

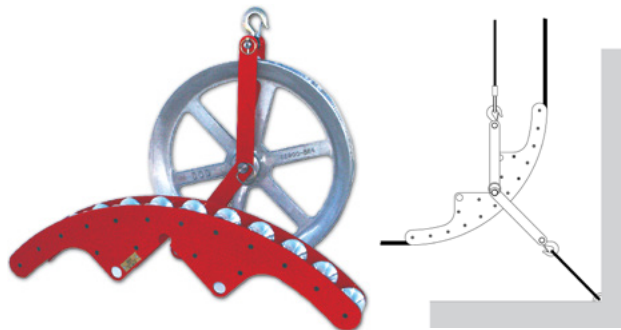
Fiber Optic Sheaves & Quadrants

For pulling fiber optic cable, DCD has a special series of sheaves and quadrants that will allow the maximum possible bend radius for the application. All the sheaves are aluminum while the quadrant side plates are 3/16" steel, giving the best combination of light weight and strength.

The Fiber Optic Quadrant has twelve rollers set on a 26" radius giving the cable a minimum 26-3/4" inside bend radius.

The one piece Fiber Optic Sheave is sized to fit through a 24" manhole and both the sheave and the quadrant can be used in the DCD Manhole Brace (32700 series).

The hanger arms also separate easily to allow insertion of the sheave or quadrant in the middle of the pull.



Fiber Optic Quadrant with Single Hanger	Fiber Optic Quadrant with Double Hanger	Single Hanger Only	Double Hanger Only	Quadrant Only	Sheave Only	Sheave Width	Sheave Diameter
32200-312	32220-312	32830-301	32810-301	32210-312	32900-303	3"	3"

Fiber Optic Sheave with Single Hanger	Fiber Optic Sheave with Double Hanger	Single Hanger Only	Double Hanger Only	Fiber Optic Sheave Only	Sheave Width	Sheave Diameter
32000-324	32100-324	32800-300	32810-300	32900-324	3"	24"

Sheave Hangers

DCD offers single or double hangers to go with their series of cast aluminum sheaves. The single hangers are provided with a safety hook and the double hangers have one hook and one pin through which a rope may be fed or other items attached.

The sheaves are all cast aluminum with machined faces and bores. They are then fitted with high load iron-bronze flanged bushings.

All parts are designed to take 10,000 lb line load allowing for a 3:1 safety factor.

One feature of the hangers is the ease with which they are assembled to either a sheave or a quadrant. A simple pin with a handle at one end and a locking pin at the other does the job. It should be noted that the handle at one end of the pin may be used to support the hanger in a horizontal position should that be necessary.

The sheaves and hangers may be purchased as assemblies or individually as shown in the table below.



Sheave with Single Hanger	Sheave with Double Hanger	Single Hanger Only	Double Hanger Only	Sheave Only	Sheave Width	Sheave Diameter
32000-420	32100-420	32800-400	32810-400	32900-420	4"	20"
32000-526	32100-526	32800-500	32810-500	32900-526	5"	26"
32000-611	32100-611	32800-600	32810-600	32900-611	6"	11"
32000-620F*	32100-620F	32800-600	32810-600	32900-620F	6"	20"
32000-626	32100-626	32800-601	32810-601	32900-626	6"	26"
32000-811	32100-811	32800-800	32810-800	32900-811	8"	11"
32000-811F*	32100-811F	32800-800	32810-800	32900-811F	8"	11"

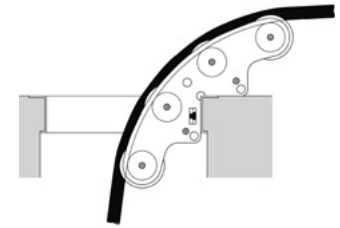
* F designates Flat Bottom Sheave.

Note: Double Hangers are supplied with one hook.

Quadrants & Hangers

DCD quadrants are designed to withstand up to 10,000 lb working line load with a 3:1 safety factor. This means they can be used safely at either the entry end of the installation or the exit end. The steel side plates along with the high strength bushings on each roller are all designed with strength, safety and weight in mind.

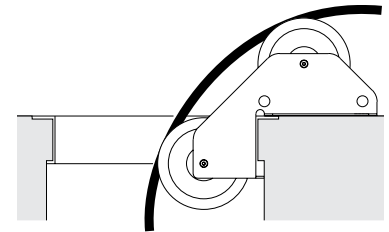
All quadrants have countersunk screws holding the rollers so there are no protrusions from the side plates and the hangers can travel the full arc of the quadrant.



Quadrant with Hanger	Quadrant Only	Hanger Only	Sheave Only	Sheave Width	Sheave Diameter	No. of Sheaves	Minimum Cable Radius
32200-304	32210-304	32830-300	32900-307	3"	7"	4	27-7/8"
32200-404	32210-404	32800-400	32900-407	4"	7"	4	27-7/8"
32200-504	32210-504	32800-500	32900-507	5"	7"	4	27-7/8"
32200-603	32210-603	32800-600	32900-611	6"	11"	3	28-3/4"
32200-803	32210-803	32800-800	32900-811	8"	11"	3	28-3/8"

Corner Guides

DCD Corner Guides are designed to withstand a 10,000 lb working line load with a 3:1 safety factor. The sheaves run in high strength iron-bronze bushings. The Corner Guides also have a wide base for stability, a deep lip for hooking into the manhole and two locations for hold down bars and lightening holes added everywhere possible.

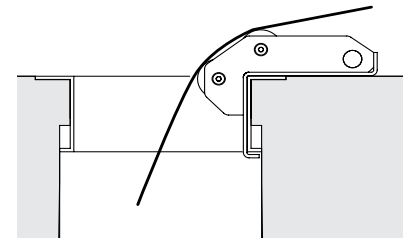


Guide Part No.	Sheave Only	Sheave Width	Sheave Diameter	Weight
32300-400	32900-411	4"	11"	58.5 lb
32300-500	32900-511	5"	11"	63.5 lb
32300-600	32900-611	6"	11"	70.5 lb
32300-800	32900-811	8"	11"	88.5 lb

Note: Add 'F' to end of part number for Flat Bottom Sheave.

Wire Rope Guide

DCD Wire Rope Guides are designed to withstand over 10,000 lb safe working line load. The hardened rollers run on ball bearings at each end for smooth easy rotation and the rollers have a flange at each end to prevent the rope from riding off either side. The product also has an extra deep lip to hook into the manhole.



Part No.	Spare Sheave	3:1 Safe Working Load	Sheave Width	Sheave Diameter	Weight
32400-200	32900-702	10,000 lb	7"	2"	28.0 lb

Safety Lifting Bar

This is simply a plain bar that can be used to prevent products such as the corner guides, quadrants or wire rope guides from falling into the manhole. Each of these products has one or two holes through them, which allows the safety bar to be positioned and tied back if needed. This product can also be used by two people to carry heavier products between them.

Part No.	Length	Diameter	Weight
32950-048	48"	1-1/4"	16.0 lb

Rim Roller

This product is designed to fit over the rim surrounding many electrical installations. While cable is being installed, this product will allow the cable to run over that rim without tearing or damaging the jacket.



Part No.	Spare Sheave	3:1 Safe Working Load	Sheave Width	Sheave Diameter	Weight
32450-400	32900-407	10,000 lb	4"	7"	14.5 lb

Duct Entry Guide

The Duct Entry Guide is unique for two reasons. First, it has an extra long tube section that goes inside the duct (see dimension A in the diagram on the right) for greater stability.

Second, because of the built-in spray nozzle for the DCD Tube-Lube® 326 application, there is one half of a quick-disconnect coupling attached to a spray nozzle that will direct the lubricant right onto the cable as it is fed into the ducting. This is a unique feature for a unique lubricant.



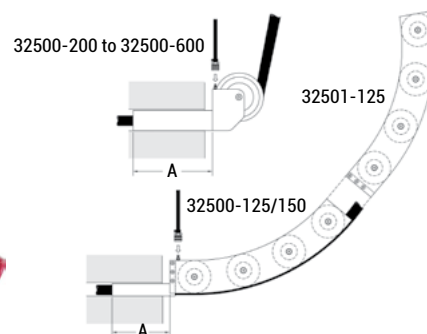
32500-125/150



32501-125



32500-200 to 32500-600



Part No.	Spare Sheave	3:1 Safe Working Load	Duct Diameter	A	Weight
32500-125*	32900-202P**	3,000 lb	1-1/4"	7-1/2"	7.4 lb
32500-150*	32900-202P**	3,000 lb	1-1/2"	7-1/2"	7.5 lb
32501-125*	32900-202P**	3,000 lb	Extension Quadrant	-	5.7 lb
32500-200	32900-303	3,000 lb	2"	7-1/2"	5.3 lb
32500-250	32900-303	3,000 lb	2-1/2"	7-1/2"	5.7 lb
32500-300	32900-307	6,000 lb	3"	9-1/2"	14.1 lb
32500-400	32900-407	6,000 lb	4"	11-1/2"	19.0 lb
32500-480	32900-407	6,000 lb	4" Schedule 80	11-1/2"	17.0 lb
32500-500	32900-507	6,000 lb	5"	13-1/2"	24.0 lb
32500-600	32900-611	6,000 lb	6"	15-1/2"	44.0 lb

* For use with Fiber Optic Cable only. Extension Quadrant may be used with -125 & -150 only.

** The 'P' style of Sheave is made from industrial grade plastic.

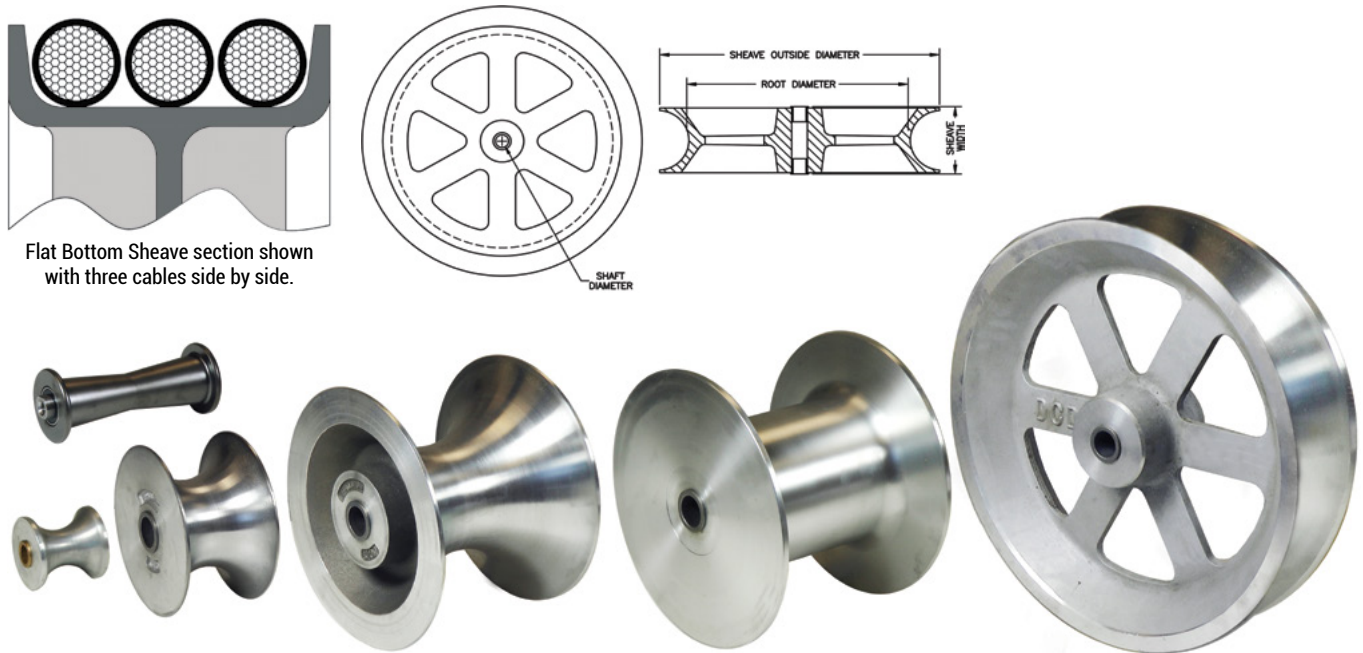
Sheaves

All DCD sheaves are cast from 356-T6 aluminum. This is a heat treated material giving over 33,000 lb of tensile strength, making it one of the strongest types of aluminum castings available.

Each sheave is fitted with an iron bronze bushing that take either 1-1/4" or 3/4" dia. shafts. All DCD sheave axles are made from high strength chrome plated shafting. With almost twice the load bearing capability of regular bronze bushings, the DCD sheaves are designed to take the full load at either entry or exit points of the pull.

DCD also offers flat bottom sheaves. The purpose of these sheaves is to allow parallel seating of three cables on the sheave – this prevents 'bunching' of the cables which in turn often causes one or more of them to ride up the side of a standard radiused sheave, possibly causing damage to the cable jackets. take the full load at either entry or exit points of the pull.

Note: Sheaves are available in Delrin upon request. Contact Customer Service for more information.



Part No.	Sheave Outside Diameter	Sheave Width	Maximum Cable Diameter	Root Diameter	Shaft Diameter	Weight
32900-202P*	2-3/8"	2-1/4"	1-3/16"	1-1/8"	5/8"	0.2 lb
32900-303	3"	3"	2-1/2"	1-1/2"	3/4"	1.1 lb
32900-307	7"	3-3/8"	3"	3-3/4"	1-1/4"	6.0 lb
32900-324	23-3/4"	3	1-3/8"	21-1/4"	1-1/4"	17.0 lb
32900-407	7"	4"	3-3/4"	3-3/4"	1-1/4"	8.0 lb
32900-411	11"	4-3/8"	4"	7-1/2"	1-1/4"	15.0 lb
32900-420	20"	4-3/4"	4"	17"	1-1/4"	31.0 lb
32900-507	7"	4-3/4"	4-5/8"	3-3/4"	1-1/4"	9.0 lb
32900-511	11"	5-3/8"	5"	6-1/2"	1-1/4"	18.0 lb
32900-526	26-5/8"	5-3/8"	4-7/8"	22-1/2"	1-1/4"	49.0 lb
32900-526F**	26-5/8"	5-3/8"	3 x 1-1/2"	23-1/2"	1-1/4"	51.0 lb
32900-611	11"	6-3/8"	5-7/8"	5-1/2"	1-1/4"	21.0 lb
32900-620F**	20-7/8"	6-3/8"	3 x 1-3/4"	17"	1-1/4"	47.0 lb
32900-626	26-5/8"	6-3/8"	5-7/8"	21"	1-1/4"	65.0 lb
32900-702	3"	7"	3/4"	1-1/2"	-	5.0 lb
32900-811	11"	8-3/8"	8"	4-3/4"	1-1/4"	27.0 lb
32900-811F**	11"	8-3/8"	3 x 2-3/8"	6"	1-1/4"	24.0 lb

* P designates Polyurethane Sheave.

** F designates Flat Bottom Sheave.

Meter Box Puller

Designed for use by power utilities or contractors who are pulling new residential service lines through conduit. The head of the Meter Box Puller fits snugly in the meter enclosure, while the handle is strapped to the PVC conduit that goes from the ground to the meter box.

During the pull, the sheaves in the head make the pull easier, while the handle presses against the PVC conduit helping to keep the conduit and the meter box from pulling out from the wall.



Part No.	3:1 Safe Working Load	Nominal PVC Conduit Diameter	Weight
32460-000	1,250 lb	3" to 4"	8.1 lb
32460-300	1,250 lb	3"	7.8 lb

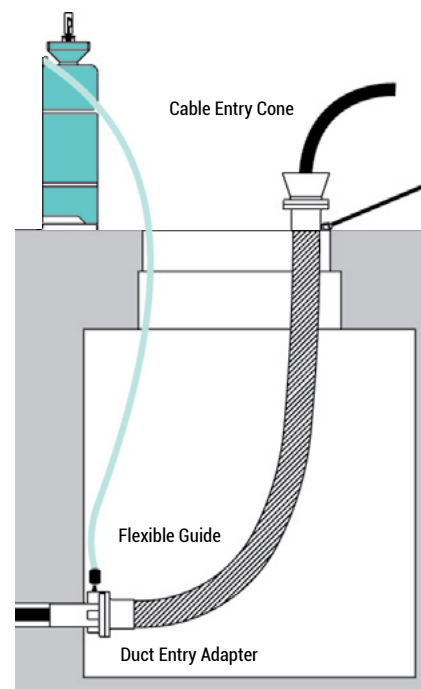
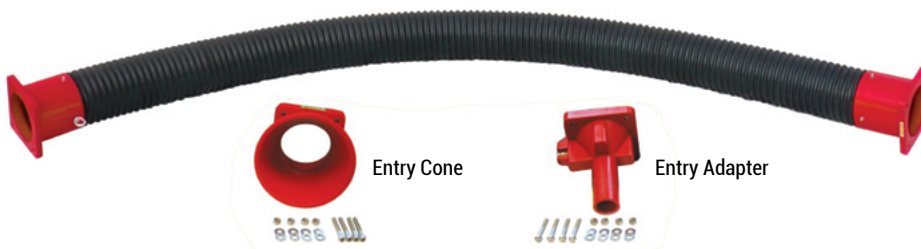
Flexible Cable Guides

The DCD Flexible Cable Guide comes in 5' or 10' lengths. Custom lengths are also available. At each end there is a polyurethane coupling that can be used for attaching two lengths together and for attaching the duct adapter and the cable entry cone.

There are three different diameters or sizes of flexible guides. The 4" size has adapters suitable for 2", 3" and 4" duct sizes, the 5" size only fits 5" duct, and the larger 6" unit has adapters suitable for 4", 5", and 6" ducting.

Each duct adapter is fitted with a spray nozzle suitable for the DCD Tube-Lube® 326. There is one half of a quick-disconnect coupling attached to the nozzle that will direct the lubricant onto the cable as it is fed into the ducting.

Like the end fittings, the duct adapters are made from polyurethane and are also sold separately.



Flexible Guide Part No.	Diameter	Length	Cable Entry Cone Part No.
32600-405*	4"	5'	32610-300
32600-410	4"	10'	32610-400
32600-505	5"	5'	32610-500
32600-510	5"	10'	
32600-605	6"	5'	32610-600
32600-610	6"	10'	

Note: Contact Customer Service regarding custom lengths.

* Depending on stock, this size of Flexible Cable Guide may have an aluminum hose.

Duct Entry Adapter Part No.	Use with Flexible Guide Diameter	Nominal Duct Size
32620-420	4"	2"
32620-425	4"	2-1/2"
32620-430	4"	3"
32620-440	4"	4"
32620-550	5"	5"
32620-640	6"	4"
32620-650	6"	5"
32620-660	6"	6"

Note: Custom sizes are available. Contact Customer Service for more info.

Poly Entry Bell

This product is used for guiding the cable into the ducting. The polyurethane material is self lubricating which helps to smooth the passage of cable into the duct.



Part No.	Nominal Duct Diameter	Weight
32510-300	3"	0.9 lb
32510-400	4"	1.4 lb
32510-500	5"	1.7 lb

Nylon Cable Protector

These products are common to the industry and serve to protect the cable while being fed into the duct. They may be left in place if there is concern about wear between the duct edge and the cable.



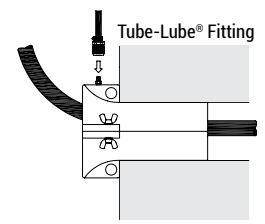
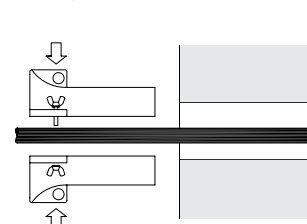
Part No	Description	Weight
32560-200	For 2" to 3" duct (package of 10 pieces)	0.7 lb
32560-300	For 3" to 6" duct (package of 10 pieces)	1.4 lb

Note: Sold in boxes of 10. Not sold individually.

Split Entry Bells

The DCD Split Entry Bell is designed to allow continuation of a single cable pull through a manhole – out one side and into another side. The split feature allows removal of the guide after installation. Split Bells are available in long wearing bronze or lower cost aluminum. Bronze bell halves are held together with wing nuts and bolts while the aluminum bells use dowel pins and one lug has a 3/4" dia. lifting hole.

Add an L to the end of the part number to order the Entry Bell complete with a Lube Fitting for the DCD Tube-Lube® 326 applicator systems.



Aluminum Bell Part No.	Bronze Bell Part No.	Nominal Duct Diameter	Aluminum Weight	Bronze Weight
32550-200A	32550-200B	2"	2.0 lb	5.7 lb
32550-300A	32550-300B	3"	2.6 lb	7.2 lb
32550-400A	32550-400B	4"	3.3 lb	9.4 lb
32550-450A	32550-450B	4-1/2"	3.5 lb	9.4 lb
32550-500A	32550-500B	5"	4.1 lb	11.5 lb
32550-600A	32550-600B	6"	4.8 lb	13.1 lb

Cable Separators

Polyurethane Cable Separators are available in 3-way or 4-way units to suit 2", 4", 5" or 6" ducting. They are designed to fit in the feed-in end of the duct and to align multiplex cable for smoother entry into the duct.



Part No.	Nominal Duct Size	Minimum Duct Diameter	Maximum Cable Diameter	Style	Color Code	Weight
32650-200	2"	1-15/16"	3/4"	3-way	Black	0.3 lb
32650-400	4"	3-13/16"	1-9/16"	3-way	Red	1.0 lb
32650-500	5"	5-1/32"	2-1/8"	3-way	Red	1.4 lb
32650-600	6"	5-3/4"	2-7/16"	3-way	Red	1.5 lb
32655-400	4"	3-13/16"	1-5/16"	4-way	Black	1.5 lb
32655-500	5"	5-1/32"	1-13/16"	4-way	Black	2.0 lb
32655-600	6"	5-3/4"	2-1/8"	4-way	Black	2.2 lb

Manhole Brace

The DCD Manhole Brace may look like other products on the market, but look again. There are several features that make it stand out from other similar products:

- Pivoting Head** - In many applications the top of the brace cannot jam against a round manhole, instead it may be jammed against a square cutout in the roof of the manhole vault. The DCD Manhole Brace has a pivotable upper head which allows the brace and sheave to be accurately aligned with the duct bank without the need for temporary shoring/bracing.
- Custom Extruded Channels** - The aluminum channels have been custom extruded to an engineered design. Their shape provides the maximum strength-to-weight ratio while also providing a smooth sliding action. The channels have approximately twice the strength as the standard aluminum channels used in similar products, allowing a full 10,000 lb line load to be applied at either entry or exit end of the pull. This load allows in excess of a 2:1 safety factor.
- Fixed Angle** - The brace operates at a fixed angle of 10 degrees. There is an acme screwjack assembly to adjust the height of the brace. This same screw can be used to relieve the pressure on the brace when it is being removed.
- Lifting Bar** - The lifting bar provided allows the user to easily raise the upper extension into its correct position. This bar can be swung out of the way and stored when not in use.
- Locking Pins** - The brace uses separate locking pins for each set of channels. Using two locking pins ensures that they do not interfere with the desired placement of the sheave or quadrant.
- Fixed Width** - This fixed width brace is designed to accept quadrants or sheaves up to 8" wide. Since correct alignment to the duct entrance is now possible with the rotating head, even use of only a 4" wide sheave is no problem inside the 8" available width. The sheave will simply float between the side rails, always picking up the most favorable alignment.
- Construction** - Although the side channels are extruded aluminum, the upper and lower assemblies are made out of steel. While increasing the overall weight by a few pounds, the added strength of steel is necessary in order to match the strength of the extruded side channels. The end result is a brace that can operate equally at either end of the pull and one that will match the safe working loads of all other DCD manhole products at 10,000 lb. The base section is used in all assemblies and comes complete with two locking pins and one sheave pin. The short, medium or long extension should be ordered to suit the height range requirement.



Sheave sold separately.

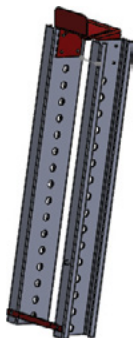
Locking pins and sheave pins come with securing pins that may be ordered separately.

Note: Replacing any parts with components other than those supplied by DCD will void the warranty and may cause serious damage to persons or equipment.



Base Section

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Extension

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Corner Guide
(32300 Series)



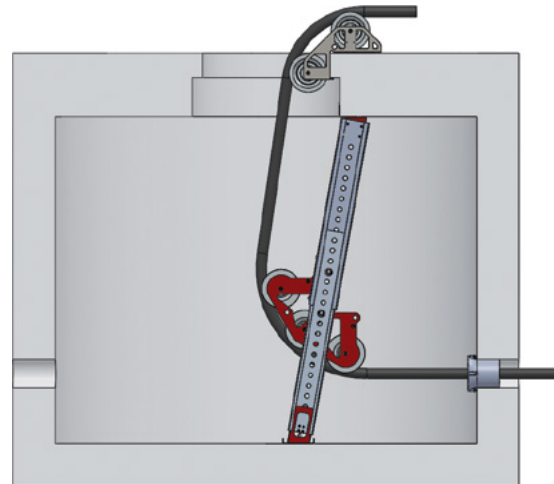
Poly Entry Bell
(32510 Series)



Quadrant
(32210 Series)

Additional Manhole Tools
(Sold separately)

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Full Assembly

Part No.	Description	Options	Height Range	Weight
32700-000	Base Section	Mandatory	-	64.5 lb
32700-010	Short Extension	Add-on	5' to 8'	54.5 lb
32700-020	Medium Extension	Add-on	7' to 10'	72.5 lb
32700-030	Long Extension	Add-on	9' to 12'	89.0 lb
32700-035	Extra Long Extension	Add-on	12' to 15'	105.0 lb
32700-040	Locking Pin Kit (1-1/4" long)	Spare	-	1.0 lb
32700-050	Sheave Pin Kit (11" long)	Spare	-	4.0 lb

Note: Base Section and one of the Extensions are both required to make this product work.