

## Section 5: Installation Accessories

Sub-Section	Page
Tubing .....	164
Cable Ties .....	170
Hook & Loop .....	179
Fish Tape & Pulling Rope .....	181



Descriptive information herein supplied directly by individual manufacturers. Not responsible for opinion-oriented information or typographical errors. Not all products may be in stock or available to all EDGE members. Price is subject to change without notice. Restrictions may apply. We reserve the right to limit quantities to stock on hand.

# Installation Accessories - Tubing



## PAN-WRAP™ Split Harness Wrap

Slot pattern provides improved flexibility and abrasion protection in any application. Large overlap accommodates a wide range of bundle diameters. Unique wall design provides for easy wire or cable breakouts. Innovative design maintains uniform bundle protection in dynamic applications. Packaged on a reel for easy handling and dispensing of product.



Part #	Material	Lgth/Reel ft (M)	Max. Bundle Dia in (mm)	Min Bundle Dia in (mm)	Nom. I.D. in (mm)
PW50F-T20	Polyethylene - Black	200 (61.1)	.55 (14.0)	.43 (10.9)	.50 (12.7)
PW50F-T	Polyethylene - Natural	200 (61.1)	.55 (14.0)	.43 (10.9)	.50 (12.7)
PW75F-C20	Polyethylene - Black	100 (30.5)	.81 (20.6)	.55 (14.0)	.75 (19.1)
PW75F-C	Polyethylene - Natural	100 (30.5)	.81 (20.6)	.55 (14.0)	.75 (19.1)
PW100F-C	Polyethylene - Natural	100 (30.5)	1.13 (28.7)	.81 (20.6)	1.00 (25.4)
PW100F-C20	Polyethylene - Black	100 (30.5)	1.13 (28.7)	.81 (20.6)	1.00 (25.4)
PW150F-L	Polyethylene - Natural	50 (15.2)	1.63 (41.4)	1.13 (28.7)	1.50 (38.1)
PW150F-L20	Polyethylene - Black	50 (15.2)	1.63 (41.4)	1.13 (28.7)	1.50 (38.1)
PW50FR-T	Flame Retardant Polyethylene - Natural	200 (61.1)	.55 (14.0)	.43 (10.9)	.50 (12.7)
PW50FR-T20	Flame Retardant Polyethylene - Black	200 (61.1)	.55 (14.0)	.43 (10.9)	.50 (12.7)
PW75FR-C	Flame Retardant Polyethylene - Natural	100 (30.5)	.81 (20.6)	.55 (14.0)	.75 (19.1)
PW75FR-C20	Flame Retardant Polyethylene - Black	100 (30.5)	.81 (20.6)	.55 (14.0)	.75 (19.1)
PW100FR-C	Flame Retardant Polyethylene - Natural	100 (30.5)	1.13 (28.7)	.81 (20.6)	1.00 (25.4)
PW100FR-C20	Flame Retardant Polyethylene - Black	100 (30.5)	1.13 (28.7)	.81 (20.6)	1.00 (25.4)
PW150FR-L	Flame Retardant Polyethylene - Natural	50 (15.2)	1.63 (41.4)	1.13 (28.7)	1.50 (38.1)
PW150FR-L20	Flame Retardant Polyethylene - Black	50 (15.2)	1.63 (41.4)	1.13 (28.7)	1.50 (38.1)

## HellermannTyton

### Convuluted Tubing

Convuluted tubing provides an efficient method of routing and protecting wire and cable, while reducing the chance of installation damage. Provides excellent protection against vibration wear, water, snow, ice and the effects of heat, cold and sunlight on cables and wires.



Part #	Description	Package Quantity
CTP140STD	1/4" Black Polyethylene	3,200'
CTP380STD	3/8" Black Polyethylene	1,900'
CTP120STD	1/2" Black Polyethylene	1,100'
CTP580STD	5/8" Black Polyethylene	800'
CTP340STD	3/4" Black Polyethylene	550'
CTP10STD	1" Black Polyethylene	300'
CTP1140STD	1 1/4" Black Polyethylene	250'
CTP1120STD	1 1/2" Black Polyethylene	150'
CTP20STD	2" Black Polyethylene	100'

### Spiralwrap

Designed to be wrapped around a group of cables. Ideal for shielding, organizing and controlling bundles. This protective sheathing also allows for flexible routing and lead-out of wire and cable. Offered in many sizes and colors, Spiralwrap is reusable and adaptable to any telecom closet, network or office environment. Helps to maintain minimum bend radius requirements for wires. X = Available colors: 9 (Natural-White) or 0 (Black). Package quantity is 100.



### Non-Flame Retardant Polyethylene

Part #	Outside Dia. (in.)	Wall Thickness (in.)	Pitch (in.)	Max Bundle (in.)
1NFP(X)C	.125	.032	.187	1/16 to 1/2
2NFP(X)C	.250	.045	.375	3/16 to 2
2.5NFP(X)C	.375	.052	.438	5/16 to 3
3NFP(X)C	.500	.062	.563	3/8 to 4
4NFP(X)C	.750	.065	.750	3/4 to 5
5NFP(X)C	1.000	.095	1.000	1 to 7

## HellermannTyton

### Spiralwrap (cont.)

#### Flame Retardant Polyethylene

Part #	Outside Dia. (in.)	Wall Thickness (in.)	Pitch (in.)	Max Bundle (in.)
1FRP(X)C	.125	.032	.187	1/16 to 1/2
2FRP(X)C	.250	.045	.375	3/16 to 2
2.5FRP(X)C	.375	.052	.438	5/16 to 3
3FRP(X)C	.500	.062	.563	3/8 to 4
4FRP(X)C	.750	.065	.750	3/4 to 5
5FRP(X)C	1.000	.095	1.000	1 to 7

#### Nylon

Part #	Outside Dia. (in.)	Wall Thickness (in.)	Pitch (in.)	Max Bundle (in.)
1N(X)C	.125	.015	.187	1/16 to 1/2
2N(X)C	.250	.025	.375	3/16 to 2
2.5N(X)C	.375	.035	.438	5/16 to 3
3N(X)C	.500	.035	.5	3/8 to 4
4N(X)C	.750	.032	.750	1/2 to 5
5N(X)C	1.000	.032	1.000	1 to 7

# Installation Accessories - Tubing



## FIT®-105 Flexible Irradiated PVC Heat Shrink Tubing

Operating temperature is -20°C to 105°C. Shrinkage ratio is approximately 2 to 1 at 100°C. All standard packages are black (white available in certain sizes). Tensile strength is 2000 psi (141 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Self extinguishing. Dielectric strength is 400V/mil (158 kV/cm). Dimensions in inches (mm).

Part #	Min. Supplied I.D.	Max. Recovered I.D.	Spools Tot. Ftg.
FIT-105-1	1.000 (25,40)	0.500 (12,70)	100
FIT-105-1/16	0.062 (1,58)	0.031 (0,78)	500
FIT-105-1/2	0.500 (12,70)	0.250 (6,35)	100
FIT-105-1/4	0.250 (6,35)	0.125 (3,18)	100
FIT-105-1/8	0.125 (3,18)	0.062 (1,58)	100
FIT-105-1-1/2	1.500 (38,10)	0.750 (19,10)	25
FIT-105-3/64	0.046 (1,17)	0.023 (0,58)	500
FIT-105-3/8	0.375 (9,53)	0.187 (4,75)	100
FIT-105-2	2.000 (50,80)	1.000 (25,40)	50
FIT-105-3/32	0.093 (2,36)	0.046 (1,17)	100
FIT-105-3/4	0.750 (19,10)	0.375 (9,53)	100
FIT-105-3/16	0.187 (4,75)	0.093 (2,36)	100

## FIT®-221 General Purpose, Irradiated Polyolefin Heat Shrink Tubing

Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 2 to 1 at 121°C. Four foot lengths are 3/64 to 2 inch - black, white, clear, red, yellow, blue, green; 3 and 4 inch - black, and clear. Six inch lengths are 3/64 to 1 inch - black, white, clear, red, yellow, blue, green; 1-1/2 to 3 inch - black and clear. 1/2 or 1 inch cut pieces: black. Tensile strength is 1500 psi, (106 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -5%. Specific gravity is 1.35. Secant modulus is 2.5 x 10(4) max. Self-extinguishing. Passes copper stability test. No fungus growth. Dielectric strength is 500V/mil (197 kV/cm). 10(14) ohm-cm volume resistivity. MIL-DTL-23053/5C, Class 1,2. UL standard 224 (except for clear) and CSA standard 198 (except for clear). Dimensions in inches (mm).



Part #	Min. Supplied I.D.	Max. Recovered I.D.	4 Ft. Lgths Total Ftg.
FIT-221-1	1.000 (25,40)	0.500 (12,70)	20
FIT-221-1/16	0.063 (1,60)	0.031 (0,78)	100
FIT-221-1/2	0.500 (12,70)	0.250 (6,35)	20
FIT-221-1/4	0.250 (6,35)	0.125 (3,18)	100
FIT-221-1/8	0.125 (3,18)	0.062 (1,58)	100
FIT-221-1-1/2	1.500 (38,10)	0.750 (19,10)	20
FIT-221-2	2.000 (50,80)	1.00 (25,40)	20
FIT-221-3	3.000 (76,20)	1.500 (38,10)	8
FIT-221-3/16	0.187 (4,75)	0.093 (2,36)	100
FIT-221-3/32	0.093 (2,36)	0.046 (1,17)	100
FIT-221-3/4	0.750 (19,10)	0.375 (9,53)	20
FIT-221-3/64	0.046 (1,17)	0.023 (0,58)	100
FIT-221-3/8	0.375 (9,53)	0.187 (4,75)	100
FIT-221-4	4.000 (101,60)	2.000 (50,80)	8

## FIT®-221B Bulk Pkgs, Irradiated Polyolefin Heat Shrink Tubing

Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 2 to 1 at 121°C. Bulk package colors are black and clear. Tensile strength is 1500 psi (106 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -5%. Specific gravity is 1.35. Secant modulus is 2.5 x 10(4) max. Self-extinguishing. Passes copper stability test. Volume resistivity is 10(14) ohm-cm. MIL-DTL-23053/5C, Class 1, 2; UL Standard 224 (except for clear) and CSA Standard 198 (except clear). Dimensions in inches (mm).



Part #	Min. Supplied I.D.	Max. Rec. I.D.	Total Fig.
FIT-221B-1/16	0.063 (1,60)	0.031 (0,78)	3000
FIT-221B-1/4	0.250 (6,35)	0.125 (3,18)	500
FIT-221B-1/8	0.125 (3,18)	0.062 (1,58)	1500
FIT-221B-3/16	0.187 (4,75)	0.093 (2,36)	1000

## FIT®-221V Low Shrink Temp, Flame Retardant Irradiated Polyolefin Heat Shrink Tubing

Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 2 to 1 at 90°C. Standard 4 ft. lengths and spools are black, white, red, yellow, green and blue. Bulk 4 ft. lengths and spools are black only. Six inch pieces are black only. Tensile strength is 1500 psi, (106kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -5%. Specific gravity is 1.35. Self-extinguishing (UL VW-1, CSA OFT). Passes copper stability test. No fungus growth. Dielectric strength is 500V/ mil (197kV/cm) 10(14) ohm-cm volume resistivity. MIL-DTL-23053/5C, Class 1 and 3. UL standard 224 and CSA standard 198. Passes UL VW-1 and CSA OFT flame tests. Dimensions in inches (mm).

Part #	Min. Supplied I.D.	Max. Rec. I.D.	Spool Total Ftg.
FIT-221V-1	1.000 (25, 40)	.500 (12, 70)	250
FIT-221V-1/16	0.063 (1, 60)	0.031 (0, 78)	1000
FIT-221V-1/2	0.500 (12, 70)	.250 (6, 35)	150
FIT-221V-1/4	0.250 (6, 35)	0.125 (3, 18)	250
FIT-221V-1/8	0.125 (3, 18)	0.062 (1, 58)	500
FIT-221V-1-1/2	1.500 (38, 10)	0.750 (19, 10)	125
FIT-221V-2	2.000 (50, 80)	1.000 (25, 40)	125
FIT-221V-3/16	0.187 (4, 75)	0.093 (2, 36)	500
FIT-221V-3/32	0.093 (2, 36)	0.046 (1, 17)	500
FIT-221V-3/4	0.750 (19, 10)	0.375 (9, 53)	250
FIT-221V-3/64	0.046 (1, 17)	0.023 (0, 58)	1000
FIT-221V-3/8	0.375 (9, 53)	0.187 (4, 75)	200

## FIT®-260 Irradiated Polyolefin Ground Identification

Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 2 to 1 at 120°C. All standard package colors are green with yellow stripe. Each color will cover at least 30% of the surface area. Tensile strength is 1500 psi (106 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -5%. Self-extinguishing. No fungus growth. Water absorption is 0.1% maximum. Chemical resistance is JP-4, Skydrol 500, Aviation Gas and Hydraulic Fuel. Dielectric strength is 500V/mil (197kV/cm) Volume resistivity is 10(14) ohm-cm. UL Standard 224, CSA Standard 198 and NEC Article 250-57B, Exception 3. Dimensions in inches (mm).

Part #	Min. Supplied I.D.	Max. Rec. I.D.	Spools Total Ftg.
FIT-260-1	1.024 (26,00)	0.512 (14,00)	100
FIT-260-1/2	0.472 (11,98)	0.236 (6,00)	250
FIT-260-1/4	0.236 (6,00)	0.118 (2,99)	250
FIT-260-1/8	0.118 (3,00)	0.059 (1,50)	500
FIT-260-3/4	0.748 (18,99)	0.355 (9,02)	250
FIT-260-3/8	0.315 (8,00)	0.158 (4,01)	250

# Installation Accessories - Tubing



## FIT®-295 Series - Semi-Rigid Irradiated Polyolefin

Choose for 30% stronger than standard polyolefin, 25% stiffer than standard polyolefin, low water absorption, resistance to water, fungus and UV light. Applications include: Strength and stiffness make it excellent for strain relief applications, heavy duty cable/connector protection, electrical cable splices, crimp terminals, solder joints. Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 2 to 1 at 135°C. Color description: 3/64 inch - yellow, black, clear; 1/16 inch - white, black, clear; 3/32 inch - blue, black, clear; 1/8 inch - red, black, clear; 3/16 inch - green, black, clear; 1/4 inch - slate, black, clear; 3/8 inch - brown, black, clear; 1/2 inch - white, black, clear. Tensile strength is 2000 psi (141 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -5%. Specific gravity is 1.35. Self-extinguishing. Non-corrosive and no fungus growth. Water absorption is 0.5%. Dielectric strength is 500V/mil (197 kV/cm). Volume resistivity is 10(14) ohm-cm. MIL-DTL-23053/6D, Class 1, 2; UL Standard 224 (except for clear) and CSA Standard 198 (black only).

Part #	Min. Supplied I.D. inches (mm)	Max. Rec. I.D. inches (mm)	Nom. Rec. Wall Thickness inches (mm)	Std. Pkg. 4 Ft. Total Ftg.	Std. Pkg. No. Cut Pieces 6 inches
FIT-295-1/16	0.063 (1,60)	0.032 (0,81)	0.020 (0,50)	100	36
FIT-295-1/2	0.500 (12,70)	0.250 (6,35)	0.030 (0,76)	20	14
FIT-295-1/4	0.250 (6,35)	0.125 (3,18)	0.025 (0,63)	100	20
FIT-295-1/8	0.125 (3,18)	0.063 (1,60)	0.020 (0,50)	100	28
FIT-295-3/16	0.187 (4,75)	0.093 (2,36)	0.025 (0,63)	100	24
FIT-295-3/32	0.093 (2,36)	0.045 (1,14)	0.020 (0,50)	100	32
FIT-295-3/64	0.046 (1,17)	0.023 (0,58)	0.020 (0,50)	100	40
FIT-295-3/8	0.375 (9,53)	0.187 (4,75)	0.030 (0,76)	100	16

## FIT®-300 Series - Surface Irradiated/Dual Extruded Polyolefin

Choose for meltable inner wall, encapsulates without adhesive, temporary sealing without sticky residue, increased wall thickness for added protection, high shrink ratios and excellent dielectric properties. Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 6 to 1 or 3 to 1 at 135°C depending on size. Color description: 1/8 inch - brown, black; 3/16 inch - slate, black; 1/4 inch - white, black; 3/8 inch - red, black; 1/2 inch - blue, black; 3/4 inch - yellow, black; 3/10 inch - blue, black. Tensile strength is 1500 psi (106 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -10%. Specific gravity is 0.99. Non-corrosive and no fungus growth. Water absorption is 0.1%. Dielectric strength is 500V/mil (197 kV/cm). Volume resistivity is 10(14) ohm-cm. MIL-DTL-23053/4D, Class 1 and UL Standard 224 (black only). Dimensions in inches (mm).



Part #	Min. Supplied I.D.	Max. Rec. I.D.	Nom. Rec. Wall Thick.	Total Nom. Rec. Meltable Wall Thick.
FIT-300-1/2	0.500 (12,70)	0.195 (4,95)	0.055 (1,40)	0.035 (0,88)
FIT-300-1/4	0.250 (6,35)	0.080 (2,03)	0.047 (1,19)	0.027 (0,68)
FIT-300-1/8	0.125 (3,18)	0.023 (0,58)	0.038 (0,96)	0.020 (0,50)
FIT-300-3/10	0.300 (7,62)	0.050 (1,27)	0.100 (2,54)	0.065 (1,65)
FIT-300-3/16	0.187 (4,75)	0.060 (1,52)	0.043 (1,09)	0.025 (0,63)
FIT-300-3/4	0.750 (19,10)	0.313 (7,95)	0.065 (1,65)	0.040 (1,02)
FIT-300-3/8	0.375 (9,53)	0.135 (3,43)	0.050 (1,27)	0.030 (0,76)



## FIT®-321V Low Shrink Temp., Flame Retardant Irradiated Polyolefin

Choose for lowest shrink temperature (90°C). Fastest recovery time reduced wall thickness and UL VW-1 and CSA OFT Flame retardancy. Operating temperature is -55°C to 125°C. Shrinkage ratio is approximately 3 to 1 at 90°C. All standard packages are black and white.



Part #	Minimum Supplied I.D. inches (mm)	Maximum Expanded inches (mm)	Nom. Rec. Wall Thickness inches (mm)
FIT-321V-3/32	0.093 (2,36)	0.031 (0,8)	0.023 (0,58)
FIT-321V-1/8	0.125 (3,18)	0.042 (1,1)	0.023 (0,58)
FIT-321V-1/4	0.250 (6,35)	0.083 (2,2)	0.023 (0,58)
FIT-321V-3/8	0.375 (9,50)	0.125 (3,2)	0.023 (0,58)
FIT-321V-1/2	0.500 (12,70)	0.166 (4,3)	0.024 (0,61)
FIT-321V-3/4	0.750 (19,10)	0.250 (6,4)	0.024 (0,61)
FIT-321V-1 IN	1.000 (25,40)	0.333 (8,5)	0.024 (0,61)

## FIT®-421 Series - Over Expanded, Irradiated Polyolefin

Choose for large supplied diameter sizes; resistance to water, fungus, UV light; shrinks to 25% of its original size; conforms to odd shapes. Operating temperature is -55°C to 135°C. Shrinkage ratio is approximately 4 to 1 at 121°C. All standard packages color is black. Tensile strength is 1500 psi (106 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -10%. Specific gravity is 1.35. Self-extinguishing. Non-corrosive and no fungus growth. Dielectric strength is 500V/mil (197 kV/cm). Volume resistivity is 10(14) ohm-cm. MIL-DTL-23053/5C, Class 1 Over Expanded. Dimensions in inches (mm).



Part #	Min. Supplied I.D.	Max. Rec. I.D.	Nom. Rec. Wall Thick.
FIT-421-1	1.000 (25,40)	0.275 (6,99)	0.045 (1,14)
FIT-421-1-1/2	1.500 (38,10)	0.375 (9,53)	0.045 (1,14)
FIT-421-2	2.000 (50,80)	0.550 (13,97)	0.045 (1,14)
FIT-421-3	3.000 (76,20)	0.810 (20,57)	0.045 (1,14)
FIT-421-4	4.000 (101,60)	1.050 (26,67)	0.045 (1,14)

## FIT®-500 Series - Temperature/Chemical Resistant TFE Teflon

Choose for supreme chemical resistance, most extreme temperature range, highest tensile strength, unmatched dielectric properties, extremely thin wall thickness, low friction coefficient. Operating temperature is -67°C to 250°C. Shrinkage ratio is approximately 1.5 to 1 at 327°C. Standard package color is natural. Tensile strength is 2500 psi (176 kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -20%. Specific gravity is 2.20. Self-extinguishing. Non-corrosive and no fungus growth. Water absorption is 0.01%. Dielectric strength is 800V/mil (315 kV/cm). Volume resistivity is 10(18) ohm-cm. MIL-DTL-23053/12C, Class 3. Dimensions in inches (mm).



Part #	Min. Supplied I.D.	Max. Rec. I.D.	Nom. Rec. Wall Thickness
FIT-500-0	0.470 (11,90)	0.347 (8,81)	0.015 (0,38)
FIT-500-10	0.191 (4,85)	0.112 (2,84)	0.012 (0,30)
FIT-500-12	0.150 (3,81)	0.089 (2,26)	0.012 (0,30)
FIT-500-14	0.120 (0,35)	0.072 (1,83)	0.012 (0,30)
FIT-500-16	0.093 (2,36)	0.061 (1,55)	0.012 (0,30)
FIT-500-18	0.076 (1,93)	0.049 (1,24)	0.012 (0,30)
FIT-500-2	0.430 (8,64)	0.278 (7,06)	0.015 (0,38)
FIT-500-20	0.060 (1,52)	0.039 (0,99)	0.012 (0,30)
FIT-500-22	0.055 (1,40)	0.032 (0,81)	0.010 (0,25)
FIT-500-24	0.050 (1,27)	0.027 (0,69)	0.010 (0,25)
FIT-500-26	0.046 (1,17)	0.022 (0,56)	0.009 (0,23)
FIT-500-28	0.038 (0,97)	0.018 (0,46)	0.009 (0,23)
FIT-500-30	0.034 (0,86)	0.015 (0,38)	0.009 (0,23)
FIT-500-4	0.370 (9,40)	0.224 (5,69)	0.015 (0,38)
FIT-500-6	0.302 (7,67)	0.178 (4,52)	0.015 (0,38)
FIT-500-8	0.240 (6,10)	0.141 (3,58)	0.015 (0,38)

# Installation Accessories - Tubing



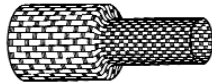
## FIT®-621 Series - Heavy Wall Adhesive Lined Irradiated Polyolefin

Choose for over expanded to a 6 to 1 shrink ratio, shrinks to 1/6 its original size, heavy duty adhesive inner lining, low water absorption, excellent durability and toughness, resistant to oils and chemicals, convenient pre-cut six inch lengths. Operating temperature is -55°C to 90°C. Shrinkage ratio is approximately 6 to 1 at 121°C. All standard package colors are black. Tensile strength is 1200 psi (84kg/cm<sup>2</sup>). Ultimate elongation is 200%. Longitudinal shrinkage is -10%. Specific gravity is 1.4. Low temperature flexibility to -55°C (no cracking). Non-corrosive. No fungus growth. Water absorption is 0.5%. Chemical resistance is JP-8 hydraulic fluids, deicing fluid and lubricating oil. Dielectric strength is 200V/mil (79 kV/cm) Volume resistivity is 10(13) ohm-cm. Dimensions in inches (mm).

Part #	Min. Supplied I.D.	Max. Rec. I.D.	Nom. Rec. Wall Thickness
FIT-621-5/8	0.60 (15,24)	0.150 (3,81)	0.060 (1,52)
FIT-621-1-1/4	1.25 (31,75)	0.220 (5,59)	0.059 (1,49)
FIT-621-2	2.00 (50,80)	0.275 (9,50)	0.105 (2,70)
FIT-621-2-1/2	2.50 (63,50)	0.500 (12,70)	0.120 (3,05)
FIT-621-3	3.00 (76,20)	0.750 (19,05)	0.120 (3,05)
FIT-621-4	4.00 (101,60)	0.900 (22,86)	0.140 (3,55)

## FIT® FAB Highly Flexible Heat Shrinkable Woven Fabric Tubing

Choose for superior abrasion resistance over a wide temperature range. Outstanding flexibility and durability. Tight grip without additional fixing. Ease of installation. Resistance to harsh environments. Soft, safe handling and cuts with scissors. Operating temperature is -40°C to 125°C. Shrinkage ratio is approximately 2 to 1 or 3 to 1 at 135°C depending on size. All standard packages are black. On-Rec. Wall Thickness inches (mm) is 0.039 (0,99).

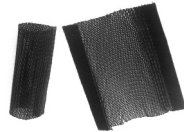


Part #	Approx. Shrink Ratio	Minimum Supplied I.D. inches (mm)	Maximum Rec. I.D. inches (mm)
FIT-FAB-1	2 to 1	0.47 (12,0)	0.24 (6,0)
FIT-FAB-2	2 to 1	0.79 (20,0)	0.39 (10,0)
FIT-FAB-3	2 to 1	1.18 (30,0)	0.59 (15,0)
FIT-FAB-4	2 to 1	1.57 (40,0)	0.79 (20,0)
FIT-FAB-5	2 to 1	1.97 (50,0)	0.98 (25,0)
FIT-FAB-6	2 to 1	2.36 (60,0)	1.18 (30,0)
FIT-FAB-7	2 to 1	2.76 (70,0)	1.38 (35,0)
FIT-FAB-8	3 to 1	0.71 (18,0)	0.24 (6,0)
FIT-FAB-9	3 to 1	1.18 (30,0)	0.39 (10,0)
FIT-FAB-10	3 to 1	2.36 (60,0)	0.79 (20,0)



## Expandable Polyester Webbed Sleeveing - ZIP-GRP

This sleeveing is for unlimited breakouts, abrasion, cut-through resistance and oil and solvent resistance. Applications are cut-resistant covering for wire, cable and hoses. Wire bundling and harnessing. All standard packages are black. Operating temperature is -70°C to 125°C. Typical wall thickness in inches (mm) is 0.025 (0,635). Standard put-up spools in feet are 25 or 50.



Part #	Min. Supplied I.D. - In. (mm)	Max. Expanded I.D. - In. (mm)
ZIP-GRP-7/8	0.750 (19,1)	1.000 (25,4)
ZIP-GRP-1-1/2	1.000 (25,4)	2.000 (50,8)
ZIP-GRP-2	1.500 (38,1)	2.125 (53,9)



## Zipper Tubing

Designed to provide a professional finish to wiring installations by eliminating exposed wiring and providing added protection against flame, chemicals and abrasion. Manufactured from the highest quality, high temperature, stabilized PVC. It is the ideal jacketing material for use in harsh environments and for use in the production or repair of pre-wired harness assemblies. Standard package spool lengths in feet are 25 and 100.



Part #	Nom. Inside Dia. - In. (mm)	Nom. Flat Width - In. (mm)
ZIP-41-1/2	1/2 (12,7)	2 (50,8)
ZIP-41-5/8	5/8 (15,8)	2-3/8 (60,3)
ZIP-41-3/4	3/4 (19,0)	2-3/4 (69,8)
ZIP-41-7/8	7/8 (22,2)	3-1/8 (79,8)
ZIP-41-1	1 (25,4)	3-9/16 (90,4)
ZIP-41-1-1/4	1-1/4 (31,7)	4-1/8 (104,7)
ZIP-41-1-1/2	1-1/2 (38,1)	4-7/8 (123,8)
ZIP-41-1-3/4	1-3/4 (44,4)	5-5/8 (142,8)
ZIP-41-2	2 (50,8)	6-3/8 (161,9)
ZIP-41-2-1/4	2-1/4 (57,1)	7-1/2 (190,5)
ZIP-41-3	3 (76,2)	10 (254,0)

## Expandable Braided Polyester Sleeveing

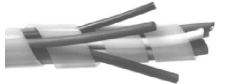
Offers high flexibility with high resistance to abrasion and cut-through. The open weave allows for a great range of expansion of the sleeving diameter, thus ensuring ease of installation and gripping action over a wide range of shapes and sizes. Ideal protective sleeve for wire bundles, harnesses, pneumatic hoses, hydraulic lines and highly polished or threaded machine parts. Standard put-up spools in feet are 100 and 500. Nominal wall thickness in inches (mm) is 0.025 (0,63).



Part #	Min. Supplied I.D. - In. (mm)	Max. Expanded I.D. - In. (mm)
GRP-110-1/8	0.093 (2,36)	0.250 (6,35)
GRP-110-1/4	0.125 (3,18)	0.437 (11,09)
GRP-110-1/2	0.250 (6,35)	0.750 (19,05)
GRP-110-3/4	0.500 (12,70)	1.250 (31,75)
GRP-110-1-1/4	0.750 (19,05)	1.750 (44,45)
GRP-110-1-3/4	1.250 (31,75)	2.750 (69,85)
GRP-110-2	1.500 (38,10)	3.500 (88,90)

## Spiral Wrap Tubing

Wraps tightly to the wire and cable being bundled, yet is flexible and simple to apply. All types maintain flexibility even when bent around sharp edges. Breakouts or tapoff connections may be made through the openings of the wrap. SW spiral wrap is constructed from several semi-rigid tubing materials and then cut on a continual spiral.



## Clear Polyethylene

Ideal for general indoor applications. This cost-effective material is extremely abrasion resistant and is unaffected by most solvents. Max. Oper. Temperature is 80°C (176°F) and minimum is -20°C (-4°F). Not flame retardant. Color is natural.

Part #	Size In.	Standard Put-Up Ft.	Nom. O.D. Inches	Nom. Wall Thickness In.	Max. Dia. Inner Wire Bundle Inches
SW-1	1/8	25, 100, 500	0.125	0.031	1/2
SW-2	1/4	25, 100, 500	0.250	0.046	2
SW-3	3/8	25, 100	0.375	0.052	3
SW-4	1/2	25, 100	0.500	0.062	4
SW-5	3/4	25, 100, 500	0.750	0.065	5
SW-6	1	25, 100, 500	1.000	0.095	6

# Installation Accessories - Tubing



## Spiral Wrap Tubing (cont.)

### Fire Resistant Polyethylene

A cost-effective alternative to Nylon or Teflon. This special material is self-extinguishing. Max. operating temperature is 80°C (176°F) and minimum is -20°C (-4°F). Flammability is 94V-0. Color is white.

Part #	Size In.	Standard Put-Up Ft.	Nom. O.D. Inches	Nom. Wall Thickness In.	Max. Dia. Inner Wire Bundle Inches
SW-10	1/8	25, 100, 500	0.125	0.031	1/2
SW-11	1/4	25, 100, 500	0.250	0.046	2
SW-12	3/8	25, 100	0.375	0.052	3
SW-13	1/2	25, 100	0.500	0.062	4
SW-14	3/4	25, 100	0.750	0.065	5

### Nylon

Highly specialized product that is tough, durable, self-extinguishing, abrasion resistant, lightweight. Operates over a wide temp. range. Max. operating temperature is 120°C (176°F) and minimum is -40°C (-40°F). Flammability is 94V-0. Color is natural.

Part #	Size In.	Standard Put-Up Ft.	Nom. O.D. Inches	Nom. Wall Thickness Inches	Max. Dia. Inner Wire Bundle Inches
SW-20	1/8	25, 100, 500	0.125	0.016	1/2
SW-21	1/4	25, 100, 500	0.250	0.025	2
SW-22	3/8	25, 100	0.375	0.035	3
SW-23	1/2	25, 100	0.500	0.035	4
SW-24	3/4	25, 100	0.750	0.032	5
SW-25	1	25, 100	1.000	0.032	6

### Teflon

Self extinguishing, fluorocarbon, resin material. Possesses greatest min. and max. temp. range of any spiral wrap material. Suitable for use in a number of industrial applications. Standard put-up Ft. is 25, 100. Max. operating temperature is 250°C (482°F) and minimum is -70°C (-94°F). Flammability is self extinguishing. Color is natural.

Part #	Size In.	Nom. O.D. Inches	Nom. Wall Thickness Inches	Max. Dia. Inner Wire Bundle Inches
SW-30	1/8	0.125	0.030	1/2
SW-31	1/4	0.250	0.030	2
SW-32	3/8	0.375	0.030	2-1/2
SW-33	1/2	0.500	0.030	3
SW-34	3/4	0.750	0.032	3-1/2
SW-35	1	1.000	0.040	4

### Ultraviolet-Resistant Black Polyethylene

Recommended for outdoor use. Same properties as clear polyethylene but contains extra additive for moisture resistance ultraviolet light and rain. Max. operating temperature is 80°C (176°F) and minimum is -20°C (-4°F). Not flame retardant. Color is black.

Part #	Size In.	Standard Put-Up Ft.	Nom. O.D. Inches	Nom. Wall Thickness Inches	Max. Dia. Inner Wire Bundle Inches
SW-40	1/8	25, 100, 500	0.125	0.030	1/2
SW-41	1/4	25, 100, 500	0.250	0.045	2
SW-42	3/8	25, 100	0.375	0.050	3
SW-43	1/2	25, 100	0.500	0.060	4
SW-44	3/4	25, 100, 500	0.750	0.065	5
SW-45	1	25, 100, 500	1.000	0.095	6



## Spiral Wrap Tubing (cont.)

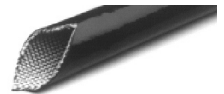
### PVC

Superior taber abrasion resistance, tensile strength, thermal, mechanical and electrical properties. Self-extinguishing flexible product. Standard put-up Ft. is 25, 100. Max. operating temperature is 80°C (176°F) and minimum is -20°C (-4°F). Flammability is self extinguishing. Color is black.

Part #	Size In.	Nom. O.D. Inches	Nom. Wall Thickness Inches	Max. Dia. Inner Wire Bundle Inches
SW-50	1/8	0.125	0.032	1/2
SW-51	1/4	0.250	0.045	2
SW-52	3/8	0.375	0.052	2-1/2
SW-53	1/2	0.500	0.062	3

### PVC Coated Fiberglass Sleeving

Offers high temperature, abrasion and oil resistance. Resists fraying, bending and knotting. Applications are flexible wire harnessing. Operating temperature is -20°C to 130°C. All standard packages are black.



Part #	Nom. Inside Dia. - In. (mm)
PIF-130-20	0.034 (0,86)
PIF-130-18	0.042 (1,07)
PIF-130-16	0.053 (1,35)
PIF-130-14	0.066 (1,68)
PIF-130-12	0.085 (2,16)
PIF-130-10	0.106 (2,09)
PIF-130-8	0.133 (3,38)
PIF-130-6	0.166 (4,22)
PIF-130-4	0.208 (5,28)
PIF-130-2	0.263 (6,68)
PIF-130-0	0.330 (8,38)
PIF-130-3/8	0.375 (9,52)
PIF-130-7/16	0.438 (11,12)
PIF-130-1/2A	0.500 (12,70)
PIF-130-5/8	0.625 (15,88)
PIF-130-3/4	0.750 (19,05)
PIF-130-7/8	0.875 (22,22)
PIF-130-1 IN	1.000 (25,40)



### Convolute Tubing (Split Loom)

Flexible black polyethylene tubing holds groups of wires in position and give the wire excellent protection against abrasion and crushing. Slit for easy insertion of wires, yet the slit remains basically closed when the tubing is bent or twisted. Temperature range of -34c (-30f) to +93c (200f). Available in black, red, blue, green, white, yellow and purple for 1/4", 3/8", 1/2" and 3/4".



Part #	I.D.	Length
5140-C	1/4"	100'
5141-C	3/8"	100'
5142-C	1/2"	100'
5139-C	5/8"	100'
5143-B	3/4"	50'
5144-B	1"	50'

# Installation Accessories - Tubing



## Shrink Tube-Single Wall 2 To 1

### 4' Individual

Part #	ID	Color
8326 6-41	1.5"	White
8317 7-E	1/16"	Yellow
8318 7-E	3/32"	Yellow
8319 7-E	1/8"	Yellow
8320 7-E	3/16"	Yellow
8321 7-E	1/4"	Yellow
8322 7-E	3/8"	Yellow
8323 7-E	1/2"	Yellow
8324 7-E	3/4"	Yellow
8325 7-E	1"	Yellow
8317 8-41	1/16"	Grey
8318 8-41	3/32"	Grey
8319 8-41	1/8"	Grey
8320 8-41	3/16"	Grey
8321 8-41	1/4"	Grey
8322 8-41	3/8"	Grey
8323 8-41	1/2"	Grey
8324 8-41	3/4"	Grey
8325 8-41	1"	Grey
8316C-E	3/64"	Clear
8317C-E	1/16"	Clear
8318C-E	3/32"	Clear
8319C-E	1/8"	Clear
8320C-E	3/16"	Clear
8321C-E	1/4"	Clear
8322C-E	3/8"	Clear
8323C-E	1/2"	Clear
8324C-E	3/4"	Clear
8325C-E	1"	Clear
8326C-41	1.5"	Clear
8327C-41	2"	Clear

### Shrink Tube Adhesive - Dual Wall 3 To 1

Adhesed lined polyolefin, heat shrinkable tubing. This tubing is designed for environmental sealing of electrical components including wire splices, harness breakouts and cable ends from fluids, moisture and corrosion. The adhesive inner lining bonds to a wide variety of substrates. Minimum shrink temperature 90c. Temperature at continuous duty -55c to +135c. Approvals: UL224 vw-1 600v & CSA. MIL DTL 23053/5.

4' Lengths-Individual. Black.

Part #	ID
8329-E	1/8"
8330-E	3/16"
8331-E	1/4"
8332-E	3/8"
8333-E	1/2"
8334-E	3/4"
8335-E	1"
8336-41	1.25"
8337-41	1.5"
8338-41	2"

## Shrink Tube-Single Wall 2 To 1 - 4' Individual

Flexible, flame retarded general purpose, polyolefin heat shrinkable tubing. This tubing is designed to provide superior mechanical, thermal & fluid performance. It is used extensively in military & industrial applications for lightweight harness jackets, insulation, color coding & identification of electrical connections and wire bundles. Minimum shrink temperature 90c.

Part #	ID	Color
8316-E	3/64"	Black
8317-E	1/16"	Black
8318-E	3/32"	Black
8319-E	1/8"	Black
8320-E	3/16"	Black
8321-E	1/4"	Black
8322-E	3/8"	Black
8323-E	1/2"	Black
8324-E	3/4"	Black
8325-E	1"	Black
8326-41	1.5"	Black
8327-41	2"	Black
8328-41	3"	Black
8315-41	4"	Black
8317 1-E	1/16"	Blue
8318 1-E	3/32"	Blue
8319 1-E	1/8"	Blue
8320 1-E	3/16"	Blue
8321 1-E	1/4"	Blue
8322 1-E	3/8"	Blue
8323 1-E	1/2"	Blue
8324 1-E	3/4"	Blue
8325 1-E	1"	Blue
8317 3-E	1/16"	Green
8318 3-E	3/32"	Green
8319 3-E	1/8"	Green
8320 3-E	3/16"	Green
8321 3-E	1/4"	Green
8322 3-E	3/8"	Green
8323 3-E	1/2"	Green
8324 3-E	3/4"	Green
8325 3-E	1"	Green
8316 5-E	3/64"	Red
8317 5-E	1/16"	Red
8318 5-E	3/32"	Red
8319 5-E	1/8"	Red
8320 5-E	3/16"	Red
8321 5-E	1/4"	Red
8322 5-E	3/8"	Red
8323 5-E	1/2"	Red
8324 5-E	3/4"	Red
8325 5-E	1"	Red
8326 5-41	1.5"	Red
8327 5-41	2"	Red
8328 5-41	3"	Red
8315 5-41	4"	Red
8316 6-E	3/64"	White
8317 6-E	1/16"	White
8318 6-E	3/32"	White
8319 6-E	1/8"	White
8320 6-E	3/16"	White
8321 6-E	1/4"	White
8322 6-E	3/8"	White
8323 6-E	1/2"	White
8324 6-E	3/4"	White
8325 6-E	1"	White



# Installation Accessories - Cable Ties

## HellermannTyton

### Cable Ties

Used to bundle and secure wire and cable, these cable ties are engineered and manufactured for maximum performance and quality. Many options of cable ties available. Whether the application demands extra strength, mounting, releasable, identification features or more, HellermannTyton has the cable tie to fit the requirement. Dimensions in inches (mm).



### Heavy Duty Lashing Ties

Ties are natural. For black, replace "9" in part number with "0". Package quantity is 50. For 500, replace suffix "K2" with "H4", where appropriate.

Part #	Min. Tensile Stgth lbs.	Max. Bundle Dia.	Approx. Lgth	Approx. Wdth
T120I9K2	120	3" (76.2)	11-7/8" (301.6)	.30" (7.6)
T120R9K2	120	4" (101.6)	15-1/4" (387.4)	.30" (7.6)
T120S9K2	120	2" (50.8)	8-7/8" (225.4)	.30" (7.6)
T120R9H4	120	4" (101.6)	15-1/4" (387.4)	.30" (7.6)

### Mounting Cable Ties

Ties are natural. For black, replace "9" in part number with "0". Package quantity is 100. For 1000, replace suffix "C2" with "M4".

Part #	Mounting	Min. Tensile Stgth lbs.	Max. Bundle Dia.	Approx. Lgth	Approx. Wdth
T18MR9C2	#4 screw	18	3/4" (19.0)	4-1/4" (107.9)	.10" (2.5)
T50ML9C2	#10 screw	50	4" (101.6)	16"	.18" (4.6)
T50MR9C2	#10 screw	50	1-3/4" (44.4)	8-1/2" (215.9)	.18" (4.6)

### Standard Cable Ties

Ties are natural. For black, replace "9" in part number with "0". Package quantity is 100. For 1000, replace suffix "C2" with "M4".

Part #	Min. Tensile Stgth lbs.	Max. Bundle Dia.	Approx. Lgth	Approx. Wdth
T18L9C2	18	2" (50.8)	8" (203.2)	.10" (2.5)
T18R9C2	18	3/4" (19.0)	4" (101.6)	.10"
T30R9C2	30	1-1/4" (31.8)	6" (152.4)	.14" (3.6)
T40I9C2	40	3" (76.2)	11-1/2" (292.1)	.16"
T40L9C2	40	4" (101.6)	14-1/2" (368.3)	.16"
T40R9C2	40	2" (50.8)	8-1/4" (215.9)	.16"
T50I9C2	50	3" (76.2)	11-3/4" (298.5)	.18" (4.6)
T50L9C2	50	4" (101.6)	15-1/2" (393.7)	.18" (4.6)
T50R9C2	50	2" (50.8)	8" (203.2)	.18" (4.6)
T18R9M4	18	3/4" (19.0)	4" (101.6)	.10" (2.5)
T30R9M4	30	1-1/4" (31.8)	6" (152.4)	.14" (3.6)
T50I9M4	50	3" (76.2)	11-3/4" (298.5)	.18" (4.6)
T30L9M4	30	4" (101.6)	14-1/4" (362)	.15" (3.8)
T40I9M4	40	3" (76.2)	11-1/2" (292.1)	.15" (3.8)
T30LL9C2	30	3" (76.2)	11-1/4" (285.8)	.14" (3.6)
T30XL9C2	30	4" (101.6)	14-1/4" (362)	.14" (3.6)
T30L9C2	30	2" (50.8)	8" (203.2)	.14" (3.6)

## HellermannTyton

### Cable Ties (cont.)

#### Cable Ties for Plenum Applications

UL and Halar cables ties met NEC regulations and can be used in applications where low smoke and low flame are a concern in air handling spaces. Manufactured using UL 94V-0 rated raw material. Measurements in inches (mm).

Part #	Min. Tensile Unlocking Strength	Max. Bundle Diameter	Approx. Length	Approx. Width
T18R2HALC2	14 lbs	7/8 (22.2)	4 (101.6)	.10 (2.5)
T50R2HALC2	40 lbs.	1 3/4 (44.5)	8 (203.2)	.18 (4.6)

#### Identification Cable Ties

Allows for fastening and identifying bundles of wire and cable in one operation. Each style offers a large flat area for imprinting, placing a label or writing the information directly onto the tie. Hot stamping is also available. Ties are natural. For black, replace "9" in part number with "0".



Part #	Tensile Strength	Bundle (in.)	Length (in.)	Width (in.)	Marking Pad	Qty
IT18R9C2	18 lbs.	3/4	4	.10	1 x 19/64	100
IT18R9L4	18 lbs.	3/4	4	.10	1 x 19/64	200
IT18FL9C2	18 lbs.	3/4	4 1/4	.10	13/16 x 5/16	100
IT18FL9L4	18 lbs.	3/4	4 1/4	.10	13/16 x 5/16	200
IT50R9C2	50 lbs.	1 3/4	8	.18	1 x 7/16	100
IT50R9M4	50 lbs.	1 3/4	8	.18	1 x 7/16	1000
IT50RD9K2	50 lbs.	1 3/4	8	.18	1 11/64 x 15/16	50
IT50RT9K2	50 lbs.	1 3/4	8	.19	1 13/64 x 15/16	50
IT50L9C2	50 lbs.	4	15	.19	1/2 x 2 1/8	100
IT50L9M4	50 lbs.	4	15	.19	1/2 x 2 1/8	1000

#### Stainless Steel Ties

Designed to secure hoses, cables, poles, pipes and more when harsh environmental conditions may adversely affect the bundling application. Used where corrosion, vibration, weathering, radiation and temperature extremes are a concern. Can be used in virtually any indoor, outdoor and underground application. Dimensions in inches.



#### Stainless Steel Ties: 316 Material

Grade 316 material is highly resistant to corrosion and widely used in marine environments where chemicals, salts, acids and temperature extremes may affect the bundling application. Designed with a low profile, enclosed bearing head.

Part #	Min. Tensile Strength	Max Bundle	Length	Width	Qty
MBT5S	150 lbs.	1	5	.18	100
MBT8S	150 lbs.	2	7.9	.18	100
MBT14S	150 lbs.	4	14.3	.18	100
MBT20S	150 lbs.	6	20.5	.18	100
MBT27S	150 lbs.	8	26.8	.18	100
MBT33S	150 lbs.	10	33.0	.18	100
MBT8H	250 lbs.	2	7.9	.31	50
MBT14H	250 lbs.	4	14.3	.31	50
MBT20H	250 lbs.	6	20.5	.31	50
MBT27H	250 lbs.	8	26.8	.31	50
MBT33H	250 lbs.	10	33	.31	50



# Installation Accessories - Cable Ties

HellermannTyton

HellermannTyton

## Stainless Steel Ties (cont.)

### Stainless Steel Ties: 304 Material

Grade 304 material is commonly used for stainless steel bundling applications and suits most general purpose requirements. It features the ability to withstand most environmental conditions, particularly in applications where vibration, general weathering, radiation and temperature extremes are a concern. Designed with a low profile clamping bearing head.

Part #	Min. Tensile Strength	Max Bundle	Length	Width	Qty
MBT5S-S	150 lbs.	1	5	.18	100
MBT8S-S	150 lbs.	2	7.9	.18	100
MBT14S-S	150 lbs.	4	14.3	.18	100
MBT20S-S	150 lbs.	6	20.5	.18	100
MBT27S-S	150 lbs.	8	26.8	.18	100
MBT33S-S	150 lbs.	10	33.0	.18	10
MBT8H-S	250 lbs.	2	7.9	.31	50
MBT14H-S	250 lbs.	4	14.3	.31	50
MBT20H-S	250 lbs.	6	20.5	.31	50
MBT27H-S	250 lbs.	8	26.8	.31	50
MBT33H-S	250 lbs.	10	33	.31	50

## Releasable Cable Ties

In applications that require frequent cable moves. Ties are natural. For black, replace "9" in part number with "0". Package quantity is 100. For 1000, replace suffix "C2" with "M4".



Part #	Min. Tensile Strength	Max Bundle (in.)	Length (in.)	Width (in.)
RT40R0C2	34 lbs.	2	8 1/2	.16
RT50S9C2	50 lbs.	1 3/8	6 1/2	.18
RT50LL9C2	50 lbs.	4	15	.18

## Wide Strap Heavy Duty Cable Ties

Minimizes pinching on soft bundles and features a low profile head to provide compact bundling. A thinner strap provides increased flexibility for improved ergonomics. Clamping rails on the bottom of head to increase grip on round bundles. Accommodates a large range of bundle diameters: .375" - 4.125" (9.5mm - 104.7mm). Bent tip for quick insertion into mounts. Black.

Part #	Type	Min Tensile Strength lbs (N)	Lgth in (mm)	Max Bundle in (mm)	Width in (mm)
111-12303	WSS	120 (534)	9.1 (231.14)	2.25 (57.15)	.5 (12.7)
111-12304	WSI	120 (534)	12.1 (307.34)	3.25 (82.55)	.5 (12.7)
111-12305	WSR	120 (534)	15.1 (383.54)	4.125 (104.78)	.5 (12.7)

## Cable Tie Mount

Designed to provide stability to wire bundles, these mounts can accommodate miniature, intermediate or standard cross-section cable ties. Each mount is secured with a single screw. Mounts are white. Package quantity is 100. For 1000, replace suffix "C2" with "M4".



Part #	Cable Tie Series	Mount Type	Dimensions (in.)
CTM10C2	T18-T50	#6 Screw	.375 x .578
CTM110C2	T18-T50	#8 Screw	.370 x .579
CTM210C2	T18-T120	#8 Screw	.605 x .857
CTM310C2	T18-T120	#10 Screw	.609 x .853
CTM410C2	T18-T120	.250" Screw	.616 x .864

## Cable Tie Mounting Base

Used in conjunction with cable ties, these mounting bases stabilize and secure wire and cable to most surfaces. Provided with or without adhesive. Insertion of ties can be made from all four sides. Manufactured from white and black nylon 6/6. Mounts are white. For black, replace "10" in part number with "0". Package quantity is 100. For 1000, replace suffix "C2" with "M4"

Part #	Cable Tie Series	Mount Type	Dimensions (in.)
MB2.510C2	T18	#3 Screw	0.625 x 0.625
MB2.5A10C2	T18	Adhesive	0.625 x 0.625
MB310C2	T18, T30	#4 Screw	0.75 x 0.75
MB3A10C2	T18, T30	Adhesive	0.75 x 0.75
MB410C2	T18, T50	#8 Screw	1.12 x 1.12
MB4A10C2	T18, T50	Adhesive	1.12 x 1.12
MB510C2	T18, T150	#8 Screw	1.485 x 1.485
MB5A10C2	T18, T150	Adhesive	1.485 x 1.485

## Cable Tie Installation Tools

Cable tie tension and cut-off tools reduce operator fatigue and speed assembly. Specifically developed for maximum ergonomic and performance values, the Mark 7 and Mark 9 series tools combine reduced hand effort and durable components to ensure efficient assembly and a longer life cycle.



Part #	Stroke	Weight	Cable Tie Series
MK7	1 inch	10 oz.	T18 thru T250 Series and CTT20 thru CTT60
MK9	5/8 inch	13 oz.	T18 thru T250 Series and CTT20 thru CTT175 and EL-TY Series

## High Tension Cable Tie Installation Tools

High tension versions of both the Mark 7 & Mark 9 tools offer the same design features as their standard counterparts but w/ higher cut-off tension capabilities.

Part #	Stroke	Cable Tie Series
MK7HT	5/8 inch	T30 thru T250 Series and CTT20 thru CTT60
MK9HT	5/8 inch	T18 thru T250 series, CTT20 thru CTT175 series, EL-TY series and Wide Strap series

## Nail Clips

Tough, precision engineered clips hold wire and cable securely in place. The nail is hardened for driving into wood, masonry joints, cinder block and mortar. The nails are also perpendicular to the work surface and are driven in straight, greatly reducing cracking. The nail clips do not have sharp edges, which reduce the chance of cutting cable jackets or sheaths and causing signal loss. The black clips are UV stabilized. Nail length is 1.0". Package quantity is 100.

Part #	Nom. Cable Dia. in. (mm)	Color	Coaxial Cable
NC3.50	.138 (3.5)	Black	14# Ground Wire Telecom 1 Pair
NC3.510	.138 (3.5)	White	14# Ground Wire Telecom 1 Pair
NC50	.197 (5.0)	Black	Telecom 4 Pair
NC510	.197 (5.0)	White	Telecom 4 Pair
NC60	.236 (6.0)	Black	Telecom 6 Pair, RG59
NC610	.236 (6.0)	White	Telecom 6 Pair, RG59
NC70	.276 (7.0)	Black	RG6 and RG59 Double Shielded
NC710	.276 (7.0)	White	RG6 and RG59 Double Shielded
NC80	.315 (8.0)	Black	Telecom 10 Pair RG7 and RG6 Double and Quad Shielded
NC810	.315 (8.0)	White	Telecom 10 Pair RG7 and RG6 Double and Quad Shielded
NC90	.354 (9.0)	Black	Telecom 12 Pair
NC910	.354 (9.0)	White	Telecom 12 Pair
NC110	.433 (11.0)	Black	Telecom 25 Pair
NC1110	.433 (11.0)	White	Telecom 25 Pair
FC140	.551 (14)	Black	RG59 and RG6 Flat Twin and Ground
FC1410	.551 (14)	White	RG59 and RG6 Flat Twin and Ground

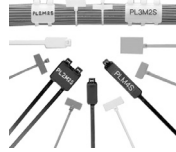


# Installation Accessories - Cable Ties



## PAN-TY® Nylon Marker and Flag Ties

Use to fasten and identify cable bundles at the same time.



### Standard Cross Section Marker Ties

Width is .185 inch (4.7 mm). Minimum loop tensile strength is 50 lbs. (222 N).

Part #	Max. Bundle Dia. in (mm)	Length in (mm)	Marker Write-on Area in (mm)
PL2M2S-L	1.75 (45)	7.4 (188)	.87 x 1.07 (22.1 x 27.2)
PL3M2S-L	1.75 (45)	7.4 (188)	.87 x 1.79 (22.1 x 45.5)
PLM2S-C	1.75 (45)	7.4 (188)	.44 x .87 (11.1 x 22.1)
PLM4S-C	4.0 (102)	14.6 (371)	.44 x 2.0 (11.1 x 50.8)

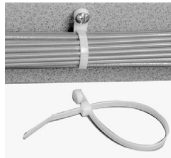
### Miniature Cross Section Marker & Flag Ties

Approximate width is .098 inch (2.5 mm). Minimum loop tensile strength is 18 lbs. (80 N).

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)
PLF1MA-C	.87 (22)	5.1 (130)
PLF1MB-C	.75 (19)	3.9 (101)
PLF1M-C	.87 (22)	4.3 (109)
PLM1M-C	.75 (19)	3.9 (99)
PLM2M-C	2.0 (51)	8.0 (203)

## PAN-TY® Nylon Clamp Ties

Use to attach a bundle of wires to another surface such as a control panel, wall or ceiling. This design allows for bundling of cables before or after the clamp tie is screwed into place.



### Miniature Cross Section Ties

Width is .100 inch (2.5 mm). Hole diameter is .122 inch (3.1). Screw size is #4 (M2.5). Minimum loop tensile strength is 18 lbs. (80 N). Maximum bundle is .75 inches, and 19 mm. Length is 4.3 inches, and 109 mm.

Part # PLC1M-S4-C

### Intermediate Cross Section Ties

Width is .135 inch (3.4 mm). Hole diameter is .174 inch (4.4 mm). Screw size is #8 (M4). Minimum loop tensile strength is 40 lbs. (178 N). Maximum bundle is 1.25 in, 32 mm. Length is 6.1 in, 155 mm.

Part # PLC1.5I-S8-C

### Standard Cross Section Ties

Approx. width is .190 inch (4.8 mm). Minimum loop tensile strength is 50 lbs. (122 N).

Part #	Max Bundle Dia. in(mm)	Length in(mm)	Hole Dia. in(mm)	Screw Size
PLC2S-S10-C	1.84 (47)	7.9 (201)	.200 (5.1)	#10 (M5)
PLC2S-S6-C	1.84 (47)	7.9 (201)	.148 (3.8)	#6 (M3)
PLC3S-S10-C	3.00 (76)	12.0 (305)	.200 (5.1)	#10 (M5)
PLC4S-S10-C	14.00 (102)	15.0 (381)	.200 (5.1)	#10 (M5)

### Heavy Cross Section Ties

Width is .300 inch (7.6 mm). Hole diameter is .260 inch (6.6 mm). Screw size is 1/4 (M6). Minimum loop tensile strength is 120 lbs. (534 N).

Part #	Max Bundle in. (mm)	Length in. (mm)
PLC2H-S25-L	2.00 (51)	9.0 (229)
PLC4H-S25-L	4.00 (102)	15.1 (384)



## PAN-TY® HALAR® Cable Ties - Distinctive Maroon Color

For plenum use. Meets or exceeds low smoke and low flame spread requirements. Distinctive maroon color. UL 94V-0. \*Halar is the registered trademark of Solvay Solexis, Inc.



Part #	Type	Max. Bundle Dia. inch (mm)	Length inch (mm)	Width inch (mm)	Min. Loop Tensile Strength lbs (N)
PLT1M-C702	Miniature	.87 (22)	4.0 (102)	.098 (2.5)	18 (80)
PLT2S-C702	Standard	1.88 (48)	7.4 (188)	.190 (4.8)	50 (222)
PLT3S-C702	Standard	3.00 (76)	11.6 (295)	.190 (4.8)	50 (222)

## PAN-TY® Nylon Cable Ties

One-piece construction. Versatile fasteners can be used for numerous applications including cable bundling. Optional Panduit Installation Tooling available for automatic tension and cut off. Available in a variety of materials.



### Intermediate Cross Section

Minimum tensile strength is 40 lbs (178 N).

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Approx. Width inch (mm)	Tools
PLT1.5I-C	1.38 (35)	5.6 (142)	.142 (3.6)	GTS, PTS, STS2
PLT2.5I-C	2.50 (64)	9.7 (246)	.145 (3.7)	GTS, PTS, STS2
PLT2I-C	2.00 (51)	8.0 (203)	.142 (3.6)	GTS, PTS, STS2
PLT3I-C	3.00 (76)	11.4 (290)	.145 (3.7)	GTS, PTS, STS2
PLT4I-C	4.00 (102)	14.5 (368)	.145 (3.7)	GTS, PTS, STS2

### Miniature Cross Section

Width is .098 inch (2.5 mm). Minimum tensile strength is 18 lbs (80 N).

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Tools
PLT1.5M-C	1.25 (32)	5.6 (142)	GTS, PTS, STS2
PLT1M-C	.87 (22)	3.9 (99)	GTS, PTS, STS2
PLT2M-C	2.00 (51)	8.0 (203)	GTS, PTS, STS2

### Standard Cross Section

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Tools
PLT1.5S-C	1.50 (38)	6.2 (157)	GTS, GTH, PTS, STS2
PLT1S-C	1.00 (25)	4.8 (122)	GTS, GTH, PTS, STS2
PLT2.5S-C	2.50 (64)	9.8 (249)	GTS, GTH, PTS, STS2
PLT2S-C	1.88 (48)	7.4 (188)	GTS, GTH, PTS, STS2
PLT3S-C	3.00 (76)	11.5 (292)	GTS, GTH, PTS, STS2
PLT4.5S-C	4.50 (114)	15.5 (394)	GTS, GTH, PTS, STS2
PLT4S-C	4.00 (102)	14.5 (368)	GTS, GTH, PTS, STS2
PLT5S-C	5.00 (127)	17.5 (445)	GTS, GTH, PTS, STS2

# Installation Accessories - Cable Ties



## PAN-TY® Nylon Cable Ties (cont.)

### Heavy Cross Section

Width is .350 inch (8.9mm). Minimum loop tensile strength is 175 lbs. (778N)

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Tools
PLT2H-L	2.00 (51)	8.1 (206)	GTH, PTH, STH2
PLT2.5H-L	2.50 (64)	9.8 (251)	GTH, PTH, STH2
PLT3H-L	3.00 (76)	11.4 (290)	GTH, PTH, STH2
PLT4H-L	4.00 (102)	14.5 (368)	GTH, PTH, STH2
PLT8H-L	9.00 (229)	30.6 (779)	GTH, PTH, STH2

### Light-Heavy Cross Section

Width is .300 inch (7.6mm). Minimum loop tensile strength is 120 lbs (534N).

Part #	Length - in. (mm)	Max. Bundle Dia. - in. (mm)	Tools
PLT6LH-L	21.9 (556)	6.00 (152)	GTH, PTH, STH2
PLT7LH-L	24.7 (627)	7.00 (178)	GTH, PTH, STH2
PLT9LH-L	30.5 (775)	9.00 (229)	GTH, PTH, STH2
PLT10LH-L	34.3 (871)	10.31 (262)	GTH, PTH, STH2
PLT5H-L	17.7 (450)	5.00 (127)	GTH, PTH, STH2
PLT6H-L	20.9 (530)	6.00 (152)	GTH, PTH, STH2
PLT13H-Q	43.3 (1100)	13.00 (330)	GTH, PTH, STH2

### Extra-Heavy Cross Section

Width is .500 inch (12.7mm). Minimum loop tensile strength is 250 lbs. (1112N)

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Tools
PLT5EH-Q	5.00 (127)	20.1 (511)	GS4EH, ST3EH
PLT6EH-Q	6.00 (152)	22.2 (564)	GS4EH, ST3EH

## Enhanced Pan-Steel® Self-Locking Stainless Steel Cable Ties

### Extra-Heavy Cross Section

Minimum bundle diameter is 1.0 in (25.4mm). Width is .50 in (12.7mm). Recommended installation tool is RT1HT or ST3MT.

Part #	Max. Bundle Dia in (mm)	Lgth in (mm)	Min. Loop Tensile Stgth lbs (N)	Thickness in (mm)
MLT4EH-LP	4.0 (102)	17.1 (434)	600 (2670)	.010 (.25)
MLT6EH-LP	6.0 (152)	23.4 (594)	600 (2670)	.010 (.25)
MLT8EH-LP	8.0 (203)	29.7 (754)	600 (2670)	.010 (.25)
MLT10EH-LP	10.0 (254)	35.9 (912)	600 (2670)	.010 (.25)
MLT12EH-Q	12.0 (305)	42.2 (1072)	600 (2670)	.010 (.25)
MLT4EH15-LP	4.0 (102)	17.1 (434)	700 (3115)	.015 (.38)
MLT6EH15-LP	6.0 (152)	23.4 (594)	700 (3115)	.015 (.38)
MLT8EH15-LP	8.0 (203)	29.7 (754)	700 (3115)	.015 (.38)
MLT10EH15-LP	10.0 (264)	35.9 (912)	700 (3115)	.015 (.38)
MLT12EH15-Q	12.0 (305)	42.2 (1072)	700 ( )	-

## Enhanced Pan-Steel® Self-Locking Stainless Steel Cable Ties (cont.)

### Super-Heavy Cross Section

Minimum bundle diameter is 1.0 in (25.4mm). Width is .63 in (15.9mm). Recommended installation tool is RT1HT.

Part #	Max. Bundle Dia in (mm)	Lgth in (mm)	Min. Loop Tensile Stgth lbs (N)	Thickness in (mm)
MLT4SH-LP	4.0 (102)	17.1 (434)	900 (4005)	.015 (.38)
MLT6SH-LP	6.0 (152)	23.4 (594)	900 (4005)	.015 (.38)
MLT8SH-LP	8.0 (203)	29.7 (754)	900 (4005)	.015 (.38)
MLT10SH-LP	10.0 (254)	35.9 (912)	900 (4005)	.015 (.38)
MLT12SH-Q	12.0 (305)	42.2 (1072)	900 (4005)	.015 (.38)

### Extra-Heavy Duty Cross Section

Minimum bundle diameter 1.0 in (25.4 mm). Width is .50 in (12.7 mm). Recommended installation tool RT1HT or ST3MT.

Part #	Max Bundle Dia in (mm)	Lgth in (mm)	Min Loop Tensile Strength lbs (N)	Thickness in (mm)
MLT4EH-LP316	4.0 (102)	17.1 (434)	600 (2670)	.010 (.25)
MLT8EH-LP316	8.0 (203)	29.7 (754)	600 (2670)	.010 (.25)
MLT4EH15-LP316	4.0 (102)	17.1 (394)	700 (3115)	.015 (.38)
MLT6EH15-LP316	6.0 (152)	23.4 (594)	700 (3115)	.015 (.38)
MLT8EH15-LP316	8.0 (203)	29.7 (754)	700 (3115)	.015 (.38)

### Super-Heavy Cross Section

Minimum bundle diameter is 1.0 in (25.4 mm). Width is .68 in (15.9 mm). RT1HT recommended installation tool.

Part #	Max. Bundle Dia in (mm)	Lgth in (mm)	Min Loop Tensile Stgth lbs (N)	Thickness in (mm)
MLT4SH-LP316	4.0 (102)	17.1 (434)	900 (4005)	.015 (.38)
MLT6SH-LP316	6.0 (152)	23.4 (594)	900 (4005)	.015 (.38)
MLT8SH-LP316	8.0 (203)	29.7 (754)	900 (4005)	.015 (.38)

## Pan-Steel® Fully Coated Stainless Steel Cable Ties - MLTFC Series

Polyester coating. Base metal is AISI 316 grade stainless steel. Self-locking with low thread force. Available in standard, heavy, extra-heavy and super-heavy cross sections. Low smoke. Halogen free. Temperature tolerance -40°F (-40°C) to 302°F (150°C). Good UV resistance. Coating thickness .003 in (.08mm) / .005 in (.13mm) per side.

### Standard Cross Section

Minimum bundle diameter is .50 in (12.7 mm). Width is .18 in (4.6 mm). Thickness is .010 in (.25 mm). Recommended installation tools: GS4MT, HTMT, PPTMT, ST2MT or ST3MT.

Part #	Max Bundle Dia in (mm)	Length in (mm)	Min Loop Tensile Strength lbs (N)
MLTFC2S-CP316	2.0 (51)	7.9 (201)	100 (445)
MLTFC4S-CP316	4.0 (102)	14.3 (362)	100 (445)
MLTFC6S-CP316	6.0 (152)	20.5 (521)	100 (445)
MLTFC8S-CP316	8.0 (203)	26.8 (679)	100 (445)



# Installation Accessories - Cable Ties



## Pan-Steel® Fully Coated Stainless Steel Cable Ties - MLTFC Series (cont.)

### Heavy Cross Section

Minimum bundle diameter is .50 in (12.7 mm). Width is .31 in (7.9 mm). Thickness is .010 in (.25 mm). Recommended installation tools: GS4MT, HTMT, PPTMT, ST2MT or ST3MT.

Part #	Max Bundle Dia in (mm)	Length in (mm)	Min Loop Tensile Stgth lbs (N)
MLTFC2H-LP316	2.0 (51)	7.9 (201)	250 (1112)
MLTFC4H-LP316	4.0 (102)	14.3 (362)	250 (1112)
MLTFC6H-LP316	6.0 (152)	20.5 (521)	250 (1112)
MLTFC8H-LP316	8.0 (203)	26.8 (679)	250 (1112)

### Extra-Heavy Cross Section

Minimum bundle diameter is 1.0 in (25.4 mm). Width is .50 in (12.7 mm). Thickness is .010 in (.25 mm). Recommended installation tools: RT1HT or ST3MT.

Part #	Max Bundle Dia in (mm)	Length in (mm)	Min Loop Tensile Stgth lbs (N)
MLTFC4EH-LP316	4.0 (102)	17.1 (434)	300 (1335)
MLTFC6EH-LP316	6.0 (152)	23.4 (594)	300 (1335)
MLTFC8EH-LP316	8.0 (203)	29.7 (754)	300 (1335)

### Super-Heavy Cross Section

Minimum bundle diameter is 1.0 in (25.4 mm). Width is .63 in (15.9 mm). Thickness is .015 in (.38 mm). Recommended installation tool is RT1HT.

Part #	Max Bundle Dia in (mm)	Length in (mm)	Min Loop Tensile Stgth lbs (N)
MLTFC4SH-LP316	4.0 (102)	17.1 (434)	450 (2000)
MLTFC6SH-LP316	6.0 (152)	23.4 (575)	450 (2000)
MLTFC8SH-LP316	8.0 (203)	29.7 (754)	450 (2000)

## Pan-Steel® Wave-Ty™ Self-Locking Stainless Steel Cable Ties

Patented wave-form spring maintains greater installed tension on non-resilient objects. Loop tensile strength of 200-450 lbs. Provides superior strength for increased performance and reliability on most bundling application. Standard package quantity is fifty. Standard carton quantity is two-hundred and fifty.



### Standard Cross Section

Min. Loop tensile strength is 200 lbs and 890 N. Min. bundle diameter inch is 2 (51mm). Width inch is .18 (4.6mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2.7WS-LP	2.7 (69)	10.2 (259)
MLT4WS-LP	4 (102)	14.3 (362)
MLT6WS-LP	6 (152)	20.5 (521)
MLT8WS-LP	8 (203)	26.8 (679)

### Light Heavy Cross Section

Min. Loop tensile strength is 250 lbs and 1112 N. Min. bundle diameter inch is 2 (51mm). Width inch is .25 (6.4mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2.7WLH-LP	2.7 (69)	10.2 (259)
MLT4WLH-LP	4 (102)	14.3 (362)
MLT6WLH-LP	6 (152)	20.5 (521)
MLT8WLH-LP	8 (203)	26.8 (679)

## Pan-Steel® Wave-Ty™ Self-Locking Stainless Steel Cable Ties (cont.)

### Heavy Cross Section

Min. Loop tensile strength is 450 lbs and 2000 N. Min. bundle diameter inch is 2 (51mm). Width inch is .31 (7.9mm). AISI 316 stainless steel.

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2.7WH-LP	2.7 (69)	10.2 (259)
MLT4WH-LP	4 (102)	14.3 (362)
MLT6WH-LP	6 (152)	20.5 (521)
MLT8WH-LP	8 (203)	26.8 (679)

### Standard Cross Section

Wave-Ty™ stainless steel ties for superior grip on rigid bundles - AISI 316 stainless steel. Min. Loop tensile strength is 200 lbs and 890 N. Min. bundle diameter inch is 2 (51mm). Width inch is .18 (4.6mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2.7WS-LP316	2.7 (69)	10.2 (259)
MLT4WS-LP316	4 (102)	14.3 (362)
MLT6WS-LP316	6 (152)	20.5 (521)
MLT8WS-LP316	8 (203)	26.8 (679)

### Light Heavy Cross Section

Min. Loop tensile strength is 250 lbs and 1112 N. Min. bundle diameter inch is 2 (51mm). Width inch is .25 (6.4mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2.7WLH-LP316	2.7 (69)	10.2 (259)
MLT4WLH-LP316	4 (102)	14.3 (362)
MLT6WLH-LP316	6 (152)	20.5 (521)
MLT8WLH-LP316	8 (203)	26.8 (679)

### Heavy Cross Section

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2.7WH-LP316	2.7 (69)	10.2 (259)
MLT4WH-LP316	4 (102)	14.3 (362)
MLT6WH-LP316	6 (152)	20.5 (521)
MLT8WH-LP316	8 (203)	26.8 (679)

## Pan-Steel® Self-Locking Stainless Steel Cable Ties

Strong, durable method of bundling and fastening.

Can be used in virtually all indoor, outdoor and underground (including direct burial) applications. Well suited for network bundling of data and power cables. Fully rounded edges and exclusive lead-in design. Provides ultimate support for network cables. Min. Loop Tensile Str. is 200 lbs (890N). Min. Bundle diameter in In. (mm) is .5 (12.7). Width in In. (mm) is .18 (4.6)



### Light Heavy Cross Section

General purpose ties - AISI 304 stainless steel. Min. loop tensile strength is 250 lbs and 1112 N. Min. bundle diameter inch is .5 (12.7mm). Width inch is .25 (6.4mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2LH-LP	2 (51)	7.9 (201)
MLT4LH-LP	4 (102)	14.3 (362)
MLT6LH-LP	6 (152)	20.5 (521)
MLT8LH-LP	8 (203)	26.8 (679)

# Installation Accessories - Cable Ties



## Pan-Steel® Self-Locking Stainless Steel Cable Ties (cont.)

### Heavy Cross Section

General purpose ties - AISI 304 stainless steel. Min. loop tensile strength is 450 lbs and 2000 N. Min. bundle diameter inch is .5 (12.7mm). Width inch is .31 (7.9mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2H-LP	2 (51)	7.9 (201)
MLT4H-LP	4 (102)	14.3 (362)
MLT6H-LP	6 (152)	20.5 (521)
MLT8H-LP	8 (203)	26.8 (679)

### Standard Cross Section

Stainless steel for superior corrosion resistance - AISI 316 stainless steel. Min. loop tensile strength is 200 lbs and 890 N. Min. bundle diameter inch is .5 (12.7mm). Width inch is .18 (4.6mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT1S-CP316	1 (25)	5.0 (127)
MLT2S-CP316	2 (51)	7.9 (201)
MLT4S-CP316	4 (102)	14.3 (362)
MLT6S-CP316	6 (152)	20.5 (521)
MLT8S-CP316	8 (203)	26.8 (679)

### Light Heavy Cross Section

Stainless steel for superior corrosion resistance - AISI 316 stainless steel. Min. loop tensile strength is 250 lbs and 1112 N. Min. bundle diameter inch is .5 (12.7mm). Width inch is .25 (6.4mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2LH-LP316	2 (51)	7.9 (201)
MLT4LH-LP316	4 (102)	14.3 (362)
MLT6LH-LP316	6 (152)	20.5 (521)
MLT8LH-LP316	8 (203)	26.8 (679)

### Heavy Cross Section

Stainless steel for superior corrosion resistance - AISI 316 stainless steel. Min. loop tensile strength is 450 lbs and 2000 N. Min. bundle diameter inch is .5 (12.7mm). Width inch is .31 (7.9mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT2H-LP316	2 (51)	7.9 (201)
MLT4H-LP316	4 (102)	14.3 (362)
MLT6H-LP316	6 (152)	20.5 (521)
MLT8H-LP316	8 (203)	26.8 (679)

### Standard Cross Section

General purpose ties - AISI 304 stainless steel. Min. loop tensile strength is 200 lbs and 890 N. Min. bundle diameter inch is .5 (12.7mm). Width inch is .18 (4.6mm).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLT1S-CP	1 (25)	5.0 (127)
MLT2S-CP	2 (51)	7.9 (201)
MLT2.7S-CP	2.7 (69)	10.2 (259)
MLT4S-CP	4 (102)	14.3 (362)
MLT6S-CP	6 (152)	20.5 (521)
MLT8S-CP	8 (203)	26.8 (679)

## Patented Nylon 11 Selectively Coated Ties

For communication and electrical cables. Strength of steel, the protection of nylon; the nylon coating provides protection for the cables. Standard package quantity is fifty. Standard carton quantity is two-hundred and fifty. Min. Loop Tensile strength in lbs. (N) is 250 (1112). Min Bundle diameter in In. (mm) is .5 (12.7). Width in In. (mm) is .31 (7.9).

Part #	Max. Bundle Dia. - In. (mm)	Length - In. (mm)
MLTC2H-LP316	2 (51)	7.9 (201)
MLTC4H-LP316	4 (102)	14.3 (362)
MLTC6H-LP316	6 (152)	20.5 (521)
MLTC8H-LP316	8 (203)	26.8 (679)

## Dura-Ty™ Cable Ties

Ideal for all outdoor messenger strand applications including telephone, cable TV, traffic signals and outside plant power services. Double stainless steel, type 302, locking barb. High tensile strength and high impact resistance. Excellent chemical and moisture resistance. Meets Telcordia TR-TSY-000789. May be used with Stackable Cable Spacer, SACS50-T100. Weather resistant acetal strap body and head material.



## Strapping, Heads and Kit

Part #	Length - FT. (M)	Strap Width - In. (mm)	Max. Bundle Dia. - In. (mm)	Min. Loop Tensile Str. - Lbs. (N)	Tool
DTREH-LR0	50' reel of strapping	50.0 (15)	.500 (12.7)	250 (1112)	GTH, GS4EH, ST3EH
DTHEH-Q0	Bag of 25 cable tie heads	-	-	-	-
DTKEH-0	Kit containing 50' reel of strapping and 25 cable tie heads	50.0 (15)	.500 (12.7)	250 (1112)	GTH, GS4EH, ST3EH

## Extra-Heavy Cross Section

Part #	Length - In. (mm)	Strap Width - In. (mm)	Max. Bundle Dia. - In. (mm)	Min. Loop Tensile Str. - Lbs. (N)	Tool
DT4EH-L0	13.5 (343)	.500 (12.7)	3.88 (98)	250 (1112)	GTH, GS4EH, ST3EH
DT8EH-Q0	27.0 (686)	.500 (12.7)	8.00 (203)	250 (1112)	GTH, GS4EH, ST3EH

## Dome-Top® Barb Ty Clamp Ties

Used to secure a wire bundle to another surface such as a control panel, wall or ceiling. Design allows for bundling before or after screwing clamp in place. All cable tie cross sections smaller than Light-Heavy have a curved tip that is easier to pick up from flat surfaces, allows faster initial threading and speeds installation.



## Intermediate Cross Section

Min. loop tensile strength is 40 Lbs. (178 N). Screw size # 8 (Metric: M4).

Part #	Length - In. (mm)	Width - In. (mm)	Max. Bundle Dia. - In. (mm)	Tool
BC1.5I-S8-M	6.6 (168)	.141 (3.6)	1.50 (38)	GTS, GS2B, PTS, PPTS, STS2

# Installation Accessories - Cable Ties



## Dome-Top® Barb Ty Clamp Ties (cont.)

### Standard Cross Section

Min. loop tensile strength is 50 Lbs. (222 N). Screw size # 10 (Metric: M5).

Part #	Length - In. (mm)	Width - In. (mm)	Max. Bundle Dia. - In. (mm)	Tool
BC2S-S10-C	8.5 (216)	.185 (4.7)	2.00 (51)	GTS, GS2B, GTH, GS4H, PTS, PPTS, STS2, STH2
BC4S-S10-C	15.6 (396)	.185 (4.7)	4.00 (102)	GTS, GS2B, GTH, GS4H, PTS, PPTS, STS2, STH2

### Light-Heavy Cross Section

Min. loop tensile strength is 120 Lbs. (534 N). Screw size 1/4 (Metric: M6).

Part #	Length - In. (mm)	Width - In. (mm)	Max. Bundle Dia. - In. (mm)	Tool
BC4LH-S25-L	15.5 (394)	.275 (7.0)	4.00 (102)	GTH, GS4H, GS4EH, PTH, STH2, ST2EH

### Miniature Cross Section

Min. loop tensile strength is 18 Lbs. (80 N). Screw size # 4 (Metric: M2.5).

Part #	Length - In. (mm)	Width - In. (mm)	Max. Bundle Dia. - In. (mm)	Tool
BC1M-S4-M	4.6 (117)	.095 (2.4)	.90 (23)	GTS, GS2B, PTS, PPTS, STS2
BC2M-S4-M	8.3 (211)	.095 (2.4)	2.00 (51)	GTS, GS2B, PTS, PPTS, STS2

## DOME-TOP® Barb Ty Nylon 6.6 Locking Cable Ties

Consistent performance and reliability. Stainless steel locking barb provides consistent performance, reliability and infinite adjustability through entire bundle range. Available in natural, weather resistant, heat stabilized nylon, and various colors.



### Standard Cross Section

Width is .185 inch (4.7 mm). Minimum loop tensile strength is 50 lbs (222 N).

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Tools
BT2S-C	2.00 (51)	8.0 (203)	GTS, GTH, PTS, STS2
BT3S-C	3.00 (76)	12.0 (305)	GTS, GTH, PTS, STS2
BT4S-C	4.00 (102)	15.1 (384)	GTS, GTH, PTS, STS2

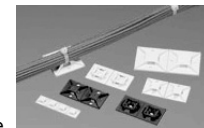
### Light Heavy Cross Section (Straight Tip)

Width is .275 inch (7.0 mm). Minimum loop tensile strength is 120 lbs (534 N).

Part #	Max. Bundle Dia. inch (mm)	Length inch (mm)	Tools
BT2LH-L	2.00 (51)	8.7 (221)	GTH, PTH, STH2
BT3LH-L	3.00 (76)	11.8 (300)	GTH, PTH, STH2
BT4LH-L	4.00 (102)	14.9 (378)	GTH, PTH, STH2
BT6LH-L	6.00 (152)	21.2 (538)	GTH, PTH, STH2
BT7LH-L	7.00 (178)	24.4 (620)	GTH, PTH, STH2
BT8LH-L	8.00 (203)	27.5 (699)	GTH, PTH, STH2
BT9LH-L	9.00 (229)	30.7 (780)	GTH, PTH, STH2

## Adhesive Backed Mounts

For use with nylon cable ties. Cable ties entry from all four sides. \*Refers to BARB-TY® and PAN-TY®. Cable ties sizes: M - miniature, I - intermediate, S - standard, LH - light heavy and H - heavy. Color is white and used indoors (ABM100-AT-CO is black and used outdoors).



Part #	Used With Cable Ties*	Width inch (mm)	Length inch (mm)	Height inch (mm)
ABM100-A-C	M, I, S	1.00 (25.4)	1.00 (25.4)	.24 (6.1)
ABM1M-A-C	M	.50 (12.7)	.50 (12.7)	.16 (4.0)
ABM2S-A-C	M, I, S	1.00 (25.4)	1.00 (25.4)	.20 (5.1)
ABM3H-A-L	M, I, S, LH, H	1.50 (38.1)	1.50 (38.1)	.25 (6.4)
ABM4H-A-L	M, I, S, LH, H	2.00 (50.8)	2.00 (50.8)	.25 (6.4)
ABMM-A-C	M, I	.75 (19.1)	.75 (19.1)	.18 (4.6)
ABM100-AT-CO	M, I, S	1.00 (25.4)	1.00 (25.4)	.24 (6.1)

## Stackable Cable Rack Spacer

Manufactured from black weather resistant polypropylene. For use with Dura-Ty™ cable ties or Pan-Steel® Metal Locking Ties. Each spacer snaps into another to increase spacer heights by 1/2" increments. Designed to be used in parallel and perpendicular applications.



Part #	Length - In. (mm)	Width - In. (mm)
SACS50-T100	2.08 (52.8)	1.16 (29.5)

## Ergonomic Cable Tie Installation Tools

Lightweight, ergonomic design is comfortable to use and reduces operator fatigue. Exceeds industry standards for tool operation to provide high reliability for maximum tool life. Narrow nose improves visibility and access to bundles in confined areas. Flush cut-off protects adjacent cables and workers' arms and hands. Tension adjustment conveniently located at the rear of the tool to help quickly and easily change and confirm tension settings to improve installer productivity.



Part #	Description
GTS	Installs subminiature, miniature, intermediate and standard cross section cable ties. Qualified product listed per Mil. Std. MS90387-7 and Mil. Spec. MIL-T-81306A. Black trigger handle. Body has gray plastic housing with black selector knob.
GTH	Installs standard, heavy-standard, light-heavy and heavy cross section cable ties. Red trigger handle. Body has gray plastic housing with red selector knob.

## PAN-STEEL® Stainless Steel Installation Tooling

Complete line of manual and pneumatic installation tools speed installation. Side entry of cable ties into the tools allows quick and easy installation. Automatic tension and cut-off capabilities available on select models. High reliability, low maintenance, long life. The MLT cross sections are standard, light heavy, heavy, extra-heavy and super-heavy.



Part #	MLT Usage per Year	Operation
GS4MT	Under 50,000	Hand; tool controlled tension and cut-off
PPTMT	Over 50,000	Pneumatic; tool controlled tension and cut-off
ST2MT	Under 10,000	Hand; manual controlled tension twist cut-off.
HTMT	Under 10,000	Hand; manual controlled tension no cut-off.
RT1HT	Under 50,000	Hand; manual controlled tension and cut-off

# Installation Accessories - Cable Ties



## Datacom Cable Tie Gun

Die-cast steel construction for durability and long life. Provides a flush cut with each use for neat, professional installations. Tension adjustment allows use on miniature, intermediate, standard and heavy-duty cable ties.

Part # DCT300V



## Cable-Tie Installation Tools

Consistent, positive tension. Flush cut-off leaves no projections to damage nearby wires or components. Lightweight economy model for smaller jobs. Standard and heavy-duty models feature rugged, die-cast aluminum construction with comfortable, cushioned grips. Scrap tail stays in tool until trigger is released.

Part #	Description
41-990	Standard, for use with intermediate & standard ties
41-995	Heavy duty, for use with standard & heavy-duty ties
BCTT-200	Economy-use with intermediate and standard ties



## Wire Ties And Mounts

Color Code: N-Natural, B-Black, P-Purple, A-Blue, R-Red, G-Green, Y-Yellow.

Part #	Description
WT-4-18N	4" 18 lb
WT-4-18B	4" 18 lb
WT-4-18A	4" 18 lb
WT-4-18R	4" 18 lb
WT-4-18Y	4" 18 lb
WT-4-18G	4" 18 lb
WT-4-18P	4" 18 lb
WT-5.5-40N	5.5" 40 lb
WT-5.5-40B	5.5" 40 lb
WT-8-18N	8" 18 lb
WT-8-18B	8" 18 lb
WT-8-50N	8" 50 lb
WT-8-50B	8" 50 lb
WT-8-50A	8" 50 lb
WT-8-50R	8" 50 lb
WT-8-50Y	8" 50 lb
WT-8-50G	8" 50 lb
WT-8-50P	8" 50 lb
WT-12-50N	12" 50 lb
WT-12-50B	12" 50 lb
WT-14-120N	14" 120 lb
WT-14-120B	14" 120 lb
WT-15-70N	15" 70 lb
WT-15-70B	15" 70 lb
WTI-4-18N	I.D.4" 18 lb
WTI-8-50N	I.D.8" 50 lb
WTI-12-50N	I.D.12" 50 lb
WTS-4-18N	SCREW 4" 18 lb
WTS-8-50N	SCREW 8" 50 lb
WTS-12-50N	SCREW 12" 50 lb
WM-AB	ADHES. MT 1" X 1"
WM-ABB	ADHES. MT 1" X 1"
WT-A-NB	ASST. NAT & Black 250PCS
WT-A-C	ASST. Colors 250 PCS.



## Screw Mount Cable Ties

#8 screw hole. Replace suffix with -1000 for bulk packages of 1000.

Part #	Length inches (mm)	Width (mm)	Load
34-143-50	6 (150)	4.8	22 Kg
34-144-50	8 (200)	4.8	22 Kg
34-146-25	11 (300)	4.8	22 Kg

## Weather Resistant Cable Ties

High quality black nylon cable ties suitable for outdoor use. Replace suffix with -1000 for 1000 bulk packages.

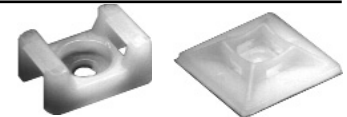
Part #	Length inches (mm)	Width (mm)	Load
34-131-100	3.5 (90)	2.4	8 Kg
34-132-100	4 (100)	2.5	8 Kg
34-133-100	5.5 (140)	3.6	18 Kg
34-134-50	7.5 (188)	4.8	22 Kg
34-135-50	8 (200)	4.8	22 Kg
34-136-25	11 (300)	4.8	22 Kg

## Natural Nylon Cable Ties

High quality nylon cable ties. Replace suffix with -1000 for 1000 bulk package.

Part #	Length inches (mm)	Width (mm)	Load
34-121-100	3.5 (90)	2.4	8 Kg
34-122-100	4 (100)	2.5	8 Kg
34-123-100	5.5 (140)	3.6	18 Kg
34-124-100	7.5 (188)	4.8	22 Kg
34-125-100	8 (200)	4.8	22 Kg
34-126-50	11 (300)	4.8	22 Kg

## Cable Tie Mounts



Part #	Description	Type
34-200-25	#6 screw	Screw
34-201-25	.188" mounting hole	Screw
34-210-25	3/4" square	Adhesive
34-212-25	1" square adhesive #8 screw mount	Adhesive

## Paladin Tools®

### Cable Tie Gun

Use with plastic cable ties up to 0.25" (6.35 mm) in width. Fastens and cuts in one action. Adjustable tension for changing cable bundle pressure. Automatic cable tie cut off. One-year warranty.

Part # 1828.1



## Quick Release Cable Tie

Quick release cable tie allows multiple use capabilities. Sizes are in inches.



Part #	Length	Width	Max. Bundle Dia.	Min. Tensile Strength (lbs)
13-2514	14½	.19	4	50

## Self-Adhesive Tie Mount

Designed to support lightweight wire bundles when properly applied on any clean, smooth, grease-free surface. For heavy support, mounting hole is supplied for screws. To apply, simply peel off backing paper and apply mount to surface. Can be inserted to secure wire bundles. Material is UL approved Nylon 6/6, 94V-2 (back with adhesive tape).



Part #	Lgth inch	Wdth inch	Hght inch	Mtng Hole inch
13-1000	.50	.50	.125	-
13-1125	.75	.75	.153	.126



# Installation Accessories - Cable Ties



## Tie Wraps

One piece self-locking nylon tie wrap. No metal barbs. Wrap tie around cable, slip tail through head and pull tight. Tie locks in place automatically. Snip off excess tail. Available in natural, UV black and assorted colors. UV - Weather resistant black nylon containing finely divided carbon black for weather resistance, in accordance with U.S. Military specification MIL-M20693B are specially formulated for uniform carbon dispersion to help maximize elongation.

### UV Black Standard Tie Wraps

Part #	Overall Lgth in. (mm)	Width in. (mm)	Thickness in. (mm)	Tie Tensile
7063 0	4.0 (102.4)	.094 (2.390)	.042 (1.070)	18 lb.
7064 0	5-1/16" (128.5)	.115 (2.9)	.045 (1.1)	30 lb.
7065 0	5.7 (144.3)	.140 (3.580)	.049 (1.240)	40 lb.
7066 0	7.50 (190.0)	.178 (4.520)	.053 (1.350)	50 lb.
7067 0	11.2 (285.7)	.178 (4.520)	.053 (1.350)	50 lb.
7068 0	14.5 (368.0)	.178 (4.520)	.053 (.350)	50 lb.

### Natural Standard Tie Wraps

Part #	Overall Lgth in. (mm)	Width in. (mm)	Thickness in. (mm)	Tie Tensile
7063	4.0 (102.4)	.094 (2.390)	.042 (1.070)	18 lb.
7064	5.20 (132.0)	.115 (2.9)	.045 (1.1)	30 lb.
7065	5.7 (144.3)	.140 (3.580)	.049 (1.240)	40 lb.
7066	7.50 (190.0)	.178 (4.520)	.053 (1.350)	50 lb.
7067	11.2 (285.7)	.178 (4.520)	.053 (1.350)	50 lb.
7068	14.5 (368.0)	.178 (4.520)	.053 (.350)	50 lb.

### Extra Heavy Duty Tie Wraps 175 lbs

Part #	Color	Length in. (mm)	Width in. (mm)	Thickness in. (mm)
7069	Natural	25.25 (641.35)	.340 (8.636)	.090 (2.286)
7069 0	UV Black	25.25 (641.35)	.340 (8.636)	.090 (2.286)



NWT-8041    NWT-1258    NWT-4141



## Nylon Cable Ties

Low profile snagless design. High quality nylon material. 100 pieces per bag. Perfect for marine use or confined space. MIL Spec approved. Works with all standard cable tie guns. CSA approved.

Part #	Description	Length Inch.	Holding Strength LBS	Color
NWT-8041	Nylon	4	18	Black
NWT-8048	Nylon	4	18	White
NWT-8081	Nylon	8	18	Black
NWT-8088	Nylon	8	18	White
NWT-4081	Nylon	8	40	Black
NWT-4088	Nylon	8	40	White
NWT-1288	Nylon	8	120	White
NWT-4111	Nylon	11	40	Black
NWT-4118	Nylon	11	40	White
NWT-5118	Nylon	11	50	White
NWT-4141	Nylon	14	40	Black
NWT-4148	Nylon	14	40	White
NWT-1258	Nylon	15	120	White
NWT-4210	Nylon Marker	4	18	White
NWT-4200	Nylon Nailable	8	40	White
NWT-3751	Snagless	7.5	50	White
NWT-3752	Snagless	7.5	50	UV Black
NWT-3151	Snagless	16	120	White
NWT-3152	Snagless	16	120	UV Black

## Cable Tie Kits

NWT-0100



NWT-1000



Part #	Description
NWT-0100	4", 8" and 11" Wire Tie Assortment
NWT-0650	4" and 7" Wire Tie Assortment
NWT-1000	4" Wire Tie Assortment
NWT-4000	4" and 8" Wire Tie Assortment
NWT-4001	4", 7" and 8" Wire Tie Assortment

## Cable Tie Mounts

NWT-9001

NWT-9101



Part #	Description
NWT-9001	Saddle type tie mount 0.6" length (100 PK)
NWT-9002	Saddle type tie mount 0.5" length (100 pk)
NWT-9003	Saddle type tie mount 0.9" length (100 pk)
NWT-9101	Self adhesive tie mount 0.75" length (100 pk)
NWT-9102	Self adhesive tie mount 1.10" length (100 pk)



## Wire Cable Ties

Part #	Description	QTY
CTVP-300	Value Pack Kit (Great for home or office)	300
CTVP-1000	Value Pack Kit (Great for home or office)	1000
CTRP-350	Retail Pack Kit	350
CTTB-400	Tackle Box Kit (Neon)	400
CTP-650	Canister Pack Kits (Professional/Industrial)	650
CTP-850	Canister Pack Kit (Professional/Industrial)	850
CTP-1000	Canister Pack Kit (Professional/Industrial)	1000
CTP-1200	Canister Pack Kit (Professional/Industrial)	1200

## E-Z Off™ Cable Ties

Provide for a strong, secure locking device that is easily removed without the need of a cutting device. Use for securing shipping containers, attaching sports netting, tag attaching, temporary job site cabling, agricultural uses, tier 1 & 2 automotive suppliers, tenting or anywhere a tie is used as a temporary securing device. 100 pieces per bag. 40 lbs. tensile strength.

Part #	Length	Color	Max Bundle
34-490-C	6"	Natural	1.5"
34-491-C	6"	Red	1.5"
34-492-C	6"	Blue	1.5"
34-493-C	6"	Green	1.5"
34-494-C	6"	Orange	1.5"
34-495-C	6"	Yellow	1.5"
34-496-C	6"	Purple	1.5"
34-497-C	6"	Black	1.5"
34-500-C	8"	Natural	2.0"
34-501-C	8"	Red	2.0"
34-502-C	8"	Blue	2.0"
34-503-C	8"	Green	2.0"
34-504-C	8"	Orange	2.0"
34-505-C	8"	Yellow	2.0"
34-506-C	8"	Purple	2.0"
34-507-C	8"	Black	2.0"





# Installation Accessories - Hook & Loop

**HellermannTyton**



## Grip Ties for Plenum Applications

UL94V-2 flame rated ties for use in air handling spaces. Available in maroon. UL Listed accordance with the NEC regulations. Available in three lengths as well as a 180' roll. Dimensions in inches(mm). Quantity is 10. Tensile strength is 40 lbs.



Part #	Bundle Dia.	Length	Width
GT.50X8MP2V2	1.91	8"	0.5"
GT.50X12MP2V2	3.18"	12"	0.5"
GT.50X6MP2V2	1	6"	0.5"
GT.75X180MV2	1-5	180	0.75

## Grip Tie Straps

A low profile, one piece fastening device. Constructed of polyethylene hook and nylon loop, laminated back to back. Can be opened and closed numerous times without failure. Reusable, adjustable, releasable and easy to install. Design provides ease of installation in tight areas. Black. Package quantity is 10.



Part #	Bundle Dia.	Length	Strength
GT.50X110P2	2.63"	11"	55 lbs.
GT.75X150P2	3.88"	15"	60 lbs.
GT.50X60P2	1"	6"	42 lbs.
GT.50X80P2	1.75"	8"	50 lbs.

## Write-on Grip Ties

This smudge-free surface is ideal for fast and easy identification with a ballpoint pen or felt-tip marker. The write-on area is approximately 3/8" (H) x 1-1/4" (W). It is positioned in the center of the black straps, as well as spaced every 12" on the Grip Tie rolls. Black grip tie roll with white write-on area.



Part #	Strap Length	Strap Width	Pkg Qty
GT.50X80P2W	8"	0.5"	10
GT.75X1800W	180"	0.75"	1 roll

## Grip Tie Roll

With the hook and loop strap on a 5-yard or 25-yard roll, desired lengths can be cut on the spot. Color is black.

Part #	Length	QTY
GT.75X1800	5 yards	1 roll
GT.75X9000	25 yards	1 roll



## TAK-TY® Hook & Loop Cable Ties

Color chart suffixes for HLT Ties, HLS Ties and HLS/HLM Rolls: 0 - black, 2 - red, 3 - orange, 4 - yellow, 5 - green, 6 - blue, 8 - gray, 10 - white. Minimum 2" overlap required to achieve loop tensile rating.



## 15'/75' Roll

Can be cut to desired length, eliminating waste. Add suffix number for desired color. Standard package quantity is one roll and standard carton quantity is ten rolls. Max. bundle diameter is various in inches and mm.



Part #	Length inch (mm)	Width inch (mm)	Min. Loop Tensile Strength lb (N)
HLM-15R0	180.0 (4,572)	.330 (8.4)	18 (80)
HLS-15R0	180.0 (4,572)	.750 (19.0)	50 (222)
HLS-75R0	900.0 (22,860)	.750 (19.0)	50 (222)

## TAK-TY® Hook & Loop Cable Ties (cont.)

### Loop Ties

Slot allows for pre-wrapping of bundles. Add suffix number for desired color. Width is .500 inch (12.7 mm). Minimum loop tensile strength is 40 lbs (178 N). Standard package quantity is ten and standard carton quantity is one-hundred.

Part #	Length inch (mm)	Max. Bundle Dia. inch (mm)
HLT2I-X0	8.0 (203)	1.91 (49)
HLT3I-X0	12.0 (305)	3.18 (81)

### Strip Ties

Convenient 6", 12" and 18" strips. Add suffix number for desired color. Width inch (mm) is .750 (19.1). Minimum loop tensile strength is 50 lbs (222 N). Standard package quantity is ten roll and standard carton quantity is one-hundred rolls. Perforated in roll form - ten ties to each roll.

Part #	Length inch (mm)	Max. Bundle Dia. inch (mm)
HLS1.5S-X0	6.0 (152)	1.50 (38)
HLS3S-X0	12.0 (305)	3.20 (81)
HLS5S-X0	18.0 (457)	5.00 (127)

### UL Listed Loop Ties - Plenum Rated

Width is .500 inch and (12.7 mm). Min. Loop Tensile Str. is 40 lbs (178N). Standard package is ten. Standard carton quantity is one-hundred.

Part #	Length inch (mm)	Max. Bundle Dia. inch (mm)
HLTP2I-X12	8.0 (203)	1.90 (48)
HLTP3I-X12	12.0 (305)	3.20 (81)

### UL Listed Strip Ties - Plenum Rated

Width is .750 inch (19.1mm). Min. Loop Tensile Str. is 50 lbs. (222N). Standard package quantity is ten. Standard carton quantity is one-hundred.

Part #	Length inch (mm)	Max. Bundle Dia. inch (mm)
HLSP1.5S-X12	6.0 (152)	1.50 (38)
HLSP3S-X12	12.0 (305)	3.20 (81)
HLSP5S-X12	18.0 (457)	5.00 (127)

## TAK-TY® Hook & Loop Cable Tie Mounts

For use with Tak-Ty Hook & Loop Cable Ties. For indoor use only. Dimensions are 1.12"L x 1.12"W x .34"H (28.4mm x 28.4mm x 8.6mm). Unique cradle design provides maximum stability for cable bundle. Standard package quantity is one-hundred. Standard carton quantity is one-thousand.

\*Flame retardant products are manufactured from a material that is rated UL94V-0.



### Adhesive Backed

Material is Nylon 6.6. Mounting method is rubber adhesive. Max. Static Load is .38 lbs (174g).

Part #	Color
ABMT-A-C	Natural
ABMT-A-C20	Black

### Screw Mount

Mounting method is #6 (M3) screw.

Part #	Material	Color
ABMT-S6-C	Nylon 6.6	Natural
ABMT-S6-C20	Nylon 6.6	Black
ABMT-S6-C60*	Flame retardant Nylon 6.6	Black
ABMT-S6-C69*	Flame retardant Nylon 6.6	Natural



# Installation Accessories - Hook & Loop



## Ultra-Cinch™ Hook and Loop Ties

Exclusive material with hooks and loops on same side allows user to secure a greater range of bundle diameters, including smaller bundles. Low profile contoured cinch ring. Releasable and reusable hundreds of times. Tapered tip threads easily for snap-free threading. Sturdy brass grommet on UGCTC and UGCTE styles resists pull-out, and allows cable bundles to be securely fastened to surfaces. Panduit recommends flat-head screws for use in grommet applications. Note: minimum 2" overlap required to achieve loop tensile rating. Width is .85 inches (21.6mm). Min. Loop Tensile Strength lb (N) is 50 (222).



Part #	Length inch (mm)	Max. Bundle Dia. inch (mm)
UCT3S-X0	12.0 (305)	3.00 (76)
UCT5S-X0	18.0 (457)	5.00 (127)
UGCTC3S-X0	12.0 (305)	3.00 (76)
UGCTE3S-X0	12.0 (305)	3.00 (76)
UGCTE5S-X0	18.7 (475)	5.00 (127)
UGCTC5S-X0	18.0 (457)	5.00 (127)

## TAK-TAPE™ Hook & Loop Strips

For general purpose bundling. Thin and flexible to quickly wrap around bundle. Adjustable, releasable and reusable. Large continuous roll that can be cut to size with Telco snips, scissors or Panduit® cutter (included with TTS-35RX0 only). Wide (3/4") black strap spreads out bundling forces over large area. May be used with ABMT mount. Handy, reusable plastic case (TTS-20R0) keeps material clean. Note: Minimum 2" overlap required to achieve loop tensile rating. Width is .750 inches and (19.1mm). Max. Bundle Dia. inch (mm) varies. Min. Loop Tensile strength is 40 lbs. (178N).



Part #	Length Ft. (M)
TTS-20R0	20 (6.1)
TTS-35RX0	35 (10.7)



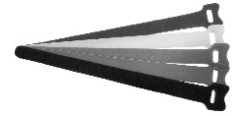
## Wire Ties Hook & Loop

Part #	Description
WTV6A	6" Blue
WTV6B	6" Black
WTV6G	6" Green
WTV6O	6" Orange
WTV6R	6" Red
WTV6W	6" White
WTV6Y	6" Yellow
WTV9A	9" Blue
WTV9B	9" Black
WTV9G	9" Green
WTV9O	9" Orange
WTV9R	9" Red
WTV9W	9" White
WTV9Y	9" Yellow
WTV13A	13" Blue
WTV13B	13" Black
WTV13G	13" Green
WTV13O	13" Orange
WTV13R	13" Red
WTV13W	13" White
WTV13Y	13" Yellow
WTV50B	50" Black
WTV50W	50" White



## Hook & Loop Cable Ties

Package of 10. Replace suffix with -100 for package of 100.



Part #	Description
34-150-10	6" Black
34-151-10	6" Red
34-152-10	6" Green
34-153-10	6" Yellow
34-154-10	6" Blue
34-155-10	8" Black
34-156-10	8" Red
34-157-10	8" Green
34-158-10	8" Yellow
34-159-10	8" Blue
34-160-10	Adhesive Pads



## Hook & Loop Cable Ties & Straps

High quality aircraft grade material. High density loop for added strength and retention. Cinch straps for creating a tight cable loop. PSA pads for mounting to most any solid surface.

Part #	Description	Color
NVT-0321	1" x 2" PSA pads	Black
NVT-0191	1" x 9" Hook/Loop cable tie	Black
NVT-0192	1" x 9" Hook/Loop cable tie	Blue
NVT-0193	1" x 9" Hook/Loop cable tie	Red
NVT-1131	1" x 13" Hook/Loop cable tie	Black
NVT-1132	1" x 13" Hook/Loop cable tie	Blue
NVT-1133	1" x 13" Hook/Loop cable tie	Red
NVT-3461	3/4" x 6" Hook/Loop cable tie	Black
NVT-3801	3/8" x 10 yards Hook/Loop roll	Black
NVT-3802	3/8" x 10 yards Hook/Loop roll	Blue
NVT-3803	3/8" x 10 yards Hook/Loop roll	Red
NVT-3401	3/4" x 10 yards Hook/Loop roll	Black
NVT-3402	3/4" x 10 yards Hook/Loop roll	Blue
NVT-3403	3/4" x 10 yards Hook/Loop roll	Red
NVT-1201	3/4" x 12" Cinch strap	Black
NVT-1801	3/4" x 18" Cinch strap	Black
NVT-1101	1" x 10" Eyelet cinch strap	Black
NVT-1130	1" x 13" Eyelet cinch strap	Black

This catalog represents a sampling of our inventory.

Please contact us if the product or part you are looking for is not included in this publication.



# Installation Accessories - Fish Tape & Pulling Rope



## Power-Fish® Pull-Line

Continuous-fiber polyline can be blown directly into conduit. Will not rot or mildew. Can be left in conduit for future use. Color-coded for easy location in conduit. Convenient packaging features pre-punched top for easy access.



Part #	Description	Tensile Strength
31-338	6500 ft. (bucket)	190 lb. avg.
31-340	6500 ft. (bucket)	210 lb. min.
31-343	6500 ft. (box)	210 lb. min.

## S-Class

Non-conductive fiberglass core with outer nylon coating is specially designed for working around energized panels, circuitry and telecommunications installations. 200 ft. Tape with Eyelet.

Part # 31-165

## Tuff-Grip™ Fish Tapes

Non-slip handle and fingertip grooves provide secure grip for added handling comfort. Oversized handle opening. Large handle increases stability. Durable handle withstands rugged job site conditions. Textured case surface. Impact-resistant plastic case.



Part #	Description	Replacement Tape No.
31-055	Blued steel tape - 60 ft x 1/8 in x .060 in.	31-035
31-056	Blued steel tape - 120 ft. x 1/8 in. x .060 in.	31-036
31-057	Blued steel tape - 240 ft. x 1/8 in. x .060 in.	31-038
31-058	Steel tape - 100 ft. x 1/4 in. x .060 in.	31-050
31-059	Steel tape - 50 ft. x 1/4 in. x .060 in.	31-051
31-060	Fiberglass tape with leader - 50 ft.	31-150
31-061	Fiberglass tape with leader - 100 ft.	31-152
31-062	Fiberglass tape with eyelet - 50 ft.	31-160
31-063	Fiberglass tape with eyelet - 100 ft.	31-162
31-064	Fiberglass tape with leader - 200 ft.	31-155
31-065	Fiberglass tape with eyelet - 200 ft.	31-165
31-066	Stainless steel - 120 ft. x 1/8 in. x .060 in.	31-073
31-067	Stainless steel - 240 ft. x 1/8 in. x .060 in.	31-074

## Zoom™ Fishtape

Translucent, impact-resistant case shows precisely how much tape is left. Unique non-slip handle with fingertip grooves provide sure handling even while wearing gloves. One year warranty. Up, down, over or around - omni-directional, round cable design simplifies pulls with superior snaking capabilities and won't get caught no matter how many twists and turns. Radial steel core (twisted not braided) wires feature high molecular density outer jacket. Easy-in, easy-out case refills quickly.



Part #	Description
31-090	50 ft.
31-092	100 ft.
31-096	200 ft.
31-091	Replacement tape, 50 ft.
31-093	Replacement tape, 100 ft.
31-095	Replacement tape, 200 ft.



## Thumbwinder™ Fish Tape

Convenient 7 in. size can be stored in tool bag. Durable, impact-resistant case. Easy-to-use thumb-operated rewind. 1/8 in. x 0.045 in. steel tape.



Part #	Description
31-010	50 ft.
31-012	25 ft.

## Rapid-Pak® Fish Tapes

Inner rotating reel with winding knob retrieves tape. Funneled tape opening reduces kinking and tape breakage. Reversible, hinged knob for right- or left-handed rewinds. Stationary handle for extra durability. Textured case surface provides positive grip. Impact-resistant plastic case.



Part #	Description	Replacement Tape
31-081	1/8 in x 100 ft Steel Tape	31-040
31-098	200 ft. x 1/2 in. x .060 in.	31-038
31-186	Fiberglass tape with leader - 100 ft.	31-152
31-187	Fiberglass tape with leader - 50 ft.	31-150
31-189	Fiberglass tape with eyelet - 100 ft.	31-162
31-190	Fiberglass tape with eyelet - 50 ft.	31-160
31-207	Fiberglass tape with leader - 200 ft.	31-155
31-208	Fiberglass tape with eyelet - 200 ft.	31-165
31-220	Replacement crank assembly	-

## Gold-Fish® Fish Tapes

Designed for multiple-bend applications. Flexible in all directions. Brass plated to resist corrosion.



Part #	Eye Type	Length (ft)
31-132	Small	50
31-133	Small	75
31-134	Small	100 ft.
31-140	Standard	25 ft.
31-141	Standard	50
31-142	Standard	100

## Fish Tape Leader

Guides flat fish tape easily around bends in conduit. Handles up to six 10 AWG bare wires. Tested for 500 lb. Pull.



Part #	Description
31-148	Fish tape leader for steel or stainless steel tapes
31-150	Fish tape leader for S-Class® fiberglass fish tapes

## Fish Tape Swivel Ball

Swivels to prevent wires from twisting during pull. Designed for use on 1/8 in. steel tape. Eyelet holds up to four 10 AWG bare wires.



Part # 31-085

# Installation Accessories - Fish Tape & Pulling Rope



**Paladin Tools®**

## Tuff-Rod™ Fishing Pole Kits

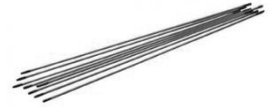
Newly redesigned fishing poles feature a crimped edge, gel coat, and reinforced composite pultrusion fiberglass to provide for a stronger and longer lasting product.



Part #	Diameter	Description
31-611	1/4"	Regular flex, white, kit of three 4' rods (12' total) w/ one J hook and one bullet nose end.
31-612	1/4"	Regular flex, white, kit of four 6' rods (24' total) w/ one J hook and one bullet nose end.
31-643	1/4"	Regular flex, white, bulk pack of twelve 4' long rods.
31-644	1/4"	Regular flex, white, bulk pack of twelve 6' long rods.
31-631	3/16"	Extra flex, glow rod, kit of three 4' rods (12' total) w/ one J hook and one bullet nose end.
31-632	3/16"	Extra flex, glow rod, kit of five 6' rods (30' total) w/ one J hook and one bullet nose end.
31-647	3/16"	Extra flex, glow rod, bulk pack of twelve 4' long rods.
31-648	3/16"	Extra flex, glow rod, bulk pack of twelve 6' long rods.

## FiberFish Cable Installation Products

Sturdy, rugged and durable for many years of use. Non-conductive fiberglass rods with a variety of useful tips. Interconnecting FIBER-FISH rods kits available in 3' and 6' lengths.



TelePole scopes to 20' to place cable over high, industrial ceilings. Carrying case holds rods, accessories and TelePole. One year warranty.

Part #	Description
1752	FIBERFISH rod kit - five 6' rods
1753	25' FiberSnake in PVC sleeve
1754	40' FiberSnake in PVC sleeve
1755	100' FiberSnake on wire reel cage
1756	Wire reel holder
1757	Attachment kit in plastic tackle box: fish hook magnet 2 bull nose tips ball chain and pull ring
1765	FIBERFISH rod kit - eight 3' rods

## NOTES

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

