**Hygiene takes top priority in food production**

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A few industries are multifaceted and demanding when it comes to the requirements and operating conditions as the Food & Beverage industry. The strict hygiene and cleanliness requirement that exists in the food and beverage industry also applies to its machineries and electrical components. Food & Beverage industry represents one of the most challenging industrial environments. Hygiene taking the top priority, the production facilities needs to adhere to the principles of Hygienic Design.

The first requirement to ensure hygienic processing is selecting the right components. The **hygienic design zone that is direct contact zone and splash zones,** regularly comes into contact with foodstuffs including stirrers, filling nozzles, blades & cutters and spraying areas. The **non-product zones** are there as in a factory which do not come in direct contact with the foodstuffs, however, these zones are often cleaned which may in turn result in high chemical and mechanical stress. The other aspects of this industry include increased regulations governing production, processing, packaging and labeling; presence of extreme temperatures and humidity; and harsh processes of high pressure cleaning and sterilization.

To meet the food and beverage industry challenges, factories must use products that perform well in these complex environments. The products and solutions must be resistant to a whole host of chemical, thermal and physical stress, so that they can fulfill their functions reliably even when used in refrigerated areas and damp environments. As a result, resistance to aggressive industrial cleaning and alkali agents which are commonly used during the cleaning processes becomes particularly important.

There are complex requirements for cables, connectors, cable glands, conduits and cable accessories in this environment as well. These products that get into the food production or packaging environment needs to be -

* **Chemical Resistant:** These products are often subjected to strong cleaning agents such as corrosives, alkalis and dry ice. Hence, the products need to be produced with material which is chemical resistant.
* **Temperature Resistant:** The food and beverage production environment include high temperature zones in baking areas, and in pasteurization/sterilization and also, low temperature zones in refrigeration areas. In such a production scenario it becomes even more critical to have the cables, connectors, glands and other components resistant to varying temperatures to provide adequate protection.
* **High IP Rating.** Products that can withstand aggressive environments with high pressure, high temperature, daily cleaning with repeated connecting and disconnecting are needed to secure watertight connections.
* **Hygienic Design.** As regular cleaning is a part of the daily process, products should be free of grooves and uneven surfaces where food/particles get collected. Hence the design becomes critical and the products also need to be corrosion resistant and withstand wash downs.

As a long term partner to the mechanical and plant engineering industry, LAPP has a comprehensive range of standards and specialized products for the F&B industry. Our proven and tested range of products has a solution for almost every application related to dairy processing, meat and fish processing, baking and confectionery processing, bottling and packaging.

LAPP offers a wide range of highly resistant and flexible cables, industrial connectors, cable glands, as well as cable accessories. The components meet strict international requirements, such as EHEDG design specifications or compatibility with ECOLAB® cleaning agents.

There is, however, no universally applicable standard solution for the Food & Beverage production environment. Each scenario needs to be individually assessed. Hence, it becomes crucial to choose the right supplier who can offer a high quality and a reliable connectivity solution. LAPP, stands out with its wide portfolio of products and solutions that includes power, control and data cables, connectors, cable glands, conduits and accessories which fulfill the requirements of hygienic design.