

PROPERTIES OF WIRE ROPE SUPPORT SYSTEMS

Wire rope systems may appear different from each other based on the manufacturer. However, they are all made up of the same basic three components.

WIRE ROPE: The wire rope is the cable with which the application is attached to the structure. Different sizes of wire ropes are used for different load ratings. Common sizes in use include 1.5 mm, 2 mm, and 3 mm diameter. Because the cable is made up of several strands of steel wire, it has a very high strength to weight ratio. Installation of typical lightweight mechanical, electrical and datacom assemblies does not require a robust cable, but product specifications should be consulted for the specific limitations of the system.



LOCKING DEVICE: The locking device is the piece of hardware that holds the wire loop in place. Locking devices may look or install differently based on the manufacturer. Some locking devices are sold with small tools called “keys” that lock up or free the cable. Other locking devices may be keyless and simply require a manual manipulation to move the cable through it. Much like the cable, locking devices have their own static load rating. The load rating can be different than that of the cable, and installers should default on the lowest of the two.

Inside the locking device, the wire is gripped with one or two spring loaded cams or jaws that hold the wire in place. A single-cam device holds the wire by pressing it into the inside wall of the housing. A double-jaw device holds the wire by clamping it between two spring loaded jaws. Double-jaw devices generally have a stronger grip on the wire than single-cam devices.

END FITTINGS: End fittings are the hardware at the end of the wire rope that is made for a specific application. Some examples of end fittings include: angle brackets, shot-fire pin brackets, and hammer-on flange clips. When used in the correct setting, end fittings can install quickly and provide a secure attachment to almost any structure.