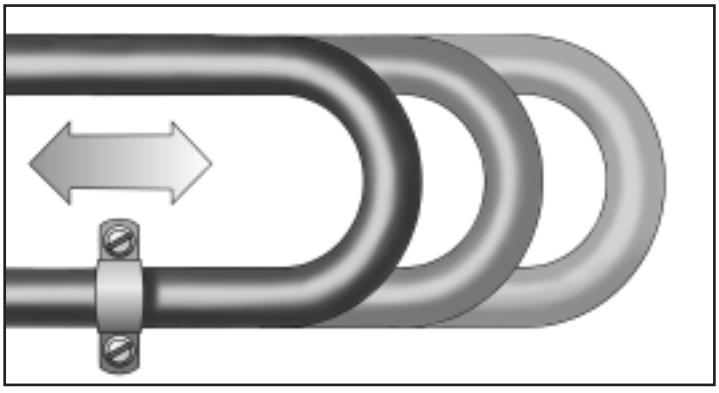
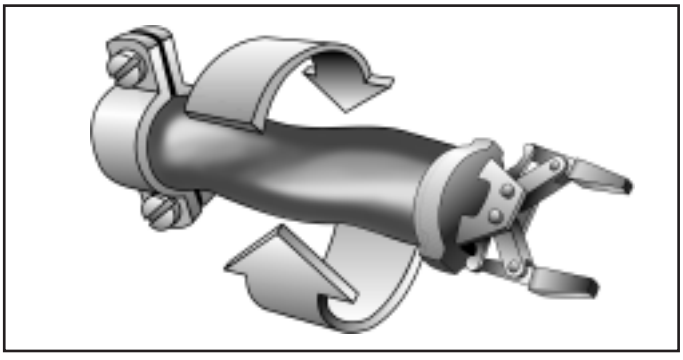
Typical Motions for Flexing Cables

The flex type and application of the cable will determine how the cable is manufactured. When the cable is designed with a special flexing application, the cable has to be manufactured on a unique cabling machine that will minimize any back-twist on the cable core.

CONTINUOUS FLEX: The cable is rolling/flexing back and forth in a linear motion. Usually these cables are used in C-track applications where the bend radius is designed for 10 x the cable diameter or less.



TORSIONAL FLEX: The cable is twisted clockwise and counter-clockwise with angles varying from 90 to 360 degrees. This type of flexing usually occurs on robotic equipment that is being twisted and flexed constantly for a long period of time.



BENDING FLEX: The cable is flexed back and forth with one of the ends being stationary. This is referred to in the industry as a "tick-tock" motion. The majority of the stress on the cable is on the two focal points where the bend and the load are applied.