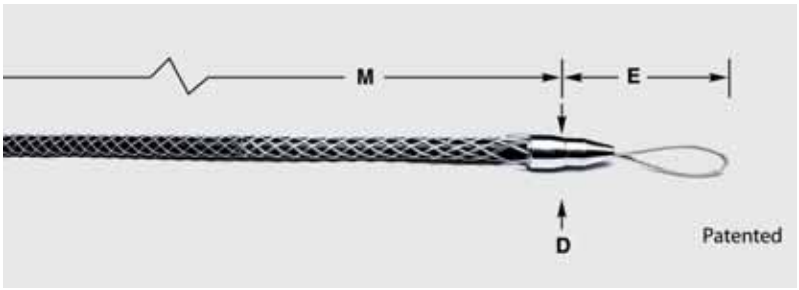
Fiber Optic Cable Pulling Grips

Double/Single Weave Mesh, Galvanized Steel, for Outside Plant Cable

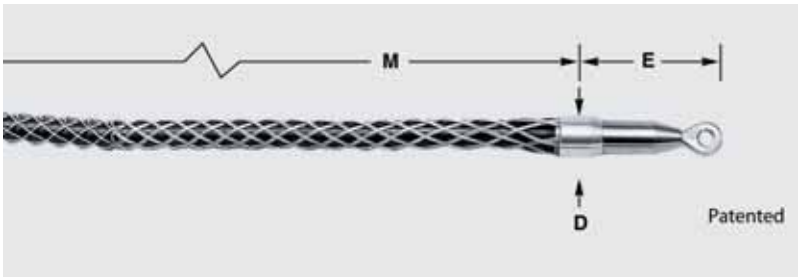


WARNING!
It is important that you read all breaking strength, safety and technical data relating to this product on pages T-54 through T-57.

F-O Pulling Grip, Flexible Eye

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs. (N)	E Approx. Inches (cm)	M Approx. Inches (cm)	D Approx. Inches (cm)	Catalog Numbers
.10"-.22" (.25-.56)	1,000 (4,448)	5.5" (14)	9" (23)	0.8" (2)	**033291000**
.21"-.35" (.53-.89)	1,500 (6,672)	5.5" (14)	14" (36)	0.8" (2)	**033291001**
.32"-.48" (.81-1.22)	2,200 (9,786)	6.0" (15)	18" (46)	0.9" (2.29)	**033291002**
.42"-.61" (1.07-1.55)	2,800 (12,454)	6.0" (15)	21" (53)	0.9" (2.29)	**033291003**
.53"-.74" (1.35-1.88)	3,300 (14,678)	6.5" (17)	24" (61)	1.3" (3.30)	**033291004**
.64"-.87" (1.63-2.21)	4,700 (20,906)	6.5" (17)	27" (69)	1.3" (3.30)	**033291005**

E-Eye length *M-Mesh length at nominal diameter*



F-O Pulling Grip, Swivel Eye

Cable Diameter Range Inches (cm)	Approx. Breaking Strength Lbs. (N)	E Approx. Inches (cm)	M Approx. Inches (cm)	D Approx. Inches (cm)	Catalog Numbers
.21"-.35" (.53-.89)	1,500 (6,672)	4.0" (10.16)	14" (35.56)	0.9" (2.29)	**033291008**
.32"-.48" (.81-1.22)	2,200 (9,786)	4.0" (10.16)	18" (45.72)	0.9" (2.29)	**033291009**
.42"-.61" (1.07-1.55)	2,800 (12,454)	4.0" (10.16)	21" (53.34)	0.9" (2.29)	**033291010**
.53"-.74" (1.35-1.88)	3,300 (14,678)	4.5" (11.43)	24" (60.96)	1.3" (3.30)	**033291011**
.64"-.87" (1.63-2.21)	4,700 (20,906)	4.5" (11.43)	27" (68.58)	1.3" (3.30)	**033291012**

E-Eye length *M-Mesh length at nominal diameter*

Kellems® Wire Management Products

Technical Information

Fiber Optic Pulling and Support Grips

Kellems has wide experience with grips for the new technology of fiber optic cable. As the industry leader in producing wire mesh grips for the stringent requirements of fiber optic applications, Kellems has developed several series of grips for use with fiber optic communications cable.

These grips include pulling grips with built in swivels, grips with steel ends to protect fragile cable ends, grips with low profiles to pull cables in tight places and the OPTISOK™ an effective tool to place preterminated cables. Also available are grips to support fiber optic cable.

Select the Correct Fiber Optic Grip

Each Kellems grip is designed to work on a specific range of cable diameters.

Step 1 Determine your cable outside diameter.

Step 2 Find the grip size that encompasses your cable diameter.

Step 3 Whenever possible, use a closed mesh that assembles over the cable end. If the cable end is not available, use a split mesh.

Step 4 Where available, select an eye style that suits your needs.

Step 5 Estimate the tension to be put on the grip, establish the working load you require and compare this to the listed approximate breaking strength of the grip to insure that the grip will be strong enough.

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.

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.

For grip applications on materials other than those that the grips have been specifically designed for, consult the factory.

Examples

Grip Style	Approx. Breaking Strength Lbs. (N)	Safety Factor	Max. Rec. Load Lbs. (N)	Catalog Numbers
Pulling	2,500 (11,120)	5	500 (2,224)	**033291196**
Support	400 (1,779)	10	40 (178)	**022291004**

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 to for the application.

Fiber Optic Grip Materials

Material	Features	Product Group
Galvanized steel wire	• High strength • Not subject to continuous outside environment	• Pulling Grip
Tin-coated bronze wire	• Corrosion resistant for normal outside areas • Non-magnetic • Moderate strength	• Support grips
Non-metallic braid	• Superior flex life • Non-conductive • Corrosion resistant • Moderate strength	• OPTISOK™

Approvals

CSA Certification is indicated on appropriate product catalog pages.