



# INDUSTRIAL CATALOGUE

Teleflex®



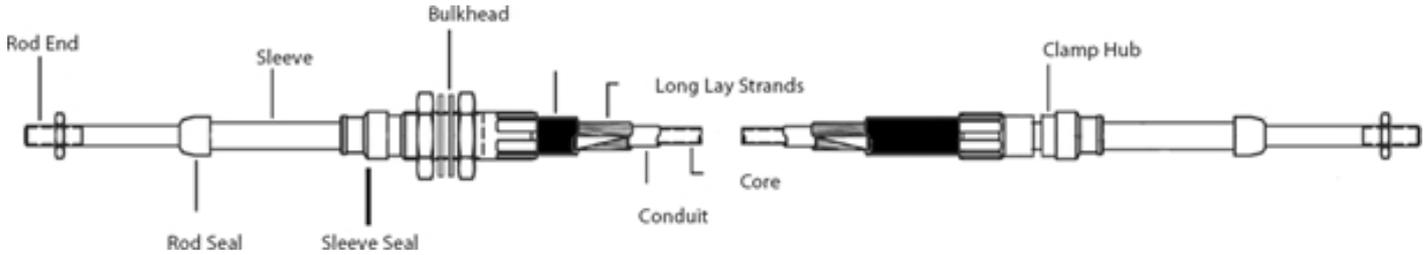
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# CONTROL CABLES



## Teleflex Cable Terminology



## Backlash

Backlash, which is apparent as lost motion under light push-pull input forces, is caused by the core member of the cable assembly moving from the inside to the outside of the bends in the cable with the change in direction of movement. It is a function of the clearance between the core and liner, the input force, and the total number of degrees of bend in the cable. See Figure 1.

Cable Series	Maximum Backlash for 360°
30	.120inches (3.1 mm)
40	.150inches (3.8 mm)
60	.180inches (4.6 mm)
80	.230inches (5.8 mm)

These figures are for input forces just sufficient to move the core. Lost motion, the sum of backlash plus core and conduit elongation (stretch and compression) will increase as cable length, degrees of bend, and loads are increased. The use of larger cable sizes for a given load will decrease the elongation portion of lost motion.

Teleflex cables, with standard lubricant, will operate at sustained temperatures from -40°F (-40°C) to +210°F (99°C). For operation at temperatures up to a maximum of +300°F (150°C) consult the Teleflex Engineering Department

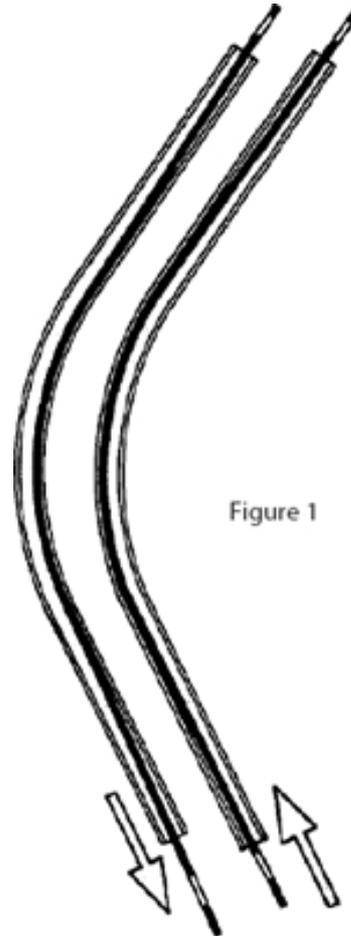


Figure 1

## Efficiency

Efficiency, or the relationship between the required input force for a given output load is primarily determined by bends in the cable calculated by using the following formula:

$$\text{Input Force} = (\text{Output Load}) (\text{Bend Factor})$$

$$\text{Output Force} = \frac{\text{Input Force}}{\text{Bend Factor}}$$



## Bend Radius

The Teleflex cable has a recommended minimum bend radius of 5" (125mm). This simply means that installations of 5" bend radius or greater will render optimum cable life. Installations requiring less than 5" can easily be achieved but may shorten the cable's life.

Other variables affecting cable life include: output loads, cable length, and total degrees of cable bend in the installation. The sum effect of higher bend radii lower loads, shorter lengths and fewer degrees of total bend will all contribute to longer cable life.

Total Degrees of Bend in Cable	90°	180°	270°	360°	450°
Bend Factor	1.2	1.4	1.6	1.8	2.0

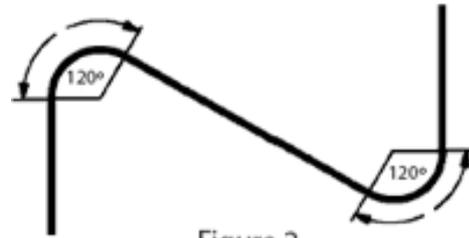


Figure 2

## Minimum Recommended Bend Radii

Cable bend radii should always be as generous as possible for maximum cable life and efficiency. The following are the minimum bend radii recommended. The life specified for the smaller bend radii reflects the fatigue life of the core. See Figure 3.

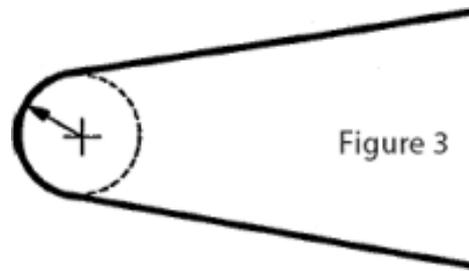


Figure 3

## Dynamic Seal™ With Lower Breakaway Force

All Teleflex cables have patented Dynamic Rod Seals. Their one-piece design was tested up to pressures of 50 psi after 1.3 million cycles. The seals are made from a proprietary thermoplastic composite impregnated with lifetime lubricant to minimise operating friction and reduce breakaway force by at least 30%. That translates into improved efficiency with reduced operator effort when Teleflex cables are used.

Cable Series	Life Long Minimum Bend radius	150,000 Cycle life Minimum Bend radius
30	5" (125 mm)	*
40	5" (125 mm)	5" (125 mm)
60	10" (250 mm)	5" (125 mm)
80	12" (305 mm)	7" (175 mm)

\* Consult Teleflex Engineering Department

## Lifetime Lubrication

There are two sources of lubrication in Teleflex cables, the lubricants impregnated in the core cover and the specialty lubricants applied to the core's exterior during manufacturing. The combination of these lubricants creates a low-friction environment that provides superior efficiency over the entire life of the cable, outlasting other cable designs.



## Maximum Recommended Input Loads

Recommended load ratings reflect the best balance between load and life characteristics. Cable operating life can be extended by utilising less than the maximum recommended load rating.

Infrequent, or momentary loads, may exceed recommended load ratings considerably without causing failure. This will however, shorten cable operating life.

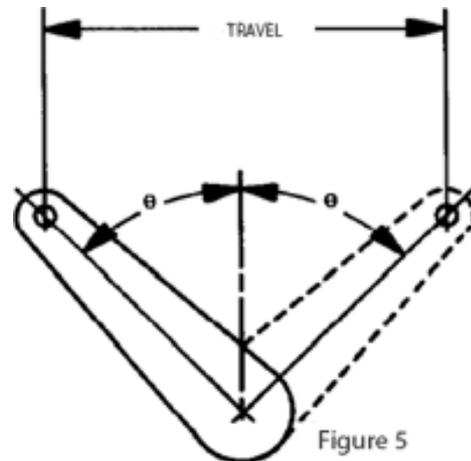
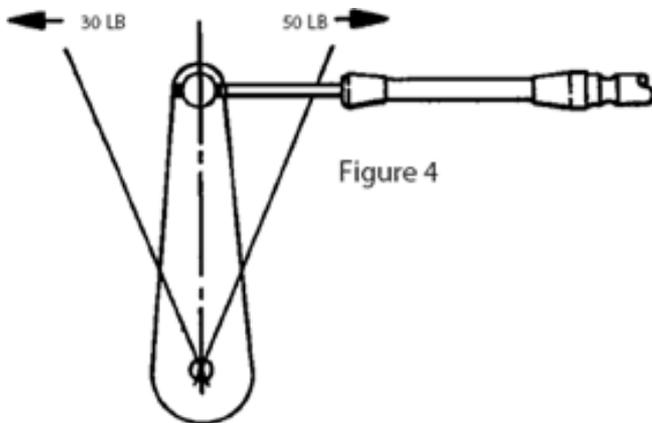
Cable Series	PULL	PUSH		
		2" (50.8 mm)	3" (76.2 mm)	4" (101.6 mm)
30	50 lbs 22.7 kg	50 lbs 22.7 kg	40 lbs 18.2 kg	30 lbs 13.6 kg
40	100 lbs 45.4 kg	100 lbs 45.4 kg	80 lbs 36.3 kg	60 lbs 27.2 kg
60	200 lbs 90.7 kg	200 lbs 90.7 kg	180 lbs 81.7 kg	150 lbs 68.0 kg
80	700 lbs 317.5 kg	700 lbs 317.5 kg	600 lbs 272.2 kg	500 lbs 226.8 kg

## Output Loads

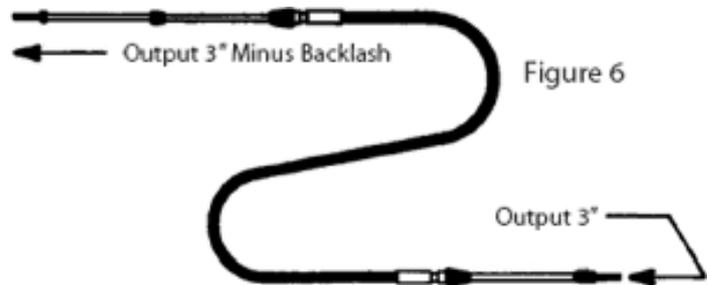
1. Measure the force required to operate the object to be controlled (valve, throttle, PTO, etc.)

For the best efficiency and longest operating life, install the cable so that it encounters the heaviest load in the "pull" mode of operation as shown in Figure 4.

2. Using appropriate lever lengths, adjust the load and travel required to fall within load and travel capabilities of the cables.



The output motion of the workend of the cable is essentially the same as the input motion. For example, a 3" pushing movement at the input end will result in a 3" pushing movement (less backlash) at the output end. If a differential between input/output and/or direction of movement is desired, it must be accommodated in the design of the lever and attaching point at the workend. See Figure 6.





## Layout

1. a. Where cable ends are to be connected to objects requiring linear movement only (such as valve spools, etc.) Maximum life and efficiency can be achieved by accurately aligning in both planes, the cable hubs with the objects to be controlled. See Figure 7.
- b. Where cable ends are to be connected to levers, etc., the connection point will describe an arc as the cable moves through its travel. Standard cables with rod and sleeve type end fittings have a built-in swivel to accommodate this deflection.
 

For best operating life and efficiency, keep this deflection to a minimum. This can be accomplished by locating the cable centre line as shown in Figure 8.
- c. Anchor the cable securely so that the anchor point will not move as load is applied. In most cases the cable end must be anchored to the object to be controlled. This is especially important on engine and transmission controls where power package "roll" could otherwise cause inadvertent operation of the control. See Figure 9.

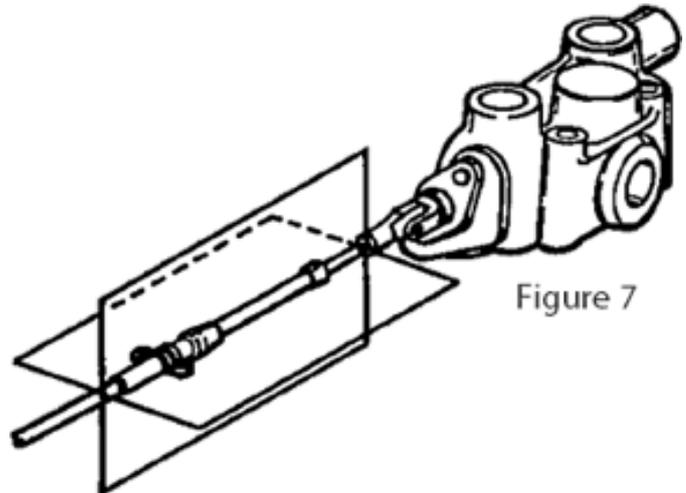


Figure 7

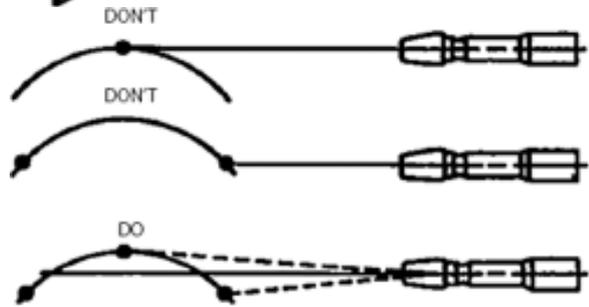


Figure 8

2. Although cables are flexible motion transfer devices, the best performance and life can be attained by keeping the number of bends to a minimum. Where bends are required allow as generous a radius as is practical.
3. Teleflex cables are sealed and resist abrasion and contamination. They should however be protected against pinching, shearing and crushing and the effects of excess heat. The operating ends should be shielded against direct spray and excessive dust.

Cable Mounted on Power Package

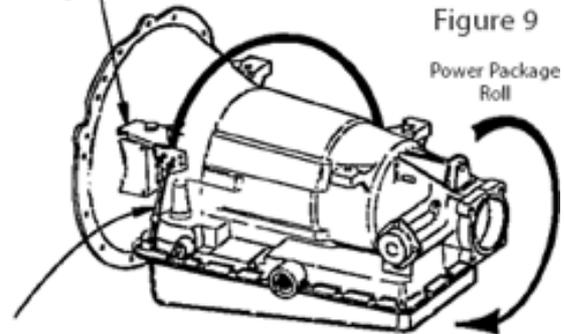


Figure 9

Power Package Roll

Output of Cable will Roll with Power Package

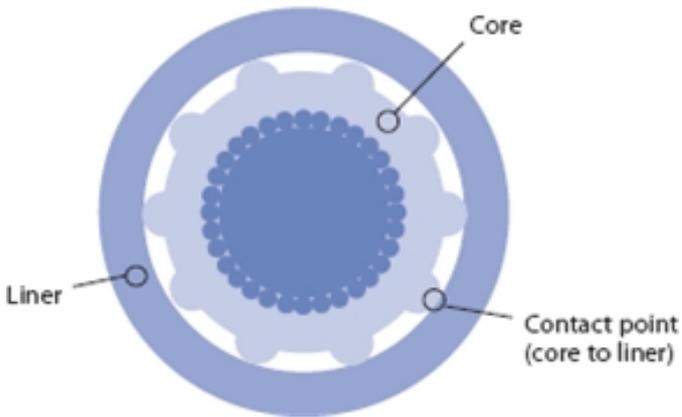


TFXtreme's unique breakthrough design assures unparalleled smoothness and efficiency – with hardly any lost motion – even in the longest and most complex cable routings. This gives superior feel at the control in any vehicle and performance that until now was considered “impossible”.

Traditional cables vary by the stiffness of the core wire and how tightly they fit in the casing. Thus the classic trade-offs in control cable design: stiffer core/tighter fit offers less lost motion but is harder to move. More flexible core/looser fit has an easier feel but allows more lost motion. This approach leads to an overall sloppy feel, RPM loss or difficult gear engagement.



**Cross Section view**



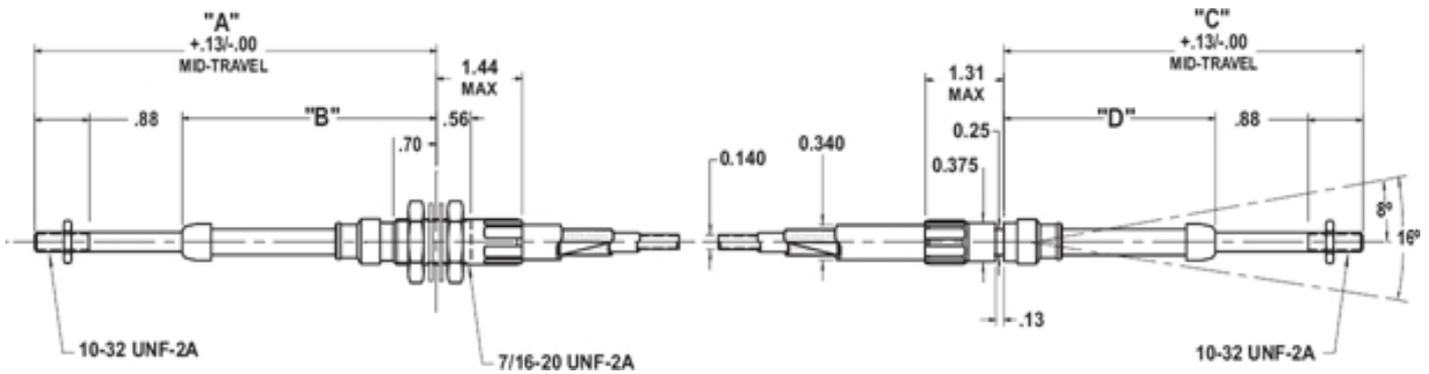
TFXtreme's unique design incorporates a splined core to achieve the “impossible”. Ridges of the core allow a close fit with the cable's inner liner, but with minimum contact, so the core glides back and forth smoothly. The result – easy movement and minimum lost motion.

TFXtreme cables also allow tighter bend radius. The recommended radius is 4”(100 mm), but tighter bends can be achieved without too much compromise to efficiency.

Cable bend radius should always be as generous as possible to maximise cable efficiency.



**30 Series Cable**



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N)
	A	B	C	D	Push/Pull
1" (25)	4.38 (111.2)	3.00 (76.2)	3.69 (93.7)	2.31 (58.6)	50/50 (222/222)
2" (50)	5.88 (149.3)	4.00 (101.6)	5.19 (131.8)	3.31 (84.0)	50/50 (222/222)
3" (75)	7.38 (187.4)	5.00 (127.0)	6.69 (169.9)	4.31 (109.4)	40/50 (148/222)
4" (100)	8.39 (225.5)	6.00 (152.4)	8.19 (208.0)	5.31 (134.8)	30/50 (133/222)
5" (125)	10.38 (263.6)	7.00 (177.8)	9.69 (246.1)	6.31 (160.2)	20/50 (89/222)

All Dimensions are in inches (mm)

**PART NUMBERING SYSTEM**

**Cable Measurement**  
Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.



**CABLE SERIES PART NUMBER**  
316831 = TFXtreme 30B (Imperial)  
316832 = TFXtreme 30C (Imperial)  
316833 = TFXtreme 30BC (Imperial)

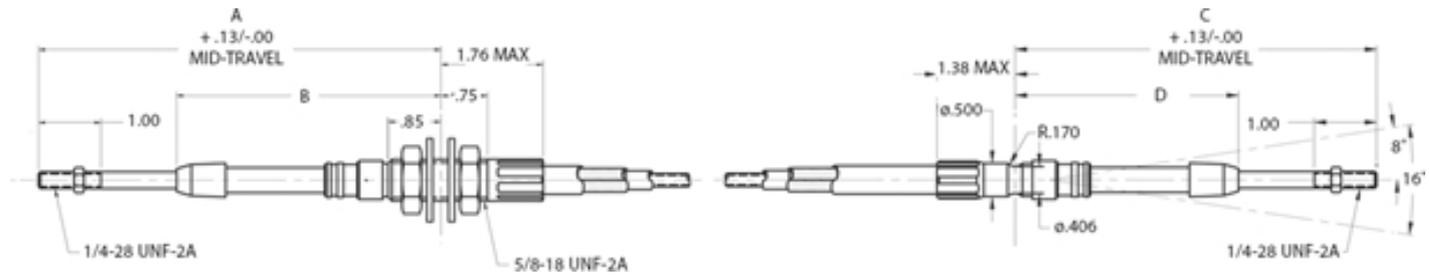
**TRAVEL IN INCHES**  
1"  
2"  
3"  
4"  
5"

**CABLE LENGTH IN CENTIMETRES**  
Place 0's in the first two positions if less than 1.00 metre.

**EXAMPLE: 316831-3-0150**  
TFXtreme 30 Series Cable with 3" Travel, Bulkhead hub at 1.50m.



## 40 Series Cable



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N) Standard & TFXtreme
	A	B	C	D	Push/Pull
1" (25)	4.63 (117.6)	3.13 (79.5)	4.00 (101.6)	2.50 (63.5)	130/150 (578/667)
2" (50)	6.13 (155.7)	4.13 (104.9)	5.50 (139.7)	3.50 (88.9)	130/150 (578/667)
3" (75)	7.63 (193.8)	5.13 (130.3)	7.00 (177.8)	4.50 (114.3)	110/150 (489/667)
4" (100)	9.13 (231.9)	6.13 (155.7)	8.50 (215.9)	5.50 (139.7)	90/150 (400/667)
5" (125)	10.63 (270.0)	7.13 (181.1)	10.00 (254.0)	6.50 (165.1)	70/150 (311/667)

All Dimensions are in inches (mm)

## PART NUMBERING SYSTEM

### Cable Measurement

Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.

X X X X X X

**CABLE SERIES  
PART NUMBER**

316841 = TFXtreme 40B (Imperial)  
316842 = TFXtreme 40C (Imperial)  
316843 = TFXtreme 40BC (Imperial)

- X -

**TRAVEL IN  
INCHES**

1"  
2"  
3"  
4"  
5"

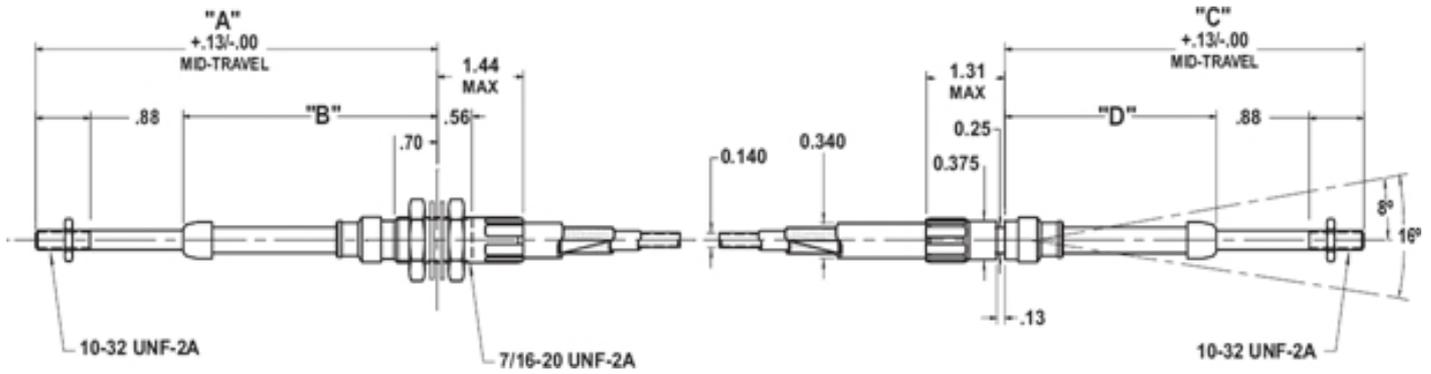
X X X X

**CABLE LENGTH  
IN CENTIMETRES**

Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 316841-3-0150

TFXtreme 40 Series Cable with 3" Travel, Bulkhead hub at 1.50m.



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N) Push/Pull
	A	B	C	D	
1" (25)	4.38 (111.2)	3.00 (76.2)	3.69 (93.7)	2.31 (58.6)	50/50 (222/222)
2" (50)	5.88 (149.3)	4.00 (101.6)	5.19 (131.8)	3.31 (84.0)	50/50 (222/222)
3" (75)	7.38 (187.4)	5.00 (127.0)	6.69 (169.9)	4.31 (109.4)	40/50 (178/222)
4" (100)	8.88 (225.5)	6.00 (152.4)	8.19 (208.0)	5.31 (134.8)	30/50 (133/222)
5" (125)	10.38 (263.6)	7.00 (177.8)	9.69 (246.1)	6.31 (160.2)	20/50 (89/222)

All Dimensions are in inches (mm)

## PART NUMBERING SYSTEM

### Cable Measurement

Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.

X X X X X X

### CABLE SERIES PART NUMBER

036559 = 30B Control (Imperial)  
065870 = 30C Control (Imperial)  
037990 = 30BC Control (Imperial)

- X -

### TRAVEL IN INCHES

1"  
2"  
3"  
4"  
5"

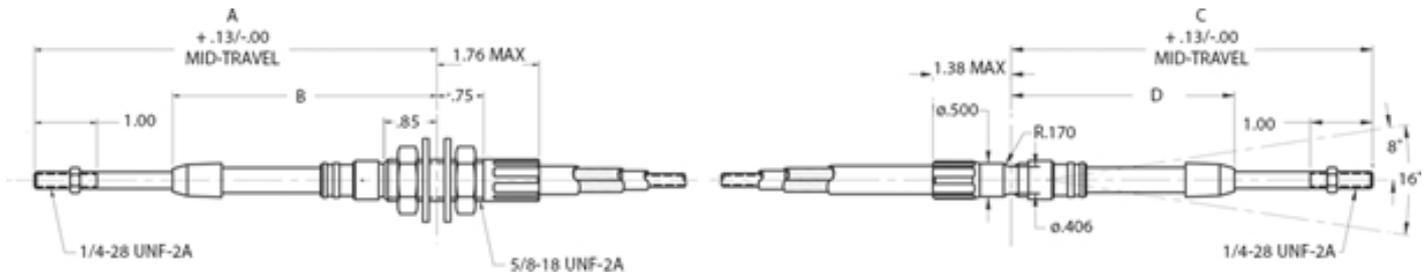
X X X X

### CABLE LENGTH IN CENTIMETRES

Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 036559-3-0150

30 Series Push Pull Cable with 3" Travel, Bulkhead hub at 1.50m.



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N) Standard & TFXtreme
	A	B	C	D	
1" (25)	4.63 (117.6)	3.13 (79.5)	4.00 (101.6)	2.50 (63.5)	130/150 (578/667)
2" (50)	6.13 (155.7)	4.13 (104.9)	5.50 (139.7)	3.50 (88.9)	130/150 (578/667)
3" (75)	7.63 (193.8)	5.13 (130.3)	7.00 (177.8)	4.50 (114.3)	110/150 (489/667)
4" (100)	9.13 (231.9)	6.13 (155.7)	8.50 (215.9)	5.50 (139.7)	90/150 (400/667)
5" (125)	10.63 (270.0)	7.13 (181.1)	10.00 (254.0)	6.50 (165.1)	70/150 (311/667)

All Dimensions are in inches (mm)

## PART NUMBERING SYSTEM

### Cable Measurement

Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.



**CABLE SERIES  
PART NUMBER**

4 = 40 Series (Imperial)

**TRAVEL IN  
INCHES**

1"  
2"  
3"  
4"  
5"

**END FITTING**

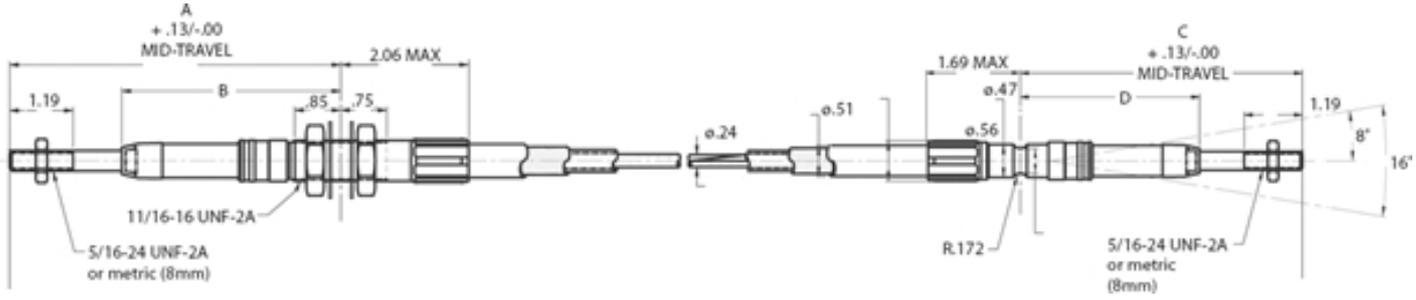
B = Bulkhead  
C = Clamp  
BC = Bulkhead/Clamp

**CABLE LENGTH  
IN CENTIMETRES**

Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 43B0150

40 Series Push Pull Cable with 3" Travel, Bulkhead hub at 1.50m.



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N) Push/Pull
	A	B	C	D	
1" (25)	5.06 (128.5)	3.38 (85.9)	4.38 (111.2)	2.69 (68.3)	200/200 (890/890)
2" (50)	6.56 (166.6)	4.38 (111.2)	5.88 (149.3)	3.69 (93.7)	200/200 (890/890)
3" (75)	8.06 (204.7)	5.38 (138.6)	7.38 (187.4)	4.69 (119.1)	180/200 (800/890)
4" (100)	9.56 (242.8)	6.38 (162.0)	8.88 (225.5)	5.69 (144.5)	150/200 (667/890)
5" (125)	11.06 (280.9)	7.38 (187.4)	10.38 (263.6)	6.69 (169.9)	120/200 (534/890)

All Dimensions are in inches (mm)

## PART NUMBERING SYSTEM

### Cable Measurement

Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.



### CABLE SERIES PART NUMBER

6 = 60 Series (Imperial)



### TRAVEL IN INCHES

- 1"
- 2"
- 3"
- 4"
- 5"



### END FITTING

- B = Bulkhead
- C = Clamp
- BC = Bulkhead/Clamp



### CABLE LENGTH IN CENTIMETRES

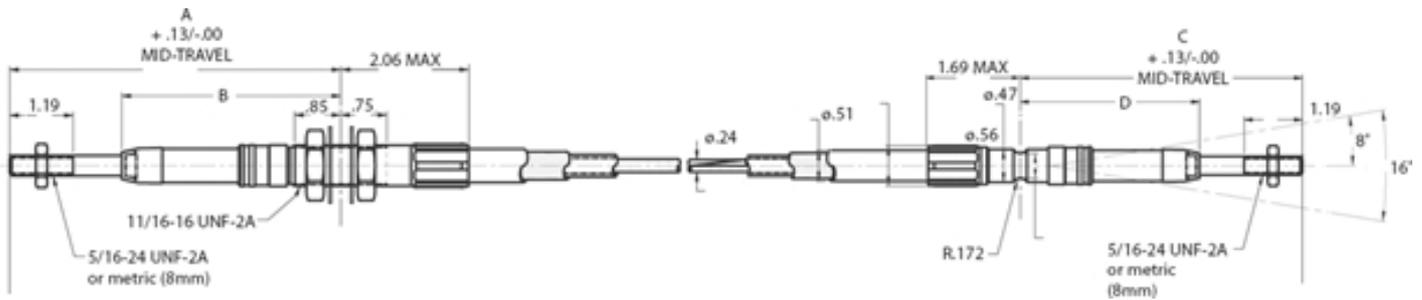
Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 63B0150

60 Series Push Pull Cable (Imperial) with 3" Travel, Bulkhead hub at 1.50m.



## 60 Series Push Pull Cable (Metric)



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N)
	A	B	C	D	Push/Pull
1" (25)	5.06 (128.5)	3.38 (85.9)	4.38 (111.2)	2.69 (68.3)	200/200 (890/890)
2" (50)	6.56 (166.6)	4.38 (111.2)	5.88 (149.3)	3.69 (93.7)	200/200 (890/890)
3" (75)	8.06 (204.7)	5.38 (138.6)	7.38 (187.4)	4.69 (119.1)	180/200 (800/890)
4" (100)	9.56 (242.8)	6.38 (162.0)	8.88 (225.5)	5.69 (144.5)	50/200 (222/890)
5" (125)	11.06 (280.9)	7.38 (187.4)	10.38 (263.6)	6.69 (169.9)	120/200 (534/890)

All Dimensions are in inches (mm)

## PART NUMBERING SYSTEM

### Cable Measurement

Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.



**CABLE SERIES  
PART NUMBER**

M6 = 60 Series (Metric)



**TRAVEL IN  
INCHES**

1"  
2"  
3"  
4"  
5"



**END FITTING**

B = Bulkhead  
C = Clamp  
BC = Bulkhead/Clamp

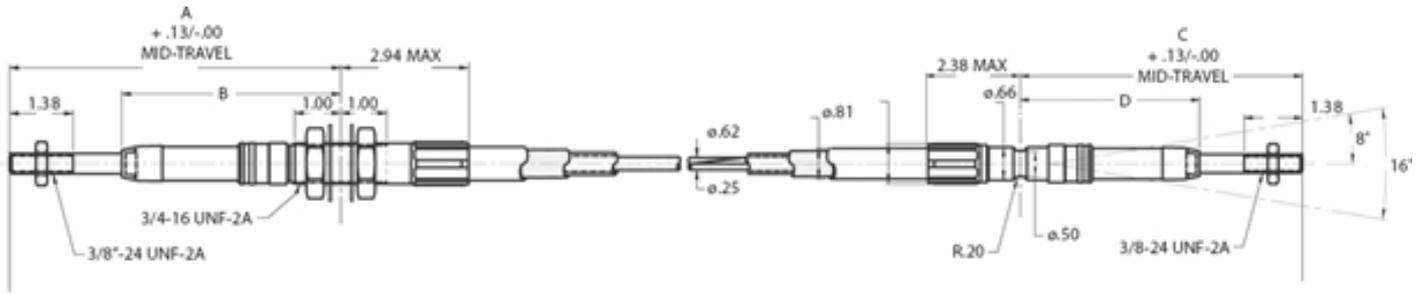


**CABLE LENGTH  
IN CENTIMETRES**

Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: M63B0150

60 Series Push Pull Cable (Metric) with 3" Travel, Bulkhead hub at 1.50m.



Travel	Bulkhead Type Fitting		Clamp Type Fitting		Input Load Pounds (N)
	A	B	C	D	
1" (25)	5.69 (144.5)	3.75 (95.25)	5.19 (131.8)	3.25 (82.55)	700/700 (3113/3113)
2" (50)	7.19 (182.6)	4.75 (120.6)	6.69 (169.9)	4.25 (107.9)	700/700 (3113/3113)
3" (75)	8.69 (220.7)	5.75 (146.0)	8.19 (208.0)	5.35 (133.3)	600/700 (2669/3113)
4" (100)	10.19 (258.8)	6.75 (171.4)	9.69 (246.1)	6.25 (158.7)	500/700 (2224/3113)
5" (125)	11.69 (296.9)	7.75 (196.8)	11.19 (284.2)	7.25 (184.1)	400/700 (1779/3113)

All Dimensions are in inches (mm)

## PART NUMBERING SYSTEM

### Cable Measurement

Cables are measured overall (tip to tip) and are manufactured in a quarter metre increment. Cables can be made to custom length.



### CABLE SERIES PART NUMBER

8 = 80 Series

### TRAVEL IN INCHES

1"  
2"  
3"  
4"  
5"

### END FITTING

B = Bulkhead  
C = Clamp  
BC = Bulkhead/Clamp

### CABLE LENGTH IN CENTIMETRES

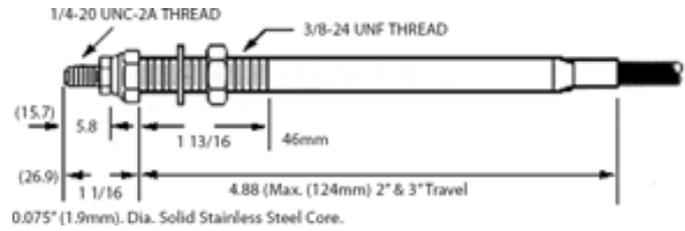
Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 83B0150

80 Series Push Pull Cable with 3" Travel, Bulkhead hub at 1.50m.



Utility cables are available with either bare wire open ends or with rods and sleeves fitted. Cables with bare wire open ends are for pull applications only and cables with rods and sleeves are for push / pull applications.



**Cables come complete with Black T-Handle knob. Other Knobs available upon request see Knobs & handles below.**



30 Series Cable Hardware	Part Number
Stop Collar	037693
Conduit Clamp 2 Hole	043229
Pivot Core Fitting 1/8"	047639
Pivot Core Fitting 3/16"	047640
Pivot Core Fitting 1/4"	047641
Bulkhead Adapter Kit	300673
Clamp Adapter Kit	302485

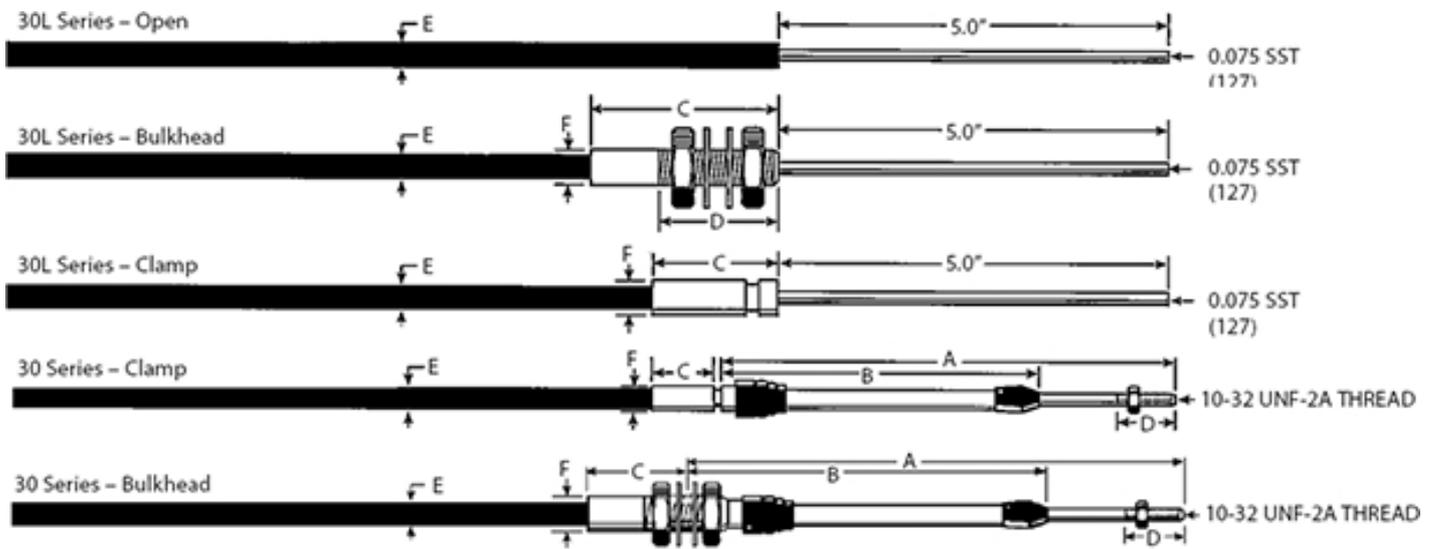
**Utility Cable Spare Parts**

T-Handles	
Part Number	Description
041884-01B	Black T-Handle Plain
041884-02B	Black T-Handle "Stop"
042978-01B	Red T-Handle Plain

Knobs	
Part Number	Description
043267-01B	Black Knob Plain
043267-02B	Black Knob "Stop"
044343-01B	Red Knob Plain



## Cable End Types



Cable Series	Part Number	End Type	Min Bend Radius	Travel	A	B	C	D	E DIA	F DIA
30 Series Utility Cable With Rod and Sleeve (WRS)	038033	Bulkhead	5" (127)	2" (50.8)	6.88 (174.7)	4.00 (101.6)	1.44 (36.5)	0.88	0.44	0.44
	038033	Bulkhead	5" (127)	3" (76.2)	8.88 (225.1)	5.00 (127.0)	1.44 (36.5)	0.88	0.44	0.44
	038038	Clamp	5" (127)	2" (50.8)	6.19 (157.2)	4.00 (101.6)	6.88 (174.7)	0.88	0.26	0.38
	038038	Clamp	5" (127)	3" (76.2)	8.19 (208.0)	4.31 (109.4)	1.13 (28.7)	0.88	0.26	0.38
30 Series Utility Cable With Bare Wire (NRS)	048711	Open	5" (127)	3" (76.2)	-	-	-	-	0.26	-
	048712	Bulkhead			-	-	1.88	-	0.26	0.38
	048713	Clamp			-	-	1.31	-	0.26	0.38

## PART NUMBERING SYSTEM

### Cable Measurement

When measuring a Utility cable with rod & sleeve. Measure from top of threaded section, under T Handle to Tip of Rod.

When measuring a Utility cable with no rod and sleeve. Measure from top of threaded section, under T Handle to end of hub (bare wire is not measured).



**CABLE SERIES PART NUMBER**  
 038033 = Utility cable B hub WRS  
 038038 = Utility cable C hub WRS  
 048711 = Utility cable OPEN hub NRS  
 048712 = Utility cable B hub NRS  
 048713 = Utility cable C hub NRS

**TRAVEL IN INCHES**  
 2"  
 3"

**CABLE LENGTH IN CENTIMETRES**  
 Place 0's in the first two positions if less than 1.00 metre.

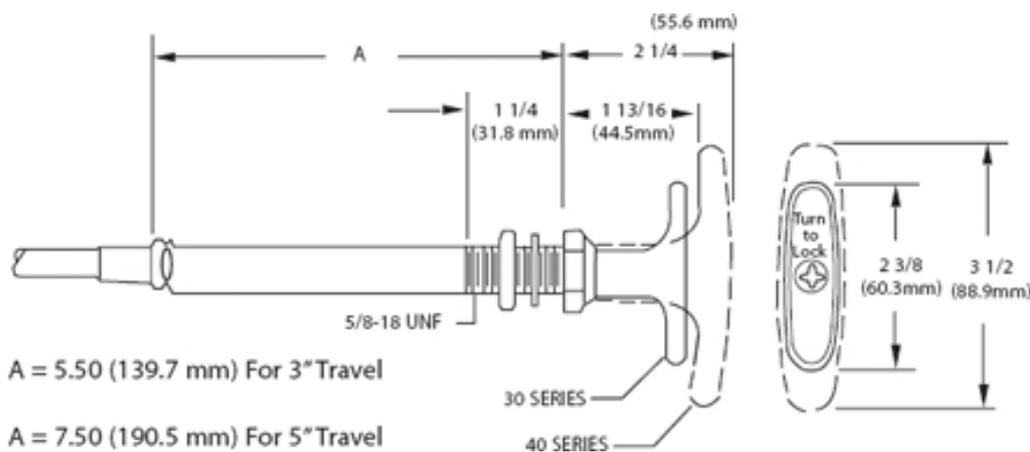
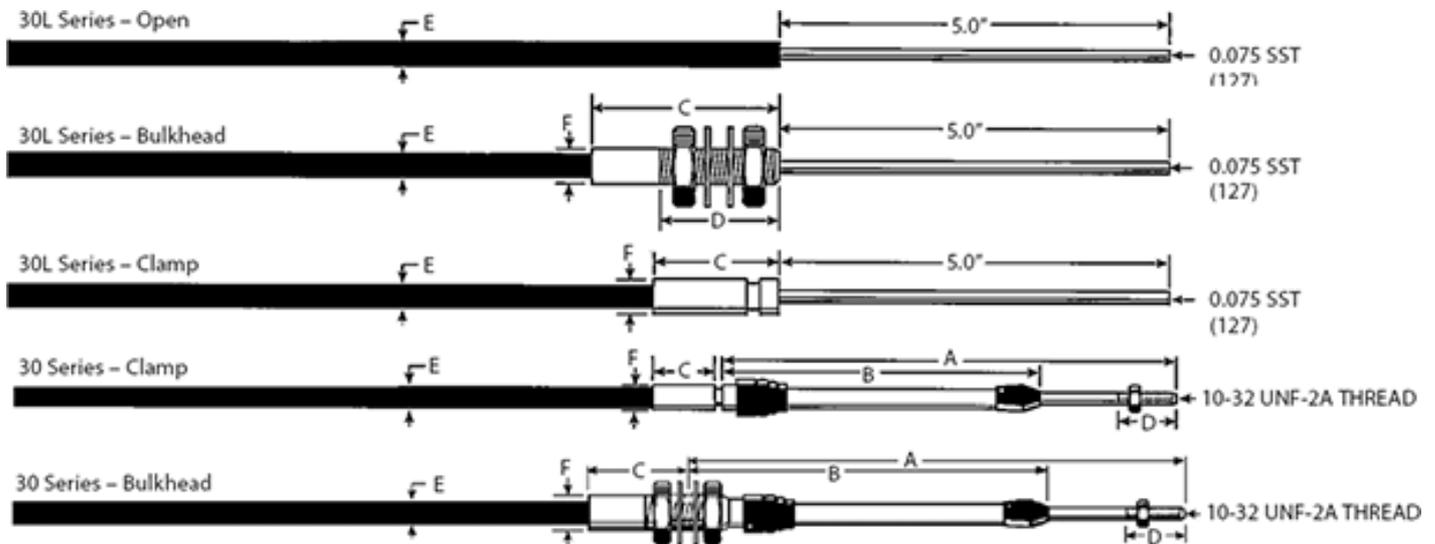
### EXAMPLE: 038033-3-0150

Utility Cable with 3" Travel, Bulkhead hub at 1.50m.



## Cable End Types

Positive Locks allow desired settings to be made and released by turning the T-Handle less than 1/8 of a turn in either direction.



Cable Hardware	Part Number
Stop Collar	037693
Conduit Clamp 2 Hole	043229
Pivot Core Fitting 1/8"	047639
Pivot Core Fitting 3/16"	047640
Pivot Core Fitting 1/4"	047641
T-Handle – Black Plastic	043133-001
T-Handle – Aluminium, Unpainted	048407





## Positive Lock Cable

Cable Series	Part Number	End Type	Travel	A	B	C	D	E DIA	F DIA	Min Bend Radius
30 Series No Rod & Sleeve	043820	Open	3" (76.2)	-	-	-	-	0.26	-	5" (127.0)
	043150	Bulkhead		-	-	1.88	-	0.26	0.38	
	043151	Clamp		-	-	1.31	-	0.26	0.38	
	043150	Bulkhead	5" (127.0)	-	-	1.88	-	0.26	0.38	5" (127.0)
	043151	Clamp		-	-	1.31	-	0.26	0.38	
30 Series With Rod & Sleeve	043143	Bulkhead	2" (50.8)	6.88 (174.2)	4.00 (101.6)	1.44	0.88	0.34	0.44	5" (127.0)
	043142	Clamp		6.19 (152.2)	3.31 (157.2)	1.13	0.88	0.34	0.44	
	043143	Bulkhead	3" (76.2)	6.88 (174.2)	4.00 (101.6)	1.44	0.88	0.34	0.44	5" (127.0)
	043142	Clamp		8.88 (225.5)	5.00 (127.0)	1.13	0.88	0.34	0.44	
	043143	Bulkhead	4" (101.6)	10.88 (276.3)	6.00 (152.4)	1.44	0.88	0.34	0.44	5" (127.0)
	043142	Clamp		10.19 (258.8)	5.31 (134.8)	1.13	0.88	0.34	0.44	
	043143	Bulkhead	5" (127.0)	11.88 (301.7)	7.00 (177.8)	1.44	0.88	0.34	0.44	5" (127.0)
	043142	Clamp		11.19 (284.2)	6.13 (160.2)	1.13	0.88	0.34	0.44	

## PART NUMBERING SYSTEM

### Cable Measurement

When measuring a 30 series positive lock cable with rod & sleeve. Measure from top of threaded section, under T Handle to Tip of Rod.

When measuring a 30 series positive lock cable with NO rod & sleeve measure from top of threaded section under T Handle to end of outer. Include hub but not bare wire.

X X X X X X

### CABLE SERIES PART NUMBER

043820 = Positive Lock OPEN NRS  
 043150 = Positive Lock B hub NRS  
 043151 = Positive Lock C hub NRS  
 043143 = PositiveLock B hub WRS  
 043142 = PositiveLock C hub WRS

- X -

### TRAVEL IN INCHES

2"  
 3"  
 4"  
 5"

- X X X X

### CABLE LENGTH IN CENTIMETRES

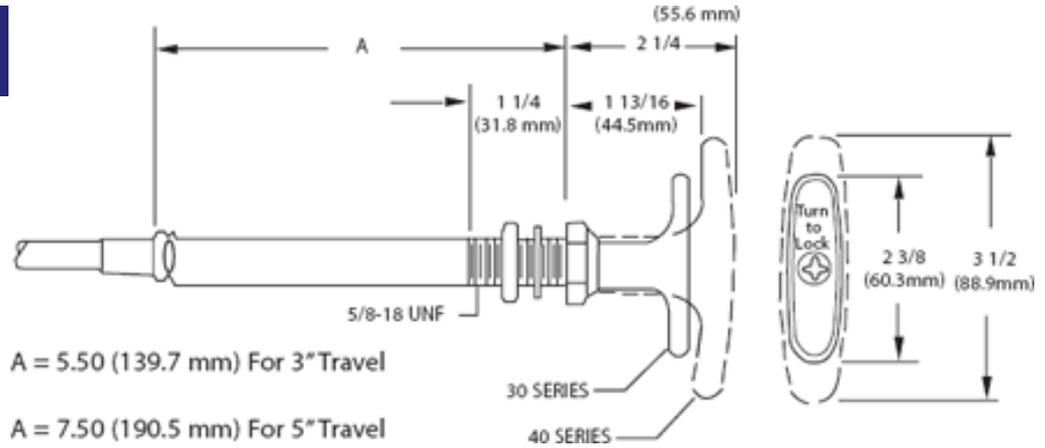
Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 043820-3-0150

Positive Lock Cable with 3" Travel, Open hub at 1.50m.

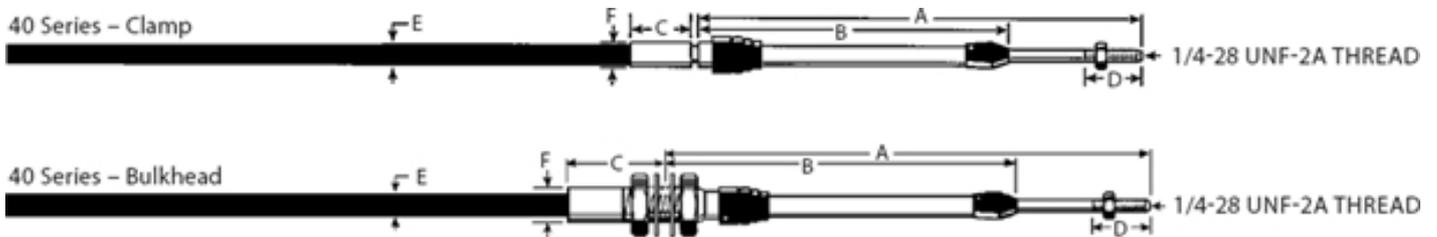


**40 Series Positive Lock Cable comes standard with Aluminium Handle.**



## Cable End Types

Positive Locks allow settings to be made and released by turning the T-Handle less than 1/8 of a turn in either direction.



Part Number	End Type	Travel	A	B	C	D	E DIA	F DIA	Min Bend Radius
043145	Bulkhead	2" (50.8)	6.88 (174.2)	4.00 (101.6)	1.44	1.00	0.34	0.44	5" (127.0)
043144	Clamp		6.19 (152.2)	3.31 (157.2)	1.13	1.00	0.34	0.38	
043145	Bulkhead	3" (76.2)	6.88 (174.2)	4.00 (101.6)	1.44	1.00	0.34	0.44	5" (127.0)
043144	Clamp		8.88 (225.5)	5.00 (127.0)	1.13	1.00	0.34	0.38	
043145	Bulkhead	4" (101.6)	10.88 (276.3)	6.00 (152.4)	1.44	1.00	0.34	0.44	5" (127.0)
043144	Clamp		10.19 (258.8)	5.31 (134.8)	1.13	1.00	0.34	0.38	
043145	Bulkhead	5" (127.0)	11.88 (301.7)	7.00 (177.8)	1.44	1.00	0.34	0.44	5" (127.0)
043144	Clamp		11.19 (284.2)	6.13 (160.2)	1.13	1.00	0.34	0.38	

## PART NUMBERING SYSTEM

### Cable Measurement

When measuring a 40 series positive lock cable with rod & sleeve, measure from top of threaded section, under T Handle to Tip of Rod.

Note: 40 Series Positive Lock Cables are only manufactured with a rod and sleeve.



**CABLE SERIES PART NUMBER**

043145 = Positive Lock B hub  
043144 = Positive Lock C hub

**TRAVEL IN INCHES**

2"  
3"  
4"  
5"

**CABLE LENGTH IN CENTIMETRES**

Place 0's in the first two positions if less than 1.00 metre.

**EXAMPLE: 043145-3-0150**

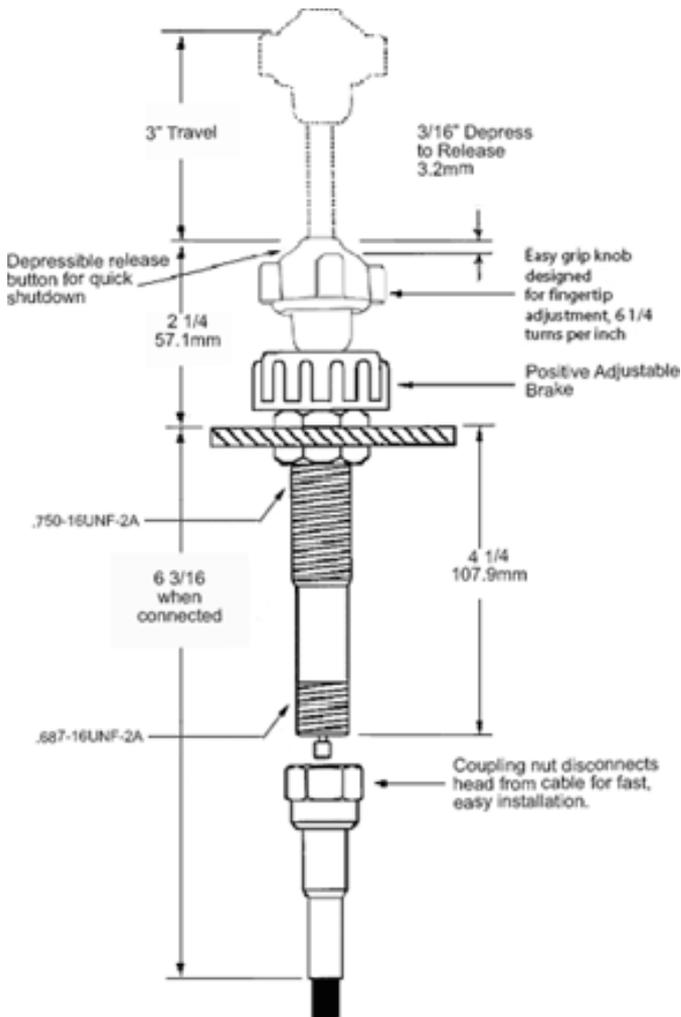
Positive Lock Cable with 3" Travel, Bulkhead hub at 1.50m.



The Teleflex Vernier Control is the premium mechanical control cable for setting engine RPM and other micro/macro adjustments.

Applications range from generator sets, to manual throttles for warm up on a wide variety of on and off-road vehicles.

### Vernier Control Head Part Number: (317310)



#### Key Features

- **Fast and Simple Installation** – can be mounted independently to the the dash and then connected to the cable on the other side of dash or firewall.
- **Positive Adjustment** – depress the red release button and pull the Vernier knob out until an approximate rpm or setting is achieved.
- **Positive Adjustable Brake** – precise settings can be maintained through vibration or governor back pressure by setting the correct amount of friction on the brake.
- **Fast Shutdown** – simply depress top of grip and simultaneously push in the knob for immediate shutdown.



## Fast and Simple Installation

The vernier control head is easily disconnected from the cable by simply backing off the coupling nut and disengaging the connectors. This feature eliminates pushing cables through mounting cutouts and trying to route from the cab end. The control head can be mounted independently to the dash and then connected to the cable on the other side of the dash or firewall.

## Operating Loads

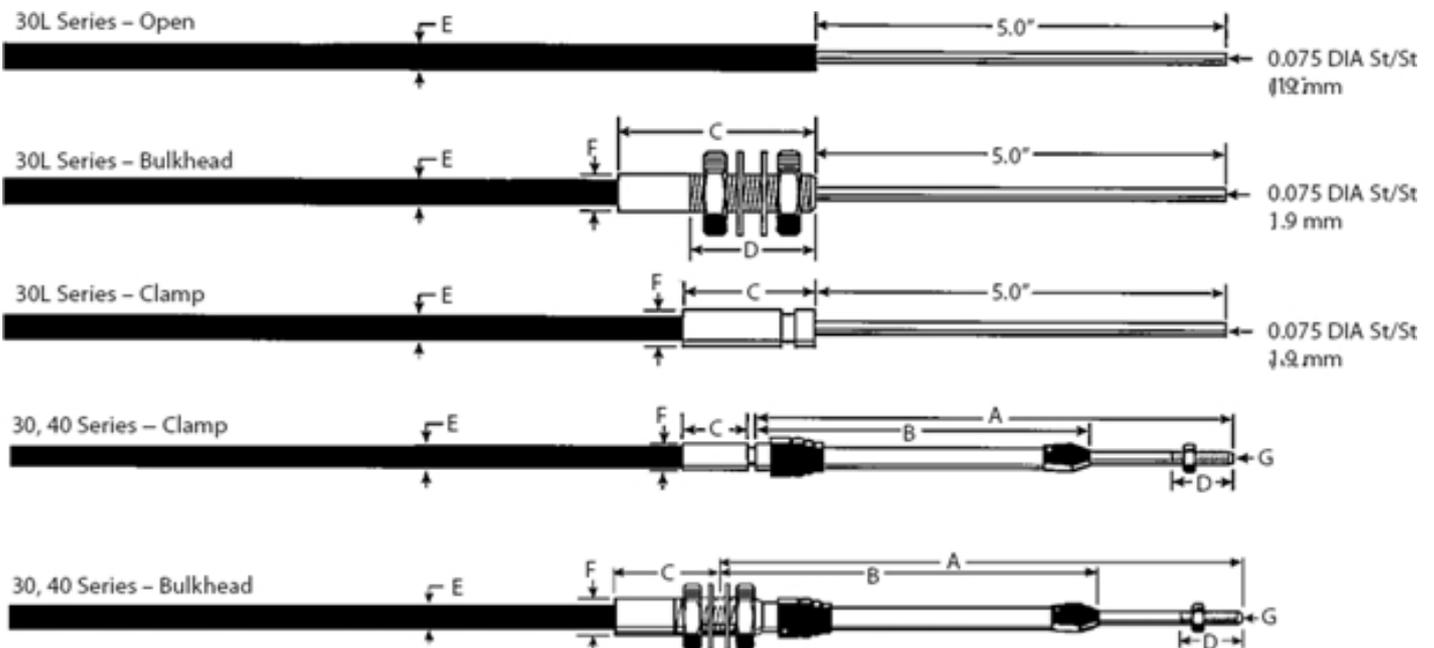
The Vernier Control is recommended for operating loads up to 9 kgs regardless of the series cable selected. The control can withstand much higher operating loads, but human engineering factors come into play at about 20 lbs. Operating finger-tip type controls at loads above 20 lbs. can cause fatigue and discomfort to operator's fingers and hands.

Consideration should be given to a different type of control for loads exceeding 20 lbs.

## Cable Travel

The Quick Release Vernier features a standard 3" of travel. Travel under 3" can be accommodated using an L type cable and a stop collar or pivot on the core wire to restrict travel. Reduced travel with 30 or 40 series cables with rod type out put ends can be accommodated with stops on the lever or mechanism for which the cable is attached.

	Series Description	End Type	Cable Series Part Number (Cable Only)	Cable Series Part Number (Cable w/Head)	Min Bend Radius	A	B	C	D	E	F	G Thread UNF-2A
Bare Wire	30L	Open	307141	307544	5"	-	-	-	-	0.26	-	-
	30L	Bulkhead	307142	307545	5"	-	-	1.88	-	0.26	0.44	-
	30L	Clamp	307143	307546	5"	-	-	1.31	-	0.26	0.38	-
Rod & Sleeve	30	Bulkhead	307144	307547	5"	8.88	5.00	1.44	0.88	0.26	0.44	10-32
	30	Clamp	307145	307548	5"	9.13	4.13	1.13	0.88	0.26	0.38	10-32
	40	Bulkhead	307146	307549	5"	9.13	5.13	1.76	1.0	0.26	0.44	1/4-28
	40	Clamp	307147	307550	5"	8.50	4.50	1.38	1.0	0.26	0.38	1/4-28





## PART NUMBERING SYSTEM

X X X X X X

-

X

-

X X X X

### CABLE SERIES PART NUMBER

- 307545 = 30L Series Vernier w/Head B NRS
- 307141 = 30L Series Vernier Only OPEN NRS
- 307142 = 30L Series Vernier Only B hub NRS
- 307143 = 30L Series Vernier Only C hub NRS
- 307144 = 30 Series Vernier Only B hub WRS
- 307145 = 30 Series Vernier Only C hub WRS
- 307146 = 40 Series Vernier Only B hub WRS
- 307147 = 40 Series Vernier Only C hub WRS
- 307546 = 30L Series Vernier w/Head C NRS
- 307547 = 30 Series Vernier w/Head B hub WRS
- 307548 = 30 Series Vernier w/Head C hub WRS
- 307549 = 40 Series Vernier w/Head B hub WRS
- 307550 = 40 Series Vernier Only C hub WRS
- 307544 = 30L Series Vernier w/Head OPEN NRS

### TRAVEL IN INCHES

- 2"
- 3"

### CABLE LENGTH IN CENTIMETRES

Place 0's in the first two positions if less than 1.00 metre.

### EXAMPLE: 307545-3-0150

Vernier Control Cable with 3" Travel, Bulkhead hub at 1.50m.

## Measuring and ordering

All cables with exposed wire are measured to the point where the core wire exits the cable conduit.

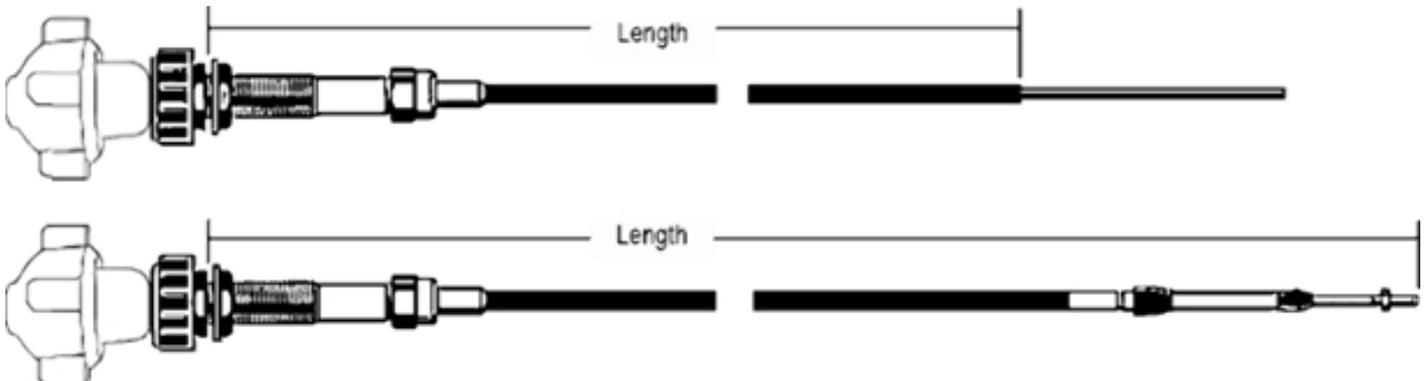
Cables with rod-type end fittings are measured to the rod end.

A Quick Release Vernier Control can be ordered as two separate items. Use part number 317310 for the Vernier Control Head.

Then order the desired cable part number (see chart above), immediately followed by the desired cable length in quarter metre increments.

Part Number	Vernier Accessories
317310	Vernier Control Head (Black)
317415	Vernier Control Head (Red)
037693	Stop Collar
043229	Conduit Clamp
047639	Pivot Core Fitting 1/8"
047640	Pivot Core Fitting 3/16"
047641	Pivot core Fitting 1/4"
300673	30L Bulkhead Adaptor Kit
302485	30L Clamp Adaptor Kit
045477	Vernier Boot Black
060327	Vernier Boot Red
031509	Clamp

Note: Cable length stamped on the cable is the overall length that is achieved when the vernier control head is attached to the cable





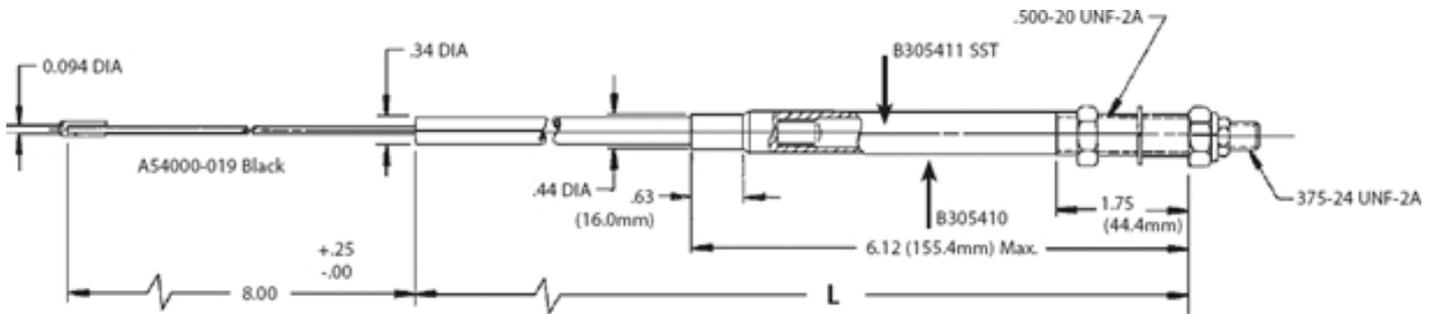
Classic Teleflex quality is built into this PTO cable. It's tough polyethylene outer jacket provides protection from weather, splash, and spray, while the stainless steel core moves smoothly inside a specially formulated polyethylene liner. In addition, the knob is solid to withstand the rigors of heavy duty use.

**Complete Interchangeability and Simple Installation**

Teleflex's thread sizes make this cable 100% interchangeable with other manufacturers of PTO cables. Our PTO cable is ideal for both new and replacement applications. It has 5 full inches of travel, is available in 1/2 metre increments, and can be cut to required lengths by the user for specific applications



Part Number	Cable Hardware
305413 XXXX (Length in centimetres)	PTO Cable
062267	Hub Adaptor Kit
302001	PTO Conduit Kit
305481	Red Knob Only



**PART NUMBERING SYSTEM**



**CABLE SERIES  
PART NUMBER**

305413 = PTO



**CABLE LENGTH  
IN CENTIMETRES**

Place 0's in the first two positions if less than 1.00 metre.

**EXAMPLE: 3054130150**

PTO Cable with 5" Travel at 1.50m.



Through the Global resources of Teleflex we are now able to offer the world respected Capro choke control cables.

This weather resistant choke control cable features a positive detent in the closed position helping to seal out dirt and moisture and eliminates inadvertant movement due to engine vibration. This choke control meets a range of temperature and routing conditions with a working load at up to 35 lbs/55N. This cable is available in 4 different lengths and can be simply cut to suit the application.



Part number	Description
73-0303-01	Choke cable 1.50m
73-0303-02	Choke cable 2.00m
73-0303-03	Choke cable 2.50m
73-0303-04	Choke cable 3.00m



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