



HP Cables
High Performance
Control Cables & Hardware



ORSCHN[®]

Features & Construction

Core Constructions

High Performance (HP) 1 x 7 coated core is available in 3, 4 and 6 Series cables. HP Core uses a proprietary coating over 1 x 7 wire rope. This construction offers improved flexibility and higher push loads than armor core construction. Solid stainless steel cores are available in 3 Series push-pull, universal, positive lock and PTO cables. Tension cables use a 1 x 19 HP coated core, while 8 Series push-pull remains armor core.

Liners

All Felsted® brand cables use polymer liners, available in standard HP cable construction at -65 to +225°F (-54 to +107°C) and HEFT 2 high temperature version at -65 to +300°F (-54 to +149°C). Factory lubrication provides optimum core performance without requiring further service.

Note: With quick disconnect control head cables, though the conduit/core may be rated to +225°F or +300°F, the control head itself is not intended for these temperature ranges.

Stranded Conduit

Multiple oil tempered spring wires are placed in a long lay pattern to protect the liner and inner core, maintain flexibility and withstand extreme compressive and tensile loads. This long lay construction results in minimal deflections during cable operation, assuring precise controlling action to the operator.

Conduit Jacket

Heavy duty, thick-walled polymer jackets are extruded onto the stranded liner for maximum cable strength. Standard HP cable material is polymer molded to a dark maroon color. HEFT 2 jacket, used in high temperature applications, is a nylon based material molded to a satin black color.

End Fittings

Corrosion-resistant materials are used throughout to provide maximum life. Standard 3, 4 and 6 Series rods and sleeves are 300 series stainless steel, while hubs are either stainless or aluminum. The 8 Series rods are stainless steel. Sleeves and hubs are aluminum with stainless steel options available for both.

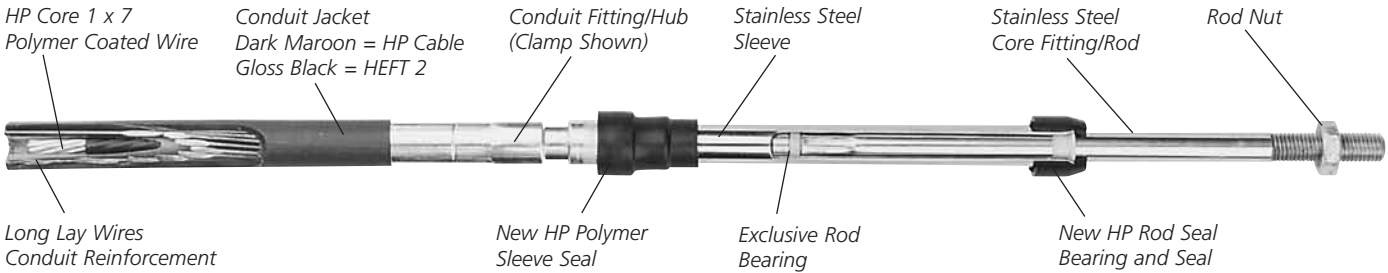
Seals & Boots

High Performance seals are now standard! Durable custom compounded seals are used to prevent moisture and contaminants from entering the cable. The new High Performance seals outperform all previous seals and are now standard on all cables. The HP seals operate in all temperature extremes, while offering improved performance and efficiency. Tension cables use a durable tear-resistant silicone boot, designed for high cycle use and high temperature.

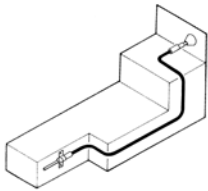
Rod & Sleeve Bearing

An exclusive polymer rod and sleeve bearing is used to improve efficiency, sealing and cable life by preventing metal-to-metal contact between the rod and sleeve. They also accurately align the rod with the seal to further ensure superior sealing and a longer cable life.

Specifications subject to change without notice



Specifications



Routing/Measuring

Measure the cable along the path it will take from the points where the cable hubs will be anchored. Follow the actual cable path as closely as possible, allowing for the largest practical bend radii.

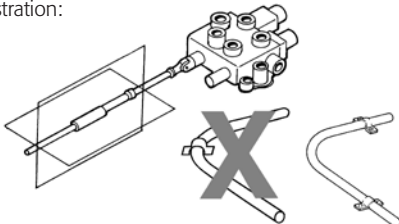
Optimum Life Bend Radii

Series	Operating Life Minimum
3	3 inches*
4	5 inches
6	7 inches
8	10 inches

* HP Core: Solid Core has 6" Bend Radii

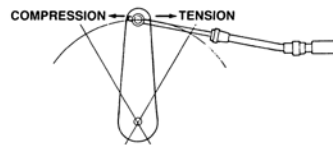
Installation Notes: Control & Work End

Where a cable is to be connected to objects requiring linear movement only (e.g. spool valves), maximum life and efficiency is achieved by accurately aligning, in both planes, the cable hubs and the controlled object. See illustration:



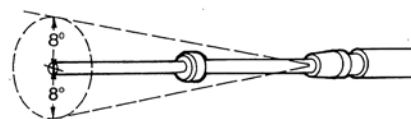
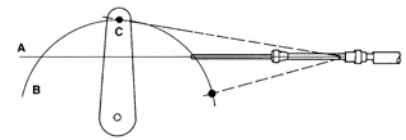
It is important to securely anchor the cable hubs. Looseness of the mounting bracket will be perceived as lost motion "sponginess" and will inhibit detent feel.

Also, clamping in the bend area may reduce bend radii under operating loads. Clamping at tangents to the bend is preferred.



For highest efficiency and long life in lever actuating operations, install the cable so that the highest loads are operated with tension (pulling), rather than compression (pushing).

Where the cable is connected to a lever, the cable will be mounted so that it lies on a plane (A) midway on the arc (B) described by the movement of the connection point on the lever (C).



All Felsted push-pull cables with rod and sleeve type end fittings have a built-in swivel to handle deflections up to 8°.

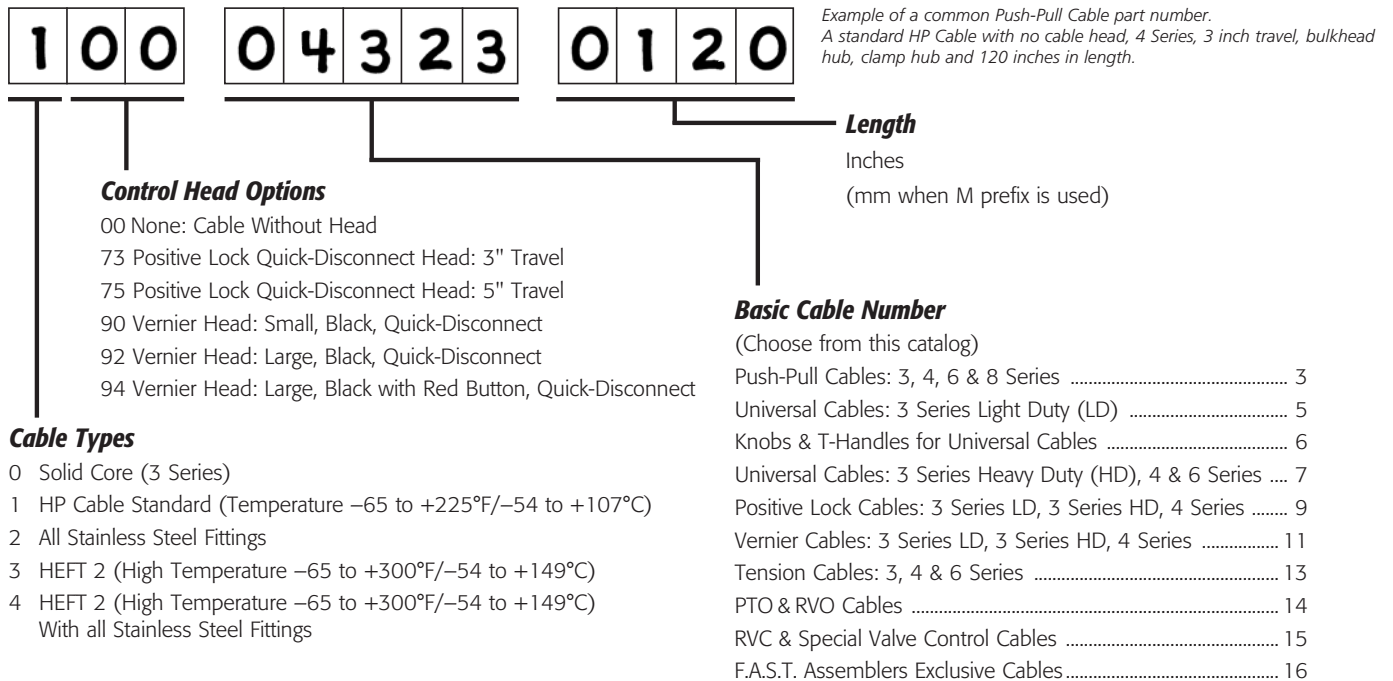
Felsted® Brand Cable Products Are Available Through A Network Of Local Orscheln® F.A.S.T.® Cable Assemblers
www.orschelnproducts.com

Catalog Index

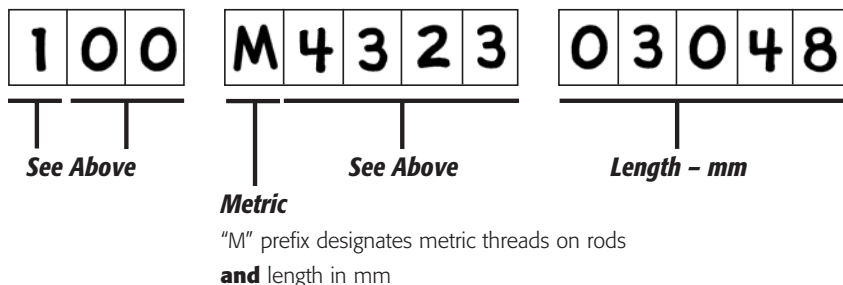
Features, Construction, & Specifications	1
Push-Pull Cables: 3, 4, 6 & 8 Series	3
Universal Cables: 3 Series Light Duty (LD)	5
Knobs & T-Handles for Universal Cables	6
Universal Cables: 3 Series Heavy Duty (HD), 4 & 6 Series	7
Positive Lock Cables: 3 Series LD, 3 Series HD, 4 Series	9
Vernier Cables: 3 Series LD, 3 Series HD, 4 Series	11
Tension Cables: 3, 4, 6 & 8 Series	13
PTO & RVO Cables	14
RVC & Special Valve Control Cables	15
F.A.S.T.[®] Assemblers Exclusive Cable Assemblies	16
Hardware	17-18

Cable Types/Options/Part Number System How to Order HP Cables: Part Number System

Standard/Imperial



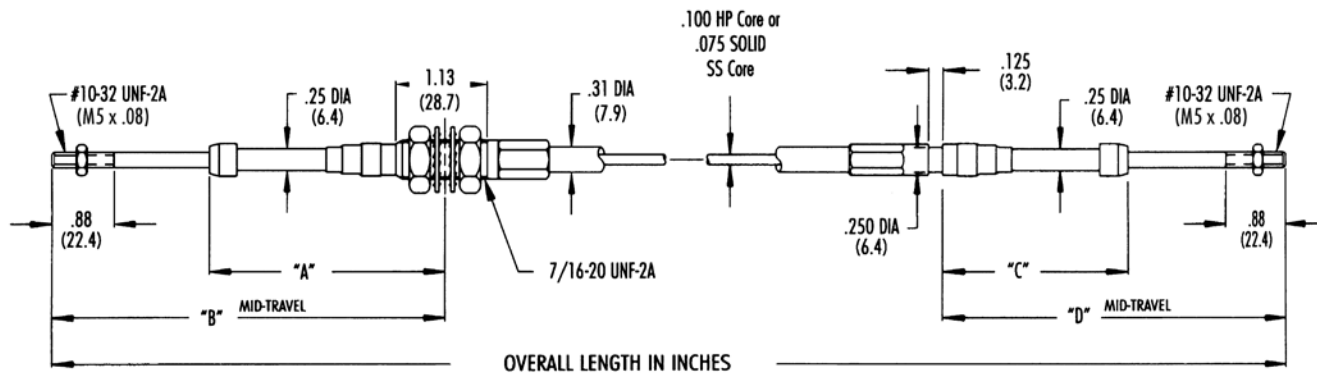
Metric



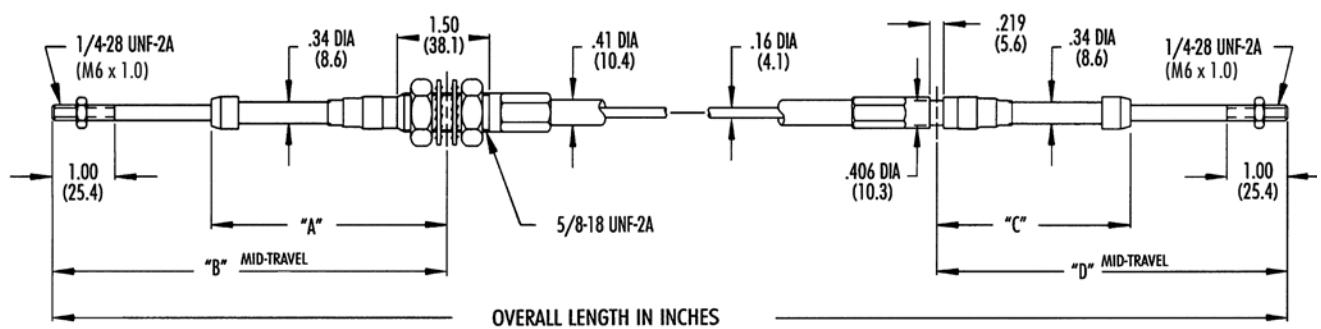
Push-Pull HP Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

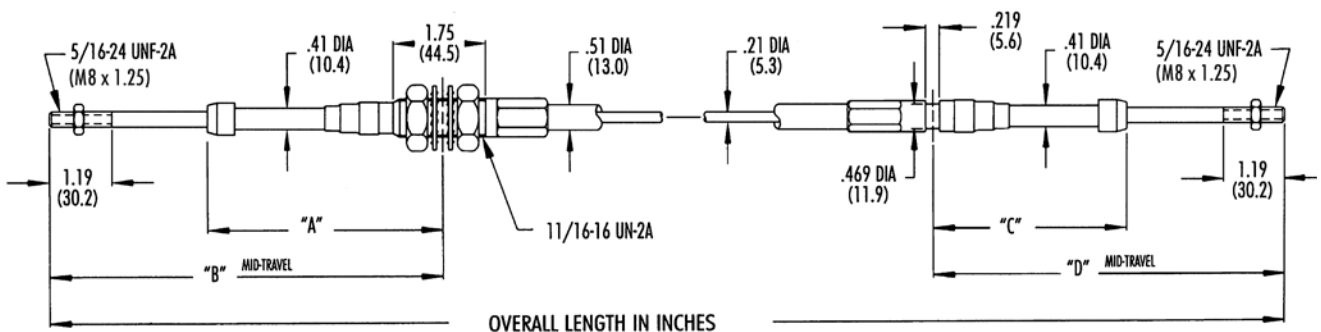
3 SERIES



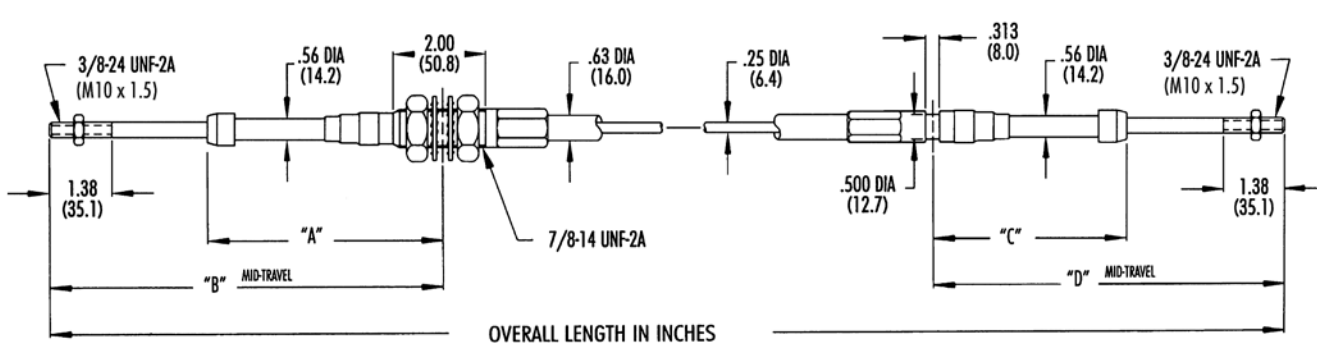
4 SERIES



6 SERIES



8 SERIES



Felsted® Brand Cable Products Are Available Through A Network Of Local Orscheln® F.A.S.T.® Cable Assemblers
www.orschelproducts.com

- Temperature Range:
 - 65 to +225°F / –54 to +107°C Std.
 - 65 to +300°F / –54 to +149°C HEFT 2
- Low Backlash
- High Efficiency
- Conduit Color:
 - Dark Maroon – HP Cable Std.
 - Satin Black – HEFT 2

3 SERIES

**HP Core
or Solid Core
10-32 Thread
3" Bend Radii (HP)
6" Bend Radii
(Solid Core)**

Specifications

Travel Inch/(mm)	Bulkhead End		Clamp End		Operating Loads	
	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)	Push Lbs./ (N)	Pull Lbs./ (N)
1.0 (25.4)	3.00 (76.2)	4.44 (112.8)	2.31 (58.7)	3.75 (95.3)	80 (356)	120 (534)
2.0 (50.8)	4.00 (101.6)	5.94 (150.9)	3.31 (84.1)	5.25 (133.4)	80 (356)	120 (534)
3.0 (76.2)	5.00 (127.0)	7.44 (189.0)	4.31 (109.5)	6.75 (171.5)	70 (311)	120 (534)
4.0 (101.6)	6.00 (152.4)	8.94 (227.1)	5.31 (134.9)	8.25 (209.6)	60 (267)	120 (534)
5.0 (127.0)	7.00 (177.8)	10.44 (265.2)	6.31 (160.3)	9.75 (247.7)	45 (200)	120 (534)
6.0 (152.4)	8.00 (203.2)	11.94 (303.3)	7.31 (185.6)	11.25 (285.7)	35 (155.8)	120 (534)
7.0 (177.8)	9.00 (228.6)	13.44 (341.4)	8.31 (211.0)	12.75 (323.8)	25 (111.3)	120 (534)

4 SERIES

**HP Core
1/4-28 Thread
5" Bend Radii**

Specifications

Travel Inch/(mm)	Bulkhead End		Clamp End		Operating Loads	
	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)	Push Lbs./ (N)	Pull Lbs./ (N)
1.0 (25.4)	3.13 (79.5)	4.69 (119.1)	2.50 (63.5)	4.06 (103.1)	150 (667)	230 (1023)
2.0 (50.8)	4.13 (104.9)	6.19 (157.2)	3.50 (88.9)	5.56 (141.2)	150 (667)	230 (1023)
3.0 (76.2)	5.13 (130.3)	7.69 (195.3)	4.50 (114.3)	7.06 (179.3)	125 (556)	230 (1023)
4.0 (101.6)	6.13 (155.7)	9.19 (233.4)	5.50 (139.7)	8.56 (217.4)	100 (445)	230 (1023)
5.0 (127.0)	7.13 (181.1)	10.69 (271.5)	6.50 (165.1)	10.06 (255.5)	75 (334)	230 (1023)
6.0 (152.4)	8.13 (206.5)	12.19 (309.6)	7.50 (190.5)	11.56 (293.6)	55 (244.8)	230 (1023)
7.0 (177.8)	9.13 (231.9)	13.6 (347.7)	8.50 (215.9)	13.06 (331.7)	45 (200.3)	230 (1023)

6 SERIES

**HP Core
5/16-24 Thread
7" Bend Radii**

Specifications

Travel Inch/(mm)	Bulkhead End		Clamp End		Operating Loads	
	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)	Push Lbs./ (N)	Pull Lbs./ (N)
1.0 (25.4)	3.25 (82.6)	5.00 (127.0)	2.56 (65.0)	4.31 (109.5)	250 (1112)	400 (1779)
2.0 (50.8)	4.25 (108.0)	6.50 (165.1)	3.56 (90.4)	5.81 (147.6)	250 (1112)	400 (1779)
3.0 (76.2)	5.25 (133.4)	8.00 (203.2)	4.56 (115.8)	7.31 (185.7)	210 (934)	400 (1779)
4.0 (101.6)	6.25 (158.8)	9.50 (241.3)	5.56 (141.2)	8.81 (233.8)	170 (756)	400 (1779)
5.0 (127.0)	7.25 (184.2)	11.00 (279.4)	6.56 (166.6)	10.31 (261.9)	130 (578)	400 (1779)
6.0 (152.4)	8.25 (209.6)	12.50 (317.5)	7.56 (192.0)	11.81 (299.9)	90 (400.5)	400 (1779)
7.0 (177.8)	9.25 (235)	14.00 (355.6)	8.56 (217.4)	13.31 (338.0)	60 (267)	400 (1779)

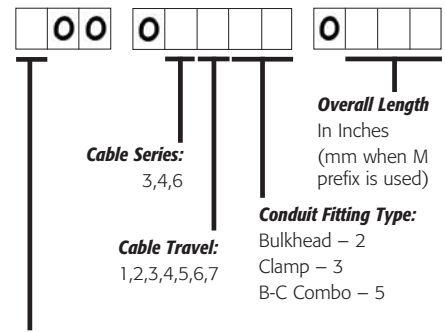
8 SERIES

**Armor Core
3/8-24 Thread
10" Bend Radii**

Specifications

Travel Inch/(mm)	Bulkhead End		Clamp End		Operating Loads	
	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)	Push Lbs./ (N)	Pull Lbs./ (N)
1.0 (25.4)	3.69 (93.7)	5.56 (141.2)	3.19 (81.0)	5.06 (128.5)	700 (3114)	1000 (4448)
2.0 (50.8)	4.69 (119.1)	7.06 (179.3)	4.19 (106.4)	6.56 (166.6)	700 (3114)	1000 (4448)
3.0 (76.2)	5.69 (144.5)	8.56 (217.4)	5.19 (131.8)	8.06 (204.7)	600 (2669)	1000 (4448)
4.0 (101.6)	6.69 (169.9)	10.06 (255.5)	6.19 (157.2)	9.56 (242.8)	500 (2224)	1000 (4448)
5.0 (127.0)	7.69 (195.3)	11.56 (293.6)	7.19 (182.6)	11.06 (280.9)	400 (1779)	1000 (4448)
6.0 (152.4)	8.69 (220.7)	13.06 (331.7)	8.19 (208.0)	12.56 (319.0)	275 (1223.8)	1000 (4448)
7.0 (177.8)	9.69 (246.1)	14.56 (369.8)	9.19 (233.4)	14.06 (357.1)	150 (667.5)	1000 (4448)

Building a Part Number

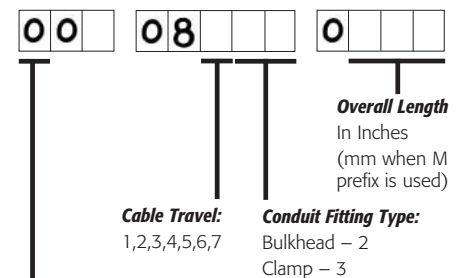


Cable Type:

- 0 Solid Core (3 Series Only)
- 1 High Performance (Standard)
- 2 All Stainless Steel Fittings
- 3 HEFT 2 (High Performance & High Temperature)
- 4 HEFT 2 and All Stainless Steel Fittings

M Metric – see pg. 2

8 Series Options Building a Part Number



Cable Type:

- 1 Stainless Steel Rods & HP Rod Seal (Standard)
- 2 All Stainless Steel Fittings, Hardware & HP Rod Seal
- 4 All Stainless Steel Core & Conduit Strand
Stainless Steel Fittings, Hardware & HP Rod Seal
(Premium)

HEFT 2 Not available in 8 Series

M Metric – see pg. 2

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

3 SERIES LIGHT DUTY

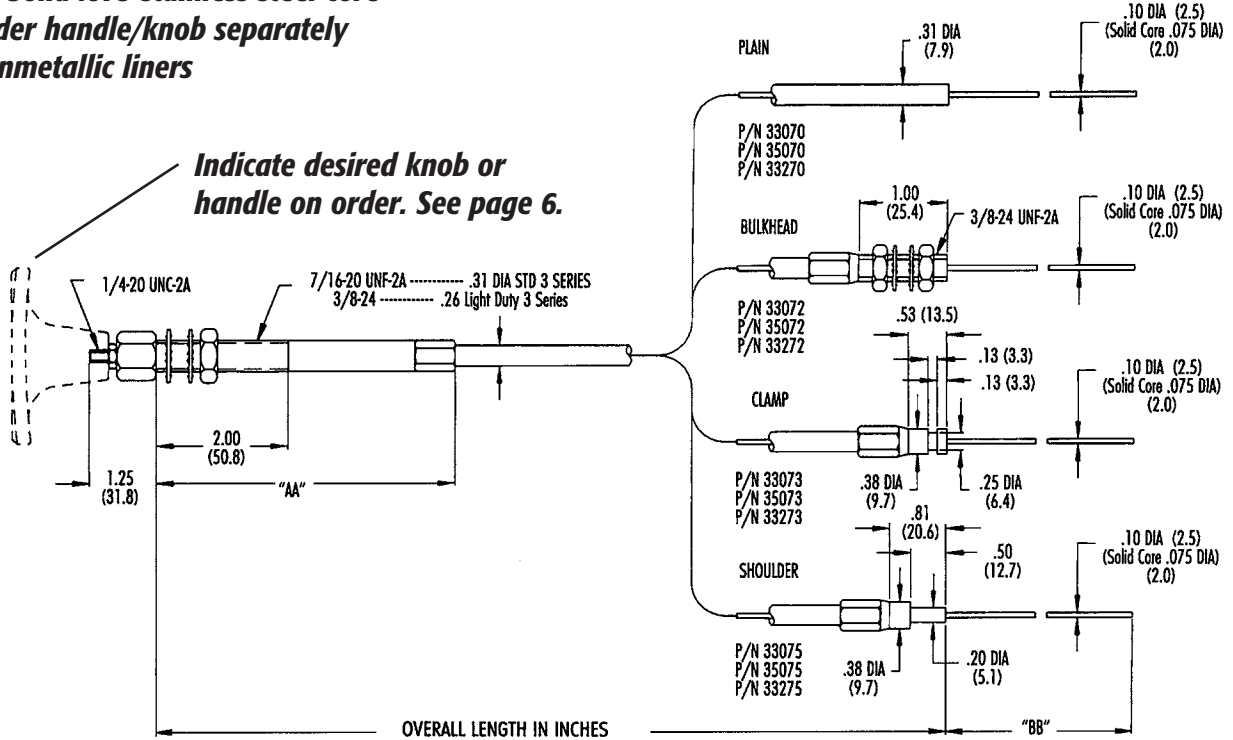
Choice of core type:

HP Core – Polymer coated 1 x 7

Solid .075 stainless steel core

Order handle/knob separately

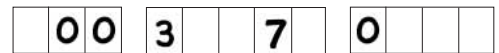
Nonmetallic liners



Specifications

Travel Inch/(mm)	DIM "AA" Inch/(mm)	DIM "BB" Inch/(mm)
3.0 (76.2)	4.50 (114.3)	5.0 (127.0)
5.0 (127.0)	6.50 (165.1)	8.0 (203.2)

Cable Only
Building a Part Number



Cable Travel:
3,5

Overall Length
In Inches

Conduit Size:
 0 = .31 dia. std.
 2 = .26 dia.
 (Available with
 cable type 0,
 solid core only)

Conduit Fitting Type:
 Plain - 0
 Bulkhead - 2
 Clamp - 3
 Shoulder - 5

Cable Type:

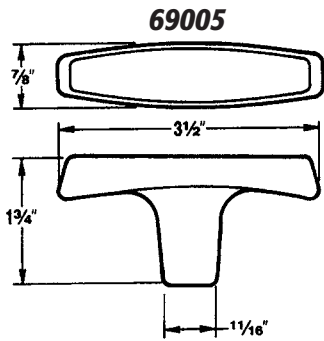
- 0 Solid Core (3 Series Only) .075 dia.
- 1 High Performance (Standard)
- 3 HEFT 2 (High Performance & High Temperature)



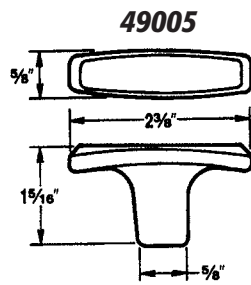
T-Handles

Tough Nylon Material

T-HANDLES



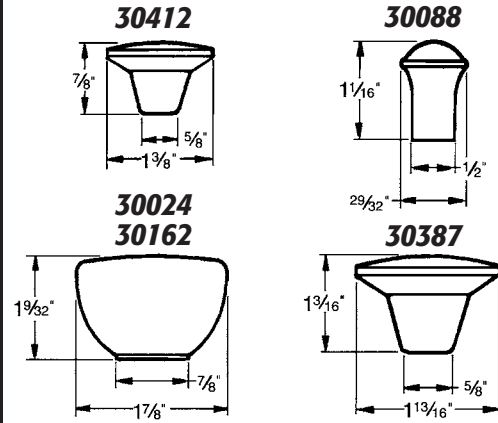
Base Part #	Type	Color
49005-1	A	Black
49005-2	B	Red
69005-1	C	Black
69005-2	D	Red



Knobs

Rugged Phenolic Material

KNOBS



Base Part #	Type	Color	Legend I.D.	Thread Size
30024-0	E	Black	01	1
30088-1	F	Black	01	1
30088-2	G	Red	01	1
30162-0	H	Red	06	1
30387-1	I	Black	01	1
30387-2	J	Red	01	1
30412-0	K	Black	01	1

T-Handle/Knob Only Building a Part Number



Base Part Number

Thread Size

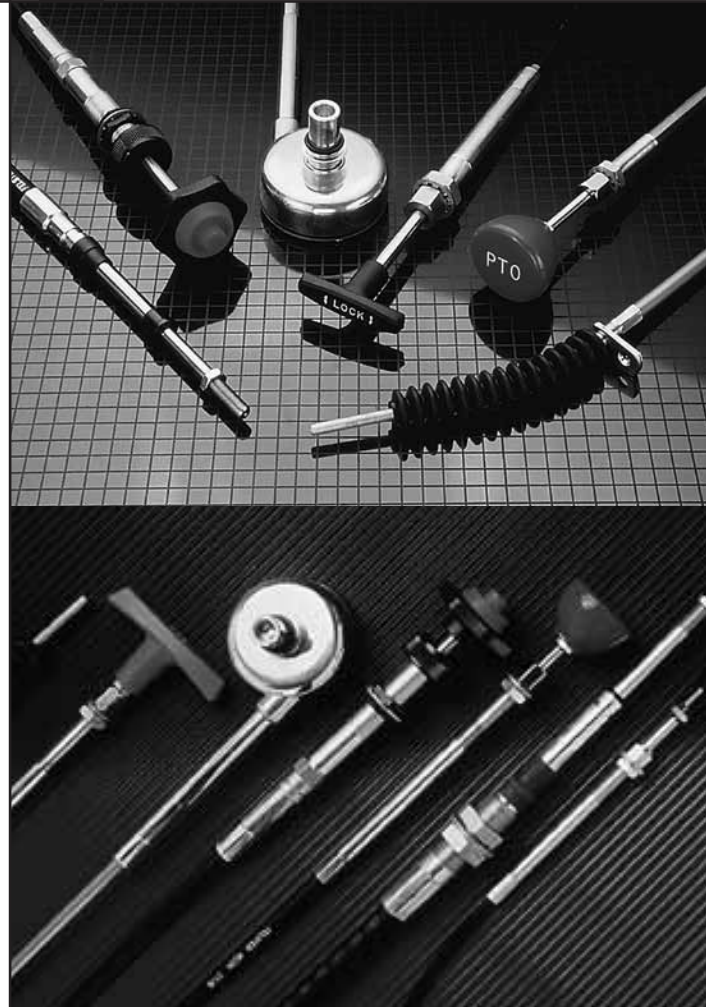
- 1 1/4-20 UNC-2B
- 2 5/16-24 UNF-2B
- 3 3/8-24 UNF-2B
- 4 .358 hole with set screw

Legend Identification

01 Plain	11 Cold Start	19 Overdrive
02 Stop	12 Pump	20 Aux. Release
03 Shut-Off	13 Chute	(Lock)
04 Throttle	14 Fire	21 Rear Door
05 Choke	15 Start	(Lock)
06 PTO	16 Hood	22 Throttle
07 Emergency Stop	17 Emergency Fuel	(Lock)
08 Engine Stop	Shut-Off	23 Hatch
09 (Lock)		(Lock)
10 Disconnect		

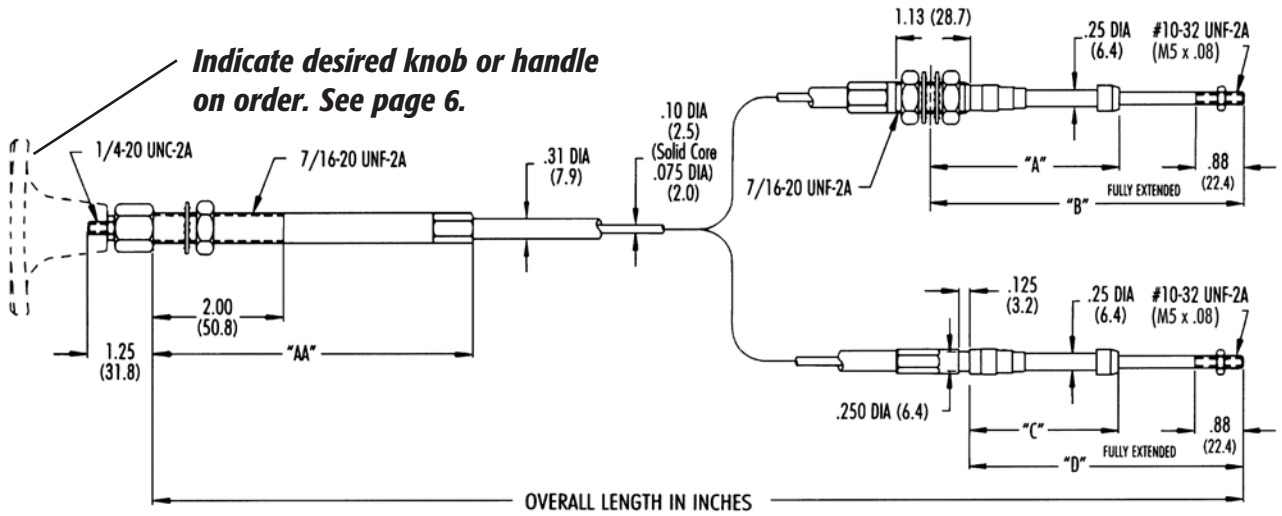
Note: 01 Plain T-handle is a stock item. Other T-handles may have minimum order quantities and special order long lead time.

Note: To order Positive Lock Spare Handle 49005-1094 w/set screw use part #30073.

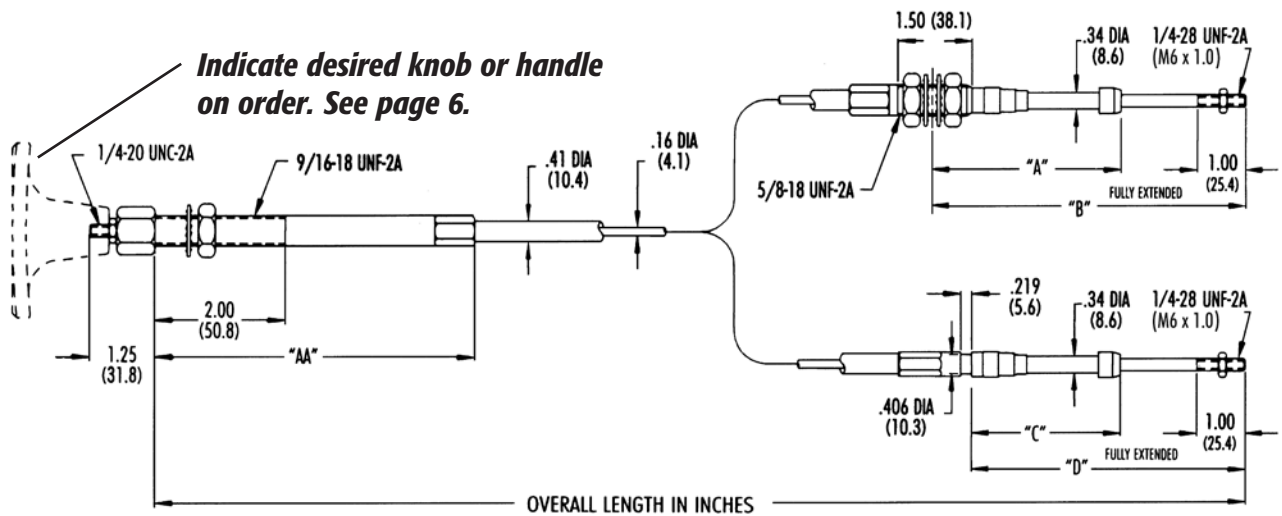


Can be custom assembled by local Orscheln® F.A.S.T.® distributors

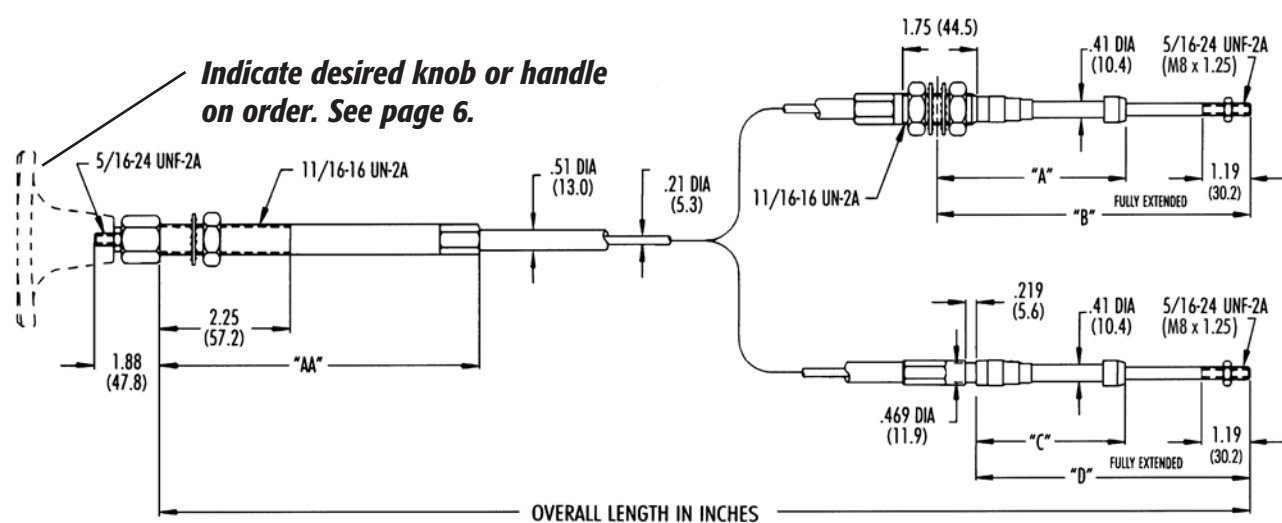
HEAVY DUTY 3 SERIES



HEAVY DUTY 4 SERIES



HEAVY DUTY 6 SERIES



- Heavy Duty: 3, 4 & 6 Series threaded end rods
- Applications: throttle, choke, engine stop, fuel shut-off, latches
- Temperature Range:
 - 65 to +225°F / -54 to +107°C Std.
 - 65 to +300°F / -54 to +149°C HEFT 2
- Wide variety of Handles & Knobs

HEAVY DUTY 3 SERIES

Choice of Core Type

HP Core – polymer coated 1 x 7

Solid .075 stainless steel core

10-32 Threaded rod (output end)

Specifications

Travel	DIM "AA"	Bulkhead End		Clamp End		Operating Loads	
		Inch/(mm)	Inch/(mm)	Inch/(mm)	Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	4.50 (114.3)	3.00 (76.2)	4.94 (125.5)	2.31 (58.7)	4.25 (108.0)	60 (267)	60 (267)
2.0 (50.8)	4.50 (114.3)	4.00 (101.6)	6.94 (176.3)	3.31 (84.1)	6.25 (158.8)	60 (267)	60 (267)
3.0 (76.2)	4.50 (114.3)	5.00 (127.0)	8.94 (227.1)	4.31 (109.5)	8.25 (209.6)	60 (267)	60 (267)
4.0 (101.6)	6.50 (165.1)	6.00 (152.4)	10.94 (277.9)	5.31 (134.9)	10.25 (260.4)	60 (267)	60 (267)
5.0 (127.0)	6.50 (165.1)	7.00 (177.8)	12.94 (328.7)	6.31 (160.3)	12.25 (311.2)	45 (200)	60 (267)

HEAVY DUTY 4 SERIES

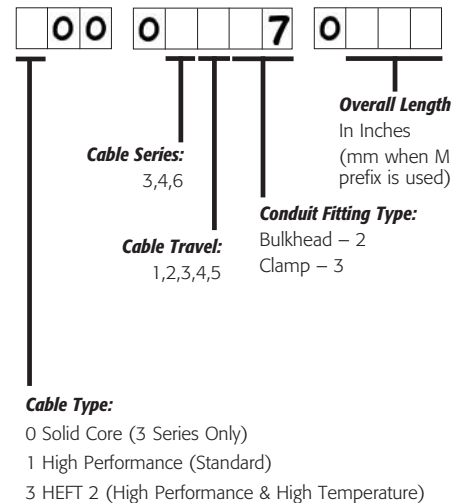
HP Core

1/4" – 28 Threaded rod (output end)

Specifications

Travel	DIM "AA"	Bulkhead End		Clamp End		Operating Loads	
		Inch/(mm)	Inch/(mm)	Inch/(mm)	Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	5.19 (131.8)	3.13 (79.5)	5.19 (131.8)	2.50 (63.5)	4.56 (115.8)	120 (534)	120 (534)
2.0 (50.8)	5.19 (131.8)	4.13 (104.9)	7.19 (182.6)	3.50 (88.9)	6.56 (166.6)	120 (534)	120 (534)
3.0 (76.2)	5.19 (131.8)	5.13 (130.3)	9.19 (233.4)	4.50 (114.3)	8.56 (217.4)	120 (534)	120 (534)
4.0 (101.6)	7.19 (182.6)	6.13 (155.7)	11.19 (284.2)	5.50 (139.7)	10.56 (268.2)	100 (445)	120 (534)
5.0 (127.0)	7.19 (182.6)	7.13 (181.1)	13.19 (335.0)	6.50 (165.1)	12.56 (319.0)	75 (334)	120 (534)

Building a Part Number



M Metric – see pg. 2

HEAVY DUTY 6 SERIES

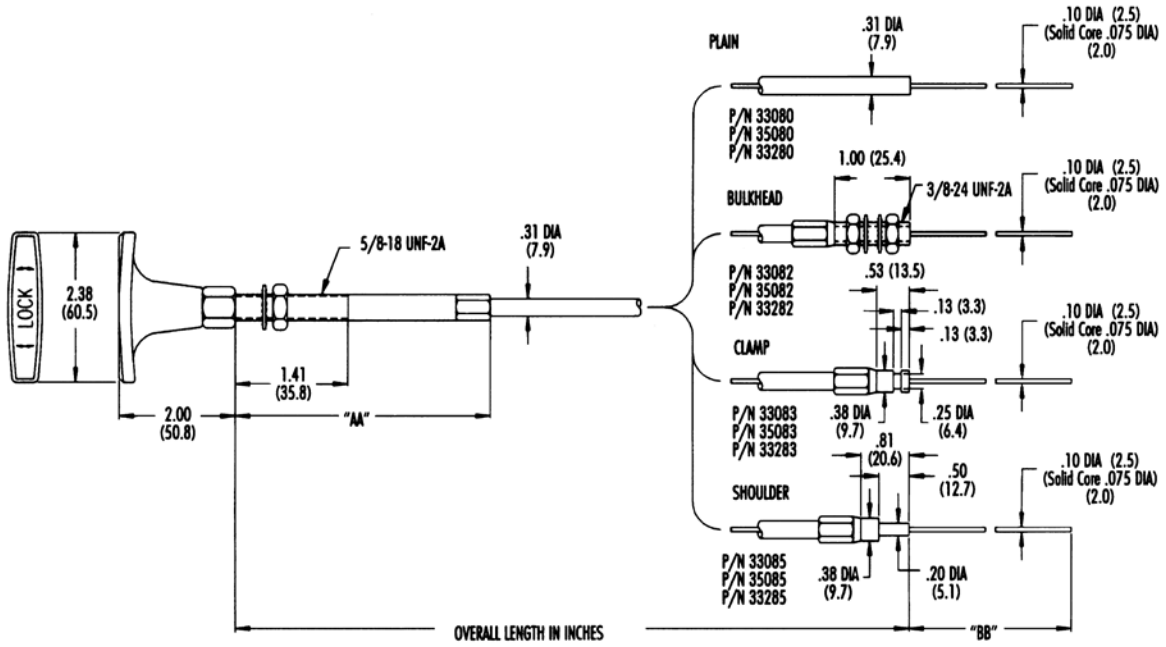
HP Core

5/16" – 28 Threaded rod (output end)

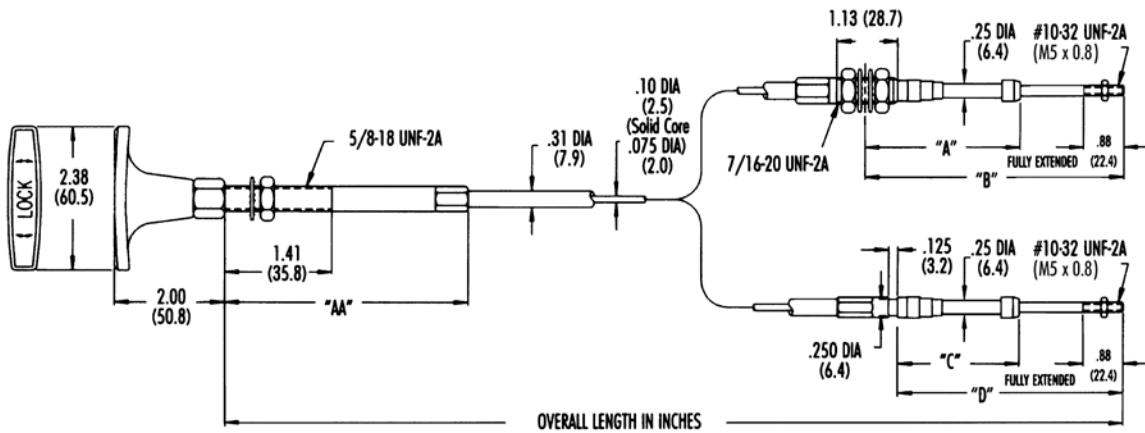
Specifications

Travel	DIM "AA"	Bulkhead End		Clamp End		Operating Loads	
		Inch/(mm)	Inch/(mm)	Inch/(mm)	Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	5.19 (131.8)	3.25 (82.6)	5.50 (139.7)	2.56 (65.0)	4.81 (122.2)	225 (1001)	225 (1001)
2.0 (50.8)	5.19 (131.8)	4.25 (108.0)	7.50 (190.5)	3.56 (90.4)	6.81 (173.0)	225 (1001)	225 (1001)
3.0 (76.2)	5.19 (131.8)	5.25 (133.4)	9.50 (241.3)	4.56 (115.8)	8.81 (223.8)	210 (934)	225 (1001)
4.0 (101.6)	7.19 (182.6)	6.25 (158.8)	11.50 (292.1)	5.56 (141.2)	10.81 (274.6)	170 (756)	225 (1001)
5.0 (127.0)	7.19 (182.6)	7.25 (184.2)	13.50 (342.9)	6.56 (166.6)	12.81 (325.4)	130 (578)	225 (1001)

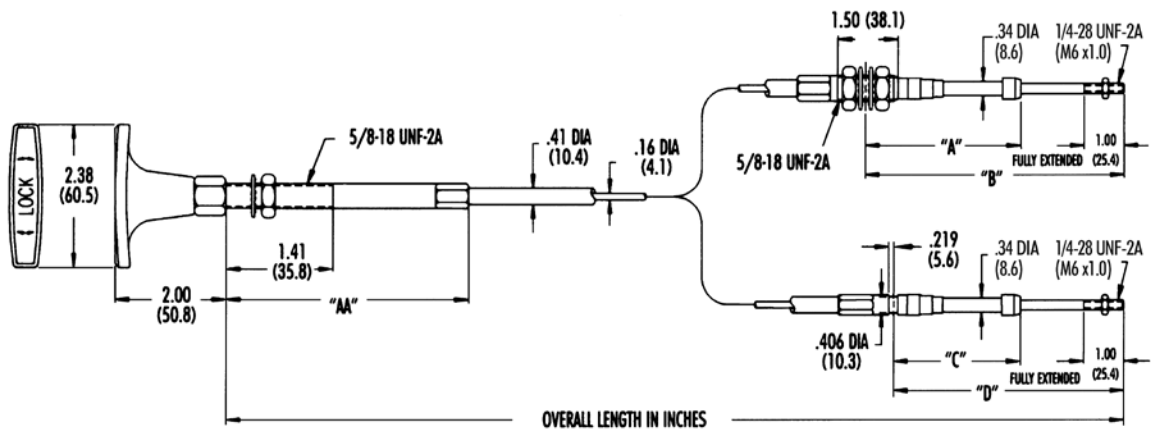
LIGHT DUTY 3 SERIES



HEAVY DUTY 3 SERIES



4 SERIES



- Light Duty: Exposed Solid Core or 1 x 7 HP Core
HP Core: Choose for best flexibility, lower backlash and higher efficiency. Polymer coated 1 x 7 wire rope.
Solid Core: .075 solid stainless steel core
- Heavy Duty: 3 & 4 Series threaded end rods
- Applications: throttle, choke, engine stop, fuel shut-off, latches

- Temperature Range:
-65 to +225°F / -54 to +107°C Std.
-65 to +300°F / -54 to +149°C HEFT 2
- T-Handle locks in either direction
- Quick Disconnect Positive Lock Head: See verniers page 12
- Replacement T-Handle: 49005-1094 with 30073 set screw

LIGHT DUTY 3 SERIES

Choice of core type:

HP Core – Polymer coated 1 x 7

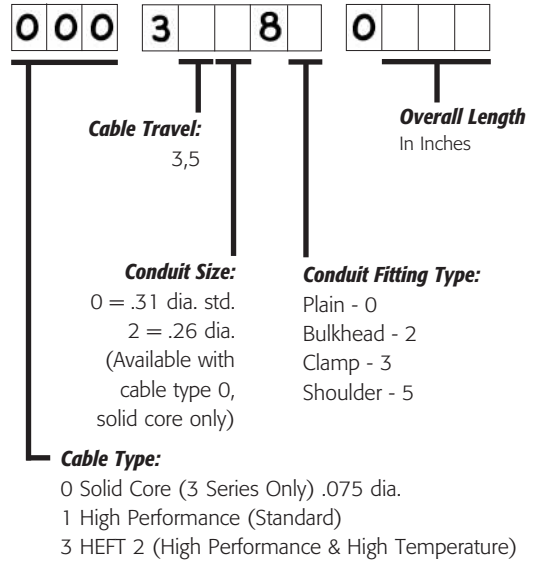
Solid .075 stainless steel core

Exposed core

Choice of 4 cable ends

Specifications		
Travel Inch/(mm)	DIM "AA" Inch/(mm)	DIM "BB" Inch/(mm)
3.0 (76.2)	5.25 (133.4)	5.00 (127.0)
5.0 (127.0)	7.25 (184.2)	8.00 (203.2)

Building a Part Number



HEAVY DUTY 3 SERIES

Choice of core type:

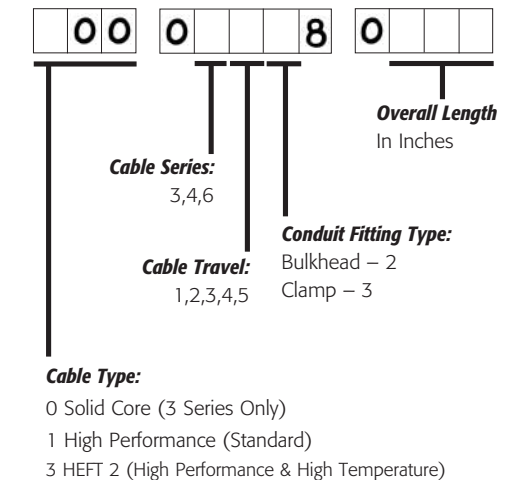
HP Core – Polymer coated 1 x 7

Solid .075 stainless steel core

10-32 Threaded rod (output end)

Specifications							
Travel Inch/(mm)	DIM "AA" Inch/(mm)	Bulkhead End		Clamp End		Operating Loads	
		DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	5.25 (133.4)	3.00 (76.2)	4.94 (125.5)	2.31 (58.7)	4.25 (108.0)	60 (267)	60 (267)
2.0 (50.8)	5.25 (133.4)	4.00 (101.6)	6.94 (176.3)	3.31 (84.1)	6.25 (158.8)	60 (267)	60 (267)
3.0 (76.2)	5.25 (133.4)	5.00 (127.0)	8.94 (227.1)	4.31 (109.5)	8.25 (209.6)	60 (267)	60 (267)
4.0 (101.6)	7.25 (184.2)	6.00 (152.4)	10.94 (277.9)	5.31 (134.9)	10.25 (260.4)	60 (267)	60 (267)
5.0 (127.0)	7.25 (184.2)	7.00 (177.8)	12.94 (328.7)	6.31 (160.3)	12.25 (311.2)	45 (200)	60 (267)

Building a Part Number



4 SERIES

HP Core

1/4" – 28 Threaded rod (output end)

Specifications							
Travel Inch/(mm)	DIM "AA" Inch/(mm)	Bulkhead End		Clamp End		Operating Loads	
		DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	5.25 (133.4)	3.13 (79.5)	5.19 (131.8)	2.50 (63.5)	4.56 (115.8)	120 (534)	120 (534)
2.0 (50.8)	5.25 (133.4)	4.13 (104.9)	7.19 (182.6)	3.50 (88.9)	6.56 (166.6)	120 (534)	120 (534)
3.0 (76.2)	5.25 (133.4)	5.13 (130.3)	9.19 (233.4)	4.50 (114.3)	8.56 (217.4)	120 (534)	120 (534)
4.0 (101.6)	7.25 (184.2)	6.13 (155.7)	11.19 (284.2)	5.50 (139.7)	10.56 (268.2)	100 (445)	120 (534)
5.0 (127.0)	7.25 (184.2)	7.13 (181.1)	13.19 (335.0)	6.50 (165.1)	12.56 (319.0)	75 (334)	120 (534)

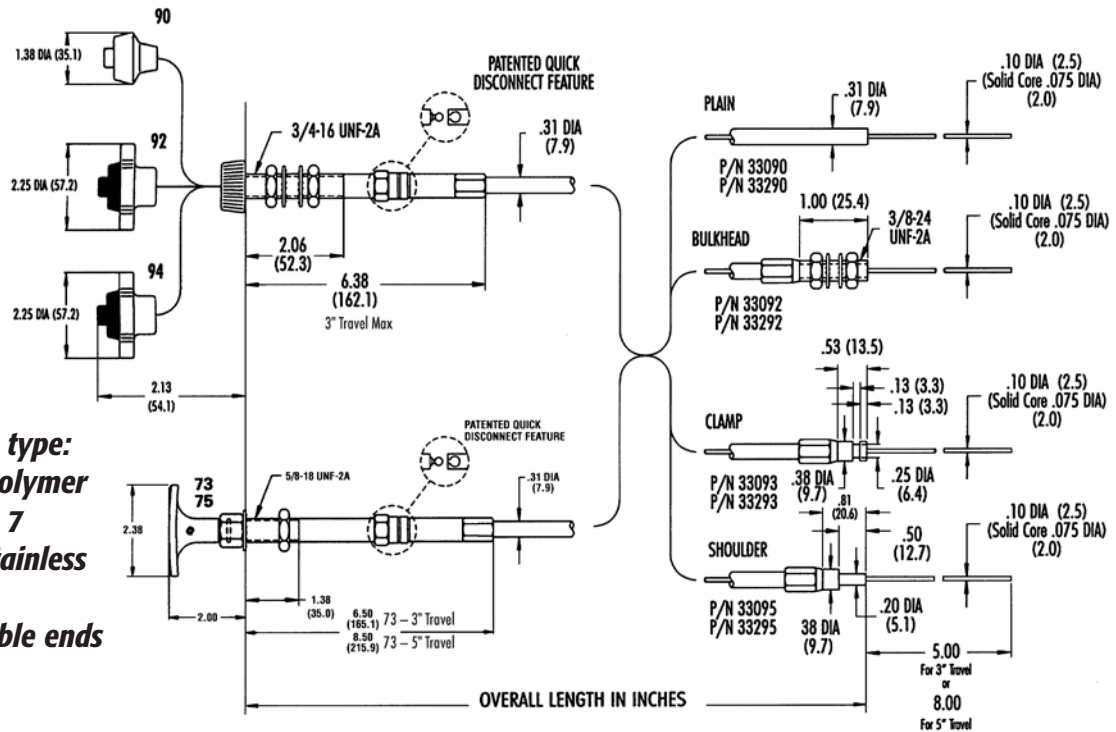
M Metric – see pg. 2

Quick Disconnect HP Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

LIGHT DUTY 3 SERIES

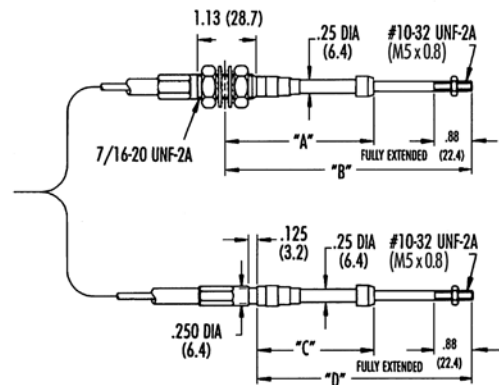
Choice of core type:
 HP Core – Polymer coated 1 x 7
 Solid .075 stainless steel core
 Choice of 4 cable ends
 Exposed core



HEAVY DUTY 3 SERIES

Choice of core type:
 HP Core – Polymer coated 1 x 7
 Solid .075 stainless steel core
 10-32 Threaded rod (output end)

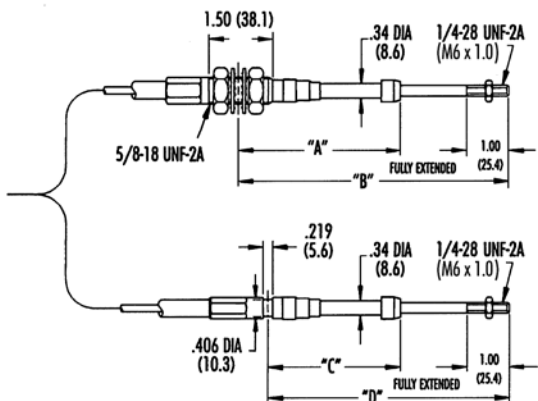
HEAD OPTIONS
 SEE ABOVE



4 SERIES

HP Core
 1/4"-28 Threaded rod
 (output end)

HEAD OPTIONS
 SEE ABOVE



- Light Duty: Exposed Solid Core or 1 x 7 HP Core
HP Core: Choose for best flexibility, lower backlash and higher efficiency. Polymer coated 1 x 7 wire rope
Solid Core: .075 solid stainless steel core
- Heavy Duty: 3 & 4 Series threaded end rods

- Temperature Range:
-65 to +225°F / -54 to +107°C Std.
-65 to +300°F / -54 to +149°C HEFT 2
- Applications: Engine RPM, or where coarse or fine adjustments are needed

Quick Disconnect Cable Heads

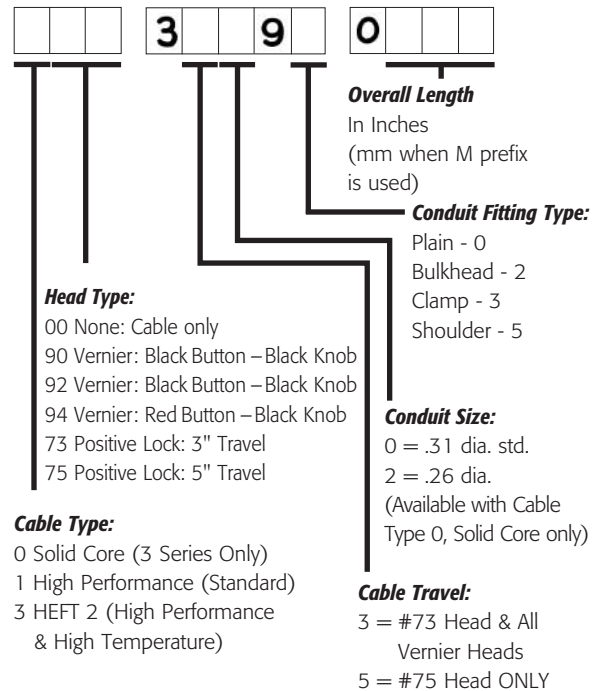
- #73 Positive Lock Head: 3" Travel
- #75 Positive Lock Head: 5" Travel
- #90 Vernier: Small Knob
- #92 Vernier: Black Center Button
- #94 Vernier: Red Center Button

To Order

Vernier and Positive Lock cable control heads may be ordered as a complete assembly (head and cable attached) or separately. Order the desired control head using the two-digit number 90, 92, 94, 73 or 75. Order the cable using the five-digit number from "Building a Part Number." To order a complete assembly, combine the control head number with the desired cable number. Example: if you desire control head #94 and cable #33092, then combine to make the assembly part number X94-33092-length.

Load Rating: Maximum 20 lbs. is recommended.

Building a Part Number



Specifications				
Travel	Bulkhead End		Clamp End	
	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)
1.0 (25.4)	3.00 (76.2)	4.94 (125.5)	2.31 (58.7)	4.25 (108.0)
2.0 (50.8)	4.00 (101.6)	6.94 (176.3)	3.31 (84.1)	6.25 (158.8)
3.0 (76.2)	5.00 (127.0)	8.94 (227.1)	4.31 (109.5)	8.25 (209.6)
4.0 (101.6)	6.00 (152.4)	10.94 (277.9)	5.31 (134.9)	10.25 (260.4)
5.0 (127.0)	7.00 (177.8)	12.94 (328.7)	6.31 (160.3)	12.25 (311.2)

☐ Using #75 Head

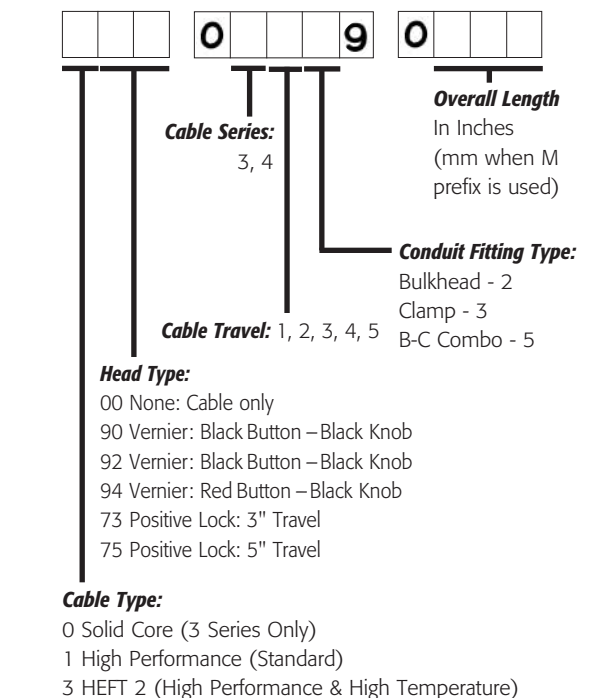
Load Rating: Maximum 20 lbs. is recommended.

Specifications				
Travel	Bulkhead End		Clamp End	
	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	DIM "C" Inch/(mm)	DIM "D" Inch/(mm)
1.0 (25.4)	3.13 (79.5)	5.19 (131.8)	2.50 (63.5)	4.56 (115.8)
2.0 (50.8)	4.13 (104.9)	7.19 (182.6)	3.50 (88.9)	6.56 (166.6)
3.0 (76.2)	5.13 (130.3)	9.19 (233.4)	4.50 (114.3)	8.56 (217.4)
4.0 (101.6)	6.13 (155.7)	11.19 (284.2)	5.50 (139.7)	10.56 (268.2)
5.0 (127.0)	7.13 (181.1)	13.19 (335.0)	6.50 (165.1)	12.56 (319.0)

☐ Using #75 Head

Load Rating: Maximum 20 lbs. is recommended.

Building a Part Number

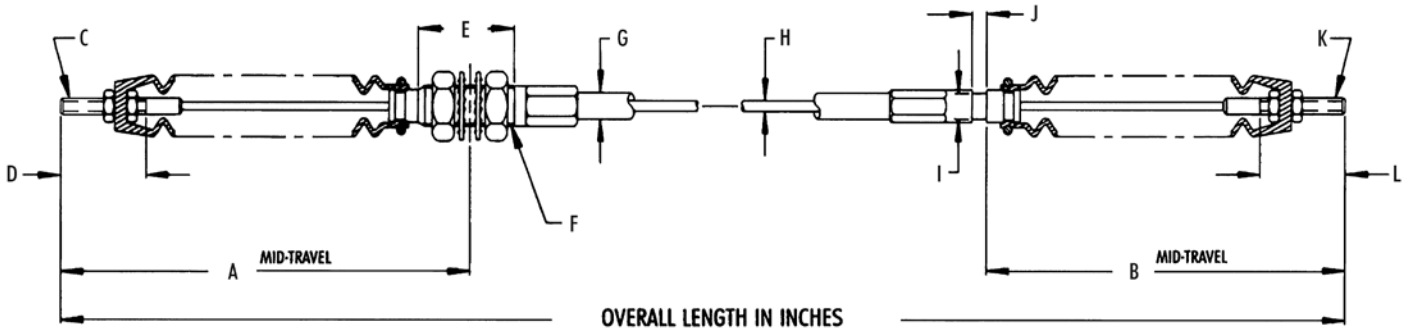


M Metric – see pg. 2

Felsted® Brand Cable Products Are Available Through A Network Of Local Orscheln® F.A.S.T.® Cable Assemblers
www.orschelnproducts.com

Tension HP Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors



- Temperature Range:
 - 65 to +225°F / -54 to +107°C Std.
 - 65 to +300°F / -54 to +149°C HEFT 2

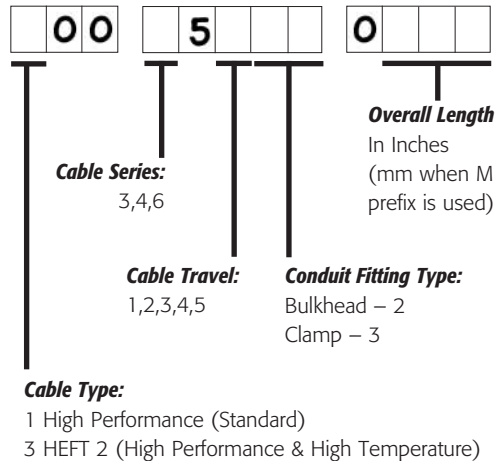
3 SERIES				
Travel	Bulkhead End	Clamp End	Operating Loads	
Inch/(mm)	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	4.44 (112.8)	3.75 (95.3)	0	120 (534)
2.0 (50.8)	5.94 (150.9)	5.25 (133.4)	0	120 (534)
3.0 (76.2)	7.44 (189.0)	6.75 (171.5)	0	120 (534)
4.0 (101.6)	8.94 (227.1)	8.25 (209.6)	0	120 (534)
5.0 (127.0)	10.44 (265.2)	9.75 (247.7)	0	120 (534)

4 SERIES				
Travel	Bulkhead End	Clamp End	Operating Loads	
Inch/(mm)	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	4.69 (119.1)	4.06 (103.1)	0	230 (1023)
2.0 (50.8)	6.19 (157.2)	5.56 (141.2)	0	230 (1023)
3.0 (76.2)	7.69 (195.3)	7.06 (179.3)	0	230 (1023)
4.0 (101.6)	9.19 (233.4)	8.56 (217.4)	0	230 (1023)
5.0 (127.0)	10.69 (271.5)	10.06 (255.5)	0	230 (1023)

6 SERIES				
Travel	Bulkhead End	Clamp End	Operating Loads	
Inch/(mm)	DIM "A" Inch/(mm)	DIM "B" Inch/(mm)	Push Lbs./(N)	Pull Lbs./(N)
1.0 (25.4)	5.23 (130.3)	4.44 (112.8)	0	400 (1779)
2.0 (50.8)	6.63 (168.4)	5.94 (150.9)	0	400 (1779)
3.0 (76.2)	8.13 (206.5)	7.44 (189.0)	0	400 (1779)
4.0 (101.6)	9.63 (244.8)	8.94 (227.1)	0	400 (1779)
5.0 (127.0)	11.13 (282.7)	10.44 (265.2)	0	400 (1779)

DIMENSIONS	3 SERIES	4 SERIES	6 SERIES
C	#10-32 UNF-2A	1/4-28 UNF-2A	5/16-24 UNF-2A
D	1.25 (31.8)	1.25 (31.8)	1.56 (39.6)
E	1.13 (28.7)	1.50 (38.1)	1.75 (44.5)
F	7/16-20 UNF-2A	5/8-18 UNF-2A	11/16-16 UNF-2A
G	.31 DIA (7.9)	.41 DIA (10.4)	.51 DIA (13.0)
H	.08 DIA (2.0)	.13 DIA (3.3)	.18 DIA (4.6)
I	.250 DIA (6.4)	.406 DIA (10.3)	.469 DIA (11.9)
J	.125 (3.2)	.219 (5.6)	.219 (5.6)
K	#10-32 UNF-2A	1/4-28 UNF-2A	5/16-24 UNF-2A
L	1.25 (31.8)	1.25 (31.8)	1.56 (39.6)

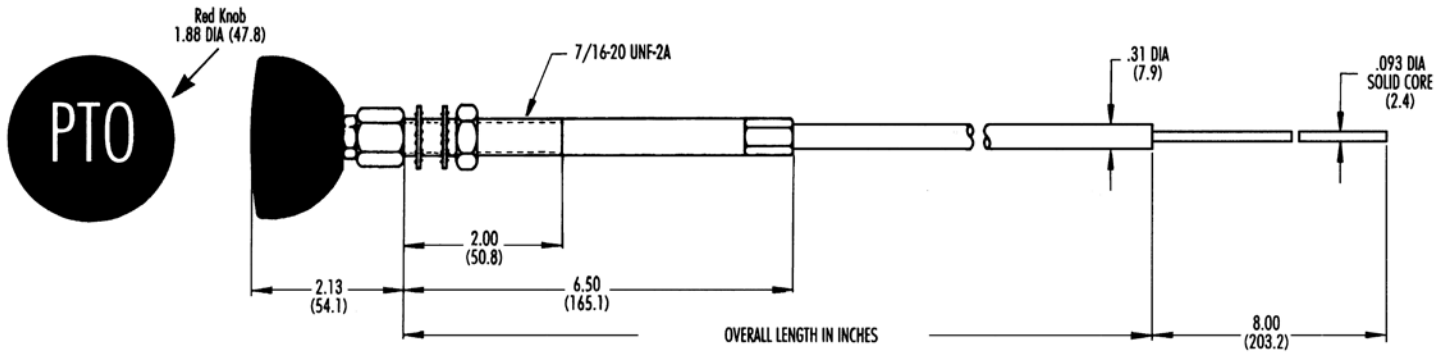
Building a Part Number



PTO Cables

- Power take off operation
- .093 Solid Stainless Steel Core
- Full 5" travel
- 6" Bend radius

Can be custom assembled by local Orscheln® F.A.S.T.® distributors



Power Take Off Cables

Red knob – standard
 Temperature Range:
 -65 to +225°F / -54 to +107°C Std.

Building a Part Number



Overall Length
 In Inches
 (mm when M prefix is used)

RVO Cables

- Remote valve control operation (Orscheln controls ONLY).
- HP Cable construction – same as 4 Series Push-Pull on pages 3–4.

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

Building a Part Number



Cable Type:

- 1 High Performance (Standard)
- 3 HEFT 2 (High Performance & High Temperature)

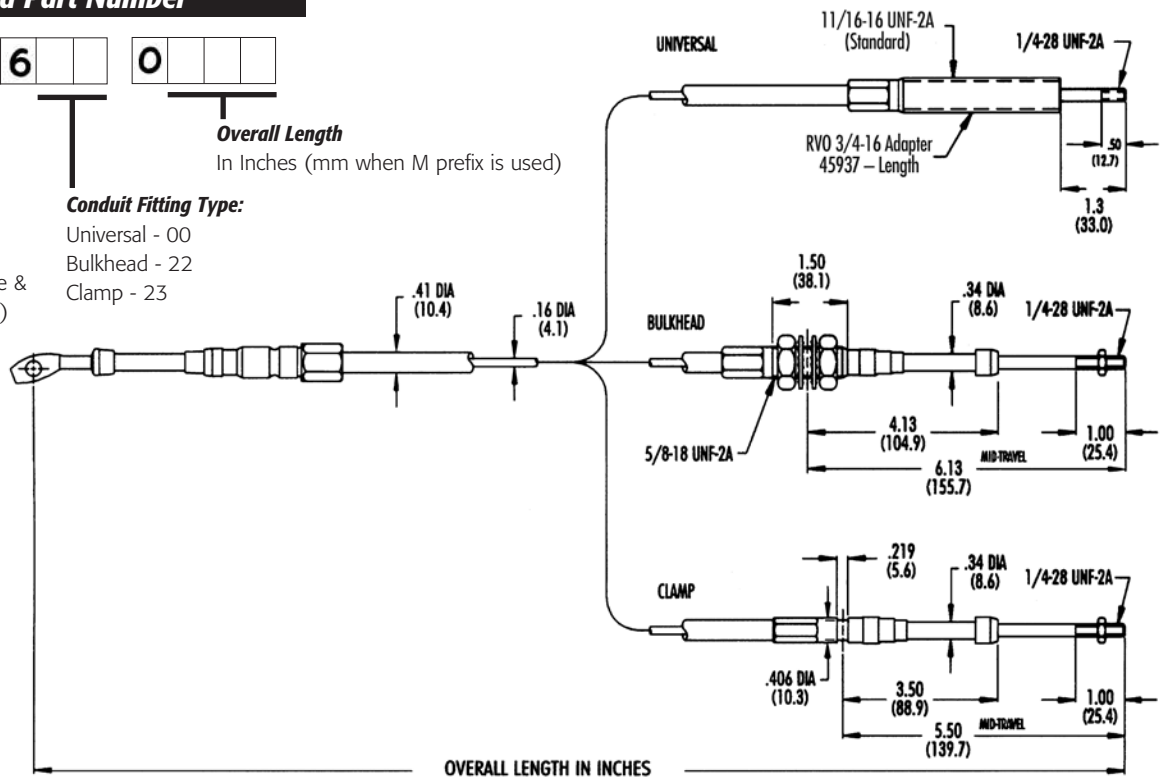
Conduit Fitting Type:

- Universal - 00
- Bulkhead - 22
- Clamp - 23

Overall Length
 In Inches (mm when M prefix is used)

Connects to
Orscheln Remote Valve Controls
55700
55709

Valve Connection Kit End

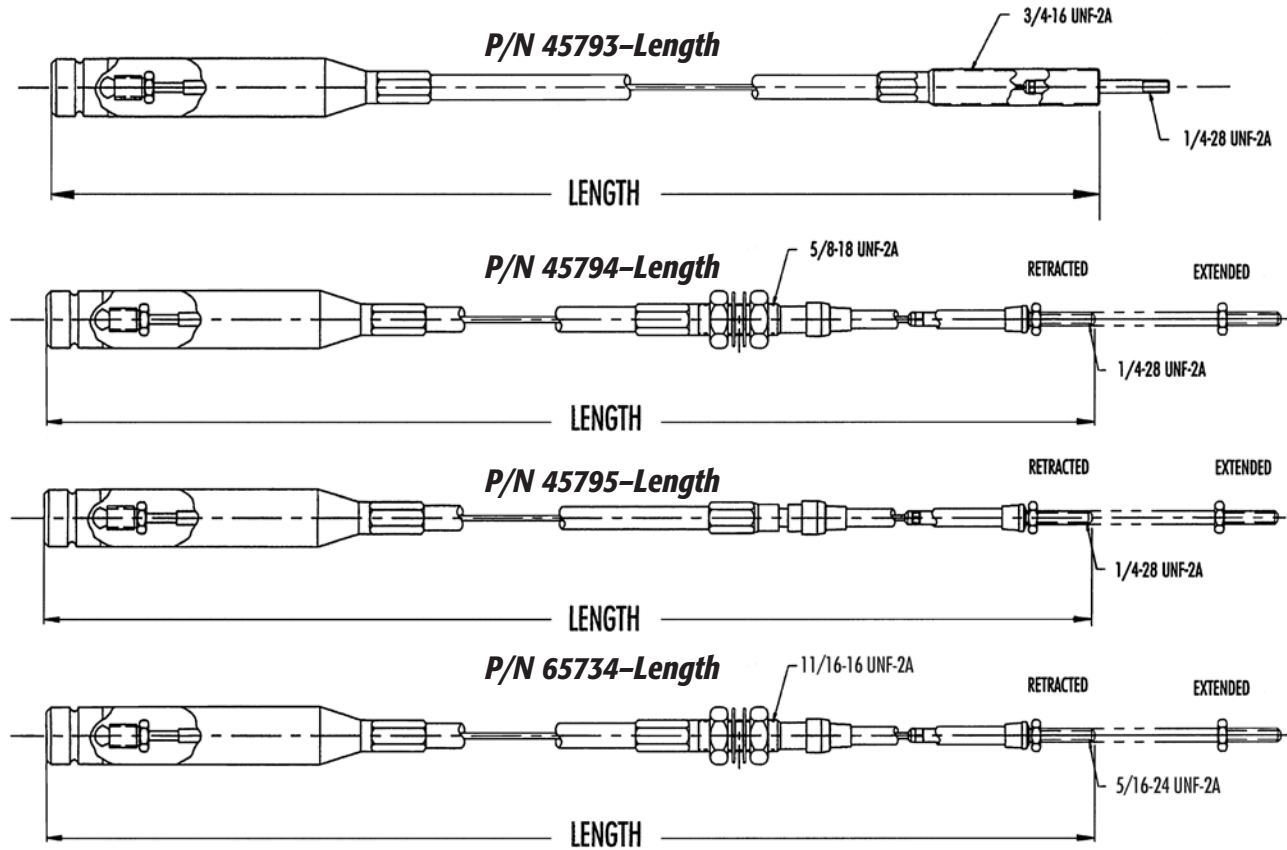


Felsted® Brand Cable Products Are Available Through A Network Of Local Orscheln® F.A.S.T.® Cable Assemblers
www.orschelnproducts.com

RVC Cables

- Remote Valve Control Cables
- Fits Competitor RVC Controls

Can be custom assembled by local Orscheln® F.A.S.T.® distributors



Special Valve Control Cables

- HD lever applications
- Remote valve dump body control use • HP cable construction

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

Base Part Number

1	0	0
1	0	0
1	0	0
1	0	0
1	0	0

OAL inches

4	5	6	3	0
4	5	6	3	9
4	5	7	3	4
4	5	7	9	6
4	5	7	9	1

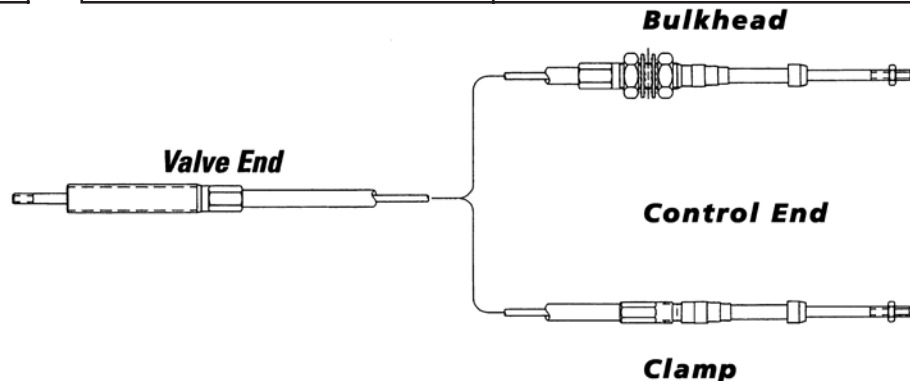
0		
0		
0		
0		
0		

Valve End Connection

11/16" -16 thread connects to valve connection kit
11/16" -16 thread connects to valve connection kit
11/16" -16 thread connects to valve connection kit
3/4"-16 thread connects to valve connection kit
3/4"-16 thread connects to valve connection kit

Control End Connection

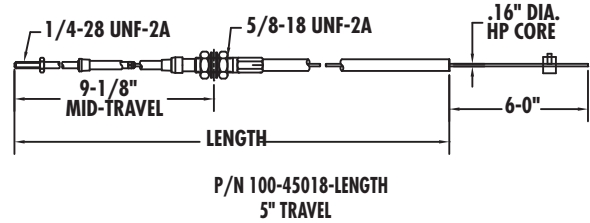
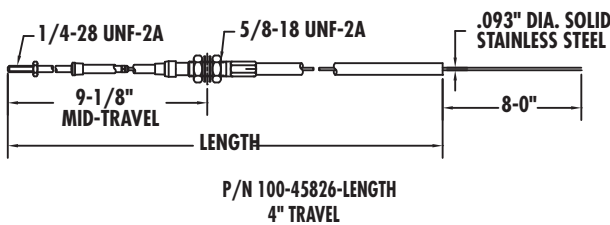
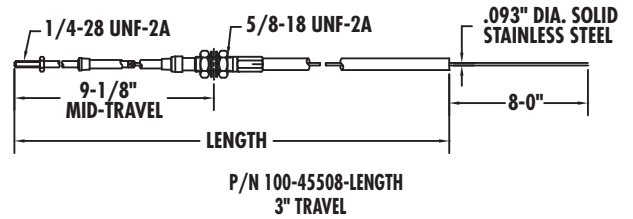
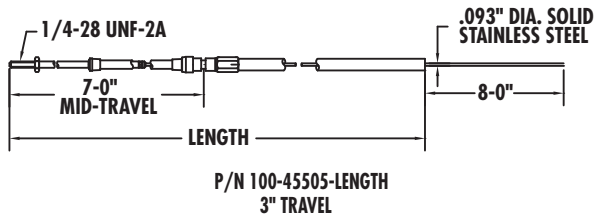
5/8"-18 bulkhead hub connects to an HD Lever
Clamp hub connects to a 55781-2 dump body control shifter
Clamp hub connects to a 3" mounting dump body control shifter
Clamp hub connects to a 55781-2 dump body control shifter
5/8"-18 bulkhead hub connects to an HD Lever



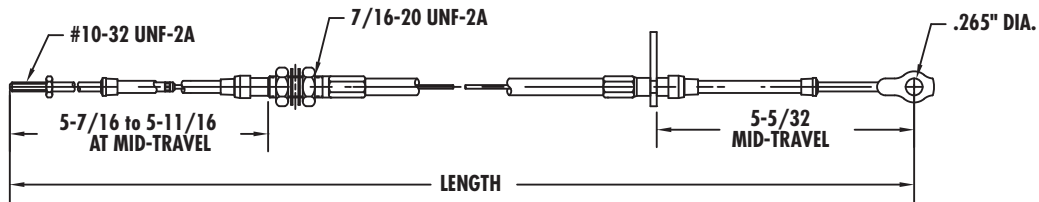
Felsted® Brand Cable Products Are Available Through A Network Of Local Orscheln® F.A.S.T.® Cable Assemblers
www.orschelproducts.com

Can be custom assembled by local Orscheln[®] F.A.S.T.[®] distributors

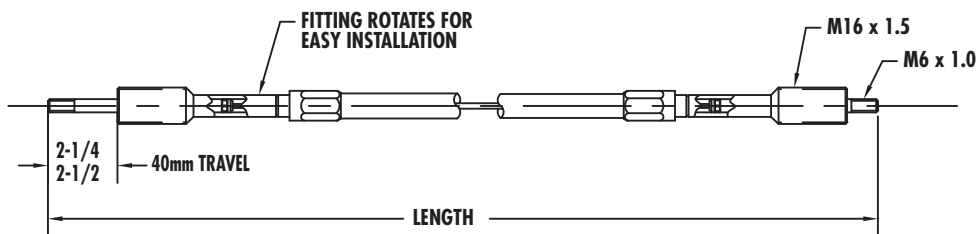
MIXER CABLES



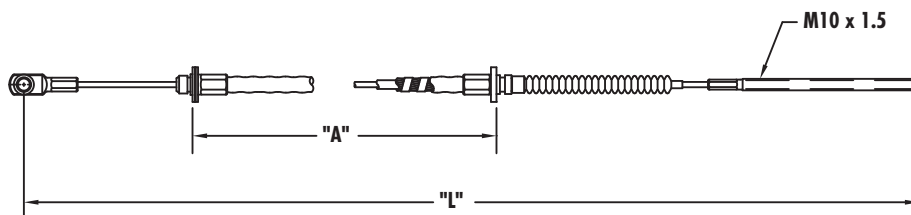
HP RACE SHIFT CABLE – P/N 36101-LENGTH



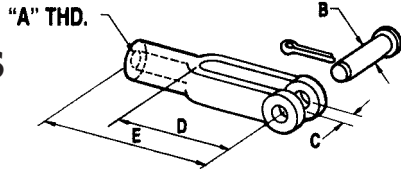
WALVOIL[®] REPLACEMENT CABLE – P/N 46041-LENGTH



GM[®] REPLACEMENT CLUTCH CABLE – P/N 65604



CLEAVISES

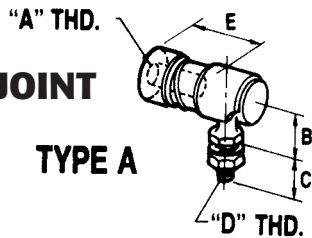


Part #	A	B	C	D	E
3 SERIES					
39003-1 **	10-32 UNF-2B	3/16" (4.8mm)	7/32" (5.6mm)	1" (25.4mm)	1-9/16" (39.7mm)
49003-2	10-32 UNF-2B	1/4" (6.4mm)	9/32" (7.1mm)	1-1/4" (31.8mm)	2" (50.8mm)
69003-2 *	10-32 UNF-2B	5/16" (7.9mm)	11/32" (8.7mm)	1-7/16" (36.5mm)	2-1/4" (57.2mm)
4 SERIES					
49003-1	1/4-28 UNF-2B	1/4" (6.4mm)	9/32" (7.1mm)	1-1/4" (31.8mm)	2" (50.8mm)
49044-1 *	1/4-28 UNF-2B	1/2" (12.7mm)	9/16" (14.3mm)	1-7/8" (47.6mm)	3" (76.2mm)
69003-3	1/4-28 UNF-2B	5/16" (7.9mm)	11/32" (8.7mm)	1-7/16" (36.5mm)	2-1/4" (57.2mm)
6 SERIES					
49003-3	5/16-24 UNF-2B	1/4" (6.4mm)	9/32" (7.1mm)	1-1/4" (31.8mm)	2" (50.8mm)
49044-2	5/16-24 UNF-2B	1/2" (12.7mm)	9/16" (14.3mm)	1-7/8" (47.6mm)	3" (76.2mm)
69003-1	5/16-24 UNF-2B	5/16" (7.9mm)	11/32" (8.7mm)	1-7/16" (36.5mm)	2-1/4" (57.2mm)
69034	5/16-24 UNF-2B	7/16" (11.1mm)	1/2" (12.7mm)	1-7/8" (47.6mm)	2-7/8" (73.1mm)
89003-2	5/16-24 UNF-2B	3/8" (9.5mm)	7/16" (11.1mm)	1-5/8" (41.3mm)	2-1/2" (63.5mm)
8 SERIES					
89003-1 *	3/8-24 UNF-2B	3/8" (9.5mm)	7/16" (11.1mm)	1-5/8" (41.3mm)	2-1/2" (63.5mm)
*SPECIAL SERIES					
49044-3	3/8-24 UNF-2B	1/2" (12.7mm)	9/16" (14.3mm)	1-7/8" (47.6mm)	3" (76.2mm)
49044-4 *	1/2-20 UNF-2B	1/2" (12.7mm)	9/16" (14.3mm)	1-7/8" (47.6mm)	3" (76.2mm)
69034-1	3/8-24 UNF-2B	7/16" (11.1mm)	1/2" (12.7mm)	1-7/8" (47.6mm)	2-7/8" (73.1mm)

* Consult factory for leadtime and availability.

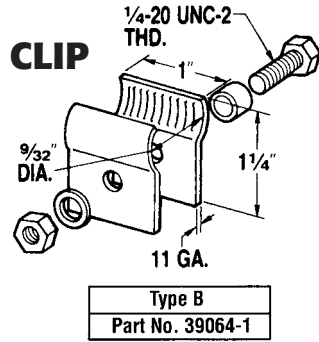
** Note: The 39003-1 clevis is made of polymer and is not identical to the illustration shown above.

BALL JOINT

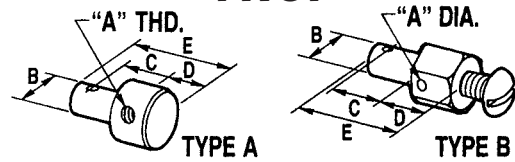


Part #	Type	A	B	C	D	E
3 SERIES						
39006	A	10-32 UNF-2B	15/32" (11.9mm)	9/16" (14.3mm)	1/4-28 UNF-2A	31/32" (24.6mm)
4 SERIES						
49006	A	1/4-28 UNF-2B	15/32" (11.9mm)	9/16" (14.3mm)	1/4-28 UNF-2A	31/32" (24.6mm)
49007	A	1/4-28 UNF-2B	15/32" (11.9mm)	7/8" (22.2mm)	5/16-24 UNF-2A	31/32" (24.6mm)
6 SERIES						
69007	A	5/16-24 UNF-2B	17/32" (13.5mm)	11/16" (17.5mm)	5/16-24 UNF-2A	1-1/8" (28.5mm)

CONDUIT CLIP

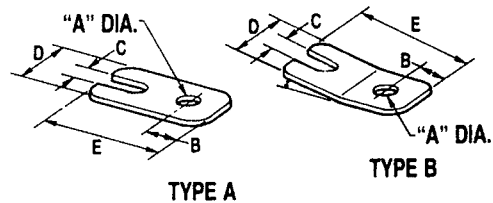


PIVOT



Part #	Type	A	B	C	D	E
3 SERIES						
39011-1	B	7/64" (2.8mm)	1/4" (6.4mm)	5/32" (4.0mm)	5/16" (7.9mm)	9/16" (14.3mm)
39011-2	B	7/64" (2.8mm)	1/4" (6.4mm)	19/64" (7.5mm)	5/16" (7.9mm)	11/16" (17.5mm)
39050-2 *	B	7/64" (2.8mm)	5/16" (7.9mm)	19/64" (7.5mm)	5/16" (7.9mm)	11/16" (17.5mm)
39042	A	10-32 UNF-2B	1/4" (6.4mm)	13/64" (5.2mm)	21/64" (8.3mm)	5/8" (15.9mm)
39045 *	A	10-32 UNF-2B	5/16" (7.9mm)	3/8" (9.5mm)	3/8" (9.5mm)	15/16" (23.8mm)
4 SERIES						
49008 *	A	1/4-28 UNF-2B	1/4" (6.4mm)	13/32" (10.3mm)	1/2" (12.7mm)	1-1/16" (27.0mm)
49008-1	A	1/4-28 UNF-2B	1/4" (6.4mm)	5/16" (7.9mm)	1/2" (12.7mm)	31/32" (24.6mm)
49011	A	1/4-28 UNF-2B	1/4" (6.4mm)	13/64" (5.2mm)	7/16" (11.1mm)	3/4" (19.1mm)
49042	A	1/4-28 UNF-2B	3/8" (9.5mm)	15/32" (11.9mm)	1/2" (12.7mm)	1-3/16" (30.2mm)
50061-1	A	1/4-28 UNF-2B	5/16" (7.9mm)	3/16" (4.8mm)	9/16" (14.3mm)	27/32" (21.4mm)

CLIP BRACKET

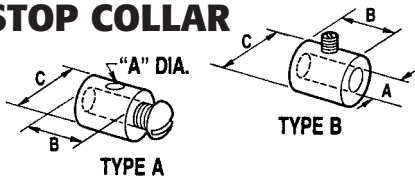


Part #	Type	A	B	C	D	E
3 SERIES						
30121	B	9/32" (7.5mm)	3/8" (9.5mm)	1/4" (6.4mm)	5/8" (15.9mm)	1-7/32" (30.0mm)
39004-1 Stainless	A	9/32" (7.5mm)	3/8" (9.5mm)	1/4" (6.4mm)	5/8" (15.9mm)	1-5/16" (33.3mm)
39004-2 Plated Steel	A	9/32" (7.5mm)	3/8" (9.5mm)	1/4" (6.4mm)	5/8" (15.9mm)	1-5/16" (33.3mm)

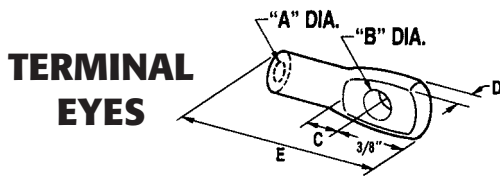
*Consult factory for leadtime and availability.

Hardware Continued

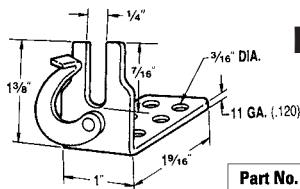
STOP COLLAR



Part #	Type	A	B	CD	
3 SERIES					
30103	A	7/64" (2.8mm)	5/16" (7.9mm)	5/16" (7.9mm)	-
4 SERIES					
40081	A *	3/16" (4.8mm)	5/16" (7.9mm)	5/16" (7.9mm)	-
49043	B	3/16" (4.8mm)	1/4" (6.4mm)	7/16" (11.1mm)	-



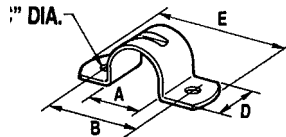
Part #	A	B	C	D	E
3 SERIES					
49004-4 *	10-32 UNF-2B	1/8" (3.2mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
4 SERIES					
49004-1	1/4-28 UNF-2B	5/16" (7.9mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
49004-2 *	1/4-28 UNF-2B	1/2" (12.7mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
49004-3	1/4-28 UNF-2B	1/4" (6.4mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
6 SERIES					
69004-1	5/16-24 UNF-2B	3/8" (9.5mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
69004-2 *	5/16-24 UNF-2B	5/16" (7.9mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
69004-3 *	5/16-24 UNF-2B	1/2" (12.7mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)
69004-4	5/16-24 UNF-2B	1/4" (6.4mm)	5/8" (15.9mm)	3/8" (9.5mm)	1-7/8" (47.6mm)



FIELD CLAMP

Part No. 39030-1

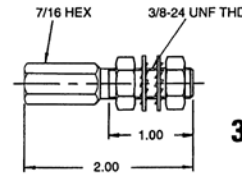
CLAMP



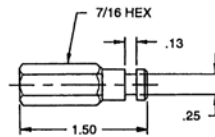
Part #	A	B	C	D	E
3 SERIES					
39001	3/8" (9.5mm)	1" (25.4mm)	13/64" (5.2mm)	1/2" (12.7mm)	1-1/2" (38.1mm)
4 SERIES					
49001	1/2" (12.7mm)	1" (25.4mm)	7/32" (5.6mm)	1/2" (12.7mm)	1-1/2" (38.1mm)
6 SERIES					
69001	9/16" (14.3mm)	1-1/4" (31.8mm)	9/32" (7.1mm)	5/8" (15.9mm)	1-5/8" (41.3mm)

Field Hub Kits for Standard Felsted® Brand 3 Series Cables

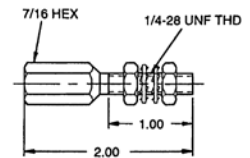
(Solid or HP Core) • (Conduit Outside Diameter of .31")



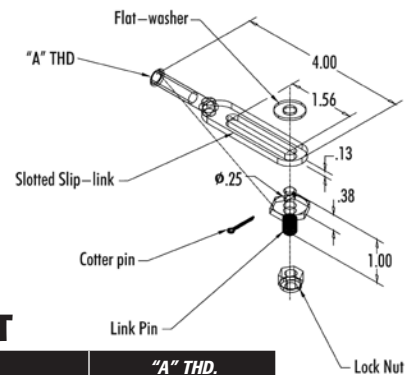
Kit #39067-2
3/8-24 THD HUB



Kit #39067-3
CLAMP HUB



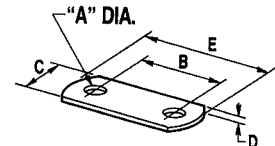
Kit #39067-4
1/4-28 THD HUB



SLIP LINK KIT

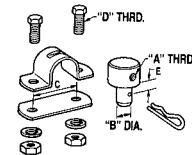
	Kit Number	"A" THD.
Polymer	59049-1	10-32 UNF-2B
	59049-2	1/4-28 UNF-2B
Metal	M00-59049-1	10-32 UNF-2B
	M00-59049-2	1/4-28 UNF-2B

SHIM



Part #	A	B	C	D	E
3 & 4 SERIES					
39002	13/64" (5.2mm)	1" (25.4mm)	1/2" (12.7mm)	3/32" (2.4mm)	1-1/2" (38.1mm)
6 SERIES					
69002	9/32" (7.5mm)	1-1/4" (31.8mm)	5/8" (15.9mm)	5/64" (2.0mm)	1-3/4" (44.5mm)

SHIFTER CABLE CONNECTION KIT



Kit #	A THD.	B DIA.	C	D THD.	E
50030	1/4-28 UNF-2B	5/16" (7.9mm)	1" (25.4mm)	10-32 UNF-2A	1/8" (3.2mm)
50035	5/16-24 UNF-2B	5/16" (7.9mm)	1-1/4" (31.8mm)	1/4-20 UNF-2A	1/8" (3.2mm)
59033	10-32 UNF-2B	5/16" (7.9mm)	1" (25.4mm)	10-32 UNC-2A	1/8" (3.2mm)



check » shift » accelerate » park

Orscheln Markets

TRUCK



BUS



MILITARY



CONSTRUCTION



AGRICULTURE



Orscheln Products

PARK BRAKE SYSTEMS



MECHANICAL CONTROL CABLES



FLUID LEVEL INDICATORS



ELECTRONIC THROTTLE CONTROL SYSTEMS



SHIFT CONTROL SYSTEMS



Orscheln Products LLC

1177 N. Morley St.
P.O. Box 280
Moberly, MO 65270
USA
Phone: +1 660-263-4377
Fax: +1 660-269-3910
Email: sales@orscheln.com
www.orschelnproducts.com

Orscheln Europe

Unit 1 Pelham Road
Central Park, Rugby,
England CV23 0PB
Phone: +44 (0) 1788 561400
Fax: +44 (0) 1788 567555
Email: sales@orschelneurope.co.uk
www.orschelneurope.co.uk

Orscheln China

1447/1090 Century Avenue
Suncome Cinic Tower
Pudong, Shanghai 200120
China
Phone: +86 021 22157766
Fax: +86 021 22157889
Email: sales@orschelnchina.com.cn
www.orschelnproducts.com

Orscheln India

Plot No. 28, North Phase
SIDCO Industrial Estate
Ambattur, Chennai 600098
Phone: +91 44 42896850
Fax: +91 44 42896859
Email: sales@orschelnindia.co.in
www.orschelnindia.co.in

Over 110 F.A.S.T.[®] cable assembly distributors worldwide

Specifications subject to change without notice.

