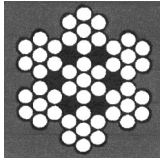


Pendant Systems

The Lighting Suspension Specialists www.PendantSystems.com P-215-638-8552 F-215-638-8554

Cable Gripper & Cable Strength Information

Cable Strength Relationships between Gripper & Cable Diameter for Loading Requirements



7 X 7 Cable

Information

Cable (also known as wire rope) is available in many different types of construction. Wire rope consists of strands laid helically around a supporting core. Individual strands are composed of a number of wires laid helically around a center (core) of wire. The lay of a cable is defined by the direction in which the strands are laid into the rope, and by the direction the wire is laid into strands.

Cable that is 7 X 7 refers to the number of strands (7) which has (7) wires each. The center strand (core), with 6 strands laid around the core. See illustration on the left.

Grippers can be used to suspend objects safely at angles of up to 60° from the vertical. However, suspension at angles does reduce the safe working load per the table to the right.

	Vertical	15°	30°	45°	60°
Load	100%	96%	86%	70%	50%
De-rating of Load	0%	4%	14%	30%	50%

Safety Recommendations

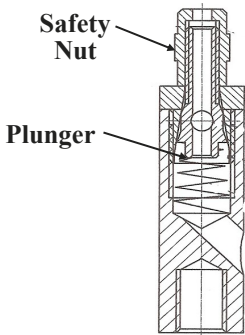
- Do not use for loads outside the stated range of the product
- Do not exceed the safe working load

- Do not apply paint or other coatings to cable
- Do not use in Chlorinated atmospheres
- To facilitate height adjustments, install the object below and adjust upwards to the desired level
- Inspect periodically and replace if worn, distorted, or damaged

Cable Gripper Designs

Within each cable gripper is a plunger that a cable slides through. There are three balls that surround the outside diameter of the cable as it passes through the gripper. When weight is applied to the gripper when mounted, the tension forces the balls to grab the cable in a pinching movement.

In normal operation the more the tension, the more the gripping. Some grippers come with a safety nut that locks the movement in both directions eliminating the potential for a release if the plunger is accidentally depressed by an end user.



Diameter ¹	Description ²	Break Strength ³	Gripper Slippage ⁴	Maximum Safe Load ⁵
1/32"	Micro Series	132	85	12
3/64"	Micro / MGR Series	270	227	30
1/16"	MGR-SE Side Exit Series	480	318	50
1/16"	MGR / GR Series	480	328	50
3/32"	GR Series	920	532	100

Notes:

1. Cable diameter is expressed in fractions of an inch and relates to the US standard of referring to cable diameters.
2. Describes series of Gripper Part#. The cable used in all tests conducted by Pendant Systems was 7 x 7 Galvanized steel cable.
3. The break strength is the minimum breaking force in pounds for that particular diameter of cable.
4. Gripper Slippage is the average force in pounds when the testing equipment sensed slippage within the gripper. Normally the cable slips, and the gripper holds again within a very small distance of cable.
5. Maximum safe load is based on 20% (percent) of the lowest observed force for that diameter cable. For multiple cables, add the weights together. Example for a linear fixture using 2 each 1/16" cables, 2 X 40 = 80 pounds of fixture with a 80% (percent) safety factor. Pendant Systems is conservative with loads but keep in mind that most junction boxes only support 50lbs & fan rated boxes support up to 75lbs.
6. Pendant Systems Grippers are not recommended for outdoor use or exposure to water, wind, chemical environments (such as swimming pools) or continuous movement (such as in front of a HVAC vent).
7. Use only uncoated 7 x 7 or 7 x 19 uncoated stainless or galvanized steel aircraft cable.
8. Weight guidelines are for static loads at 5% or less of an angle. For angled suspension, use our CC-Slot cable coupler or ADJ foot adjustable grippers.
9. Always allow at least 1" of cable to pass beyond the body of the gripper.

Disclaimer:

The information shown on the chart above is based on independent tests conducted for Pendant Systems. The information shown may vary with gripper model and cable diameter. Pendant Systems recommends each customer determine their individual specific requirements. Please contact Pendant Systems for additional information if required.