl. Mounting holes for work bench assembly

Technical data	
Operating pressure:	max. 460 bar
Dimension:	approx. 330 x 100 x 100 mm
Weight:	approx. 2.7 kg

Item	Part No.
Hydraulic hand pump 767	50132849

Accessories	Part No.	Page
High-pressure hose 6.4 mm x 0.9 m	50383167	563



■ Hydraulic foot pump 1725

- Foot operation ensures wo-handed operation of round and special shaped punches

Characteristics

- Lockable pedal for storage and transport
- In combination with punch cylinder 17091 for all hole sizes
- All-purpose

Technical data	
Operating pressure:	max. 460 bar
Dimension:	approx. 400 x 200 x 150 mm
Weight:	approx. 5.0 kg

Item	Part No.
Hydraulic foot pump 1725	50313533

Accessories	Part No.	Page
High-pressure hose 6.4 mm x 3 m	50377299	562





■ High-pressure hydraulic hand pump 755

- Powerful, portable pump

Characteristics

- In combination with punch cylinder 17091 for all hole sizes
- Mounting holes for work bench assembly
- Works in every position
- Incl. 9.5 mm quick coupling with dust cap

Technical data	
Operating pressure:	max. 700 bar
Dimension:	approx. 650 x 180 x 150 mm
Weight:	approx. 8.0 kg

Item	Part No.
High-pressure hydraulic hand pump 755	50156772

Accessories	Part No.	Page
High-pressure hose 9.5mm x 1.80 m	50112899	562



■ High pressure hose

Characteristics

- For use with pump 1725
- Filled with hydraulic oil

Item	Part No.
High-pressure hose 6.4 mm x 3 m	50377299

Scope of supply	Part No.	Page
Hydraulic hose 3.0m	90525159	
Coupler plug	90541693	
Dust cover	90541707	



■ High pressure hose

Characteristics

- For use with pump 755
- Filled with hydraulic oil

Item	Part No.
High-pressure hose 9.5mm x 1.80 m	50112899

Scope of supply	Part No.	Page
Hydraulic hose	90507606	
Quick action coupling	90508238	

High pressure hose

Characteristics

- For use with pump 767
- Without hydraulic oil



Item	Part No.	
High-pressure hose 6.4 mm x 0.9 m	50383167	
Scope of supply	Part No.	Page
High pressure hose	50063022	
Coupler plug	90541693	
Dust cover	90541707	

Hydraulic oil

Characteristics

- Specially-developed for GREENLEE hydraulic tools

Item	Part No.
Hydraulic oil 3.8 l	90510593



Hydraulic oil

Characteristics

- Specially-developed for GREENLEE hydraulic tools

Item	Part No.
Hydraulic oil 0.95 l	90508068







Cable pulling technology

- Fish tapes 566
- Cable puller 572
- Pulling grips 575



Step by step

Installing cables.

Cable pulling systems for light and heavy duty cables.

A wide range of technical solutions for cable pulling is available. But depending on the application or cable type these can be very different. Our range offers solutions for light and heavy duty cables as well as for long straight pulling operations lateral / vertical bends or in hollow spaces.



*Ultra Tugger™:
Floor mount application ...*

- Fish tapes made of steel, nylon and fibreglass.
- Flat steel fish tape to fish under carpets.
- Cable caster for installation in hollow spaces and above suspended ceilings.
- Cable puller for heavy duty pulling operations.



... and chain mount set up.

■ For long straight pulling operations and in bends.

Fish tapes made of steel, nylon and fibreglass.

- ▶ Depending on application available in various types for long straight pulling and in angled conduits.
- ▶ In lengths from 15 m to 76 m.
- ▶ In various diameters and dimensions.

Benefits:

- ▶ A suitable fish tape is available for every application. No improvisation needed you can make better use of your time.



■ Up through the ceiling: *Steel fish tape EZ Reach*



- ▶ Flat 7.5 m long steel fish tape for fishing under carpets and behind walls.
- ▶ Also capable of fishing under carpets.

Benefits:

- ▶ The tape profile allows straight pulls without twisting or kinking.
- ▶ Thin flat profile to fish easily under carpets.

■ Even faster, safer and lighter: *Magnum Pro™ fish tapes.*

- ▶ New grooved design with inspection hole and patented system.
- ▶ 360° standard comfort handle.

Benefits:

- ▶ Fatigue proof operations as well as lighter and faster pulling resp. coiling of the tape.





■ Cable Caster™

- For quick and easy installation of cables in suspended ceilings

Characteristics

- Flashlight (option) can be simply mounted

Item	Part No.
Cable Caster™	50061860

Accessories	Part No.	Page
Replacement tips	50062590	568
Flashlight	50465007	568

■ Steel fish tape in winder case

Suitable for:

- pulling of cables over long distances
- Distances from 20 m, 38 m, 73 m
- Spare tapes without housing 30 m, 60 m

Characteristics

- Winder case eases cable pulling
- Dirt-free tape finish
- High impact nylon winder case with large handle grip



Item	Tape dimensions mm	Part No.
Steel fish tape in winder case 20 m	3.0 x 1.5	52041709
Steel fish tape in winder case 38 m	3.0 x 1.5	52041741
Steel fish tape in winder case 73 m	3.0 x 1.5	52041743
Steel fish tape in winder case 30 m	6.3 x 1.5	52041745
Steel replaceable fish tape without winder case 20 m	3.0 x 1.5	52044590
Steel replaceable fish tape without winder case 38 m	3.0 x 1.5	52044591
Steel replaceable fish tape without winder case 73 m	3.0 x 1.5	52044592
Steel fish tape without winder case 30 m	6.3 x 1.5	52044593
Steel fish tape without winder case 60 m	6.3 x 1.5	52044594

Accessories	Part No.	Page
Rotating pulling eye 3 mm	50293672	568

■ Silver Streak™ Fish tape

- Stainless, speed flex leader
- Slim pulling eye permits trouble-free pulling in long and winding conduits

Suitable for:

- Sections from 30 m or 60 m

Characteristics

- Can be used in conjunction with every steel fish tape with a tape dimension of 3.0 x 1.5 mm
- High impact nylon winder case with large handle grip

Item	Tape dimensions mm	Part No.
Silver Streak™ fish tape in winder case 30 m	3.0 x 1.5	52041746
Silver Streak™ Fish tapes in winder case 60 m	3.0 x 1.5	52041747
Speed Flex leader for fish tapes with tape dimension 3.0 x 1.5 mm	3.0 x 1.5	50143921



■ Nylon fish tape

- Non-conductive, non-coiling nylon tape

Suitable for:

- Large as well as small pipes
- Sections from 15 m or 30 m

Characteristics

- Diameter 4.8 mm
- High impact nylon winder case with large handle grip

Item	Diameter mm	Part No.
Nylon fish tape 15 m	4,8	52041750
Nylon fish tape 30 m	4,8	52041751
Flex-O-Twist™ Fish tape without winder case 30 m	4,8	52044597
Nylon fish tape without winder case 30 m	4,8	52044599

Accessories	Part No.	Page
Replacement tip	50016644	569



Fish tapes



■ Flex-O-Twist™ Fish tape in winder case

Suitable for:

- Sections from 15 m or 30 m

Characteristics

- Made of multi-strand steel cable
- Flexible type
- For quick and simple application
- High impact nylon winder case with large handle grip

Item	Diameter mm	Part No.
Flex-O-Twist™ Fish tape in winder case 15 m	4,8	52041748
Flex-O-Twist™ Fish tape in winder case 30 m	4,8	52041749
Flex-O-Twist™ Fish tape without winder case 30 m	4,8	52044597



■ Flex-O-Twist™ flexible fish tape leader

Characteristics

- Especially suitable for sharp bends
- Flexible fish tape leader

Item	Length	Part No.
Flex-O-Twist™ flexible fish tape leader	300 mm	50308599

■ Fibreglass fish tape in winder case

Suitable for:

- Data and telecommunication industry
- Pulling over distances from 15 m, 30 m, 45 m, 60 m, 76 m

Characteristics

- Non-conductive fibreglass tape with low friction coating
- To fish in small and large conduits even with wire or cable in place
- High impact nylon winder case with large handle grip

Item	Diameter mm	Part No.
Fibreglass fish tape in winder case 15 m	4,5	52041752
Fibreglass fish tape in winder case 30 m	4,5	52041753
Fibreglass fish tape in reel stand 45 m	4,8	50357450
Fibreglass fish tape in reel stand 60 m	4,8	50357468
Fibreglass fish tape in reel stand 76 m	4,8	50357476
Fibreglass fish tape without winder case 30 m	4,5	52044600

Accessories	Part No.	Page
Fibreglass fish tape accessory set	50357506	571
Pulling eye 3.0 mm	50359193	571
Pulling eye 4.8 mm	50359304	571



■ Steel fish tape EZ Reach

Characteristics

- With hand crank
- Flat steel tape for working above suspended ceilings, under carpets and through walls

Item	Tape dimensions mm	Part No.
Steel fish tape EZ Reach 7.5 m		50016962



■ Ultra Tugger™ cable puller 6800-22 CE

- Lightweight, portable cable puller
- Direct gear drive
- Tapered capstan and patented rope guide system for better control of the rope when feeding onto the capstan
- Force gauge for monitoring the max. pulling force of 3.6 t



Technical data	
Maximum pulling force:	3.6 t
Continuous output:	3 t
Pulling rate:	2.7 m/min at no load, 2.4 m/min at 900 kg load 2.3 m/min at 1,800 kg load 2.1 m/min at 2,700 kg load 1.8 m/min at 3,600 kg load
Dimension:	approx. 30 x 66 x 22 cm
Weight:	approx. 39 kg
Motor:	230 V, 50 Hz

Item	Part No.	
Ultra Tugger™ cable puller 6800-22 CE	50031961	
Scope of supply	Part No.	Page
Force gauge	50010697	
Floor-mount	50008650	

Accessories	Part No.	Page

■ Rope for cable puller 6800-22 CE

Characteristics

- Breaking strength approx. 14.2 t
- Rope diameter 22 mm
- Rope on rope stand

Item	Part No.
Rope for cable puller 6800-22 CE 91 m long	50341367
Rope for cable puller 6800-22 CE 182 m long	50341375
Rope for cable puller 6800-22 CE 365 m long	50341383
Rope stand for ropes 91 and 182 m	50343629



■ Tray type sheaves

Characteristics

- Steel frames with forged hook 25 mm
- Sheaves from aluminium alloy with self-lubricating bearings
- Max. rated capacity 3.6 t
- For hooking



Item	Part No.	External diameter mm	Internal radius mm	Width mm	Weight: kg
Tray type sheaves 125 mm	50008722	300	100	125	12,0
Tray type sheaves 150 mm	50008730	460	180	150	20,0
Tray type sheaves 165 mm	50008749	600	250	165	30,0

■ Cable tray roller

Characteristics

- Sheaves from aluminium alloy
- Self-lubricating bearings
- Steel frames for mounting to cable ducts up to 50 mm thickness

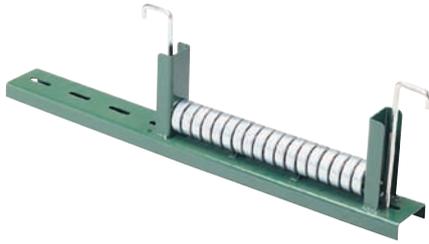


Item	Part No.	Length: mm	Width mm	Weight: kg
Cable tray rollers 125 mm	50153323	300	125	5,0
Cable tray rollers 125 mm	50190946	560	125	8,0

■ Cable tray roller

Characteristics

- Steel ball-bearings
- Steel frames
- Mounting slots
- Universal mounting brackets



Item	Part No.	Version	Width of cable conduit mm	Weight: kg
Cable tray rollers 300 - 450 mm	50273833	Straight	300 - 450	3.6
Cable tray rollers 500 - 600 mm	50273841	Straight	500 - 600	4.5
Cable tray rollers 600 - 760 mm	50273868	Straight	600 - 760	5.9
Cable tray rollers 300 - 450 mm	50273884	Radius	300 - 450	5.0
Cable tray rollers 500 - 600 mm	50273892	Radius	500 - 600	5.4
Cable tray rollers 600 - 760 mm	50273906	Radius	600 - 760	5.9

■ Cable Cream™ cable pulling lubricant

Characteristics

- Adheres well without dripping
- Easy to remove
- Won't break after exposure to heat or freezing cold
- Quality cream (yellow) for quick and easy application



Item	Part No.
Cable Cream™ cable pulling lubricant 0.95 l	50352075
Cable Cream™ cable pulling lubricant 3.8 l	50352083

■ Pulling grips Junior, closed

Characteristics

- Single weave galvanized steel mesh with flexible pulling eye



Item	Part No.	Length of mesh mm	Eye length mm	Max. pulling force kN
Pulling grips, Junior, closed for cable diameters Ø 5 - 6 mm	50305964	110	83	0.3
Pulling grips, Junior, closed for cable diameters Ø 7 - 9 mm	50305840	110	83	0.4
Pulling grips, Junior, closed for cable diameters Ø 10 - 12 mm	50305867	180	96	0.8
Pulling grips, Junior, closed for cable diameters Ø 13 - 15 mm	50305883	220	110	1.1
Pulling grips, Junior, closed for cable diameters Ø 16 - 18 mm	50305905	255	130	1.7
Pulling grips, Junior, closed for cable diameters Ø 19 - 25 mm	50305921	255	146	2.4
Pulling grips, Junior, closed for cable diameters Ø 26 - 31 mm	50305948	300	165	3.4



Pulling grips

■ T-Basket type pulling grips, closed

Characteristics

- Double weave galvanized steel mesh with flexible pulling eye



Item	Part No.	Length of mesh mm	Eye length mm	Max. pulling force kN
T-Basket type pulling grips closed for cable diameters Ø 13 - 15 mm	50305581	535	200	4.0
T-Basket type pulling grips closed for cable diameters Ø 16 - 18 mm	50305603	610	200	4.9
T-Basket type pulling grips closed for cable diameters 19 - 25 mm	50305620	610	230	6.0
T-Basket type pulling grips closed for cable diameters 26 - 38 mm	50305646	610	230	8.7
T-Basket type pulling grips closed for cable diameters 39 - 50 mm	50305662	610	280	14.5
T-Basket type pulling grips closed for cable diameters 51 - 63 mm	50305689	610	300	16.4
T-Basket type pulling grips closed for cable diameters 64 - 76 mm	50305700	610	300	21.7
T-Basket type pulling grips closed for cable diameters 77 - 88 mm	50305727	610	360	21.7
T-Basket type pulling grips closed for cable diameters 89 - 100 mm	50305743	660	360	27.5
T-Basket type pulling grips closed for cable diameters 19 - 25 mm	50305760	915	230	6.0
T-Basket type pulling grips closed for cable diameters 26 - 38 mm	50305786	915	230	8.7
T-Basket type pulling grips closed for cable diameters 39 - 50 mm	50310100	915	280	14.5
T-Basket type pulling grips closed for cable diameters 51 - 63 mm	50305808	915	300	16.4
T-Basket type pulling grips closed for cable diameters 64 - 76 mm	50310127	915	300	21.7
T-Basket type pulling grips closed for cable diameters 77 - 88 mm	50305824	915	360	21.7
T-Basket type pulling grips closed for cable diameters 89 - 100 mm	50310143	1020	360	27.5

■ Pulling grip set

Characteristics

- Set of the most important pulling grips for the most frequently required pulling operations

Item	Diameter mm	Part No.
Pulling grip set 50305840, 50305876, 50305883, 50305905, 50305921, 50305948	7-31 mm	50307584
Cable grip set 50305760, 50310100, 50305786	19-50 mm	50314823
Cable grip set 50305808, 50310100, 50310127	51-76 mm	50314831
Pulling grip set 50305760, 50305786, 50305808, 50310100, 50310127	19-76 mm	50314840



■ Pulling grip open

- Easy and straight pulls when the end of the conductor is not available

Characteristics

- Single woven galvanised steel netting mesh with bar closure
- Offset flexible eye



Item	Part No.	Length of mesh mm	Eye length mm	Max. pulling force kN
Pulling grip open, for cable diameters 13 - 15 mm	50306588	150	175	1.3
Pulling grip open, for cable diameters 16 - 18 mm	50310240	200	175	1.6
Pulling grip open, for cable diameters 19 - 25 mm	50306600	250	175	1.9
Pulling grip open, for cable diameters 26 - 31 mm	50310267	300	200	3.0
Pulling grip open, for cable diameters 32 - 38 mm	50306626	350	200	4.0
Pulling grip open, for cable diameters 39 - 44 mm	50310283	380	230	5.1
Pulling grip open, for cable diameters 45 - 50 mm	50306642	400	250	6.7
Pulling grip open, for cable diameters 51 - 63 mm	50310305	480	250	8.0
Pulling grip open, for cable diameters 64 - 76 mm	50306669	500	250	9.7
Pulling grip open, for cable diameters 77 - 88 mm	50310321	530	300	10.6
Pulling grip open, for cable diameters 89 - 100 mm	50306685	600	300	10.6





Testing and measuring instruments

■ Voltage testers	580
■ Digital multimeter	586
■ Clamp meters	606
■ VDE testing instruments	620
■ Temperature gauges	626
■ Locators	630
■ Cable and conductor identifiers	634
■ Network measuring devices and testers	636



Measuring and testing up to 1000 V.

Voltage testers for distributors, meters, control panels etc.

Fast testing of existence of voltage. Suitable for measuring DC or AC voltage.

Some of the devices output warning signals some feature a patented rotary field direction display. The voltage ranges are from 5 to 1000 volts depending on the device and the testing category.

If used correctly the devices have a lifetime limited warranty.



Voltmeter with removable measuring tips for a wide range of applications.



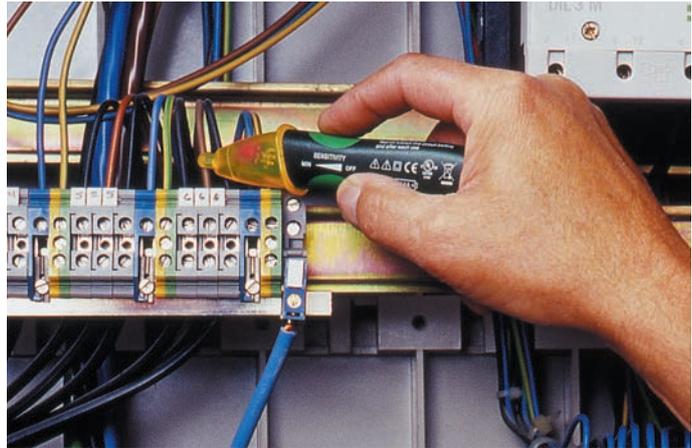
- For fast contactless voltage testing (EF function).
- For DC and AC voltage.
- Also with polarity display.
- Detachable measuring tips for a range of applications.
- FI resolution function.
- 2-pole rotary field display, 1-pole phase test.
- Continuity test.
- Voltage measurement without battery.

■ Fast testing at AC voltage 5 – 1000 Volt: GT-16

- ▶ Fast and contactless testing with adjustable sensitivity.
- ▶ With optical and acoustical signal.
- ▶ Integrated On/Off switch.
- ▶ Handy pin design for any jacket pocket.

Benefits:

- ▶ Fast and easy testing of various voltage ranges.
- ▶ Increased lifetime of battery by disconnecting the stand-by function.
- ▶ The voltage tester is always to hand.



■ Includes rotary field direction display: GT-85NE



- ▶ With patented rotary field direction display.
- ▶ Also for resistance measurements.
- ▶ With diode test.
- ▶ **Removable tips.**

Benefits:

- ▶ Just one measuring device for several types of measurement.
- ▶ Flexible application with wall outlets, Schuko-compatible (19 mm clearance) and terminals.
- ▶ Unique measuring point illumination for working in poor lighting conditions.

■ Features of all testers.

	Voltage values	Category/voltage	Contactless	Display	FI resolution	Removable tip	Rotary field display	Continuity test	Single-pole phase test	Measurement without battery
GT-12	50 – 1000 AC	CAT IV /1000 V	✓	LED						
GT-16	5 – 1000 AC	CAT IV /1000 V	✓	LED						
GT-55NE	12 – 750 AC/ DC	CAT III /1000 V CAT IV / 600 V		LED	✓	✓	✓	✓	✓	✓
GT-85NE	12 – 750 AC/ DC	CAT III /1000 V CAT IV / 600 V		LCD	✓	✓	✓	✓	✓	✓

Voltage testers



GT-12

Contactless voltage tester 50-1000 V

Characteristics

- Fast, easy, contactless voltage testing
- Clear LED and acoustic warning signal when the voltage has been determined
- ON/OFF switch provides longer battery service life
- Handy pen format, which fits easily into a jacket or tool pocket
- Rubber-coated comfort handle
- Fast, easy replacement of batteries
- Automatic self test

Technical data	
Voltage range:	AC 50 - 1000V
Frequency range:	50 - 500Hz
Measuring category:	CAT IV, 1,000V

Item	Part No.	
GT-12 Contactless voltage tester (50-1000 V)	52042113	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		



GT-16

Adjustable, contactless voltage tester 5-1000 V

Characteristics

- Fast, easy, contactless voltage testing
- Clear LED and acoustic warning signal when the voltage has been determined
- ON/OFF switch provides longer battery service life
- Handy pen format, which fits easily into a jacket or tool pocket
- ergonomically shaped comfort handle
- Fast, easy replacement of batteries
- Automatic self test
- Adjustable sensibility by rotary switch

Technical data	
Voltage range:	AC 5 - 1000V
Frequency range:	50 - 500Hz
Measuring category:	CAT IV, 1,000V

Item	Part No.	
GT-16 adjustable voltage tester (5-1000 V)	52033580	
Scope of supply	Part No.	Page
Batteries 1 x 1.5 V AAA		

GT-55NE

Bipolar voltage tester with LED display

- LED Display 12, 24, 50, 120, 230, 400, 750 V AC/DC
- Compatible with shock-proof socket (19mm spacing)
- One hand operation
- Power LED for Measuring point illumination

Characteristics

- Display of AC and DC voltage
- Bipolar rotary field testing
- Unipolar phase testing, optical and acoustic
- Continuity check, optical and acoustic
- Diode test
- Polarity display, loud beeper
- IP65 - splash water proof and dust tight



Technical data	
Voltage range:	12 - 750V AC/DC
Resistance:	< 2000Ω
Frequency:	45 - 65 Hz
Measuring category:	CAT III, 1000V; CAT IV, 600V

Item	Part No.	
GT-55E bipolar voltage tester with LED display	52049408	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		

Accessories	Description	Part No.	Page
TC-30	TC-30 Nylon carrying case with belt loop	50075365	618



Voltage testers



GT-85NE

Bipolar voltage tester with LCD display

- Backlit LCD
- Compatible with shock-proof socket (19mm spacing)
- One hand operation
- True resistance measurement up to 2000 Ω
- Power LED for Measuring point illumination

Characteristics

- Display of AC and DC voltage
- Bipolar rotary field testing
- Unipolar phase testing, optical and acoustic
- Continuity check, optical and acoustic
- Diode test
- Polarity display, loud beeper
- IP65 - splash water proof and dust tight
- Unique measuring point illumination for working in poor lighting conditions

Technical data	
Voltage range:	12 - 750V AC/DC
Resistance:	< 2000Ω
Frequency:	45 - 65Hz
Measuring category:	CAT III, 1000V; CAT IV, 600V

Item	Part No.	
GT-85E bipolar voltage tester with LCD display	52049407	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		

Accessories	Description	Part No.	Page
TC-30	TC-30 Nylon carrying case with belt loop	50075365	618



Digital *all-rounder.*



Multimeters for every application.

Measuring, detecting, testing: These terms can be used to describe the complex performance spectrum of our digital multimeters. Their numerous functions make these devices genuine all-rounders.

The following areas reflect various applications of the multimeters:

- ▶ Multimeter for electrical and telecommunication.
- ▶ For vehicle electrics.
- ▶ For air-conditioning systems.
- ▶ For lab and field use.

If handled correctly we grant a lifetime limited warranty on these products.



- For DC and AC.
- For DC and AC voltage.
- With digital and analogue display.
- For measuring categories II, III and IV.
- With true effective value measurement.
- For frequency, capacity and resistance measurement.



■ Specially for electricians: DM-200A

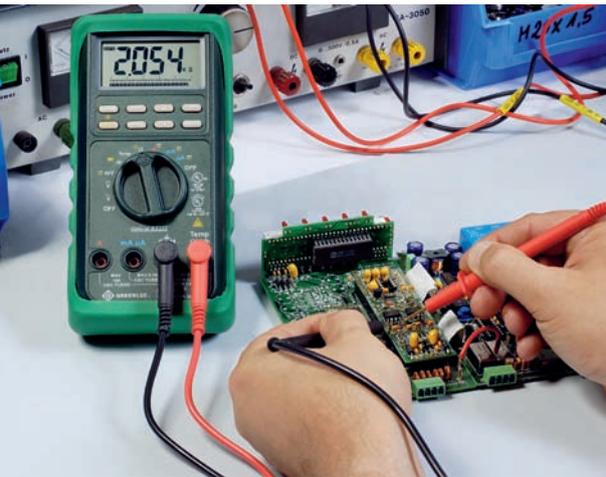
- ▶ Optical RS 232 and USB port.
- ▶ Automatic range selection and data hold function.
- ▶ **Contactless voltage detection** (EF function).
- ▶ Large, backlit display.
- ▶ Automatic stop.

Benefits:

- ▶ Fast simple and contactless testing of the presence of voltage.
- ▶ The automatic range selection function enables optimised measured value read-off at all times.
- ▶ Measured values transferred straight to a PC through the optical RS232 interface and USB cable.



■ Outstanding measuring accuracy and versatile applications: DM-860



- ▶ 5 ⁵/₆-digit display with a display range of 500,000.
- ▶ Temperature, frequency and capacity measurement.
- ▶ **TRUE RMS effective value measurement.**

Benefits:

- ▶ Extremely accurate when recording and displaying the measured values.
- ▶ The broad spectrum in temperature measurements enables use in air-conditioning systems in labs or in industries.
- ▶ Quick fault diagnosis by measuring the true effective value.

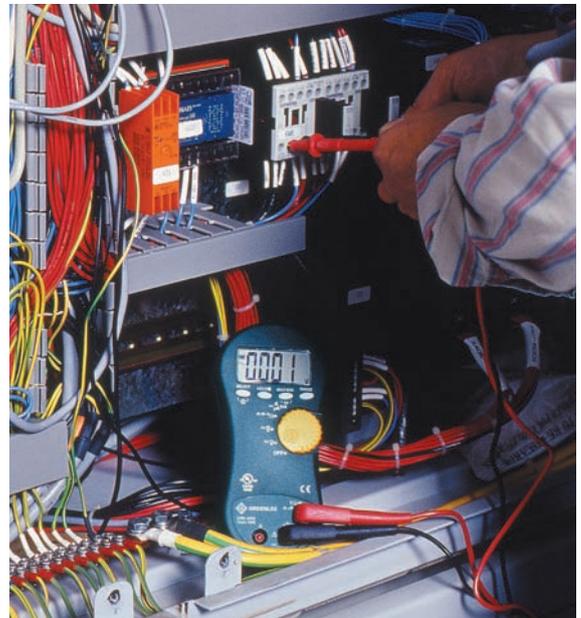
▶ *More on Page 600.*

■ TRUE RMS: precise measurement, even when consumption fluctuates.

- ▶ TRUE RMS true effective value measurement is a special function of some GREENLEE multimeters. This function enables correct consumption measurement with non-linear – i.e. sinusoidal – consumption.

Benefits:

- ▶ Precise consumption measurements without error sources through sinusoidal consumers.
- ▶ More reliable planning and lower error quotas – caused for example by incorrectly calculated current consumption.
- ▶ **Devices with TRUE RMS: DM-350, DM-510A, DM-810A, DM-820A and DM-860.**



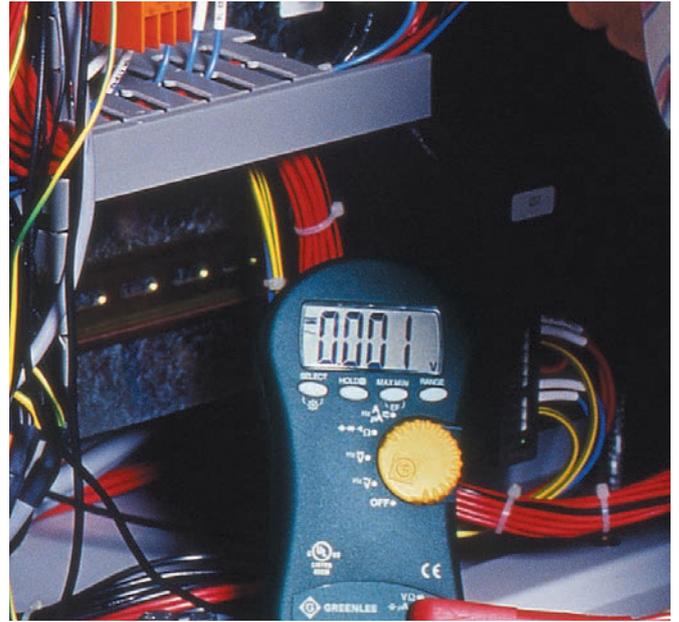
■ *Tough and with light for field use: DM-350.*

- ▶ Versatile applications.
- ▶ Large backlit **display**.

Benefits:

- ▶ Suitable for applications to CAT IV, 600 V.
- ▶ The large, illuminated display simplifies read-off under all lighting conditions.

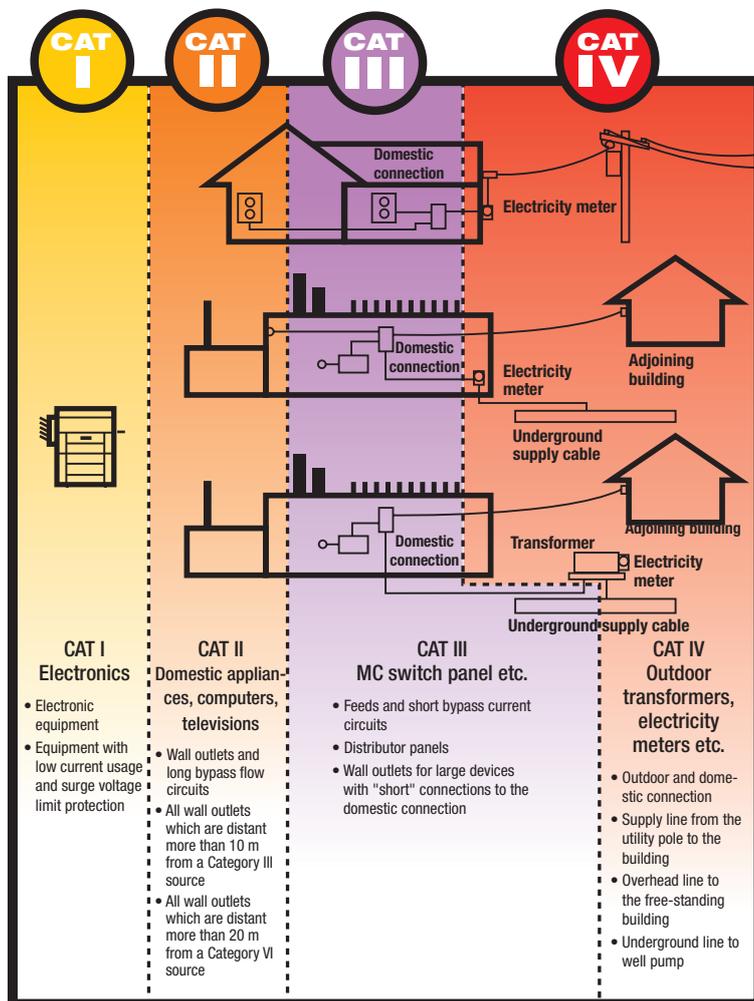
▶ *More on Page 596.*



■ *Features of testers.*

	True effective value	DC A (A max.)	AC A (A max.)	DC V (V max.)	AC V (V max.)	Resistance (M Ω)	Optical interface	Automatic and manual range selection	Contactless voltage testing	Measuring category
DM-20		200 mA		300	300	2				II, 300 V
DM-40		200 mA		600	600	20				III, 300 V
DM-60		10	10	600	600	20				III, 300 V II, 600 V
DM-200A		8	8	1000	1000	60	✓	✓	✓	IV, 300 V III, 600 V II, 1000 V
DM-210A		8	8	1000	1000	60	✓	✓	✓	IV, 300 V III, 600 V II, 1000 V
DM-310		10	10	1000	1000	60		✓	✓	IV, 600 V III, 1000 V
DM-350	✓	10	10	1000	1000	60		✓	✓	IV, 600 V III, 1000 V
DM-510	✓	8	8	1000	1000	60	✓	✓	✓	IV, 300 V III, 600 V II, 1000 V
DM-810A	✓	10	10	1000	1000	50	✓	✓	✓	IV, 1000 V
DM-820A	✓	10	10	1000	1000	50	✓	✓	✓	IV, 1000 V
DM-860	✓	10	10	1000	1000	50	✓	✓		IV, 600 V III, 1000 V

What you should know about the nominal capacities of the measuring categories.



Protective values which greatly exceed the nominal capacity of a system are stipulated in the standards of the IEC categories. Without this additional protection transient overvoltages which occur with increasing regularity may cause serious or fatal injuries.



Measuring category I

is the signal level for telecommunications and electronic equipment.

Measuring category II

is the local level for permanently connected devices or devices not operated by means of a fixed connection – including all types of illumination from household devices to office equipment such as copy machines. Can also be used in Category I ranges.

Measuring category III

is the distribution level for fixed main or bypass flow circuits. These electric circuits are usually separated by at least one level of transformer barrier of Category IV (public utility or other high-voltage power source). Can also be used in Category II and Category I ranges.

Measuring Category IV

is the main electric supply level. Greenlee is setting new standards by offering equipment that meets the highest protective values of IEC standards and which are certified accordingly. Can be used in all category ranges.

Greenlee equipment – tested and certified for compliance with norms by an independent party. This catalogue states the category for many Greenlee devices indicating that these devices comply with the various IEC categories (II, III or IV). All these references represent the categories confirmed in tests by independent testing organizations – giving you additional assurance.

The right type of protection for the task at hand.

No matter in which area you may need overvoltage protection – select a device which has at least the nominal capacity suitable for the work you are carrying out.

Digital multimeter

DM Series in detail



Part No. Catalogue No.	50120379 DM-20	50120395 DM-40	50120409 DM-60	52047801 DM-200A	52047802 DM-210A	52047803 DM-510A
True effective value						•
DC A (A max.)	200 mA	200 mA	10	10	10	
Maximum resolution (µA)	100	10	0,1	0,1	0,1	0,1
Greatest accuracy (%)	1,0	1,0	1,2	0,8	0,8	0,8
AC A (A max.)			10	10	10	10
Maximum resolution (µA)			0,1	0,1	0,1	0,1
Greatest accuracy (%)			1,5	1,0	1,0	1,0
DC V (V max.)	300	600	600	1000	1000	1000
Maximum resolution (µV)	100	100	100	100	100	100
Greatest accuracy (%)	1,5	0,54	0,5	0,3	0,3	0,3
AC V (V max.)	300	600	600	750	750	750
Maximum resolution (µV)	100 mV	100 mV	100	100	100	100
Greatest accuracy (%)	2,5	1,2	1,0	1,0	1,0	1,0
Resistance (MΩ)	2	20	20	25	25	25
Maximum resolution (mΩ)	100	100	100	100	100	100
Greatest accuracy (%)	2,5	0,8	0,8	0,4	0,4	0,4
Continuity and beeper	•	•	•	•	•	•
Diode test	•	•	•	•	•	•
Capacity					•	•
Frequency measurement			•	•	•	•
Frequency threshold value (Hz)	45-400	40-400	40-400	50-500	50-500	50-500
Temperature (T1)		•			•	•
Temperature (twin conduit T1, T2)						
Display type	Digital	Digital	Digital	Digital	Digital	Digital
Display of updating rate (x/s)	2,5	2,5	2,5	3	3	3
Coverage	2000	2000	2000	2500	2500	2500
Analogue bar chart						
Updating rate analogue (x/s)						
Computer Interface				USB, RS 232	USB, RS 232	
Automatic and manual range selection				•	•	•
Automatic stop			Sleep	Yes	Yes	
Contactless voltage testing (EF)				•	•	•
Data Hold (measured data memory)		•	•	•	•	•
Minimum value / maximum value			only Max.			
Relative compensation function				•	•	•
Processing loopback						
Harmonics (HAR)						
Safety category classification	CAT II, 300 V	CAT III, 300 V	CAT III, 300 V CAT II, 600 V	CAT IV, 300 V CAT III, 600 V CAT II, 1,000 V	CAT IV, 300 V CAT III, 600 V CAT II, 1,000 V	CAT IV, 300 V CAT III, 600 V CAT II, 1,000 V
CE	•	•	•	•	•	•
Limited lifetime warranty	•	•	•	•	•	•

DM-20

Digital multimeter 300 V AC/DC

Characteristics

- AC/DC Voltage measurement
- Current measurement in electrical circuits
- Battery test for 1.5 V and 9 V batteries
- Acoustic continuity check, diode test, resistance measurement

Detail info

- More detailed technical information can be found on the overview page 590



Technical data	
Voltage measurement:	AC V: 200.0, 300V; 200.0, 2000mV; 20.00, 200.0, 300V
Current measurement:	DC A: 2000µA; 20.00, 200.0mA
Resistance:	200.0, 2000Ω; 20.00, 200.0, 2000kΩ
Measuring category:	CAT II, 300V

Item	Part No.		
DM-20 Digital multimeter 300 V AC/DC	50120379		
Scope of supply	Description	Part No.	Page
Test leads	Fixed to the device		
Battery 9 V			
Protective covering			

DM-40

Digital multimeter 600 V AC/DC with temperature measurement

Characteristics

- AC/DC Voltage measurement
- DC current measuring
- Battery test for 1.5 V and 9 V batteries
- Acoustic continuity check, diode test, resistance measurement, temperature measurement

Detail info

- More detailed technical information can be found on the overview page 590



Technical data	
Voltage measurement:	AC V: 200.0, 600V; DC V: 200.0, 2000mV; 20.00, 200.0, 600V
Current measurement:	DC A: 20.00, 200.0mA
Resistance:	200.0, 2000 Ω; 20.00, 200.0 kΩ, 20.00 MΩ
Temperature measurement	-40V - 400°C (-40°F - 1832°F)
Measuring category:	CAT II, 600V; CAT III, 300V

Item	Part No.		
DM-40 Digital multimeter 600 V AC/DC with temperature measurement	50120395		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
Battery 9 V			
Protective covering			



DM-60

Digital multimeter 600 V AC/DC

Characteristics

- AC/DC Voltage and current measurement
- Frequency measurement in voltage mode
- Acoustic continuity check, diode test, resistance measurement
- Max Hold and Data Hold for recording measurement results

Detail info

- More detailed technical information can be found on the overview [590](#) page

Technical data	
Voltage measurement:	200.00mV; 2.000, 20.00, 200.0, 600V
Current measurement:	200.0µA; 2.000, 20.00, 200.0mA; 10.00A
Resistance:	200.0Ω; 2.000, 20.00, 200.0kΩ; 2.000, 20.00MΩ
Frequency:	2k - 10MHz
Measuring category:	CAT II, 600V; CAT III, 300V

Item	Part No.		
DM-60 Digital multimeter 600 V AC/DC	50120409		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
Battery 9 V			
Protective covering			

DM-200A / DM-210A

Digital multimeter



- PC-Interface (DMSC-2U) USB, RS-232 Cable and Software for data logging via PC Software

Characteristics

- Automatic and manual range selection
- Large, backlit LCD display
- Automatic stop
- Analogue Bar-chart
- Optical and acoustic warning in the event of incorrect handling

Detail info

- More detailed technical information can be found on the overview page 590



Technical data		
	DM-200A	DM-210A
Voltage measurement:	0.01mV - 1000V AC/DC	0.01mV - 1000V AC/DC
Current measurement:	0.1µA - 8A AC/DC	0.1µA - 8A AC/DC
Resistance:	0.1Ω - 60MΩ	0.1Ω - 60MΩ
Voltage response range	30 - 500 V	30 - 500 V
Capacity		60.00nF - 3000µF
Temperature measurement	K-type, -4 °F - 572 °F	-50°C - 1000°C
Frequency:	5.00Hz - 1,000MHz	5.00Hz - 1,000MHz
Measuring category:	CAT II 1000V, CAT III 600, CAT IV 300	CAT II 1000V, CAT III 600, CAT IV 300

Item	Part No.		
DM-200A Digital multimeter	52047801		
DM-210A Digital multimeter	52047802		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
Protective covering			
Batteries 2 x 1.5 V AAA			

Accessories	Description	Part No.	Page
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
DMSC-2U	DMSC-2U Interface kit, for downloading data	50075551	604



Digital multimeter



DM-510A

Digital multimeter, True RMS

- Autocheck Function permits the automatic selection of AC V / DC V or resistance with low impedance for Ghost-Voltage-Removal
- PC-Interface (DMSC-2U) RS232C + USB Cable and Software for data logging via PC Software

Characteristics

- Frequency, temperature and capacity measurement
- Automatic and manual range selection
- Large, backlit LCD display
- Automatic stop
- Analogue bar chart
- Optical and acoustic warning in the event of incorrect handling

Detail info

- More detailed technical information can be found on the overview [590](#) page

Technical data	
Voltage measurement:	0.01mV - 1000V AC/DC
Current measurement:	0.1µA - 8A AC/DC
Resistance:	0.1Ω - 60MΩ
Voltage response range	30 - 500 V
Capacity	60.00nF - 3000µF
Temperature measurement	-50°C - 1000°C
Frequency:	5.00Hz - 1,000MHz
Measuring category:	CAT II 1000V, CAT III 600, CAT IV 301

Item	Part No.		
DM-510A Digital multimeter, True RMS	52047803		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
Temperature probe, blank			
Batteries 2 x 1.5 V AAA			

Accessories	Description	Part No.	Page
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594

TC-20

Nylon carry bag with carrying strap

Suitable for:

- Series 200, Series 500 and Series 800 measuring instruments.

Characteristics

- With inner pocket for test leads

Item	Part No.
TC-20 Nylon carrying case with carrying strap	50075357



DM-300 series in detail


Part No.	50118692	50118714
Catalogue No.	DM-310	DM-350
True effective value		•
DC A (A max.)	10	10
Maximum resolution (μA)	1000	1000
Greatest accuracy (%)	0,9	0,9
AC A (A max.)	10	10
Maximum resolution (μA)	1000	1000
Greatest accuracy (%)	1,2	1,2
DC V (V max.)	1000	1000
Maximum resolution (μV)	100	100
Greatest accuracy (%)	0,5	0,5
AC A (A max.)	1000	1000
Maximum resolution (μV)	100	100
Greatest accuracy (%)	1	1
Resistance (MΩ)	60	60
Maximum resolution (mΩ)	100	100
Greatest accuracy (%)	0,7	0,7
Continuity and beeper	•	•
Diode test	•	•
Capacity	•	•
Frequency measurement	•	•
Frequency threshold value (Hz)	50-500	50-500
Display type	Digital	Digital
Display of updating rate (x/s)	5	5
Coverage	6000	6000
Backlighting		•
Automatic and manual range selection	•	•
Automatic stop	Yes	Yes
Contactless voltage testing (EF)	•	•
Data Hold (measured data memory)	•	•
Minimum value / maximum value	Yes	Yes
Safety category classification	CAT IV, 600 V CAT III, 1000 V	CAT IV, 600 V CAT III, 1000 V
CE	•	•
Limited lifetime warranty	•	•



DM-310 / DM-350

Digital multimeter, True RMS (only DM-350)

Characteristics

- AC/DC Voltage and current measurement
- Large display
- EF Function for contactless voltage testing
- Automatic shut-off and display of low battery charge
- Resistance measurement
- Diode test and continuity check (also acoustic)
- Data Hold for recording the measured values
- Min / Max function

Detail info

- More detailed technical information can be found on the overview page 595

Technical data		
	DM-310	DM-350
Voltage measurement:	600.0mV; 6.000, 60.00, 600.0, 1000V	600.0mV; 6.000, 60.00, 600.0, 1000V
Current measurement:	6,000, 10.00A	6,000, 10.00A
Resistance:	600.0Ω; 6.000, 60.00, 600.0kΩ; 6.000, 60.00MΩ	600.0Ω; 6.000, 60.00, 600.0kΩ; 6.000, 60.00MΩ
Capacity	600.0nF, 6.000, 60.00, 600.0, 2000μF	600.0nF, 6.000, 60.00, 600.0, 2000μF
Frequency:	40Hz minimum, 100Hz to 60kHz maximum depending on the set functions and range	40Hz minimum, 100Hz to 60kHz maximum depending on the set functions and range
Measuring category:	CAT III, 1000V; CAT IV, 600V	CAT III, 1000V; CAT IV, 600V

Item	Part No.		
DM-310 Digital multimeter	50118692		
DM-350 Digital multimeter, True RMS	50118714		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
Battery 9 V			

DM-800 series in detail


Part No.	52047805	52047806	50077970
Catalogue No.	DM-810A	DM-820A	DM-860
True effective value	•	•	•
DC A (A max.)			10,000
Maximum resolution (µA)			0,01
Greatest accuracy (%)			0,1
AC A (A max.)			10,000
Maximum resolution (µA)			0,01
Greatest accuracy (%)			0,5
DC V (V max.)			1000,0
Maximum resolution (µV)			1
Greatest accuracy (%)			0,02
AC A (A max.)			1000,0
Maximum resolution (µV)			10
Greatest accuracy (%)			0,3
Resistance (MΩ)			50
Maximum resolution (mΩ)			10
Greatest accuracy (%)			0,07
Continuity and beeper	•	•	•
Diode test	•	•	•
Capacity	•	•	•
Frequency measurement	•	•	•
Frequency threshold value (Hz)			20-100 k
Temperature (T1)			•
Temperature (twin conduit T1, T2)			•
Display type	Digital	Digital	Digital
Display of updating rate (x/s)			5
Coverage			50.000/500.000
Backlighting	•	•	•
Analogue bar chart			42 segments
Updating rate analogue (x/s)			60
Zoom analogue bar chart			
Computer Interface	USB	USB	USB
Automatic and manual range selection	•	•	•
Automatic stop			Yes
Peak Hold			•
Data Hold (measured data memory)	•	•	•
Minimum value / maximum value			Yes
Relative compensation function	•	•	•
Processing loopback			•
Instrument lead calibration			
Operating clearance			•
Safety category classification	CAT IV, 1,000 V	CAT IV, 1,000 V	CAT IV, 600 V CAT III, 1000 V
CE	•	•	•
Limited lifetime warranty	•	•	•

Digital multimeter



DM-810A

Digital multimeter, True RMS

- PC-Interface (DMSC-9U) USB Cable and Software for data logging via PC Software

Characteristics

- Automatic and manual range selection
- Large, backlit LCD display
- Automatic stop
- Analogue Bar-chart
- Optical and acoustic warning in the event of incorrect handling

Detail info

- More detailed technical information can be found on the overview page 597

Technical data	
Voltage measurement:	0.01mV - 1000V AC/DC
Current measurement:	0.1µA - 10A AC/DC
Resistance:	0.1Ω - 60MΩ
Capacity	0.01nF - 25mF
Frequency:	5.00Hz - 1,000MHz
Measuring category:	CAT IV, 1,000V

Item	Part No.		
DM-810A Digital multimeter, True RMS	52047805		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
Battery 9 V			

Accessories	Description	Part No.	Page
DMSC-9U	Interface kit, for downloading data	50077554	604
TSGF	TSGF Measuring cable set with fuses	52034235	617

DM-820A

Digital multimeter, True RMS



- PC-Interface (DMSC-9U) USB Cable and Software for data logging via PC Software
- Recording of peak value (5 ms peak hold) max, min and max/min results

Characteristics

- Automatic and manual range selection
- Large, backlit LCD display
- Automatic stop
- Analogue Bar-chart
- Optical and acoustic warning in the event of incorrect handling

Detail info

- More detailed technical information can be found on the overview page 597



Technical data	
Voltage measurement:	0.01mV - 1000V AC/DC
Current measurement:	0.1µA - 10A AC/DC
Resistance:	0.1Ω - 60MΩ
Capacity	0.01nF - 25mF
Temperature measurement	-50°C - 1000°C
Frequency:	5.00Hz - 1,000MHz
Measuring category:	CAT IV, 1,000V

Item	Part No.		
DM-820A Digital multimeter, True RMS	52047806		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
Battery 9 V			
Temperature probe, blank			

Accessories	Description	Part No.	Page
DMSC-9U	Interface kit, for downloading data	50077554	604
TSGF	TSGF Measuring cable set with fuses	52034235	617





DM-860

Industry-Digital multimeter, True RMS

- Recording of maximum, minimum and maximum/minimum results
- Recording of peak value (peak hold) max, min and max/min display

Characteristics

- 5 5/6-place display with a display range of 500,000 for greater precision
- Carrying out frequency, temperature and capacity measurements as well as diode tests and continuity checks
- Display of the relative measured value offset for checking the relative measured value changes
- Automatic range selection for effortless and time-saving operation
- Analogue 42-segment bar chart display simplifies the checking of fast changes
- Clear backlit display simplifies read-off under all lighting conditions
- Temperature measurements up to 1000°C

Detail info

- More detailed technical information can be found on the overview [page 597](#)

Technical data	
Voltage measurement:	500.00mV; 5.0000, 50.000, 500.00, 1000.0V
Current measurement:	500.00, 5000.0µA; 50.000, 500.00mA; 5.0000, 10.000A
Resistance:	500.00Ω; 5.0000, 50.000, 500.00kΩ; 5.0000, 50.000MΩ
Capacity	50.00; 500.0nF; 5.000, 50.00, 500.0, 9999µF
Temperature measurement	K-type, -50 °C to 1,000°C (-58°F - 1832°F)
Frequency:	5Hz - 200kHz sine wave; 5Hz - 2MHz square wave logic level
Measuring category:	CAT II 1000V, CAT IV 600V

Item	Part No.		
DM-860 Industry-Digital multimeter, True RMS	50077970		
Scope of supply	Description	Part No.	Page
TSG-3	Test leads	50120344	
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
Battery 9 V			
Temperature probe, blank			

Accessories	Description	Part No.	Page
DMSC-9U	Interface kit, for downloading data	50077554	604
TSGF	TSGF Measuring cable set with fuses	52034235	617

GT-220, GT-540 series in detail


Part No.	50077481	50077490
Catalogue No.	GT-220	GT-540
DC V (V max.)	1000	1000
Maximum resolution (V)	0,001	0,001
Greatest accuracy (%)	1,2	0,8
AC A (A max.)	1000	1000
Maximum resolution (V)	0,001	0,001
Greatest accuracy (%)	2,5	1,5
Resistance (Ω)	6,000 M	6,000 M
Maximum resolution (Ω)	1	0,1
Greatest accuracy (%)	0,9	0,9
Continuity and beeper	•	•
Diode test		•
Capacity		•
Frequency threshold value (Hz)	50-400	50-400
Display type	Digital	Digital
Display of updating rate (x/s)	5	5
Coverage	6000	6000
Display of low battery charge	•	•
Automatic range selection	•	•
Automatic stop	Yes	Yes
Data Hold (measured data memory)	•	•
UL	•	•
Safety category classification	CAT IV, 1,000 V	CAT IV, 1,000 V
CE	•	•
Contactless determination of AC voltage	•	•
Limited lifetime warranty	•	•



GT-220

Electrical tester

■ **Trouble-free, automatic measurement of voltage and resistance**

Characteristics

- Low impedance rules out measurement of stray voltage from
- Automatic range selection ensures fast measurements
- Measurement of direct and alternating voltage
- Contactless voltage check for determining current-carrying lines
- Longer battery service life due to automatic shut-off
- Display of low battery charge
- Resistance measurement
- Acoustic continuity check
- Data Hold function for recording the measurement results

Detail info

- More detailed technical information can be found on the overview page 601

Technical data			
Voltage measurement:		6.000, 60.00, 600.0, 1000V	
Resistance:		6.000, 60.00, 600.0kΩ; 6.000MΩ	
Measuring category:		CAT IV, 1,000V	
Item		Part No.	
GT-220 Electrical testing equipment		50077481	
Scope of supply	Description	Part No.	Page
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
Battery 9 V			
TSG-3	Test leads		

GT-540

Electrical tester

Trouble-free, automatic measurement of voltage and resistance

Characteristics

- Low impedance rules out stray voltage from
- Automatic range selection ensures fast measurements
- Measurement of direct and alternating voltage
- Contactless voltage check for determining current-carrying lines
- Longer battery service life due to automatic shut-off
- Display of low battery charge
- Resistance measurement
- Acoustic continuity check
- Data Hold function for recording the measurement results
- High-impedance measurement of direct and alternating voltage for load-sensitive circuits
- Capacity measurement, Diode test
- Low-impedance range with fast continuity test
- Optimised measuring precision
- Automatic and manual range selection

Detail info

- More detailed technical information can be found on the overview page 601



Technical data	
Voltage measurement:	6.000, 60.00, 600.0, 1000V
Resistance:	6.000, 60.00, 600.0kΩ; 6.000MΩ
Capacity	100.0, 1000.0nF; 10.00, 100.0, 2000μF
Measuring category:	CAT IV, 1,000V

Item	Part No.		
GT-540 Electrical testing equipment	50077490		
Scope of supply	Description	Part No.	Page
TC-20	TC-20 Nylon carrying case with carrying strap	50075357	594
Battery 9 V			
TSG-3	Test leads		



Digital multimeter



DMSC-2U

Interface-Kit for DM-200A / DM-210A / DM-510 A

Characteristics

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data for analysis with every type of table calculation program

Technical data	
Software requirements:	Windows ME/98/95 or Windows XP/2000/NT4/Vista
Hardware requirements:	Processor and main memory must, as a minimum, satisfy the requirements for Windows
Monitor:	Minimum resolution of 640 x 480, 800 x 600 recommended
Fixed disc:	Minimum 20 Megabyte of disc space
Connection:	Free serial COM connection with 9-pole plug/USB.
Item	Part No.
DMSC-2U Interface kit, for downloading data	50075551



DMSC-9U

Interface-Kit for DM-810A / DM-820A / DM-860

Characteristics

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data for analysis with every type of table calculation program

Technical data	
Software requirements:	Windows ME/98/95 or Windows XP/2000/NT4/Vista
Hardware requirements:	Processor and main memory must, as a minimum, satisfy the requirements for Windows
Monitor:	Minimum resolution of 640 x 480, 800 x 600 recommended
Fixed disc:	Minimum 20 Megabyte of disc space
Connection:	Free serial COM connection with 9-pole plug/USB
Item	Part No.
Interface kit, for downloading data	50077554



TC-20

Nylon carry bag with carrying strap

Suitable for:

- Series 200, Series 500 and Series 800 measuring instruments.

Characteristics

- With inner pocket for test leads

Item	Part No.
TC-20 Nylon carrying case with carrying strap	50075357



Take the current to the pliers.

Clamp meters for DC and AC.

Our clamp meters stand out through their manyfold functions. The displays allow measured values to be read-off quickly even under difficult conditions.

In most cases the devices conform to IEC CAT IV and ensure a riskless measuring of currents up to 1,000 A.

If handled correctly we grant a lifetime limited warranty on these products.



- For DC and AC.
- For DC and AC voltage.
- With digital and analogue display.
- For measuring category III and IV.
- With true effective value measurement.



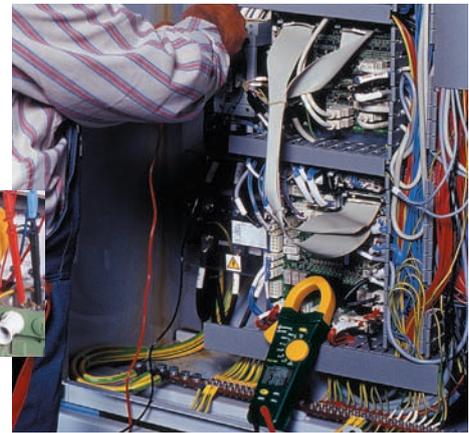
Clamp meters available for different applications and conductor diameters.

■ Also suitable for DC: CM-950

- ▶ Instrument for measuring direct and alternating voltage and direct and alternating current.
- ▶ With **double hall sensor for highest accuracy** with direct current measurements.
- ▶ With remanence compensation at direct current measurements.

Benefits:

- ▶ Just one measuring device for both DC and AC.
- ▶ Highly accurate measurements.
- ▶ Measuring errors are practically excluded.

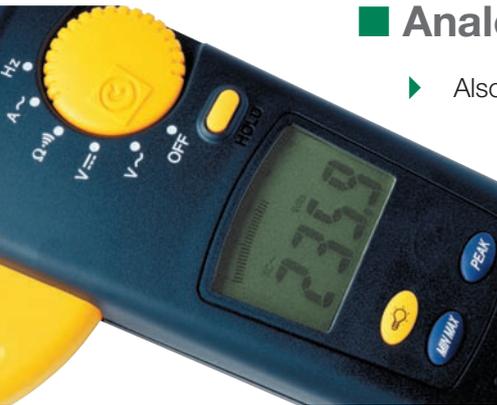


■ Analogue bar display for fast read-off: CM-1300

- ▶ Also with analogue display.
- ▶ **With acoustic continuity test.**

Benefits:

- ▶ Variances are indicated immediately as the analogue bar display responds faster than conventional digital displays.
- ▶ Fast testing of contact faults with the acoustic continuity function.



■ Measures direct and alternating current to 1000 A: CM-1550

- ▶ Approved for measuring categories CAT III and CAT IV.
- ▶ For DC and AC.
- ▶ **For true effective value measurement** even with distorted current flows.

Benefits:

- ▶ Current measurements in all application ranges up to 1000 A.
- ▶ Safe and accurate voltage and current measurement thanks to true RMS effective value measurement.



■ Features of clamp meters.

	True effective value	DC A (A max.)	AC A (A max.)	DC V (V max.)	AC V (V max.)	Resistance (Ω)	Frequency Hz	Bar display	Measuring category
CM-330			400						III, 600 V
CM-600			600		600	2000			III, 600 V
CM-800			600	600	600	400	✓	✓	III, 600 V
CM-850	✓		600	600	600	400	✓	✓	III, 600 V
CM-900		600	600	600	600	400	✓	✓	III, 600 V
CM-950	✓	600	600	600	600	400	✓	✓	III, 600 V
CM-1300			1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V
CM-1350	✓		1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V
CM-1500		1000	1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V
CM-1550	✓		1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V

Clamp meters



CMT-80

Automatic tester

Pincer opening 27 mm

Characteristics

- Trouble-free, automatic measurement of current strength, voltage and resistance
- Compact design for measuring in tight spaces
- Low impedance rules out measurement of stray voltage from
- 400 A AC~, 600 V AC/DC measurements
- Data Hold function for recording important measurement results
- Longer battery service life due to automatic shut-off

Technical data	
Voltage measurement:	AC V: 1.3, 60.0V; DC V: 1.8 - 600.0; 0.6 - 600.0V
Current measurement:	0.6-400.0A AC
Resistance:	2000Ω with acoustic continuity signal
Display	LCD (display range 6000)
Measuring category:	CAT II, 600V
Plier opening	27mm

Item	Part No.		
CMT-80 Automatic tester	50077350		
Scope of supply	Description	Part No.	Page
TC-5	TC-5 Nylon carrying case with belt loop	50075888	662
Battery 9 V			
TSG-3	Test leads		

CM series in detail


Part No.	50118650	52022030	50075934	50076647	50076990	50077325	50077988
Catalogue No.	CM-330	CM-410	CM-600	CM-800	CM-900	CM-1300	CM-1500
True effective value							
DC A (A max.)					600		1000
Maximum resolution (A)					0,1		0,1
Greatest accuracy (%)					1,2		1,2
AC A (A max.)	400	400	600	600	600	1000	1000
Maximum resolution (A)	0,01	0,1	0,1	0,1	0,1	0,1	0,1
Greatest accuracy (%)	2,0	1,9	1,9	1,9	1,9	1,9	1,9
DC V (V max.)		600		600	600	1000	1000
Maximum resolution (V)		0,1		0,1	0,1	0,1	0,1
Greatest accuracy (%)		1,0		0,7	0,7	0,7	0,7
AC V (V max.)		600	600	600	600	750	750
Maximum resolution (V)		0,1	1	0,1	0,1	0,1	0,1
Greatest accuracy (%)		1,0	1,2	1,0	1,0	1,0	1,0
Resistance (Ω)		20M Ω	2000 Ω	400 Ω	400 Ω	400 Ω	400 Ω
Maximum resolution (Ω)		0,1	1	0,1	0,1	0,1	0,1
Greatest accuracy (%)		0,7	1,5	1,0	1,0	1,0	1,0
Acoustic continuity check		•	•	•	•	•	•
Frequency				•	•	•	•
Frequency threshold value (Hz)	50-60	50-500	40-500	50-400	50-500	50-400	50-500
Plier opening	30mm	27mm	35mm	34mm	35mm	51mm	51mm
Display type	Digital	Digital	Digital	Digital	Digital	Digital	Digital
Display of updating rate (x/s)	25	1,5	4	2,5	2,5	2,5	2,5
Display range	2000	2000	2000	4000	4000	4000	4000
Analogue bar chart				42 segments	42 segments	42 segments	42 segments
Updating rate analogue (x/s)				13	13	13	13
Display of low battery status	•	•	•	•	•	•	•
Automatic range selection		•		•	•	•	•
Automatic stop			Yes	Yes	Yes	Yes	Yes
Peak Hold				•	•	•	•
Data Hold (measured data memory)	•	•	•	•	•	•	•
Minimum value / maximum value				Yes	Yes	Yes	Yes
Measuring category	CAT III, 600 V	CAT IV, 600 V CAT III, 1000 V	CAT IV, 600 V CAT III, 1000 V				
CE	•	•	•	•	•	•	•
Limited lifetime warranty	•	•	•	•	•	•	•

Clamp meters

CM series in detail 2



Part No.	50076663	50077007	50077333	50077996	52020887
Catalogue No.	CM-850	CM-950	CM-1350	CM-1550	CSJ-100
True effective value	•	•	•	•	
DC A (A max.)		600		1000	
Maximum resolution (A)		0,1		0,1	
Greatest accuracy (%)		1,2		1,2	
AC A (A max.)	600	600	1000	1000	200
Maximum resolution (A)	0,1	0,1	0,1	0,1	0,1
Greatest accuracy (%)	1,9	1,9	1,9	1,9	3,0
DC V (V max.)	600	600	1000	1000	1000
Maximum resolution (V)	0,1	0,1	0,1	0,1	0,1
Greatest accuracy (%)	0,7	0,7	0,7	0,7	1,0
AC A (A max.)	600	600	750	750	1000
Maximum resolution (V)	0,1	0,1	0,1	0,1	0,1
Greatest accuracy (%)	1,0	1,0	1,0	1,0	1,5
Resistance (Ω)	400 Ω	400 Ω	400 Ω	400 Ω	20M Ω
Maximum resolution (Ω)	0,1	0,1	0,1	0,1	0,1
Greatest accuracy (%)	1,0	1,0	1,0	1,0	1,0
Acoustic continuity check	•	•	•	•	•
Frequency	•	•	•	•	
Frequency threshold value (Hz)	50-400	50-500	50-400	50-500	50-500
Plier opening	34mm	35mm	51mm	51mm	16mm
Display type	Digital	Digital	Digital	Digital	Digital
Display of updating rate (x/s)	2,5	2,5	2,5	2,5	1,5
Display range	4000	4000	4000	4000	2000
Analogue bar chart	42 segments	42 segments	42 segments	42 segments	
Updating rate analogue (x/s)	13	13	13	13	
Display of low battery status	•	•	•	•	•
Automatic range selection	•	•	•	•	•
Automatic stop	Yes	Yes	Yes	Yes	Yes
Peak Hold	•	•	•	•	
Data Hold (measured data memory)	•	•	•	•	•
Minimum value / maximum value	Yes	Yes	Yes	Yes	
Measuring category	CAT III, 600 V	CAT III, 600 V	CAT IV, 600 V CAT III, 1000 V	CAT IV, 600 V CAT III, 1000 V	CAT IV, 600 V CAT III, 1000 V
CE	•	•	•	•	•
Limited lifetime warranty	•	•	•	•	•

CM-330

Clamp meters

- Compact, ergonomic design for measuring in tight spaces
- Pincer opening 30 mm

Characteristics

- Measurement of alternating currents to 400 A
- Data Hold function for recording peak values
- Data Hold function for recording important measurement results

Detail info

- More detailed technical information can be found on the overview page 609

Technical data	
Current measurement:	20.00, 200.0, 400A AC
Display	LCD (display range 2000)
Measuring category:	CAT III, 600V
Plier opening	30mm

Item	Part No.		
CM-330 clamp meter	50118650		
Scope of supply	Description	Part No.	Page
TC-5	TC-5 Nylon carrying case with belt loop	50075888	662
Battery 9 V			



CM-410

Clamp meters

- Narrow, compact design for measuring in tight spaces
- Pincer opening 27 mm

Characteristics

- Measurement of resistances up to 20 Ω
- Data Hold function for recording important measurement results
- Automatic device shut-off
- Continuity test

Detail info

- More detailed technical information can be found on the overview page 609

Technical data	
Voltage measurement:	200.0 - 600V AC/DC
Continuity test:	Yes
Current measurement:	200.0, 400A AC
Resistance:	20MΩ
Display	3 1/2-character LCD (display range 2000)
Measuring category:	CAT III, 600V
Plier opening	27mm
Accuracy:	0,7

Item	Part No.		
CM-410 clamp meter	52022030		
Scope of supply	Description	Part No.	Page
TC-5	TC-5 Nylon carrying case with belt loop	50075888	662
Batteries 2 x 1.5 V AAA			



Clamp meters



CM-600

Clamp meters

Pincer opening 35 mm

Characteristics

- Measurement of alternating voltage and alternating current
- Resistance measurement up to 2000 Ω
- Longer battery service life due to automatic shut-off

Detail info

- More detailed technical information can be found on the overview page 609

Technical data	
Voltage measurement:	600V AC
Current measurement:	600V
Resistance:	2000Ω
Display	3 1/2-character LCD (display range 2000)
Measuring category:	CAT III, 600V
Plier opening	35mm

Item	Part No.		
CM-600 clamp meter	50075934		
Scope of supply	Description	Part No.	Page
TC-10	TC-10 Nylon carrying case with belt loop	50075349	663
Battery 9 V			
TSG-3	Test leads		

■ CM-800 / CM-850

Clamp meter, True RMS (only CM-850)

- True RMS for the most precise measurements if harmonic oscillation is present
- Pincer opening 34 mm

Characteristics

- Measurement of alternating current, direct and alternating voltage, frequency and resistance
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Longer battery service life due to selectable automatic shut-off

Detail info

- More detailed technical information can be found on the overview page 609



Technical data		
	CM-800	CM-850
Voltage measurement:	400.0, 600V	400.0, 600V
Current measurement:	400.0, 600A AC	400.0, 600A AC
Resistance:	400.0Ω	400.0Ω
Display	LCD (display range 4000)	LCD (display range 4000)
Frequency:	0.400kHz	0.400kHz
Measuring category:	CAT III, 600V	CAT III, 600V
Plier opening	34mm	34mm

Item	Part No.		
CM-800 clamp meter	50076647		
CM-850 Clamp meter, True RMS	50076663		
Scope of supply	Description	Part No.	Page
TC-10	TC-10 Nylon carrying case with belt loop	50075349	663
Battery			
TSG-3	Test leads		



Clamp meters



CM-900 / CM-950

Clamp meter, True RMS (only CM-950)

- True RMS for the most precise measurements if harmonic oscillation is present
- Pincer opening 35 mm

Characteristics

- Measurement of direct and alternating current, direct and alternating voltage, frequency and resistance
- Dual reverberation sensor ensures precision during direct current measurement
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Automatic zero-point setting for direct current measurement
- Longer battery service life due to selectable automatic shut-off

Detail info

- More detailed technical information can be found on the overview page 609

Technical data		
	CM-900	CM-950
Voltage measurement:	400.0, 600V	400.0, 600V
Current measurement:	400.0, 600A	400.0, 600A
Resistance:	400.0Ω	400.0Ω
Display	LCD (display range 4000)	LCD (display range 4000)
Frequency:	0.400kHz	0.400kHz
Measuring category:	CAT III, 600V	CAT III, 600V
Plier opening	35mm	35mm

Item	Part No.		
CM-900 clamp meter	50076990		
CM-950 Clamp meter, True RMS	50077007		
Scope of supply	Description	Part No.	Page
TC-10	TC-10 Nylon carrying case with belt loop	50075349	663
Battery 9 V			
TSG-3	Test leads		

CM-1300 / CM-1350

Clamp meter, True RMS (only CM-1350)

- True RMS for the most precise measurements if harmonic oscillation is present
- Pincer opening 51 mm

Characteristics

- Measurement of alternating current, direct and alternating voltage, frequency and resistance
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Acoustic continuity check
- Longer battery service life due to selectable automatic shut-off

Detail info

- More detailed technical information can be found on the overview page 609



Technical data		
	CM-1300	CM-1350
Voltage measurement:	AC V: 400.0, 750V; DC V: 400.0, 1,000V	AC V: 400.0, 750V; DC V: 400.0, 1,000V
Current measurement:	400.0, 1,000A	400.0, 1,000A
Resistance:	0 - 400.0Ω	0 - 400.0Ω
Display	LCD (display range 4000)	LCD (display range 4000)
Frequency:	0.400kHz	0.400kHz
Measuring category:	CAT III 750V AC/ 100V DC, CAT IV 600V	CAT III 750V AC/ 100V DC, CAT IV 600V
Plier opening	51mm	51mm

Item	Part No.		
CM-1300 clamp meter	50077325		
CM-1350 Clamp meter, True RMS	50077333		
Scope of supply	Description	Part No.	Page
TC-30	TC-30 Nylon carrying case with belt loop	50075365	
Battery 9 V			
TSG-3	Test leads		

Clamp meters



CM-1500 / CM-1550

Clamp meter, True RMS (only CM-1550)

- True RMS for the most precise measurements if harmonic oscillation is present
- Pincer opening 51 mm

Characteristics

- Measurement of direct and alternating current, direct and alternating voltage, frequency and resistance
- Dual reverberation sensor ensures precision during direct current measurement
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Acoustic continuity check

Detail info

- More detailed technical information can be found on the overview page 609

Technical data			
	CM-1500	CM-1550	
Voltage measurement:	AC V: 400.0, 750V; DC V: 400.0, 1,000V	AC V: 400.0, 750V; DC V: 400.0, 1,000V	
Current measurement:	400.0, 1,000A	400.0, 1,000A	
Resistance:	400.0Ω	400.0Ω	
Display	LCD (display range 4000)	LCD (display range 4000)	
Frequency:	0.400kHz	0.400kHz	
Measuring category:	CAT III 750V AC/ 100V DC, CAT IV 600V	CAT III 750V AC/ 100V DC, CAT IV 600V	
Plier opening	51mm	51mm	
Item	Part No.		
CM-1500 clamp meter	50077988		
CM-1550 Clamp meter, True RMS	50077996		
Scope of supply	Description	Part No.	Page
TC-30	TC-30 Nylon carrying case with belt loop	50075365	
Battery 9 V			
TSG-3	Test leads		

CSJ-100

Jaw meter, open

Pincer opening 16 mm

Characteristics

- Measurement of AC, DC and alternating voltage
- For easy, quick voltage measurement
- Resistance measurement up to 20 MΩ
- Acoustic continuity test and diode test
- Alarm and LED for contactless voltage detection
- Automatic shut-off for longer service life
- Data Hold for recording the measured values
- 3 ½-place LCD-Display (counter value with maximum 1999 Points)

Order info

- More detailed technical information can be found on the overview page

Technical data	
Voltage measurement:	200.0, 1,000V
Current measurement:	200.0AC
Resistance:	200.0Ω; 2,000, 20.00, 200.0kΩ; 2,000, 20.00MΩ
Display	LCD (display range 2000)
Measuring category:	CAT II 1000V, CAT IV 600V
Plier opening	16mm

Item	Part No.		
CSJ-100 jaw meter, open	52020887		
Scope of supply	Description	Part No.	Page
TC-5	TC-5 Nylon carrying case with belt loop	50075888	662
Batteries 2 x 1.5 V AAA			
Test leads			



TSGF

Measuring cable set with fuses CAT IV 1000V

Suitable for Greenlee jaw meters and Digital multimeter

Characteristics

- Double insulated Silicon conductors with two coatings
- Superfine stranded copper cable
- High flexible
- 1.2 Meter cable length

Item	Part No.
TSGF Measuring cable set with fuses	52034235

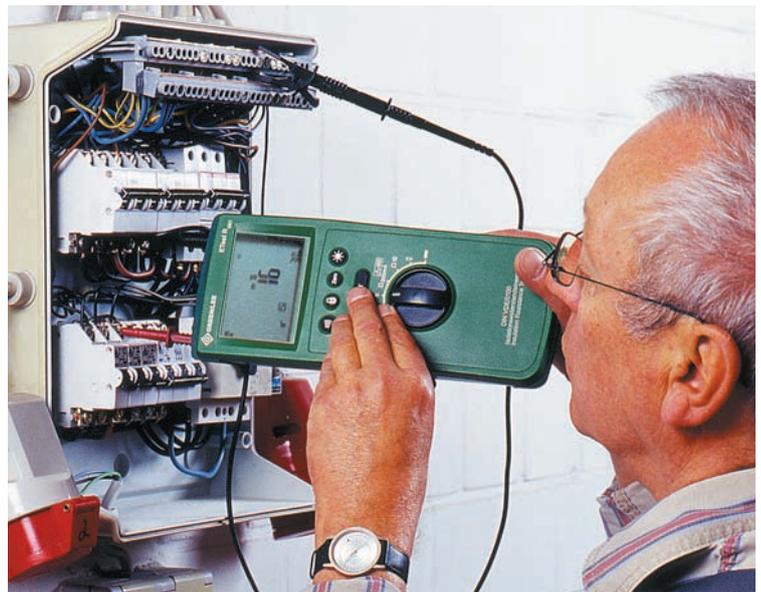




The right test *for every installation.*

VDE tester to VDE 0100.

All you need to do to satisfy the requirements of VDE 0100 is respect a broad range of values. With the new Greenlee ETest series you can be sure to meet all these requirements. Either with the multifunctional installation tester or the special devices for earthing and/or insulation resistances. With the upmost safety and simple operation.



- **VDE tester to VDE 0100.**
- **Continuity test.**
- **Voltage measurements.**
- **Insulation resistance tests.**
- **RCD/FI measurements.**
- **Earthing resistance measurements.**

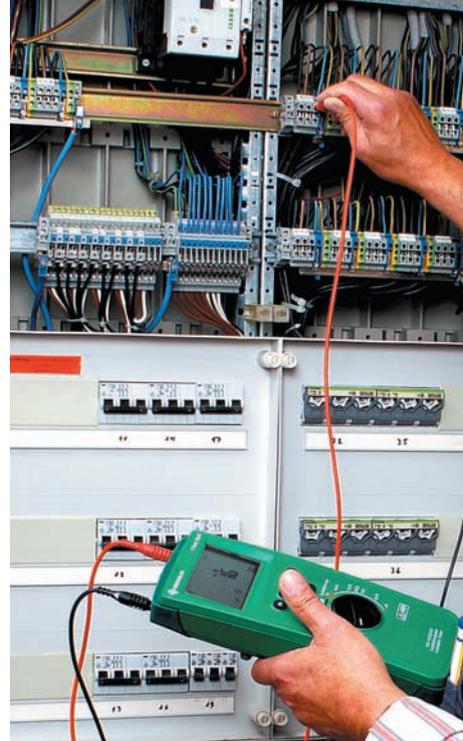
The ETest series is extremely safe to use as the display is always at sight.

■ All measurements in just one action: *ETest Multi*

- ▶ One measuring device for measuring earth continuity and insulation from 100 V – 500 V loop impedance, frequency and voltage.
- ▶ Handy design weighing just 900 g.
- ▶ With unique integrated measuring head and cordless probe.

Benefits:

- ▶ Being multifunctional the ETest Multi replaces several tools.
- ▶ The simple operation increases both comfort and safety when in use.
- ▶ The cordless probe enables use even at relatively inaccessible measuring points.



■ Measures the earth resistance at every voltage: *ETest R_E*



- ▶ Suitable for use at 110 Volt, 230 Volt and electrical 3-phase systems.
- ▶ Earth resistance measurement according to 2, 3 and 4-wire method.
- ▶ With flexible USB interface and storage for 500 test results.

Benefits:

- ▶ The ETest R_E can be used at all standard voltages.
- ▶ Regardless of the applicable requirements earth resistance can be measured according to any method.
- ▶ The test results can be quickly and easily archived on the PC.

■ Automatically discharges capacitive circuits: *ETest R_{ISO}*

- ▶ The lightweight among testers.
- ▶ Unique integrated measuring head.
- ▶ Fully compatible with EN 61557 and IEC 61010-1 600 V CAT III/ 1000 V CAT II.

Benefits:

- ▶ The low weight ensures high comfort during use.
- ▶ Thanks to the integrated measuring head the test probe and display can also be moved into the line of sight.
- ▶ The measuring device is suitable for international use and conforms to all applicable standards.





Etest Multi

The multi-functional Installation tester

- **DIN VDE 0100 Tester for: Continuity test, voltage measurement, insulation resistance test, line and earth loop impedance measurement, automatic RCD/RCCB test sequence, test of RCD/RCCB response time, test of RCD/FI trip current**
- **Uniquely integrated measuring head (wireless probe)**
- **Loop impedance measurement optionally without triggering the RCCB**
- **slimm tester with the lightest weight of its class**
- **Auto test function for RCD/FI Measurement**

Characteristics

- Large LCD display and analogue bar display
- Extremely simple operation
- More safety when working under voltage - Display can be found directly in vision field when using
- Fast and effective operation

Technical data	
Test current at:	> 200 mA
Scale range of the display:	0.00 Ω - 199 Ω
Resolution (Earthing):	0,01 Ω maximum
Test voltage:	100 V, 250 V, 500 V
Test current:	1 mA > 1 mA with UN x (1000W/V)
Short circuit-Test current:	> 2 mA
Scale range of the display (Insulation)	0.05 MΩ - 199 MΩ
Resolution (Insulation)	0,01 MΩ maximum
Mains voltage:	195 - 253 V / 195 - 440 V, 40 Hz - 65 Hz
Nominal Test current:	15 mA
Scale range of the display:	0.01 Ω - 2000 Ω
Resolution (Impedance)	0,01 Ω maximum
Scale range PFC:	0 - 26 kA
Mains voltage RDC	195 - 253 V, 40 Hz - 65 Hz
Nominal Test current RDC	10 mA, 30 mA, 100 mA, 300 mA, 500 mA
Scale range of the increase in current:	½ IΔn up to 1.1 IΔn
Scale range of the display:	0 V - 400 V
Resolution (Voltage/Freq)	1 V
Accuracy:	± 5 % ± 2 Digits
Frequency range:	45 Hz - 65 Hz
Safety guidelines:	IEC61010-1 300V Cat III, EN 61557
Dimension:	260 x 100 x 55 mm
Weight:	950 g
Power supply system:	Battery - AA with 1,5 V Alkaline, IEC-LR14 (6 Std. supplied as standard)

Item	Part No.	
Etest Multi multi-functional Installation tester	52045014	
Scope of supply	Part No.	Page
Set of test leads	52046756	
Mains cable	52046757	
Wireless measuring probe	52046758	
Three alligator clips (red, green, black)		
Robust plastic case	52046759	

ETest RE

The earth resistance measuring device

- **Test options: Earth resistance measurement with 2, 3 and 4 - Wire Method, Earth resistance measurement with jaw meter, measurement of the specific earth resistance**
- **USB interface**

Characteristics

- Large LCD display
- Compact design
- Comfortable operation by rotary switch and push buttons
- Simple reading thanks to large LCD-Display
- Storage for 500 test results
- Comfortable Download option on the PC via USB



Technical data	
Scale range of the display:	0,00 Ω - 50,0 kΩ
Measured frequency:	125 Hz ± 1 Hz
Measurement current:	< 20 mA effective
Measuring voltage:	< 30 V effective sinusoidal
Scale range of the display:	0,00 Ω - 2.0 kΩ
Measured frequency clamp method	125 Hz ± 1 Hz
Measurement current:	< 20 mA effective
Measuring voltage:	< 30 V effective sinusoidal
Scale range of the display:	0,00 Ω - 320 kΩ
Measured frequency:	125 Hz ± 1 Hz
Measurement current:	< 20 mA effective
Measuring voltage:	< 30 V effective sinusoidal
Safety guidelines:	IEC 61010-1 300 V CAT II, EN 61557
Dimension:	260 x 100 x 55 mm
Weight:	800 g
Storage spaces:	500
Interface:	USB
Power supply system:	Battery - AA with 1.5 V Alkaline, IEC-LR14 (6 Std. supplied as standard)

Item	Part No.	
ETest RE of earth resistance measuring device	52045013	
Scope of supply	Part No.	Page
Set of test leads	52046753	
Connection cable USB on Mini DIN	52046754	
Ground spikes (4)		
Carrying bag	52046755	

Accessories	Part No.	Page
Current probe	52046834	





Etest RISO

The installation resistance tester

- **Test options: Insulation resistance measurement, continuity measurement, voltage measurement**
- **Uniquely integrated measuring head (wireless probe)**

Characteristics

- Large LCD display
- Comfortable operation by rotary switch and push buttons
- Simple reading of the large backlit display
- Automatic warning in case of dangerous voltages
- Fully compatible with EN 61557 and IEC 61010-1, 600V CAT III/ 1,000V CAT II
- More safety when working under voltage - Display can be found directly in vision field when using

Technical data	
Safety guidelines:	IEC 61010-1 600 V CAT III/1000 V CAT II, EN 61557
Electrical safety:	EN 61010-1:2001 and EN 61557:1997
Max. operating voltage:	1000 V AC or DC between connecting terminal and earthing
Protection:	CAT II, 1000 V and CAT III, 600 V, environmental pollution degree 2 for EN 61010-1
Range:	1000 V AC/DC up to 400 Hz
Resolution:	1 V
Accuracy:	2 % + 2 Digits
Analogue bar chart	10 %
Visible warning:	≥ 30 V AC/DC to inputs
Range calibration:	2.000 MΩ, 20.00MΩ, 200.0 MΩ, 2000 MΩ
Resolution:	0,001 MΩ for maximum range 2.000 MΩ
Accuracy:	2 % + 2 digit, 2 MΩ, 20 MΩ, 200 MΩ ranges / 6 % + 2 digits for range 2000 MΩ
Analogue bar chart	10 %
Accuracy of the bar chart:	+ 20 %, - 0 %
Test voltage:	250 V, 500 V, 1000 V
Accuracy:	2 % + 2 digit, 2 MΩ, 20 MΩ, 200 MΩ ranges / 6 % + 2 digits for range 2000 MΩ
Nominal current:	1 mA
Number of measurements for EN 61557-2 2500	2500
Input protection	1000 V
Circuit protection:	Test blocked for > 30 V AC or DC to inputs
Range:	1000 V
Accuracy:	5 % ± 2 Digits
Resolution:	1 Ω
Analogue bar chart	10 %
Audible signal:	at = 30 Ω or less

Item	Part No.	
Etest RISO of the Insulation resistance measuring device	52045012	
Scope of supply	Part No.	Page
Set of test leads		
Wireless measuring probe	52046758	
Two alligator clips (red, black)		
Carrying bag	52046763	



Measuring heat, where nobody goes.

Temperature measuring devices for tight areas.

Temperature measuring devices can measure temperatures quickly and safely from a distance. The products are characterized by highest accuracy. The compact device design also permits measurements in tight areas.

If handled correctly we grant a lifetime limited warranty on these products.



High optical resolution for sharp measurement.



- For measurements from $-20\text{ }^{\circ}\text{C}$ to $+500\text{ }^{\circ}\text{C}$.
- Accuracy to $\pm 2\text{ }^{\circ}\text{C}$.
- With laser for locating measuring points.
- Emission factor of 500 ms.

■ For highly-precise temperature measurement: TG-600



- ▶ Highly-precise temperature measurements from a distance and in tight areas.
- ▶ **Precise focussing on measuring points even from long distances.**
- ▶ Temperature measuring range from -20 °C to +500 °C.

Benefits:

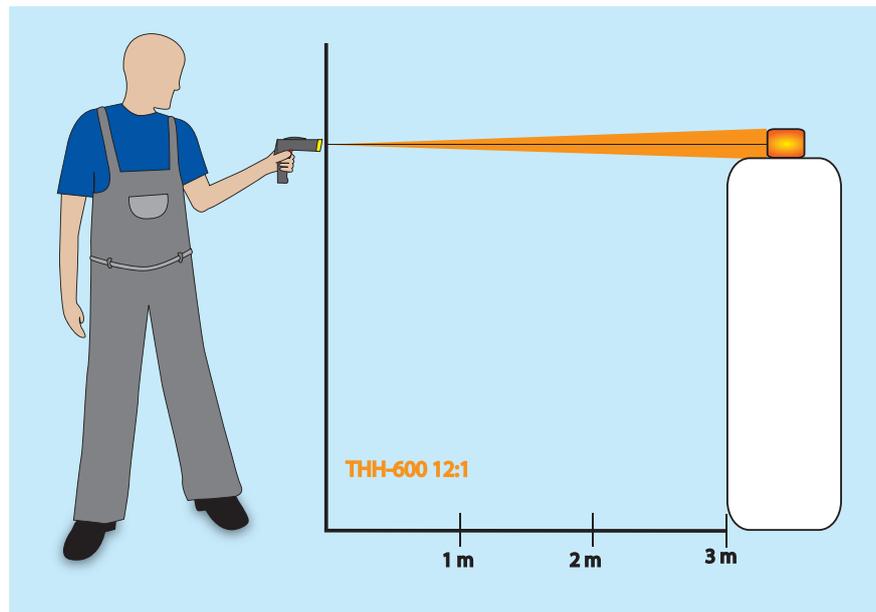
- ▶ Injuries and short circuits eliminated due to the distance during measurement.
- ▶ Temperature measurements can easily be taken even while the machine is operating.

■ Simple measurement from a distance

- ▶ High optical resolution of 12:1.
- ▶ Both horizontal and vertical measurements possible.

Benefits:

- ▶ Thanks to the high optical resolution measurements can be made to an accuracy of 25 cm from 3 m distance.
- ▶ Under-ceiling measurements can easily be taken without a ladder.



Optical resolution and associated measuring ranges.

■ The TG-600 in figures

	Optical resolution	Temperature measuring range	Accuracy	Reproducibility	Response time	Features
THH-600	12:1	-20 °C – 500 °C (-2°F – 932°F)	±2% or ±2 °C (4°F)	±1%	500 ms	High accuracy

Temperature gauges



TG-600

Temperature measuring device for temperatures of -20° C to +500° C

Optical resolution 12:1

Characteristics

- Safe, contactless temperature measurement
- Laser for simple measuring point location
- Backlit display
- Longer battery service life due to automatic shut-off

Technical data	
Temperature measurement	-20 to +500 (-18.89 to 500.00)
Optical resolution	12:1
Accuracy:	±2% or ±2°C (-15.56°C)
Reproducibility	±1% of the display value or ±2°F (1°C)
Response time	500 ms emission factor: Set at 0,98 TH

Item	Part No.	
TG-600 Temperature measuring device	50090313	
Scope of supply	Part No.	Page
Battery 9 V		
Bag		

TPI-1

Temperature probe for temperatures of -40° C to +800° C

Suitable for:

- For use in liquids and gels.



Technical data	
Temperature measurement	-40°C to 800 (-40°F to 775.00)
Sensor length	120 mm ±5 mm (4.72" ±0.2")
Accuracy:	0.75% or ±2.2°C (4°F)
Thermoelement:	Thermoelement type K

Item	Part No.
TPI-1 Temperature probe	50065696

TPB

Temperature probe for temperatures of -40° C to +204° C

Suitable for:

- Surfaces, air and gases.
- Not for use with fluids and gels.



Technical data	
Temperature measurement	-40 to +204 (-40.00 to 203.89)
Sensor length	1 m ±5 mm (39.4" ±0.2")
Thermoelement:	Thermoelement type K

Item	Part No.
TPB Temperature probe	50075926

■ **TPFSC**

Temperature probe for temperatures of -40° C to +500° C

Suitable for:

- Measurement of flat or beveled surfaces

Technical data	
Temperature measurement	-40°C to +500°C (-40°F to 932°F)
Sensor length	120 mm ±5 mm (4.72" ±0.2")
Accuracy:	0.75% or ±2.2°C (4°F)
Thermoelement:	Thermoelement type K

Item	Part No.
TPFSC Temperature probe	50065700



Play safe,

prevent hazards.

Locators for timber and metal struts as well as live cables.

The locators detect the presence of wood and metal struts in ceilings, walls and floors. They also help when searching for live cables.



- For searching of live cables (to 76 mm measuring depth).
- For detecting timber or metal.
- Measuring depths up to 38 mm for timber and 152 mm for metal.
- In some cases with potential distinction between magnetic and non-magnetic metals.



■ Finds bars up to 38 mm deep: SF-420AC

- ▶ Depth measurement to 38 mm.
- ▶ Live cables detected up to 76 mm depth.

Benefits:

- ▶ No test bores for finding timber bars or metal rods.
- ▶ **No damage to electrical installations** since they are found directly.
- ▶ Increased safety when drilling.



■ Indicates reinforcements up to 76 mm: SF-530



- ▶ Metal Scan Mode for steel rebars up to 76 mm.
- ▶ **Also suitable for wood and live cables.**
- ▶ Finds both wood and metal studs.

Benefits:

- ▶ When drilling in reinforced concrete steel rebars are detected directly with no unnecessary wear on drills.
- ▶ Direct distinction between metal and timber in walls.
- ▶ Fast detection of live cables.

■ Metal displayed, even at a depth of 152 mm: SF-780

- ▶ For measuring depths to 152 mm.
- ▶ **Automatic distinction between magnetic and non-magnetic materials.**
- ▶ Indicates the depth of cables and conductors.

Benefits:

- ▶ You can detect the presence of cables or conductors in walls even in relatively deep bores.
- ▶ Without a floor plan you can determine whether it concerns magnetic or non-magnetic metal.



■ Features of locators.

	Potential applications and max. measuring depth				Display of measuring depth	Distinction between magnetic and non-magnetic metals
	Stud Scan Mode	Deep Scan Mode	Metal Scan Mode	Live cables		
SF-420 AC	19 mm	38 mm		to 76 mm		
SF-530	19 mm	38 mm	76 mm	to 50 mm		
SF-780			152 mm		✓	✓



SF-420AC

Stud Sensor locator

Characteristics

- Detection of edges (wood or metal bars) to a depth of 19 mm in typical dry mortarless walls
- DeepScan® mode for localising wood or metal bars up to a depth of 38 mm in thick dry mortarless walls, lined for example with plywood, wood paneling or tiles
- Double scan for increased flexibility
- Contactless detection of AC voltage

Technical data	
Battery type	9 V alkaline
Positioning accuracy: Bar Scan Mode:	Normally within 3 mm when double scanning and marking
Positioning accuracy: Deep-Scan® mode	Normally within 5 mm when double scanning and marking
Measuring depth: Bar Scan Mode:	Normally to 19 mm
Measuring depth: Deep-Scan® mode	Normally to 38 mm
Positioning accuracy for AC voltage:	90 - 250 V at 50 - 60 Hz normally within 150 mm of live, unshielded conductors
Measuring depth for AC voltage:	Conductors are detected down to a depth of 76 mm in typical dry mortarless walls with Romex® cabling

Item	Part No.	
SF-420AC Stud Sensor locator	52020895	
Scope of supply	Part No.	Page
Battery 9 V		

SF-530

Multiscanner

Characteristics

- Detection of bars and posts in timber and metal
- AC-Scan for localising live conductors
- Metal-Scan for detecting conduits
- Backlit display for improved read-off



Technical data	
Battery type	9 V alkaline
Positioning accuracy: Bar Scan Mode:	Normally within 3 mm when double scanning and marking
Positioning accuracy: Deep-Scan® mode	Normally within 5 mm when double scanning and marking
Positioning accuracy: Metal Scan Mode	Normally within 13 mm
Measuring depth: Bar Scan Mode:	Normally to 19 mm
Measuring depth: Deep-Scan® mode	Normally to 38 mm
Measuring depth: Metal Scan Mode	Copper to 38 mm, metal reinforcements to 76 mm
Positioning accuracy for AC voltage:	90-250 V at 50-60 Hz normally within 150 mm of lives, unscreened conductors
Measuring depth for AC voltage:	Normally 50 mm

Item	Part No.
SF-530 Multiscanner	52020896
Scope of supply	Part No. Page
Battery 9 V	

SF-780

Metal detector

Characteristics

- Saves time by avoiding duds, repair jobs as well as the destruction of core drills and cutter blades
- Detects both (ferrous) and non-ferrous metals and displays depth values of down to 152 mm
- Easy read-off LCD, position and depth of the target object displayed
- Locates through concrete the most metallic materials
- Accurate depth measurement to approx. 13 mm
- Automatic demarcation between metal reinforcement and copper pipes (i.e. magnetic and non-magnetic metals)
- Easy handling with two-button operation



Technical data	
Battery type	9 V alkaline
Positioning accuracy	Centre of 13 mm metal reinforcements or 13 mm copper pipes spaced at least 152 mm apart, normally within 13 mm
Measuring depth	Up to 152 mm

Item	Part No.
SF-780 Metal detector	52020897
Scope of supply	Part No. Page
Battery 9 V	
Bag	

Easy

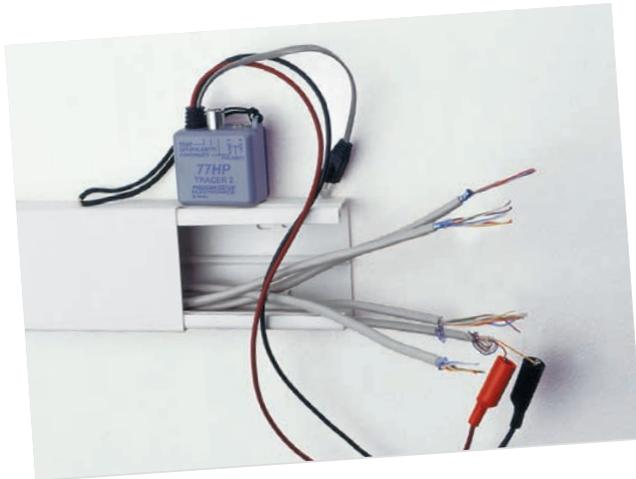
cable tracing.

Sound testing sensors for sheathed and unsheathed cables.

Sound testing sensors for cable and conductor identification allow cables to be detected within a bundle at a cross-connect point or at the remote end.

- ▶ In some cases using various tones for several conductors at the same time.
- ▶ Also without metallic contact with the receiver.

The devices enable cables and conductors to be quickly traced along a wall in full control panels and equipment rooms.



Simply connect the transmitter and cables can be quickly detected.

- **Sound testing sensors for twisted pair, coaxial and contactless cables.**
- **For continuity tests and tracking cores and cables.**
- **Various sensitivities can be set for precise identification.**



■ Classic Tone and Probe Kit 701 K

For identifying individual conductors or cables in the communications industry

Characteristics

- Talk battery supply
- Tone generator with crocodile terminals and RJ-11 plug
- 3-colour LED display (identifies WS call voltages)
- Weather-resistant design
- Tone generator with interchangeable tips
- Selectable wobble tone
- Polarity test
- Continuity test



Item	Part No.	
Classic Tone and Probe Kit 701 K	50605041	
Scope of supply	Part No.	Page
High Power tone generator 77HPCE	50605027	676
Inductive amplifier 200 EP	50086715	676
Bag	50086839	676
Battery 9 V		

■ Premium Tone and Probe Kit 801K

For identifying individual conductors or cables in the communications industry

■ 50Hz filter function

Characteristics

- Talk battery supply
- Tone generator with crocodile terminals with pincushion and RJ-11 plug
- 3-colour LED display (identifies WS call voltage).
- Weather-resistant design
- Selectable wobble tone
- Continuity test
- Polarity test



Item	Part No.	
Premium Tone and Probe Kit 801K	50604660	
Scope of supply	Part No.	Page
77HP/6A Tone generator	50605034	677
200FP Filter sensor	50604678	677
Bag		
Battery 9 V		

Secure communication within the network.

Network measuring devices and testers.

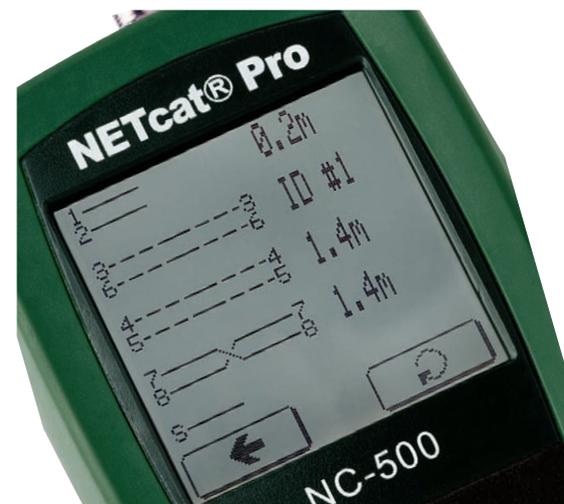
Fast, precise and easy to use – these features make Greenlee's wiring and network service testers indispensable for technicians who install and maintain networks. The NETcat®Micro NC-100 is a wiring tester for testing data voice and video applications. The result is clearly shown on a backlit LCD display.

In twisted-pair mode even "split-pairs" faults can be found. An integrated sound generator combined with an inductive receiver enables laid cables to be quickly identified. The NETcat®Pro NC-500 also offers the option of TDR calibration – enabling you to easily determine the length of the cable without problem.



Greenlee measuring devices and testers for the fast simple testing of networks.

- Network cable tester.
- Built-in tone generator.
- Length measurement via TDR function.
- Backlit touchscreen display.



NETcat® Micro NC-100

The new NETcat®Micro NC-100 is a wiring tester for testing data voice and video cables

- Built-in tone generator

Characteristics

- Testing of twisted pair (UTP, STP) and coaxial cables
- Locating short-circuits, breaks, incorrect wiring and split pair errors
- Surge warning feature
- Digital, backlit display
- Telephone (RJ-12), LAN (RJ-45) and coaxial connector (F type) ports
- Integrated remote unit
- Three selectable tone signals for cable identification



Item	Part No.	
NETcat® Micro NC-100	52024541	
Scope of supply	Part No.	Page
Twisted-pair, coax and crocodile terminals connection cable		
Battery 9 V		

NETcat® Micro + 200EP

NETcat® Micro NC-100 in combination with inductive receiver 200EP for cable identification

Characteristics

- Telephone (RJ-12), LAN (RJ-45) and coaxial connector (F type) ports
- Integrated remote unit
- Three selectable tone signals for cable conductor identification
- Testing of twisted pair (UTP, STP) and coaxial cables
- Locating short-circuits, breaks, incorrect wiring and split pair errors



Item	Part No.	
NETcat® Micro + 200EP	NC100EP	
Scope of supply	Part No.	Page
NETcat® Micro	52024541	686
Inductive receiver 200EP	50086715	
Bag		
Battery 9 V		



■ NETcat® Pro NC-500

The NETcat® Pro NC-500 is a fast and precise wiring and network service tester with TDR function

■ Length measurement using TDR function up to 609.6 m

Characteristics

- Four selectable tone signals for cable identification
- Displays active network devices (PC or hub) in 10/100Base-T networks
- NVP calibration
- ID detection of up to eight remote units with optional NC-510 accessory kit
- Testing of twisted pair (UTP, STP) and coaxial cables
- Locating short-circuits, breaks, incorrect wiring and split pair errors

Item	Part No.	
NETcat® Pro NC-500	52024556	
Scope of supply	Part No.	Page
Twisted-pair, coax and crocodile terminals connection cable		
Battery 9 V		





Technical Appendix

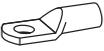
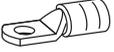
Klauke®	■ Technical notes on the various crimping types	i-2
	■ Legend of pictograms used for connecting materials	i-3
	■ Special properties of connecting materials	i-4
	Material properties	i-4
	Electrical properties	i-4
	Mechanical properties	i-4
	Designation of cables and conductors	i-5
	■ Notes for fitting connecting materials	i-6
	Assembly instructions for cable lugs and connectors	i-6
	Notes for fitting sleeves	
	for compressed conductors, types VHR and VHD	i-7
	Notes for fitting reduction sleeves	i-7
	Assembly instructions for full tension Al/steel connectors to	
	DIN 48085, part 3	i-7
	General information	i-8
	■ Notes for fitting screw connectors	i-9
	■ Notes for fitting compact tap connectors	i-10
	Assembly instructions KSK1503	i-10
	Assembly instructions KSK504	i-11
	Assembly instructions for SKR1503 / SKR1204 / SKR1304 /	
	SKR1504 / SKR150 / 1504 / SKR1854 / KSK1504 / KSK1854	i-12
	Structure of the tap connectors SKR1204, SKR150/504,	
	SKR150 / 1504 and SKR1854 for four conductor cables	i-13
	Structure of the compact tap connector SKR1503	
	for three conductor cables	i-13
	Structure of the compact tap connector SKR1504	
	for four conductor cables	i-13
	■ Conversion tables	i-14
	■ Check-list for custom made cable lugs and connectors	i-15
 GREENLEE® <small>A Textron Company</small>	■ General technical information	i-16
	Measuring categories	i-16
	Metric cable glands EN 50262	i-17
	Hole-making systems	i-17
	Hydraulic punch drivers	i-17
	Standards and norms	i-18
	■ Alphabetical Index	i-19
	■ Alphanumeric Index	i-23



■ **Technical notes on the various crimping types**

	Crimping	Description	Field of application
	Hexagonal crimping	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, compression cable lugs and connectors DIN 46235/DIN 46267, aluminium cable lugs and connectors	6 – 1000 mm ²
	Indent crimping	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, solderless terminals DIN 46234 and pin cable lugs DIN 46230, insulated solderless terminals, tubular cable lugs and connectors for fine stranded cables, tubular nickel cable lugs and connectors, stainless steel tubular cable lugs and connectors	0.75 – 400 mm ²
	Oval crimping	for crimping tubular double compression cable lugs, C-clamps, insulated tubular cable lugs and connectors, insulated pin cable lugs and compression joints DIN 48217, insulated cable connections	0.1 – 185 mm ²
	Indent crimping	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, tubular cable lugs and connectors for fine-stranded conductors	6 – 400 mm ²
	Indent crimping	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, tubular nickel cable lugs and connectors, stainless steel tubular cable lugs and connectors	4 – 95 mm ²
	Trapezoid crimping	for crimping cable end sleeves and twin cable end sleeves	0.14 – 240 mm ²
	Indent crimping	for crimping cable end sleeves and twin cable end sleeves	0.5 – 35 mm ²
	Square crimping	for crimping cable end sleeves and twin cable end sleeves	0.14 – 16 mm ²
	Roll crimping	for crimping non-insulated receptacles and cable end-sleeves DIN 46228, part 2	0.1 – 6 mm ²
	Round crimping	for crimping cable end sleeves and twin cable end sleeves	0.14 – 16 mm ²
		of 90° and 120° sector-shaped conductors	10 sm – 300 sm 35 se – 300 se
	Quad-point indent crimping	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, tubular cable lugs and connectors for fine-stranded conductors	10 – 300 mm ²
	Four point crimping	for crimping turned pin connectors and receptacles	0.1 – 4 mm ²
	Special trapezoid crimping	particularly for crimping cable end sleeves for compacted fine-stranded conductors	10 - 240 mm ²
	Gas-tight oval crimping	Crimp quality according to automotive standards	

■ Legend of pictograms used for connecting materials

	Designation
	Copper tubular cable lugs and connectors - standard design
	Insulated cable lugs and connectors "standard type"
	Tubular cable lugs and connectors for fine-stranded conductors
	Tubular cable lugs and connectors for solid conductors
VA 	Stainless steel tubular cable lugs and connectors
Ni 	Nickel tubular cable lugs and connectors
DIN 	Copper compression cable lugs and connectors to DIN
	Copper solderless terminals, connectors and pin terminals to DIN
	Insulated solderless terminals
	Copper sleeves for compacted conductors and sector-shaped conductors
Al 	Aluminium compression cable lugs and connectors to DIN
Al/Cu 	Aluminium/copper compression cable lugs and connectors
	C-clamps
	H-clamps
	Cable end sleeves
	Insulated cable connections
	Non-insulated receptacles



Special properties of connecting materials

Material properties

Information on materials used for copper and aluminium cable lugs and connectors

- All copper tubular cable lugs, solderless terminals and pin terminals as well as appropriate connectors are manufactured from Cu to DIN 13600.
- Cable end sleeves to DIN 46228 part 1 and part 4 are manufactured from Cu to DIN EN 13600.
- Aluminium compression cable lugs and connectors are manufactured from E-Al 99.5 to DIN 1712.

Electrical properties

- The maximum permissible current load of our connecting material in conjunction with insulated conductors can be found in the chart below.

Nominal cross section mm ²	Group 1 One or several single-core cables laid in conduits		Group 2 Multi-core cables, e. g. sheathed cables, conduit wires, lead-sheathed cables, flat webbed cables, flexible cables		Group 3 Overhead single-core cables with clearance of at least their diameter	
	Cu (A)	Al (A)	Cu (A)	Al (A)	Cu (A)	Al (A)
0,75	-	-	12	-	15	-
1	11	-	15	-	19	-
1,5	15	-	18	-	24	-
2,5	20	-	26	-	32	-
4	25	-	34	-	42	-
6	33	-	44	-	54	-
10	45	-	61	48	73	57
16	61	48	82	64	98	77
25	83	65	108	85	129	103
35	103	81	135	105	158	124
50	132	103	168	132	198	155
70	165	-	207	163	245	193
95	197	-	250	197	292	230
120	235	-	292	230	344	268
150	-	-	335	263	391	310
185	-	-	383	301	448	353
240	-	-	453	357	528	414
300	-	-	504	409	608	479
400	-	-	-	-	726	569
500	-	-	-	-	830	649

Values applicable only at an ambient temperature of 30 °C

Mechanical properties

- The tensile strength of connections assembled in accordance with our assembly instructions and tools complies with DIN EN 61238-1.



*Please note that crimping of solderless cable connectors with tools from other manufactures will not guarantee proper and safe connection. We recommend exclusively the use of solderless cable connections **Klauke**® with tools from **Klauke**®.*

■ Assignment of cables and conductors

a) Copper

- Our copper cable lugs and connectors are suitable for connecting copper cables to DIN 48201, part 1 and copper conductors according to DIN EN 60228 (see chart).

b) Aluminium

- Our aluminium cable lugs and connectors are suitable for connecting aluminium cables to DIN EN 50182 and aluminium conductors to DIN EN 60228, (see chart).



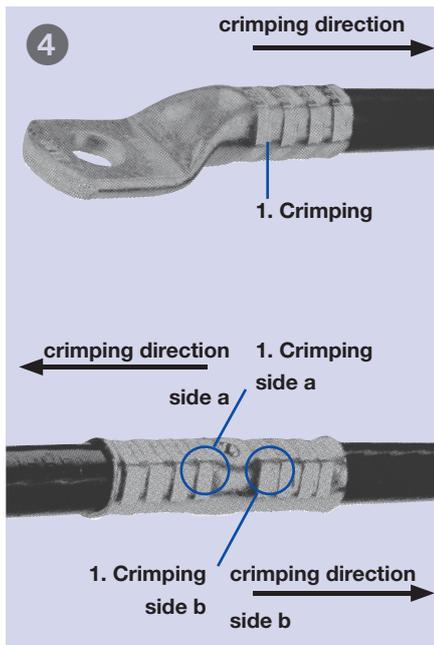
Sector-shaped conductors must be rounded with pre-rounding tools before assembly.

Cross-section compatibility chart for cable lugs and connectors for copper and aluminium conductors to

- VDE 0250
- DIN 48200
- DIN 48201 part 1, DIN EN 50182
- DIN EN 60228

Cross-section mm ²	Reference cross section	Cable Cu and Al		Stranded round conductor	Compacted round conductor		Solid conductor		Fine and finest stranded conductor
	DIN 48201 part 1, DIN EN 50182			VDE 0295, DIN EN 60228					
	(mm ²)	Number of wires	Cable Ø (mm)	Conductor Ø (mm)	Conductor Ø min. (mm)	Conductor Ø max. (mm)	Conductor Ø min. (mm)	Conductor Ø max. (mm)	Cable Ø max. (mm)
0,5	-	-	-	1,1	-	-	-	0,9	1,1
0,75	-	-	-	1,2	-	-	-	1	1,3
1	-	-	-	1,4	-	-	-	1,2	1,5
1,5	-	-	-	1,7	-	-	-	1,5	1,8
2,5	-	-	-	2,2	-	-	-	1,9	2,3
4	-	-	-	2,7	-	-	-	2,4	2,9
6	-	-	-	3,3	-	-	-	2,9	3,9
10	10,02	7	4,1	4,2	-	-	-	3,7	5,1
16	15,89	7	5,1	5,3	-	-	-	4,6	6,3
25	24,25	7	6,3	6,6	5,6	6,5	5,2	5,7	7,8
35	34,36	7	7,5	7,9	6,6	7,5	6,1	6,7	9,2
50	49,48	7	9	9,1	7,7	8,6	7,2	7,8	-
50	48,35	19	9	-	-	-	-	-	11
70	65,81	19	10,5	11	9,3	10,2	8,7	9,4	13,1
95	93,27	19	12,5	12,9	11	12	10,3	11	15,1
120	116,99	19	14	14,5	12,5	13,5	11,6	12,4	17
150	147,11	37	15,8	16,2	13,9	15	12,9	13,8	19
185	181,62	37	17,5	18	15,5	16,8	-	-	21
240	242,54	61	20,3	20,6	17,8	19,2	-	-	24
300	299,43	61	22,5	23,1	20	21,6	-	-	27
400	400,14	61	26	26,1	22,9	24,6	-	-	31
500	499,83	61	29,1	29,2	25,7	27,6	-	-	35
625	626,2	91	32,6	33,2	29,3	32,5	-	-	39
800	802,09	91	36,9	37,6	-	-	-	-	-
1000	999,71	91	41,1	42,2	-	-	-	-	-

Notes for fitting of connecting materials



■ Assembly instructions for cable lugs and connectors

- ❶ Strip conductor according to insertion depth (+ 10 % because of length change of crimp sleeve).
- ❷ Conductor ends must be cleaned mechanically before assembly.
- ❸ Insert conductor fully into cable lug or connector.
- ❹ Observing the crimping direction crimp the cable lug or connector using the appropriate tools. The crimping direction for cable lug and connector is indicated in the adjoining illustration.
- ❺ After crimping remove excess compound emerging from aluminium cable lugs and connectors.

We recommend the following number of crimps for individual cross sections:

Cross-section mm ²	Tubular cable lugs		Cable lugs DIN 46235		Aluminium cable lugs	
	5 mm Crimping die	width Crimping dies	5 mm Crimping die	width Crimping dies	7 mm Crimping die	width Crimping dies
6	1		2			
10	1		2			
16	1	1	2	1	4	2
25	2	1	2	1	4	2
35	2	1	2	1	5	2
50	2	1	3	1	5	2
70	2	1	3	1	6	3
95	2	1	4	2	6	3
120	2	1	4	2	6	3
150	2	1	4	2	6	3
185	2	1*	4	2	6	3
240	4	2	5	2	8	3
300	4	2		2	8	3
400	4	2		3		4
500				3		4
625				3		
800				3		
1000				3		

* when using quad-point indent crimping (HK60VP, EK 60 VP/FT-L etc.)
Number of crimps: 2

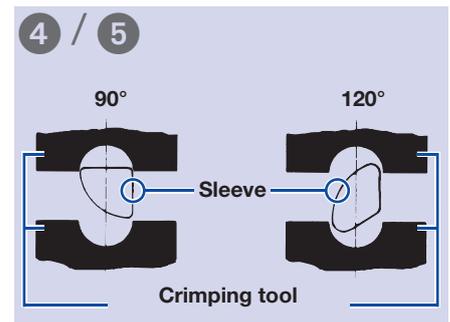
■ Instructions for fitting sleeves for compacted and sector-shaped conductors type VHR and VHD.

We recommend that additional VHR and VHD sleeves be used for compacted round conductors to ensure that the tubular cable lugs and connectors fit accurately.

For sector-shaped conductors we recommend use of additional sector sleeves VHR 3 or VHR 4 and VHD 3 or VHD 4 with Cu cable lugs and connectors to prevent spring back of conductors. Sleeves need to be rounded with pre-rounding tools.

Please note:

- 1 Ensure that the conductor is deformed as little as possible when cutting to length.
- 2 Strip the conductor insulation to the length to be inserted.
- 3 Slide the sleeve up to the front cut edge of the conductor.
- 4 Place the conductor and sleeve in the pre-rounding tool as shown in the sketch.
- 5 Crimp the sleeve
 - a) Crimp as illustrated (1st pre-compression)
 - b) Crimp turned through 90° (2nd pre-compression)
 - c) Crimp turned through 30° (final crimp)
 - d) Crimp turned through 30° if necessary (final crimp)



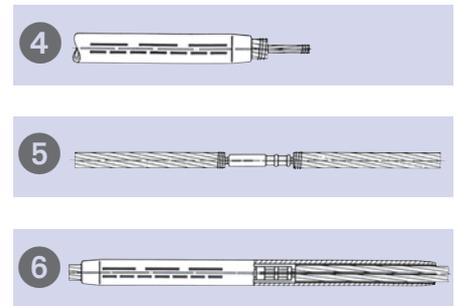
■ Instructions for fitting reduction sleeves

Only wide hydraulic crimping dies to be used when crimping more than two cross-sections.

■ Mounting instructions for full tension Al/steel connectors to DIN 48085, part 3

The connectors consist of an aluminium bushing (E-Al 99.5) and a soft steel bushing (St 52).

- 1 Straighten cable ends and remove dirt and if necessary oxide layer.
- 2 Slip the Al-compression joint onto one of the cable ends.
- 3 Tie the cable end and strip the aluminium wires.
- 4 Tie aluminium and steel wires.
- 5 Slip on the steel bushing and crimp according to the crimping marks.
- 6 Push the aluminium bushing in the centre over the assembled steel bushing and crimp according to the crimping marks.



Note: Do not crimp in the centre around the steel joint. Do not crimp on the cone-shaped ends of the connector.

- 7 Remove access compound after crimping the compression joint.



Note: Do not remove compound before assembly.

The dies can be assigned either by colour of the dies but preferably by the code no which is primarily related to the assigned cross-sections. Dies for steel bushings have a black finish while aluminium bushings are zinc-coated.

General information:

The crimping process has to be continued until the dies are completely closed otherwise a proper crimp cannot be guaranteed.

Notes for fitting of connecting materials

General information

Crimping dies:

The dies of series K 18, EK 50/18-L, PK 18, HK 18 and THK 18 and series HK 252, PK 252, HK 252 EL correspond in terms of external dimensions to DIN 48083 parts 1 and part 3 respectively.

The hexagonal dimensions of all interchangeable dies for manual and hydraulic tools of series D (i. e. for DIN cable lugs and connectors 46235 and 46267) and A (aluminium cable lugs and connectors, as well as Al-Cu cable lugs and connectors) are to DIN 48083 part 4.

Surfaces:

All above mentioned dies are supplied "chrome-yellow" for copper and "galvanized" for aluminium and nickel.

Respect the following maximum cross-sections when crimping connectors with crimping tools K18, PK18 and HK12025 and EK120/25-L:

K18 / PK18 Type of connector / dies	max. cross-section mm ²	HK120/25 and EK120/25-L Type of connector / dies	max. cross-section mm ²
Copper, standard version, R-series	95	Copper, standard version, R-series	185
Copper DIN for high tensile strength, D-series	70	Copper DIN, D-series	150
		Aluminium version, A-series	120
Aluminium version, A-series	70	Aluminium full-tension version, A-series	95



Following tools do not provide a code No. on crimps:

EK 60 VP-L, EK 60 VP/FT-L, HK 60 VP, HK 60 VPFT, PK 60 VP and PK 60 VPFT.

The following tightening torques apply for screws and bolts of strength category 8.8 as specified by DIN EN 61238:

Size of thread	Tightening torque (Nm)	Size of thread	Tightening torque (Nm)
M 5	5	M 12	75
M 6	9	M 14	120
M 7	15	M 16	190
M 8	22	M 20	380
M 10	44		

■ Assembly instructions for screw connectors

As loosening connecting elements screw connectors are being used preferably for heat shrinking or cast resin technique. However, they also can be used in all other kinds of cable joints. Four-screw connectors are especially suitable for fine stranded conductors as the longer connector length increases the transverse conductance of the individual wires and the contact resistance falls accordingly. In addition higher pull-out values are achieved. Barrier type four-screw connector clamps are suitable for cables with mass-impregnated paper insulation.

In an electrolyte-free, e.g. dry environment, copper as well aluminium conductors can be combined. This also applies in combination with heat shrinks. If conductors of different material (e.g. Cu and Al cables) have to be combined a barrier type connector is recommended.

While identical types of cables (e.g. NAYY-NAVY) can be used with non-barrier types of connectors for unequal cables (e.g. NAYY-NAKBA) plastic or drained cables application of connectors with barrier as an oil stop is recommended.

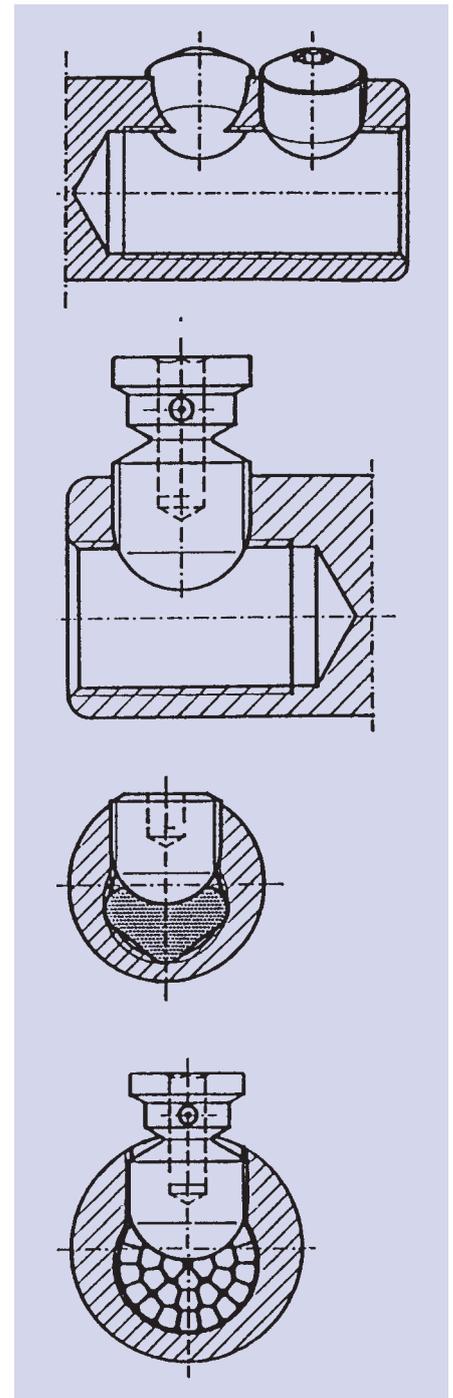
Insertion depth of conductors is controlled either by the barrier or by inspection hole on connectors without barrier.

In addition to the traditional screw connectors we also offer screw connectors with shear-off heads. The benefit of this version lies in the defined tightening torque pre-determined by the maximum transferable torque at the rated breaking point. These defined torque values set by the manufacturer guarantee maximum electrical and mechanical properties (DIN EN 61238). No torque wrenches are required for assembly of these compression joints.

With standard screw connectors the required contact pressure is reached at approx. 80 % of the given torque values. Excess crimps at rates higher than recommended torque values are to be avoided.

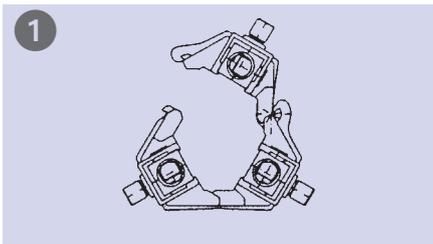
The cross-grooves on the conductor channels allow high tensile forces to be transmitted. The tensile forces of our screw connectors correspond to compression joints DIN 46267, part 2, having identical cross sections.

The contact screws are treated with a high-gliding lubricant based on molybdenum sulphide. This guarantees adequate contact pressure with low tightening torque.



Instructions for fitting compact tap connectors

Assembly instructions KSK1503



1 Bare cable acc. to DIN 47630.

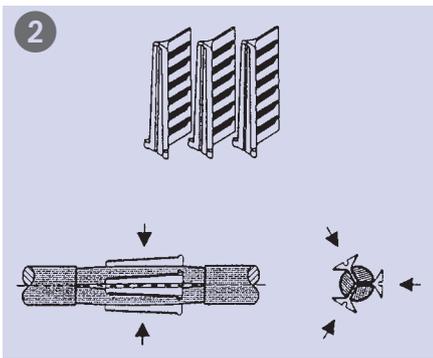
Comes with open snap-closure.

If opening is required due to inadvertent closing open ring parts by hand against snapping direction.

Three conductor cable

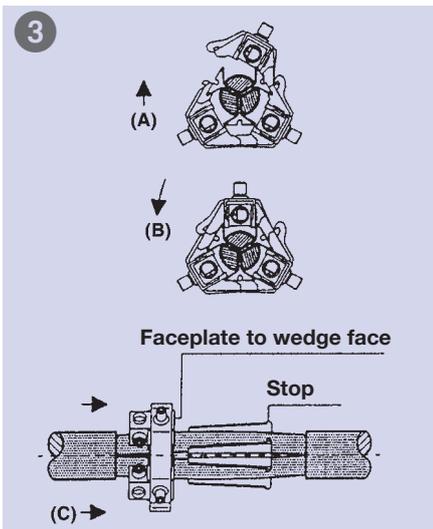
Cross-section	recommended bare length*
50 – 95 mm ²	200 mm
50 – 185 mm ²	320 mm

* **Observe assembly instructions of gland manufacturer!** On sets with off-centre bulge (largest gland diameter) spacer wedges are also to be placed off-centre.



2 Spacer wedges to be placed between conductors.

Expander wedges help to spread the conductors.



3 (A) Place clamping ring on the main conductor.

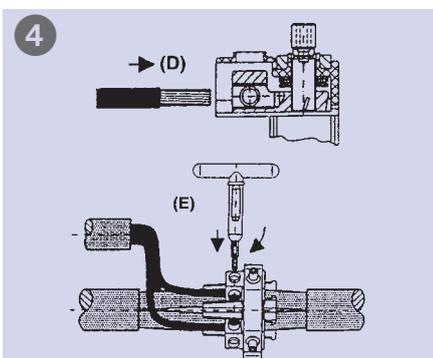
(B) Push clamping ring halves tight next to wedges.

(C) Push ring onto wedges hand-tight. It does not need to be pushed until stop.

4 (D) Bare tap conductor.

(E) Insert phase conductor into tap hole and tighten.

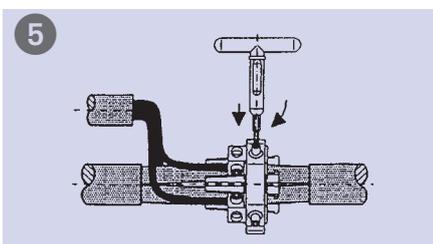
Attention! Always insert wrench totally into hexagon screw. Tap conductors below 16 mm² are recommended to be clamped with kinked ends.



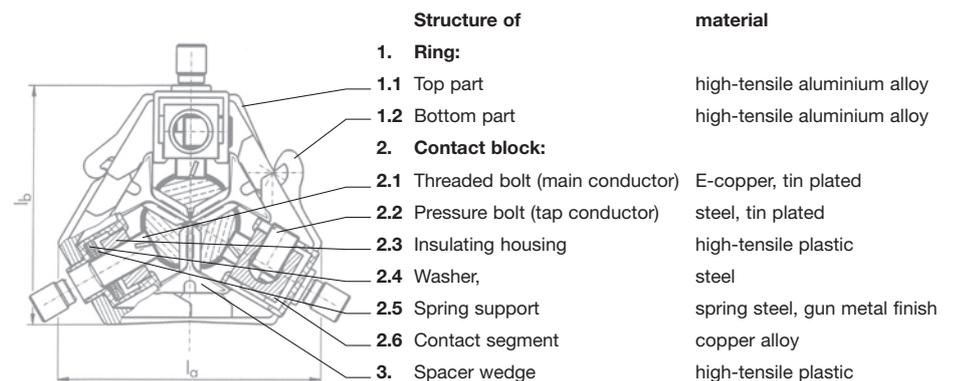
5 Shear-off screws to be tightened until seated on insulation.

Contact by alternating and uniform tightening until heads shear off.

Shear-off screws ease assembly operation. However they do not release the need for careful assembly by alternating and uniform tightening of screws. Remove sheared-off heads from gland. Once sheared-off screws cannot be loosened.



Structure of the compact tap connector KSK1503 for three conductors



Assembly instructions for KSK504

1 Bare conductor and insert wedge. Make sure that wires are tight to wedge.

Type	recommended bare length*
KSK504	90 mm

* Observe assembly instructions of gland manufacturer!
Delivered with open snap-closure.

If opening is required due to inadvertent closing open ring parts by hand against snapping direction.

2 Spacer wedges to be placed between conductors.

Expander wedges help to spread the conductors.

3 (A) Place clamping ring on the main conductor.

(B) Push clamping ring halves tight next to wedges.

(C) Push ring onto spacers. If wedges or two piece insulator are used push on ring only hand-tight. Does not need to be pushed until stop.

4 (D) Bare tap conductor.

(E) Insert phase conductor into tap hole and tighten.



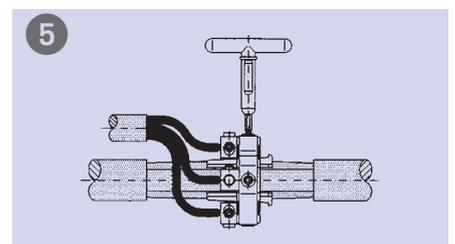
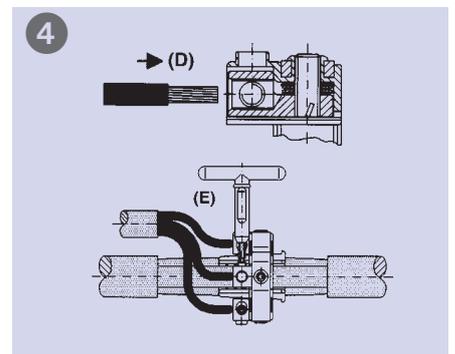
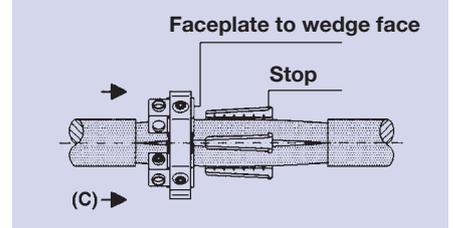
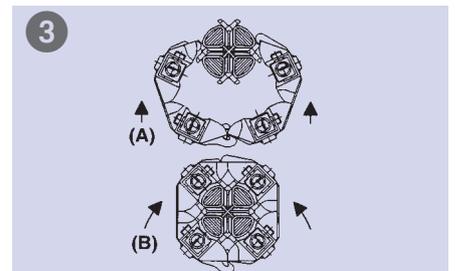
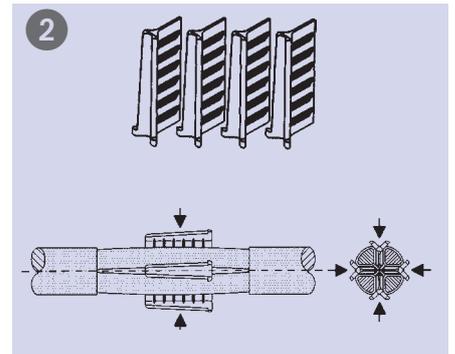
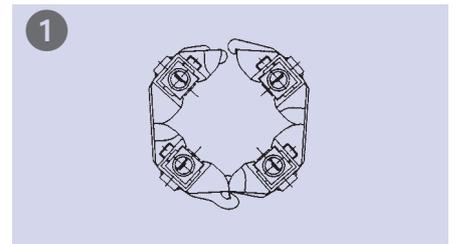
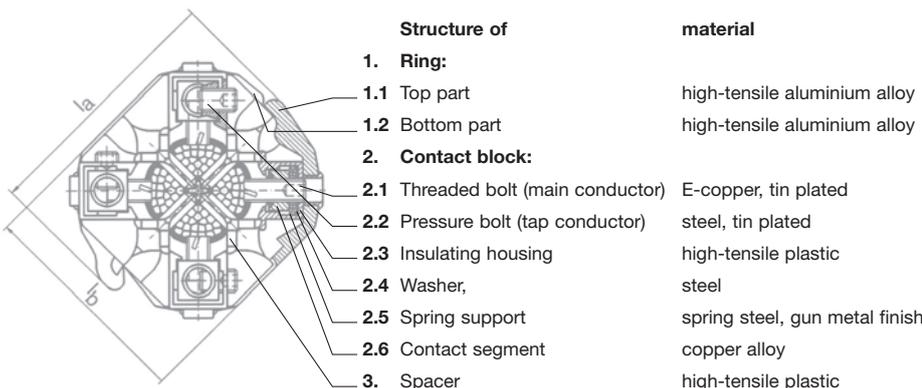
Attention! Always insert wrench fully into hexagon screw. Tap conductors below 16 mm² are recommended to be clamped with kinked ends.

5 Shear-off screws to be tightened by alternating and uniform actions until seated on insulation.

Contacting resp. alternating and uniform tightening.

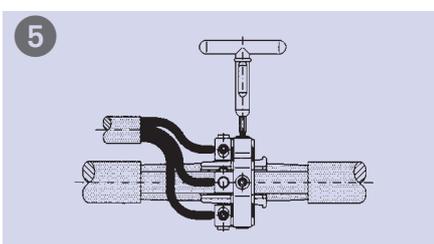
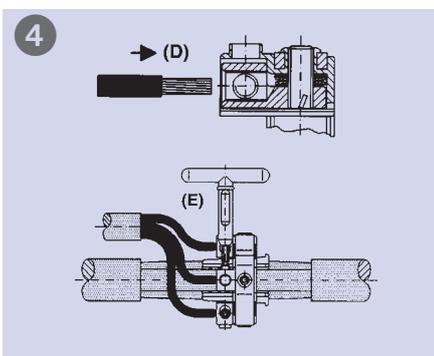
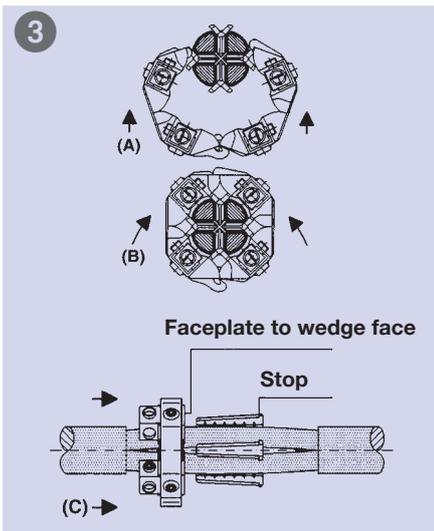
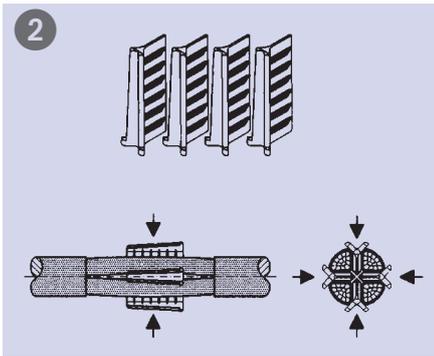
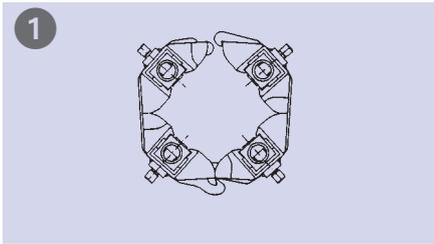
Maximum tightening force is achieved when a perceptible resistance is felt after cutting through insulation (stop), caused by penetration of bolt into conductor surface. Recommended tightening torque is approx. 15 Nm (1.5 kpm).

View of the compact tap connector KSK504 for four connector cables



Instructions for fitting compact tap connectors

**Assembly Instructions for:
SKR1503 / SKR1204 / SKR1304 / SKR1504 /
SKR150/1504 / SKR1854 / KSK1504 / KSK1854**



1 Bare cable acc. to DIN 47630.

Comes with open snap-closure. If opening is required due to inadvertent closing open ring parts by hand against snapping direction.

Three conductor cable

Cross-section	recommended bare length*
50 – 95 mm ²	200 mm
50 – 185 mm ²	320 mm

Four conductor cable

Cross-section	recommended bare length*
50 – 120 mm ²	120 mm
50 – 185 mm ²	160 mm

* **Observe assembly instructions of gland manufacturer!** On sets with off-centre bulge (largest gland diameter) spacer wedges are also to be placed off-centre.

2 Spacer wedges to be placed between conductors. Expander wedges help to spread the conductors.

3 (A) Place clamping ring on the main conductor.
(B) Push clamping ring halves tight next to wedges.
(C) Push ring onto wedges hand-tight.
It does not need to be pushed until stop.

4 (D) Bare tap conductor.
(E) Insert phase conductor into tap hole and tighten.

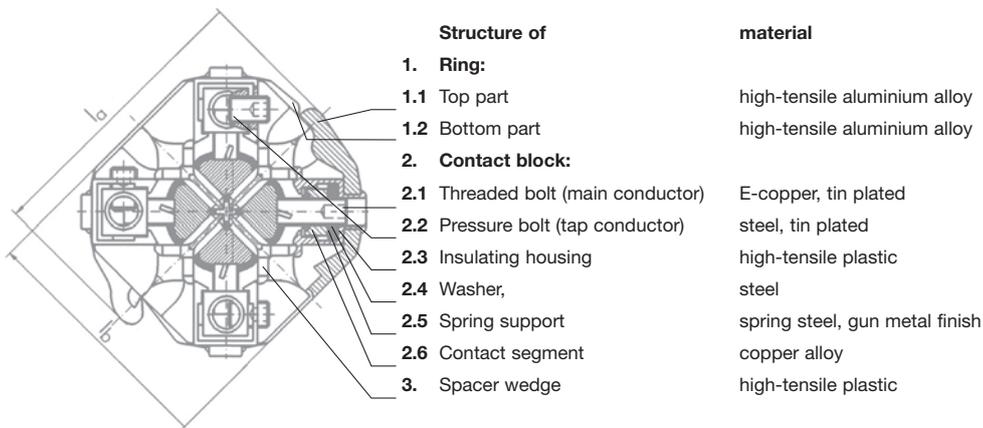
Attention! Always insert wrench totally into hexagon screw. Tap conductors below 16 mm² are recommended to be clamped with kinked ends.

5 Shear-off screws to be tightened by alternating and uniform actions until seated on insulation.

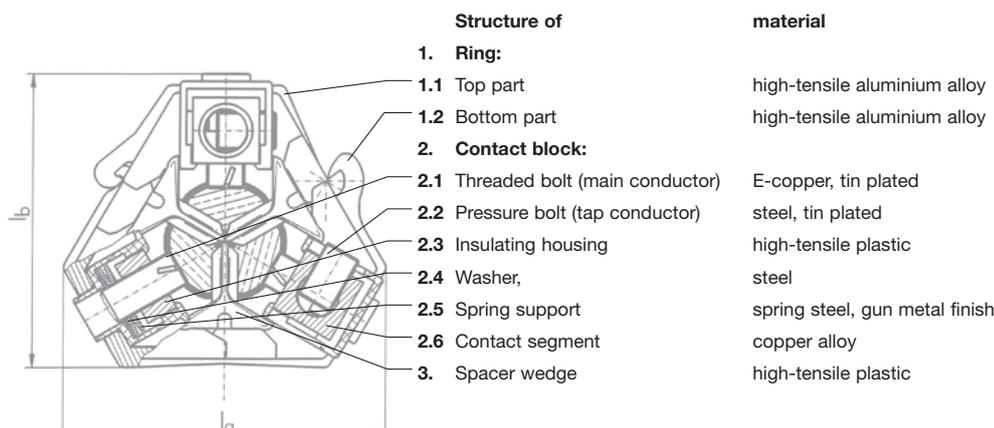
Contact by alternating uniform tightening.

Maximum tightening force is achieved when a perceptible resistance is felt after cutting through insulation (stop), caused by penetration of bolt into conductor surface. Recommended tightening torque is approx. 20 Nm (2 kpm).

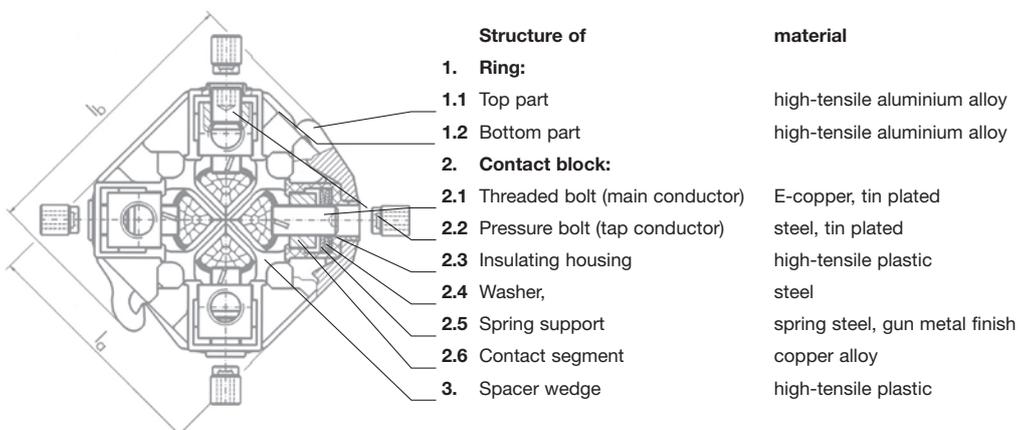
■ Structure of the compact tap connectors SKR1204, SKR150/504, SKR150/1504 und SKR1854 for four connector cables



■ Structure of the compact tap connector SKR1503 for three connector cables



■ Structure of the compact tap connector KSK1504 for four connector cables



Conversion charts

■ Allocation of conductor cross sections (AWG, MCM sizes to mm²)

AWG	metric conductor cross-section mm ²	comparable conductor cross-section mm ²	MCM	metric conductor cross-section mm ²	comparable conductor cross-section mm ²
27	0,102	–	250	127	120
26	0,128	0,14	300	152	150
25	0,163	–	350	177	185
24	0,205	0,2	400	203	–
23	0,259	0,25	500	253	240
22	0,325	0,34	600	304	300
21	0,412	–	700	355	–
20	0,519	0,5	800	405	400
19	0,653	–	900	456	–
18	0,823	0,75	1000	507	500
17	1,04	1	1250	633	625
16	1,31	–	1500	760	800
15	1,65	1,5	1750	887	–
14	2,08	–	2000	1010	1000
13	2,63	2,5			
12	3,31	–			
11	4,15	4			
10	5,27	6			
9	6,62	–			
8	8,35	–			
7	10,6	10			
6	13,3	–			
5	16,8	16			
4	21,2	–			
3	26,7	25			
2	33,6	35			
1	42,4	–			
1/0	53,4	50			
2/0	67,5	70			
3/0	85	95			
4/0	107,2	120			

■ British and American units of measurement

length	area			volume		fluid volume		weight	
1 mil	0.0254 mm	1 sq. in.	645.1 mm ²	1 cu. in.	16.386 cm ³	1 pint	0.568 l	1 grain	0.059 g
1 inch	25.4 mm	1 sq. ft.	0.093 m ²	1 cu. ft.	0.028 m ³	1 quart	1.136 l	1 ounce	28.349 g
1 foot	0.3048 m	1 sq. yd.	0.836 m ²	1 cu. yd.	0.764 m ³	1 brit. gallon	4.554 l	1 pound (lb)	0.454 kg
1 yard	0.9140 m					1 am gallon	3.785 l	1 brit. ton	1.016 t
1 mile	1.6090 km					1 quarter	290.790 l	1 am. ton	0.907 t
						1 bushel	36.350 l		

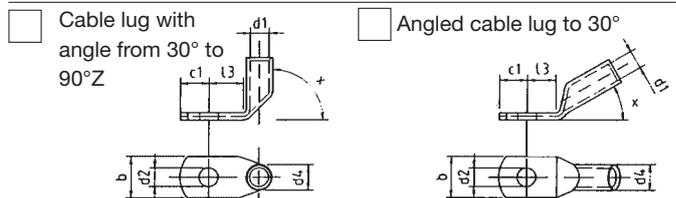
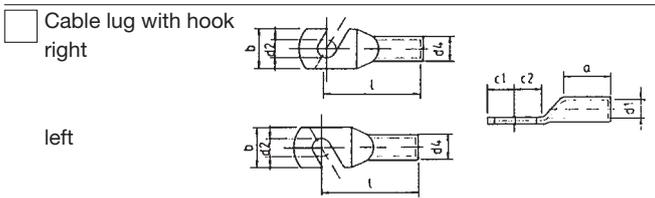
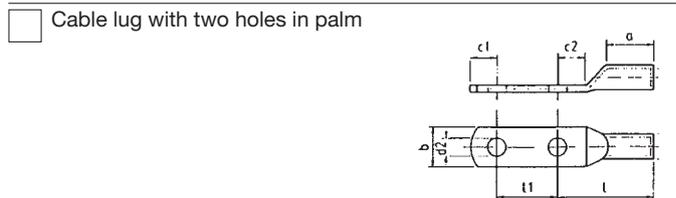
■ Check-list for special cable lugs and connectors

Customer / Company: Customer No.:

Address: Fax:

Contact person: Phone:

Drawings and Dimensions: Please fill in all required dimensions (see dimension chart) and necessary datas.



Number of butt marks: 0 / 1 / 2 /

Other types acc. to your sketches/remarks:

Dimension chart (please state nominal dimensions in "mm"):

Dimension d1 Dimension d1
 Dimension d4 Dimension l1
 Dimension d2 Dimension l3
 Dimension a
 Dimension b
 Dimension c1 Angle x
 Dimension c2

Technical data

Commercial Data

Type of conductor (if known):

Batch size / Annual requirement:

Cross-section (cable):

Requested delivery time:

Inspection hole (on cable lugs): Tubular cable lugs Compression cable lugs

Sample: Yes No

Surface: bright tin plated nickel-plated

Test report of first sample: Yes No

Other:

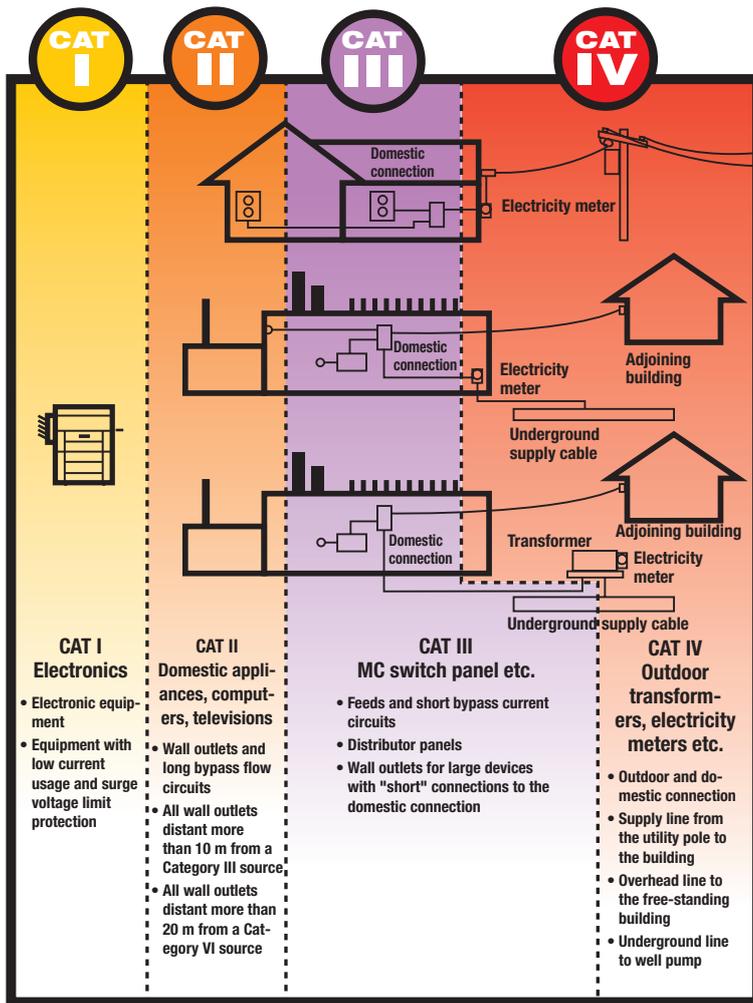
Additional agreements:

Material: Cu Al

Other:

Date: Signature (Customer):

■ Measuring categories



Protective values which greatly exceed the nominal capacity of a system are stipulated in the standards of the IEC categories. Without this additional protection transient overvoltages which occur with increasing regularity may cause serious or fatal injuries.

■ Measuring category I

is the signal level for telecommunications and electronic equipment.

■ Measuring category II

is the local level for permanently connected devices or devices not operated by means of a fixed connection - including all types of illumination from household devices to office equipment such as copy machines. Can also be used in Category I ranges.

■ Measuring category III

is the distribution level for fixed main or bypass flow circuits. These electric circuits are usually separated by at least one level of transformer barrier of Category IV (public utility or other high-voltage power source). Can also be used in Category II and Category I ranges.

■ Measuring Category IV

is the main electric supply level. Greenlee is setting new standards by offering equipment that meets the highest protective values of IEC standards and which are certified accordingly. Can be used in all category ranges.

Greenlee equipment – checked and certified for compliance with norms by an independent party. This catalogue states the category for many Greenlee devices indicating that these devices comply with the various IEC categories (II, III or IV). All these references represent the categories confirmed in tests by independent testing organizations - giving you additional assurance.

The right type of protection for the task at hand. No matter in which area you may need overvoltage protection – select a device which has at least the nominal capacity suitable for the work you are carrying out.



■ Metric cable glands for electrical installations EN 50262

The new European standard EN 50262 defines conditions for all manufacturers of electrical appliance housings and all electrical installations.

It's scope includes cables and conductors for control cabinets, distributor housings, junction boxes, domestic connections, installation boxes, equipment housings etc.

The EN 50262 supersedes all existing Pg sizes used for cable glands. The sizes Pg 7 to Pg 48 are being replaced by ISO M 6 to M75.

Greenlee holemaking tools in ISO sizes acc. to EN 50262

ISO sizes	mm	Slug-Buster® Punching tools	Slug-Splitter® Punching tools	HSS hole saws	Step bits	Kwik Change® HM cutters
12	12.5	✓				
16	16.5	✓	✓		✓	
20	20.5	✓	✓	✓	✓	✓
25	25.5	✓	✓	✓	✓	✓
32	32.5	✓	✓		✓	
40	40.5	✓	✓		✓	
50	50.5	✓	✓	✓		✓
63	63.5	✓	✓	✓		✓

■ Holemaking systems

	Operation	Capacity	Hole size
Slug-Buster®	Manual, hydraulic punch drivers	max. 3.0 mm in mild steel	12.5 to 64.0 mm
Slug-Splitter®	Hydraulic punch drivers	max. 3.5 mm in stainless steel	15.2 to 64.0 mm
Standard	Manual, hydraulic punch drivers	max. 3.0 mm in mild steel	66.7 to 143.7 mm
Special shaped punches	Manual, hydraulic punch drivers	max. 3.0 mm in mild steel or 1.5 mm in stainless steel	See data for the individual punch drivers

■ Hydraulic punch drivers

		Description
LS 50 L Flex Battery-powered hydraulic punch driver	LS50FLEX	- micro-processor controlled - 50 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size
LS 60-L Battery powered hydraulic punch driver		- micro-processor controlled - 60 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size
Quick Draw™ Hand hydraulic punch driver 7804E	50342916	- ideal for fast, straight-on front panel punching - 80 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size
Quick Draw 90™ Hand hydraulic punch driver 7904E	50342991	- right angle driver head, rotates 180° - maximum flexibility in tight working areas - 80 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size
Ram and hand pump hydraulic driver 7646	50159062	- compact design of punch, pump and cylinder - 110 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size
Ram and foot pump hydraulic driver 7625	50250973	- Foot operation frees both hands to operate punch. - 110 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size
Manual hydraulic driver Flex Draw	52033843	- right angle driver head, rotates 180° - maximum flexibility in tight working areas - 80 kN punching force - punches up to 3.0 mm mild steel and up to 3.5 mm stainless steel, depending on hole size

General Technical Information

■ Standards for cabling

Various standard boards whose role is to define the technical features of cabling systems exist since 1993. These directives must be observed when planning and setting up networks. Full volumes can be obtained from specialist bookshops.

■ International standards

International Standards are published by the ISO (International Standards Organisation). In Europe these international directives are used for information purposes.

- ISO/IEC IS 11801** Description of the performance requirements for a general cabling system
- IEC 1156** Multi-core and symmetrical conductors for digital message transmission
- IEC 1156-1** Basic specification
- IEC 1156-2** Framework specification for service cables IEC1156-3 Framework specification for patch and equipment connecting cables
- IEC 1156-4** Framework specification for building connecting and rising cables

■ European standards

In collaboration with national standard institutes the European Committee for Electrical Standardisation CENELEC (Comite Europeen de Normalisation Electrotechnique) has published European standards that are based on the international ISO/IEC 11801 and hence normative for Europe.

- EN 50173** Description of the performance requirements for a general cabling system (EN 50173 also refers to HD 608 and also EN 55022)
- 608** General specification for symmetrical conductors for digital message transmission
- EN 50167** Framework specification for service cables
- EN 50168** Framework specification for patch and equipment connecting cables
- EN 50169** Framework specification for building connection and rising cables
- EN 55022** Framework specification for electromagnetic compatibility (EMC). This specification contains threshold values and measuring procedures for radio interference of data processing equipment.

■ American standards

The American standards are published by the EINTIA (Electronic Industries Association / Telecommunication Industries Association) an American Joint Venture.

- TSB 36** Framework specification for symmetrical data cables (100 Ohm, unshielded)
- TSB 40** Framework specification for passive components (100 Ohm, unshielded)
- EIA/TIA 568** Framework specification for cabling systems

A			
Accessories for fibreglass fish tape	571	Carburettor screwdriver	455-456
Adapter	287	Carpenter's pencil	545
Adapter 1/4" / 3/8"	458	Chain mount for conduits and round poles	572
Adjusting spanner	507	Chalk	468
Allen key set	461	Chalk line	468
Allen key set, ball point	461	Circuit distributors, flexible	183
Amplifier, inductive	635	Clamp meter	617
Arbor for HSS bi-metal hole saws	542	Clamp meters	609-616
Automatic tester	608	Cleaning brush	443
Automatic wire stripper	482-483	Coax stripper	491
B		Coax wire stripper	491-492
BNC Crimping tool	252	Combi bit set	551
Bag	477, 478, 479	Combination plier, heavy duty	448
Basin wrench	452	Combination scissors	472
Batteries	375	Combination spanner set	464
Batteries, Li-Ion	376	Compact tap connectors	138-140
Batteries, NiMh	375	Compound	131
Battery charger	377-378	Connectors, flexible	181
Battery powered hydraulic cutting tool	318	Control cabinet key	470
Battery powered punch driver	523	Cotton gloves	442
Battery powered universal tool	330	Coupler	381
Battery-powered hydraulic crimping tool	294	Coupler plug	380
Battery-powered hydraulic cutting tool	318	Crimp adapter	287
Bi-metal washer	122	Crimping dies, Series 13	412
Bit holder, mechanical	458	Crimping dies, Series 18	401
Bit set, Torx	460, 463-464	Crimping dies, Series 22	406
Bit sets	463-464	Crimping dies, Series 25	418
Bits	456-458	Crimping dies, Series 4	392
Butt connectors, copper	34	Crimping dies, Series 45	424
Butt connectors, copper, special type	46	Crimping dies, Series 5	397
Butt connectors, nickel	62	Crimping dies, Series 50	390
Butt connectors, stainless steel	59	Crimping tool, BNC	252
Butt-connectors for fine stranded conductors, copper	44	Cross slotted screwdriver	454
C		Cross-connectors, copper	37, 47
C-Clamps	130-131	Cutter knife	472
C-frame punch driver	526	Cutting adapter	287
Cable Caster	568	Cutting die	287
Cable cutters	448	Cutting dies, series 18	405
Cable end sleeves	162	Cylinder lock punch	513
Cable end-sleeves acc. to DIN	161	D	
Cable end-sleeves acc. to DIN, copper	158-160	D - punches	510
Cable lug, punched copper	126	Digital meter	583
Cable puller	572	Digital multimeter	591-600
Cable pulling lubricant	574	Double compression cable lugs	72
Carbide tipped hole saw	545-546	Double-D punches	511
Carbide tipped hole saw set	547	Draw stud	502
		Draw studs	503
		Draw studs for hydraulic operation	500

Alphabetical Index

E			
Electricians knife	442, 471, 468	Insulated cable end-sleeves, copper	146-148
End-splices, insulated	173	Insulated end-splices	173
Engineers hammer	470	Insulated parallel connectors	175
Extension	460	Insulated pin receptacles	169-170
F		Insulated pin receptacles	168-169
Face mask	440	Insulated receptacles	170-172
Fibreglass fish tape accessory set	571	Insulated screw connectors	136-137
Filter sensor	635	Insulated solderless terminals, copper	85, 88
Fish tape	568-570	Insulated tabs	173
Fish tape leader	570	Insulated tubular cable lugs, copper	38
Fish tape, fibreglass	571	Insulated twin cable end-sleeves	154
Fish tape, fibreglass	571	Insulating floor mat	441
Fish tape, steel	568	Insulation sleeves	178
Flashlight	468	Interchangeable pilot drill for carbide tipped hole saws	546
Flexible circuit distributors	183	Interface kit, for downloading data	604
Flexible connectors	181-182	K	
Folding rule	465	Keyway punch	520
Foot pump	357	Keyway punch	512
Foot switch	379	Kwik Change arbor	544
Force sensor	383	Kwik Change carbide tipped hole saw	543
G		Kwik Change carbide tipped hole saw set	544
Guide wedge	133	Kwik Stepper. Step bits	550
H		Kwik Stepper. Step bits with ROTASTOP [®] shank	550-551
H-Clamps	131	L	
HSS hole saws	538-540	Locator	632
Hand laser meter	466-467	Long nose pliers	448-449
Hand operated cutting tool	269	M	
Hand-operated hydraulic crimping tool	272	Magnetic holder	457
Hexagonal wrench	443	Manual cutting tool	255-261
Hexagonal wrench	443	Marking pen	468
High pressure hose	380	Measuring adapter	383
Hole saw, carbide tipped	546	Measuring tape	465
Hydraulic crimping head	336	Mechanical basic tool Pro-Series	242
Hydraulic cutting head	349	Mechanical bit holder	458
Hydraulic drive unit	357	Mechanical crimping tool	212
Hydraulic oil	380	Multi key	469
Hydraulic oil, special	380	N	
Hydraulic punch driver	520	NH safety handle with guard	440
Hydraulic punch driver with 90° head	521	Non-insulated multiple tabs	180
Hydraulic punch driver with straight head	520	Non-insulated receptacles	175-177
Hydraulic universal head	354	Non-insulated tabs	177-180
I		Nylon carrying case	594, 618
Identification rings	153	Nylon fish tape	569
Inductive amplifier	635	Nylon tool holder, empty	478
Industrial digital multimeter	600	O	
Insulated butt-connectors	174	Open-end spanner set	464
Insulated butt-connectors, copper	40		
Insulated cable end-sleeves	155		

P			
Parallel connectors, copper	35	Sleeves for sector shaped conductors, copper	97-99
Parallel groove clamps for tap off connections	128-129	Slotted screwdriver	453
Phase tester	436	Slug Buster® slug splitting punch set	527-529
Pilot drill for carbide tipped hole saws	546	Slug Splitter punch set (for stainless steel)	529-530
Pilot drills	582	Slug splitting punch systems	502
Pin terminals acc. to DIN, copper	87	Slug splitting punch systems (for stainless steel)	503
Plastic case	530	Socket head bit set	460
Plastic clamp	441	Socket set	460
Plier set	459	Solderless connectors acc. to DIN, copper	89-90
Pliers, VDE	431	Solderless terminals acc. to DIN, copper	82
Pliers/screwdriver set	437	Solderless terminals, copper	86
Polyamide connectors	182	Sound generator	635
Pressure sensor	383	Sound testing sensor kit	635
Pulling grip sets	577	Special shape punches for heavy duty connectors	515
Pulling grips	575-577	Special shaped punches	510
Punched cable lugs, copper	126	Special square punch with flattened corners	508
Punches/dies, punching tool I	558	Spirit level	465
Punching head	527	Square punches	507
Punching tools, standard	500	Standard punch systems	500
R		Stationary basic tool for Pro-Series	263
Rectangular punches	506	Steel carrying case	200-204
Reduction compression joints, Al	107	Step bits	550
Reduction sleeves, copper	76-77	Sub-Min-D-punch	514
Rope	572	Sun protection lenses	473
Rope stand	572	T	
Round cable stripper	487	T-connectors, copper	36, 46
Round punches	509	T-screw connectors	127, 128
Rubber cover	441	Tabs, insulated	170
S		Tabs, non-insulated	175
SDS arbor for HSS hole saws	540	Telephone pliers	450
Safety gloves	442	Temperature measuring device	628
Safety goggles	473	Temperature sensor	628
Safety helmet	440	Test equipment, electric	601-603
Screw connectors	132-138	Tool chest - assortment	473-477
Screw connectors	127	Tool chest, empty	444, 477, 478
Screwdriver bit	457	Tool holder	453
Screwdriver set	460	Torpedo laser	466
Screwdriver set, Torx	460	Torque screwdriver set	461
Screwdriver set, VDE	438-439	Torque wrench	444
Screwdriver/plier, set	436-437	Torque wrench set	461-463
Screwdrivers, Torx	455	Torx bit set	460, 463, 464
Screwdrivers, VDE	434-435	Torx screwdriver set	460
Screwdrivers, ball-point	455	Torx screwdrivers	455
Side cutter ^s	431	Transport trolley	378
Side cutters, heavy duty	431	Tray type sheaves	573
Sledge hammer	470	Tubular angle cable lugs for fine stranded conductors, copper	43
Sleeves for compacted conductors, copper	96-97		

Alphabetical Index

Tubular angle cable lugs, copper	30
Tubular cable lug for switch gear connections, copper	48
Tubular cable lugs for fine stranded conductors, copper	41
Tubular cable lugs, copper	26
Tubular cable lugs, copper, special type	45
Tubular cable lugs, insulated	38
Tubular cable lugs, nickel	60
Tubular cable lugs, stainless steel	58
Tweezers	443
Two hand safety control system	379
U	
USB adapter	385
Universal cabinet key, subkey	469
Universal knife	472
Universal saw	472
Universal tool, hand operated	286
V	
VDE Cable cutters	430
VDE Cable cutters	430
VDE Plier set	436
VDE Pliers	431-433
VDE Screwdriver set	438-439
VDE Screwdrivers	434-435
VDE Side cutters	431
VDE Testing instruments	622-624
VDE Wire stripper	433
Voltage tester	616-619
W	
Waterpump plier	451
Waterpump plier, grooved	451
Western crimping tool	494
Wire stripper	433, 450, 482-483
Wire stripper, VDE	433
Wire strippers	493-494
Wire strippers, coax	491-492
Wire strippers, photovoltaic	483, 488
Wire stripping tool	491
Wiring tester	637-638
Workshop screwdriver	454

Part No.	PAGE						
101R5	67	10R8	29	128R	73	154R	35
101R6	66	10SG10	48	129R	73	155R	35
101R8	66	10SG12	48	12R10	29	156R	35
1020	169	10SG6	48	12R12	29	157R	35
1020V	170	10SG8	48	12R14	29	158R	35
102R5	66	110R10	67	12R16	29	159R	35
102R6	66	110R12	67	12R20	29	160R	35
102R8	66	110R14	67	12SG10	48	161R	35
1030	169	110R16	67	12SG12	48	161R5	69
1030V	170	110R20	67	12SG16	48	161R545	70
103R10	66	111R10	67	130R	73	161R6	68
103R12	66	111R12	67	131R	73	161R645	69
103R6	66	111R14	67	132R	73	162010	82
103R8	66	111R16	67	133R	73	162025	83
104R10	66	111R20	67	134R	73	16203	82
104R12	66	112R12	67	135R	73	162035	82
104R6	66	112R14	67	136DP12	72	16204	82
104R8	66	112R16	67	136DP212	72	16205	82
1050	169	112R20	67	136R	73	16206	82
1050V	170	1130	173	137DP12	72	16208	82
105R10	66	113R14	67	137DP212	72	1620C3	86
105R12	66	113R16	67	137R	73	1620C35	86
105R14	66	113R20	67	138DP12	72	1620C4	86
105R6	66	114R14	67	138DP212	72	1620C5	86
105R8	66	114R16	67	138R	73	1620C6	86
106R10	66	114R20	67	139DP12	72	1620K	89
106R12	66	1150	173	139DP212	72	1620L	90
106R14	66	115R16	67	13R12	29	162R	35
106R16	66	115R20	67	13R14	29	162R5	68
106R8	66	116R16	67	13R16	29	162R545	69
107R10	66	116R20	67	13R20	29	162R6	68
107R12	66	117R16	67	13SG10	48	162R645	69
107R14	66	117R20	67	13SG12	48	162R8	68
107R16	66	118R16	67	13SG16	48	162R845	69
107R8	66	118R20	67	147D212	71	163010	82
108R10	66	11R10	29	148D212	71	163012	82
108R12	66	11R12	29	148R	35	16303	82
108R14	66	11R14	29	149D212	71	163035	82
108R16	66	11R16	29	149R	35	16304	82
108R8	66	11R20	29	14R12	29	16305	82
109R10	66	11SG10	48	14R14	29	16306	82
109R12	66	11SG12	48	14R16	29	16308	82
109R14	66	11SG16	48	14R20	29	1630C3	86
109R16	66	121R	73	150D212	71	1630C35	86
109R20	66	122R	73	150R	35	1630C4	86
10R10	29	123R	73	151D212	71	1630C5	86
10R12	29	124R	73	151R	35	1630C6	86
10R14	29	125R	73	152D212	71	1630K	89
10R16	29	126R	73	152R	35	1630L	90
10R20	29	127R	73	153R	35	163R	35



Numerical Index

Part No.	PAGE						
163R10	68	16545	82	1660L	90	169R10	68
163R1045	69	16546	82	166112	83	169R1045	70
163R12	68	16548	82	166116	83	169R12	68
163R1245	69	1654K	89	166212	83	169R1245	70
163R6	68	1654L	90	166216	83	169R14	68
163R645	69	165510	83	1666	152	169R1445	70
163R8	68	165512	83	1668	152	169R16	68
163R845	69	165516	83	166GR	151	169R1645	70
164R10	68	16556	83	166GRL	150	169R20	68
164R1045	69	16558	83	166R10	68	169R2045	70
164R12	68	1655K	89	166R1045	70	1706	152
164R1245	69	1655L	90	166R12	68	1708	152
164R6	68	165610	83	166R1245	70	170R10	69
164R645	69	165612	83	166R14	68	170R1045	70
164R8	68	165616	83	166R1445	70	170R12	69
164R845	69	16566	83	166R16	68	170R1245	70
165010	82	16568	83	166R1645	70	170R14	69
165012	82	1656K	89	166R8	68	170R1445	70
16504	82	1656L	90	166R845	70	170R16	69
16505	82	165710	83	1676	152	170R1645	70
16506	82	165712	83	1678	152	170R20	69
16508	82	165716	83	167H	150	170R2045	70
1650C10	86	16576	83	167HL	150	170W	150
1650C4	86	16578	83	167R10	68	170WH	150
1650C5	86	1657K	89	167R1045	70	170WK	150
1650C6	86	1657L	90	167R12	68	170WL	150
1650C8	86	165810	83	167R1245	70	1716	152
1650K	89	165812	83	167R14	68	1718	152
1650L	90	165816	83	167R1445	70	171G	150
165210	82	16588	83	167R16	68	171GH	150
165212	82	1658K	89	167R1645	70	171GK	150
16525	82	1658L	90	167R8	68	171GL	150
16526	82	165910	83	167R845	70	171R10	69
16528	82	165912	83	1686	152	171R1045	70
1652C5	86	165916	83	1688	152	171R12	69
1652C6	86	16598	83	168R10	68	171R1245	70
1652K	89	1659K	89	168R1045	70	171R14	69
1652L	90	1659L	90	168R12	68	171R1445	70
165310	82	165R10	68	168R1245	70	171R16	69
165312	82	165R1045	70	168R14	68	171R1645	70
16535	82	165R12	68	168R1445	70	171R20	69
16536	82	165R1245	70	168R16	68	171R2045	70
16538	82	165R14	68	168R1645	70	1720	175
1653C6	86	165R1445	70	168T	150	17210	152
1653C8	86	165R8	68	168TL	150	17212	152
1653K	89	165R845	70	1696	152	17218	152
1653L	90	166010	83	1698	152	1726	152
165410	82	166012	83	1690	150	1728	152
165412	82	166016	83	1690H	150	172R12	69
165416	82	1660K	89	1690K	150	172R1245	70

Part No.	PAGE						
172R14	69	18202	175	2083	179	245R	108
172R1445	70	18203	175	208R10	103	246R	108
172R16	69	18203AZ	176	208R12	103	247R	108
172R1645	70	18251	175	208R16	103	248R	108
172R20	69	18251A	175	2090	179	249R	108
172R2045	70	182R	76	209R12	103	24R	34
172RH	151	1830	177	209R16	103	250R	108
172RK	151	18303	175	20R	34	251R	108
172RL	151	18303AZ	176	2100	179	252R	108
172RM	151	183R	76	2105	179	253R	108
172R0	151	184R	76	210R12	103	254R10	109
1730	175	185R	76	210R16	103	254R12	109
1730AZ	176	186R	76	210R20	103	254R8	110
17312	152	187R	76	2115	179	255R10	109
17318	152	188R	76	211R12	103	255R12	109
1738	152	189R	76	211R16	103	256R10	109
173B	151	18R	34	211R20	103	256R12	109
173BH	151	190R	76	2123	179	256R16	109
173BL	151	191R	76	212R12	104	257R10	109
17410	152	192R	76	212R16	104	257R12	109
17412	152	193R	76	212R20	104	257R16	109
17418	152	19R	34	213R16	104	258R12	110
174GR	151	1R10	28	213R20	104	258R16	110
174GRH	151	1R12	28	2140	179	259R12	110
174GRL	151	1R5	29	2145	179	259R16	110
1750	175	1R6	28	214R16	104	259R20	110
17512	152	1R8	28	214R20	104	25R	34
17518	152	2010	180	21R	34	263R10	102
175S	151	2020	180	2220	177	263R8	103
175SL	151	2025	180	222R	104	264R10	102
17612	152	202R6	104	2230	177	264R12	102
17618	152	202R8	103	2235	177	264R8	102
176E	151	2030	180	223R	104	265R10	102
176EL	151	2035	180	224R	104	265R12	102
17712	152	203R10	103	2250	177	265R8	102
17718	152	203R8	103	225R	104	266R10	102
177GR	151	2040	179	226R	104	266R12	102
177GRL	151	2045	179	227R	104	266R8	102
17816	152	204R10	103	228R	104	267R10	102
17818	152	204R8	103	229R	104	267R12	102
17822	152	205R10	103	22R	34	267R8	102
178BR	151	205R12	103	230R	104	268R10	102
178BRL	151	2060	179	231R	104	268R12	102
179B	151	206R10	103	232R	104	268R16	102
179BL	151	206R12	103	233R	104	269R10	102
17R	34	2070	179	234R	104	269R12	102
1800	151	2075	179	235R	104	269R16	102
1800L	151	207R10	103	23R	34	26R	34
181R	76	207R12	103	243R	108	270R10	102
18201A	175	2080	179	244R	108	270R12	102



Numerical Index

Part No.	PAGE						
270R16	102	290R50	107	31R	34	330R95	121
270R20	102	290R70	107	322R10	121	331R120	121
271R10	102	290R95	107	322R16	120	331R150	121
271R12	102	291R120	107	323R10	120	331R185	121
271R16	102	291R150	107	323R16	120	331R50	121
271R20	102	292R120	108	324R10	120	331R70	121
2720	176	292R150	108	324R16	120	331R95	121
272R10	102	292R95	108	324R25	120	332R120	121
272R12	102	294AD	109	324R35	120	332R150	121
272R16	102	295AD	109	324R416	120	332R185	121
272R20	102	296AD	109	324R425	120	332R240	121
2730	176	297AD	109	324R50	120	332R50	121
273R12	102	298AD	109	325R16	120	332R70	121
273R16	102	29R	34	325R25	120	332R95	121
273R20	102	2R10	28	325R35	120	333R120	121
274R12	103	2R12	28	325R50	120	333R150	121
274R16	103	2R5	28	325R616	120	333R185	121
274R20	103	2R6	28	325R625	120	333R240	121
2750	176	2R8	28	325R635	120	333R300	121
2755	178	302R6	120	326R16	121	33R	34
275R12	103	302R8	119	326R25	121	344R	122
275R16	103	303R10	119	326R35	121	345R	122
275R20	103	303R8	119	326R50	121	346R	122
2760	178	304R10	119	327R120	121	347R	122
2765	178	304R8	119	327R16	121	348R	122
2770	178	305R10	119	327R25	121	349R	122
2775	178	305R12	119	327R35	121	34R	34
2780	178	306R10	119	327R50	121	350R	122
2785	178	306R12	119	327R70	121	351R	122
2790	178	307R10	119	327R95	121	352R	122
27R	34	307R12	119	328R120	121	353R	122
284R16	108	308R10	119	328R16	121	363R10	118
285R25	107	308R12	119	328R25	121	363R8	119
286R25	107	308R16	119	328R35	121	364R10	118
286R35	107	309R12	119	328R50	121	364R12	118
287R25	107	309R16	119	328R70	121	364R8	118
287R35	107	30R	34	328R95	121	365R10	118
287R50	107	310R12	119	329R120	121	365R12	118
288R25	107	310R16	119	329R35	121	365R8	118
288R35	107	310R20	119	329R50	121	366R10	118
288R50	107	311R12	120	329R70	121	366R12	118
288R70	107	311R16	120	329R95	121	366R8	118
289R25	107	311R20	120	32R	34	367R10	118
289R35	107	312R12	120	330R120	121	367R12	118
289R50	107	312R16	120	330R150	121	368R10	118
289R70	107	312R20	120	330R16	121	368R12	118
289R95	107	313R16	120	330R25	121	368R16	118
28R	34	313R20	120	330R35	121	3698	153
290R120	107	314R16	120	330R50	121	369R12	118
290R35	107	314R20	120	330R70	121	369R16	118

Part No.	PAGE						
3708	153	41R545	33	432R120	106	456R	111
370R12	118	41R6	30	432R150	106	457R	111
370R16	118	41R645	32	432R185	106	458R	111
370R20	118	41R8	30	432R25	106	459R	111
3718	153	41R845	32	432R35	106	45R10	30
371R10	118	420R	105	432R50	106	45R1045	32
371R12	118	421R	105	432R70	106	45R12	30
371R16	118	422R	105	432R95	106	45R1245	32
371R20	118	423R	105	43312	154	45R14	30
3720	177	424R	105	4338	154	45R1445	32
3725	177	425R25	107	433R150	107	45R16	30
3728	153	426R25	106	433R185	107	45R1645	32
372R10	119	426R35	106	433R240	107	45R6	30
372R12	119	427R25	106	43410	154	45R645	32
372R16	119	427R35	106	434R185	107	45R8	30
372R20	119	427R50	106	434R240	107	45R845	32
3735	177	428R25	106	434R300	107	46910	149
3738	153	428R35	106	43512	154	4696	150
373R12	119	428R50	106	43612	154	4698	149
373R16	119	428R70	106	43712	154	46R10	30
373R20	119	429R25	106	43R10	30	46R1045	32
380-	153	429R35	106	43R1045	32	46R12	30
380+	153	429R50	106	43R12	30	46R1245	32
3800	153	429R70	106	43R1245	32	46R14	30
380A	153	429R95	106	43R5	30	46R1445	32
3R10	28	42R10	30	43R545	32	46R16	30
3R12	28	42R1045	32	43R6	30	46R1645	32
3R5	28	42R12	30	43R645	32	46R20	30
3R6	28	42R1245	32	43R8	30	46R2045	32
3R8	28	42R5	30	43R845	32	46R6	30
405R	105	42R545	32	444R	110	46R645	32
406R	105	42R6	30	445R	110	46R8	30
407R	105	42R645	32	446R	110	46R845	32
408R	105	42R8	30	447R	110	47010	149
409R	105	42R845	32	448R	110	47012	149
410R	105	430R120	106	449R	110	4706	149
411R	105	430R25	106	44R10	30	4708	149
412R	105	430R35	106	44R1045	32	47110	149
413R	105	430R50	106	44R12	30	47112	149
414R	105	430R70	106	44R1245	32	4716	149
415R	105	430R95	106	44R14	30	4718	149
416R	105	431R120	106	44R1445	32	47210	149
417R	105	431R150	106	44R5	30	47212	149
418R	105	431R25	106	44R545	32	47218	149
419R	105	431R35	106	44R6	30	4726	149
41R10	30	431R50	106	44R645	32	4728	149
41R1045	32	431R70	106	44R8	30	47312	149
41R12	30	431R95	106	44R845	32	47318	149
41R1245	32	43210	154	454R	111	4738	149
41R5	31	4328	154	455R	111	47410	149



Numerical Index

Part No.	PAGE						
47412	149	49R14	31	50040421	502	50046055	503
47418	149	49R1445	33	50040588	500	50046071	503
47512	149	49R16	31	50040596	500	50046080	503
47518	149	49R1645	33	50040618	502	50046098	503
47612	149	49R20	31	50040618	500	50046110	503
47618	149	49R2045	33	50040626	501	50046136	503
47712	149	49R8	31	50040634	501	50046144	503
47718	149	49R845	33	50040634	502	50046381	511
47816	149	4R10	28	50041754	501	50046381	507
47818	149	4R12	28	50041770	501	50046381	514
47822	149	4R14	28	50041800	501	50046381	510
47916	149	4R5	28	50041835	501	50046381	508
47918	149	4R6	28	50041878	501	50046381	506
47925	149	4R8	28	50041886	501	50046527	501
47R10	31	50000420	500	50041886	504	50046535	501
47R1045	33	50000420	502	50042181	502	50046543	501
47R12	31	50000420	504	50042181	500	50046551	501
47R1245	33	50003550	556	50042181	504	50046799	501
47R14	31	50008722	573	50042238	500	50046799	504
47R1445	33	50008730	573	50042246	500	50046853	501
47R16	31	50008749	573	50042254	500	50046861	501
47R1645	33	50016644	569	50042262	500	50047345	500
47R20	31	50016962	571	50042297	500	50047353	500
47R2045	33	50024086	500	50042300	500	50047361	500
47R6	31	50024094	500	50042327	500	50052110	527
47R645	33	50024337	500	50042335	501	50052128	558
47R8	31	50024434	501	50042343	501	50052144	560
47R845	33	50024450	501	50042351	500	50052152	560
48020	150	50031708	501	50042378	500	50052160	560
48025	150	50031708	505	50042386	500	50052241	558
48121	150	50031961	572	50042408	500	50052250	558
48225	150	50035991	547	50042424	500	50052268	558
48327	150	50039865	500	50042459	500	50052276	559
48432	150	50039903	500	50042467	501	50052276	527
48R10	31	50039911	500	50042475	501	50052284	559
48R1045	33	50039989	500	50042483	500	50052292	559
48R12	31	50039997	500	50042491	500	50052306	559
48R1245	33	50040022	500	50042505	500	50052314	559
48R14	31	50040030	500	50042513	500	50052322	559
48R1445	33	50040103	500	50042521	501	50052330	559
48R16	31	50040111	502	50042530	556	50052349	559
48R1645	33	50040111	500	50042564	500	50052357	559
48R20	31	50040138	500	50042572	500	50052365	559
48R2045	33	50040138	502	50042580	501	50052373	559
48R8	31	50040405	500	50042599	501	50052381	559
48R845	33	50040405	502	50045989	503	50052446	512
49R10	31	50040405	504	50045997	503	50052446	506
49R1045	33	50040421	504	50046012	503	50052446	510
49R12	31	50040421	501	50046020	503	50052446	507
49R1245	33	50040421	500	50046039	503	50052659	501

Part No.	PAGE						
50052667	501	50067290	502	50077325	615	50156772	562
50053027	513	50068920	534	50077333	615	50159062	524
50053035	513	50069292	540	50077350	608	50159119	526
50053043	513	50069292	542	50077481	602	50176870	500
50053043	516	50069306	540	50077490	603	50176900	501
50053051	513	50069314	540	50077554	604	50176978	500
50053078	513	50069330	540	50077970	600	50177001	500
50054473	501	50069497	541	50077988	616	50183311	500
50054481	501	50069519	503	50077996	616	50186353	501
50056913	543	50069527	503	50086715	676	50188860	500
50056921	543	50069535	503	50086839	676	50188879	500
50056930	543	50069543	503	50090313	628	50188909	500
50056948	543	50069551	503	50112899	562	50188917	500
50056956	543	50069560	503	50115286	559	50188925	501
50056964	543	50069578	503	50115294	559	50189050	501
50056972	543	50069586	503	50115308	559	50189069	501
50056980	543	50069594	503	50115316	559	50190946	573
50056999	543	50069608	503	50115324	559	50191314	538
50057006	543	50069616	503	50115332	559	50191322	538
50057014	543	50069624	503	50115340	559	50191322	540
50057022	543	50069632	503	50115359	559	50191330	538
50057030	543	50069640	503	50115367	559	50191349	538
50057049	543	50069659	503	50115375	559	50191349	540
50057057	543	50069667	503	50115383	559	50191357	540
50057065	543	50069691	542	50115391	559	50191357	538
50057073	543	50069721	502	50115413	556	50191365	540
50057529	543	50069780	500	50115472	525	50191365	538
50057529	544	50069845	551	50115723	507	50191373	538
50057537	544	50069853	551	50116304	551	50191381	538
50057537	543	50069861	551	50116312	551	50191403	538
50057618	543	50069870	551	50116320	551	50191411	540
50057618	544	50069888	551	50116339	551	50191411	538
50057626	543	50069900	551	50116347	551	50191438	538
50057626	544	50069969	500	50116355	551	50191438	540
50057669	544	50069977	501	50116363	551	50191446	538
50058207	544	50070444	500	50116371	551	50191454	538
50059572	543	50075349	663	50118650	611	50191462	540
50059580	543	50075349	618	50118692	596	50191462	538
50059599	543	50075357	604	50118714	596	50191470	538
50059602	543	50075357	594	50120379	591	50191489	540
50061860	568	50075365	618	50120395	591	50191489	538
50062590	568	50075551	604	50120409	592	50191497	538
50063626	501	50075888	662	50125630	541	50191500	538
50063634	501	50075888	618	50125699	557	50191519	538
50065696	628	50075926	628	50125869	493	50191527	538
50065700	629	50075934	612	50125907	493	50191527	540
50065866	500	50076647	613	50125940	493	50191535	538
50065874	500	50076663	613	50132849	561	50191543	538
50067273	502	50076990	614	50143921	569	50191543	540
50067281	502	50077007	614	50153323	573	50191551	538



Numerical Index

Part No.	PAGE						
50191551	540	50212141	501	50281658	503	50311239	503
50191578	539	50212168	501	50281666	503	50311247	503
50191586	539	50213164	500	50292099	540	50311255	503
50191594	539	50214896	501	50293672	568	50311263	503
50191608	539	50214918	501	50294512	503	50311280	503
50191616	539	50215191	501	50294512	505	50311298	503
50191616	540	50225634	500	50294520	503	50311310	503
50191624	539	50225642	500	50294520	505	50311328	503
50191624	540	50225650	500	50300083	550	50311336	503
50191632	539	50225669	500	50302361	540	50311352	503
50191640	539	50225677	500	50305581	576	50313533	561
50191659	539	50225685	501	50305603	576	50314823	577
50191667	539	50244590	500	50305620	576	50314831	577
50191675	539	50244620	500	50305646	576	50314840	577
50191675	540	50244760	500	50305662	576	50317563	502
50191683	539	50244779	500	50305689	576	50317571	502
50191691	539	50250973	525	50305700	576	50317580	502
50191691	540	50253417	500	50305727	576	50317598	502
50191705	539	50253425	500	50305743	576	50317601	502
50191713	539	50253441	500	50305760	576	50317610	502
50191721	540	50253492	500	50305786	576	50318721	505
50191721	539	50253506	500	50305808	576	50318721	500
50191748	539	50253514	500	50305824	576	50318721	502
50191756	539	50253603	500	50305840	575	50319620	502
50191764	539	50253611	501	50305867	575	50319639	502
50191772	540	50253727	501	50305883	575	50319647	502
50191772	539	50253832	501	50305905	575	50319655	502
50191780	539	50254030	501	50305921	575	50319663	502
50191799	539	50254278	500	50305948	575	50319671	502
50191802	540	50254286	500	50305964	575	50319698	502
50191802	539	50265342	520	50306588	577	50319701	502
50191810	539	50265369	520	50306600	577	50319710	502
50191829	539	50265385	520	50306626	577	50319736	502
50191837	539	50273612	526	50306642	577	50319752	502
50191845	539	50273833	574	50306669	577	50319760	502
50191926	540	50273841	574	50306685	577	50319787	502
50199757	501	50273868	574	50307584	577	50319892	502
50199765	501	50273884	574	50308599	570	50319906	502
50199773	501	50273892	574	50310100	576	50319914	502
50199781	501	50273906	574	50310127	576	50319930	502
50199803	501	50281542	503	50310143	576	50319957	502
50206672	500	50281550	503	50310240	577	50319965	502
50206680	500	50281569	503	50310267	577	50319981	502
50206702	500	50281577	503	50310283	577	50320025	502
50206710	500	50281585	503	50310305	577	50320025	500
50206737	500	50281593	503	50310321	577	50320033	500
50206761	500	50281607	503	50311174	503	50320033	502
50206788	500	50281615	503	50311190	503	50320041	500
50206796	501	50281623	503	50311204	503	50320041	502
50211153	500	50281631	503	50311220	503	50320068	500

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
50320068	502	50351613	502	50362798	502	50465007	568
50320084	500	50351613	500	50362798	500	504R	75
50320084	502	50351621	502	50362828	500	504RLD	75
50320092	502	50351621	500	50362844	502	505R	75
50320092	500	50351630	502	50364022	550	505RLD	75
50320114	502	50351648	500	50364146	550	50600010	507
50320114	501	50351648	502	50364898	503	50600028	507
50323989	534	50351656	502	50364901	503	50600036	507
50328034	535	50351664	502	50365061	500	50600044	507
50339672	514	50351672	502	50365088	502	50600087	507
50339672	508	50351680	500	50366904	528	50600095	507
50339672	513	50351680	502	50366912	529	50600141	507
50339672	511	50351699	502	50366920	527	50600150	507
50339672	510	50351770	502	50366939	528	50600168	507
50339672	507	50351788	502	50368826	500	50600176	507
50339672	505	50351796	502	50369105	500	50600184	507
50339672	506	50351800	502	50371541	542	50600192	507
50341367	572	50351818	502	50371550	542	50600206	507
50341375	572	50351826	502	50371550	540	50600214	507
50341383	572	50351923	500	50371568	542	50600230	507
50342916	520	50351931	500	50371568	540	50600249	507
50342991	521	50351966	514	50371576	540	50600257	506
50343629	572	50351974	514	50371576	542	50600265	506
50344013	550	50351982	514	50371819	540	50600273	506
50344030	550	50351990	514	50377299	562	50600303	506
50344102	550	50352008	514	50383167	563	50600311	506
50344110	550	50352075	574	50383248	546	50600320	506
50344188	514	50352083	574	50383256	546	50600338	506
50344200	514	50356119SET	531	50383264	546	50600346	506
50344218	516	50356143SET	532	50383272	546	50600354	506
50344218	506	50356151SET	531	50383280	546	50600362	506
50344277	514	50356160SET	532	50383299	546	50600370	506
50344293	514	50356178	533	50383302	546	50600389	506
50344366	514	50357450	571	50383310	546	50600397	506
50344374	514	50357468	571	50383329	546	50600400	506
50344412	514	50357476	571	50383337	546	50600419	506
50344420	514	50357506	571	50383345	546	50600427	506
50344439	514	50359193	571	50383361	546	50600435	506
50344447	514	50359304	571	50383892	546	50600451	506
50347330	506	50360183	550	50383906	546	50600460	506
50347330	511	50360205	550	50385224	542	50600478	506
50347330	513	50360221	550	50450395	492	50600486	506
50347330	514	50361694	539	50450409	492	50600494	506
50347330	507	50361694	540	50455753	494	50600508	506
50347330	510	50361708	539	50455761	492	50600516	506
50347330	508	50361716	502	50455770	492	50600524	506
50351583	502	50361724	502	50455800	594	50600532	506
50351591	502	50361732	500	50455818	594	50600540	506
50351591	500	50361732	502	50456679	594	50600559	506
50351605	502	50362780	502	50456776	491	50600567	506



Numerical Index

Part No.	PAGE						
50600575	506	50601202	507	50608073	493	51300430	502
50600583	506	50601202	506	50610076	507	51300430	500
50600591	506	50601270	508	50610106	507	51300430	505
50600605	506	50601652	509	50610137	507	513R	75
50600613	506	50601652	511	50610281	506	513RLD	75
50600621	506	50601652	506	50610809	510	514R	75
50600630	506	50601652	512	50610830	510	514RLD	75
50600648	506	50601652	507	50610861	511	51600790	510
50600656	506	50601660	516	50610892	511	51601020	512
50600664	506	50601660	511	50610922	511	51601030	512
50600672	506	50601660	512	50611257	508	51601050	512
50600680	506	50601679	505	50611264	508	51601060	512
50600699	506	50601679	509	506R	75	51601080	512
50600702	506	50601679	506	506RLD	75	51601090	512
50600710	506	50601679	511	50766797	530	51601110	512
50600729	506	50601679	512	50766803	529	51R10	31
50600737	506	50601679	507	50766810	530	51R1045	33
50600745	506	50601687	507	50766919	559	51R12	31
50600753	506	50601695	507	50767640	507	51R1245	33
50600761	506	50601709	507	50767657	507	51R14	31
50600770	510	50601717	507	507R	75	51R1445	33
50600788	510	50601725	507	507RLD	75	51R16	31
50600958	511	50601733	507	508R	75	51R1645	33
50600982	511	50601741	507	508RLD	75	51R20	31
50601016	512	50601750	507	509R	75	51R2045	33
50601040	512	50601768	507	509RLD	75	52020113	507
50601075	512	50601776	507	50R10	31	52020113	514
50601105	512	50601784	507	50R1045	33	52020113	511
50601121	512	50601792	507	50R12	31	52020113	508
50601130	510	50602349	507	50R1245	33	52020887	617
50601130	516	50602357	506	50R14	31	52020895	632
50601148	507	50602357	507	50R1445	33	52020896	633
50601148	512	50602373	502	50R16	31	52020897	633
50601148	510	50602381	509	50R1645	33	52022030	611
50601148	505	50602390	509	50R20	31	52024541	637
50601148	506	50602420	509	50R2045	33	52024541	686
50601156	506	50602438	509	50R8	31	52024556	638
50601156	512	50602462	502	50R845	33	52033580	582
50601156	516	50602497	509	51040060	500	52033816	515
50601156	510	50602500	509	51040080	500	52033817	515
50601164	516	50602586	512	51069720	500	52033818	515
50601172	506	50602586	506	51069740	500	52033819	515
50601172	507	50602586	507	510R	75	52033820	515
50601172	509	50602586	509	510RLD	75	52033831	515
50601172	516	50602586	511	51147220	500	52033832	515
50601180	506	50604660	635	51147220	502	52033833	545
50601180	516	50604678	677	511R	75	52033834	545
50601180	507	50605027	676	511RLD	75	52033835	545
50601202	510	50605034	677	512R	75	52033836	515
50601202	512	50605041	635	512RLD	75	52033837	545

Part No.	PAGE						
52033843	521	528R	74	56N4	60	5SG6	48
52033844	515	529R	74	56N5	60	602R10	38
52034233	533	52R10	31	572R6	126	602R12	38
52034235	617	52R1045	33	573R6	126	602R5	39
52034333	545	52R12	31	573R8	126	602R6	38
52041709	568	52R1245	33	574R8	126	602R8	38
52041741	568	52R14	31	575R8	126	603R10	38
52041743	568	52R1445	33	57C4	61	603R12	38
52041745	568	52R16	31	57C5	61	603R5	38
52041746	569	52R1645	33	57C6	61	603R6	38
52041747	569	52R20	31	57N4	60	603R8	38
52041748	570	52R2045	33	57N5	60	604R10	38
52041749	570	530R	74	57N6	60	604R12	38
52041750	569	531R	74	584R10	126	604R14	38
52041751	569	532R	74	584R8	126	604R5	38
52041752	571	533R	74	585R10	126	604R6	38
52041753	571	534R	74	585R12	126	604R8	38
52042113	582	535R	74	585R8	126	605R10	38
52042827	505	536R	74	586R10	126	605R12	38
52044590	568	53R12	31	586R12	126	605R14	38
52044591	568	53R1245	33	587R10	126	605R16	38
52044592	568	53R14	31	587R12	126	605R6	38
52044593	568	53R1445	33	588R10	126	605R8	38
52044594	568	53R16	31	588R12	126	606R10	38
52044597	570	53R1645	33	589R10	126	606R12	38
52044597	569	53R20	31	589R12	126	606R14	38
52044599	569	53R2045	33	589R16	126	606R16	38
52044600	571	54R12	31	58C4	61	606R20	38
52045012	624	54R1245	33	58C5	61	606R6	38
52045013	623	54R14	31	58C6	61	606R8	38
52045014	622	54R1445	33	58N4	60	607R10	38
52045040	502	54R16	31	58N5	60	607R12	38
52045040	501	54R1645	33	58N6	60	607R14	38
52045040	505	54R20	31	590R10	126	607R16	38
52045296	506	54R2045	33	590R12	126	607R20	38
52045297	506	551R	127	590R16	126	607R6	38
52047801	593	552R	127	590R20	126	607R8	38
52047802	593	553R	127	592R12	126	608R10	39
52047803	594	554R	127	592R16	126	608R12	39
52047805	598	555R	127	592R20	126	608R14	39
52047806	599	556R	127	59C5	61	608R16	39
52049407	584	557R	127	59C6	61	608R20	39
52049408	583	558R	127	59N5	60	608R8	39
52055901	507	559R	127	59N6	60	609R10	39
52055905	507	560R	127	5R10	28	609R12	39
523R	74	561R	127	5R12	28	609R14	39
524R	74	562R	127	5R14	28	609R16	39
525R	74	563R	127	5R16	28	609R20	39
526R	74	56C4	61	5R6	28	609R8	39
527R	74	56C5	61	5R8	28	60C5	61



Numerical Index

Part No.	PAGE						
60C6	61	6308	166	65616	84	703F6	41
60C8	61	630C3	167	6566	84	703F8	41
60N5	60	630C35	167	6568	84	704	168
60N6	60	630C4	167	65710	84	704F10	41
60N8	60	630C5	167	65712	84	704F12	41
610R10	39	630C6	167	65716	84	704F5	41
610R12	39	630R	40	6576	84	704F6	41
610R14	39	63N10	60	6578	84	704F8	41
610R16	39	63N8	60	65810	84	705	168
610R20	39	63R	62	65812	84	7050	158
610R8	39	64N10	60	65816	84	705F10	41
6192	166	64N12	60	65910	84	705F12	41
61925	166	64R	62	65912	84	705F14	41
6193	166	65010	166	65916	84	705F6	41
61935	166	6504	166	65N10	60	705F8	41
6194	166	6505	166	65N12	60	705K	168
6195	166	6506	166	65R	62	705V	146
619C3	167	6508	166	66010	85	706F10	41
61N6	60	650C10	167	66012	85	706F12	41
61N8	60	650C4	167	66016	85	706F14	41
62010	166	650C5	167	669	174	706F16	41
62025	166	650C6	167	66R	62	706F6	41
6203	166	650C8	167	670	174	706F8	41
62035	166	65210	84	670WS	174	707	158
6204	166	65212	84	680	174	707F10	41
6205	166	6525	85	680WS	174	707F12	41
6206	166	6526	84	695	158	707F14	41
6208	166	6528	84	695V	148	707F16	41
620C3	167	652C5	88	697	158	707F8	41
620C35	167	652C6	88	697V	146	707V	146
620C4	167	65310	84	6R10	28	708F10	41
620C5	167	65312	84	6R12	28	708F12	41
620C6	167	6535	84	6R14	28	708F14	41
622R	40	6536	84	6R16	28	708F16	41
623R	40	6538	84	6R20	28	708F8	41
624R	40	653C6	88	6R6	28	709F10	42
625R	40	653C8	88	6R8	28	709F12	42
626R	40	65410	84	6SG10	48	709F14	42
627R	40	65412	84	6SG6	48	709F16	42
628R	40	65416	84	6SG8	48	709F20	42
629R	40	6545	84	700	174	710	168
62N6	60	6546	84	700WS	174	710F10	42
62N8	60	6548	84	702F10	41	710F12	42
62R	62	65510	84	702F12	41	710F14	42
63010	166	65512	84	702F5	42	710F16	42
6303	166	65516	84	702F6	41	710F20	42
63035	166	6556	84	702F8	41	710K	168
6304	166	6558	84	703F10	41	710L	168
6305	166	65610	84	703F12	41	7110	158
6306	166	65612	84	703F5	41	7110V	146

Part No.	PAGE						
7112	158	726V	146	742F10	42	750F12	43
7112V	146	727	158	742F12	42	750F14	43
7115	158	727F	44	742F5	43	750F16	43
7115V	146	727V	146	742F6	42	750F20	43
711F12	42	728	158	742F8	42	750V	172
711F14	42	728F	44	743F10	43	7510	159
711F16	42	728V	146	743F12	43	7510V	147
711F20	42	729F	44	743F5	43	7512	159
712F10	42	72S10	158	743F6	43	7512V	147
712F12	42	72S10V	146	743F8	43	7515	159
712F14	42	72S12	158	744F10	43	7515V	147
712F16	42	72S12V	146	744F12	43	7518	159
712F20	42	72S15	158	744F5	43	7518V	147
713F12	42	72S15V	146	744F6	43	751F12	43
713F14	42	72S6	158	744F8	43	751F14	43
713F16	42	72S6V	146	745F10	43	751F16	43
713F20	42	72S8	158	745F12	43	751F20	43
715	168	72S8V	146	745F14	43	7520	159
716	158	730	170	745F6	43	7520V	147
716V	146	7308	170	745F8	43	7525	159
718	158	730AZ	171	746F10	43	7525V	147
718V	146	730BZ	171	746F12	43	752F16	43
71S10	158	730F	44	746F14	43	755	180
71S10V	146	730V	172	746F16	43	7610	159
71S6	158	7310	158	746F6	43	7610V	147
71S6V	146	7310V	146	746F8	43	7612	159
71S8	158	7312	158	747F10	43	7612V	147
71S8V	146	7312V	146	747F12	43	7615	159
720	170	7315	158	747F14	43	7615V	147
7208	170	7315V	146	747F16	43	7618	159
720AZ	171	7318	158	747F8	43	7618V	147
720BZ	171	7318V	146	748	158	7620	159
720V	172	731F	44	748F10	43	7620V	147
7210	158	7320	158	748F12	43	7625	159
7210v	146	7320V	146	748F14	43	7625V	147
7212	158	735	180	748F16	43	769	175
7212V	146	737	158	748F8	43	770	175
7215	158	737V	146	748V	146	7712	159
7215V	146	738	158	749	158	7712V	147
7218	158	738V	146	749F10	43	7715	159
7218V	146	7410	158	749F12	43	7715V	147
7220	158	7410V	146	749F14	43	7718	159
7220V	146	7412	158	749F16	43	7718V	147
722F	44	7412V	146	749F20	43	7720	159
723F	44	7415	158	749V	146	7720V	147
724F	44	7415V	146	750	171	7725	159
725	180	7418	158	7509	171	7725V	147
725F	44	7418V	146	750AZ	171	7732	159
726	158	7420	158	750BZ	171	7732V	147
726F	44	7420V	146	750F10	43	775	180



Numerical Index

Part No.	PAGE						
780	175	80112	182	8203B	173	850	173
7812	159	8012	182	8203V	172	8502B	173
7812V	147	8018	159	8225	159	8502V	172
7815	159	8018V	147	8225V	147	8503	171
7815V	147	8022	159	8230	159	8503B	173
7818	159	8022V	147	8230V	147	8503V	172
7818V	147	8025	159	8232	159	8532	160
7820	159	8025V	147	8232V	147	8532V	148
7820V	147	8030	159	8234	159	8540	160
7825	159	8030V	147	8234V	147	8540V	148
7825V	147	8032	159	82R	59	85R	59
7828	159	8032V	147	82V5	58	85V6	58
7828V	147	8051	181	82V6	58	85V8	58
7832	159	80512	181	82V8	58	8634	160
7832V	147	8052	181	830	173	8634V	148
790	175	80R	59	8301	170	8640	160
7912	159	80V4	58	8301A	170	8640V	148
7912V	147	80V5	58	8301AV	172	8678	155
7915	159	80V6	58	8301V	172	8688	154
7915V	147	8101	181	8302	170	8698	154
7918	159	81012	181	8302B	173	86R	59
7918V	147	8102	181	8302V	172	86V10	58
7920	159	8122	159	8303	170	86V12	58
7920V	147	8122V	147	8303B	173	86V6	58
7922	159	8125	159	8303V	172	86V8	58
7922V	147	8125V	147	8330	159	87010	154
7925	159	8130	159	8330V	147	8708	154
7925V	147	8130V	147	8332	159	87110	154
7930	159	8132	159	8332V	147	8718	154
7930V	147	8132V	147	8334	159	87212	154
7932	159	8151	183	8334V	147	8728	154
7932V	147	81512	183	8338	159	87310	155
79R	59	8152	183	8338V	147	87313	155
79V4	58	816	183	8340	159	87412	155
79V5	58	817	183	8340V	147	87514	155
7R10	29	81R	59	83R	59	87614	155
7R12	29	81V4	58	83V5	58	87714	155
7R14	29	81V5	58	83V6	58	87R	59
7R16	29	81V6	58	83V8	58	87V10	58
7R20	29	820	173	8432	159	87V12	58
7R6	29	8201	171	8432V	147	87V16	58
7R8	29	8201A	170	8434	159	87V8	58
7SG10	48	8201AV	172	8434V	147	88R	59
7SG12	48	8201B	173	8438	159	88V10	58
7SG6	48	8201C	173	8438V	147	88V12	58
7SG8	48	8201V	172	8440	159	88V8	58
8001	182	8202	170	8440V	147	8R10	29
80012	182	8202B	173	84R	59	8R12	29
8002	182	8202V	172	84V6	58	8R14	29
8011	182	8203	170	84V8	58	8R16	29

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
8R20	29	95R4	26	AE10	404	AST2295	409
8R8	29	95R5	26	AE16	404	BAG9698	156
8SG10	48	95R6	26	AE2210	410	BAG9708	156
8SG12	48	95R8	26	AE22120	410	BAG9718	156
8SG6	48	96C5	27	AE22150	410	BAG9728	156
8SG8	48	96C6	27	AE2216	410	BAG9738	156
90500113	513	96C8	27	AE22185	410	BAK9698	156
90508068	563	97C5	27	AE2225	410	BAK9708	156
90510593	563	97C6	27	AE2235	410	BAK9718	156
91C3	27	97C8	27	AE2250	410	BAK9728	156
91C4	27	9R10	29	AE2270	410	BAK9738	156
91C5	27	9R12	29	AE2295	410	BMH1	361
91R3	26	9R14	29	AE25	404	BNC501	391
91R4	26	9R16	29	AE35	404	C16	404
91R5	26	9R20	29	AE50	404	C2216	410
920	168	9R8	29	AE501	390	C2225	410
920V	169	9SG10	48	AE502	390	C2235	410
92C3	27	9SG12	48	AE503	390	C2250	410
92C4	27	9SG6	48	AE70	404	C25	404
92C5	27	9SG8	48	AE95	404	C35	404
92C6	27	A10	403	AES10	405	C50	404
92R3	26	A150	403	AES16	405	CK16	130
92R4	26	A1625	403	AES2210	411	CK25	130
92R5	26	A185	403	AES22120	411	CK35	130
92R6	26	A2210	409	AES22150	411	CK50	130
930	168	A22150	409	AES2216	411	CK70	130
930V	169	A221625	409	AES22185	411	CK95	130
93C3	27	A22185	409	AES22240	410	CR501	391
93C4	27	A22240	409	AES22240	411	CR502	391
93C5	27	A22300	409	AES2225	411	CR503	391
93C6	27	A2235	409	AES2235	411	CR504	391
93R3	26	A2250	409	AES2250	411	CR505	391
93R4	26	A2270	409	AES2270	411	CS1022	122
93R5	26	A2295120	409	AES2295	411	CS1228	122
93R6	26	A35	403	AES25	405	CS1428	122
93R8	26	A50	403	AES35	405	CS1635	122
94C4	27	A70	403	AES50	405	CS818	122
94C5	27	A95120	403	AES70	405	D10	402
94C6	27	AD22120	409	AES95	405	D120	402
94C8	27	AD22150185	409	AH120120	131	D150	402
94R4	26	AD2225	409	AH7070	131	D16	402
94R5	26	AD2235	409	AH9595	131	D185	402
94R6	26	AD2250	409	AS105FHP	369	D2210	407
94R8	26	AD2270	409	AS120FHP	369	D22120	407
950	168	AD2295	409	AS65FHP	368	D22150	407
950V	169	AD25	404	AST22120	409	D2216	407
95C4	27	AD35	404	AST2225	409	D22185	407
95C5	27	AD50	404	AST2235	409	D22240	407
95C6	27	AD70	404	AST2250	409	D2225	407
95C8	27	AD95	404	AST2270	409	D22300	407

Numerical Index

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
D2235	407	ES65L	325	GR4728D0	193	HAD25120	421
D2250	407	ES85E	327	GR4738	149	HAD25150185	421
D226	407	ES85L	327	GR4738D0	194	HAD25240	421
D2270	407	ESG105EF	328	H2270	410	HAD2525	421
D2295	407	ESG105ES	328	HA1310	415	HAD25300	421
D25	402	ESG105L	328	HA13150	415	HAD2535	421
D35	402	ESG45EF	322	HA131625	415	HAD2550	421
D50	402	ESG45ES1	322	HA13185	415	HAD2570	421
D6	402	ESG45L	322	HA13240	415	HAD2595	421
D70	402	ESG50EF1	323	HA1335	415	HAD425	394
D95	402	ESG50ES	323	HA1350	415	HAD435	394
DNAW2	493	ESG50L	323	HA1370	415	HAD450	394
DNAW3	494	ESG55EF	324	HA1395120	415	HAD45150185	424
DNAW3M	494	ESG55ES	324	HA2510	421	HAD45240	424
DNK742	252	ESG55L	324	HA25150	421	HAD45300	424
DNP2	381	ESG85EF1	326	HA251625	421	HAD525	399
DP2250	408	ESG85ES	326	HA25185	421	HAD535	399
DP2270	408	ESG85ES1	326	HA25240	421	HAD550	399
EBS12	321	ESG85L	326	HA25300	421	HAD570	399
EBS8	320	ESSG853	373	HA2535	421	HAD595	399
EHP2380	358	F10	402	HA25400	421	HAE13120	417
EHP3	359	F16	402	HA2550	421	HAE13150	417
EHP4115	360	F2210	407	HA25500	421	HAE13185	417
EHP4230	360	F2216	407	HA2570	421	HAE13240	417
EHP4400	360	F2225	407	HA2595120	421	HAE1325	417
EHP5	361	F2235	407	HA410	394	HAE1335	417
EK12025L	312	F2250	407	HA41625	394	HAE1350	417
EK12042L	314	F2270	407	HA435	394	HAE1370	417
EK120IDL	311	F25	402	HA450	394	HAE1395	417
EK120UL	316	F35	402	HA45150	424	HAE25120	423
EK120UNVL	332	F50	402	HA45185	424	HAE25150	423
EK1550	294	FHP2	357	HA45240	424	HAE25185	423
EK1550G	296	FTA1	379	HA45300	424	HAE25240	423
EK354	300	GR1698	152	HA45400	424	HAE2525	423
EK5018L	304	GR1690	150	HA45500	424	HAE2535	423
EK505L	302	GR1708	152	HA470	394	HAE2550	423
EK6022L	306	GR170W	150	HA510	398	HAE2570	423
EK60UNVL	330	GR1718	152	HA5150	398	HAE2595	423
EK60VPFTL	309	GR171G	150	HA51625	398	HAE410	395
EK60VPL	308	GR1728	152	HA535	398	HAE416	395
EKP1	298	GR172R0	151	HA550	398	HAE425	395
ES105E	329	GR1738	152	HA570	398	HAE435	395
ES105L	329	GR173B	151	HA595120	398	HAE450	395
ES20	318	GR4698	149	HAD13120	415	HAE510	399
ES20E	318	GR4698D0	193	HAD13150185	415	HAE516	399
ES32	319	GR4708	149	HAD1325	415	HAE525	399
ES32E	319	GR4708D0	193	HAD1335	415	HAE535	399
ES32F	319	GR4718	149	HAD1350	415	HAE550	399
ES32FE	319	GR4718D0	194	HAD1370	415	HAES13120	417
ES65E	325	GR4728	149	HAD1395	415	HAES13150	417

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
HAES13185	417	HC2525	422	HD45800	424	HIS1325	412
HAES13240	417	HC2535	422	HD46	393	HIS1335	412
HAES1325	417	HC2550	422	HD470	393	HIS1350	412
HAES1335	417	HC2570	422	HD495	393	HIS1370	412
HAES1350	417	HC2595	422	HD51050	398	HIS1395	412
HAES1370	417	HC416	395	HD5120	398	HIS2510	418
HAES1395	417	HC425	395	HD5150	398	HIS25120	418
HAES25120	423	HC516	399	HD51670	398	HIS25150	418
HAES25150	423	HC525	399	HD5185	398	HIS2516	418
HAES25185	423	HC535	399	HD52595	398	HIS2525	418
HAES25240	423	HD13120	413	HD5635	398	HIS2535	418
HAES2525	423	HD13150	413	HDP1350	413	HIS2550	418
HAES2535	423	HD1316	413	HDP1370	413	HIS2570	418
HAES2550	423	HD13185	413	HDP1395	413	HIS2595	418
HAES2570	423	HD13240	413	HDP25120	419	HIS410	392
HAES2595	423	HD1325	413	HDP2550	419	HIS416	392
HAES410	395	HD13300	413	HDP2570	419	HIS425	392
HAES416	395	HD1335	413	HDP2595	419	HIS435	392
HAES425	395	HD1350	413	HF13120	413	HIS450	392
HAES435	395	HD1370	413	HF13150	413	HIS470	392
HAES450	395	HD1395	413	HF1316	413	HIS510	397
HAES510	400	HD25120	419	HF1325	413	HIS516	397
HAES516	400	HD25150	419	HF1335	413	HIS525	397
HAES525	400	HD2516	419	HF1350	413	HIS535	397
HAES535	400	HD25185	419	HF1370	413	HIS550	397
HAES550	400	HD25240	419	HF1395	413	HIS570	397
HAH13120	416	HD2525	419	HF25120	419	HIS595	397
HAH1370	416	HD25300	419	HF25150	419	HISQ1310	414
HAH1395	416	HD2535	419	HF2516	419	HISQ1316	414
HAH25120	422	HD25400	419	HF25185	419	HISQ1325	414
HAH2570	422	HD2550	419	HF25240	419	HISQ1335	414
HAH2595	422	HD25500	419	HF2525	419	HISQ1350	414
HAST13120	415	HD25625	419	HF25300	419	HISQ1370	414
HAST1325	415	HD2570	419	HF2535	419	HISQ1395	414
HAST1335	415	HD2595	419	HF2550	419	HISQ2510	420
HAST1350	415	HD410	393	HF2570	419	HISQ25120	420
HAST1370	415	HD4120	393	HF2595	419	HISQ25150	420
HAST1395	415	HD416	393	HF410	392	HISQ2516	420
HAST25120	421	HD425	393	HF416	392	HISQ2525	420
HAST2525	421	HD435	393	HF425	392	HISQ2535	420
HAST2535	421	HD450	393	HF435	392	HISQ2550	420
HAST2550	421	HD451000	424	HF510	397	HISQ2570	420
HAST2570	421	HD45120	424	HF516	397	HISQ2595	420
HAST2595	421	HD45150	424	HF525	397	HISQ410	394
HC1316	416	HD45185	424	HF535	397	HISQ416	394
HC1325	416	HD45240	424	HF550	397	HK12025	276
HC1335	416	HD45300	424	HIS1310	412	HK12042	278
HC1350	416	HD45400	424	HIS13120	412	HK120U	280
HC1370	416	HD45500	424	HIS13150	412	HK122EL220	366
HC2516	422	HD45625	424	HIS1316	412	HK122EL380	366

Numerical Index

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
HK252	364	HQ410	393	HR5635	397	HS28	380
HK252EL220	367	HQ416	393	HRU1310	414	HSG45	282
HK252EL380	367	HQ425	393	HRU1312095	414	HSG50	283
HK45	365	HQ435	393	HRU13150120	414	HSG55	284
HK6018	270	HQ510	398	HRU1316	414	HSG852	285
HK6022	272	HQ516	398	HRU13185150	414	HST131215	416
HK6022W	272	HQ525	398	HRU13240185	414	HST1320	416
HK60UNV	286	HQ535	398	HRU13300240	414	HST1346	416
HK60VP	274	HQ550	398	HRU13300SM	414	HST138	416
HK60VPFT	275	HR13120	412	HRU133525	414	HST251215	422
HM4154	393	HR13150	412	HRU135035	414	HST2520	422
HM416	393	HR1316	412	HRU137050	414	HST2546	422
HM4610	393	HR13185	412	HRU139570	414	HST258	422
HMC1310	416	HR13240	412	HRU2510	420	HZAE410	395
HMC1335	416	HR1325	412	HRU2512095	420	HZAE416	395
HMC1350	416	HR13300	412	HRU25150120	420	HZAE44	395
HMC1370	416	HR1335	412	HRU2516	420	HZAE46	395
HMC25120	422	HR13400	412	HRU25185150	420	HZAE510	399
HMC25150	422	HR1350	412	HRU25240185	420	HZAE516	399
HMC25185	422	HR1370	412	HRU25300240	420	HZAE54	399
HMC2535	422	HR1395	412	HRU25300SM	420	HZAE56	399
HMC2550	422	HR25120	418	HRU253525	420	HZAES410	396
HMC2570	422	HR25150	418	HRU255035	420	HZAES416	396
HMC2595	422	HR2516	418	HRU257050	420	HZAES44	396
HMC410	395	HR25185	418	HRU259570	420	HZAES46	396
HMC435	395	HR25240	418	HRU410	394	HZAES510	400
HMC44	395	HR2525	418	HRU412095	394	HZAES516	400
HN4051	393	HR25300	418	HRU4150120	394	HZAES54	400
HN410	393	HR2535	418	HRU416	394	HZAES56	400
HN41525	393	HR25400	418	HRU43525	394	IS10	401
HN416	393	HR2550	418	HRU45035	394	IS16	401
HN446	393	HR2570	418	HRU47050	394	IS2210	406
HQ13120	414	HR2595	418	HRU49570	394	IS22120	406
HQ13150	414	HR410	392	HRU510	398	IS22150	406
HQ1316	414	HR4120	392	HRU512095	398	IS2216	406
HQ1325	414	HR4150	392	HRU5150120	398	IS2225	406
HQ1335	414	HR416	392	HRU516	398	IS2235	406
HQ1350	414	HR425	392	HRU5185150	398	IS2250	406
HQ1370	414	HR435	392	HRU5240185	398	IS2270	406
HQ1395	414	HR450	392	HRU5300240	398	IS2295	406
HQ25120	420	HR46	392	HRU53525	398	IS25	401
HQ25150	420	HR470	392	HRU55035	398	IS35	401
HQ2516	420	HR495	392	HRU57050	398	IS50	401
HQ25185	420	HR51050	397	HRU59570	398	IS501	390
HQ25240	420	HR5120	397	HS210	380	IS502	391
HQ2525	420	HR5150	397	HS22	380	IS503	390
HQ2535	420	HR51670	397	HS23	380	IS504	391
HQ2550	420	HR5185	397	HS24	380	IS505	391
HQ2570	420	HR5240	397	HS25	380	IS70	401
HQ2595	420	HR52595	397	HS26	380	IS95	401

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
ISQ10	403	K2	233	K607	443	KL040160	449
ISQ16	403	K2011	261	K610	443	KL020180IS	430
ISQ2210	408	K2021E	261	K615	444	KL042190IS	431
ISQ2216	408	K2022E	261	K6151	444	KL044200IS	431
ISQ2225	408	K22	250	K6152	444	KL045180	449
ISQ2235	408	K230	258	K62	229	KL045180IS	432
ISQ2250	408	K25	234	K63	230	KL045200	449
ISQ2270	408	K250	259	K64	230	KL045200IS	432
ISQ25	403	K271	220	K65	229	KL045240IS	432
ISQ35	403	K272	221	K66	214	KL050115EL	452
ISQ50	403	K28	221	K67	228	KL050170	450
K02	233	K29	222	K68	231	KL050205	450
K05	238	K3	213	K6SP	236	KL050205IS	432
K05D	238	K303	220	K7	237	KL055170	450
K05DSP	238	K3031220	370	K7SP	237	KL055205	450
K05SP	238	K3031380	370	K8	237	KL055205IS	432
K06	240	K3032220	370	K80	224	KL060160	450
K06D	240	K3032380	370	K81	224	KL060160IS	433
K06DSP	240	K32	216	K82	225	KL070250	451
K06SP	240	K34	216	K85	225	KL070250G	451
K07	236	K35	213	K8SP	237	KL070250IS	433
K07SP	236	K354	246	K90MC32	253	KL072180G	451
K08	239	K36	215	K90MC41	253	KL072250	451
K08D	239	K37	217	K90MC42	254	KL072250G	451
K08DSP	239	K382	218	K93	231	KL072300G	451
K08SP	239	K38ERGO	218	K94	232	KL075250	451
K09	241	K38ERGOSET	219	K95	234	KL075250G	451
K09D	241	K39	217	KF125	131	KL078250G	452
K09DSP	241	K4	212	KL010160	448	KL10010030IS	434
K09SP	241	K400	486	KL010160IS	430	KL10010035	453
K1	214	K4041	371	KL010210	448	KL10010035IS	434
K10	222	K4042	371	KL010210IS	430	KL10010040	453
K100	255	K432	482	KL020165IS	430	KL10010040IS	434
K1011	260	K44	482	KL020205IS	430	KL10012555	453
K1011E	260	K46	212	KL025165	448	KL10012555IS	434
K1012	261	K48	215	KL025180	448	KL10015065	453
K1012E	261	K5	235	KL025205	448	KL10015065IS	434
K102	255	K50	245	KL026205	448	KL10017580	453
K1031	257	K507	244	KL026205IS	430	KL10017580IS	434
K1041	257	K511	252	KL030160	448	KL1002555	455
K1051	260	K512	252	KL035160	449	KL1007525	453
K1061	256	K572	227	KL040115EL	452	KL1007525IS	434
K1062	256	K582	227	KL040115ELW	452	KL1008030	453
K13	232	K592	228	KL040128EL	453	KL10510055	454
K130	258	K5SP	235	KL040128ELH	453	KL10512565	454
K14	223	K6	236	KL040145	449	KL10515080	454
K15	223	K60	226	KL040145IS	431	KL11025PH1	456
K150	259	K601	443	KL040160IS	431	KL110PH1	454
K16	226	K602	443	KL040180	449	KL110PH1IS	434
K18	248	K606	443	KL040180IS	431	KL110PH2	454

Numerical Index

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
KL110PH2IS	434	KL25073TX40	457	KL542ES	472	KL820L	478
KL110PH3	454	KL290	457	KL544	472	KL880B26IS	444
KL110PH3IS	434	KL291	458	KL544ES	472	KL880L	444
KL120PZ1	454	KL295	458	KL545	472	KL890TB88	476
KL120PZ1IS	435	KL296	458	KL550	472	KL890TL	478
KL120PZ2	454	KL300IS	439	KL550ES	472	KL900B15	477
KL120PZ2IS	435	KL303	459	KL550ES	471	KL900L	478
KL120PZ3	454	KL303IS	436	KL559	471	KL910L	478
KL120PZ3IS	435	KL304	459	KL580300	470	KL920L	479
KL130PM1IS	435	KL304IS	436	KL580500	470	KLE300IS1	480
KL130PM2IS	435	KL305IS	437	KL5821000	470	KLE300IS10	480
KL140100IS	435	KL306IS	437	KL5821250	470	KLE300IS11	480
KL140130IS	435	KL310	459	KL584230	470	KLE300IS12	480
KL14055IS	435	KL315	459	KL585200	471	KLE300IS13	480
KL14060IS	435	KL330	463	KL585250	471	KLE300IS14	480
KL14070IS	435	KL331	463	KL586	471	KLE300IS2	480
KL14080IS	435	KL335	463	KL600	440	KLE300IS3	480
KL150TR10	455	KL340	464	KL602GELB	440	KLE300IS4	480
KL150TR15	455	KL345	464	KL603	440	KLE300IS5	480
KL150TR20	455	KL350	453	KL604	473	KLE300IS6	480
KL150TR25	455	KL360	460	KL604S	473	KLE300IS7	480
KL150TR30	455	KL365	464	KL60509	442	KLE300IS8	480
KL150TR40	455	KL370	461	KL60510	442	KLE300IS9	480
KL150TX10IS	434	KL375	461	KL605U	442	KLE3501	497
KL150TX15IS	434	KL380	460	KL620S1000	441	KLE3502	497
KL150TX20IS	434	KL385	460	KL625A1000	441	KLE3503	497
KL150TX25IS	434	KL38715	461	KL625A500	441	KLE3504	497
KL150TX30IS	434	KL38830	462	KL628	441	KLE3505	497
KL160KI3	455	KL38954	463	KL640GK	442	KLE3506	497
KL160KI4	455	KL390IS	438	KL642HK	442	KLE3507	497
KL160KI5	455	KL391IS	437	KL690130	443	KLE3601	460
KL160KI6	455	KL392IS	438	KL698	443	KLE3602	460
KL160KI8	455	KL393IS	438	KL710	487	KLE3603	460
KL19073IS	436	KL399IS	439	KL720	491	KLE3604	460
KL2007335	456	KL402	465	KL730	487	KLE3605	460
KL2007340	456	KL403	465	KL735PV	488	KLE3606	460
KL2007355	456	KL420200	465	KL740416	486	KLE3607	460
KL2007365	456	KL425400	465	KL740828	486	KLE387151	461
KL21073PH1	457	KL425600	465	KL745GK	486	KLE3871510	461
KL21073PH2	457	KL440F	468	KL745HK	487	KLE3871511	461
KL22073PZ1	456	KL449	468	KL749ES	487	KLE3871512	461
KL22073PZ2	456	KL450	468	KL760180	482	KLE3871513	461
KL23073PM1	457	KL451BLAU	468	KL760180IS	433	KLE3871514	461
KL23073PM2	457	KL451ROT	468	KL765FR215	483	KLE387152	461
KL25073TX10	457	KL500	470	KL765PV	483	KLE387153	461
KL25073TX15	457	KL505	469	KL800B21	473	KLE387154	461
KL25073TX20	457	KL510	469	KL800L	477	KLE387155	461
KL25073TX25	457	KL515	469	KL810B20	474	KLE387156	461
KL25073TX27	457	KL540	471	KL810L	477	KLE387157	461
KL25073TX30	457	KL542	472	KL820B28	475	KLE387158	461

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
KLE387159	461	KP351	299	KP83	299	MC10	404
KLE388301	462	KP351	265	KP90MC31	242	MC2210	410
KLE3883010	462	KP351	263	KP90MC31	265	MC2235	410
KLE3883011	462	KP352	242	KP90MC31	299	MC224	410
KLE3883012	462	KP352	265	KP90MC31	263	MC35	404
KLE3883013	462	KP352	263	KPM15	264	MC4	404
KLE3883014	462	KP352	299	KPM15PRO	264	MCK1010	130
KLE3883014	461	KP631	299	KPM15TH	264	MCK1016	130
KLE3883015	462	KP631	242	KSK1503	138	MCK1025	130
KLE388302	462	KP631	265	KSK1504	139	MCK120120	131
KLE388303	462	KP631	263	KSK1854	139	MCK150150	131
KLE388304	462	KP632	242	KSK504	139	MCK185185	131
KLE388305	462	KP632	299	KST2	380	MCK2550	130
KLE388306	462	KP632	265	KV10	37	MCK3535	130
KLE388307	462	KP632	263	KV120	37	MCK3570	130
KLE388308	462	KP64	265	KV15	37	MCK3595	131
KLE388309	462	KP64	242	KV150	37	MCK44	131
KLE389541	463	KP64	299	KV16	37	MCK5050	130
KLE389542	463	KP64	263	KV185	37	MCK7095	131
KLHLMD2	466	KP65	265	KV240	37	MK17	203
KLHLMD3	467	KP65	299	KV25	37	MK18	203
KMF1	381	KP65	242	KV2.5	37	MK210B	198
KMF2	381	KP65	263	KV35	37	MK210L	201
KP1	242	KP66	265	KV4	37	MK210L	198
KP1L	242	KP66	299	KV50	37	MK22	203
KP232	265	KP66	242	KV6	37	MK220B	198
KP232	263	KP66	263	KV70	37	MK220L	202
KP232	242	KP67	265	KV95	37	MK220L	198
KP232	299	KP67	263	LG4F	377	MK230B	199
KP242	299	KP67	299	LG5	377	MK230L	202
KP242	263	KP67	242	LG6	377	MK230L	199
KP242	265	KP68	263	LGL1	378	MK55	201
KP242	242	KP68	265	LGL2	378	MKKP1	203
KP303	242	KP68	299	LS50LFLEX	523	MKU	204
KP303	299	KP68	242	LS60L	522	N2210	407
KP303	265	KP80	265	M154	402	N2216	407
KP303	263	KP80	242	M16	402	N2225	407
KP304	263	KP80	299	M22154	407	N2235	407
KP304	242	KP80	263	M2216	407	N2250	407
KP304	265	KP81	242	M22610	407	NC100EP	637
KP304	299	KP81	265	M50154	390	NG2	376
KP312	242	KP81	263	M50610	390	NG2115	376
KP312	265	KP81	299	M610	402	NG2230	376
KP312	299	KP82	242	MA120	383	PGA1	385
KP312	263	KP82	265	MA18	383	PHD1	357
KP350	299	KP82	263	MA22	383	PK12042	342
KP350	242	KP82	299	MA4	383	PK120U	344
KP350	265	KP83	263	MA5	383	PK18	336
KP350	263	KP83	242	MA50	383	PK22	338
KP351	242	KP83	265	MAVP	383	PK22W	338

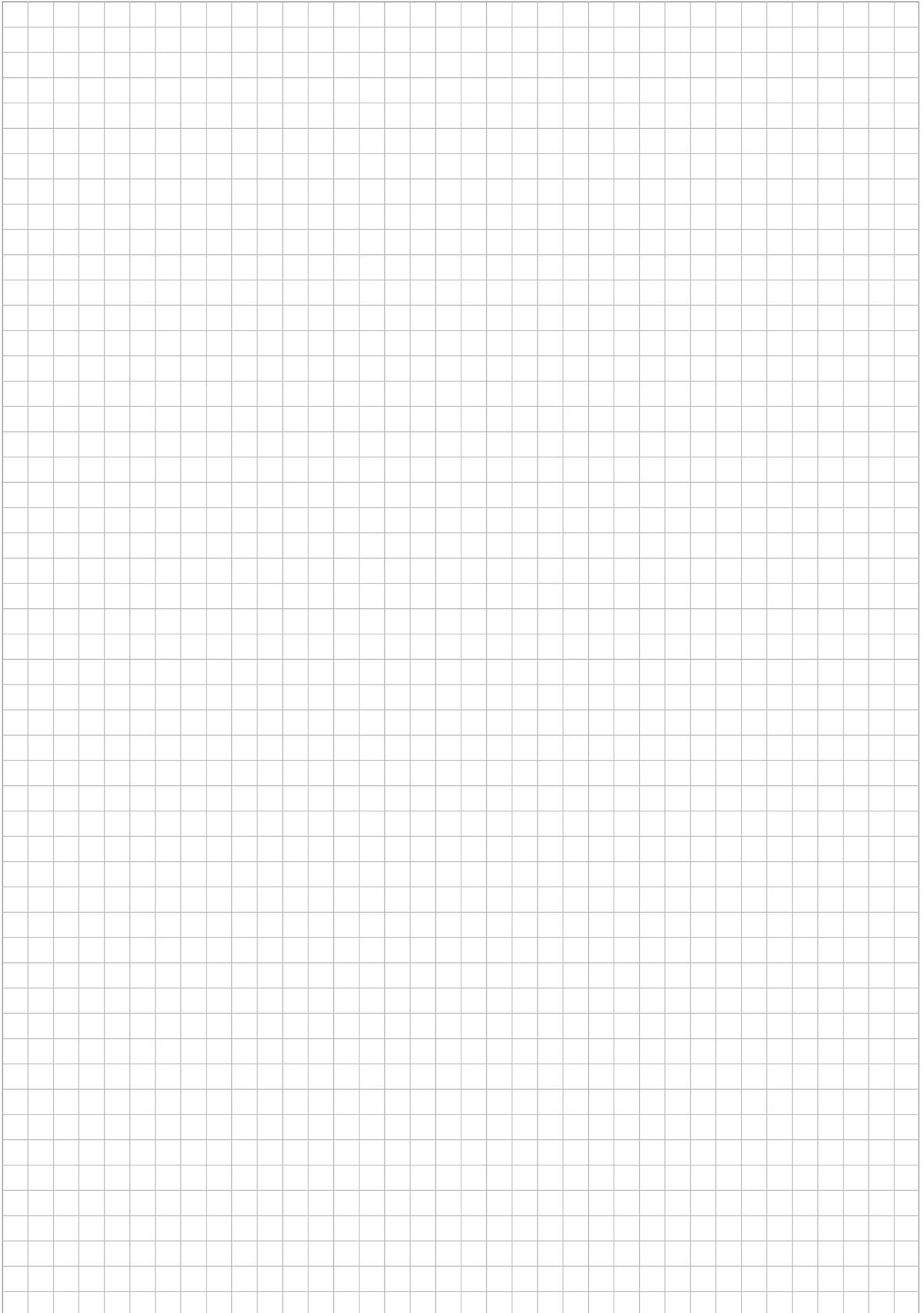
Numerical Index

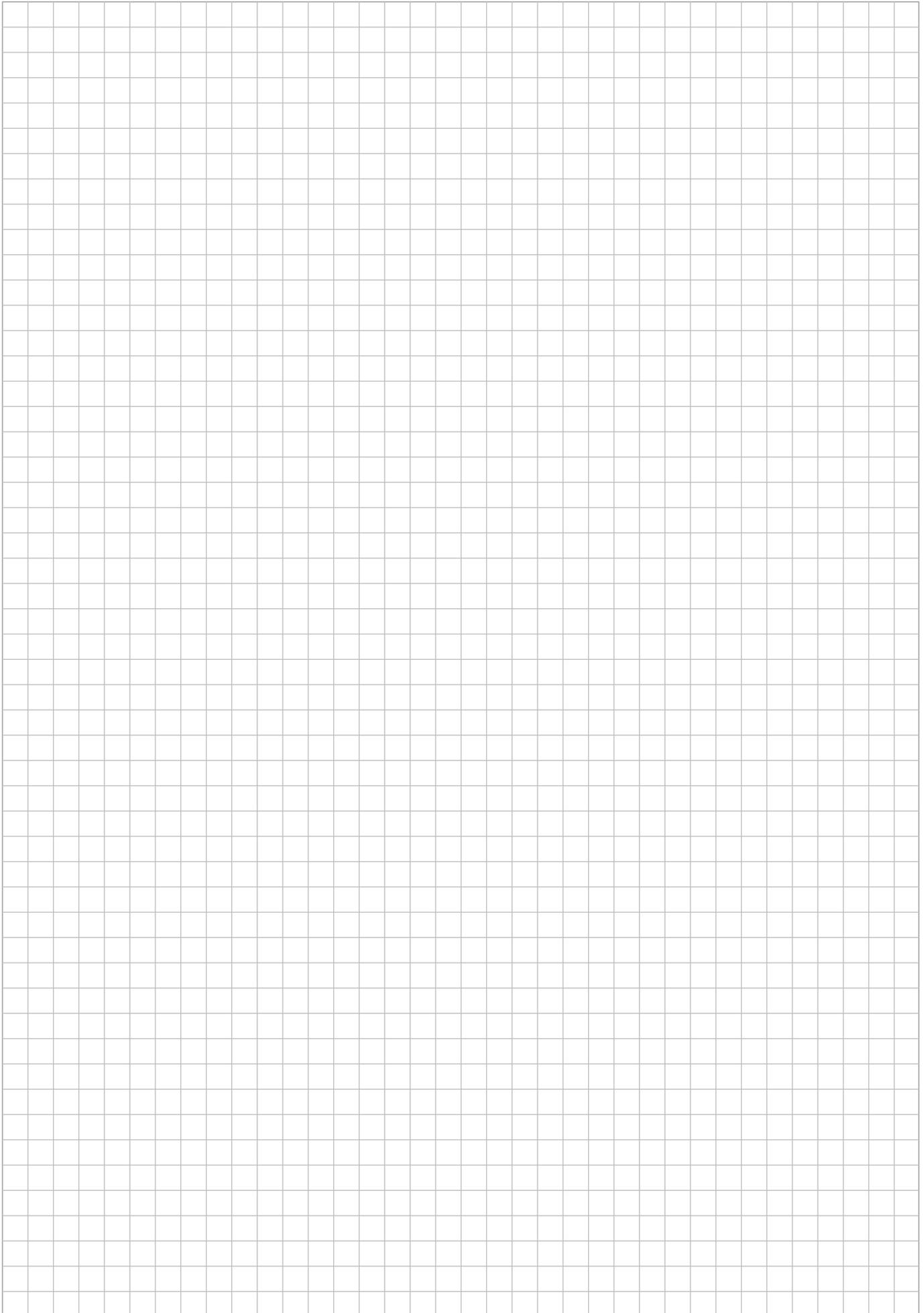
Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
PK252	346	RH12070	77	RU7050	403	SK120L	202
PK45	348	RH12095	77	RU9570	403	SK303P	197
PK60UNV	354	RH150120	77	S18	405	SK303S	197
PK60VP	340	RH15070	77	SAK10	128	SK30B	194
PK60VPFT	341	RH15095	77	SAK11	128	SK30L	194
Q10	402	RH185120	77	SAK12	128	SK30L	195
Q16	402	RH185150	77	SAK13	128	SK30L	200
Q2210	408	RH18595	77	SAK14	128	SK32B	195
Q2216	408	RH240120	77	SAK15	128	SK32L	196
Q2225	408	RH240150	77	SAK16	128	SK32L	195
Q2235	408	RH240185	77	SAK17	128	SK32L	200
Q2250	408	RH2510	77	SAK18	128	SK43B	196
Q2270	408	RH2516	76	SAK19	128	SK43L	201
Q25	402	RH300150	77	SAK20	128	SK43L	196
Q35	402	RH300185	77	SAK21	128	SK45B	195
Q50	402	RH300240	77	SAK22	128	SK47B	196
Q501	390	RH3510	77	SAK23	128	SK4L	201
Q70	402	RH3516	77	SAK24	128	SK50B	188
R10	401	RH3525	77	SAK25	128	SK65B	188
R120	401	RH400185	77	SAK30	129	SK65L	202
R150	401	RH400240	77	SAK31	129	SK65L	188
R16	401	RH400300	77	SAK32	129	SK82P	200
R185	401	RH5016	77	SAK33	129	SK82S	199
R2210	406	RH5025	77	SAK34	129	SKP1	243
R22120	406	RH5035	77	SAK35	129	SKP6	243
R22150	406	RH7025	77	SAK36	129	SKR1204	140
R2216	406	RH7035	77	SAK37	129	SKR1501504	140
R22185	406	RH7050	77	SAK38	129	SKR1503	140
R22240	406	RH9535	77	SAK39	129	SKR1504	140
R2225	406	RH9550	77	SAK40	129	SKR150504	140
R22300	406	RH9570	77	SAK41	129	SKR1854	140
R2235	406	RU10	403	SAK42	129	SKV10	47
R2250	406	RU12095	403	SAK43	129	SKV1525	47
R226	406	RU150120	403	SAK44	129	SKV16	47
R2270	406	RU16	403	SAK45	129	SKV25	47
R2295	406	RU185150	403	SAK46	129	SKV35	47
R25	401	RU2210	408	SAK47	129	SKV4	47
R35	401	RU2212095	408	SB501	391	SKV50	47
R50	401	RU22150120	408	SDG105	352	SKV6	47
R501	390	RU2216	408	SDG45	349	SR106	45
R502	390	RU22185150	408	SDG50	349	SR108	45
R6	401	RU22240185	408	SDG55	350	SR166	45
R70	401	RU22300240	408	SDG852	351	SR168	45
R95	401	RU223525	408	SDK105	352	SR256	45
RA5	375	RU225035	408	SDK120	353	SR258	45
RAL1	376	RU227050	408	SDK65	350	SR3510	45
RAL2	376	RU229570	408	SDK85	351	SR356	45
RAM2	375	RU240185	403	SH271	148	SR358	45
RAM3	375	RU3525	403	SH272	148	SR5010	45
RH12050	77	RU5035	403	SH273	148	SR506	45

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
SR508	45	ST33L	193	SV309	134	TK95	235
SR65	45	ST3B	192	SV309AK	134	TP1000	383
SR66	45	ST3L	192	SV309AKV	134	TP1000	423
SSG1202	372	ST5L	194	SV309V	134	TPC15	383
SSG853	372	ST9698	155	SV310	134	TT2	204
SSG902	372	ST9708	155	SV310AK	134	TT4	204
ST11B	190	ST9718	155	SV310AKV	134	TV10	36
ST11L	190	ST9728	155	SV310V	134	TV120	36
ST12B	191	ST9738	155	SV311AKNL	134	TV15	36
ST12L	191	STV10	46	SV312AKNL	134	TV150	36
ST13B	192	STV1525	46	SV312AKNLV	134	TV16	36
ST13L	192	STV16	46	SV315	134	TV185	36
ST15B	190	STV25	46	SV315V	134	TV240	36
ST15L	190	STV35	46	SV319AKNLV	134	TV25	36
ST1705	87	STV4	46	SV320	134	TV2.5	36
ST1710	87	STV50	46	SV320V	134	TV35	36
ST1715	87	STV6	46	SV322AKVK	134	TV4	36
ST1716	87	SV10	46	SV35	46	TV50	36
ST1716IS	85	SV100	132	SV4	46	TV6	36
ST1717	87	SV1525	46	SV400	136	TV70	36
ST1717IS	85	SV16	46	SV405V	136	TV95	36
ST1718	87	SV200	132	SV410	136	TW150	379
ST1718IS	85	SV200BK	132	SV410AK	136	TW50	378
ST1719	87	SV25	46	SV420	136	UA18	355
ST1719IS	85	SV300	133	SV420AK	136	UA18	331
ST1720	87	SV300V	133	SV420V	136	UA18	287
ST1720IS	85	SV301	133	SV430	137	UA22	355
ST1721	87	SV301AK	133	SV430AK	137	UA22	331
ST1721IS	85	SV301AKV	133	SV440	137	UA22	287
ST1722	87	SV301V	133	SV440AK	137	UA5	331
ST1722IS	85	SV302	133	SV50	46	UA5	355
ST1B	190	SV302AK	133	SV501	138	UA5	287
ST1L	190	SV302AKV	133	SV501V	138	UA6P	287
ST21B	189	SV302V	133	SV6	46	UA6P	355
ST21L	189	SV303	133	T15	380	UA6P	331
ST221215	410	SV303AK	133	TAS10	127	UC26	331
ST2220	410	SV303V	133	TAS16	127	UC26	333
ST2246	410	SV304AKNL	133	TAS25	127	UC26	355
ST228	410	SV304AKNLV	133	TAS35	128	UC26	287
ST22B	189	SV305	135	TAS50	128	UC40	331
ST22L	189	SV305AK	135	TAS6	128	UC40	355
ST23B	189	SV305AKV	135	TAS70	128	UC40	287
ST23L	189	SV305V	135	TAS95	128	UC40	333
ST2B	191	SV306	135	TC1S	383	UCACSR	355
ST2L	191	SV306AK	135	TEKP1	263	UCACSR	333
ST31B	191	SV306AKV	135	TF130L	383	UCACSR	287
ST31L	191	SV306V	135	TF70L	383	UCACSR	331
ST32B	192	SV307AKNL	133	THK120	342	UCD3215	333
ST32L	192	SV307V	133	THK18	336	UCD3215	287
ST33B	193	SV308	133	THK22	338	UCD3215	355

Numerical Index

Part No.	PAGE	Part No.	PAGE	Part No.	PAGE
UCD3215	331	UCUNC38	406	VHR25	96
UCD3515	333	UCUNC38	287	VHR300	96
UCD3515	355	UCUNC38	331	VHR35	96
UCD3515	287	UCUNC38	355	VHR353	98
UCD3515	331	UCUNC38	333	VHR354	99
UCD3575	355	UPD6	333	VHR400	96
UCD3575	287	UPD6	287	VHR50	96
UCD3575	331	UPD6	355	VHR503	98
UCD3575	333	UPD6	331	VHR504	99
UCF	355	VHD120	97	VHR70	96
UCF	287	VHD1203	98	VHR703	98
UCM10	355	VHD1204	99	VHR704	99
UCM10	287	VHD150	97	VHR95	96
UCM10	331	VHD1503	98	VHR953	98
UCM10	333	VHD1504	99	VHR954	99
UCM10	406	VHD16	97	ZAE10	404
UCM12	406	VHD185	97	ZAE16	404
UCM12	287	VHD1853	98	ZAE2210	411
UCM12	331	VHD1854	99	ZAE2216	411
UCM12	355	VHD240	97	ZAE224	411
UCM12	333	VHD2403	98	ZAE226	411
UCM5	406	VHD2404	99	ZAE4	404
UCM5	287	VHD25	97	ZAE6	404
UCM5	331	VHD300	97	ZAES10	405
UCM5	333	VHD35	97	ZAES16	405
UCM5	355	VHD353	98	ZAES2210	411
UCM6	287	VHD354	99	ZAES2216	411
UCM6	331	VHD400	97	ZAES224	411
UCM6	355	VHD50	97	ZAES226	411
UCM6	406	VHD503	98	ZAES4	405
UCM6	333	VHD504	99	ZAES6	405
UCM8	355	VHD70	97	ZST3	379
UCM8	331	VHD703	98		
UCM8	406	VHD704	99		
UCM8	333	VHD95	97		
UCM8	287	VHD953	98		
UCN2980	355	VHD954	99		
UCN2980	331	VHR120	96		
UCN2980	333	VHR1203	98		
UCN2980	287	VHR1204	99		
UCUNC12	406	VHR150	96		
UCUNC12	355	VHR1503	98		
UCUNC12	287	VHR1504	99		
UCUNC12	331	VHR16	96		
UCUNC12	333	VHR185	96		
UCUNC14	331	VHR1853	98		
UCUNC14	333	VHR1854	99		
UCUNC14	406	VHR240	96		
UCUNC14	355	VHR2403	98		
UCUNC14	287	VHR2404	99		





Easier to find, what's needed.

A system from connecting material to tools.

Connecting material

Electrical connection systems
Copper tubular cable lugs and connectors

Tubular cable lugs, copper 0.75 - 6 mm²
standard type
■ for fine stranded conductors

Characteristics

- With inspection hole
- Annealed material optimises material and crimping properties
- Flat contact surface and precise screw ends for simple cable insertion

Material

- Copper to EN 13800
- Surface
- tin plated

Cross section mm ²	bolt	Part No.	d1	Dimension mm										Weight 100 pcs		
				F	G	H	I	J	K	L	M	N	g	kg		
0.75	M3	91R3	1.3	6.0	3.2	2.8	3.25	4.0	12	0.060	100					
	M4	91R4	1.3	6.5	4.3	2.8	4.00	5.0	13	0.060	100					
	M5	91R5	1.3	7.5	5.3	2.8	4.75	5.5	14	0.080	100					
1.5	M3	92R3	1.8	6.5	3.2	3.3	3.25	4.0	12	0.080	100					
	M4	92R4	1.8	6.5	4.3	3.3	4.00	5.0	13	0.080	100					
	M5	92R5	1.8	7.5	5.3	3.3	4.75	5.5	14	0.080	100					
2.5	M3	93R3	2.3	9.0	6.5	3.3	6.50	6.5	16	0.090	100					
	M4	93R4	2.3	7.5	3.2	4.2	3.25	4.0	12	0.120	100					
	M5	93R5	2.3	7.5	4.3	4.2	4.00	5.0	13	0.120	100					
4	M3	93R6	2.3	8.5	5.3	4.2	6.50	6.5	16	0.150	100					
	M5	93R8	2.3	13.0	8.5	4.2	7.75	9.5	20	0.180	100					
	M4	94R4	3.0	8.5	4.3	5.0	4.75	5.5	18	0.210	100					
6	M3	94R5	3.0	9.0	5.3	5.0	4.75	6.0	18	0.213	100					
	M5	94R6	3.0	10.0	6.5	5.0	6.50	6.5	19	0.220	100					
	M4	94R8	3.0	13.0	8.5	5.0	8.50	9.5	22	0.280	100					
6	M3	95R4	4.0	9.5	4.3	6.0	5.00	5.5	18	0.290	100					
	M5	95R5	4.0	9.5	5.3	6.0	6.00	6.0	19	0.300	100					
	M6	95R6	4.0	10.0	6.5	6.0	7.00	6.5	19	0.300	100					
M8	95R8	4.0	14.0	8.5	6.0	8.50	9.5	22	0.320	100						

Tool: see chart page 49

Tool recommendation

Electrical connection systems
Copper tubular cable lugs and connectors

Tool application chart

Tubular cable lugs, butt-connectors, parallel connectors and T-connectors "standard type" and tubular cable lugs for switchgear connections made from Cu

Crimping range corresponds to nominal cross-section mm ²	Tools	Category	Tool type						Crimping profile	Page (Tool)
			Mechanical crimping tools	Mechanical, electrical, pneumatic crimping tools with interchangeable dies/heads	hand hydraulic crimping tools	Battery powered crimping tools	Hydraulic crimping systems	Hydraulic crimping heads		
0.5-6	KTS									232
0.75-2.5	KP	+KP232		*						242
	KL	+KP232		*						242
	EKH	+KP232		*			*			298
0.75-10	TE	+KP232		*						263
	KP	+KP232		*						264
	KP	+KP232		*						245
0.75-16	K5			*						294
	EX			*			*			296
	EX			*			*			296
1-4	K2			*					233	
4-10	K5			*						292
	KP	+KP242		*						242
	KL	+KP242		*						298
6-50	KP	+KP242		*			*			263
	TE	+KP242		*						264
	KP	+KP242		*						235
6-10	K5			*						238
	K2			*						252
	K5			*						300
6-120	EK			*						248
	K18			*						270
	HW			*						304
6-185	EK			*						338
	PK			*			*			338
	TH	UNV + UA18		*						286
6-240	TH	UNV + UA18		*						330
	HW	UNV + UA18		*						354
	EK	UNV + UA18		*			*			302
6-300	PK			*						250
	EK			*						272
	HW			*						306
6-300	PK	UNV + UA22		*						286
	TH	UNV + UA22		*			*			330
	HW	UNV + UA22		*				*		354

See next page

- 1 Select connecting material.
- 2 Via cross-reference to the tool chart.
- 3 The pictogram of the connecting material refers to the appropriate tool chart with recommended tools.
- 4 Select the preferred tool type.
- 5 Pre-selection of suitable crimping tools considering crimping range and crimping profile.
- 6 Page number indicated refers to the crimping tools.



Crimping tools

Crimping and cutting tools
Battery-operated crimping, cutting and universal tools

7 EK 60/22-L
Battery powered crimping tool 6 - 300 mm²
Superior performance by special strong motor system and 10V / 2.0 Ah Li-Ion Battery

8 Available dies for EK 60/22-L

Suitable for	Connection material	Crimping range mm²	Crimp profile	Page
Stainless steel tubular cable lugs and connectors	VA	0.5 - 16		407
Insulated pin terminals				407
Tubular cable lugs and connectors		10-150		407
Fine stranded conductors		10-70		407
Tubular cable lugs and connectors for solid conductors		1.5-16		407
Tubular cable lugs and connectors, Ni, VA				407
Stainless steel tubular cable lugs and connectors	VA	0.5 - 16		407
Nickel tubular cable lugs and connectors	Ni	0.5 - 16		407
Copper compression cable lugs and connectors to DIN	DIN	10 - 50		407
Compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN				407
Double compression cable lugs		6-300		408
Terminals, connectors and pin terminals to DIN-Cu	DIN	2 x 50 - 2 x 70		408
Solderless terminals (DIN 46234), connectors and pin terminals (DIN 46230) acc. to DIN				408
Insulated solderless terminals		10-70		408
Sleeves for compressed conductors and sector-shaped conductors		10-70		408
Pre-rounding dies for sector-shaped Al and Cu conductors				408
Aluminum compression cable lugs and connectors to DIN	Al	10em-300se/240um		409
Aluminum compression cable lugs and connectors to DIN				409
Compression joints connections for Aldry-conductors DIN 50182, Al-conductors DIN EN 50182, 120 - 185 mm²	Al	10-240		409
Compression joints DIN 49085, part 3 for Al-steel conductors DIN EN 50182	Al	25 / 4-		409
Aluminum/copper compression cable lugs and connectors	Al	120 / 20		409
Aluminum/copper compression cable lugs and connectors				409
Clamps and screw connectors	Al/Cu	10-240		410
Clamps, C-type				410
Clamps, H-type		4-50		410
Cable end sleeves		70		410
Cable end sleeves				410
Twin cable end-sleeves		10-240		411
Cable end-sleeves, for fine stranded conductors		2 x 4 - 2 x 16		411
Twin cable end-sleeves for fine stranded conductors		10-240		411
Please observe the restrictions in the technical index when crimping connectors!		2 x 4 - 2 x 16		

306

307



Crimping dies

Crimping dies
Series 22

22 Klauke

K 22, HK 60/22 L, HK 60 UNV + UA22, EK 6022 L, EK 60 UNV + UA22, THK 22, PK 22, PK 60 UNV + UA22

10 Crimping dies R 22

mm²	Part No.	Crimp width mm
6	R226	5
10	R2210	5
16	R2216	5
25	R2225	5
35	R2235	5
50	R2250	5
70	R2270	5
95	R2295	5
120	R22120	5
150	R22150	5
185	R22185	5
240	R22240	5
300	R22300	5

11 Crimping dies IS 22

Suitable for:
 Insulated tubular cable lugs and connectors
 Insulated pin terminals

mm²	Part No.	Crimp width mm
10	IS2210	5
16	IS2216	5
25	IS2225	5
35	IS2235	5
50	IS2250	5
70	IS2270	5
95	IS2295	5
120	IS22120	5
150	IS22150	5

407

7 Select crimping tool.

8 For tools with interchangeable dies selection of crimping dies is carried out as per chart of available dies.

9 The indicated page in the chart refers to the crimping dies considering the connecting material to be crimped.

10 Choose the correct chart from pictograms for connecting material and crimp profiles.

11 Choose from the chart the appropriate crimping die for the nominal cross section to be crimped.

Connecting material

	Copper tubular cable lugs and connectors – standard type		Stainless steel tubular cable lugs and connectors		Insulated solderless terminals		C-shaped clamps
	Insulated cable lugs and connectors “standard type”		Nickel tubular cable lugs and connectors		Copper sleeves for compacted conductors and sector shaped conductors		Cable end-sleeves
	Tubular cable lugs and connectors for fine stranded conductors		Copper compression cable lugs and connectors to DIN		Aluminium compression cable lugs and connectors to DIN		Insulated terminals
	Tubular cable lugs and compression joints for solid conductors		Terminals, connectors and pin terminals to DIN – Cu		Aluminium/copper compression cable lugs and connectors		Non-insulated receptacles

Crimping profiles

	Hexagonal crimping		Roll crimping		Oval crimping		Quad-point indent crimping
	Round crimping		Indent crimping		Four point crimping		Trapezoid crimping
	Indent crimping tubular cable lug		Special trapezoid crimping		Indent crimping cable end sleeves		
	Gas-tight oval crimping		Square crimping		Indent crimping compression cable lugs		

Crimping and cutting tools

	6ton	Crimping force		Al/St cables		Manual retraction stop		Workplace illumination
	300 mm ²	Max. crimping range		2-component plastic housing		Manual retraction stop with teach-in function		Audible error message/ Intelligent Pressing System
	Ø32mm	Max. cutting performance		Rotating head		Electronic control		Environmentally-friendly hydraulic oil
	25mm	Opening width, C-heads		Two stage hydraulics		Maintenance indicator		Easy handling / one-button operating concept
	Narrow crimping			Quick stop		NiMH battery		Evaluation function via USB adapter
	Wide crimping			Automatic retraction		Li-Ion battery		
	Centering system			Manual retraction		Rated voltage		
	Cu Al	Copper and aluminium cable		Automatic positioning control		Energy saving function		

Hand tools

	Slot		without chamfer		Two-way key bit		Triangle
	PH (cross-slotted)		Hexagon socket		with chamfer		ESD
	SQ		PZ (cross-slotted)		Groove		Stepped external square
	Torx Plus		Torx TR		Clamp		
	Half-moon		Plus-minus		Torx		

Test symbols and categories

	VDE		UL		Measuring category 1		Measuring category 4
	IEC		Insulated acc. to IEC 60900		Measuring category 2		GS
	CSA		CE		Measuring category 3		True RMS measurement

Key benefits for you, our partner.



Klauke unites a great number of distinctive competencies from various areas. In addition we co-operate with different partners to offer you even more safety and competence.



The 'Elektromarken' initiative is a partnership between strong brands and is synonymous for maintaining important values such as quality, reliability, performance, innovation and design. Klauke provides a great number of argument aids for trade and instruction advice for electrical engineers.



The E-Check safety initiative with its recognised test seal offers detailed energy-saving advice tests electrical installations and confirms their sound condition to industrial inspectorates, trade associations and insurance companies.



The trade gateway for electricians. Visit www.voltimum.de at any time for key information, first-class advice and reliable contacts with trade partners.



Strong brands for your success:

Klauke[®]

 **GREENLEE**[®]
A Textron Company

Gustav Klauke GmbH

Auf dem Knapp 46
D-42855 Remscheid

Phone: +49 (0) 2191 / 907 - 0
Fax: +49 (0) 2191 / 907 - 205
E-mail: info@klauke.textron.com
Internet: www.klauke.com