



## Duct Rodders

A & M duct rodders combine ease of operation and reliable performance to help increase the efficiency of your rodding operations

Our duct rodder cages have been designed to be lighter weight for easy handling in the field. They feature sturdy construction and a hand-operated wheel brake. They can be used on their side as well as upright. Larger cages come with flotation wheels for added mobility. Cage sizes are matched to suit the rod you order.

## End Fittings Included

A & M duct rods come equipped with a threaded end fitting on each end, plus a tapered head on the outward end. A & M offers a number of optional end fitting accessories for additional applications.

## Easy to Order

Simply refer to the charts in this section based on the diameter of rod you need. A & M provides 48-hour turnaround on most rodder orders.

## Three Types of Rod

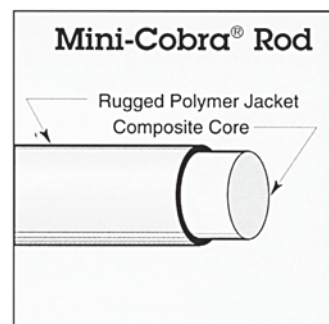
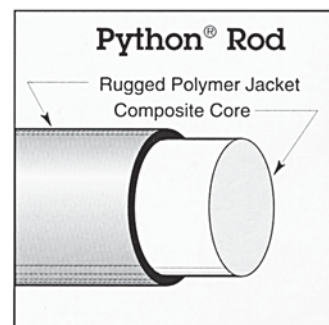
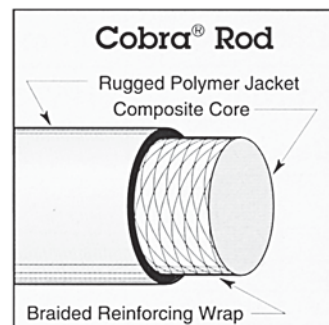
A & M Sales offers three types of duct rod: **Cobra®**, **Python®**, and **Mini-Cobra®**. Each has a glass reinforced composite core jacketed in a rugged plastic coating to ensure long life. All three have excellent flexural strength, compressive strength, fatigue resistance, and memory. They also have favorable electrical and thermal properties that make them safe for use in cable-occupied duct. They are suitable for pulling back winch line or small diameter cable.

**COBRA®:** Cobra is our highest quality rod, designed for heavy-duty applications. It gets its extra strength from a unique construction process that ensures greater rigidity and strength, enabling it to endure the additional force required for long duct runs with multiple bends and sweeps. A braided wrap of reinforcing fibers increases its rigidity and helps bond the core with the outer plastic coating. The coating is made from a polymer blend for greater toughness and superior abrasion resistance to ensure extra long life. Includes one male and one female end fitting, and a tapered head.

**PYTHON®:** Our Python rod is best suited for less demanding applications. It has strength properties similar to our Cobra rod, but is more flexible. Also, like the Cobra, it has a heavy-duty outer plastic coating to resist abrasions and reduce wear. Includes one male and one female end fitting, and a tapered head.

**MINI-COBRA®:** Our Mini-Cobra rod includes our 3/16" (5 mm) and 1/4" (6 mm) diameter rods used primarily for smaller duct sizes and shorter runs. The rod has the same flexibility and strength features of our Python rod and comes wound in 16" (406 mm) and 24" (610 mm) cages in 50' (25 m) to 600' (200 m) lengths. Includes two male end fittings and two tapered heads.

**REPLACEMENT ROD:** Replacement rod is available for all A & M Duct Rodders. Have your existing duct rodder part number ready to ensure an accurate match. Replacement rod 3/16" (5 mm) to 1/4" (6 mm) comes with end fittings and tapered heads taped in a hand coil. The 5/16" (8 mm) to 9/16" (13 mm) rod comes with end fittings and a tapered head in a disposable replacement cage.



## Duct Rod Specifications

Duct Rod Dia. in (mm)	Duct Rod Pull Strength lbs (n)	Core O. D.** in (mm)	Coating O. D.* in (mm)	Min. Bending Radius in (mm)
3/16(5)	200(890)	.125(3.2)	.187(4.8)	3(76)
1/4(6)	350(1,557)	.187(4.8)	.250(6.3)	5(127)
5/16(8)	950(4,226)	.237(6.0)	.312(7.9)	7(178)
7/16(11)	950(4,226)	.300(7.6)	.437(11.1)	11(280)
9/16(13)	1,400(6,227)	.375(9.5)	.500(13.0)	11(280)

\*\*Core O. D. Tolerance Plus/Minus .007"; \*Coating O. D. Tolerance Plus/Minus .015"

### Recommended Rod Sizes

Conduit Sizes* in (mm)	Recommended Duct Rod Size in (mm)	Conduit Sizes* in (mm)	Recommended Duct Rod Size in (mm)
1/2(13)	3/16(5)	3(76)	5/16, 7/16, 9/16(8, 11, 13)
3/4(19)	3/16(5)	3-1/2(89)	5/16, 7/16, 9/16(8, 11, 13)
1(25)	3/16, 1/4(5, 6)	4(102)	5/16, 7/16, 9/16(8, 11, 13)
1-1/4(32)	3/16, 1/4(5, 6)	5(127)	7/16, 9/16(11, 13)
1-1/2(38)	1/4, 5/16(6, 8)	6(152)	7/16, 9/16(11, 13)
2(51)	1/4, 5/16(6, 8)	8(203)	9/16(13)
2-1/2(64)	1/4, 5/16(6, 8)		

\* Conduit sizes are base on standard radius bends and should not be considered minimums.

## Fiberglass Rod Units & Replacement Rod

3/16" Mini-Cobra Rod			(#12-24 End Fitting)			16" Cage		
Part No.	Length (ft)	Replacement Rod No.	Part No.	Length (ft)	Replacement Rod No.	Part No.	Length (ft)	Replacement Rod No.
8072405	50	8073605	8072420	200	8073620			
8072410	100	8073610	8072425	250	8073625			
8072415	150	8073615	8072430	300	8073630			

1/4" Mini-Cobra Rod			(5/16"-18 End Fitting)			24" Cage		
Part No.	Length (ft)	Replacement Rod No.	Part No.	Length (ft)	Replacement Rod No.	Part No.	Length (ft)	Replacement Rod No.
8072510	100	8073710	8072540	400	8073740			
8072515	150	8073715	8072545	450	8073745			
8072520	200	8073720	8072550	500	8073750			
8072525	250	8073725	8072555	550	8073755			
8072530	300	8073730	8072560	600	8073760			
8072535	350	8073735						

5/16" Cobra Rod			(3/8"-16 End Fitting)			30" Cage		
Part No.	Length (ft)	Replacement Rod No.	Part No.	Length (ft)	Replacement Rod No.	Part No.	Length (ft)	Replacement Rod No.
8083720	200	8079120	8083760	600	8079160			
8083725	250	8079125	8083765	650	8079165			
8083730	300	8079130	8083770	700	8079170			
8083735	350	8079135	8083775	750	8079175			
8083740	400	8079140	8083780	800	8079180			
8083745	450	8079145	8083790	900	8079190			
8083750	500	8079150	8083710	1000	8079110			
8083755	550	8079155						



a & m sales, inc. p.o. box 171 chagrin falls, ohio 44022 (440) 708-0180

5/16" Python Rod			(3/8"-16 End Fitting)			30" Cage		
PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.
8084320	200	8082320	8084360	600	8082360			
8084325	250	8082325	8084365	650	8082365			
8084330	300	8082330	8084370	700	8082370			
8084335	350	8082335	8084375	750	8082375			
8084340	400	8082340	8084380	800	8082380			
8084345	450	8082345	8084390	900	8082390			
8084350	500	8082350	8084310	1000	8082310			
8084355	550	8082355						

7/16" Cobra Rod			(3/8"-16 End Fitting)			45" Cage		
PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.
8083820	200	8086320	8083870	700	8086370			
8083825	250	8086325	8083875	750	8086375			
8083830	300	8086330	8083880	800	8086380			
8083835	350	8086335	8083890	900	8086390			
8083840	400	8086340	8083810	1000	8086310			
8083845	450	8086345	8083811	1100	8086311			
8083850	500	8086350	8083812	1200	8086312			
8083855	550	8086355	8083813	1300	8086313			
8083860	600	8086360	8083814	1400	8086314			
8083865	650	8086365	8083815	1500	8086315			

7/16" Python Rod			(3/8"-16 End Fitting)			45" Cage		
PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.
8083920	200	8086520	8083970	700	8086570			
8083925	250	8086525	8083975	750	8086575			
8083930	300	8086530	8083980	800	8086580			
8083935	350	8086535	8083990	900	8086590			
8083940	400	8086540	8083910	1000	8086510			
8083945	450	8086545	8083911	1100	8086511			
8083950	500	8086550	8083912	1200	8086512			
8083955	550	8086555	8083913	1300	8086513			
8083960	600	8086560	8083914	1400	8086514			
8083965	650	8086565	8083915	1500	8086515			

9/16" Python Rod			(3/4"-10 End Fitting)			45" Cage		
PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.	PartNo.	Length (ft)	Replacement RodNo.
8083220	200	8075720	8083260	600	8075760			
8083225	250	8075725	8083265	650	8075765			
8083230	300	8075730	8083270	700	8075770			
8083235	350	8075735	8083275	750	8075775			
8083240	400	8075740	8083280	800	8075780			
8083245	450	8075745	8083290	900	8075790			
8083250	500	8075750	8083210	1000	8075710			
8083255	550	8075755						



## Fiberglass Duct Rod Covers

A & M Rodder Covers are made from 100% UV blocking fabric to give the rodder extra protection from the sun's rays. They offer complete weather protection from rain, snow and ice in temperatures as low as 40° below zero. Rodder Covers are velcro removable. Rodder Covers are available in four sizes and can be installed without disassembling the rodder cage. Best of all, there is no need to remove the cover when rodding.

Part Number	Description
8081216	16" Duct Rodder Cover
8081224	24" Duct Rodder Cover
8081230	30" Duct Rodder Cover
8081250	45" Duct Rodder Cover

## Duct Rodder Replacement Cages

Use A & M Sales Replacement Cages to update older cages or to replace damaged cages. Fits all major manufacturers fiberglass rods. Make sure that you choose the right size cage for the rod that you are using. Available sizes: 16", 24", 30" and 45". If you need help in determining the correct size cage, feel free to contact us on our toll free line for help in deciding what cage may suit your needs best.

Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
Replacement Cage	8081516	8081524	8081530	8081550	8081550
Cage Diameter	16" (406)	24" (610)	30" (762)	45" (1,143)	45" (1,143)



16" Cage    24" Cage    30" Cage

## Fiberglass Duct Rodding Units -NONCONDUCTIVE-



## CS Kits come complete with:

### TOOLS:

- 1 ea. Self Feeding Frisbee Type Reel 100' or 165'
- 3 ea. Spring Ball Leaders 1/4", 3/8" and 1/2"
- 2 ea. Brass Pulling Eyes
- 1 ea. Cable Grip with Eye
- 1 ea. Bottle of Pulling Lube
- 1 ea. Pulling Plier

### REPAIR ITEMS:

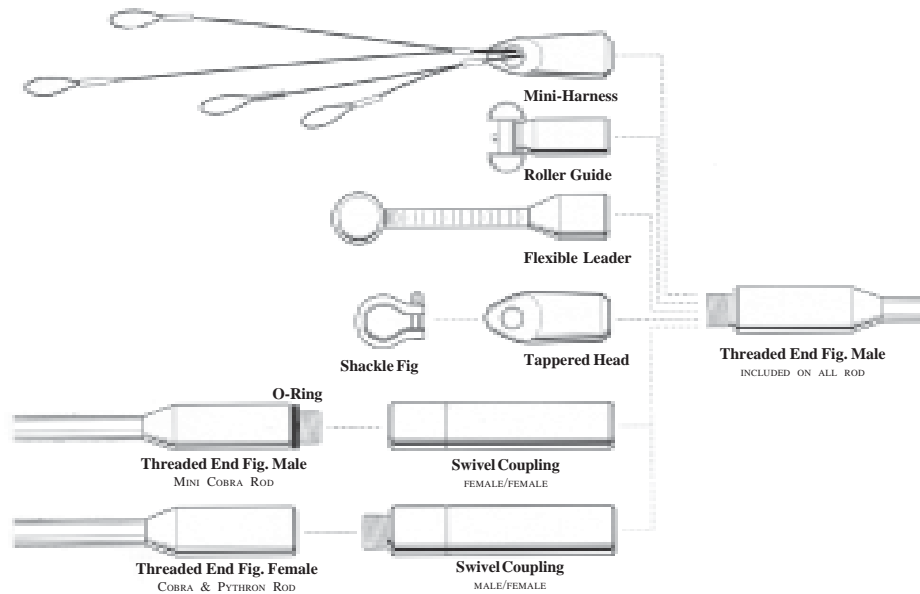
- 3 ea. Glue-On Rod Ends
- 2 ea. Brass Splices
- 1 ea. Small Bottle Of Glue

Part #	Description
44100	1/8" x 100' Coated Rod (Rod & Dispenser Only)
44100 CS	1/8" x 100' Coated Rod with Carrying Case
44165	1/8" x 165' Coated Rod (Rod & Dispenser Only)
44165 CS	1/8" x 165' Coated Rod with Carrying Case

All items are packed in a Brief case 15" x 16" x 3" Weight 4 lbs



## Duct Rodder Accessories



### Accessory Kit

Popular accessories available in a convenient bag that attaches to the Mini-Cobra cage. Kit Includes: Roller Guide, Splice Kit, Epoxy, Swivel Coupling, Tapered head, and Threaded End Fittings.

Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
Accessory Kit	8033498	8033499	8033497	8033494	8033488
Metric Thread	M5	M8	M12	M12	M12
Accessory Kit	8033492	8033493	8033496	8033495	8033489

\*Kits for 3/16 (5 mm) and 1/4 (6 mm) rod also include a Flexible Leader and O-Rings.

Bag Only 8033490



### Shackle Fitting

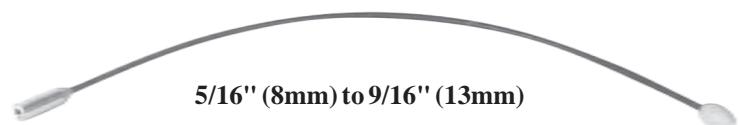
Fits onto tapered head to provide a larger pulling loop for attaching the rope or pull line.

Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
Shackle Fitting	-	-	8031101	8031101	8031100
Metric Thread	M5	M8	M12	M12	M12
Shackle Fitting	-	-	8031101	8031101	8031101



### Flexible Leader

Helps guide the duct rod around bends, sweeps, and duct misalignments.



Rod Dia. in. (mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
Flexible Leader	8033428	8033443	8037538	8037538	8037534
Metric Thread	M5	M8	M12	M12	M12
Flexible Leader	8033448	8033444	8037512	8037512	8037512



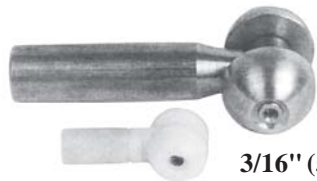


## Mini Harness

Screws onto the threaded end fitting to allow for easy wire attachment when pulling wire into conduit.



Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
<b>Mini Harness</b>	<b>8033433</b>	<b>8033434</b>	<b>8033435</b>	<b>8033435</b>	<b>8033436</b>
Metric Thread	M5	M8	M12	M12	M12
<b>Mini Harness</b>	<b>8033432</b>	<b>8033431</b>	<b>8033437</b>	<b>8033437</b>	<b>8033437</b>



**5/16" (8mm) to 9/16" (13mm)**

**3/16" (5mm) to 1/4" (6mm)**

### Roller Guide

Helps guide the duct rod around bends, sweeps, and duct misalignments. Also used when the conduit is already occupied by other cables.

Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
<b>Roller Guide</b>	<b>8037430</b>	<b>8037440</b>	<b>8037401</b>	<b>8037401</b>	<b>8037400</b>
Metric Thread	M5	M8	M12	M12	M12
<b>Accessory Kit</b>	<b>8037428</b>	<b>8037450</b>	<b>8037405</b>	<b>8037405</b>	<b>8037405</b>

## Swivel Coupling

Used to connect two duct rods pushed into the conduit from the same end. Used when one length of duct rod is not long enough for the full conduit run. Also used as a rotating swivel when pulling wire or rope with the tapered head or mini-harness.



**Female  
to  
Female**

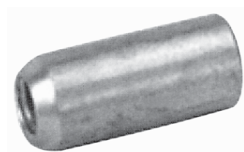
**Male  
to  
Female**



Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
<b>Female/Female</b>	<b>8033470</b>	<b>8033459</b>	-	-	-
<b>Male/Female</b>	<b>8033422</b>	<b>8033442</b>	<b>8036800</b>	<b>8036800</b>	<b>8036700</b>
Metric Thread	M5	M8	M12	M12	M12
<b>Female/Female</b>	<b>8033429</b>	<b>8033483</b>	-	-	-
<b>Male/Female</b>	<b>8033426</b>	<b>8033485</b>	<b>8036806</b>	<b>8036806</b>	<b>8036806</b>

## Sonde Adapter

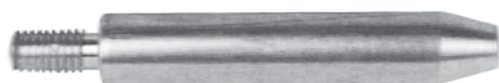
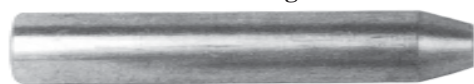
Couples a locating sonde or other device with an M10 male thread to the male end fitting of the duct rod.



Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
<b>Sonde Adapter</b>	-	<b>8036500</b>	<b>8036503</b>	<b>8036503</b>	<b>8036504</b>
Metric Thread	M5	M8	M12	M12	M12
<b>Sonde Adapter</b>	-	<b>8036505</b>	<b>8036501</b>	<b>8036501</b>	<b>8036501</b>

## Replacement / Repair Accessories

### Female End Fitting



### Male End Fitting

### Threaded End Fittings

Use as a replacement to the factory installed end fittings if the end fitting breaks off or if the duct rod breaks close to the end of the rod. Installation instructions are included with the end fittings. Epoxy is required for installation and is ordered separately.

Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
<b>Male</b>	<b>8033420</b>	<b>8033440</b>	<b>8036307</b>	<b>8036303</b>	<b>8036005</b>
<b>Female</b>	-	-	<b>8036306</b>	<b>8036304</b>	<b>8036006</b>
Metric Thread	M5	M8	M12	M12	M12
<b>Male</b>	<b>8033487</b>	<b>8033486</b>	<b>8036318</b>	<b>8036319</b>	<b>8036316</b>
<b>Female</b>	-	-	<b>8036317</b>	<b>8036314</b>	<b>8036315</b>



## Epoxy

Use with end fittings or splice tubes to repair duct rodders.

Part #	Description
8035851	Single pack for replacing end fitting
8035852	Double pack for splice tubes



## Splice Kit

Use to repair duct rod if it breaks towards the middle of the duct rod.

Kit includes splice tube, epoxy, and installation instructions.

Rod Dia.in.(mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
Splice Kit	8033457	8033465	8035753	8035751	8035752
Splice Tube Only	8033455	8033463	8035703	8035701	8035702

## Tapered Head

Attaches to the end fitting on the duct rod. Guides duct rod through the conduit and allows a pull line (diameter A) to be attached to the duct rod. Comes standard with each of the duct rodders.

Rod Dia.,in (mm)	3/16(5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
USC Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
Tapered Head	8033421	8033441	8038400	8038400	8038300
Diameter A	.156(4)	.156(4)	.281(7)	.281(7)	.343(9)
Metric Thread	M5	M8	M12	M12	M12
Tapered Head	8033410	8033480	8038301	8038301	8038301
Diameter A	.156(4)	.156(4)	.281(7)	.281(7)	.281(7)



## O-Rings

Used to help keep accessories on the end fitting while rodding. Comes standard with the Mini-Cobra rodders.

Rod Dia.,in (mm)	3/16(5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
US Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
O-Rings	2163600	2215000	-	-	-
Metric Thread	M5	M8	M12	M12	M12
O-Rings	2163600	2215000	-	-	-

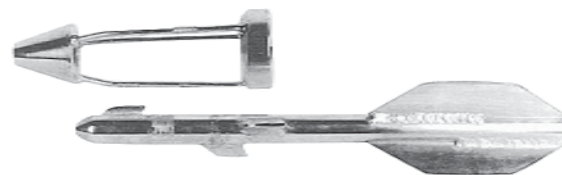


7  
0  
0

## Basket Combination

Used to connect two hand rods pushed into the conduit from opposite ends of the conduit run. Both rods can then be pulled out in one direction. Used instead of a swivel coupling when the full length of the rod is difficult to push from one end. Works in 4" (102 mm) or larger conduit only.

**Does not negotiate tight bends.**



Rod Dia.,in (mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
US Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
Basket Comb.	-	-	8031400	8031400	8031300
Metric Thread	M5	M8	M12	M12	M12
Basket Comb.	-	-	8033700	8033700	8033700

## Fiberglass Hand Rods

Screw-together fiberglass duct rods for straight runs. All rods equipped with 3/4" - 10 end fittings, which work with 3/4" - 10 duct rodder accessories. 2,500 lbs. (11, 120 N) pull rating.



Part Number	Size	
	(in x ft)	(mm x m)
8031923	1/2 x 5	12 x 1.5
8031922	1/2 x 10	12 x 3
8032026	5/8 x 5	16 x 1.5
8032022	5/8 x 10	16 x 3

## Replacement Brass Hand Rod End Fittings Requires Epoxy : 8035851

Part #	Size in. (mm)
8036021	3/4" - 10 male end for 1/2" (12mm) rod
8036022	3/4" - 10 female end for 1/2" (12mm) rod
8036150	3/4" - 10 male end for 5/8" (16mm) rod
8036151	3/4" - 10 female end for 5/8" (16mm) rod

## Mud Scoop

Attaches to the end of the hand rods and is used to clear the conduit of mud. The mud scoop is pushed into the conduit, it fills with mud, and is then pulled back out and cleaned. This process is repeated until the conduit is cleaned of mud. Works in four inch (102 mm) or larger conduit only. **Does not negotiate tight bends.**



Rod Dia., in (mm)	3/16 (5)	1/4 (6)	5/16 (8)	7/16 (11)	9/16 (13)
US Thread	#12-24	5/16-18	3/8-16	3/8-16	3/4-10
Mud Scoop	-	-	8049302	8049302	8049301
Metric Thread	M5	M8	M12	M12	M12
Mud Scoop	-	-	8049304	8049304	8049304

## Winch Line Blower

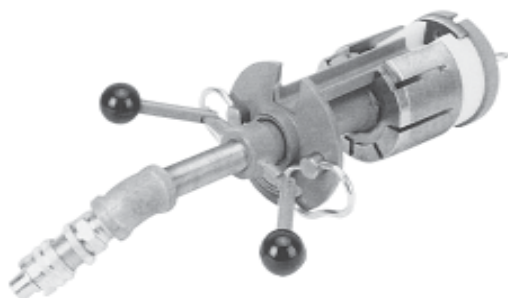
The Winch Line Blower is a method of installing winch line in conduit. It turns the job of pulling winch line into one easy step, eliminating the need to blow a string and pull back a rope. Using compressed air, 65 psi (4.5 bar) and 100 cfm (2.8 m<sup>3</sup>/min), the Winch Line Blower can propel up to 5/8" (16 mm) steel winch line, or 3/4" (19 mm) rope up to 1,600 feet (500 m), depending on job conditions, in conduit from 1-1/2" (38 mm) to 8" (203 mm) in diameter. Typical travel time is 5 to 7 minutes for 1,400 feet (427 m) in 4" (102 mm) conduit.

### Easy Installation

Installation is easy. No special tools are required. The blower's seal-off slides into the duct and is held in place by hand-tightening the adjustment handles.

### Expands to fit a range of Conduit ID's

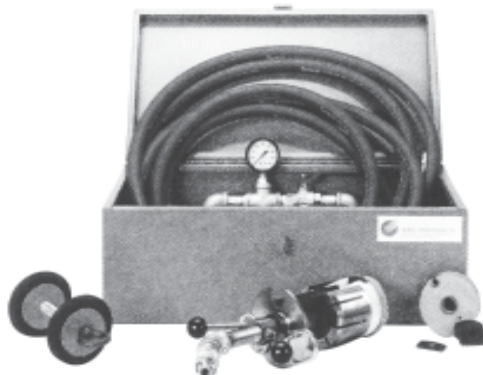
The blower features a patented expandable split ring coupled with a tapered expander plug that allows the seal-off to work on the full range of ID's for a specific conduit O.D. (e.g. 4" (102 mm) schedule 40, telephone, TC-6 DB & EB, and TC-8 DB & EB). This feature allows up to a 1/2" (13 mm) variation in conduit ID with no loss in seal-off efficiency.



## The Winch Line Blower System

The system is comprised of these mechanical assemblies

- Seal-off body for specific range of Conduit ID's
- Seal disc to prevent blow back
- Cable insert for abrasion-resistant cable travel
- Carrier for specific range of conduit ID's
- Control Valve Assembly
- Air Hose Assembly, 25 feet (7.6 m)
- Job Box







### Winch Line Blower Single Conduit Kits

Includes all mechanical components and accessories (listed on previous page bottom) for a specific range of conduit sizes. Winch Line blower kits are available for the following conduit sizes: 1.5", 2", 2.5", 3", 3.5", 4", 5", 6" and 8" PVC. Call for a complete listing of Winch Line Blower Kits and help in selecting a kit that will best suit your needs.

### Winch Line Blower Multiple Conduit Kits

Combined single kits to make multiple conduit kits. Includes all mechanical components and accessories for a full range of conduit sizes. These kits are great if you have a need for multiple pulling applications in various sized ducts.

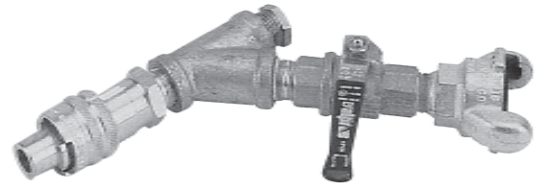
Part #	Description
8202300	Multiple conduit kit for 2" (51mm), 3" (76mm), and 4" (102mm) duct. Includes single kits: 8202001, 8203001, 8204001, control valve assembly, air hose assembly and job box.
8202400	Multiple conduit kit for 2" (51mm) thru 4" (102mm) duct. Includes single kits: 8202001, 8202501, 8203001, 8203501, 8204001, control valve assembly, air hose assembly and job box.
8204600	Multiple conduit kit for 4" (102mm) thru 6" (152mm) duct. Includes single kits:

### Compressor Seal-Offs

Universal duct seal-off for blowing projectiles and line carriers through the duct using an external air compressor. **Order Seal-Off Body Control Valve and Seal-Off Heads separately.**

### Universal Seal-Off Control Valve

The Universal Seal-Off Control Valve Body is used with the Innerduct Seal-Off, Conduit Seal-Off, & Double Seal-Off. Use the interchangeable heads for the style and size you need. Comes equipped with an air flow valve and a universal hose coupling for attachment to most compressors. 3/16" rope adapter included.

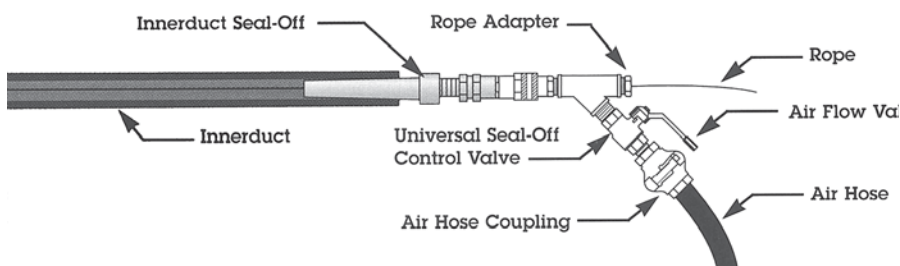


Part #	Description
8032165	Seal-Off Control Valve Body

### Innerduct Seal-Off Kits

Inserts into innerduct and twists tight for seal. Consists of a common Universal Seal-Off Control Valve Body and an assortment of heads to fit duct sizes shown below. **Order Seal-Off Body Control Valve and Seal-Off Heads separately.**

Part #	Description
8034319	Innerduct Seal-Off Kit (1", 1-1/4", 1-1/2" & 2" Heads, and Seal-Off Body with carrying case)
8034320	Innerduct Seal-Off Kit (1", 1-1/4", 1-1/2", & 2" Heads, and Seal-Off Body.



### Innerduct Seal-Off Heads

Part #	Description	Nominal Duct Size (in)	(mm)	Innerduct I.D. Range (in)	(mm)
8034315	1" Quick Innerduct Seal-Off	1	25	.93-1.19	24-30
8034316	1-1/4" Quick Innerduct Seal-Off	1-1/4	32	1.18-1.44	30-37
8034317	1-1/2" Quick Innerduct Seal-Off	1-1/2	38	1.31-1.69	33-43
8034318	2" Quick Innerduct Seal-Off	2	51	1.93-2.31	49-59



## Rope Adapter Kit

Allows a wider range of rope diameters to be used with the Innerduct and Compressor seal-offs. Adapters specific for 3/16" (5 mm), 1/4" (6 mm), 3/8" (10 mm) diameter ropes provide optimum seal-off performance.

Part #	Description
8032181	Adapter Kit for Conduit Seal-Offs

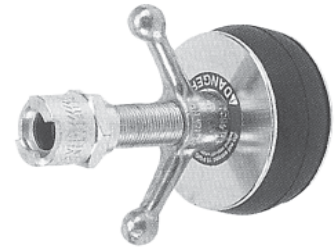
## Conduit Seal-Off

Locks into duct with a turn of the wing-nut handle, compressing the rubber ring for a firm seal. 15 psi (1 bar) maximum. **Order Seal-Off Body Control Valve and Seal-Off Heads separately.**

Part #	Description
8032903	Conduit Seal-Off Kit (2", 3", 3-1/2" & 4" Heads, Seal-Off Body with Carrying Case)
8032904	Conduit Seal-Off Kit (2", 3", 3-1/2" & 4" Heads, Seal-Off Body)



Part #	Description	Nominal Duct Size		Innerduct I.D. Range	
		(in)	(mm)	(in)	(mm)
8032900	2" Quick Conduit Seal-Off	2	51	1.93-2.36	49-60
8032905	2-1/2" Quick Conduit Seal-Off	2-1/2	63	2.40-2.76	61-70
8032910	3" Quick Conduit Seal-Off	3	76	2.87-3.31	73-84
8032915	3-1/2" Quick Conduit Seal-Off	3-1/2	89	3.50-3.75	89-95
8032920	4" Quick Conduit Seal-Off	4	102	3.54-4.25	90-108
8032925	5" Quick Conduit Seal-Off	5	127	4.72-5.37	120-136
8032930	6" Quick Conduit Seal-Off	6	152	5.50-6.29	140-160
8032935	8" Quick Conduit Seal-Off	8	203	7.83-8.27	199-210



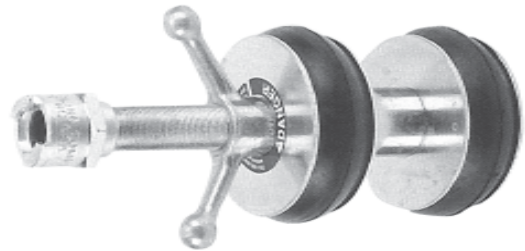
## Double Seal-Off Kit

Locks into duct with a turn of the wing-nut handle, compressing both rubber rings for a better seal. Also helps to align the seal-off during insertion. 15 psi (1 bar) maximum. **Order Seal-Off Body Control Valve and Seal-Off Heads separately.**

Part #	Description
8032906	Double Seal-Off Kit (2", 3", 3-1/2" & 4" Heads, and Seal Off Body)

## Double Seal-Off Heads

Part #	Description	Nominal Duct Size		Innerduct I.D. Range	
		(in)	(mm)	(in)	(mm)
8032940	2" Quick Conduit Seal-Off	2	51	1.93-2.36	49-60
8032945	2-1/2" Quick Conduit Seal-Off	2-1/2	63	2.40-2.76	61-70
8032950	3" Quick Conduit Seal-Off	3	76	2.87-3.31	73-84
8032955	3-1/2" Quick Conduit Seal-Off	3-1/2	89	3.50-3.75	89-95
8032960	4" Quick Conduit Seal-Off	4	102	3.54-4.25	90-108
8032965	5" Quick Conduit Seal-Off	5	127	4.72-5.37	120-136
8032970	6" Quick Conduit Seal-Off	6	152	5.50-6.29	140-160
8032975	8" Quick Conduit Seal-Off	8	203	7.83-8.27	199-210



## Replacement Seals for Compressor Seal-Offs



Part #	Nominal Duct Size	
	(in)	(mm)
8082121	2	51
8082126	2-1/2	63
8082131	3	76
8082136	3-1/2	89
8082141	4	102
8082151	5	127
8082161	6	152



## Power Dart® Blower

The Power Dart® Blower is a pneumatic rodding system especially suited for long duct runs. A three-motor system allows you to choose the right speed for your needs. With all three motors engaged, the Power Dart Blower will deliver up to 300 cfm (8.5 m<sup>3</sup>/min) of air at 3 psi (.2 bar) max. pressure, easily blowing 1/2" (13 mm) poly line or measuring tape over 2,000 feet (610 m) in conduit up to 6 inches (152 mm) in diameter. The complete kit comes with 25 feet (7.6 m) of air hose, an assortment of conduit seal-offs, and an assortment of carriers. Weighs only 31 pounds (14 kg) and operates at 110 or 220 Volts. 110 Volt model includes a 30 amp twist plug. The 220 Volt model is supplied without a plug. **Requires a 3,000 Watt generator.**

### Utility Power® Kit

Includes the following items for utility applications:

- Blower Unit
- 25' (8 m) x 2-1/2" (64 mm) heavy duty hose
- Seal-Off Body
- Seal-Offs for 1/2" (13 mm) - 6" (152 mm) conduit
- Line Carriers for 2" (51 mm), 3" (76 mm), 4" (102 mm), 5" (127 mm) & 6" (154 mm) conduit

Part #	Description
8030000	110 Volt System with 30 Amp twist plug
8030040	220 Volt System (Supplied without a plug)
8030001	110 Volt Utility Kit complete with Accessory Bag
8030041	220 Volt Utility Kit complete with Accessory Bag



## Contractor Power Dart Kit

Includes the following items for electrical contractor applications:

- Blower Unit
- 25' (8 m) x 2-1/2" (64 mm) heavy duty hose
- Seal-Off Body
- Seal-Offs for 1/2" (13 mm) - 6" (152 mm) conduit
- Foam Carriers for 1/2" (13 mm), 3/4" (19 mm), 1" (25 mm), 1-1/4" (32 mm), 1-1/2" (38 mm), 2" (51 mm), 2-1/2" (64 mm), 3" (76 mm), 3-1/2" (89 mm), & 4" (102 mm) conduit

Part #	Description
8030030	110 Volt System with 30 Amp twist plug
8030050	220 Volt System (Supplied without a plug)
8030031	110 Volt Utility Kit complete with Accessory Bag
8030051	220 Volt Utility Kit complete with Accessory Bag



## Replacement Accessories

### Power Dart Blower Seal-Off

Part Number	Duct Size (in)	Duct Size (mm)
8039700	1/2_1-1/4	13-32
8066800	1-1/2_2-1/2	38-64
8039500	2-1/2_6	64-152

Seal-Off, 2-1/2" - 6" (64-152 mm)



Seal-Off Body

### Power Dart Blower Seal-Off Body

Part Number	Duct Size (in)	Duct Size (mm)
8039400	1/2-6	13-152

Seal-Off, 1-1/2" - 2-1/2" (38-64 mm)



### Power Dart Hose

Part #	Description
8039300	25' (7.6 m) x 2-1/2" (64 mm) heavy duty hose
8039301	Replacement hose end fitting



Seal-Off, 1/2" - 1-1/4" (13-32 mm)

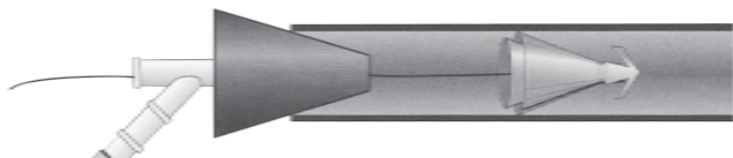


## Power Dart Blower Accessory Bag

Convenient canvas bag holds power dart hose. Inner bag holds line carriers foam carriers, seal -off body and seal-offs.

**Part #**  
8030060

**Description**  
Power Dart Blower Accessory Bag



## Carrier Kit For Power Dart Blowers

A convenient way to order a practical assortment of carriers and seal-off products for use with the Power Dart Blower or other applications. Kit includes the following:



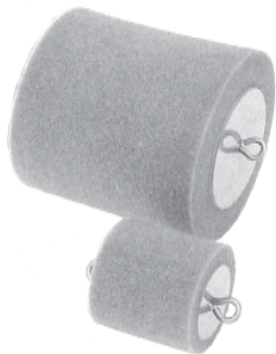
Item	Duct Size	
	(in)	(mm)
Power Dart Blower Seal-Off	1-1/2_2-1/2	38-64
Power Dart Blower Seal-Off	2-1/2-6	64-152
Power Dart Seal-Off Body	1/2-6	13-152
Line Carrier	2	51
Line Carrier	4	102
Inflatable Carrier	1-1/2_2-1/2	38-64
Infaltable Carrier	3-4	76-102
Duct Projectile	2	50
Duct Projectile	4	102

**Part #**  
8030011

**Description**  
Carrier Kit for Power Dart Blowers

## Foam Carrier

Lightweight carrier easily blows through duct. Best suited for short runs and runs with multiple bends.



Part Number	Duct Size		Max. O.D.	
	(in)	(mm)	(in)	(mm)
8078200	1/2	13	.50	13
8078300	3/4	19	.75	19
8032200	1	25	1.00	25
8032300	1-1/4	25	1.25	32
8033600		30		30
8039300	1-1/2	38	1.50	38
8033500		45		45
8032400	2	51	2.00	51
8033800		60		60
8078400	2-1/2	64	2.50	64
8032500	3	76	3.00	76
8033900		80		80
8032100	3-1/2	89	3.50	89
8032600	4	102	4.00	102
8059100	5	127	5.00	127
8059200	6	152	6.00	152

## Line Carriers

Fast and efficient plastic carriers for fishing with highspeed blowers even in out-of-round duct. Carrier will travel over minor obstructions in duct



Part Number	Duct Size		Max. O.D.	
	(in)	(mm)	(in)	(mm)
8067900	2	51	2.06	52
8030100	3	76	3.06	78
8030200	3-1/2	89	3.56	90
8030300	4	102	4.06	103
8030400	5	127	5.06	129
8030500	6	152	6.06	154





## Inflatable Carriers

Rip-stop nylon bag conforms to cable-occupied ducts. One carrier can be used in a variety of duct sizes or when the duct size changes throughout the run. Easy pull-back.

Part Number	Duct Size	
	(in)	(mm)
8032700	3/4_1-1/4	19-32
8032800	1-1/2_2-1/2	38-64
8031600	3-4	76-102
8031700	4-6	102-152



## Duct Projectile

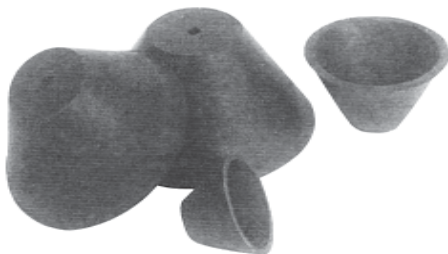
Flexible rubber cones are durable for many repeated uses. Fast and efficient for long runs with easy pull-back.

Part Number	Duct Size		Max. O.D.	
	(in)	(mm)	(in)	(mm)
8031812	1-1/4	32	1.25	32
8031814	1-3/8	35	1.37	35
8031815	1-1/2	38	1.50	38
8031816	1-5/8	41	1.62	41
8031820	2	50	2.00	50
8031822	2-1/4	56	2.20	56
8031825	2-1/2	64	2.50	64
8031830	3	76	3.00	76
8031835	3-1/2	89	3.50	89
8031840	4	102	4.00	102
8031844	4-1/4	108	4.25	108
8031846	4-1/2	115	4.51	115
8031850	5	127	5.00	127
8031860	6	152	6.00	152
8031880	8	203	8.00	203



## Replacement Cones for Duct Projectile

Original equipment replacement cones.



Part Number	Duct Size		Max. O.D.	
	(in)	(mm)	(in)	(mm)
8031805	1-1/4	32	1.25	32
8031803	1-3/8	35	1.37	35
8031806	1-1/2	38	1.50	38
8031804	1-5/8	41	1.62	41
8031819	2	50	2.00	50
8031821	2-1/4	56	2.20	56
8031826	2-1/2	64	2.50	64
8031831	3	76	3.00	76
8031802	3-1/2	89	3.50	89
8031841	4	102	4.00	102
8031801	4-1/4	108	4.25	108
8031847	4-1/2	115	4.51	115
8031851	5	127	5.00	127
8031861	6	152	6.00	152
8031881	8	203	8.00	203

## Poly Line Pail

Line attaches to the back of a foam carrier, inflatable carrier, or line carrier and is used to pull back a rope. Packaged in a weather-proof, reusable plastic bucket with lid.



Part Number	Break Strength		Length	
	(lbs)	(N)	(ft)	(m)
8561285*	200	890	6,500	1981
8561297*	450	2,002	2,500	762

\*Pallet quantities of 48 available.





## Pail Opener

Easy to use opener works on any 5 gallon pail, including Poly Line Pails.

Part #	Description
8095000	Pail Opener



## Double-Braided Cable Pulling Rope

Premium quality rope recommended for cable pulling. Complete with spliced eye on each end. Double-braided construction offers high working loads and tensile strength without kinking. Other sizes available.

Part Number	Dia.		Length		Standard Tensile		Minimum Tensile		Recommended 5:1		Working Load 12:1	
	(in)	(mm)	(ft)	(m)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)
8090906	5/8	16	600	183	16,200	72,058	13,500	60,048	2,700	12,010	1,125	5,004
8090912	5/8	16	1,200	366	16,200	72,058	13,500	60,048	2,700	12,010	1,125	5,004
8091103	7/8	22	300	91	28,000	124,544	25,200	112,090	5,040	22,418	2,100	9,341
8091106	7/8	22	600	183	28,000	124,544	25,200	112,090	5,040	22,418	2,100	9,341
8091112	7/8	22	1,200	366	28,000	124,544	25,200	112,090	5,040	22,418	2,100	9,341



## Polypropylene Rope (Yellow)

Good quality, general purpose rope. Not recommended for powered pulling applications. Other sizes available. Contact factory for additional rope specifications.

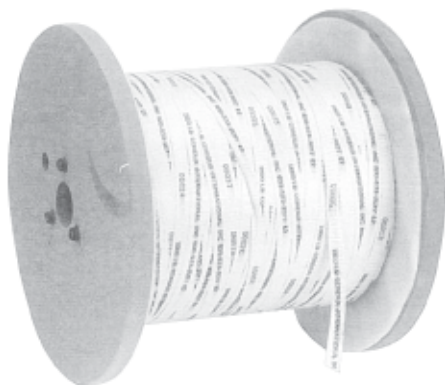
Part Number	Dia.		Length		Standard Tensile		Minimum Tensile		Recommended 5:1		Working Load 12:1	
	(in)	(mm)	(ft)	(m)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)	(lbs)	(N)
8051303	1/4	6	3,000	914	1,250	5,560	1,130	5,026	226	1,005	94	418
8051305	1/4	6	5,000	1,524	1,250	5,560	1,130	5,026	226	1,005	94	418
8051401	3/8	10	1,200	366	2,700	12,010	2,440	10,853	488	2,171	203	903
8051403	3/8	10	3,000	914	2,700	12,010	2,440	10,853	488	2,171	203	903
8051405	3/8	10	5,000	1,524	2,700	12,010	2,440	10,853	488	2,171	203	903



## Pulling Tape

A flat woven replacement to 1/4" Polypropylene rope, that provides a lower coefficient of friction due to its flat woven design. Drastically reduces the chance of burn through that is associated with ropes, and has an elongation of less than 10% compared to Polypropylene rope which is 20%+. Not available printed. Other lengths available.

Part Number	Break Strength (in)	Break Strength (mm)	Approx. Width (in)	Approx. Width (mm)	Length (ft)	Length (m)
8099703	1,130	5,026	1/2	13	3,000	914



## Conduit Measuring Tape

For pulling fiber optic or coaxial cable through innerduct or for determining exact wall-to-wall measurements in duct runs. Other strengths and lengths are available.

Part Number	Break Strength (in)	Break Strength (mm)	Approx. Width (in)	Approx. Width (mm)	Length (ft)	Length (m)
8073900	130	578	3/16	5	3,000	914

\*\*Pallet quantities of 48 available.



## Wood Test Mandrels

Pull through duct to prove joint integrity and test for out-of-round duct. 2,240 lbs. (9,964 N) load capacity. Wood body with steel end caps and pulling eyes.



Part Number	Duct Size		Body Length		Max. O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8020660	4	102	6	152	3.56	90
8020600	4	102	11-1/2	292	3.56	90

## Aluminum Test Mandrels

Pull through duct to prove joint integrity and test for out-of-round duct. Provides an 80% fill in schedule 40 and telephone conduit.



Part Number	Duct Size		Body Length		Max. O.D.		Load Capacity	
	(in)	(mm)	(in)	(mm)	(ft)	(m)	(lbs)	(N)
8059515	1-1/2	38	1.74	44	1.18	30	2,200	9,786
8059520	2	51	2.40	61	1.62	41	2,200	9,786
8059525	2-1/2	64	2.98	76	2.00	51	2,200	9,786
8059530	3	76	3.50	89	2.37	61	2,200	9,786
8059535	3-1/2	89	4.10	104	2.75	70	4,500	20,016
8059540	4	102	4.84	123	3.25	83	4,500	20,016
8059550	5	127	5.98	152	4.00	102	4,500	20,016
8059560	6	152	7.08	180	4.75	121	4,500	20,016

## Rubber Duct Swab

Ideal for cleaning and assisting in the spreading of lubricant throughout the duct. 7,000 lbs. (31,136 N) load capacity.



\*4,500 lbs (20,016 N) load capacity.

Part Number	Duct Size		Body Length		Max. O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8028820*	2	51	10	254	2.00	51
8028830	3	76	10	254	3.00	76
8028700	3-1/2	89	10	254	3.50	89
8028800	4	102	10	254	4.00	102
8058700	5	127	10	254	5.00	127
8058800	6	152	10	254	6.00	152
8022880	8	203	10	254	8.00	203

## Leather Washer Duct Cleaner

Tough, durable leather washers in graduated sizes for cleaning duct prior to cable pulling. 4,500 lbs. (20,016 N) load capacity.



Part Number	Duct Size		Body Length		Max. O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8025430	3	76	14.38	365	3.00	76
8025300	3-1/2	89	14.38	365	3.50	89
8025400	4	102	14.38	365	4.00	102

## Short Rubber Slug

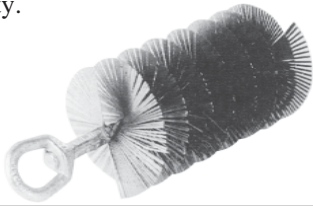
For proving duct integrity and for spreading cable pulling lubricant especially in tight-radius bends. 4,500 lbs. (20,016 N) load capacity.



Part Number	Duct Size		Body Length		Max. O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8082020	2	51	3.25	83	2.00	51
8082025	2-1/2	64	3.25	83	2.50	64
8082030	3	76	3.25	83	3.00	76
8082035	3-1/2	89	3.25	83	3.50	89
8082040	4	102	3.25	83	4.00	102
8082050	5	127	3.25	83	5.00	127
8082060	6	152	3.25	83	6.00	152
8082080	8	203	3.25	83	8.00	203

## Wire Brush Mandrel

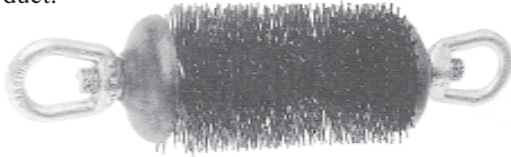
Flat steel bristles with a pulling eye on one end and a loop on the other end. Easily removes sand, grit and other light obstructions from the duct. 800 lbs. (3,558 N) load capacity.



Part Number	Duct Size		Body Length		Max. O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8028904	1-1/4	32	4.25	108	1.00	25
8028905	1-1/2	38	4.25	108	1.25	32
8028900	2	51	4.25	108	1.75	44
8046000	2-1/2	64	4.25	108	2.25	57
8067100	3	76	5.50	140	2.75	70
8067200	3-1/2	89	5.00	127	3.25	82
8029000	4	102	6.75	171	3.75	95
8029100	5	127	6.50	165	4.75	121
8068100	6	152	6.75	171	5.75	146
8029080	8	203	4.75	121	7.75	197

## Heavy Duty Wire Brush Mandrel

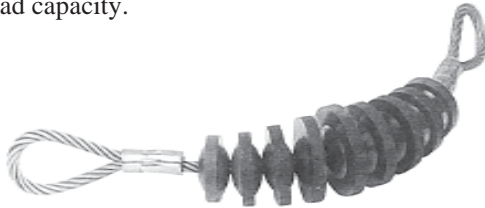
Heavy duty steel bristles with pulling eyes on each end. For removing obstructions from the duct.



Part Number	Duct Size		Body Length		Max. O.D.		Load Capacity	
	(in)	(mm)	(in)	(mm)	(ft)	(m)	(lbs)	(N)
8029104	2	51	3.50	89	1.75	44	1,240	5,516
8046001	2-1/2	64	4.25	108	2.25	57	1,240	5,516
8067101	3	76	5.25	133	2.75	70	1,240	5,516
8067201	3-1/2	89	5.25	133	3.25	82	2,240	9,964
8029001	4	102	5.25	133	3.75	95	2,240	9,964
8029101	5	127	5.00	127	4.75	121	2,240	9,964
8029105	6	152	5.00	127	5.75	146	2,240	9,964

## Flexible Steel Mandrel

Steel discs in graduated sizes make this mandrel ideal for removing obstructions in duct with extreme bends. 7,000 lbs. (31,136 N) load capacity.



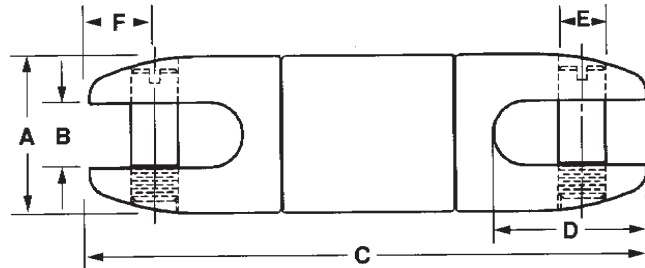
Part Number	Duct Size		Body Length		Max. O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8021700	*2	51	7.31	186	1.75	44
8021925	2-1/2	64	11.25	286	2.25	57
8021800	3	76	11.25	286	2.75	70
8049400	3-1/2	89	11.25	286	3.25	83
8021900	4	102	11.25	286	3.75	95
8067500	5 Sch 80	114	11.25	286	4.25	108
8058900	5	127	11.25	286	4.75	121
8059000	6	152	11.25	286	5.75	146
8079500	8	203	11.25	286	7.75	197

\*2,000 lbs. (8,896 N) load capacity

## 808 Champion Swivels

Designed specifically for underground cable pulling applications. Can handle all types of utility cables. Precision machined from high-strength steel.

**CAUTION:** To be used for cable stringing or pulling only.  
**NOTE:** Swivels are not designed to run around bullwheels.



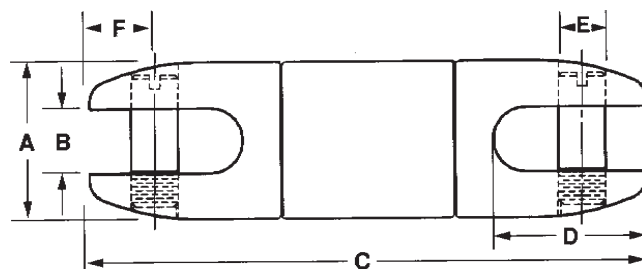
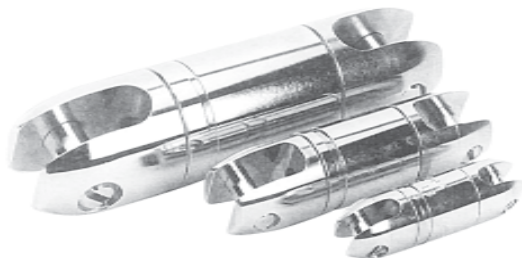
Part Number	Working Load		A		B		C		D		E		F	
	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8017000	600	2,669	5/8	16	.28	7	3.56	90	.79	20	.25	6	.37	9
HD - 00	1,500	6,672	7/8	22	.5	13	5.06	127	-	-	.375	10	-	-
8016000	1,800	8,006	7/8	22	.38	10	4.51	115	1.06	27	.31	8	.53	13
W - 1	3,000	13,344	1-5/16	33	.625	16	6.69	168	-	-	.44	11	-	-
8080912	4,000	17,792	1-1/4	32	.56	14	5.44	138	1.34	34	.37	9	.59	15
HD - 0	5,400	24,019	1-1/8	29	.5	13	5.06	127	-	-	.44	11	-	-
W - 2	5,400	24,019	1-5/8	41	.875	22	6.69	168	-	-	.5	13	-	-
8080913	6,500	28,912	1-3/8	35	.56	14	5.25	133	1.31	33	.44	11	.56	14
8080916	8,500	37,808	1-5/8	41	.63	16	6.51	165	1.59	40	.56	14	.78	20
HD - 1	9,000	40,032	1-3/8	35	.5	13	6.38	160	-	-	.5	13	-	-
8080920	10,000	44,480	2	51	.75	19	6.99	178	1.78	45	.62	16	.72	18
HD - 2	12,000	53,376	2	51	.625	16	7	175	-	-	.625	16	-	-
W - 3	12,000	53,376	2	51	1.00	25	7.75	194	-	-	.625	16	-	-
W - 4	15,000	66,720	2-1/4	57	1.25	31.25	8.94	224	-	-	.75	19	-	-
8080925	20,000	88,960	2-1/2	64	1.00	25	10.23	260	2.80	71	.87	22	1.23	31
HD - 3	21,000	93,408	2	51	.75	19	8.75	219	-	-	.75	19	-	-
HD - 4	30,000	133,440	2-3/8	60	.875	22	10.125	254	-	-	.875	22	-	-
8080930	30,000	133,440	3	76	1.31	33	12.04	306	3.56	90	1.12	28	1.37	35

Copyright © 1992, A & M Sales, Inc.



## 821 Champion Swivels

Designed to meet common dimensional specifications, the 821 Champion swivels are designed for underground cable pulling applications, and can handle all types of utility cable. Precision machined from high-strength steel.



**CAUTION:** To be used for cable stringing or pulling only.

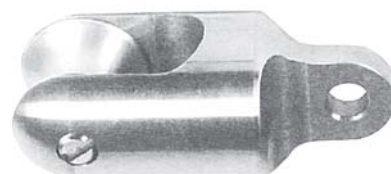
**NOTE:** Swivels are not designed to run around bullwheels.

Part Number	Working Load		A		B		C		D		E		F	
	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8210007	1,800	8,006	7/8	22	.31	8	3.09	78	.84	21	.31	8	.38	10
70136	2,500	11,120	7/8	22	.38	9.5	3.38	85.7	-	-	-	-	-	-
8210012	4,000	17,792	1-1/4	32	.59	15	4.52	115	1.22	31	.38	10	.44	11
70137	5,000	22,240	1-1/4	32	.54	14	4.16	104	-	-	-	-	-	-
A 13 L	5,400	24,019	7/8	22	.31	8	3.09	78	.84	21	.31	8	.38	10
70138	7,000	31,136	1-3/8	35	.57	14.25	4.59	115	-	-	-	-	-	-
8210014	7,500	33,360	1-7/16	37	.59	15	5.13	130	1.41	36	.44	11	.59	15
70139	10,000	44,480	1-5/8	41	.69	18	5.44	136	-	-	-	-	-	-
8210018	10,000	44,480	1-7/8	48	.75	19	7.06	179	1.88	48	.63	16	.81	21
BB 13 L	12,000	53,376	1-1/4	32	.59	15	4.34	109	1.13	29	.38	10	.44	11
B 13 L	22,500	100,080	1-7/16	36	.59	15	5.13	129	1.38	35	.44	11	.57	14
70140	25,000	111,200	2-1/2	62.5	.34	9	9.63	240	-	-	-	-	-	-
C 13 L	30,000	133,440	1-7/8	47	.75	19	7.07	177	1.75	44	.63	16	.82	21
D 13 L	48,000	213,504	2-7/16	61	1.00	25	10.19	255	2.69	68	.88	22	1.13	29

## Rope to Swivel Clevis

Used to connect the swivel to rope up to 1" (25 mm) in diameter. To be used with an 808 Champion swivel of the same size only.

Part Number	Size		Max O.D.		Load Rating	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8091212	1-1/4	32	2	51	4,000	17,792
8091213	1-3/8	35	2	51	6,500	28,912
8091216	1-5/8	41	2	51	8,500	37,808
8091220	2	51	2	51	10,000	44,480



700

## Rope to Rope / Grip Clevis

Versatile clevis provides efficient link for several applications. All-steel construction with 10,000 lbs. (44,480 N) load capacity. Combinations of sheaves and pins allow the following connections:

- 3/4" (19 mm) diameter rope to 3/4" (19 mm) diameter rope
- Rope to forged eye pulling grip
- Forged eye pulling grip to forged eye pulling grip
- Rope to flexible eye pulling grip

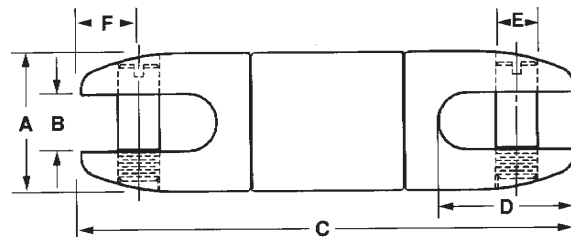
Part Number	Max O.D.	
	(in)	(mm)
8091200	1-3/4	44





## Break-Away Swivel

Essential for fiber optic and coaxial cable pulling, these swivels have a break load ranging from 150-1,800 pounds (667-8,006 N) and are designed to separate at  $\pm 10\%$  of their rated break load. If the load rating is exceeded, the interior break pin fractures, the swivel separates, and the cable remains undamaged. Break pin is easily replaceable.



### Break-Away Swivel Dimensions

A	B	C	D	E	F
(in) (mm)	(in) (mm)	(in) (mm)	(in) (mm)	(in) (mm)	(in) (mm)
5/8 16	.28 7	3.56 90	.79 20	.25 6	.37 9
7/8 22	.38 10	4.51 115	1.06 27	.31 8	.53 13



## Break-Away Swivel

### 5/8" Swivel (16 mm)

Part Number	Break Load (lbs)	Break Load (N)
8017300	200	890
71399*	200	890
71400*	220	979
8017400	250	1,112
71401*	290	1,290
8017800	300	1,334
71402*	340	1,513
71403*	400	1,780
71404*	420	1,869
71405*	435	1,935
71406*	450	2,002
8016900	450	2,002
70188*	500	2,225
71408*	600	2,670
8017200	600	2,669
8017500	650	2,891
70191*	700	3,115
8017900	750	3,336

### 7/8" Swivel (22 mm)

Part Number	Break Load (lbs)	Break Load (N)
8018100	150	667
8018300	200	890
8018000	250	1,112
8017600	300	1,334
53700*	340	1,513
8018400	350	1,557
8075300	400	1,779
53701*	450	2,002
8015800	450	2,002
8076500	500	2,224
8018500	550	2,446
53702*	600	2,670
8015000	600	2,669
8018600	650	2,891
8076000	700	3,114
8075500	750	3,336

### 7/8" Swivel (22mm) Con't.

Part Number	Break Load (lbs)	Break Load (N)
53703*	800	3,560
8018700	800	3,558
8018800	850	3,781
8076600	900	4,003
53704*	1,000	4,450
8015700	1,000	4,448
8018900	1,100	4,893
53705*	1,200	5,340
8015200	1,200	5,338
8019100	1,300	5,782
8074600	1,400	6,227
8076900	1,500	6,672
8019200	1,600	7,117
8019300	1,700	7,562
8017700	1,800	8,006

Dimensions on Stared Swivels may vary, call for details

5/8" Swivels with the "\*" next to the are made out of Steel

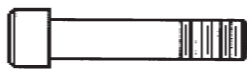
7/8" Swivels with the "\*" next to them are made out of Aluminum

## Replacement Pins

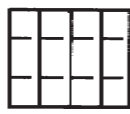
Break pins for th 5/8" & 7/8" Break-Away swivels are easy to order and ready to ship.



Externally Threaded Head



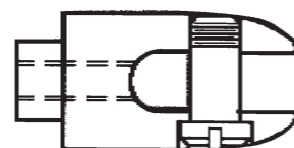
Break Pin



Bearings



Body



Internally Threaded Head

### Replacement Pins for 5/8" Swivel (16 mm)

Part Number	Break Load (lbs)	Break Load (N)	Color
8017305	200	890	Green/Black
8017405	250	1,112	Blue/White
8017805	300	1,334	Blue/Violet
8016905	450	2,002	Blue/Yellow
8017205	600	2,669	Orange/Black
8017505	650	2,891	Brown/White
8017905	750	3,336	Orange/Violet

### Replacement Pins for 7/8" Swivel (22 mm)

Part Number	Break Load (lbs)	Break Load (N)	Color
8018105	150	667	Slate/White
8018305	200	890	Green/Orange
8018005	250	1,112	Blue/White
8017605	300	1,334	Brown/Red
8018405	350	1,557	Black/Green
8075305	400	1,779	Blue/Black
8015805	450	2,002	Blue/Yellow
8076505	500	2,224	Orange/Red
8018505	550	2,446	Blue/Green
8015005	600	2,669	Orange/black
8018605	650	2,891	Slate/Green
8076005	700	3,114	Orange/White
8075505	750	3,336	Orange/Violet

### Replacement Pins for 7/8" Swivel (22mm) Con't.

Part Number	Break Load (lbs)	Break Load (N)	Color
8018705	800	3,558	Red/Yellow
8018805	850	3,781	Black/Yellow
8076605	900	4,003	Orange/Yellow
8015705	1,000	4,448	Green/White
8018905	1,100	4,893	White/Yellow
8015205	1,200	5,338	Brown/White
8019105	1,300	5,782	Brown/Yellow
8074605	1,400	6,227	Green/Red
8076905	1,500	6,672	Green/Yellow
8019205	1,600	7,117	Black/White
8019305	1,700	7,562	Red/White
8017705	1,800	8,006	Brown/Black





## Eye to Eye Connectors

Light duty winch line pulling connector drop forged from C-1035 steel. Hot dip galvanized.

Part Number	Size		Working Load	
	(in)	(mm)	(lbs)	(N)
8050300	3/8	10	2,200	9,786
8050500	1/2	13	3,600	16,013
8050501	5/8	16	5,200	23,130

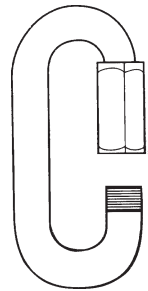


## Threaded Chain Connectors

Offer a quick and easy way to attach pulling eyes or swivels to winch lines, harnesses or rope. To close, simply screw the nut onto the threaded end. Connectors are reusable.

**Note: To be used for cable stringing or pulling only.**

Part Number	Work Load Limit		Stock Diameter S		A		B		C	
	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8581212	200	890	0.125	3.2	0.375	9.5	1.813	46.0	1.563	40
8581218	550	2,446	0.188	4.8	0.500	12.7	2.438	61.9	2.063	52
8581225	770	3,425	0.250	6.4	0.563	14.3	2.750	69.9	2.313	59
8581231	1,430	6,361	0.313	7.9	0.688	17.5	3.438	87.3	28.13	71
8581237	1,760	7,828	0.375	9.5	0.750	19.1	3.750	95.3	3.000	76
8581250	2,755	12,254	0.500	12.7	0.938	23.8	4.875	123.8	3.938	100
8581256	4,410	19,616	0.563	14.3	1.063	27.0	5.563	141.3	4.500	114
8581262	5,510	24,508	0.625	15.9	1.125	28.6	6.313	160.3	5.063	129
8581268	6,615	29,424	0.688	17.5	1.250	31.8	6.938	176.2	5.500	140
8581278	7,935	35,295	0.781	19.8	1.375	34.9	7.813	198.4	6.250	159



## Figure 8 Swing Link

For quick connections to winch line or pulling harnesses. **Note: To be used for cable stringing or pulling only.**

Part Number	Size		Working Load		A Length		B Width		C Eye I.D.		D Eye I.D.	
	(lbs)	(N)	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8580825	1/4	6	540	2,402	1.94	49	.94	24	.38	10	.50	13
8580837	3/8	10	900	4,003	2.90	74	1.31	33	.50	13	.63	16
8580850	1/2	13	1,620	7,206	3.25	83	1.63	41	.69	18	.75	19
8580875	3/4	19	3,600	16,013	5.00	127	2.50	64	.94	24	1.13	29
8580899	1	25	8,100	36,029	6.50	165	3.25	83	1.25	32	1.50	38



## Multiple Pulling Harness

Allows staggered attachment to cable or innerduct when pulling through conduit systems. Configuration includes 2, 3, 4, or 5-way legs. Choice of steel cable or chains (varies by model).



Part Number	Description	Working Load Per Leg		Working Load Combined		Max. Width A		Separation Between Legs B		Lead Ring Dia. C		Leg Dia. D	
		(lbs)	(N)	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8549200	3 Way 1/8" (3mm) Cable	550	2,446	1,600	7,117	2.25	57	14	356	.37	10	.12	3
8549230	3 Way 1/4" (6mm) Cable	1,400	6,227	2,900	12,889	3.00	76	14	346	.50	13	.25	6
8549325	4 Way 1/4" (6mm) Cable	1,400	6,227	4,200	18,682	3.75	95	14	356	.62	16	.25	6
8569910	5 Way 1/4" (6mm) Cable	1,400	6,227	4,200	18,682	3.75	95	14	356	.62	16	.25	6
8549333	3 Way 3/8" (10mm) Cable	4,800	21,350	9,000	40,032	2.63	67	10	254	.62	16	.37	10
8549329	4 Way 3/8" (10mm) Cable	4,800	21,350	9,000	40,032	2.63	67	10	254	.62	16	.37	10
8549331	2 Way 1/2" (13mm) Cable	7,000	31,136	10,000	44,480	2.50	64	12	305	.50	13	.50	13
8549332	3 Way 1/2" (13mm) Cable	7,000	31,136	15,000	66,720	3.75	95	12	305	.87	22	.50	13
8549340	4 Way 1/2" (13mm) Cable	7,000	31,136	15,000	66,720	3.75	95	12	305	.87	22	.50	13
8549255	3 Way Link Chain	3,500	15,568	5,000	22,240	3.50	89	14	356	.50	13	.31	8
8549250	3 Way Link Chain	3,500	15,568	5,000	22,240	3.50	89	14	356	.50	13	.31	8
8549254	4 Way Link Chain	3,500	15,568	5,000	22,240	3.50	89	14	356	.50	13	.31	8

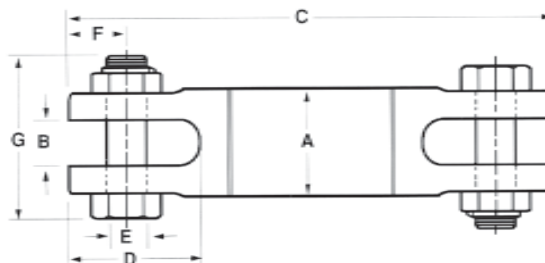


## D.Drill® Directional Drilling Swivels

Designed specifically for directional drilling, the 819 D. Drill Swivels prevent boring equipments' rotational torque from interfering with the product (cable or conduit) being pulled. The D. Drill Swivels are greasable and double sealed to keep contaminants out. Clevis pins with hex nuts allow for installation and removal from either side of the swivel. There is a 90 day warranty on the directional drill swivels.

**CAUTION:** To be used for directional drilling only.

**CAUTION:** A & M Sales requires the use of a calcium based lubricant only. Other lubricants may have adverse reactions when exposed to bentonite products. A & M Sales requires that the swivels be flushed with grease after each use to purge any contaminants that may have penetrated past the seals into the swivel while boring.

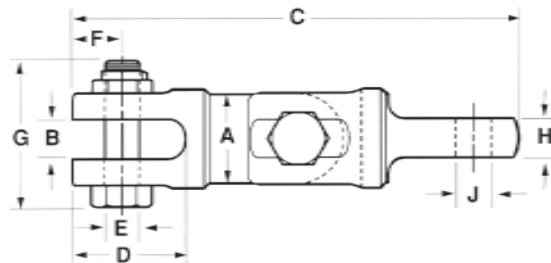
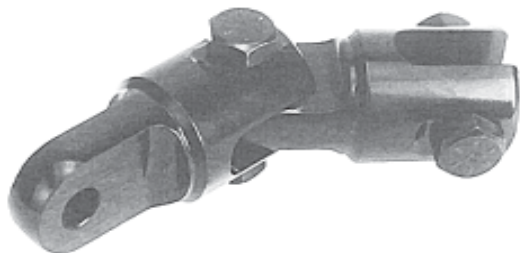


### Working Load

Part Number	Tension		Compression		A		B		C		D		E		F		G	
	(lbs)	(N)	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8190016	8,500	37,808	2,800	12,454	1-5/8	41	.63	16	6.85	174	1.59	40	.56	14	.78	20	2.36	60
8190020	10,000	44,480	3,300	14,678	2	51	.75	19	7.83	199	1.81	46	.63	16	.75	19	2.89	73
8190025	20,000	88,960	6,600	29,357	2-1/2	64	1.00	25	10.93	278	2.84	72	.88	22	1.25	32	3.67	93
8190030	30,000	133,440	10,000	44,480	3	76	1.31	33	12.75	324	3.56	90	1.13	29	1.37	36	4.50	114
8190040	45,000	200,160	15,000	66,720	4	102	1.63	41	15.25	387	4.00	102	1.25	32	1.84	47	5.58	142
8190045	60,000	266,880	20,000	88,960	4-5/8	117	1.75	44	17.48	444	4.62	117	1.50	38	2.13	54	6.31	160
8190060	90,000	400,320	30,000	133,440	6	152	2.00	51	18.27	464	4.50	114	1.75	44	2.18	56	6.59	167
8190080	120,000	533,760	40,000	177,920	8	203	2.25	57	21.71	552	5.25	133	2.00	51	2.50	64	8.25	210

## Universal Joints

A & M Sales U-Joints are used to aid the pulling of conduit or other material in a directional drilling application. Used in conjunction with D. Drilling Swivels, U-Joints prevent side loading and binding that may occur at points in a directional bore. To ensure load rating and size match, U-Joints are available with the same specifications as the 819 D. Drill® Swivels.



### Working Load

Part Number	Load Tension		A		B		C		D		E		F		G		H		J	
	(lbs)	(N)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8190316	8,500	37,808	1-5/8	41	.63	16	6.88	175	1.59	40	.56	14	.78	20	2.36	60	.61	15	.58	15
8190320	10,000	44,480	2	51	.75	19	7.97	202	1.81	46	.63	16	.75	19	2.89	73	.73	19	.76	19
8190325	20,000	88,960	2-1/2	64	1.00	25	11.13	283	2.84	72	.88	22	1.25	32	3.67	93	.98	25	.89	23
8190330	30,000	133,440	3	76	1.31	33	13.75	349	3.56	90	1.13	29	1.38	35	4.50	114	1.29	33	1.14	29
8190340	45,000	200,160	4	102	1.63	41	17.25	428	4.00	102	1.25	32	1.84	47	5.58	142	1.61	41	1.26	32
8190345	60,000	266,880	4-5/8	117	1.75	44	20.75	527	4.63	118	1.50	38	2.12	54	6.31	160	1.73	44	1.52	39

## Directional Drilling Grease

Specially formulated for use in a bentonite clay environment. This is an extreme pressure multiservice lubricant designed to give outstanding performance in directional drilling / boring applications. Manufactured from the highest quality petroleum oil and thickened with a unique calcium complex soap. This thickener resists breakdown caused by bentonite, which is common with lithium based lubricants. Packaged in cartridges to fit a standard grease gun. Standard package quantity is 10 cartridges.



Part #	Description
8190007	Directional Drilling Grease (1 Cartridge)



## Replacement Parts for Directional Drilling Swivels

D.Drill Swivel rebuild kits allow the swivel to be rebuilt by the user if bentonite gets past the seals and damages the bearings. Kit includes 4 bearings, 2 seals, a roll pin, a setscrew, a grease zerker and instructions. Individual replacement clevis pins and clevis pin locking nuts are also available.

Swivel Part No.	Rebuild Kit	Clevis Pin	Locking Nut	Rebuild Tool
1-5/8 (41mm)	8190001	8190104	2250500	-
2 (51mm)	8190002	8190114	2250600	-
2-1/2 (64mm)	8190003	8190124	2250700	-
3 (76mm)	8190004	8190134	2250800	-
4 (102mm)	8190008	8190154	2263000	-
4-5/8 (117mm)	8190005	8190144	2250900	-
6 (152mm)	8190006	8190164	2251000	8190168
8 (203 mm)	8190009	8190167	2279000	8190188

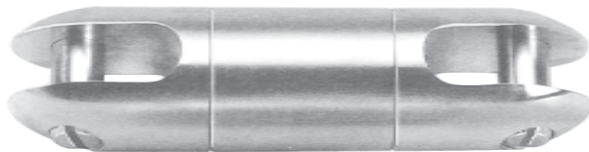


## Break-Away Swivels for Directional Drilling

Avoid overstressing cable or conduit being pulled in during directional drilling operations. The A & M Break-Away Swivels for directional drilling are designed exclusively to provide both the swivel, and the break link, for product pull-back. Eliminate the use of two or more components and shorten the gap between the reamer and pulling eye. No need to use "weak link" pipe sections or wire, when using the A & M Break-Away Swivel. Six different diameter Swivels are available to accommodate various pulling needs. Break loads range from 1,900 lbs. (8,451 N) to 22,000 lbs. (97,856 N) and are designed to separate at  $\pm 10\%$  of their rated break load. Order Replacement Pins as needed.

**NOTE: D.Drill Swivels come with a 90 day limited warranty.**

**\*WARNING : These swivels are to be used while Directional Drilling only. Severe personal injury could result if used with rope or steel winch lines in cable pulling applications.**



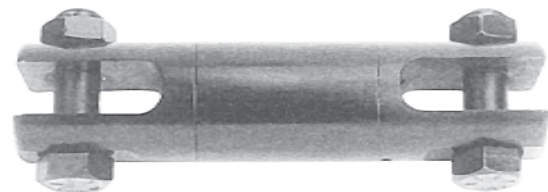
**Break-Away D. Drill® Swivel**  
**1-1/4"-1-3/8"**

### 1-1/4" Swivel (32mm)

Part Number	Break Load (lbs)	Break Load (N)
8019400*	1,900	8,451
8019500*	2,000	8,896
8019600*	2,500	11,120
8019700*	3,000	13,344
8076100*	3,400	15,123
8019800*	4,000	17,792

### 1-3/8" Swivel (35mm)

Part Number	Break Load (lbs)	Break Load (N)
8019900*	4,500	20,016
8021300*	5,000	22,240
8022100*	5,500	24,464
8024200*	6,000	26,688
8024400*	6,500	28,912



**Break-Away D. Drill Swivel**  
**1-5/8"-3"**

### 1-5/8" Swivel (41mm)

Part Number	Break Load (lbs)	Break Load (N)
8024500*	7,000	31,136
8025500*	7,500	33,360
8027900*	8,000	35,584
8028400*	8,500	37,808

### 2" Swivel (51mm)

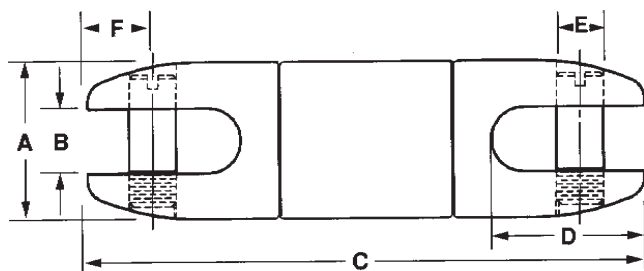
Part Number	Break Load (lbs)	Break Load (N)
8029200*	9,000	40,032
8029400*	10,000	44,480

### 2-1/2" Swivel (64mm)

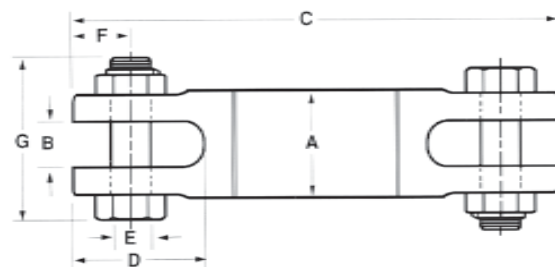
Part Number	Break Load (lbs)	Break Load (N)
8029600*	12,000	53,376
8029700*	14,000	62,272

### 3" Swivel (64mm)

Part Number	Break Load (lbs)	Break Load (N)
8075600*	18,500	82,288
8075800*	22,000	97,856

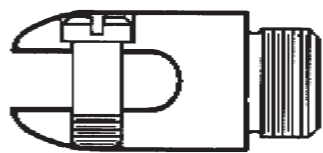


Use these dimensions when ordering the 1-1/4" (32mm) and the 1-3/8" (35mm) swivels

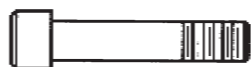


Use these dimensions when ordering the 1-5/8" (41mm), 2" (51mm), the 2-1/2" (64mm) and the 3" (76mm) swivels

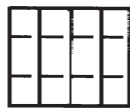
A	B	C	D	E	F	G
(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
1-1/4	32	.56	14	5.44	138	1.34
1-3/8	35	.56	14	5.25	133	1.31
1-5/8	41	.63	16	6.85	174	1.59
2	51	.75	19	7.83	199	1.81
2-1/2	64	1.00	25	10.93	278	2.84
3	76	1.31	33	12.75	324	3.56



Externally Threaded Head



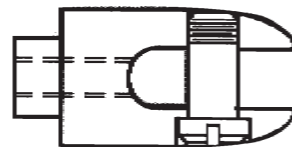
Break Pin



Bearings



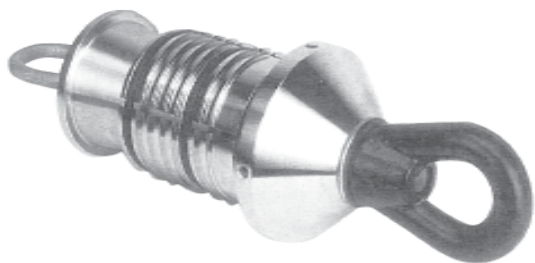
Body



Internally Threaded Head

## Replacement Pins for Break-Away Directional Drilling Swivels

Part Number	Break Load (lbs)	Break Load (N)	Break Pin Color Code	Part Number	Break Load (lbs)	Break Load (N)	Break Pin Color Code
8019405	1,900	8,451	Violet/Black	8024505	7,000	31,136	Orange
8019505	2,000	8,896	Slate/White	8025505	7,500	33,360	Blue
8019605	2,500	11,120	Violet/Green	8027905	8,000	35,584	Yellow
8019705	3,000	13,344	Slate/Red	8028405	8,500	37,808	Slate
8076105	3,400	15,123	Blue/Yellow	8029205	9,000	40,032	Red
8019805	4,000	17,792	Red/Yellow	8029405	10,000	44,480	Green
8019905	4,500	20,016	Slate/Yellow	8029605	12,000	53,376	White
8021305	5,000	22,240	Orange/Blue	8029705	14,000	62,272	Brown
8022105	5,500	24,464	Brown/Green	8029720	18,500	82,288	Black
8024205	6,000	26,688	Blue/Brown	8075805	22,000	97,856	Yellow
8024405	6,500	28,912	Red/Blue				



## PE & PVC Pulling Eyes

A & M PE & PVC Pulling Eyes feature an extremely rigid center rod to prevent bending and a steel tapered lead cone with the same O.D. as the conduit. This design feature protects the outer leading edge of the conduit. They also feature split gripping segments with aggressive gripping threads coupled with a steel expander plug that better grips the full range of conduit I.D.'s. Installation of the PE & PVC Pulling Eyes simply requires the leading eye to be tightened. The pulling eyes come standard with attachment eyes at both ends for connecting rope or steel lines. Pull-out strengths generally exceed the tensile capacity of the conduit. For thin-wall conduit, A & M has an external steel sleeve that ensures pulling integrity.

**NOTE:** PE & PVC Pulling Eyes come with a 90 day limited warranty.

Available in the following sizes: 1-1/4", 1-1/2", 2", 2-1/4", 2-1/2", 3", 4", 5", 6", 7-1/8", 8", 10", 12" & 14" Pulling Eyes





## PE & PVC Pipe Pulling Eye Sleeves

On thin-wall PE or PVC duct, it is recommended that a steel sleeve be used. This product will limit the expansion of the pipe as the pulling eye is installed, ensuring the best possible grip for the eye.

**Note:** 1-1/4", 1-1/2" and 2" eyes come complete with sleeves.

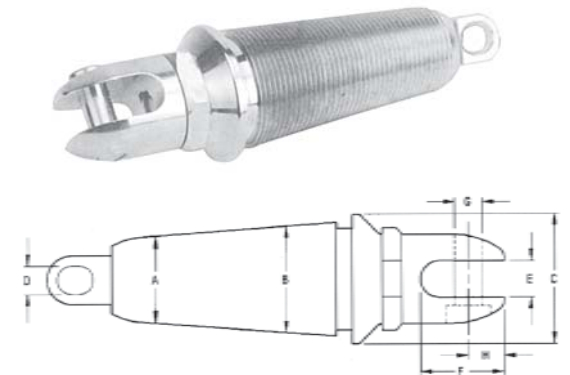
Part Number	Pulling Eye Size		Length		I.D.		O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8220125	2-1/2	64	1.88	48	2.90	74	3.13	80
8220130	3	76	2.25	57	3.53	90	3.75	95
8220140	4	102	2.56	65	4.54	115	4.75	121
8220150	5	127	3.19	81	5.63	143	5.88	149
8220160	6	152	3.69	94	6.67	169	7.00	178
8220170	7-1/8	178	4.00	102	7.17	182	7.50	191
8220180	8	203	4.31	109	8.67	220	9.00	229
8220110	10	254	4.65	118	10.85	276	11.19	284



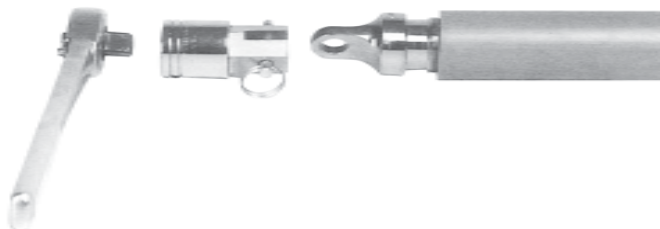
## Swivel Head Innerduct Pulling Eye

The Innerduct Pulling Eye is a hybrid tool that combines features from standard innerduct pulling eyes and swivels. A swivel head prevents twisting and binding of the innerduct as it is installed. It eliminates the need for a separate swivel on each pulling eye when installing single innerducts into individual conduits or multiple innerducts into a single conduit. Its short length is an advantage on tight bends compared to using a separate swivel and pulling eye. Easily installed using a 1-3/8" deep socket or adjustable wrench.

**NOTE.** To determine correct pulling eye size, obtain the actual innerduct inside diameter (I.D.). The I.D. measurement must be greater than dimension A and Smaller than dimension B.



Part Number	Nominal Size		Innerduct I.D. Range		Max O.D. C		Hole Dia. D		Slot Width E		Slot Depth F		Pin Dia. G		Pin Center H	
	(in)	(mm)	A-B(in)	A-B(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8960712	1-1/4	25-32	1.06-1.43	27-37	1.75	44	.44	11	.56	14	1.31	33	.44	11	.56	14
8960715	1-1/2	38	1.37-1.68	35-43	2.00	51	.44	11	.56	14	1.31	33	.44	11	.56	14
8960720	2	51	1.98-2.12	49-54	2.44	62	.44	11	.56	14	1.31	33	.44	11	.56	14



## Innerduct Pulling Eye Installation Tool

Fits on a 1/2" Drive Wrench to facilitate insertion of the eye into the innerduct.

Part #	Description
8913350	Installation Tool

## Universal Innerduct Couplings "Internal"

Best for use with corrugated duct.



Part Number	Duct Size	
	(in)	(mm)
8565803	1	25
8567001	1-1/4	32

## "External"

Couplings feature a tapered design that provides a secure fit on nearly all types of innerduct.



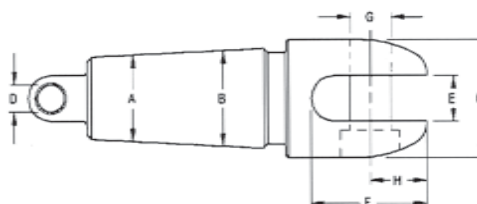
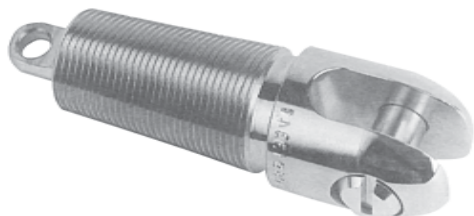
Part Number	Duct Size		Duct O.D. Range	
	(in)	(mm)	(in)	(mm)
8566010	1	25	1.23-1.42	31.2-36.1
8566012	1-1/4	32	1.49-1.70	37.8-43.2
8566015	1-1/2	38	1.80-2.01	45.7-51.1
8566020	2	51	2.31-2.52	58.7-64.0



## Clevis Head Innerduct Pulling Eye

Same tapered threads as the standard innerduct pulling eye, these pulling eyes feature a slotted head with clevis pin to permit direct attachment to multiple pulling harness leg ends. When properly sized and installed, these eyes will not pull out of the innerduct until the pulling tensions have greatly exceeded the maximum pulling tensions recommended by the innerduct manufacturers

**NOTE:** To determine correct pulling eye size, obtain the actual innerduct inside diameter (I.D.). The I.D. measurement must be greater than dimension A and smaller than dimension B.

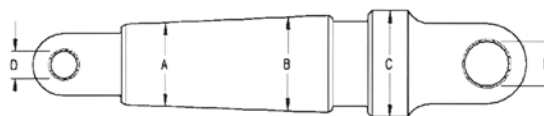


Center Part Number	Nominal Size		Innerduct I.D. Range		Max O.D. C		Hole Dia. D		Slot Width E		Slot Depth F		Pin Dia. G		Pin H	
	(in)	(mm)	A-B(in)	A-B(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8913500	3/4	19	.68-.81	17-21	1.13	29	.25	6	.38	10	1.06	27	.31	8	.53	13
8913501	7/8	22	.81-.93	21-24	1.25	32	.25	6	.56	14	1.34	34	.38	10	.59	15
8913502	1	25	.93-1.06	24-27	1.38	35	.38	10	.56	14	1.31	33	.44	11	.56	14
8913340	1	25	.98-1.14	25-29	1.38	35	.38	10	.56	14	1.31	33	.44	11	.56	14
8913503	1-1/4	32	1.06-1.18	27-30	1.44	37	.38	10	.59	15	1.41	36	.44	11	.59	15
8913504	1-1/4	32	1.18-1.34	30-34	1.63	41	.38	10	.63	16	1.59	40	.56	14	.78	20
8913341	1-1/4	32	1.23-1.39	31-35	1.63	41	.38	10	.63	16	1.59	40	.56	14	.78	20
8913505	1-1/2	38	1.34-1.50	34-38	1.88	48	.38	10	.75	19	1.88	48	.63	16	.81	21
8913506	1-1/2	38	1.50-1.62	38-41	2.00	51	.38	10	.75	19	1.78	45	.63	16	.72	18
8913507	1-3/4	44	1.68-1.81	43-46	2.00	51	.38	10	.75	19	1.78	45	.63	16	.72	18
8913510	2	51	1.82-1.96	46-50	2.50	64	.38	10	1.00	25	2.68	68	.88	22	1.25	32
8913508	2	51	1.96-2.09	50-53	2.50	64	.38	10	1.00	25	2.80	71	.88	22	1.25	32
8913509	2	51	2.06-2.18	52-56	2.50	64	.38	10	1.00	25	2.80	71	.88	22	1.25	32

## Fixed Head Innerduct Pulling Eye

Tapered buttress threads thread into the innerduct for maximum pulling strength. These eyes connect directly to a swivel. When properly sized and installed, these eyes will not pull out of the innerduct until the pulling tensions have greatly exceeded the maximum pulling tensions recommended by the innerduct manufacturers.

**NOTE.** To determine correct pulling eye size, obtain the actual innerduct inside diameter (I.D.). The I.D. measurement must be greater than dimension A and smaller than dimension B.



Part Number	Nominal Size		Innerduct I.D. Range		Max. O.D. C		Hole Dia. D		Eye Dia. E	
	(in)	(mm)	A-B(in)	A-B(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8913318	3/4	19	.68-.81	17-21	1.12	29	.25	6	.50	13
8913319	7/8	22	.81-.93	21-24	1.25	32	.25	6	.50	13
8913320	1	25	.93-1.06	24-27	1.12	29	.25	6	.50	13
8913321	1-1/4	32	1.06-1.18	27-30	1.50	38	.37	10	.62	16
8913325	1-1/4	32	1.18-1.34	30-34	1.50	38	.37	10	.62	16
8913323	1-1/2	38	1.34-1.50	34-38	1.87	47	.37	10	.62	16
8913327	1-1/2	38	1.50-1.62	38-41	2.12	54	.37	10	.62	16
8913322	1-3/4	44	1.68-1.81	43-46	2.25	57	.37	10	.62	16
8913324	2	51	1.81-1.98	46-50	2.38	60	.37	10	.62	16
8913328	2	51	1.98-2.06	50-52	2.50	64	.37	10	.62	16
8913329	2	51	2.06-2.18	52-56	2.50	64	.37	10	.62	16



## Innerduct Pulling and Placing Tool

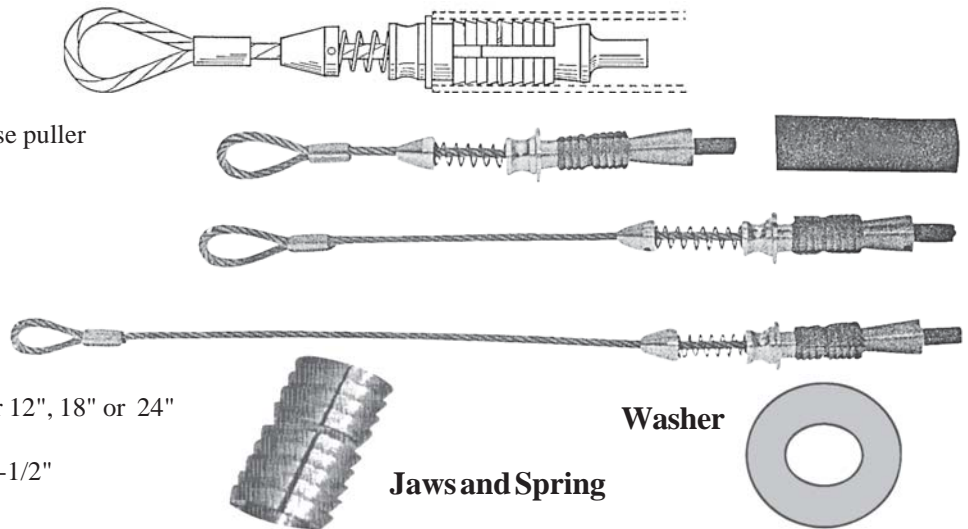
Without a doubt the fastest and easiest tool on the market for pulling in 1" to 1-1/2" plastic innerduct. If speed is your concern this is without question the fastest tool for doing the job. This puller comes in various lengths for pulling in multiple pieces of conduit, so there is no need for a multiple pulling harness. These tools are made from stainless steel and aluminum for long life and durability.

### Features:

- Easy set up, no tools required
- Fits both 1" and 1-1/4" ID Inner Duct
- No bundle size increase on OD because puller goes inside of duct
- Pull One, Two or Three at a time
- Available in three lengths: 12", 18" and 24" for staggering
- Works on chinese finger principle
- Field tested and proven

### How to order:

1. Choose your tool with the desired leader 12", 18" or 24"
2. Choose the Jaw size for your innerduct  
(In you are pulling innerduct 1-3/8" to 1-1/2" a 1037W Washer is suggested)



Part #	Description	Leader Length	Part #	Description	Size
106212P	Innerduct Pulling Tool	12"	1062J	Jaws	1" to 1-1/4"
106218P	Innerduct Pulling Tool	18"	1037J	Jaws	1-1/4" to 1-1/2"
106224P	Innerduct Pulling Tool	24"	6237	Spring Only	-
			1037 W	Washer (for 1037 J Only)	-

## Reusable Power Cable Pulling Eyes

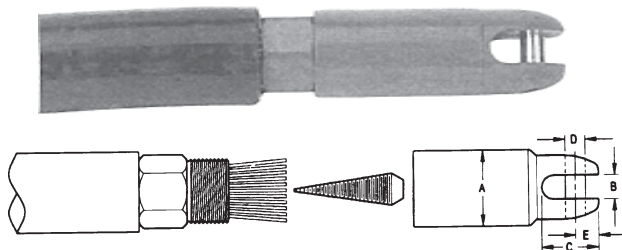
Non-crimp reusable cable pulling eyes waste virtually no cable and all components are completely reusable. These eyes will remain firmly secured on the cable for a confident pull. No special tools or crimpers are required for installation.

Three designs of Reusable Power Pulling Eyes are available: Clevis Head, Standard Head, and Swivel Head.

**NOTE: When properly installed, all Reusable Power Pulling Eyes will exceed the recommended maximum pulling tensions for single conductor power cable as specified by the cable manufacturer.**

**NOTE: Multiple Pulling Harness and connectors available**

**NOTE: All Reusable Eyes are color coded for ease of use.**



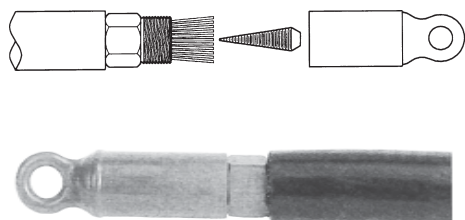
### Reusable Power Pulling Eyes, Clevis Head

The Clevis Head Power Pulling Eyes feature a slotted head with clevis pin to allow direct attachment to the multiple pulling harness. When pulling multiple cables into a single conduit, the conductors can be attached to a harness and installation is simplified to a single pull of one assembly. Each Clevis Head Power Pulling Eye includes a clevis socket, sleeve nut, and plug.

Part Number	Cable Size	Color	Max. Diameter		Max Eye O.D.		Slot Width		Slot Depth		Pin Dia.		Pin Center	
			(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8917750	1750 kcmil	Yellow	1.526	39	2.50	64	1.00	25	2.80	71	.88	22	1.23	31
8917950	1500 kcmil	Black	1.412	36	2.38	60	.75	19	1.78	45	.63	16	.72	18
8917850	1250 kcmil	Blue	1.289	33	2.25	57	.75	19	1.78	45	.63	16	.72	18
8917150	1000 kcmil	Orange	1.152	29	2.06	52	.75	19	1.78	45	.63	16	.72	18
8917250	750 kcmil	Brown	.998	25	1.75	44	.63	16	1.59	40	.56	14	.78	20
8917350	700 kcmil	Gray	.964	24	1.75	44	.63	16	1.59	40	.56	14	.78	20
8917450	500 kcmil	Yellow	.813	21	1.44	37	.59	15	1.41	36	.44	11	.59	15
8917550	350 kcmil	White	.681	17	1.25	32	.56	14	1.34	34	.38	10	.59	15
8960350	250 kcmil	Blue	.575	15	1.13	29	.38	10	1.06	27	.31	8	.53	13
8960450	4/0 AWG	Green	.528	13	1.00	25	.38	10	1.06	27	.31	8	.53	13
8960850	2/0 AWG	Black	.419	11	1.00	25	.38	10	1.06	27	.31	8	.53	13
8960550	1/0 AWG	Red	.373	9	.88	22	.38	10	1.06	27	.31	8	.53	13

## Reusable Power Pulling Eyes, Standard Head

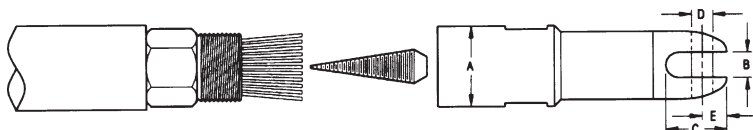
The Standard Head Power Pulling Eyes are an excellent alternative when pulling multiple cables into a single conduit. Single conductors can be attached to a multiple pulling harness with links or with swivels. Installation is then simplified to a single pull of one assembly. Each Standard Power Pulling Eye includes an eye socket, sleeve nut, & plug.



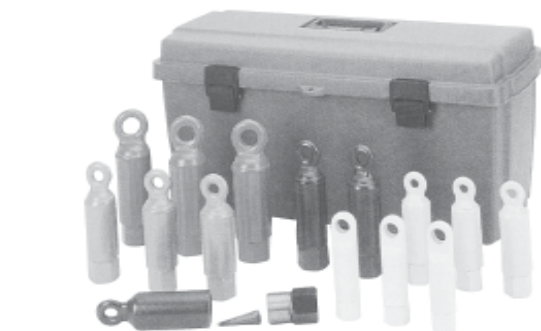
Part Number	Cable Size	Color	Max. Conductor Dia.		Max. Eye O.D.	
			(in)	(mm)	(in)	(mm)
8917720	1750 kcmil	Yellow	1.526	39	2.50	63
8917920	1500 kcmil	Black	1.412	36	2.38	60
8917820	1250 kcmil	Blue	1.289	33	2.25	57
8917120	1000 kcmil	Orange	1.152	29	2.06	52
8917220	750 kcmil	Brown	.998	25	1.75	44
8917320	700 kcmil	Gray	.964	24	1.75	44
8917420	500 kcmil	Yellow	.813	21	1.50	38
8917520	350 kcmil	White	.681	17	1.25	32
8960320	250 kcmil	Blue	.575	15	1.13	29
8960420	4/0 AWG	Green	.528	13	1.00	25
8960820	2/0 AWG	Black	.419	11	1.00	25
8960520	1/0 AWG	Red	.373	9	.88	22

## Reusable Power Pulling Eyes, Swivel Head

The Swivel Head Power Pulling Eye is a hybrid tool that combines features from standard reusable power pulling eyes and swivels for superior performance. A swivel head prevents twisting and binding of the cable as it is installed. It eliminates the need for a separate swivel on each pulling eye when installing single cables into individual conduits or multiple cables into a single conduit. Each Swivel Head Power Pulling Eye includes a swivel head, sleeve nut, and plug.



Part Number	Cable Size	Color	Max. Diameter		Max Eye O.D.		Slot Width		Slot Depth		Pin Dia.		Pin Center	
			(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8917755	1750 kcmil	Yellow	1.526	39	2.50	64	1.00	25	2.80	71	.88	22	1.23	31
8917975	1500 kcmil	Black	1.412	36	2.38	60	.75	19	1.78	45	.63	16	.72	18
8917875	1250 kcmil	Blue	1.289	33	2.25	57	.75	19	1.78	45	.63	16	.72	18
8917175	1000 kcmil	Orange	1.152	29	2.06	52	.75	19	1.78	45	.63	16	.72	18
8917275	750 kcmil	Brown	.998	25	1.75	44	.63	16	1.59	40	.56	14	.78	20
8917375	700 kcmil	Gray	.964	24	1.75	44	.63	16	1.59	40	.56	14	.78	20
8917475	500 kcmil	Yellow	.813	21	1.44	37	.59	15	1.41	36	.44	11	.59	15
8917575	350 kcmil	White	.681	17	1.25	32	.56	14	1.34	34	.38	10	.59	15
8960375	250 kcmil	Blue	.575	15	1.13	29	.38	10	1.06	27	.31	8	.53	13
8960475	4/0 AWG	Green	.528	13	1.00	25	.38	10	1.06	27	.31	8	.53	13
8960875	2/0 AWG	Black	.419	11	1.00	25	.38	10	1.06	27	.31	8	.53	13
8960575	1/0 AWG	Red	.373	10	.88	22	.38	10	1.06	27	.31	8	.53	13



## Reusable Power Pulling Eye Kits

For cost savings and ease of ordering, we have prepared kits for the Clevis, Standard, and Swivel Head Reusable Power Pulling Eyes.

### Standard Head Kits

Part #	Description
8917020	Kit for 350 to 100 kcmil power pulling eyes with eye ends. Includes 3 each of the eyes for 350 to 1000 kcmil cable.
8917070	Kit for 1/0 AWG to 250 kcmil power pulling eyes with eye ends. Includes 3 each of the eyes for 1/0 AWG to 250 kcmil cable.

### Swivel Head Kits

Part #	Description
8917030	Kit for 350 to 100 kcmil power pulling eyes with swivel ends. Includes 3 each of the eyes for 350 to 1000 kcmil cable.
8917080	Kit for 1/0 AWG to 250 kcmil power pulling eyes with swivel ends. Includes 3 each of the eyes for 1/0 AWG to 250 kcmil cable.

### Clevis Head Kits

Part #	Description
8917010	Kit for 350 to 100 kcmil power pulling eyes with clevis ends. Includes 3 each of the eyes for 350 to 1000 kcmil cable.
8917060	Kit for 1/0 AWG to 250 kcmil power pulling eyes with clevis ends. Includes 3 each of the eyes for 1/0 AWG to 250 kcmil cable.

Copyright © 1992, A & M Sales, Inc.



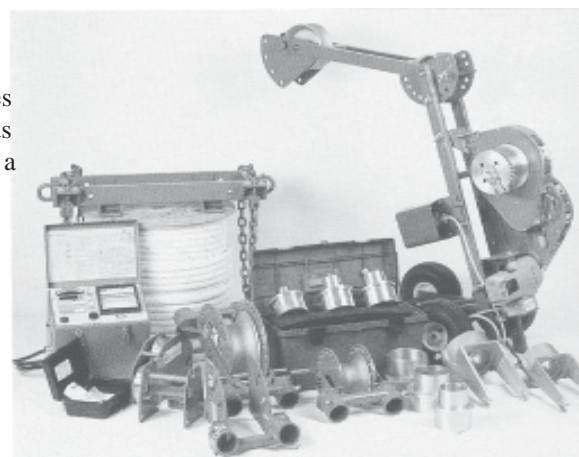
## CableGlider® STD Cable Puller

The CableGlider STD cable puller offers portability and ease of set up in a completely self-contained unit to adapt to a variety of pulling situations. It comes equipped with a two-speed removable power pack, providing up to 6,500 pounds (28,912 N) of pulling force at low speed. Speed changes are no problem with just a turn of a dial.

Design features include a self-tailing capstan for added stability, a pivoting arm, and a footswitch for operator convenience and safety. Accepts all diameter rope (self-tailing capstan accepts 5/8" (16 mm) to 7/8" (22 mm) rope only).

### CableGlider STD includes the following items:

- Puller
- Foot switch
- Retaining Fork
- Conduit Adapters - 2" (51 mm), 3" (76 mm), 3-1/2" (89 mm), 4" (102 mm)
- Tool box for the accessories



## CableGlider STD

Part Number	Description
8610650	110 Volt Standard Cable Puller*
8678025	220 Volt Standard Cable Puller* (for export only)

\*(International orders must specify plug)

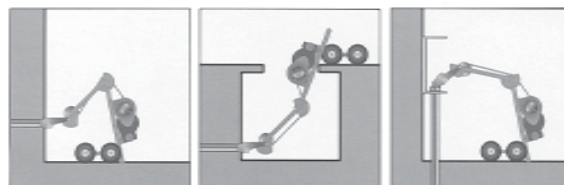
**Warning:** CableGlider cable pullers are not to be used as a hoist or for lifting, supporting or transporting people or loads.



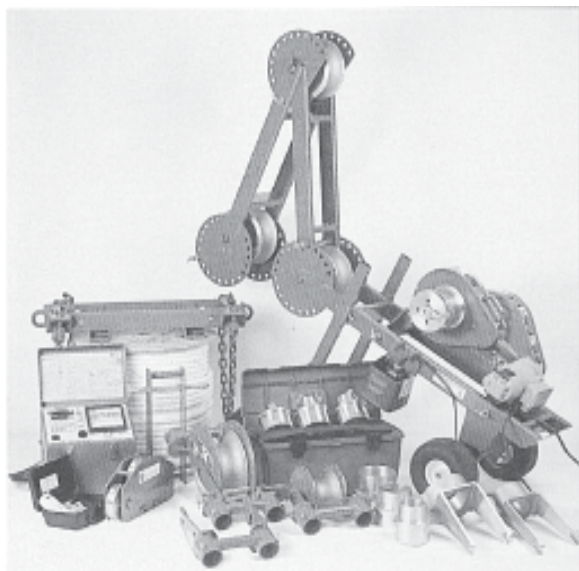
## Complete Pulling Packages for CableGlider STD

Pulling packages offer cost savings and ordering convenience.

Part Number	Description	Part Number	Description
8674389	<b>CableGlider STD (Package 1)</b> <ul style="list-style-type: none"><li>• 110 Volt Puller with accessories (above)</li><li>• HD Extension frame</li><li>• 600 ft. (183 m) of 7/8" (22mm) double braid rope</li><li>• Floor/conduit/pole mount frame</li><li>• 5" (127 mm) &amp; 6" (152 mm) adapters w/ retaining fork</li><li>• Running Line Tensiometer</li></ul>	8674825	<b>CableGlider STD (Package 4)</b> (for export only) <ul style="list-style-type: none"><li>• 220 Volt Puller with accessories (above)</li><li>• HD Extension frame</li><li>• 600 ft. (183 m) of 7/8" (22mm) double braid rope</li><li>• Floor/conduit/pole mount frame</li><li>• 5" (127 mm) &amp; 6" (152 mm) adapters w/ retaining fork</li><li>• Running Line Tensiometer</li></ul>
8674388	<b>CableGlider STD (Package 2)</b> <ul style="list-style-type: none"><li>• All items in Package 1, plus:</li><li>• Chart recorder for running line tensiometer</li></ul>	8674820	<b>CableGlider STD (Package 5)</b> (for export only) <ul style="list-style-type: none"><li>• All items in Package 4, plus:</li><li>• Chart recorder for running line tensiometer</li></ul>
8610686	<b>CableGlider STD (Package 3)</b> <ul style="list-style-type: none"><li>• All Items in Package 1, plus:</li><li>• Amp-Type tensiometer</li></ul>	8674830	<b>CableGlider STD (Package 6)</b> (for export only) <ul style="list-style-type: none"><li>• All Items in Package 4, plus:</li><li>• Amp-Type tensiometer</li></ul>







**CableGlider Plus Package 2**

## CableGlider® Plus Cable Puller

This model comes equipped with the same removable two-speed, 6,500 lbs (28,912 N) power pack and accessories as our STD model, but features a heavy-duty frame with an extra pivoting arm for added performance and versatility. In addition, the front frame height can easily be adjusted with pins. Like all CableGlider models, the Plus is portable, sets up quickly, and comes completely self-contained: ready to work,

As with the STD model, the CableGlider Plus features a self-tailing capstan for added stability, a pivoting arm, and a footswitch for operator convenience and safety. Accepts all diameter rope (self-tailing capstan accepts -5/8" (16 mm) to 78" (22 mm) rope only.

### CableGlider Plus includes the following items:

- Puller
- Foot switch
- Retaining Fork
- Conduit Adapters - 2" (51 mm), 3" (76 mm), 3-1/2" (89 mm), 4" (102 mm)
- Tool box for the accessories

## CableGlider Plus

Part Number	Description
8674300	110 Volt Plus Cable Puller*
8678050	220 Volt Plus Cable Puller* (for export only)

\*(International orders must specify plug)

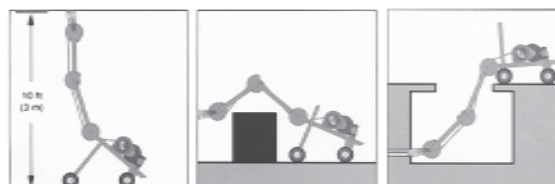
**Warning:** CableGlider cable pullers are not to be used as a hoist or for lifting, supporting or transporting people or loads.



## Complete Pulling Packages for CableGlider Plus

Pulling packages offer cost savings and ordering convenience.

Part Number	Description	Part Number	Description
8674392	<b>CableGlider Plus (Package 1)</b> <ul style="list-style-type: none"> <li>• 110 Volt Puller with accessories (above)</li> <li>• HD Extension frame</li> <li>• 600 ft. (183 m) of 7/8" (22mm) double braid rope</li> <li>• Floor/conduit/pole mount frame</li> <li>• 5" (127 mm) &amp; 6" (152 mm) adapters w/ retaining fork</li> <li>• Running Line Tensiometer</li> </ul>	8674840	<b>CableGlider Plus (Package 4)</b> (for export only) <ul style="list-style-type: none"> <li>• 220 Volt Puller with accessories (above)</li> <li>• HD Extension frame</li> <li>• 600 ft. (183 m) of 7/8" (22mm) double braid rope</li> <li>• Floor/conduit/pole mount frame</li> <li>• 5" (127 mm) &amp; 6" (152 mm) adapters w/ retaining fork</li> <li>• Running Line Tensiometer</li> </ul>
86746391	<b>CableGlider Plus (Package 2)</b> <ul style="list-style-type: none"> <li>• All items in Package 1, plus:</li> <li>• Chart recorder for running line tensiometer</li> </ul>	8674835	<b>CableGlider Plus (Package 5)</b> (for export only) <ul style="list-style-type: none"> <li>• All items in Package 4, plus:</li> <li>• Chart recorder for running line tensiometer</li> </ul>
8674386	<b>CableGlider Plus (Package 3)</b> <ul style="list-style-type: none"> <li>• All Items in Package 1, plus:</li> <li>• Amp-Type tensiometer</li> </ul>	8674845	<b>CableGlider Plus (Package 6)</b> (for export only) <ul style="list-style-type: none"> <li>• All Items in Package 4, plus:</li> <li>• Amp-Type tensiometer</li> </ul>







## CableGlider® HD Cable Puller

The CableGlider HD is specially designed to provide maximum pulling power for longer runs in a completely self-contained unit. It offers fast setup, portability, and is easily adaptable for a variety of pulling situations.

The removable power pack delivers up to 12,000 pounds (53,375 N) of pulling force at low speed-over 80% more than our STD puller. The two-speed motor pulls up to 30 feet per minute at high speed and up to 15 feet per minute at low speed.

The CableGlider HD comes with a heavy-duty frame and extra pivoting arm. The front frame height can easily be adjusted with pins.

### CableGlider HD includes the following items:

- Puller
- Foot switch
- Retaining Fork
- Conduit Adapters - 2" (51 mm), 3" (76 mm), 3-1/2" (89 mm), 4" (102 mm)
- Tool box for the accessories

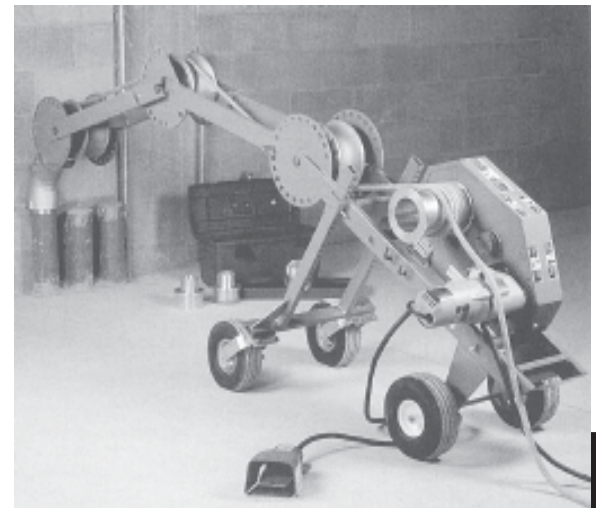
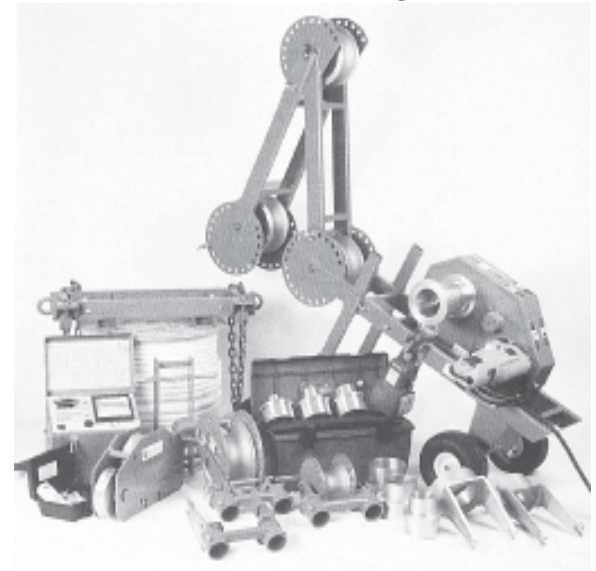
## CableGlider HD

Part Number	Description
8674500	110 Volt HD Cable Puller with 20 amp twist plug*
8678075	220 Volt HD Cable Puller* (for export only)

\*(International orders must specify plug)

**Warning:** CableGlider cable pullers are not to be used as a hoist or for lifting, supporting or transporting people or loads.

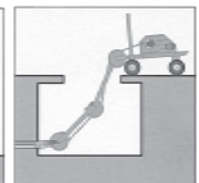
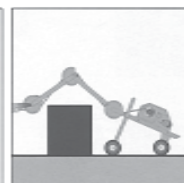
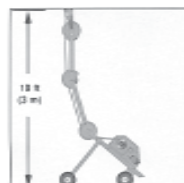
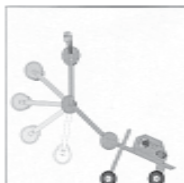
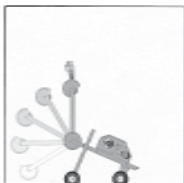
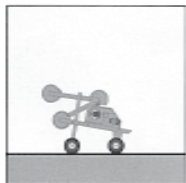
## CableGlider HD Package 2

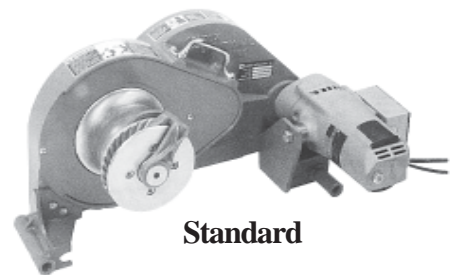


## Complete Pulling Packages for CableGlider HD

Pulling packages offer cost savings and ordering convenience.

Part Number	Description	Part Number	Description
867469	<b>CableGlider HD (Package 1)</b>	8674810	<b>CableGlider HD (Package 4)</b> (for export only)
	<ul style="list-style-type: none"> <li>• 110 Volt Puller with accessories (above)</li> <li>• HD Extension frame</li> <li>• 600 ft. (183 m) of 7/8" (22mm) double braid rope</li> <li>• Floor/conduit/pole mount frame</li> <li>• 5" (127 mm) &amp; 6" (152 mm) adapters w/ retaining fork</li> <li>• Running Line Tensiometer</li> </ul>		<ul style="list-style-type: none"> <li>• 220 Volt Puller with accessories (above)</li> <li>• HD Extension frame</li> <li>• 600 ft. (183 m) of 7/8" (22mm) double braid rope</li> <li>• Floor/conduit/pole mount frame</li> <li>• 5" (127 mm) &amp; 6" (152 mm) adapters w/ retaining fork</li> <li>• Running Line Tensiometer</li> </ul>
8674689	<b>CableGlider HD (Package 2)</b>	8674805	<b>CableGlider HD (Package 5)</b> (for export only)
	<ul style="list-style-type: none"> <li>• All items in Package 1, plus:</li> <li>• Chart recorder for running line tensiometer</li> </ul>		<ul style="list-style-type: none"> <li>• All items in Package 4, plus:</li> <li>• Chart recorder for running line tensiometer</li> </ul>
8674688	<b>CableGlider HD (Package 3)</b>	8674688	<b>CableGlider HD (Package 6)</b> (for export only)
	<ul style="list-style-type: none"> <li>• All Items in Package 1, plus:</li> <li>• Amp-Type tensiometer</li> </ul>		<ul style="list-style-type: none"> <li>• All Items in Package 4, plus:</li> <li>• Amp-Type tensiometer</li> </ul>





**Standard**



**Heavy  
Duty**

## Power Packs

As an added measure of versatility and convenience, the CableGlider® Power Packs can be purchased separately without the standard base frames provided with the CableGlider Cable Pullers. The power packs provide the same pulling capacities as the CableGlider Cable Pullers and can be used on the Floor Mount Frame or the Floor/Conduit/Pole Mount Frames.

**WARNING:** CableGlider cable pullers are not to be used as a hoist or for lifting, supporting or transporting people or loads.

Part #	Description
8610860	110 Volt STD & Plus Cable Puller Power pack
8678000	220 Volt STD & Plus Cable Puller Power pack (for export only)
8674680	110 Volt HD Cable Puller Power pack
8678010	220 Volt HD Cable Puller Power pack (for export only)

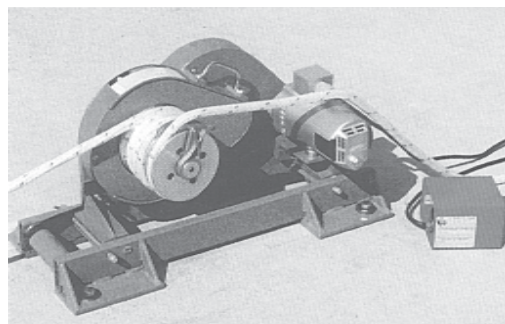
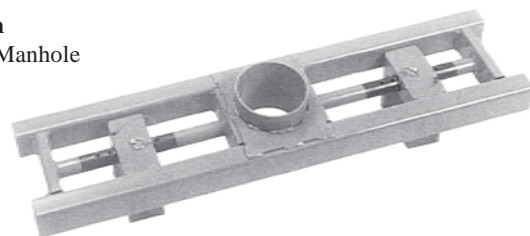


## Adjustable Manhole Adapter

Designed to work with CableGlider Cable Pullers, the Adjustable Manhole Adapter allows greater stability and versatility for manhole pulls. The rugged steel frame provides an adjustable platform to fit 18" (450 mm) to 34" (850 mm) manholes.

Use the frame to position a cable puller above a manhole. Installation is easy, the fit is secure, and the strength is a maximum 12,000 lbs. (53,376 N). **Requires 6" retaining fork**

Part #	Description
8674690	Adjustable Manhole Adapter



## Floor Mount Frame

Fastens to the floor of a vault, manhole, or utility room. The power pack pins easily to the frame. Requires 5/8" or M16 fasteners, grade 5 or better.

**WARNING:** CableGlider cable pullers are not to be used as a hoist or for lifting, supporting or transporting people or loads.

Part #	Description
8610620	Floor Mount Frame (STD model)
8674595	Floor Mount Frame (Plus & HD models)

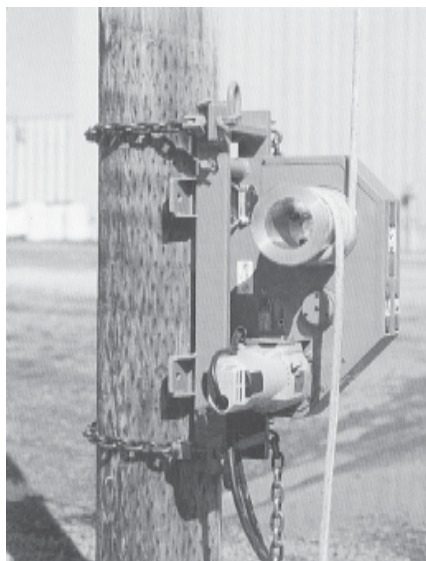
## Floor/Conduit/Pole Mount Frame

Makes it possible to attach the power pack to the floor, steel conduit, I-beams, or a wood pole. Usually is used where there is limited access for overhead pulling or pulling from pole risers. Floor mounting requires 5/8" or M16 fasteners, grade 5 or better.

**NOTE:** 24" (610 mm) diameter maximum pole.

**WARNING:** CableGlider cable pullers are not to be used as a hoist or for lifting, supporting or transporting people or loads.

Part #	Description
8674005	Floor/Conduit/Pole Mount Frame (STD model)
8674010	Floor/Conduit/Pole Mount Frame (Plus & HD models)





## Extension Frame

Productivity reaches a new level with the CableGlider Cable Puller Extension Frame. Using only a few modular components, difficult pulling situations can have easy solutions.

Ideal for cable pulling in deep manholes where added reach is necessary. Also, high overhead ducts can be reached without compromising the stability of the cable puller.

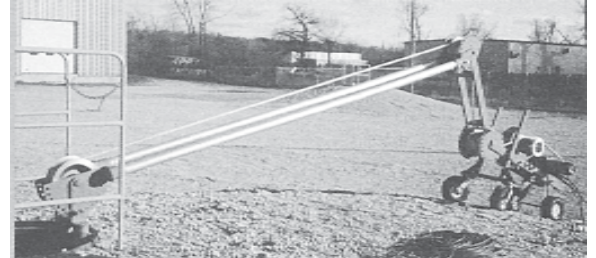
Pull slack with the extension frame when extra reach is not needed. It actually adds length to the conduit run, allowing the cable puller to be positioned farther back and more cable (slack) to be pulled through.

Extension frames are available in kits that configure to,  
CableGlider Standard, Plus, and Heavy Duty Cable Pullers.

### Each kit contains:

- Cable Puller Adapter
- Center Joint
- Duct End Joint

Steel duct (2" Sch 40 GRC) not included.

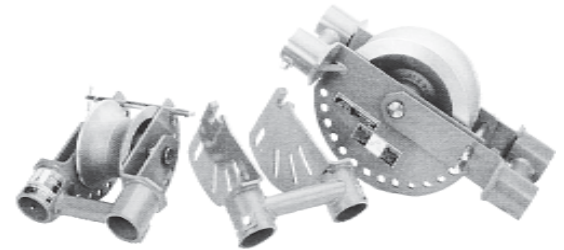


## Extension Frame Kits

Part #	Description
8674940	Kit for CableGlider STD model
8674960	Kit for CableGlider Plus and HD models

## Replacement Parts/Individual Components

Part #	Description
8674928	Puller Adapter fo CableGlider STD model
8674927	Puller Adapter for CableGlider Plus and HD models
8674916	Center Joint for CableGlider STD, Plus and HD models
8674901	Duct End Joint for CableGlider STD, Plus and HD models



## Conduit Adapters

Additional adapters are available which allow pulling into conduit up to 6" (152 mm) in size. The 5" (127 mm) and 6" (152 mm) adapters require the use of an optioned retaining fork. Also available is a 45° elbow adapter for pulling into tight quarters. Adapters for 2" (51 mm), 3" (76 mm), 3-1/2" (89 mm), 4" (102 mm) conduit are included in a tool box that comes standard with all cable pullers. Order additional adapters separately below, or order a complete toolbox: includes all six items marked with (\*) below.

### Straight Adapters

Part Number	Duct Size (in)	(mm)
8610642	1-1/4	32
8610623	1-1/2	38
8610643*	2	51
8610647	2-1/2	64
8610644*	3	76
8610645*	3-1/2	89
8610646*	4	102
8610648	5	127
8610649	6	152



### Offset Adapters

Part Number	Duct Size (in)	(mm)
8674029	2	51
8674026	3	76
8674036	-	30
8674037	-	45
8674038	-	60
8674039	-	80

### Offset Adapter



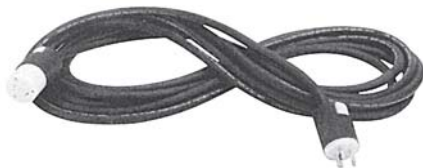


## Elbow Adapter



## Accessories

Part #	Description
8610667*	Tool Box for Accessories
8674021*	Retaining Fork for 2" - 4" (51-102 mm) Conduit Adapters
8674022	Retaining Fork for 5" - 6" (127-152 mm) Conduit Adapters
8674014	4" (102 mm) 45° Elbow Adapter
8674017	Complete Tool Box, includes all six (*) Items Above



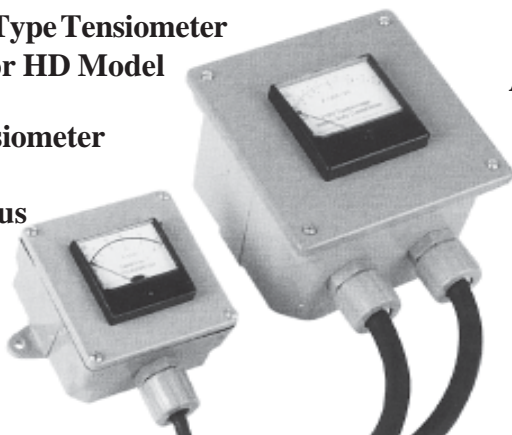
## Extension Cords

Part Number	Description
8677325	120 Volt, 20 Amp Twist 25' (7.6 m) Extension Cord
8677330	120 Volt, 20 Amp Twist 100' (30 m) Extension Cord

220 Volt Extension Cords are available upon request

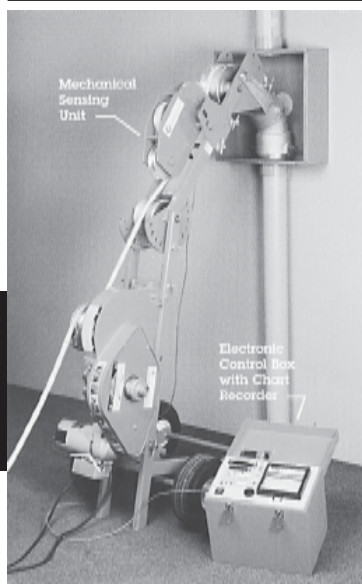
## Amp-Type Tensiometer for HD Model

## Amp-Type Tensiometer for STD & Plus Models



## Amp-Type Tensiometer

Part #	Description
8674100	110 Volt Amp-Type Tensiometer (STD & Plus models)
8674501	110 Volt Amp-Type Tensiometer (HD model)
8674502	220 Volt Amp-Type Tensiometer (STD & Plus models) (for export only)
8674503	220 Volt Amp-Type tensiometer (HD model) (for export only)



## Running Line Tensiometer

The Running Line Tensiometer, used with CableGlider® cable pullers (or other rope capstan pullers) will give accurate measurements of the force exerted on a cable as it is installed. It consists of two components: Mechanical Sensing Unit (which mounts directly to the cable puller) and Electronic Control Box.

The unit will accommodate pull tape and rope up to and including 7/8" diameter with an accuracy of  $\pm 5\%$  of full scale. Load handling capabilities and other specifications are determined by the model used.

### Mechanical Sensing Unit

Mounts easily to the cable puller frame with a mounting bracket and pin. The Running Line Tensiometer's Mechanical Sensing Unit permits rope installation without disassembly of the unit.

### Electronic Control Box

Features large LED display and analog display of pulling tension. A programable overload setpoint has both an audible and visual indication of an overload condition. The Electronic Control Box also has the capability to disengage the cable puller if an overload occurs. A chart recorder (optional) offers a permanent record of the pull.

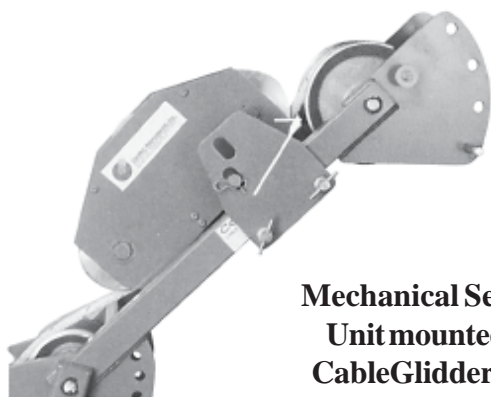
## Running Line Tensiometer, CableGlider STD

Measures loads of 0 to 6,500 lbs. (0 to 28,912 N) with an accuracy of  $\pm 325$  lbs. (1,446 N).

## Running Line Tensiometer Package I

Includes the following items:

- Mechanical Sensing Unit
- Electronic Control Box
- Mounting Hardware



## Mechanical Sensing Unit mounted on CableGlider STD

Part #	Description
8674235	110 Volt RLT fo CableGlider STD
8674243	220 Volt RLT for CableGlider STD (for export only)



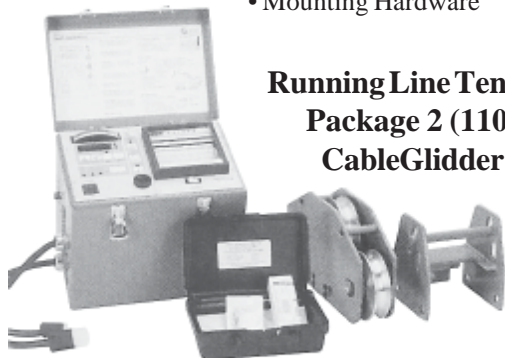


## Running Line Tensiometer Package 2

Includes the following items:

- Mechanical Sensing Unit
- Electronic Control Box
- Chart Recorder
- Mounting Hardware

Part #	Description
8674230	110 Volt RLT fo CableGlider STD with chart recorder
8674242	220 Volt RLT for CableGlider STD with chart recorder (for export only)



### Running Line Tensiometer Package 2 (110 Volt) CableGlider STD

## Chart Recorder Replacement Accessories

Part #	Description
2245600	Z-fold chart paper replacement for STD
2246001	Ink Cartridge Replacement (Juno recorder)
2245800	Ink Cartridge, 3 pack (Chessell recorder)

## Running Line Tensiometer, CableGlider Plus

Measures loads of 0 to 6,500 lbs. (0 to 28,912 N) with an accuracy of  $\pm 325$  lbs. (1,446 N).

## Running Line Tensiometer Package I

Includes the following items:

- Mechanical Sensing Unit
- Electronic Control Box
- Mounting Hardware

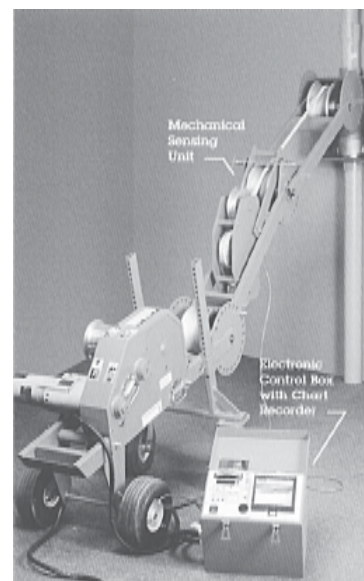
Part #	Description
8674228	110 Volt RLT fo CableGlider Plus
8674241	220 Volt RLT for CableGlider Plus (for export only)

## Running Line Tensiometer Package 2

Includes the following items:

- Mechanical Sensing Unit
- Electronic Control Box
- Chart Recorder
- Mounting Hardware

Part #	Description
8674225	110 Volt RLT fo CableGlider Plus with chart recorder
8674240	220 Volt RLT for CableGlider Plus with chart recorder (for export only)



## Chart Recorder Replacement Accessories

Part #	Description
8674225	110 Volt RLT fo CableGlider Plus with chart recorder
8674240	220 Volt RLT for CableGlider Plus with chart recorder (for export only)

## Running Line Tensiometer, CableGlider HD

Measures loads of 0 to 12,000 lbs. (0 to 53,376 N) with an accuracy of  $\pm 600$  lbs. (2,669 N)

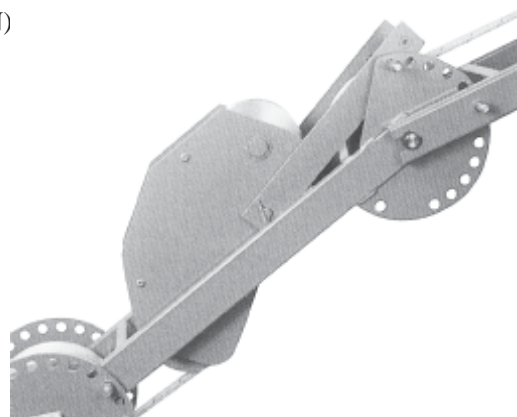
## Running Line Tensiometer Package I

Includes the following items:

- Mechanical Sensing Unit
- Electronic Control Box
- Mounting Hardware

Part #	Description
8674222	110 Volt RLT fo CableGlider HD
8674241	220 Volt RLT for CableGlider HD (for export only)

### Mechanical Sensing Unit mounted on CableGlider HD or Plus





**Running Line Tensiometer Package 2  
(110 Volt)  
CableGlidder HD**

## Running Line Tensiometer Package 2

Includes the following items:

- Mechanical Sensing Unit
- Electronic Control Box
- Chart Recorder
- Mounting Hardware

Part #	Description
8674212	110 Volt RLT fo CableGlider HD with chart recorder
8674240	220 Volt RLT for CableGlider HD with chart recorder (for export only)

## Chart Recorder Replacement Accessories

Part #	Description
2245700	Z-fold chart paper replacement for HD
2246001	Ink Cartridge Replacement (Juno recorder)
2245800	Ink Cartridge, 3 pack (Chessell recorder)

## Fiber Optic Cable Puller

The Fiber Optic Cable Puller sets new standards for safe, accurate pulling of fiber optic cables. Only our puller can offer load cell torque input for the most accurate tension measuring available. Unlike most hydraulic measuring systems, this system is not affected by changes in oil temperature, component age and power source. That means the Fiber Optic Cable Puller does not need to be recalibrated under different weather conditions.



### Standard Features

These pullers consist of a 30" (762 mm) diameter capstan, hydraulic motor, variable-speed foot control, manual flow control valve for adjusting maximum speed and a manually adjustable pressure relief valve for adjusting the ultimate pull tension. A footage counter is also included.

### Optional Features

The Fiber Optic Cable Puller features an optional electronic tension control system with adjustable digital load limits and a load cell tension measuring device. Also available is a 4" (102 mm) strip chart recorder incorporated into the electronic control box for a permanent record of the cable pull.

### Components

The Fiber Optic pullers are multi-component products. Order a puller to fit your requirements with combinations of these components. Components include:

- Hydraulic puller mounted on a standard 2-1/2" (64 mm) square tube
- 30" (762 mm) diameter capstan
- Foot control / hydraulic control assembly
- Electronic control box
- Chart recorder
- Battery pack for the tensiometer
- Hoses and cords to connect the puller to the foot control assembly and electronic control box

**WARNING:** The Fiber Optic Cable Puller is not to be used as a hoist or for lifting, supporting or transporting people or loads.

### Variable Speed Foot Control

Like the accelerator pedal in your car or truck, the Variable Speed Foot Control allows the operator to easily manage the speed of the pull.

### Bi-directional Pulling

Bi-directional pulling capabilities means less set-up time and more productivity.





### Specifications

	12 in (305 mm)		30 in (762 mm)		50 in (1270 mm)	
	Diameter Capstan		Diameter Capstan		Diameter Capstan	
Pulling Force	lbs	kN	lbs	kN	lbs	kN
Maximum	2,000	8.9	1,000	4.4	600	2.7
Continuous	2,000	8.9	1,000	4.4	600	2.7
Pulling Speed	ft/min	m/min	ft/min	m/min	ft/min	m/min
No Load	93.9	28.6	240.0	73.2	391.4	119.3
At Maximum Force	93.9	28.6	240.0	73.2	391.4	119.3
Power Requirements						
Pressure	2,000 to 2,500 psi (137 to 172 bar)					
Flow	6 to 10 gpm (22.7 to 37.9 lpm)					
Peak Power	8 HP (5.97 kW)					

### Fiber Optic Cable Puller Packages

#### Package 1 - Fiber Optic Cable Puller

Standard ordering package includes items listed below. Puller package does not include a remote mounting stand or a base mount, please order separately.

Part #	Description
8690000	<b>Fiber Optic Cable Puller (Package 1)</b>
	• Hydraulic puller mounted on a 2-1/2" (64 mm) square tube
	• 30" (762 mm) diameter capstan
	• Foot Control / hydraulic control assembly
	• Hoses and cords to connect the puller

#### Package 2 - Fiber Optic Cable Puller

Contains all items in package 1 plus the electronic tension monitoring system items listed below. Puller package does not include a remote mounting stand or a base mount, please order separately.

Part #	Description
8690025	<b>Fiber Optic Cable Puller (Package 2)</b>
	• Electronic control box
	• Battery pack
	• All Items in package 1

#### Package 3 - Fiber Optic Cable Puller

Deluxe ordering package includes all items in package 2 plus a chart recorder for permanent documentation of your pull. Puller package does not include a remote mounting stand or a base mount, please order separately.

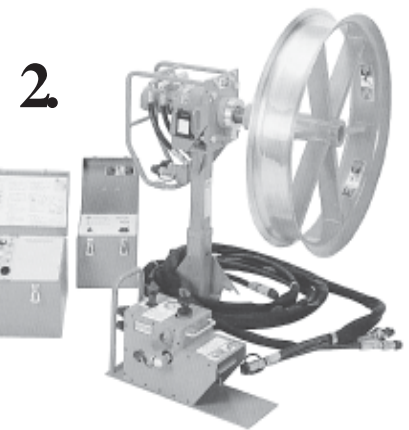
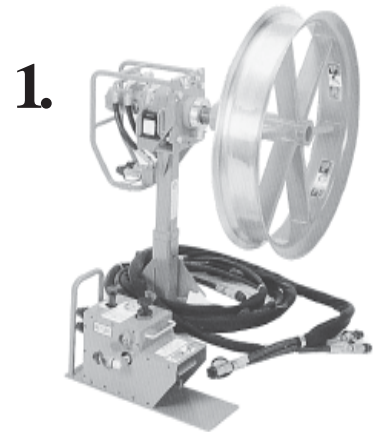
Part #	Description
8690050	<b>Fiber Optic Cable Puller (Package 3)</b>
	• Chart Recorder
	• All Items in package 2

### Fiber Optic Cable Puller Package Upgrade Kits

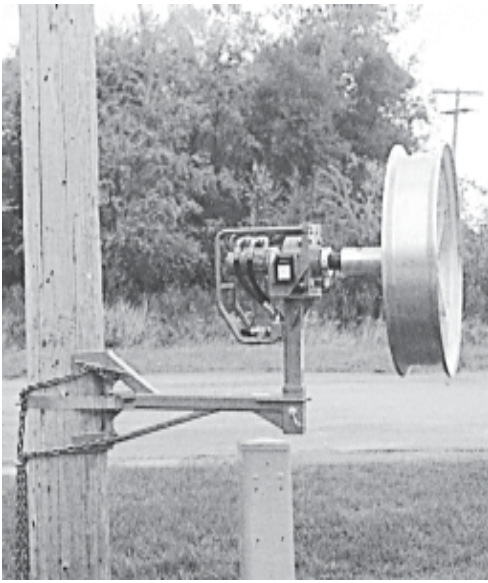
Part #	Description
8690075	Pkg 1 to Pkg 3 Upgrade Kit (Electronic Control Box with Chart Recorder and Load Cell)
8690080	Pkg 1 to Pkg 2 Upgrade Kit (Electronic Control Box and Load Cell)
8675875	Pkg 2 to Pkg 3 Upgrade Kit (Chart Recorder)

### Chart Recorder Replacement Accessories

Part #	Description
2273600	Chart Recorder Paper, 0-2,000 lbs.
2245800	Ink Cartridge, 3 pack (Chessell recorder)
2246001	Ink Cartridge, single (Jumbo Recorder)



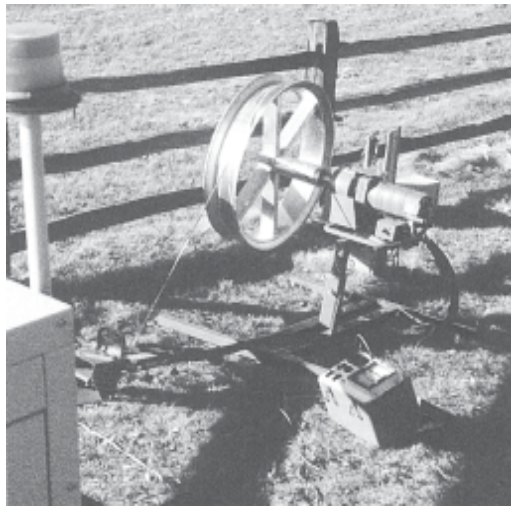




## Pole Mounting Frame

When overhead fiber optic cable installation applications require the smooth hydraulic power and accurate tension measuring system of the Fiber Optic Cable Puller, the Pole Mounting Frame is available. Install the cable puller on the frame with no modifications necessary to the puller. By design, the Pole Mounting Frame offers a secure hold on the cable puller both vertically and horizontally for a worry-free pull. A special plug drives into wood poles for added stability. Includes all mounting hardware.

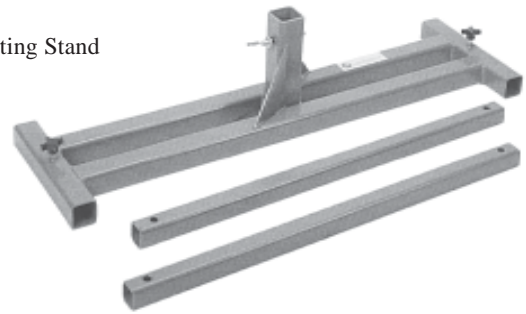
Part #	Description
8676000	Pole Mounting Frame and Hardware



## Mounting Stand

For fiber optic cable pulling applications that demand flexibility in setup, the Remote Mounting Stand allows positioning of the cable puller well away from the power source. Easy to set up, the unit is both sturdy and compact. Features 2-1/2" (64 mm) square mount to accommodate any Fiber Optic Cable Puller.

Part #	Description
8675115	Remote Mounting Stand



## Capstans

To conform to the many specifications of fiber optic cable available, and to offer more cable pulling capabilities, A & M offers several sizes of capstans that fit the Fiber Optic Cable Puller. These bayonet style capstans are offered in 12" (305 mm), 30" (762 mm), and 50" (1,270 mm) diameters for a standard 2-7/16" diameter AT&T bayonet style shaft.



Part Number	Diameter		Flat Width		Max. Cable O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
10727	7-1/4	184	8	204	-	-
8675213*	12	305	9	229	-	-
8675230	30	762	4	102	.72	19
8675430	30	762	8	203	1.00	25
30540	40	1,020	8	203	-	-
8675220	50	1,270	8	203	1.25	32

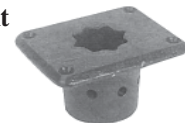
\* Not to be used for fiber optic cable or steel rope. Intended for pulling innerduct, power, telephone or coaxial cables.

## Mounting Sockets

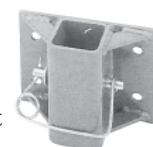
The Fiber Optic Cable Puller has a square mounting post 2-1/2" (64 mm) x 2-1/2" (64 mm). A female mounting socket is required for stability during cable pulling operations.

Part #	Description
2260800	Floor Socket Mount, Cast
2260900	Overhanging Socket Mount, Cast
8675130	Base Mount
8675138	Side Mount

### Floor Socket Mount



### Side Mount



### Base Mount







## Calibration Dynamometer

The Fiber Optic Cable Puller is calibrated at the factory prior to shipment. The Calibration Dynamometer is used to check that the puller's calibration has not changed, especially if the relief valve has been adjusted in the field. On cable puller models equipped with an Electronic Control box, the Calibration Dynamometer simply verifies the readings. Other load capacities available.



Part #	Description
2261000	1,000 lb (454 kg) Calibration Dynamometer

## Optional Electronic Control System

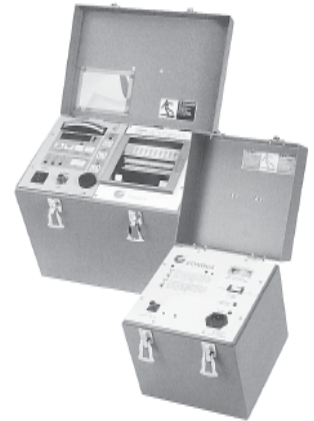
The electronic control system in a Fiber Optic Cable Puller directly measures the rotational torque at the motor, thereby indicating actual cable pulling forces. It is the most accurate technology available for measuring pull tension.

- True Measurement
- Better Control
- Not affected by oil temperature, power source, or component age
- Does not require recalibration from job to job

The Control Box features analog and LED tension displays and an easy to use membrane switch control panel. Program the maximum tension your cable will allow and the cable puller will be shut off if that tension is reached.

The Control Box may run off a 12-volt vehicle battery or the supplied battery pack.

The optional Chart Recorder provides you with permanent documentation of each pull for your records.



## Fiber Optic Cable Puller Trailer

A portable, self-contained cable pulling system incorporating a gasoline or diesel-driven hydraulic power source, cable puller mounts, leveling and stabilizing hardware, and lockable storage areas. Designed with the Fiber Optic Cable Puller in mind, the Fiber Optic Cable Puller Trailer can handle the stress of pulling 2,000 lbs. (8,896 N) of line tension and offers a multitude of cable puller positions. The unit is light and easily transported by a standard pickup truck,

The rear compartment slides forward to uncover the working platform. All controls for the power unit are easily accessed for operator convenience. Ample storage is built-in and all doors and openings have locks for security.

At the job site, any cable puller can be set in the left, center, or right positions on the trailer bed. These three built-in cable puller mounts, provide a total of seven cable pulling positions. A remote mounting stand is incorporated into the center position to provide a travel mount for the puller. It also detaches for use away from the trailer. Power for the cable puller is provided by an integrated gasoline or diesel-driven Briggs & Stratton 18 HP (13.4 kW) hydraulic power unit.



### Gasoline

Part #	Description
8675820	Trailer (includes gasoline-driven hydraulic power unit, gas tank, 4 leveling jacks, 2 wheel chocks, and remote mounting stand).
8675821	Trailer with Fiber Optic Cable Puller (pkg 1)*
8675822	Trailer with Fiber Optic Cable Puller (pkg 2)*
8675823	Trailer with Fiber Optic Cable Puller (pkg 3)*

### Diesel

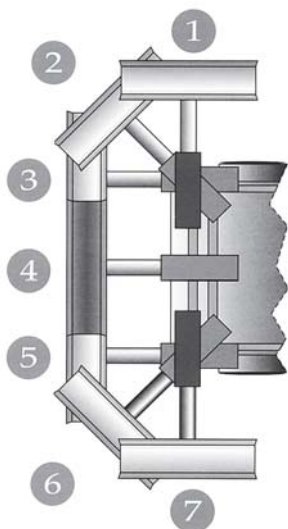
Part #	Description
8675620	Trailer (includes gasoline-driven hydraulic power unit, gas tank, 4 leveling jacks, 2 wheel chocks, and remote mounting stand).
8675621	Trailer with Fiber Optic Cable Puller (pkg 1)*
8675622	Trailer with Fiber Optic Cable Puller (pkg 2)*
8675623	Trailer with Fiber Optic Cable Puller (pkg 3)*

\*For information on Fiber Optic Cable Puller Packages, see previous pages

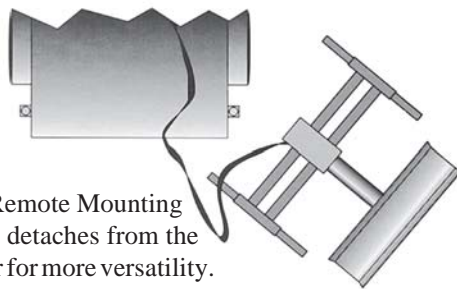
\* For Specifications on Fiber Optic Cable Trailer Please Call.



## Fiber Optic Cable Puller Trailer Positioning

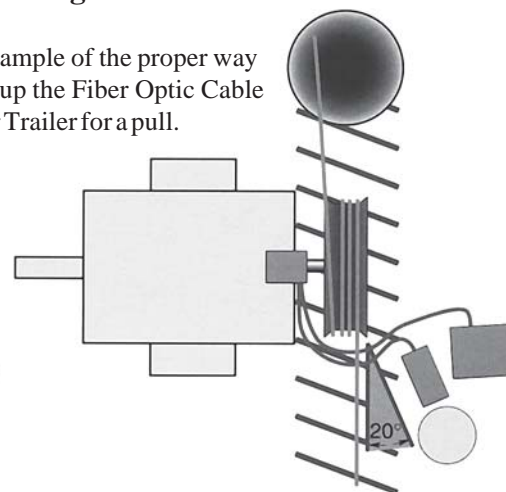


Three built-in cable puller mounts provide a total of seven cable pulling positions



The Remote Mounting Stand detaches from the trailer for more versatility.

An example of the proper way to set up the Fiber Optic Cable Puller Trailer for a pull.



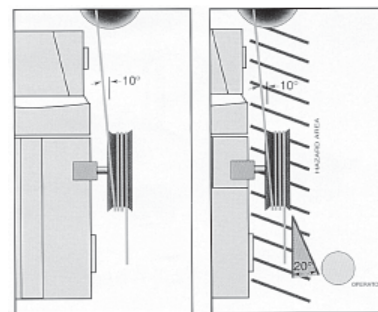
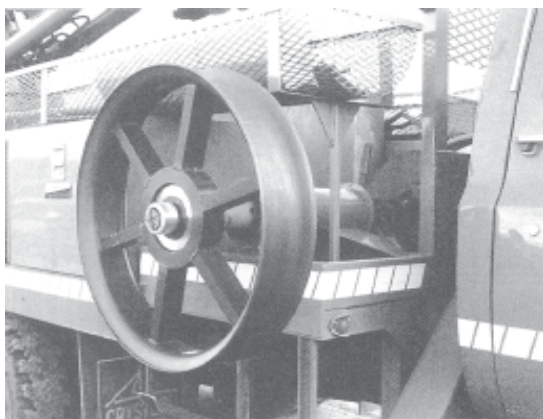
## Slip Clutch Capstan

Slip Clutch Capstans from A & M Sales are designed to mount directly on a bayonet style winch drive shaft. A factory preset torque limiter prevents pulling tensions from exceeding 600 pounds (2,670 N)  $\pm$  10% (60 lbs or 267 N). If the preset load is reached, the capstan will 'slip' and discontinues rotating.

High strength aluminum and steel construction ensures product durability and cable protection.

The capstan is factory calibrated to 600 lbs (2,269 N) but can be calibrated to different loads from 300 to 1,000 lbs. (1,334 to 4,448 N).

The capstan is designed for use with a 2-7/16" (62 mm) diameter, AT&T specification bayonet style power take-off (PTO) shaft.

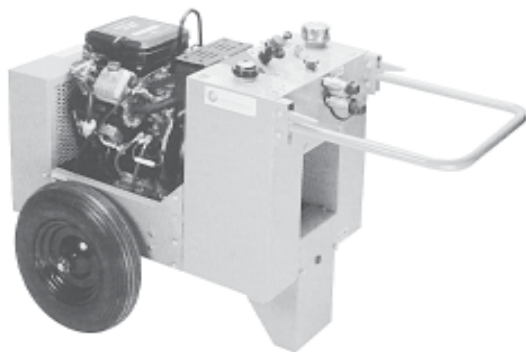


Part Number	Description		Flat Width		Max. Cable O.D.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8760030	30	762	4	102	.75	19

## Portable Hydraulic Power Pack

This portable power source is matched perfectly to the power requirements of the Fiber Optic Cable Puller and the Fiber Optic Cable Blower. Power source is a 16 HP (11.9 kW) Briggs & Stratton V-Twin Vanguard (gas or diesel) engine. Features electric start, large capacity hydraulic cooler, quick disconnects, low oil shut-off, and 16" (406 mm) diameter pneumatic tires.

### Specifications



Part #	Description
8675200	Hydraulic Power Pack, Gas
8675250	Hydraulic Power Pack, Diesel

Hydraulic System	Open Center	
Frame Type	Two wheel mobile unit	
Length	35.0 in. (889 mm)	
Width	29.0 in. (736 mm)	
Height	32.0 in. (812 mm)	
Weight (Dry)	233 lbs (105.6 kg)	
Filtration	10 Micron Return Line Canister Type	
Oil Color	Air to Oil	
Engine	Briggs & Stratton V-Twin Vanguard, Rated at 16 HP @ 3,600 RPM	
Fuel	5.0 gallons/18.9 liters	
Hydraulic Oil (Usable)	5.0 gallons/18.9 liters	
Hydraulic Rated Flow	GPM @ PSI	LPM @ BAR
	9.1 0	34.4 0
	8.2 2.000	31.0 138
Hydraulic Relief Valve Pressure	2,150.0 PSI (148.3 BAR)	

Copyright © 1992, A & M Sales, Inc.



## **Fiber Optic Cable Blower**

As a leader in the manufacturing of fiber optic, power, and CATV cable installation tools and equipment, Condux offers a superior fiber optic cable blower that is easy to use and safe to operate.

Our Fiber Optic Cable Blower offers more speed and more push force monitoring. This results in faster installations.

Install 300 feet of fiber optic cable per minute (90 m/min) with the new Fiber Optic Cable Blower. Our engineers designed the speed in by making the cable travel at the same speed as the air! A carrier is always attached to the front of the cable. Compressed air propels the carrier and cable through the air-tight sealed duct in a matter of seconds. And, because air flow and tractor drive speed can be adjusted, you can install fiber at the rate which best suits any application.

Compared to other models on the market, our Fiber Optic Cable Blower features longer tractor feed grip area for less stress on the cable. We incorporate a hydraulic cylinder on the tractor feed to better control down pressure.

A refined speed and distance counter with LCD read-out, as well as convenient hydraulic and pneumatic controls come standard with the blower. An optional electronic control system is available to monitor the cable and tractor drive speeds. This system will shut down the blower if cable slippage, an over-speed situation, or a cable stoppage is detected. Compare features and quality to see why our Fiber Optic Cable Blower is better.



## **Speed and Distance Readout**

All models come standard with speed and distance display.



## **Advanced Electronic Controls**

Optional system monitors and displays the cable and tractor drive speeds. Will automatically shut off the blower in these conditions:

- Slippage
- Over-Speed
- Cable Stoppage

## **Cable & Duct Packs**

Components provide for the maximum amount of combinations of duct & cable at the lowest possible price. See ordering information for the complete listings.

## **Easy to use**

Convenient hydraulic and pneumatic controls for ease of operation. Ergonomically designed. No special maintenance required.

## **Portability**

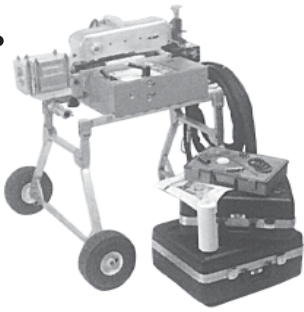
Legs with wheels (shown) or job Box with wheels.



# Fiber Optic Cable Blower Packages

## Without Electronics

1.

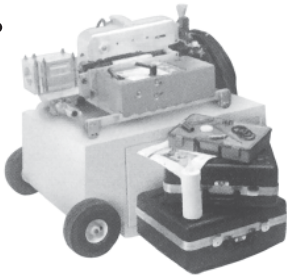


### Package 1\* - 8761310

- Fiber Optic Cable Blower
- Blower Leg Kit
- Common Parts Pack

\* Requires a minimum of one Cable Pack and one Duct Pack

2.

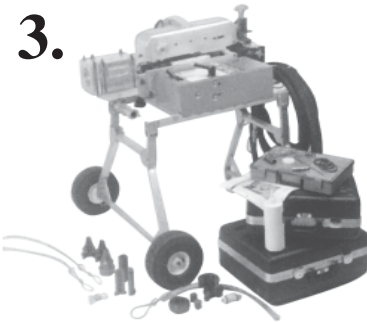


### Package 2\* - 8761315

- Fiber Optic Cable Blower
- Blower Job Box
- Common Parts Pack

\* Requires a minimum of one Cable Pack and one Duct Pack

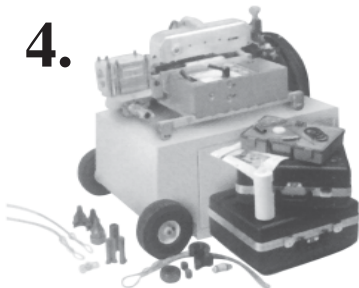
3.



### Package 3\* - 8761320

- Fiber Optic Cable Blower
- Blower Leg Kit
- Common Parts Pack
- Cable Pack 1-3
- Duct Pack 1-3

4.

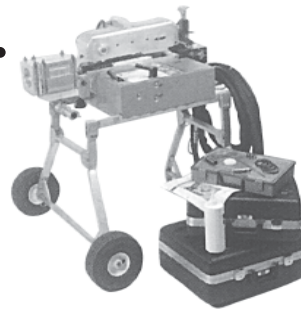


### Package 4\* - 8761325

- Fiber Optic Cable Blower
- Blower Job Box
- Common Parts Pack
- Cable Pack 1-3
- Duct Pack 1-3

## With Electronics

5.

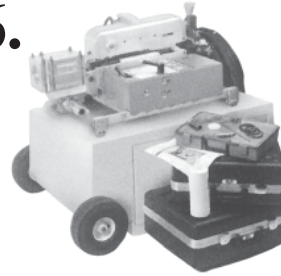


### Package 5\* - 8761330

- Fiber Optic Cable Blower
- Electronic Controls
- Blower Leg Kit
- Common Parts Pack

\* Requires a minimum of one Cable Pack and one Duct Pack

6.

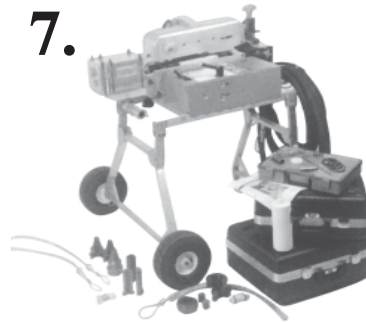


### Package 6\* - 8761335

- Fiber Optic Cable Blower
- Electronic Controls
- Blower Job Box
- Common Parts Pack

\* Requires a minimum of one Cable Pack and one Duct Pack

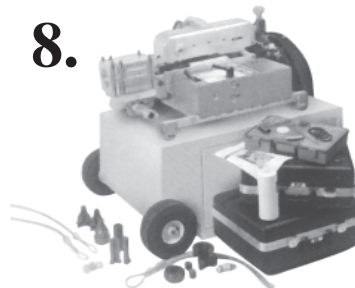
7.



### Package 7\* - 8761340

- Fiber Optic Cable Blower
- Electronic Controls
- Blower Leg Kit
- Common Parts Pack
- Cable Pack 1-3
- Duct Pack 1-3

8.



### Package 8\* - 8761345

- Fiber Optic Cable Blower
- Electronic Controls
- Blower Job Box
- Common Parts Pack
- Cable Pack 1-3
- Duct Pack 1-3

## Common Parts Packages (comes in all blower packages) includes:

- |                              |                                     |                            |
|------------------------------|-------------------------------------|----------------------------|
| • Allen Wrench               | • Large Case w/ Foam Insert         | • 1 qt. Blowing Lubricant  |
| • Ratchet Wrench             | • Small Case w/ Foam Insert         | • Capscrew Set (6-#8-32's) |
| • Socket (11/16"-3/8" drive) | • Small Divided Case w/ Parts Label | • O-Ring Seal Kit          |
| • 5/8" x 600lb. Swivel       | • Parts and User Manual             | • Venturi Air Plug         |

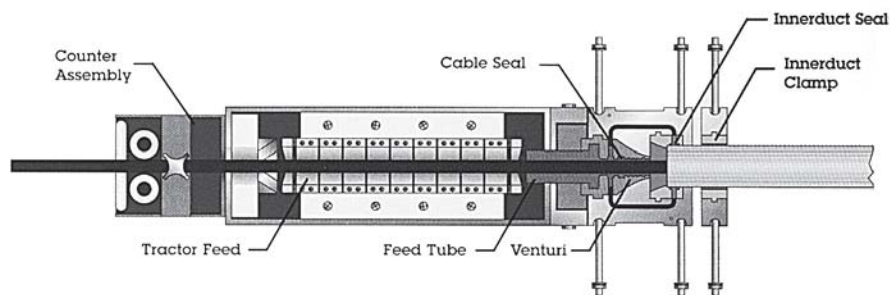




## Component Options: Duct Packs & Cable Packs

The Fiber Optic Cable Blower operates efficiently with most common combinations of cable and innerduct sizes. The correct size cable seals, feed tube and venturi must be determined for the cable being installed. Also necessary are the correct size innerduct seals, clamps, and carrier for the innerduct being occupied.

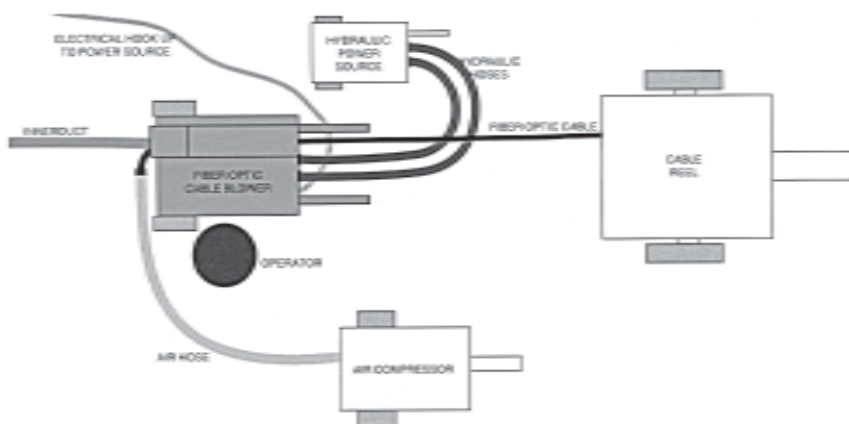
Use the chart below to determine the correct size components for your specific cable and innerduct installation project.



CABLE PACK		VENTURI		FEED TUBE		CABLE SEAL		CABLE GRIP	
Cable O.D.	Part No.	Cable O.D.	Part No.	Cable O.D.	Part No.	Cable O.D.	Part No.	Cable O.D.	Part No.
0.35-0.60 (8.9-15.2)	8761350 Pack #1	0.35-0.48 (8.9-12.2)	8761400	0.35-0.48 (8.9-123.2)	8761401	0.35-0.42 (8.9-10.7)	8761424	0.32-0.48 (8.1-12.2)	8643755 033-29-1195
						0.43-0.48 (10.8-12.2)	8761425		
		0.49-0.60 (12.3-15.2)	8761402	0.49-0.60 (12.3-15.2)	8761403	0.49-0.55 (12.3-14.0)	8761426	0.42-0.61 (10.7-15.5)	8643756 033-29-1196
						0.56-0.60 (14.1-15.2)	8761427		
0.61-0.85 (15.3-21.6)	8761355 Pack #2	0.61-0.73 (15.3-18.5)	8761404	0.61-0.73 (15.3-18.5)	8761405	0.61-0.67 (15.3-17.0)	8761428	0.53-0.74 (13.5-18.8)	8643757 033-29-1197
						0.68-0.73 (17.1-18.5)	8761429		
		0.74-0.85 (18.6-21.6)	8761406	0.74-0.85 (18.6-21.6)	8761407	0.74-0.79 (18.6-20.1)	8761430	0.64-0.87 (16.3-22.1)	8643758 033-29-1198
						0.80-0.85 (20.2-21.6)	8761431		
0.86-1.13 (21.7-28.7)	8761360 Pack #3	0.86-0.97 (21.7-24.6)	8761408	0.86-0.97 (21.7-24.6)	8761409	0.86-0.92 (21.7-23.4)	8761432	0.75-1.00 (19.1-25.4)	8643759 033-29-1199
						0.93-0.97 (23.5-24.6)	8761433		
		0.98-1.13 (24.7-28.7)	8761410	0.98-1.13 (24.7-28.7)	8761411	0.98-1.04 (24.7-26.4)	8761434	1.00-1.24 (25.4-31.5)	8643137 033-03-013
						1.05-1.13 (26.5-28.7)	8761435		
1.14-1.25 (28.8-31.8)	8761365 Pack #4	1.14-1.25 (28.8-31.8)	8761412	1.14-1.25 (28.8-31.8)	8761413	1.14-1.19 (28.8-30.2)	8761436	1.00-1.24 (25.4-31.5)	8643137 033-03-013
						1.20-1.25 (30.3-31.8)	8761437		

(Continued On Next Page)

DUCT PACK		DUCT CLAMP		DUCT SEAL		CARRIER FOAM		CARRIER		CABLE GRIP	
Duct Size	Part No.	Duct O.D.	Part No.	Duct O.D.	Part No.	Duct I.D.	Part No.	Carrier O.D.	Part No.	Duct O.D.	Part No.
1" SDR 11/13.5	8761370 Pack #1	1.315 (33.4)	8761414	1.315 (33.4)	8761415	1.121 (28.5)	8761250	1.25 (31.8)	8761439	1.00-1.24 (25.4-31.5)	8643137 033-03-013
1.25" SDR 11/13.5	8761375 Pack #2	1.660 (42.2)	8761416	1.660 (42.2)	8761417	1.414 (35.9)	8761255	1.50 (38.1)	8761440	1.50-1.99 (38.1-50.5)	8643149 033-03-016
1.5" SDR 11/13.5	8761380 Pack #3	1.900 (48.3)	8761418	1.900 (48.3)	8761419	1.618 (41.1)	8761260	1.75 (44.5)	8761441	1.50-1.99 (38.1-50.5)	8643149 033-03-016
2" SDR 11/13.5	8761385 Pack #4	2.375 (60.3)	8761420	2.375 (60.3)	8761421	2.023 (51.4)	8761265	2.00 (50.8)	8761442	2.00-2.49 (50.8-63.2)	8643155 033-03-017
32mm	8761570 Pack #5	1.260 (32.0)	8761543	1.260 (32.0)	8761545	1.024 (26.0)	8761560	1.25 (31.8)	8761439	1.25-1.49 (31.8-37.8)	8643143 033-03-015
37mm	8761565 Pack #6	1.457 (37.0)	8761536	1.457 (37.0)	8761538	1.220 (31.0)	8761555	1.25 (31.8)	8761439	1.25-1.49 (31.8-37.8)	8643143 033-03-015
40mm	8761520 Pack #7	1.575 (40.0)	8761530	1.575 (40.0)	8761535	1.300 (33.0)	8761525	1.50 (38.1)	8761440	1.50-1.99 (38.1-50.5)	8643149 033-03-016



### Specifications

700	Hydraulic System Requirements	Hydraulic Operating Pressure	1500 psi (103 bar) maximum
		Hydraulic Flow	8 gpm (30 lpm) maximum 5 gpm (19 lpm) minimum
	Air Compressor Requirements	Hydraulic Circuit Type	Open Center
		Pneumatic Pressure	150 psi (10.3 bar) maximum 100 psi (6.9 bar) minimum
	Operational Capacities	Required Flow Capacity	175 to 375 SCFM (5 m <sup>3</sup> /min-11 m <sup>3</sup> /min)
		Pushing Force	150 lbs. (667 N) maximum
	Distance and Speed Displays (Blower Packages 1, 2, 3, & 4)	Pushing Speed	300 ft/min (91 m/min) Maximum
		Cable Sizes	3/8" to 1-1/4" (10 mm to 32 mm)
	Electronic Control System (Blower Packages 5, 6, 7, & 8)	Standard Duct Sizes (other sizes available)	1, 1-1/4, 1-1/2, and 2" SDR 11 and 13.5 (32, 37, and 40 mm)
		Typical Installation Distances	4000-12,000 ft (1200-3700 m)*
	External Power Requirements	Display Unit	No External Power Required Digital LCD Display
		Automatic Shutdowns	12 Volts DC At Programmed minimum and maximum speed When cable slippage or stoppage is detected
	Display Unit		Digital LCD Display

\*Depends on duct geometry, air leakage of duct system and couplings, and size of duct and cable.

Copyright © 1992, A & M Sales, Inc.



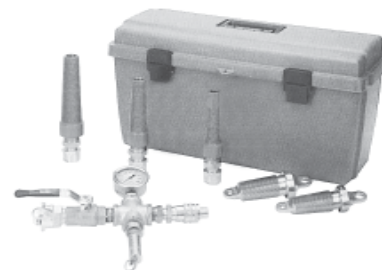
## Innerduct Pressure Test Kit

Use the Innerduct Pressure Test Kit to test innerduct before setting up the Fiber Optic Cable Blower. The duct system must be able to withstand and hold 150 psi (10.3 bar) for the Cable Blower to work properly. Kit includes: Control Valve Assembly, Seal-Off Heads, Pulling Eyes, Pulling Grips and a Tool Box.

Part #	Description
8761457	Pressure Test Kit for 1", 1-1/4" & 1-1/2" SDR 11 & 13.5 Innerduct

### Other Components Available

Part #	Description
8034318	Seal-Off Head for 2.00" SDR 11 & 13.5 Innerduct
8913328	Pulling Eye for 2.00" SDR 11 & 13.5 Innerduct
8643155	Pulling Grip for 2.00" SDR 11 & 13.5 Innerduct



## Innerduct Couplings

ETCO Double "E-Loc"® Innerduct Couplings are designed to join both smooth and ribbed HDPE innerduct, specifically for pneumatic methods of cable placement where air and water-tight integrity of the system is imperative, and where the joint is unrestrained such as in a vault, manhole or hand hole. The couplers are pressure tight to internal pressures above 200 psi when restrained or buried, and can maintain these pressures unrestrained, and are reusable. There are no metal parts and can be hand tightened with no special tools.

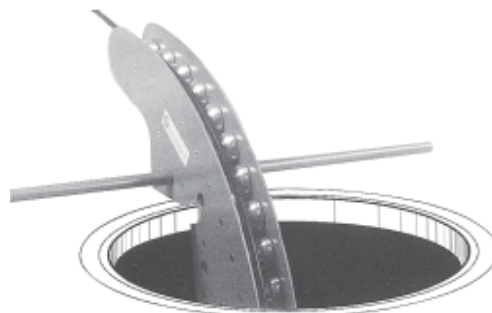
Part Number	Nominal Duct Size	Duct Type	Duct O.D.		Coupling Length when tight	
			(in)	(mm)	(in)	(mm)
8676510	1" IPS	Smooth	1.315	33	6.25	159
	1.34" O.D.	Ribbed	1.340	34	6.25	159
8676511	1.42" O.D.	Smooth	1.420	36	6.25	159
	1-1/8" SDR 9	Ribbed	1.460	37	6.25	159
8676512	1.50" O.D. SDR 11	Smooth	1.500	38	6.25	159
8676513	1-1/4" True 1.125 I.D.	Smooth	1.530	39	6.25	159
	1-1/4" O.D.	Ribbed	1.575	40	6.25	159
8676514	1.60" O.D.	Smooth	1.600	41	6.25	150
8676515	1-1/4" IPS	Smooth	1.660	42	6.25	159
	1-1/4" O.D.	Ribbed	1.700	43	6.25	159
8676516	1-1/2" True SDR 9	Ribbed	1.830	46	8.25	210
8676517	1-1/2" True SDR 9	Smooth	1.830	46	8.25	210
8676518	1-1/2" IPS	Smooth	1.900	48	8.25	210
8676520	2" IPS	Smooth	2.375	60	8.50	216



## Fiber Optic Quadrant Block

Protects fiber optic cable during installation. Pulling radius of 26" (660 mm); 13 aluminum rollers on bronze bearings allow cable to make a gradual 90° turn for easy pulling through manhole opening. Lightweight, corrosion-resistant aluminum side plates. Can be lowered into any manhole opening and chained in place for good alignment or used as a cable guide at street level. 2,600 lbs. (1 1,565 N) cable tension load capacity. 1-1/2" (38 mm) maximum cable diameter (consult cable manufacturer for minimum bend radius). Support bar sold separately. Replacement Sheaves available.

Part #	Description
8539350	Fiber Optic Quadrant Block

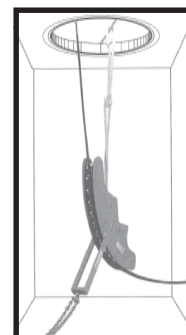


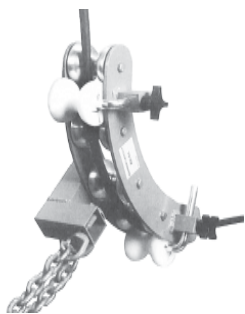
## Hanger Arms

Allows the hanging of the fiber optic quadrant block in a manhole for more flexible positioning.



Part #	Description
8539320	Hanger Arm





### Fiber Optic Hanger Block

5 aluminum rollers on bronze bearings allow cable to make a gradual 90° turn for easy pulling through manhole opening. Has a pulling radius of 12" (305 mm) Two non-metallic "keeper" rollers to hold the cable in place during the pull. Lightweight corrosion resistant aluminum side plates. Can be suspended in the manhole or hung on an overhead pole for easy pulls. 3/4" (19mm) maximum cable diameter (consult cable manufacturer for minimum bend radius). 800 lbs. (3,558 N) cable tension load capacity. Replacement Sheaves available.

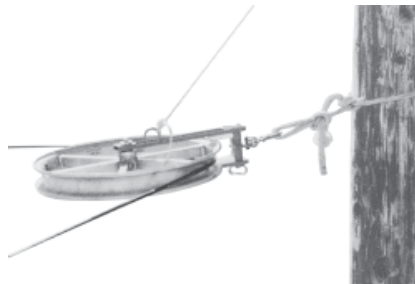
Part #	Description
8539550	Fiber Optic Hanger Block

### Overhead Fiber Optic Cable Sheave

Specially designed in cooperation with Alcoa Fujikura Ltd. for guiding fiber optic or CATV cable safely and efficiently, these Cable Sheaves feature an innovative hanger arm that eliminates the possibility of cable coming off the sheave or binding against the support arm. With the removal of a pin, the hanger arm separates and allows cable to be slipped in easily, even at midpoints. A 22 inch (559 mm) sheave diameter allows for a gentle cable arc. Aluminum sheave construction means durability with less weight. Maximum capacity is 1,500 lbs. (6,672 N). Replacement Sheaves available.



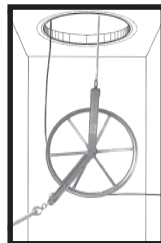
Part #	Description
8637825	Overhead Fiber Optic Cable Sheave



### Underground Fiber Optic Cable Sheave

The Underground Fiber Optic Sheave has all the features of the Overhead Sheave (above) but with an additional second arm for convenient tie-off. Replacement Sheaves available.

Part #	Description
8637800	Underground Fiber Optic Cable Sheave



### Fiber Optic Sheave Mount

Fiber Optic Sheave Mounts are an ideal solution to mid-point cable pulling situations. The Adjustable Sheave Mount allows pinpoint adjustment from horizontal to vertical. Portable components set up quickly and adjust from job to job, offering maximum versatility with minimum equipment. Uses a standard 2-1/2" square mounting post for use with FO Cable Puller Remote Mounting Stand or Mounting Sockets.



### Fiber Optic Sheave Mount Components

Part #	Description
8637900	Adjustable Sheave Mount Head (includes sheave mounting shaft and pins)
8637909	18" (457 mm) Center Tube Mount
8637910	32" (812 mm) Center Tube Mount
8637911	48" (1220 mm) Center Tube Mount
8637912	Fiber Optic Sheave Mount Assembly
8637743	Fiber Optic Aluminum Hanger Sheave 3" x 24" (76 x 610 mm)
8675115	Fiber Optic Puller Remote Mounting Stand Assembly

Replacement Sheaves are available.





## Fiber Optic Sheave Mount Packages

**Part #**  
8637930

### Description

Adjustable Fiber Optic Sheave Mount Pkg. 1  
Includes Mounting Head, all three mounting tubes,  
sheave and sheave arm assembly.

8637940

Adjustable Fiber Optic Sheave Mount Pkg. 2  
Includes Mounting Head, all three mounting tubes,  
and sheave.

8637950

Adjustable Fiber Optic Sheave Mount Pkg. 3  
Includes Mounting Head, and all three mounting  
tubes.



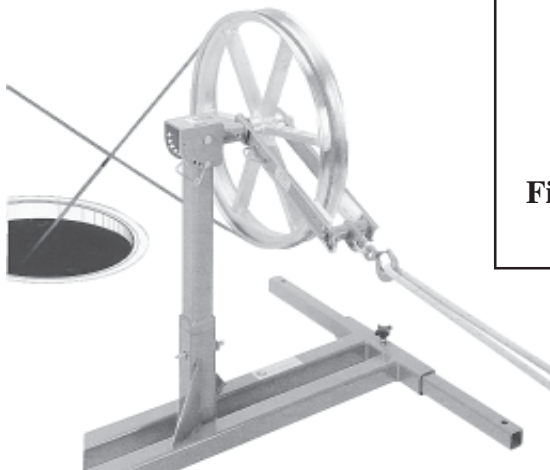
**Fiber Optic Sheave Mount  
Package 3**



**Fiber Optic Sheave Mount  
Package 1**



**Fiber Optic Sheave Mount  
Package 2**



**Fiber Optic Sheave Mounting Stand  
with Sheave Arm Assembly.**



**Fiber Optic Sheave Mounting Stand,  
Sheave at 45° Angle**



**Fiber Optic Sheave Mounting Stand,  
Sheave Vertical.**



**Fiber Optic Sheave Mounting Stand,  
Sheave Horizontal.**

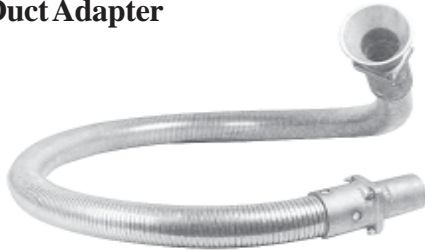
## Flexible Cable Guide with Aluminum Adapters

Cable feeds through the bell adapter and exits through the duct adapter which fits into the duct. Bell adapter and duct adapter included for specific duct and guide size ordered. Other lengths available upon request.



Part Number	Flexible Guide Diameter		Flexible Guide Length	
	(in)	(mm)	(ft)	(m)
8931009	2	51	9	2.7
8931012	2	51	12	3.6
8934009	4	102	9	2.7
8934012	4	102	12	3.6
8935009	5	127	9	2.7
8935012	5	127	12	3.6
8936009	6	152	9	2.7
8936012	6	152	12	3.6
8988009	8	203	9	2.7
8988012	8	203	12	3.6

## Duct Adapter



Bell Adapter

Duct Adapter

### Bell Adapter (Includes Mounting Bolts)

Part Number	Size (in)	(mm)
8931000	2	51
8934000	4	102
8935000	5	127
8936000	6	152
8988000	8	203

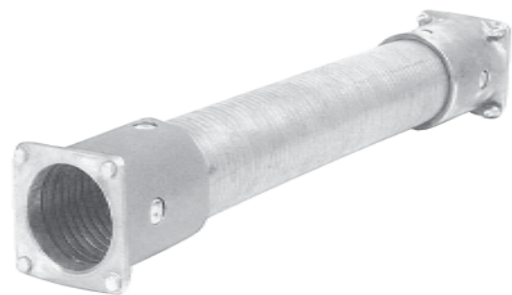
Part Number	Flexible Guide Diameter		Flexible Guide Length	
	(in)	(mm)	(ft)	(m)
8960200**	2	51	Innerduct	
8931010	2	51	1	25
8931013	2	51	1-1/4	32
8931015	2	51	1-1/2	38
8931020*	2	51	2	51
8934020	4	102	2	51
8934030	4	102	3	76
8934035	4	102	3-1/2	89
8934040*	4	102	4	102
8935020	5	127	2	51
8935030	5	127	3	76
8935035	5	127	3-1/2	89
8935040	5	127	4	102
8935050*	5	127	5	127
8935060	5	127	6	152
8936040	6	152	4	102
8936050	6	152	5	127
8936060*	6	152	6	152
8988080	8	203	8	203

\*Included with cable guide unit above for that specific duct size.

\*\*Tapered and threaded to fit over 1-2" innerduct.

Part Number	Flexible Guide Diameter		Flexible Guide Length	
	(in)	(mm)	(ft)	(m)
8931503	2	51	3	.9
8931506	2	51	6	1.8
8931509	2	51	9	2.7
8931512	2	51	12	3.6
8934503	4	102	3	.9
8934506	4	102	6	1.8
8934509	4	102	6	1.8
8934512	4	102	12	3.6
8935503	5	127	3	.9
8935506	5	127	6	1.8
8935509	5	127	9	2.7
8935512	5	127	12	3.6
8936503	6	152	3	.9
8936506	6	152	6	1.8
8936509	6	152	9	2.7
8936512	6	152	12	3.6
8988503	8	203	3	.9
8988506	8	203	6	1.8
8988509	8	203	9	2.7
8988512	8	203	12	3.6

### Extensions (Includes Mounting Bolts)

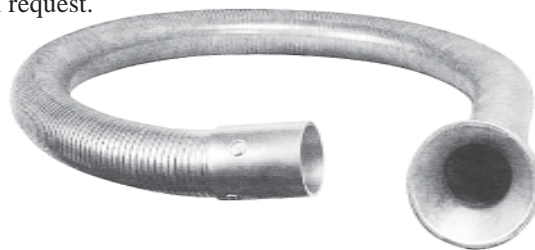




## Close Clearance Flexible Cable Guides

For guiding cable from the reel into the duct. The cable feeds through the bell adapter and exits through the duct adapter which fits into the duct. Duct adapters ordered separately. Other lengths available upon request.

Part Number	Flexible Cable Diameter		Flexible Cable Length	
	(in)	(mm)	(ft)	(m)
8040109	4	102	9	228
8041009	5	127	9	228
8044509	6	152	9	228



## Extensions

Part Number	Flexible Cable Diameter		Flexible Cable Length	
	(in)	(mm)	(ft)	(m)
8040203	4	102	3-1/2	3.7
8041103	5	127	3-1/2	3.7
8044603	6	152	3-1/2	3.7

## Steel Duct Adapters

Part Number	Duct Adapter Diameter		Duct Size Length		Style
	(in)	(mm)	(ft)	(m)	
8040300	4	102	3	76	Round
8040400	4	102	3-1/4	83	Round
8040600	4	102	3-1/2	89	Round
8040800	4	102	4	102	Round
8087200	4	102	5	127	Round
8040900	5	127	4	102	Round
8041300	5	127	5	127	Round
8041200	5	127	5	152	Round
8087000	6	152	5	127	Round
8086800	6	152	6	152	Round
8040133	4	102	3-1/4	83	Square
8040136	4	102	3-1/2	89	Square
8040142	4	102	4	102	Square



Round Adapter



Square  
Adapter

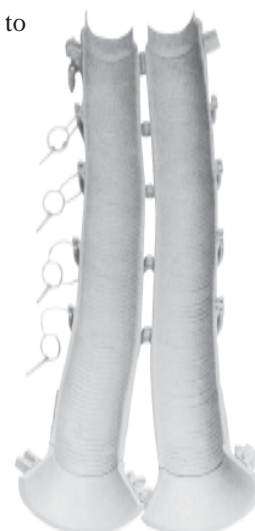
## Split Cable Guides

Ease of removal from cable being installed allows for 'figure eight' type installation, so cable remaining on reel can be pulled in a different direction without having to terminate and splice. Ideal for use with pre-connectorized cable. Split feeder is hinged on one side and has a series of flexible latches on the other side to allow full closure. Requires steel duct adapters.

Part Number	Split Guide Diameter		Split Guide Length	
	(in)	(mm)	(ft)	(m)
8064700	4	102	7-1/2	2.3

## Extension for Split Cable Guide

Part Number	Extension Diameter		Extension Length	
	(in)	(mm)	(ft)	(m)
8064800	4	102	3-1/2	1.1



Jamb Skid

The Jamb Skid is a device for supporting sheaves or quadrant blocks inside a manhole to pull cable into underground conduit. By positioning the top of the jamb skid against the underside of the manhole opening, and using the camlock foot pedal, set-up can be done in a fraction of the time it takes to install a hanging sheave assembly. Pulling tension actually increases the stability of the jamb skid during the pull. No dangerous breakage of chains or straps. The Jamb Skid is especially useful when there are no pulling-irons available, or when the existing irons do not align correctly with the duct opening. The Jamb Skid can be placed anywhere within a 360° radius inside the manhole.

Constructed of solid aluminum, the Jamb Skid is both strong and lightweight. In most instances it can be installed by one person. The complete unit is created by combining a base unit with one of several extension units, depending upon the height required. Locking 1-1/4" (32 mm) pins, allow the height adjustment of the Jamb Skid. Also, the width adjusts to accept all Condux sheave assemblies up through 8" (203 mm). 10,000 lbs. (44,480 N) cable tension load rated.

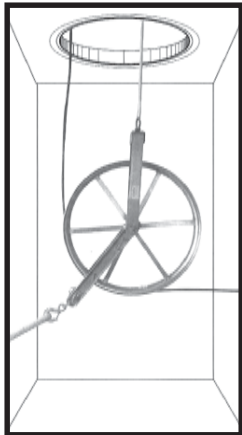
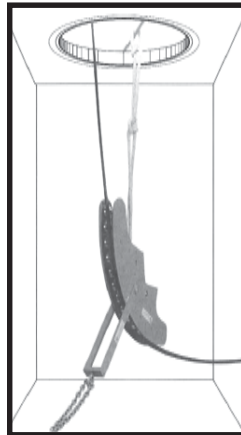
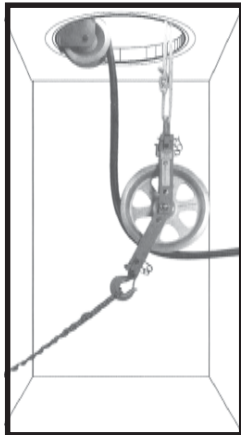
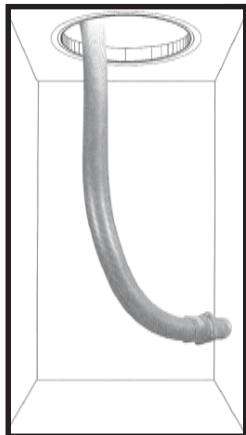
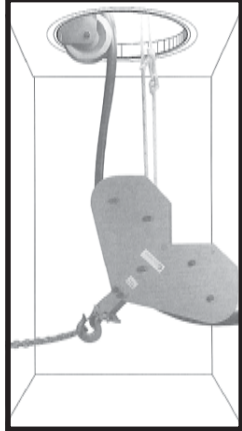
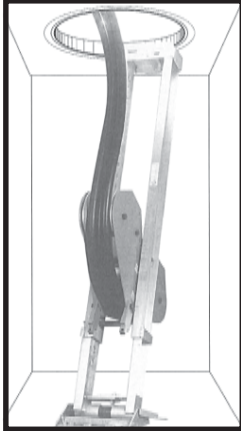
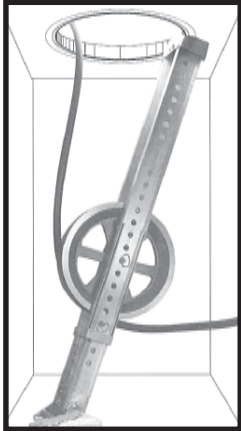
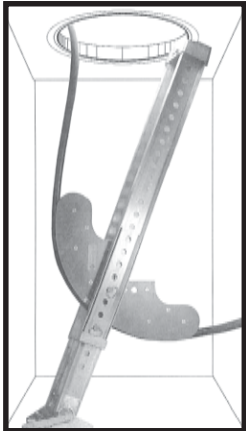


**NOTE: Order base section and choice of extension separately for a complete Jamb Skid unit. Locking pins core included with the base section.**

Part Number	Description	Manhole Height Range	
		(in)	(mm)
8097000	46" (1,168 mm) Base Section with locking pins		
8097001	43" (1,092 mm) Extension	49-80	1,244-2,032
8097002	76" (1,930 mm) Extension	78-109	1,981-2,767
8097003	109" (2,769 mm) Extension	107-138	2,718-3,505

Replacement Pins

Part #	Description
8097040	1-1/4" (32 mm) diameter pin





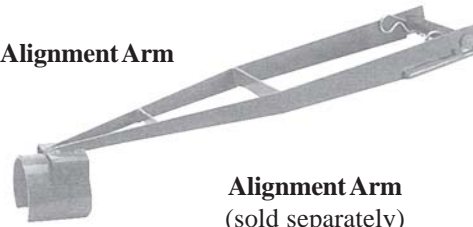


## Hooked Hanger Sheaves (Condux)

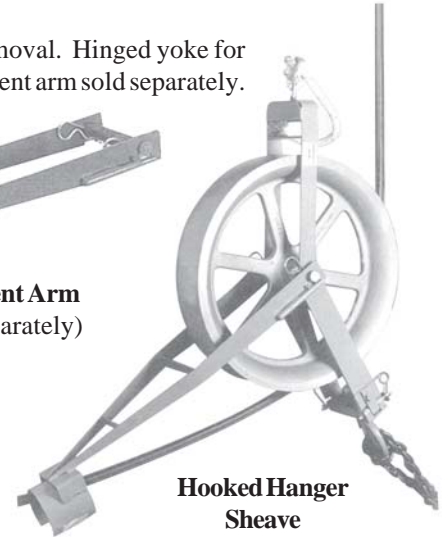
Tie off in the manhole to guide cable into the duct. Also used with alignment arm for cable removal. Hinged yoke for easy cable installation and removal. 10,000 lbs. (44,480 N) cable tension load capacity. Alignment arm sold separately. Replacement sheaves available.

Part Number	Sheave Size (in)	(mm)
8041400	3 x 11	76 x 279
8042400	4 x 11	102 x 279
8042420	4 x 20	102 x 508
8042500	5 x 11	127 x 279
8042520	5 x 20	127 x 508
8042526	5 x 26-1/2	127 x 673
8042527	5 x 26-1/2	127 x 673 w/Light Duty Hanger Arm
8082600	6 x 11	152 x 279
8082800	8 x 11	203 x 279
8045901	Alignment arm for 3, 4, & 5" (76, 102, & 127 mm) Sheaves	

Alignment Arm



Alignment Arm  
(sold separately)



Hooked Hanger  
Sheave  
Assembly With  
26-1/2" Sheave

## Cable Sheaves (GMP)

These Sheaves are used in placing and removing underground cable. Constructed from high strength aluminum alloy, and have self lubricating bushings. All hole sizes are 1-3/8" in diameter to fit a 1-5/16" pin. These units are available in 11", 20" and 26-1/2" diameters and may be purchased for maximum 3", 4" and 5" cables. These units are normally used in conjunction with either the GMP Pulling Frames or Cable Sheave Shackles. A GMP Sheave Pin is also used to retain the Sheave to either unit. (Included with the frames or shackles)



Part	Description	Sheave Size	Root	Weight
71723	Cable Sheave	3" x 11"	8-1/2"	15 lbs.
71726	Cable Sheave	4" x 11"	7-7/8"	20 lbs.
71729	Cable Sheave	5" x 11"	6-7/8"	25 lbs.
71722	Cable Sheave	3" x 20"	17-1/2"	32 lbs.
71725	Cable Sheave	4" x 20"	16"	36 lbs.
71728	Cable Sheave	5" x 20"	16-1/2"	40 lbs.
71721	Cable Sheave	3" x 26-1/2"	24"	38 lbs.
71724	Cable Sheave	4" x 26-1/2"	22-1/2"	44 lbs.
71727	Cable Sheave	5" x 26-1/2"	23"	56 lbs.

## Cable Sheave Shackle (GMP)

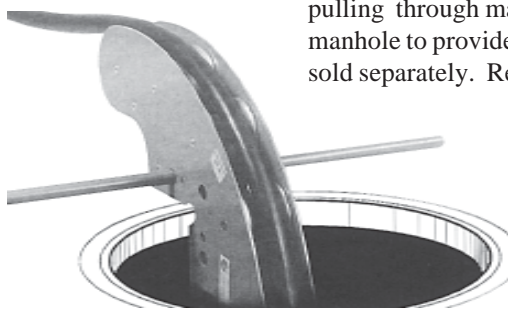
Used for supporting a cable sheave or quadrant block in place at a manhole equipped with pulling in irons. The shackle contains a two part clevis made of high strength structural steel, with two sets of sheave pin holes 1-3/8" in diameter for accomodating either a cable sheave or a quadrant block. The load half has a forged steel hook that attaches to the pulling in irons with a standard 1/2" x 6 foot construction chain, while the support half has a shoulder eyebolt so you can tie it off to a support rope over the manhole. Each shackle includes a 1-5/16" diameter sheave pin and can withstand working loads of up to 10,000 lbs. **This shackle will accomodate any 11", 20" or 26-1/2" diameter cable sheave with a 1-3/8" diameter hole size for 3", 4" or 5" cable. Make sure that you choose the correct combination shackle and sheave.**

Part	Description	Sheave Size	Weight
71643	Cable Sheave Shackle	3"	32 lbs.
71644	Cable Sheave Shackle	4"	75 lbs.
71645	Cable Sheave Shackle	5"	90 lbs.



### Heavy Duty Quadrant Block (Condux)

A series of 6 cast aluminum sheaves on bronze bearings allow cable to make a gradual 90° turn for easy pulling through manhole opening. Pulling radius of 24.25 inches (616 mm). Can also be suspended in manhole to provide alignment to duct run. 4,800 lbs. (21,350 N) cable tension load capacity. Support Bar sold separately. Replacement Sheaves available.



Part Number	Size (in)	Size (mm)
8539000	3	76
8539100	4	102
8539200	5	127

### Quadrant Block (GMP)

The Quadrant Block is used to guide the winch line and cable when placing and removing underground cable. Consists of six sheaves supported in an arc of a circle by an aluminum frame to provide a bending radius of 24" inches. A sturdy aluminum housing utilizes six cast aluminum sheaves, each mounted on a self lubricating bushing. Each block is approximately 43-1/2" long. There is a hole in each side plate for insertion of a 1-1/4" digging bar parallel to the ground. This is to keep the sheave from falling into the manhole. These quadrant blocks are normally used with either the GMP Cable Sheave or Pulling Frame.



Part Number	Size (in)	Size (mm)	Weight
84453	3	76	60 lbs.
84454	4	102	75 lbs.
84455	5	127	90 lbs.

### Fiber Optic Quadrant Block (GMP)

The Fiber Optic Quadrant Block provides a smoother and safer cable placement in manhole vaults with a minimum of set up time. This quadrant block has eleven machined aluminum sheaves that provide better cable support than all other conventional blocks. Its corrosion resistant aluminum and stainless steel construction provides a smooth, non chafing cable placement surface. This quadrant can be used either inside the vault or on the edge of the manhole. This unit has an 18" bending radius and is compatible with all fiber optic cables up to 7/8" in diameter. The Fiber Optic Quadrant Block when used in the manhole is mounted with a GMP Fiber Optic Shackle or a pulling Frame.



Part #	Description	Weight
15316	Fiber Optic Quadrant Block	18 lbs. 8 oz.

### Fiber Optic Shackle (GMP)

The Fiber Optic Shackle when secured to the pulling irons will allow you to mount up to two Fiber Optic Quadrants for ease of cable Placement. This light weight, all aluminum shackle provides a maximum load strength of 3,000 lbs. The shackle is made of two U shaped members, each of which has a separate swiveling safety hook on one end. Both members are joined by a special bushing. An L shaped locking pin (included) 1-5/16" diameter fits through this bushing to support both quadrants or sheaves. To change add or remove a quadrant or sheave, all you have to do is remove the locking pin; the shackle stays together. A knurled knob is attached to the shackle by a wire rope that lets you open it on one side for easy removal, even when there is a continuous section of cable running through the shackle. Two self storing spacers come with each shackle to securely hold a single quadrant or sheave in place.

When you want to use more than one quadrant, you can stow the spacers on one end of the pin using a handy built in bearing detente. There's even a stop pin built in to each member to keep the shackle from closing completely in either direction.



Part #	Description	Weight
70045	Fiber Optic Shackle	30 lbs.



## Fairlead Quadrant Block

Originally designed to install transpacific fiber optic cable, these quadrant blocks provide a 60" (1,524 mm) pulling radius to guide any type of cable. 18 machined rollers on bronze bearings, 8" (203 mm) wide by 5.5" (140 mm) in diameter, allow the cable to make a gradual 90° turn for easy cable installation. 10,000 lb. (44,480 N) capacity, Replacement sheaves available.



Part #	Description	A		B		C	
		(in)	(mm)	(in)	(mm)	(in)	(mm)
8094500	Fairlead Quadrant Block	96	2438	36	914	9	229

## 3 Sheave Cable Guide

3 cast aluminum sheaves on bronze bearings allow a gradual 90° turn for easy pulling through manhole opening. Pulling radius of 24" (610 mm), the cable guide will sit on manhole edge, suspended in manhole, or fit the jamb skid. 10,000 lbs. (44,480 N) cable tension load capacity. Support bar sold separately (see support bar). Replacement Sheaves available.

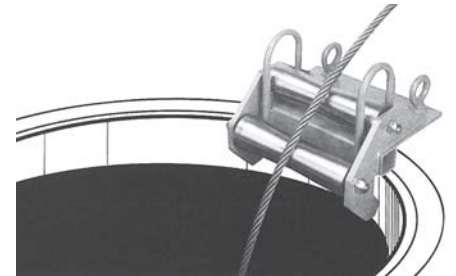


Part Number	Size (in)	Size (mm)
8539600	6	152
8539800	8	203

•Note: To fit the Jamb Skid the four bolts holding the hook must be removed.

## Mini Corner Cable Guide

Features two hardened steel rollers that guide steel winch line over sharp edges. It is small but sturdy, allowing for easy handling and set-up along with heavy duty capacities. 10,000 lbs. (44,480 N) cable tension load capacity. Replacement sheaves available.



Part #	Description
8045000	Mini Corner Cable Guide

## Corner Cable Guides

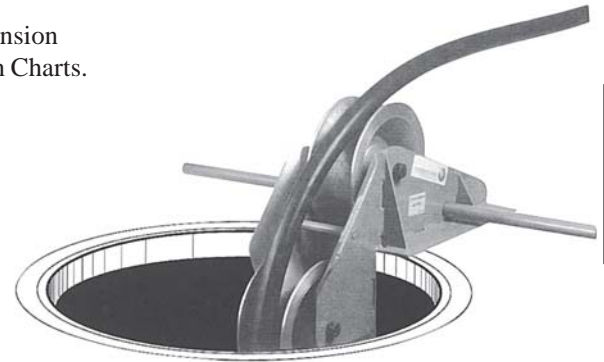
Aluminum sheaves for pulling cable into manholes. 5,000 lbs. (22,240 N) cable tension load capacity. Replacement Sheaves available. See Specifications and Selection Charts. Support bar sold separately.

### Condux

Part Number	Size (in)	Size (mm)
8040000	3	76
8043100	4	102
8043200	5	127
8088600	6	152
8088800	8	203

### GMP

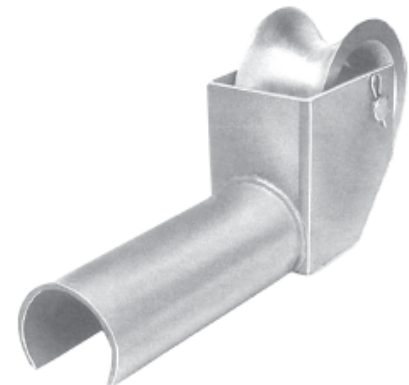
Part Number	Size	Weight
70283	3"	32 lbs.
70284	4"	55 lbs.
70285	5"	65 lbs.
80975	5" HD	65 lbs.
Heavy Duty		



## Cable Feeding Sheaves

Plugs into conduit in manhole wall, guiding cable safely into the conduit regardless of the pulling angle. Replacement Sheaves available.

Part Number	Size (in)	Size (mm)	A (in)	A (mm)	I.D. (in)	I.D. (mm)	O.D. (in)	O.D. (mm)	Load Capacity (lbs)	Load Capacity (N)
8617215	1-1/2	38	1.04	26	1.25	32	1.44	37	1,500	6,672
8617220	2	51	1.38	35	1.75	44	1.95	50	2,600	11,565
8617225	2-1/2	63	1.44	37	2.16	55	2.40	61	2,600	11,565
8617230	3	76	2.25	57	2.62	67	2.95	75	4,800	21,350
8617235	3-1/2	89	2.75	70	3.00	76	3.38	86	4,800	21,350
8617200	4	102	3.00	76	3.50	89	3.95	100	6,500	28,912
8617340*	4	102	3.00	76	3.25	83	3.65	93	6,500	28,912
8617250	5	127	3.75	95	4.50	114	4.90	125	6,500	28,912
8617260	6	114	4.50	114	5.37	136	5.90	150	6,500	28,912
8617360*	6	114	4.50	114	5.00	127	5.56	141	6,500	28,912
8617280	8	203	6.00	152	7.18	182	7.94	202	6,500	28,912





## Cable Bending Shoe

Protects cable from corner abrasion during pulling operations. Made of cadmium-plated, 13 gauge steel with a protective polymer coating to extend the life.

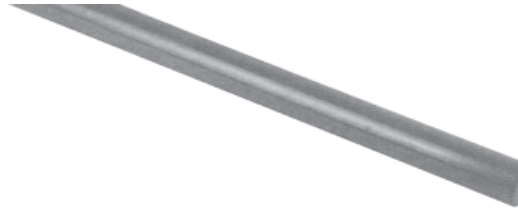
Part #	Description	Size
86570	Cable Bending Shoe	3"
86571	Cable Bending Shoe	3-1/2"



## Nylon Cable Protector

Flanged, split tube to insert in duct end and protect cable from damage during installation. Also can be left in place for permanent protection.

Part #	Description
8042301	1" - 2-1/2" (25-63 mm) Duct
8042300	3" - 6" (76-152 mm) Duct



## Support Bar

Used to support quadrant blocks or cable guides at street level.

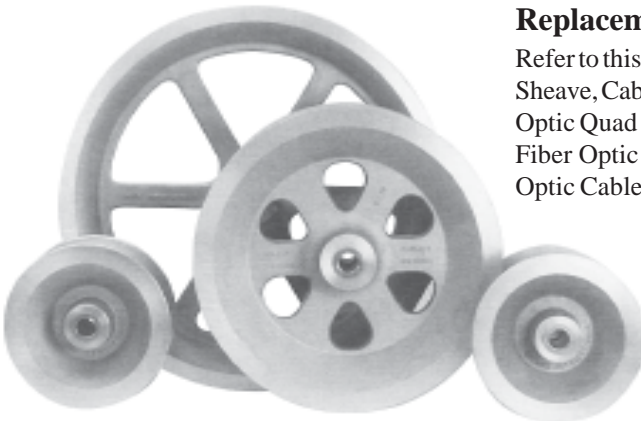
Part #	Description
8091440	1-1/4" (32mm) x 4' (1.2m) Steel Bar



## Chains

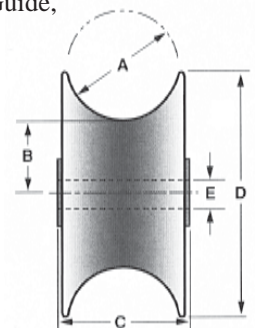
Used to tie off cable guides in the manhole. Not to be used for overhead lifting.

Part #	Description
8066301	4' (1.2 m) Chain, Double Hook, 3/16" (9mm) Alloy Links 7,100 lbs. (31,581 N) capacity.
8066300	8' (2.4m) Chain, Double Hook, 3/8" (9mm) Alloy Links, 7,100 lbs. (31,581 N) capacity.



## Replacement Sheaves (Condux)

Refer to this chart for specifications on sheave sizes for these products: Hooked Hanger Sheave, Cable Feeding Sheave, Corner Cable Guide, Heavy Duty Quadrant Block, Fiber Optic Quad Block, Fiber Optic Hanger Block, 3 Sheave Cable Guide, Fiber Optic Sheave Mount, Overhead and Underground Fiber Optic Cable Sheave and Jamb Skid.



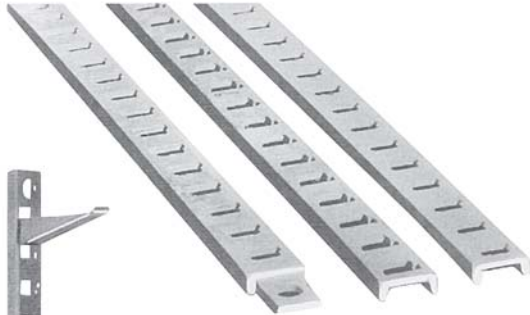
Part Number	Sheave Size		Maximum Cable O.D.		Min. Bending Radius		Max. Sheave Width		Maximum Sheave O.D.		Shaft Dia.	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
8539308	1 x 3	25 x 76	1.50	38	.75	19	3.00	76	3.00	76	.62	15
8539036	3 x 7	76 x 178	3.00	76	2.25	57	3.72	94	7.00	2.03	1.25	31
8539136	4 x 7	102 x 178	4.00	102	2.25	57	4.31	109	7.00	2.03	1.25	31
8539236	5 x 7	127 x 178	5.00	127	2.25	57	5.13	130	7.00	2.03	1.25	31
8046611	3 x 11	76 x 279	3.00	76	4.25	107	3.75	95	11.00	279	1.25	31
8046711	4 x 11	102 x 279	4.00	102	3.75	95	4.75	120	11.00	279	1.25	31
8046811	5 x 11	127 x 279	5.00	127	3.25	82	5.75	146	11.00	279	1.25	31
8087811	6 x 11	152 x 279	6.00	152	3.12	79	6.75	171	11.00	279	1.25	31
8087911	8 x 11	203 x 279	8.25	209	2.75	69	8.75	222	11.00	279	1.25	31
8065411	4 x 20	102 x 508	4.25	107	8.50	215	4.75	120	20.00	508	1.25	31
8042911	5 x 20	127 x 508	5.00	127	8.00	203	5.75	146	20.00	508	1.25	31
8637743	3 x 24	76 x 609	1.38	35	11.125	282	4.00	102	24.125	613	1.00	25
8043011	5 x 26-1/2	127x673	5.00	127	11.31	287	5.75	146	26.50	376	1.25	31





## Cable Racks

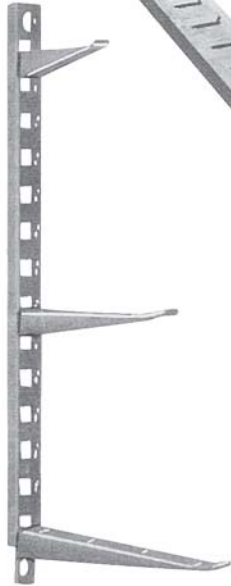
Supports cable runs in manholes and vaults. Made of 1-1/2" x 9/16" x 3/16" (38 x 14 x 5mm) hot rolled steel channel, hot dip galvanized. T-slots for attaching hooks are spaced at 1-1/2" (38 mm) intervals. The 8, 14 and 18 hole racks have 19/32" X 3/4" (15 x 19 mm) mounting slots at each end that interlock so two or more racks may be combined into one unit. Longer racks are mounted through the T-slots. Use 1/2" or M12 mounting hardware (see Mounting Hardware).



Part Number	Support Holes	Length		Bolt Hole Spacing	
		(in)	(mm)	(in)	(mm)
8380000	8	15	381	13 1/2	343
8380100	14	24	610	22 1/2	572
8380200	18	30	762	28 1/2	724
8380300	37	55 1/4	1,403	-	-
8380400	43	64 1/4	1,631	-	-
8383500	47	70 1/4	1,784	-	-
8380500	54	81	2,057	-	-

## Cable Rack Hooks

Designed to fit snugly into the rack slots. Turned up ends prevent cable or rack insulators from slipping off. Manufactured from 3/16" (5 mm) steel and hot dip galvanized with smooth surfaces to prevent cable damage.



Part #	Ext.	
	(in)	(mm)
8380600	4	102
8380700	7 1/2	190
8380800	10	254
8380900	14	356
8381000	18	457

## Cable Rack Insulator

Made of glazed porcelain, the insulators rest on the cable rack hooks, providing additional protection for the cable.

Part Number	Groove Radius		Groove (A) Width		Groove (B) Width	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8381200	11/2	38	2 3/4	70	3	76



## Cable Rack Support

To extend the racks away from the wall and avoid obstructions or water seepage. Each rack requires two supports. Hot dip galvanized. Use 1/2" or M12 mounting hardware (see mounting hardware).

Part Number	Steel Size		Ext. from wall	
	(in)	(mm)	(in)	(mm)
8381500	.5 x 1.00	13 x 25	35/8	89
8383900	.5 x 1.00	13 x 25	69/16	165
8383800	.5 x 1.25	13 x 32	69/16	165



## Corner Rack Support

To bolt the racks at manhole corners. Mounting bolt holes for 1/2" or M12 bolts (see mounting hardware). Formed of 1 1/2" x 1/4" (38 x 6 mm) steel and hot dip galvanized.

Part #	Description
8383700	9" x 12" (228 x 305 mm) legs
8383600	12" x 12" (305 x 305 mm) legs



## Manhole Ladders

All ladders are manufactured of steel. The rungs pass through the side rails and are riveted or welded. The unique design assures a rung cannot turn.

### Features:

- 5/8 inch (16 mm) diameter knurled rungs on 12 inch (305 mm) centers
- 12 inches (305 mm) clearance between side rails
- 3/8 x 1-1/2 inch (10 x 38 mm) side rails, through 12 foot (3.7 m) lengths
- 3/8 x 2 1/2 inch (10 x 64 mm) side rails, 13 foot (4.0 m) length and above
- Twisted hook is an integral part of side rail
- Approx. weight is 5 lbs. (2.3 kg) per foot of length, through 12 feet (3.7 m)
- Approx. weight is 7.6 lbs. (3.4 kg) per foot of length, over 12 feet (3.7 m)

Part #	Description
8381955	Manhole Ladder, 5.5' (1.7 m) long
8381900	Manhole Ladder, 6.5' (2.0 m) long
8382000	Manhole Ladder, 7.0' (2.1 m) long
8382100	Manhole Ladder, 8.0' (2.4 m) long
8382200	Manhole Ladder, 9.0' (2.7 m) long
8382300	Manhole Ladder, 10.0' (3.0 m) long
8382400	Manhole Ladder, 11.0' (3.4 m) long
8382500	Manhole Ladder, 12.0' (3.7 m) long
8382600	Manhole Ladder, 13.0' (4.0 m) long
8382700	Manhole Ladder, 14.0' (4.3 m) long
8382800	Manhole Ladder, 15.0' (4.6 m) long
8382900	Manhole Ladder, 16.0' (4.9 m) long
8384100	Manhole Ladder, 18.0' (5.5 m) long
8384200	Manhole Ladder, 20.0' (6.1 m) long
8384000	Manhole Ladder, 22.0' (6.7 m) long



## Manhole Ladders Wall Mount

All ladders are manufactured of steel. The rungs pass through the side rails and are riveted or welded.

### Features:

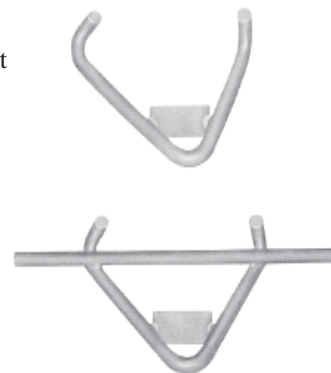
- 5/8 inch (16 mm) diameter deformed rungs on 12 inch (305 mm) centers
- 14 inches (356 mm) clearance between side rails
- 2 x 1 x 1/8 inch (51 x 25 x 3 mm) channel side rails
- Furnished with 4 unattached floor/ceiling brackets
- Wall mounting brackets may be used
- Approx. weight is 5.5 lbs. (2.5 kg) per foot of length

Part Number	Description
8381901	Manhole Ladder, wall mount, 6.5' (2.0 m) long
8382001	Manhole Ladder, wall mount, 7.0' (2.1 m) long
8382101	Manhole Ladder, wall mount, 8.0' (2.4 m) long
8382201	Manhole Ladder, wall mount, 9.0' (2.7 m) long
8382301	Manhole Ladder, wall mount, 10.0' (3.0 m) long
8382401	Manhole Ladder, wall mount, 11.0' (3.4 m) long
8382501	Manhole Ladder, wall mount, 12.0' (3.7 m) long
8382601	Manhole Ladder, wall mount, 13.0' (4.0 m) long
8382701	Manhole Ladder, wall mount, 14.0' (4.3 m) long
8382801	Manhole Ladder, wall mount, 15.0' (4.6 m) long
8382901	Manhole Ladder, wall mount, 16.0' (4.9 m) long
8384101	Manhole Ladder, wall mount, 18.0' (5.5 m) long
8384201	Manhole Ladder, wall mount, 20.0' (6.1 m) long
8384001	Manhole Ladder, wall mount, 22.0' (6.7 m) long

## Pulling-In Irons

Set into the walls of the concrete manholes opposite all duct entrances to provide a strong, convenient attachment for pulling-in blocks when installing or removing cables. Manufactured with 7/8" (22 mm) diameter steel and hot dip galvanized.

Part #	Description
8383000	9" (228 mm) w/ retaining plate
8383001	9" (228 mm) w/ cross bar & retaining plate
8383002	9" (228 mm) w/ opposing bends
8381300	12" (305mm) w/ retaining plate
8381301	12" (305 mm) w/ cross bar & retaining plate
8381302	12" (305 mm) w/ opposing bends



## Mounting Hardware

Part #	Description
2063303	Capscrew, 1/2-13 x 1.25", grade 5, hot galvanized
12008202	Capscrew, 1/2-13 x 1.50", grade 5, hot galvanized
12022003	Capscrew, 1/2-13 x 1.75", grade 2, hot galvanized
8384800	Capscrew, 1/2-13 x 2.00", grade 5, hot galvanized
2155703	Capscrew, 1/2-13 x 2.50", grade 2, hot galvanized
2010003	Lockwasher, 1/2", hot galvanized
12008303	Flatwasher, 1/2", hot galvanized
2125103	Hex Nut, 1/2-13, hot galvanized

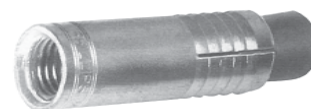




## Expansion Anchor

For use in pre-drilled holes. Plug expands as anchor is driven into it making a solid hold in concrete.

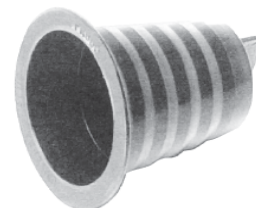
Part Number	Description	Allowable Working Loads*			
		Tension		Shear	
		(lbs)	(N)	(lbs)	(N)
8409900	3/4" - 10 UNC Threads	4,010	17,836	4,400	19,571
8409901	5/8" - 11 UNC Threads	2,420	10,764	3,050	13,566
8409902	1/2" - 13 UNC Threads	1,690	7,517	1,560	6,939



## Universal Plug

For temporarily plugging duct, bell-ends and terminators. These polyethylene plugs come in sizes to fit all types of manufactured duct, even when it's bell ended or coupling is attached. The universal plugs extended lip design permits easy extraction.

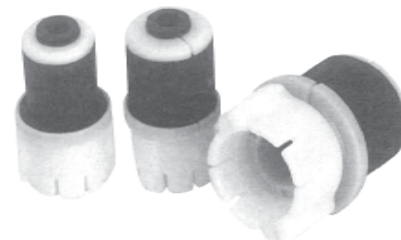
Part Number	Size		Conduit I.D. Range	
	(in)	(mm)	(in)	(mm)
8047400	2	5	1.20-2.60	30-66
8047500	3	76	2.75-3.65	70-93
8047601	4	102	3.70-4.70	94-119
8047700	5	127	4.80-5.75	122-146
8047800	6	152	5.82-6.80	148-173
8047600	4	102	3.70-4.70	94-119



## Fiber Optic Innerduct Plug

Split plug with bushing assembly for sealing around cable in duct installations. Simple installation around in-place cables, seal all types of innerduct, ideal for manholes, buildings and cabinets. U.S. Patent No. 4,842,364.

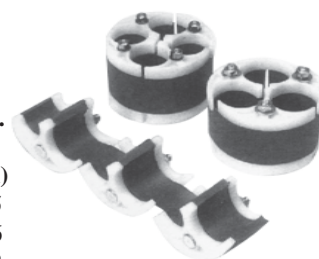
Part Number	Size		Conduit I.D. Range		Innerduct I.D. Range	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
8043910	1	25	1.00-1.14	25-29	.35-.57	9-14
8043911	1	25	1.00-1.06	25-27	.50-.70	13-18
8043912	1 1/4	32	1.22-1.36	31-35	.35-.57	9-14
8043913	1 1/4	32	1.22-1.36	31-35	.57-.70	13-18
8043914	1 1/4	32	1.24-1.34	31-34	.70-.90	18-23
8043915	1 1/2	38	1.50-1.65	38-42	.35-.57	9-14
8043916	1 1/2	38	1.50-1.65	38-42	.50-.70	13-18
8043920	2	51	1.98-2.20	50-56	.35-.57	9-14
8043921	2	51	1.98-2.20	50-56	.50-.70	13-18



## Innerduct Organizer Plug

Removable and reusable duct seal holds innerduct securely and prevents migration. Easy installation requires no foam or chemicals.

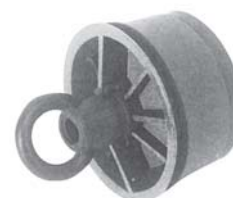
Part Number	Size		Conduit I.D. Range		Maximum number of Innerduct	Innerduct Size		Innerduct O.D. Range	
	(in)	(mm)	(in)	(mm)		(in)	(mm)	(in)	(mm)
8093436	4	102	3.97-4.13	101-105	4	1	25	1.19-1.36	30-35
8093442	4	102	3.97-4.09	101-104	3	1 & 1 1/8	25 & 29	1.30-1.42	33-36
8093467	4	102	3.97-4.09	101-104	3	1 1/8 & 1 1/4	29 & 32	1.53-1.67	39-42



Part Number	Size		Conduit I.D. Range	
	(in)	(mm)	(in)	(mm)
8067811	1	25	.96-1.16	24-29
8067812	1 1/4	32	1.14-1.48	29-38
8067814	1 1/2	38	1.49-1.83	38-46
8067820	2	51	1.83-2.36	46-60
8067825	2 1/2	64	2.34-2.91	59-74
8067830	3	76	2.99-3.46	76-88
8067840	4	102	3.94-4.33	100-110
8067850	5	127	5.00-5.35	124-136
8067860	6	152	5.82-6.37	148-162

## Non-Metallic Eye Nut Plug

Made of durable, expansive polyurethane with rugged polypropylene compression plates and eye nut. No tools required for installation. Completely water and air tight.





## American **Polywater** Corporation

American Polywater Corporation pioneered the development of water-based, polymer, cable pulling lubricants over a decade ago. Today, American Polywater's polymer lubricants uniquely combine extremely low coefficient of friction, universal cable jacket compatibility, minimal residue, and safe, clean use. The use of American Polywater lubricants is an extremely effective way to minimize tension on cable as it is pulled into conduit. A number of lubricants are available to meet specialized end-user needs.

A & M Sales Offers a complete line of Polwater products in every available size from quart sized bottles to 55 gallon drums. See below for a list of available products. Call toll free for any questions pertaining to your pulling needs. Check out the new software available from Polywater. It uses commonly accepted pulling equations to estimate cable pulling tension and sidewall pressure around bends. Planning cable pulls can save money by minimizing the number of splices, vaults, hand-holds and pulling setups while ensuring pulling tensions that won't damage cable.

### **Polywater Products that we offer:**

1. Polywater Cable Lubricants & Accessories
2. Polywater Plus Silicone
  - A. Type NN
  - B. Type WNN
  - C. Type NB
  - D. Type WNB
  - E. Type FS
3. CableFree Loosener for Stuck Cables
4. Type HP Cleaner/Degreaser
5. Type KC Contact Cleaner
6. HydraSol Cable Gel Remover
7. Pull-Planner II Cable Tension & Conduit Design Software
8. Ice Free Antifreeze Gel
9. Lube Master Cable Lubricant Applicator
10. LongShot Lubricant Spreaders
11. FlexLite Lubricant Funnel
12. SureGrip Cable Handling Gloves
13. Sandbore Drilling Fluid Additive
14. HydraFoam 2020 Cleaner Degreaser

• If you have any Question or would like any additional information about any of these products, feel free to call our toll free number

### **New Products From A & M Sales**

**New**

#### **HP-K 24**

The most popular non-hazardous electrical cleaner/degreaser, Type HP is available in a new multi-pak package.

- 24 premoistened, lint-free towelettes in a handy, resealable dispenser
- Convenient, safe alternative to bulk packages
- Economical, one-step cleaning
- Great for shop maintenance use



**HP - K24**

**New**

#### **HP Cleaner/ Degreaser**

#### **HP Cleaner/ Degreaser**

A unique and effective Cleaner and Degreaser which is **Non-Ozone Depleting** and **Non-Carcinogenic**. Now available from A & M Sales.







## Pulling Grip

A & M SALES Kellems K- Pulling Grips are an industry standard for pulling electrical cable, bare conductor or rope through conduit systems. The grips are made of high quality galvanized steel strand to assure long life and durability. Under normal conditions, the grips should be used with a safety factor of five, but this will vary depending on the situation. The tension, diameter, movement, number of objects gripped, gripping surface and the attachments used are some of the variables affecting the safety factor. In addition, the effects of abrasion, corrosion, prior use or misuse must be considered and the grip replaced when necessary. The safety factor is ultimately determined by the user.

Special Pulling Grips are also available for the stringent requirements of fiber optic applications. They feature a special weave that provides positive holding power while allowing the grip to remain flexible, ensuring cable protection.

Each A & M SALES Kellems pulling grip is designed to work on a specific range of cable diameters and working loads. In order to select a grip for your application. Estimate the tension to be put on the grip and the working load required. Contact A & M SALES for more assistance in selecting a grip for your application.



### Pulling Grip Selection Chart

Grip Style	Application
Dual-Pull, flexible eye	Extra high strength transmission line stringing for bare or insulated conductor and synthetic rope
Multiple Strength, flexible eye	Normal overhead transmission and distribution line stringing, for bare or insulated conductor.
Multiple Strength, forged eye	Normal overhead transmission and distribution line stringing, for bare or insulated conductor.
K-Type grip, forged eye	Underground power cables and communication lines. Service lines into factories.
T-Type grip, flexible eye	Underground power cables and communication lines. Service lines into factories.
Universal Slack, flexible eye	Remove underground cable. For pulling slack in final placement of new cable when end of cable is available.
Universal Slack, split mesh	Remove underground cable. For pulling slack in final placement of new cable when end of cable is not available.
Universal Slack, split mesh	Remove underground cable. For pulling slack in final placement of new cable when rod (rod closing) closing end of cable is not available. With rod closing for quick installation.
Light Duty, flexible eye	Light pulling, underground electrical construction. Industrial plant wiring and rewiring jobs.
Junior, flexible eye	Connect bundled insulated building wire to a pulling tape. Pull wire through conduit.

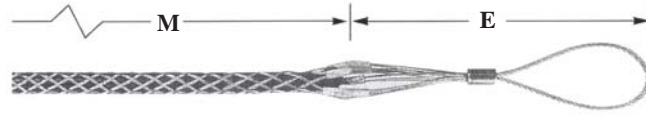
### Calculating grip size for multiple cables with the same diameter

Diameter	Number of Cables						Grip
	2	3	4	5	6	7	8
In)	Range	Range	Range	Range	Range	Range	Range
.30 - .38	.25 - .31	.22 - .27	.19 - .24	.17 - .22	.15 - .19	.14 - .18	.50 - .61
.38 - .44	.31 - .36	.27 - .31	.24 - .29	.22 - .26	.19 - .23	.18 - .21	.62 - .74
.44 - .59	.36 - .49	.31 - .42	.29 - .38	.26 - .34	.23 - .31	.21 - .28	.75 - .99
.59 - .75	.49 - .63	.42 - .54	.38 - .48	.34 - .43	.31 - .39	.28 - .35	1.00 - 1.24
.75 - .90	.63 - .76	.54 - .65	.48 - .58	.43 - .52	.39 - .46	.35 - .42	1.25 - 1.49
.90 - 1.07	.76 - .89	.65 - .77	.58 - .67	.52 - .60	.46 - .54	.42 - .49	1.50 - 1.74
1.07 - 1.22	.89 - 1.02	.77 - .88	.67 - .77	.60 - .69	.54 - .62	.49 - .56	1.75 - 1.99
1.22 - 1.53	1.02 - 1.28	.88 - 1.10	.77 - .96	.69 - .86	.62 - .77	.56 - .71	2.00 - 2.49
1.53 - 1.83	1.28 - 1.53	1.10 - 1.32	.96 - 1.16	.86 - 1.03	.77 - .93	.71 - .85	2.50 - 2.99
1.83 - 2.14	1.53 - 1.79	1.32 - 1.54	1.16 - 1.35	1.03 - 1.20	.93 - 1.08	.85 - .99	3.00 - 3.49
2.14 - 2.44	1.79 - 2.05	1.54 - 1.76	1.35 - 1.54	1.20 - 1.37	1.08 - 1.24	.99 - 1.13	3.50 - 3.99
2.44 - 2.75	2.05 - 2.30	1.76 - 1.98	1.54 - 1.74	1.37 - 1.55	1.24 - 1.39	1.13 - 1.27	4.00 - 4.49
2.75 - 3.06	2.30 - 2.56	1.98 - 2.20	1.74 - 1.93	1.55 - 1.72	1.39 - 1.55	1.27 - 1.41	4.50 - 4.99

# Fiber Optic Pulling Grips

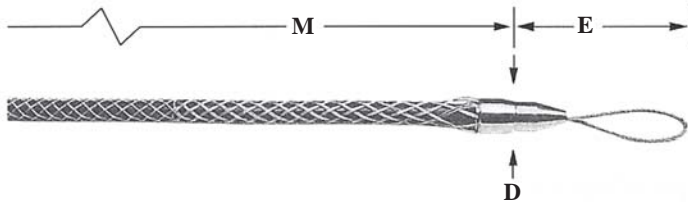
## Fiber Optic Grip - Flexible Eye, Low Profile, Double/ Single Weave Mesh

Double/Single weave mesh, galvanized steel, for outside plant cable. Used for the installation of fiber optic communication lines either underground, overhead, through conduit or through enclosures. They will fit single cables or cable bundles, are easily installed on the cable, and are reusable.



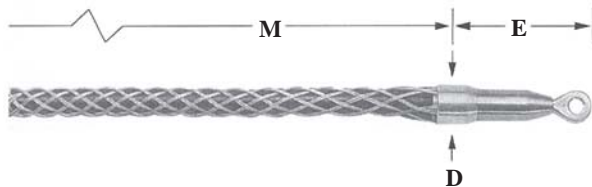
Part Number	Description	Cable Diameter Range		Approximate Breaking Strength		E		M	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
08643753	033-29-1193	.10-.22	3-6	900	4,003	7 1/2	190	10	254
08643754	033-29-1194	.21-.35	5-9	1,400	6,227	7 1/2	190	14	356
08643755	033-29-1195	.32-.48	8-12	2,000	8,896	8 1/2	216	19	483
08643756	033-29-1196	.42-.61	11-15	2,500	11,120	8 1/2	216	21	533
08643757	033-29-1197	.53-.74	13-19	3,000	13,344	8 1/2	216	23	584
08643758	033-29-1198	.64-.87	16-22	4,200	18,682	8 1/2	216	25	635
08643759	033-29-1199	.75-1.00	19-25	4,200	18,682	8 1/2	216	28	711

## Fiber Optic Grip - Flexible Eye



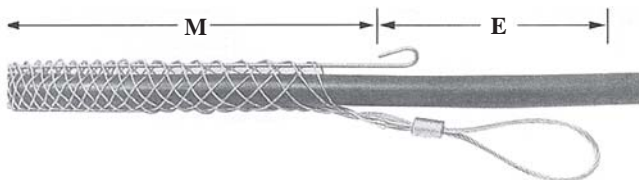
Part Number	Cable Diameter Range (In)	Approx Breaking Strength	E(In)	M(In)	D(In)
033-29-1000	0.10-0.22	1,000	5.5	9	0.8
033-29-1001	0.21-0.35	1,500	5.5	14	0.8
033-29-1002	0.32-0.48	2,200	6	18	0.9
033-29-1003	0.42-0.61	2,800	6	21	0.9
033-29-1004	0.53-0.74	3,300	6.5	24	1.3
033-29-1005	0.64-0.87	4,700	6.5	27	1.3

## Fiber Optic Grip - Swivel Eye



Part Number	Diameter Range (In)	Breaking Strength	E(In)	M(In)	D(In)
033-29-1007	0.10-0.22	1,000	4	9	0.9
033-29-1008	0.21-0.35	1,500	4	14	0.9
033-29-1009	0.32-0.48	2,200	4	18	0.9
033-29-1010	0.42-0.61	2,800	4	21	0.9
033-29-1011	0.53-0.74	3,300	4.5	24	1.3
033-29-1012	0.64-0.87	4,700	4.5	27	1.3

## Fiber Optic Slack Grip - Slit Mesh, Rod Closing, Single Weave

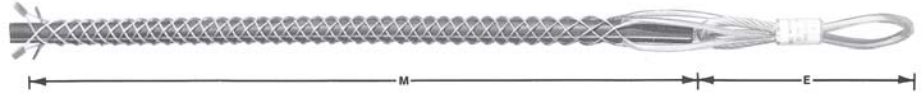


Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E(In)	M(In)
033-29-1015	0.25-0.37	300	3	4.7
033-29-1016	0.38-0.49	800	3	5
033-29-1017	0.50-0.61	800	3	7.5
033-29-1018	0.62-0.74	1,200	3	8



## Closed Mesh

This grip is especially designed for long pulls. It features a continuous single weave design that provides an even pull from the receiving end through the pulling eye. The grip is fabricated of coated galvanized aircraft strand for long life and safety. Each grip has a 24" mesh length for maximum gripping surface.



Part Number	M (in.)	E (in.)	Grip Size	Working Load	Breaking Strength
JL-25-FO-CM	24"	8"	1/4" - 3/8"	600 lbs.	1,200 lbs.
JL-37-FO-CM	24"	8"	1/4" - 1/2"	600 lbs.	1,200 lbs.
JL-50-FO-CM	24"	8"	1/2" - 5/8"	750 lbs.	1,500 lbs.
JL-62-FO-CM	24"	8"	5/8" - 3/4"	750 lbs.	1,500 lbs.
JL-75-FO-CM	24"	8"	3/4" - 1"	900 lbs.	1,800 lbs.
JL-100-FO-CM	24"	8"	1" - 1 1/4"	900 lbs.	1,800 lbs.

## Split Lace

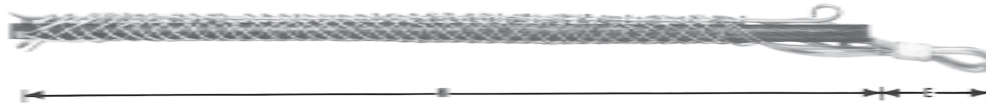
This grip has the same long-life easy pulling characteristics as the closed mesh grip but is for use on any phase of suspension or pulling when a conductor end is not available. This grip can also be used for "middle of the run" applications. The lacing is made of coated, steel flexible lacing cable.



Part Number	M (in.)	E (in.)	Grip Size	Working Load	Breaking Strength
JL-25-FO-SL	24"	8"	1/4" - 3/8"	500 lbs.	1,200 lbs.
JL-37-FO-SL	24"	8"	1/4" - 1/2"	500 lbs.	1,200 lbs.
JL-50-FO-SL	24"	8"	1/2" - 5/8"	750 lbs.	1,500 lbs.
JL-62-FO-SL	24"	8"	5/8" - 3/4"	750 lbs.	1,500 lbs.
JL-75-FO-SL	24"	8"	3/4" - 1"	900 lbs.	1,800 lbs.
JL-100-FO-SL	24"	8"	1" - 1 1/4"	900 lbs.	1,800 lbs.

## Split Rod

Use this grip, as you would the Split Lace Grip, for "middle of the run" applications or when neither end of the conductor is available. Same 24" mesh length for maximum gripping surface, same continuous single weave through the eye for even pulling tension. The rod and eyelets are made of HI-Strength steel for durable service.



Part Number	M (in.)	E (in.)	Grip Size	Working Load	Breaking Strength
JL-25-FO-SR	24"	8"	1/4" - 3/8"	600 lbs.	1,200 lbs.
JL-37-FO-SR	24"	8"	1/4" - 1/2"	600 lbs.	1,200 lbs.
JL-50-FO-SR	24"	8"	1/2" - 5/8"	750 lbs.	1,500 lbs.
JL-62-FO-SR	24"	8"	5/8" - 3/4"	750 lbs.	1,500 lbs.
JL-75-FO-SR	24"	8"	3/4" - 1"	900 lbs.	2,000 lbs.
JL-100-FO-SR	24"	8"	1" - 1 1/4"	900 lbs.	2,000 lbs.

## XIE Grips

The XIE model has the same basic features as the X model. However the XIE offers an interior pulling eye. The interior eye is attached to a strength member found on some fiber optic cable. When the interior eye is used, the fiber remains neutral and will not detach from the exterior insulation. Please use an A & M HD-00 ball bearing swivel when installing fiber, in order to release tension that would otherwise damage the cable.



Part Number	Mesh Length	Range	Working Load	Breaking Strength
XIE-10-FO-SW	10"	.10-.25	500	1500
XIE-25-FO-SW	14"	.25-.37	500	1500
XIE-37-FO-SW	24"	.25-.50	750	2200
XIE-42-FO-SW	24"	.42-.61	750	2200
XIE-53-FO-SW	24"	.53-.74	750	2200
XIE-64-FO-SW	24"	.64-.87	750	2200
XIE-75-FO-SW	24"	.75-1.00	750	2200
XIE-100-FO-SW	24"	1.00-1.25	750	2200
XIE-125-FO-SW	24"	1.25-1.50	750	2200

# Standard Fiber Optic Pulling Grip

## X-FO Grips

A & M Sales now offers a flexible eye fiber optic cable pulling grip. The grips are manufactured with high strength galvanized wire. Add S.S. to the end of the part number if stainless steel mesh is required. The flexible eye connects easily to a swivel or pulling line. The single wire eye is very flexible and will conform to the tightest of clearances. A & M flexible eye fiber optic grips are used for the installation of fiber optic cables either underground, overhead, through conduit or through enclosures. These pulling grips will pull single cables or bundles, are easily installed on the cable, and are reusable. Please use an A & M HMD-00 ball bearing swivel when installing fiber, in order to release tension that would otherwise damage the cable.

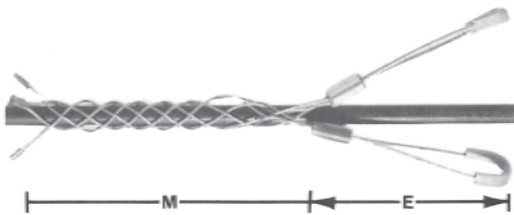


Part Number	Mesh Length	Range	Working Load	Breaking Strength
X-10-FO-SW	10"	.10-.25	500	1500
X-25-FO-SW	14"	.25-.37	500	1500
X-37-FO-SW	24"	.25-.50	750	2200
X-42-FO-SW	24"	.42-.61	750	2200
X-53-FO-SW	24"	.53-.74	750	2200
X-64-FO-SW	24"	.64-.87	750	2200
X-75-FO-SW	24"	.75-1.00	750	2200
X-100-FO-SW	24"	1.00-1.25	750	2200
X-125-FO-SW	24"	1.25-1.50	750	2200

## Special Application Fiber Optic Pulling Grips

### Dual Lift Eye Grip

The Dual Lift Eye Grip provides two offset eyes for extra support stability. This grip is especially well suited for suspending temporary power line cables. This grip is made of uncoated, galvanized aircraft strand steel for long life and safety.

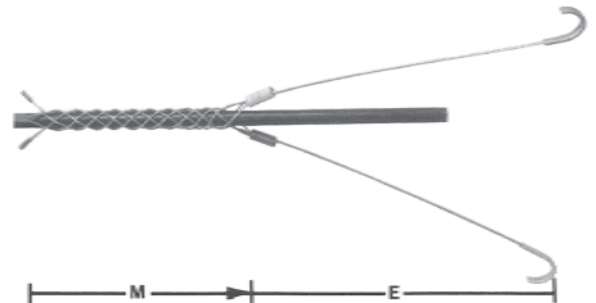


Part Number	M(in.)	E(in.)	Grip Size	Working Load	Breaking Strength
FO-25-DLE	6"	5"	1/4" - 3/8"	500 lbs.	1,000 lbs.
FO-37-DLE	6"	6"	1/4" - 1/2"	500 lbs.	1,000 lbs.
FO-50-DLE	6"	6"	1/2" - 5/8"	600 lbs.	1,250 lbs.
FO-62-DLE	6"	7"	5/8" - 3/4"	600 lbs.	1,250 lbs.
FO-75-DLE	6"	7"	3/4" - 1"	750 lbs.	1,500 lbs.
FO-100-DLE	6"	8"	1" - 1 1/4"	750 lbs.	1,500 lbs.

### Hook Bail Grip

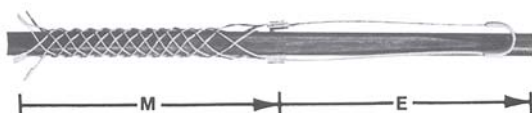
The Hook Bail Grip provides sturdy support for suspending wire and for supporting vertical wire runs on poles, in shafts, elevator shafts and processing towers. Used when the cable ends are available.

Part Number	M(in.)	E(in.)	Grip Size	Working Load	Breaking Strength
FO-25-DLE	6"	5"	1/4" - 3/8"	500 lbs.	1,000 lbs.
FO-37-DLE	6"	6"	1/4" - 1/2"	500 lbs.	1,000 lbs.
FO-50-DLE	6"	6"	1/2" - 5/8"	600 lbs.	1,250 lbs.
FO-62-DLE	6"	7"	5/8" - 3/4"	600 lbs.	1,250 lbs.
FO-75-DLE	6"	7"	3/4" - 1"	750 lbs.	1,500 lbs.
FO-100-DLE	6"	8"	1" - 1 1/4"	750 lbs.	1,500 lbs.



### U - Bail Grip

The U-Bail is especially suited for suspending cable or wire vertically. This grip is made of uncoated, galvanized aircraft strand steel for long life and safety.



Part Number	M(in.)	E(in.)	Grip Size	Working Load	Breaking Strength
FO-25-U	6"	5"	1/4" - 3/8"	500 lbs.	1,000 lbs.
FO-37-U	6"	6"	1/4" - 1/2"	500 lbs.	1,000 lbs.
FO-50-U	6"	6"	1/2" - 5/8"	600 lbs.	1,250 lbs.
FO-62-U	6"	7"	5/8" - 3/4"	600 lbs.	1,250 lbs.
FO-75-U	6"	7"	3/4" - 1"	750 lbs.	1,500 lbs.
FO-100-U	6"	8"	1" - 1 1/4"	750 lbs.	1,500 lbs.

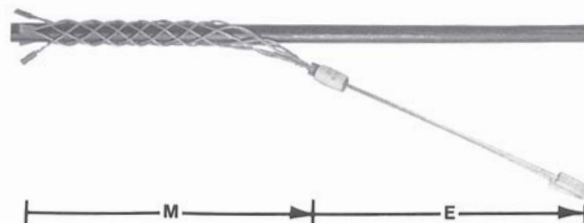




## Single Offset Eye Grip

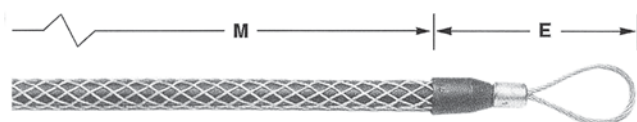
This grip works identically to the U-Bail grip except that the grip eye is offset for off-center pulls. This grip is made of uncoated, galvanized aircraft strand steel for long life and safety.

Part Number	M(in.)	E(in.)	Grip Size	Working Load	Breaking Strength
FO-25-OE	6"	5"	1/4" - 3/8"	500 lbs.	1,000 lbs.
FO-37-OE	6"	6"	1/4" - 1/2"	500 lbs.	1,000 lbs.
FO-50-OE	6"	6"	1/2" - 5/8"	600 lbs.	1,250 lbs.
FO-62-OE	6"	7"	5/8" - 3/4"	600 lbs.	1,250 lbs.
FO-75-OE	6"	7"	3/4" - 1"	750 lbs.	1,500 lbs.
FO-100-OE	6"	8"	1" - 1 1/4"	750 lbs.	1,500 lbs.



## Pulling Grips

### Junior Grip



E=Eye length  
M= Mesh length at nominal diameter.

Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E (in)	M (in)
033-05-011	0.19-0.24	400	3-1/4	4-1/4
JL25	0.25-0.36	450	3-1/4	4-1/4
JL37	0.37-0.49	900	3-3/4	7
JL50	0.50-0.61	1,300	4-1/4	8-1/2
JL62	0.62-0.74	1,950	5	10
JL75	0.75-0.99	2,800	5-3/4	10
JL100	1.00-1.24	3,900	6-1/2	11-1/2

### Junior Grip Kit

The best Small Grip Kit on the market. This kit includes some of the most widely used grips used for pulling fiber and small cables all included in a carrying case for ease of transport and storage.

#### Junior Grip Kit JLKIT



Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E (In)	M (In)
JL25	0.25-0.36	450	3-1/4	4-1/4
JL37	0.37-0.49	900	3-3/4	7
JL50	0.50-0.61	1,300	4-1/4	8-1/2
JL62	0.62-0.74	1,950	5	10
JL75	0.75-0.99	2,800	5-3/4	10
JL100	1.00-1.24	3,900	6-1/2	11-1/2
JL KIT	All of the above grips plus a carrying case			

Kit Consists Of One (1) Each of the Listed Grips With the Carrying Case Included

### Heavy-Duty Grip & Swivel Case

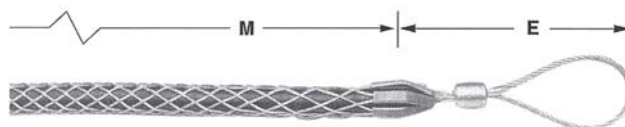
Case provides a secure place to store grips and swivels. Constructed of heavy-duty plastic coated canvas with Velcro closures. Plastic-lined pockets snap shut for swivels. Case is mildew and water resistant for years of use. (Grips & Swivels not included)

Part #	Description
HD Case	Heavy Duty Grip & Swivel Case



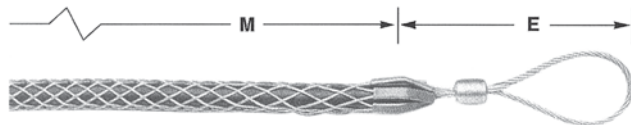
Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E (In)	M (In)
033-03-001	0.50-0.61	2,800	5	11
033-03-002	0.62-0.74	2,800	5	11
033-03-003	0.75-0.99	4,000	6	12
033-03-004	1.00-1.24	5,300	7	13
033-03-005	1.25-1.49	5,300	7	14
033-03-006	1.50-1.74	6,800	8	15
033-03-007	1.75-1.99	8,500	8	17
033-03-008	2.00-2.49	8,500	9	18

### Light Duty Grip (short)



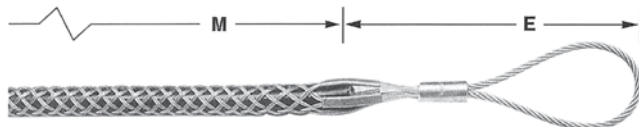
E=Eye length  
M= Mesh length at nominal diameter.

## Light Duty Grip (Standard)



Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E (In)	M (In)
033-03-010	0.50-0.61	2,800	5	16
033-03-011	0.62-0.74	2,800	5	16
033-03-012	0.75-0.99	4,000	6	20
033-03-013	1.00-1.24	6,800	7	20
033-03-015	1.25-1.49	6,800	7	21
033-03-016	1.50-1.99	6,800	8	23
033-03-017	2.00-2.49	8,500	9	25
033-03-018	2.50-2.99	10,600	9	27
033-03-019	3.00-3.49	14,700	10	30
033-03-029	3.50-3.99	14,700	10	32

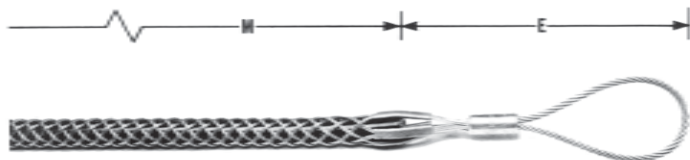
## T-Type Grip (Short)



E=Eye length  
M= Mesh length at nominal diameter.

Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E (in)	M (in)
033-04-1082	0.05-0.61	4,500	8	21
033-04-1083	0.62-0.74	5,600	8	24
033-04-1084	0.75-0.99	6,800	9	24
033-04-1085	1.00-1.49	9,600	9	24
033-04-1086	1.50-1.99	16,400	11	24
033-04-1087	2.00-2.49	18,500	12	24
033-04-1088	2.50-2.99	24,500	12	24
033-04-1089	3.00-3.49	24,500	14	24
033-04-1090	3.50-3.99	31,000	14	26

## T-Type Grip (Standard)



Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (Lbs.)	E (in)	M (in)
033-04-1091	0.75-0.99	6,800	9	36
033-04-1092	1.00-1.49	9,600	9	36
033-04-1093	1.50-1.99	16,400	11	36
033-04-1094	2.00-2.49	18,500	12	36
033-04-1095	2.50-2.99	24,500	12	36
033-04-1096	3.00-3.49	24,500	14	36
033-04-1097	3.50-3.99	31,000	14	40

## K-Type Grip\* (Short)

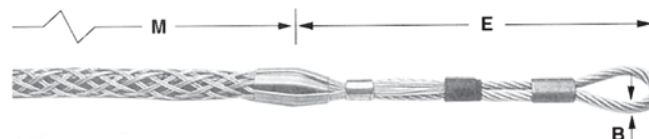


E=Eye length  
M= Mesh length at nominal diameter.

Part Number	Cable Diameter Range (In)	Approx. Breaking Strength	E (In)	M (In)	Rotate Eye Dia.
033-01-001	0.50-0.61	5,600	5	11	7/8
033-01-002	0.62-0.74	6,800	5	11	7/8
033-01-013	0.75-0.99	6,800	6	20	1
033-01-014	1.00-1.24	12,800	7	20	1-3/8
033-01-016	1.25-1.49	12,800	7	21	1-3/8
033-01-017	1.50-1.99	16,400	7	25	1-3/8
033-01-018	2.00-2.49	27,200	8	26	1-5/8
033-01-019	2.50-2.99	33,000	10	28	1-7/8
033-01-020	3.00-3.49	41,000	10	30	1-7/8
033-01-021	3.50-3.99	48,000	10	32	1-7/8
033-01-1017	4.00-4.49	48,000	10	33	1-7/8

\*Rotating Eye is not a swivel. It will not turn while under tension, but it can turn to relieve pulling torque when the tension is relaxed.

## Dual-Pull Grip



Part Number	Color	Diameter Conductor	Breaking Range (In) Rope	Strength (Lbs)	E (In)	M (In)	B (In)
033-27-1037	Black	0.19-0.37	0.25-0.65	6,500	10	24	0.218
033-27-1038	Green	0.38-0.62	0.50-0.90	14,000	12	36	0.375
033-27-1039	Red	0.63-0.87	0.75-1.10	20,000	13	48	0.437
033-27-1040	Blue	0.88-1.12	1.00-1.50	30,600	15	60	0.500
033-27-1041	Yellow	1.13-1.37	1.25-1.70	46,800	18	76	0.625
033-27-1042	Alum.	1.38-1.90	1.50-2.10	66,500	24	89	0.750

Copyright © 1992, A & M Sales, Inc.



### K-Type Grip\* (standard)

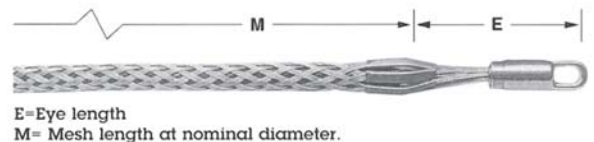


Part Number	Cable Diameter Range (In)	Approx Breaking Strength (Lbs)	E (In)	M (In)	Rotate Eye Dia.
033-01-011	0.50-0.61	5,600	5	16	7/8
033-01-012	0.62-0.74	6,800	5	16	7/8
033-01-024	0.75-0.99	9,600	6	32	1
033-01-025	1.00-1.49	16,400	7	33	1-3/8
033-01-026	1.50-1.99	16,400	7	34	1-3/8
033-01-027	2.00-2.49	27,200	9	36	1-5/8
033-01-028	2.50-2.99	33,000	10	38	1-7/8
033-01-029	3.00-3.49	41,000	10	39	1-7/8
033-01-030	3.50-3.99	48,000	10	41	1-7/8
033-01-031	4.00-4.49	48,000	10	42	1-7/8
033-01-039	4.50-4.99	48,000	10	58	1-7/8
033-01-047	5.00-5.99	48,000	10	60	1-7/8
033-01-045	6.00-6.99	48,000	10	66	1-7/8

\*Rotating Eye is not a swivel. It will not turn while under tension, but it can turn to relieve pulling torque when the tension is relaxed.

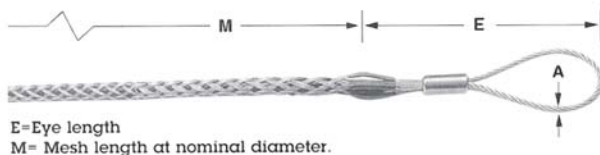
### Multiple Strength Grip - Rotating Eye\*

Part Number	Color Code	Cable Diameter Range (In)	Breaking Strength (Lbs)	E (In)	M (In)	Rotate Eye A
033-02-016	Dr Green	0.25-0.49	6,800	5	26	7/8
033-02-018	Brown	0.50-0.74	10,000	6	32	1
033-02-020	Lt. Blue	0.75-0.99	14,400	6	41	1
033-02-022	Gold	1.00-1.24	24,600	8	52	1-3/8
033-02-024	Black	1.25-1.49	30,600	8	56	1-5/8
033-02-026	Red	1.50-1.74	30,600	9	60	1-7/8
033-02-028	Dark Blue	1.75-1.99	48,000	10	70	1-7/8
033-02-066	Yellow	2.00-2.49	48,000	10	50	1-7/8
033-02-097	Orange	2.50-2.99	48,000	10	52	1-7/8
033-02-1030	Aluminum	3.00-3.49	48,000	10	54	1-7/8
033-02-1031	Lt. Green	3.50-3.99	48,000	10	56	1-7/8



\*Rotating Eye is not a swivel. It will not turn while under tension, but it can turn to relieve pulling torque when the tension is relaxed.

### Multiple Strength Grip - Flexible Eye



Part Number	Color Code	Cable Diameter Range (In)	Breaking Strength (lbs)	E (In)	M (In)	Eye Dia. A
033-02-044	DK. Green	0.25-0.49	6,800	9	26	1/4
033-02-046	Brown	0.50-0.74	10,000	9	32	5/16
033-02-048	Light Blue	0.75-0.99	14,400	11	41	3/8
033-02-050	Gold	1.00-1.24	24,600	12	52	1/2
033-02-052	Black	1.25-1.49	30,600	12	56	1/2
033-02-054	Red	1.50-1.74	30,600	12	60	1/2
033-02-056	Dark Blue	1.75-1.99	48,000	18	70	5/8
033-02-1078	Yellow	2.00-2.49	48,000	18	50	5/8
033-02-1079	Orange	2.50-2.99	48,000	18	52	5/8
033-02-1080	Aluminum	3.00-3.49	48,000	18	54	5/8
033-02-1081	Lt. Green	3.50-3.99	48,000	18	56	5/8

### Non-Conductive Grip

Non-Conductive Pulling Grips are made of a high strength, non-conductive aramid fiber, and are available for pulling single cable or cable bundles. Their braided double weave design adds strength and positive holding power. They were developed for use by utilities for pulling overhead distribution lines in close proximity to energized lines and hardware.



Part Number	Description	Color	Cable Diameter Range (in)	(MM)	Approximate Breaking Strength (N)	A (in)	(mm)	B (in)	(mm)	C (in)	(mm)
08642422	036-28-001	Green	.50-.62	13-16	4,000/17,792	5.51	40	24.0	610	.44	11
08642428	036-28-002	Yellow	.63-.74	16-19	5,000/22,240	5.51	40	26.0	660	.44	11
08642431	036-28-003	Red	.75-.99	19-25	6,000/26,688	6.01	52	31.0	787	.63	16
08642437	036-28-004	Blue	1.00-1.24	25-31	6,000/26,688	6.51	65	36.0	914	.63	16
08642443	036-28-005	White	1.25-1.49	32-38	6,000/26,688	6.71	70	41.5	1,054	.63	16

## Dua-Pull Feed Tube



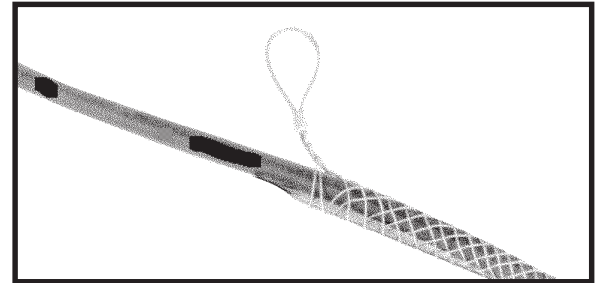
Part Number	Description	For Use With Dua-Pull Grip	Rope Diameter		Feed Tube Length	
			(in)	(mm)	(in)	(mm)
08641610	091-06-1043	08641710	.25-.65	6-17	28	711
08641616	091-06-1044	08641716	.50-.90	13-23	40	1,016
08641628	091-06-1045	08641728	.75-1.10	19-28	52	1,321
08641634	091-06-1046	08641734	1.00-1.50	25-38	67	1,702
08641640	091-06-1047	08641740	1.25-1.70	32-43	83	2,108
08641646	091-06-1048	08641746	1.50-2.10	38-53	96	2,438

## Support Grip

A & M SALES Kellems Support Grips are used to hold the weight of electrical cable as it hangs in a vertical, sloping, or horizontal position. The grips are made of high grade non-magnetic tin coated bronze strand. Electrical cable must be supported, or its dead weight can cause excessive strain or pullout at the connections resulting in power failure. Support grips also absorb additional strain from flexure, vibration, expansion and contraction.

Fiber Optic Support Grips, available from A & M SALES are specially designed to provide fiber optic cable support easily and economically.

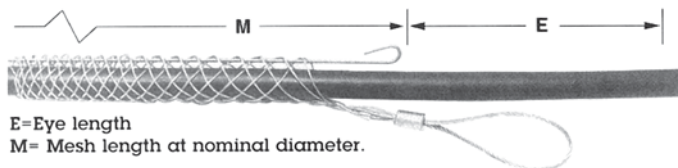
Each A & M SALES Kellems Support Grip is designed to work on a specific range of cable diameters and working load. Contact A & M SALES for more assistance in selecting a grip for your application.



## Support Grip Selection Chart

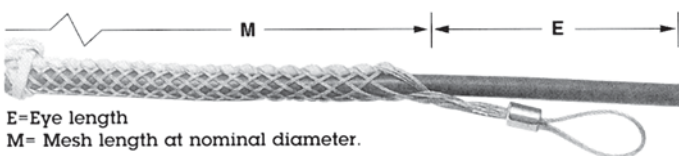
Grip Style	Application
Closed Mesh	Permanent support, cable end available
Split Mesh	Permanent support, cable end unavailable
(lace closing)	
Split Mesh	Temporary support, cable end unavailable
(rod closing)	

## Slack Grip - Split Mesh Rod Closing



Part Number	Cable Diameter Range (in)	Approx. Breaking Strength (lbs.)	E (In)	M (In)
033-10-001	0.50-0.61	1,500	7	6
033-10-002	0.62-0.74	1,800	7	8
033-10-003	0.75-0.99	2,200	7	10
033-10-004	1.00-1.24	3,400	8	12
033-10-005	1.25-1.49	4,500	8	14
033-10-006	1.50-1.74	5,800	9	15
033-10-007	1.75-1.99	7,600	10	16
033-10-008	2.00-2.49	9,000	10	19
033-10-009	2.50-2.99	11,000	10	20
033-10-010	3.00-3.49	12,000	12	21
033-10-011	3.50-3.99	12,000	12	24

## Slack Grip - Split Mesh Lace Closing

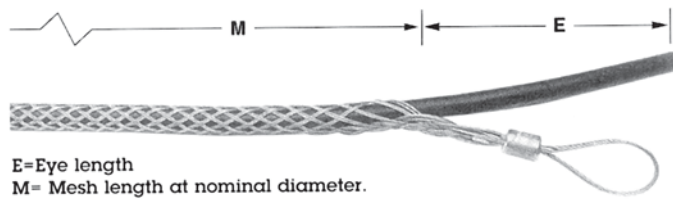


Part Number	Cable Diameter Range (in)	Approx. Breaking Strength (lbs.)	E (In)	M (In)
033-09-003	0.75-0.99	2,500	7	12
033-09-004	1.00-1.24	3,500	8	15
033-09-005	1.25-1.49	4,000	8	16
033-09-006	1.50-1.74	4,000	9	17
033-09-007	1.75-1.99	4,000	10	18
033-09-008	2.00-2.49	4,000	10	19
033-09-009	2.50-2.99	4,000	10	20
033-09-015	1.50-1.99	4,000	9	25
033-09-016	2.00-2.49	4,000	10	26
033-09-017	2.50-2.99	4,000	10	29
033-09-018	3.00-3.49	4,000	12	32
033-09-019	3.50-3.99	4,000	12	35





### Slack Grip - Closed Mesh



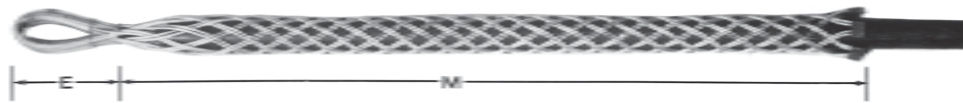
E=Eye length

M= Mesh length at nominal diameter.

Part Number	Cable Diameter Range (in)	Approx. Breaking Strength (lbs.)	E (In)	M (In)
033-08-003	0.75-0.99	2,600	7	12
033-08-004	1.00-1.24	4,000	8	15
033-08-005	1.25-1.49	5,400	8	16
033-08-006	1.50-1.74	6,600	9	17
033-08-007	1.75-1.99	10,000	10	18
033-08-008	2.00-2.49	11,000	10	19
033-08-009	2.50-2.99	11,000	10	20
033-08-010	3.00-3.49	14,500	12	21
033-08-011	3.50-3.99	14,500	12	22

### Standard Pulling Grips

Models A thru J are heavy duty grips manufactured of Hi-Fatigue Aircraft Strand, continuous weave process with flexible stress relieving pulling eye. All strands are plastic coated, which increases the life of the grip, provides a bearing surface on underground pulls and increases the ease and safety of installation and removal for workmen.



Part Number	Cable Diameter Range (In)	Approx. Breaking Strength Lbs	Weave	E (In)	M (In)
A18LSW	.75 - 1-1/4	5,000	Single	3	18
A24LDW	.75 - 1-1/4	10,000	Double	3	24
B26LTW	1-1/4 - 2	12,500	Triple	3-1/4	26
B32LTW	1-1/4 - 2	17,500	Triple	3-1/4	32
C32LTW	2 - 2-3/4	15,500	Triple	3-1/2	32
C38LTW	2 - 2-3/4	22,500	Triple	3-1/2	38
D38LTW	2-3/4 - 3-1/2	22,500	Triple	3-3/4	38
D46LTW	2-3/4 - 3-1/2	27,500	Triple	3-3/4	46
E46LTW	3-1/2 - 4-1/4	27,500	Triple	4	46
E52LTW	3-1/2 - 4-1/4	32,500	Triple	4	52
F52LTW	4-1/4 - 4-7/8	30,000	Triple	4	52
F58LTW	4-1/4 - 4-7/8	35,000	Triple	4	58
G58L4W	4-7/8 - 5-1/2	36,500	4 Wire	6 Braided	58
G64L4W	4-7/8 - 5-1/2	41,500	4 Wire	6 Braided	64
H58L4W	5-1/2 - 6	36,500	4 Wire	6 Braided	58
H64L4W	5-1/2 - 6	41,500	4 Wire	6 Braided	64
I58L4W	6 - 6-3/4	36,500	4 Wire	6 Braided	58
I64L4W	6 - 6-3/4	41,500	4 Wire	6 Braided	64
J58LDW	6-3/4 - 8	45,500	Double	6 Braided	58
J64LDW	6-3/4 - 8	50,500	Double	6 Braided	64

Standard Mesh Lengths are Shown Special Lengths Available upon request.

### Special Pulling Grips



#### Model OH Pulling Grips

Model OH Pulling Grips, designed for the special demands of overhead stringing crews, has a basket constructed of triple woven nylon coated Aircraft Strand for maximum abrasive resistance. It has special tough plastic boots at eye-end to prevent abrasion between the conductor and pulling dollies. A steel thimble is manufactured into the eye, and is furnished without swivel or steel thimble on request. It is easily adaptable to ball bearing swivels. Uncoated wire gives approximately 20% more strength. Please specify when ordering.

Part Number	Cable Diameter Range (In)	Approx. Breaking Strength Lbs	Weave	E (In)	M (In)
OH30LDW	.25 - .50	10,000	Double	3	30
OH42LTW	3/0 - .336 M.C.M.	16,000	Triple	4	42
OH48LTW	.477 - .795 M.C.M.	20,500	Triple	4	48
OH51L5W	.795 - 1.000 M.C.M.	31,500	5-Wire	4	51

## Model R Pulling Grip

The Model R is basically the same grip in size and basket construction as the Model OH; however, it is shorter. This grip is employed in pulling all types of rope.



Part Number	Cable Diameter Range (In)	Approx. Breaking Strength (lbs.)	Weave	E (In)	M (In)
R36LTW	.75 - .875	18,000	Triple	4	36
R41LTW	.875 - 1.25	20,500	Triple	4	36

## Heavy Duty Split Grips

Heavy Duty Split Grips are specially designed to pull or support wire or cable already in place. They are manufactured of Hi-Fatigue Aircraft Strand steel cable with abrasive resistant plastic coating. All Split Grips are closed with plastic coated stainless steel flexible lacing cable.



Part Number	Cable Diameter Range (In)	Approx. Breaking Strength Lbs	Weave	E (In)	M (In)
S115SW	.75 - 1.25	15,000	Single	9	14
S120DW	.75 - 1.25	20,000	Double	9	14
S220SW	1.25 - 1.75	20,000	Single	11	18
S230DW	1.25 - 1.75	20,000	Double	11	18
S325SW	1.75 - 2.25	25,000	Single	13	24
S340DW	1.75 - 2.25	40,000	Double	13	24
S430SW	2.25 - 2.75	30,000	Single	15	30
S450DW	2.25 - 2.75	50,000	Double	15	30

## Split Pulling Grips Rod & Lace Closing

A & M Sales Split Grips—both rod and lace closing—are designed for all phases of suspension or pulling, where neither end of the conductor is available and “middle of the run” application of the grip is desired. Head variations are “DLE” (pictured), “SE” or “U”. Please specify head desired. Working loads, as listed in the table below, are maximum holding power for the smallest conductor in each size range.

Part Number	Cable Diameter Range (In)	Approx Breaking Strength (Lbs)
SR.75	.75 - 1.00	6,000
SL.75	.75 - 1.00	6,000
LSR1.00	1.00 - 1.25	7,500
LSL1.00	1.00 - 1.25	7,500
LSR1.25	1.25 - 1.50	9,000
LSL1.25	1.25 - 1.50	9,000
LSR1.50	1.50 - 1.75	11,000
LSL1.50	1.50 - 1.75	11,000
LSR1.75	1.75 - 2.00	13,000
LSL1.75	1.75 - 2.00	13,000
LSR2.00	2.00 - 2.50	15,000
LSL2.00	2.00 - 2.50	15,000



Rod

Lace

Part Number	Cable Diameter Range (In)	Approx Breaking Strength (Lbs)
LSR2.50	2.50 - 3.00	15,000
LSL2.50	2.50 - 3.00	17,000
LSR3.00	3.00 - 3.50	17,000
LSL3.00	3.00 - 3.50	17,000
LSR3.50	3.50 - 4.00	17,000
LSL3.50	3.50 - 4.00	18,000
LSR4.00	4.00 - 4.50	20,000
LSL4.00	4.00 - 4.50	20,000
LSR4.50	4.50 - 5.00	22,500
LSL4.50	4.50 - 5.00	22,500
LSR5.00	5.00 - 5.50	25,000
LSL5.00	5.00 - 5.50	25,000

## Flex-Eye Multi-Grips

For support and pulling of different size cables from one flexible eye. This gives complete support for each conductor, where supporting a bundle is not desirable. Used in conjunction where severe vibration may be encountered—i.e., mine shaft, industrial, adjacent to heavily traveled freeways. When ordering please give sizes and number of conductors to be supported.

**These units can be made to your specifications.**

Illustration shows Flex-Eye Grip with  
 1-A-3/4"—11/4" Single Weave  
 1-A-3/4"—11/4" Double Weave  
 1-B-11/4"—2" Triple Weave

