

## Safety and Working Load Factors for Wire Mesh Grips

The broad application of Kellems grips on a wide variety of objects requires that adequate safety factors be used to establish working loads. The approximate breaking strength of a Kellems grip represents an average calculation based on data established from actual direct tension testing done in our engineering laboratories.

It is impossible to catalog or guarantee a safety factor suitable for all applications as operating conditions are never the same. The tension, diameter, movement, number of objects gripped, gripping surface, and the attachments used are just some of the factors which vary with each application. These factors, together with the effects of abrasion, corrosion, prior use or abuse and any other variables of a specific application, must be considered by the user and the grip replaced as appropriate. Where the

conditions of the application are not well defined or known, or where risk of injury to persons or property is involved, a greater safety factor should be utilized.

### IMPORTANT:

**Under normal conditions, Kellems' recommended factor of safety is five for catalog listed pulling grips, and ten for catalog listed support grips.**

Any warranty as to quality, performance or fitness for use of grips is always premised on the condition that the published breaking strengths apply only to new, unused grips, and that such products are properly stored, handled, used, maintained, and inspected by the user at a frequency appropriate for the use and condition of the grip.

## Examples

Grip Style	Approx. Breaking Strength Lbs. (N)	Safety Factor	Max. Recommended Load Lbs. (N)	Catalog Number
Pulling Grips	27,200 (120,986)	5	5,440 (24,197)	<b>03301027</b>
Support Grips	1,610 (7,161)	10	161 (716)	<b>02202019</b>

The maximum recommended working load is the tension to be exerted on the grip in application with a margin of safety to take care of unforeseen and unusual circumstances.

It is the end-user's decision to determine how much of a safety factor is acceptable for the application.

The metric unit of measure (force) for breaking strength and load is newtons (N). To convert from newtons to the metric unit of weight (kilograms) the conversion factor is 9.808 newtons/kilogram.

## Support Grip Materials

Material	Features	Grip Type
Tin-coated bronze wire	<ul style="list-style-type: none"> <li>• Corrosion resistant for normal outside areas</li> <li>• Non-magnetic</li> <li>• Moderate strength</li> </ul>	<ul style="list-style-type: none"> <li>• Support grips</li> <li>• Service drop grips</li> <li>• Conduit riser grips</li> </ul>
Stainless steel wire (302-304)	<ul style="list-style-type: none"> <li>• High strength</li> <li>• Corrosion resistant</li> </ul>	<ul style="list-style-type: none"> <li>• Support grips</li> <li>• Hose containment grips</li> </ul>
Galvanized steel wire	<ul style="list-style-type: none"> <li>• Slightly magnetic</li> <li>• Not subject to continuous outside environment</li> </ul>	<ul style="list-style-type: none"> <li>• Bus drop grips</li> </ul>
Non-metallic aramid fiber	<ul style="list-style-type: none"> <li>• Corrosion resistant for highly corrosive gases</li> </ul>	<ul style="list-style-type: none"> <li>• Support grips</li> </ul>

## Approvals

CSA Certifications are indicated on appropriate product catalog pages.

*Note: It is always recommended that the tail end of the grip be banded after the installation on the cable to prevent accidental release of the mesh. See page W-16 for end bands.*