

# Cable Ties

Panduit® offers the most complete selection of cable tie styles, sizes, materials and colors to meet our customers' needs. Panduit cable ties bundle, mount, and identify in countless indoor, outdoor, and harsh environment applications. Panduit cable ties, wiring accessories, and installation tools allow our customers to achieve the lowest total installed cost of managing wire and cable.

- Panduit continues to provide innovative new cable tie designs to meet our customers' application challenges
- Panduit cable ties and wiring accessories can be used in a variety of applications and environments, providing the optimal wire management solution
- Panduit offers a large selection of ergonomic cable tie installation tools – all with consistent, and reliable performance



Panduit leads the industry in the breadth and depth of available cable tie designs created from customer feedback on their application requirements. As with all Panduit products, quality in design and production along with customer service excellence are assured.

B1

## Cable Tie Selection Chart

Follow this step-by-step process to find the cable ties that best suit your application:

### Cable Tie Function

- Select the main function of the cable tie you need:  
 Bundle = Standard Cable Ties  
 Re-use = Nylon Releasable Ties\*  
 Identify = Marker and Flag Ties  
 Mount = Clamp Ties, Push Mount Ties, and Stud Mount Ties

### Material Properties

- Determine the appropriate material for your application:  
 Mechanical  
 Chemical  
 Thermal

### Cable Tie Family

- Select the cable tie family that meets your overall needs

B3

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	Cable Tie Function		Bundle, Re-use, Identify, Mount	Bundle, Re-use, Identify, Mount	Bundle, Re-use, Mount	Bundle, Re-use, Mount	Bundle	Bundle
	Material	Test Method	Nylon 6.6	Weather Resistant Nylon 6.6	Impact Modified Weather Resistant Nylon 6.6	Heat Stabilized Nylon 6.6	Heat Stabilized Nylon 6.6	Heat Stabilized Weather Resistant Nylon 6.6
	Color	—	Natural	Black	Black	Black	Natural	Black
	Part Number Suffix (Material Designation)	—	No Suffix	0	0	30	39	300
Mechanical Properties	Tensile @ Yield @ 73°F (psi)	ISO 527	12,000	12,000	9,700	12,000	12,000	12,000
	Water Absorption (24 Hours)	ASTM D570	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
	Radiation Resistance (Rads)	—	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
	Weathering Life Expectancy (Years)/UV Resistance	—	1 – 2	7 – 9	7 – 9	4 – 5	1 – 2	7 – 9
	Impact Resistance	—	○	○	⊖	○	○	○
Chemical Resistance	Salts	—	⊖	⊖	⊖	⊖	⊖	⊖
	Hydrocarbons (Gas, Oil, Lubricants)	—	●	●	●	●	●	●
	Chlorinated Hydrocarbons	—	⊖	⊖	⊖	⊖	⊖	⊖
	Acids	—	●	●	●	●	●	●
	Bases	—	⊖	⊖	⊖	⊖	⊖	⊖
	Acid Rain	—	⊖	⊖	⊖	⊖	⊖	⊖
Thermal Properties	Continuous Use Temperature Range	UL 746B	-76°F - 185°F -60°C - 85°C	-76°F - 185°F -60°C - 85°C	-76°F - 185°F -60°C - 85°C	-76°F - 239°F -60°C - 115°C	-76°F - 239°F -60°C - 115°C	-76°F - 239°F -60°C - 115°C
	Minimum Installation Temperature	UL 62275	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)
	Flammability Rating	UL 94	V-2	V-2	V-2	V-2	V-2	V-2
	Low Smoke	ASTM E662	PASS	PASS	PASS	PASS	PASS	PASS
	Oxygen Index	BS ISO 4589	28	28	—	28	28	28
	Halogen-Free	IEC 60754-2	Yes	Yes	Yes	Yes	Yes	Yes
	Burning Fume Toxicity	BSS-7239	PASS	PASS	PASS	PASS	PASS	PASS
	Heat Deflection Temperature @ 1.8 Mpa	ASTM D648 ISO 75 -1/-2	158°F 70°C	158°F 70°C	145°F 63°C	158°F 70°C	158°F 70°C	158°F 70°C
	Relative Price	—	Low	Low	Low	Low	Low	Med

Cable Tie Catalog Page	Product Line	Cross Sections				
	Pan-Ty®	✓	SM, M, I, S	LH, H, EH	✓	✓
	Super-Grip® (B1.38)	✓	M, I, S, LH	H	✓	
	Dome-Top® Barb Ty (B1.43)	✓	M, I, S	LH	✓	✓
	Dura-Ty™ (B1.53)					
	Parallel-Entry (B1.56)	✓	M, I, S, HS	LH	✓	✓
	Sta-Strap® (B1.65)	✓	M, I, S, H		✓	
	Specialty Ties (B1.73)	✓		H	✓	✓

Check mark indicates material availability in that product line.

Cross Sections: SM = Subminiature, M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy.

\*For information on re-usable Hook and Loop Cable Ties, see page B1.81.

Recommendation Legend	Highest	High	Acceptable	Low	Lowest
	●	◐	○	◑	●

Bundle	Bundle, Identify	Bundle	Bundle	Bundle, Re-use	Bundle	Bundle	Bundle	Bundle	Bundle	Bundle
Flame Retardant Nylon 6.6	Flame Retardant Nylon 6.6	Weather Resistant Nylon 12	Polypropylene	Weather Resistant Polypropylene	TEFZEL ■	HALAR ▲	PEEK	Metal Detectable Nylon 6.6	Metal Detectable Polypropylene	Weather Resistant Acetal
Black	Natural Ivory	Black	Green	Black	Aqua Blue	Maroon	Brown	Blue	Blue	Black
60	69	120	109	100	76	702Y	71	86	186	N/A
11,000	11,000	6,700	4,100	4,100	7,500	7,000	15,200	—	—	6,500
1.1%	1.1%	0.3%	0.1%	0.1%	<0.03%	<0.05%	0.5%	1.2%	0.1%	<0.45%
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	3.5 x 10 <sup>6</sup>	1 x 10 <sup>6</sup>	1 x 10 <sup>6</sup>	2 x 10 <sup>8</sup>	2 x 10 <sup>8</sup>	1 x 10 <sup>9</sup>	—	1 x 10 <sup>6</sup>	6 x 10 <sup>5</sup>
1 – 2	1 – 2	12 – 15	1	7 – 9	>15	>15	—	—	1	>20
◑	◑	○	◐	◐	●	●	●	○	◐	◐
●	●	●	○	○	●	●	●	●	○	●
●	●	○	●	●	●	●	○	●	●	●
◑	◑	◐	●	●	●	●	◐	—	●	◑
-76°F - 212°F -60°C - 100°C	-76°F - 212°F -60°C - 100°C	-76°F - 194°F -60°C - 90°C	-76°F - 239°F -60°C - 115°C	-76°F - 239°F -60°C - 115°C	-76°F - 338°F -60°C - 170°C	-76°F - 257°F -60°C - 125°C	-76°F - 500°F -60°C - 260°C	-76°F - 185°F -60°C - 85°C	-76°F - 239°F -60°C - 115°C	-76°F - 185°F -60°C - 85°C
-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 2)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)	-4°F or +32°F -20°C or 0°C (Note 1)
V-0	V-0	HB	HB	HB	V-0	V-0	V-0	HB	HB	HB
PASS	PASS	—	—	—	—	—	PASS	—	—	PASS
34	34	—	—	—	30	52	35	—	—	—
Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
PASS	PASS	—	—	—	—	—	—	—	—	—
154°F 68°C	154°F 68°C	122°F 50°C	122°F 50°C	122°F 50°C	—	149°F 65°C	313°F 156°C	145°F 63°C	122°F 50°C	239°F 115°C
Med	Med	Med	Med	Med	High	High	High	Low	Med	Med

✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	✓									
	✓									✓

Note 1: Check UL file for the specific part number rating

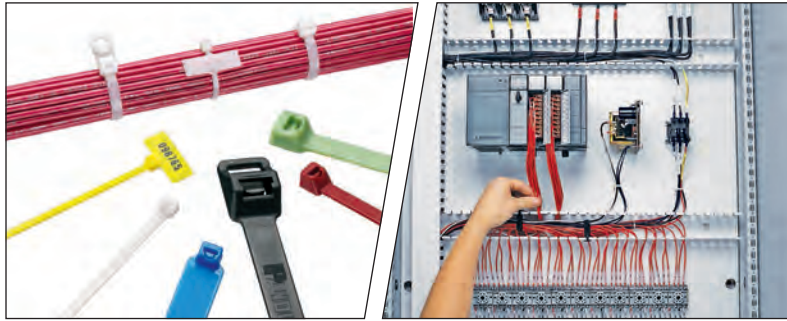
Note 2: Based upon UL RTI for electrical properties

■ TEFZEL is a registered trademark of The Chemours Company ▲ HALAR is a registered trademark of Solvay Solexis

## Cable Tie Styles Overview

## Pan-Ty® Cable Ties

Pages B1.6 – B1.35



- Designed for use in numerous applications to meet a variety of needs in the OEM, MRO, and construction markets
- Largest selection of styles, materials, and sizes
- One-piece construction for consistent performance and reliability
- Lowest threading force of any one-piece cable tie in the industry

## Super-Grip® Cable Ties

Pages B1.36 – B1.40



- Designed for the strength requirements of the MRO and construction markets
- Thin, wide strap body – flexible, conforms to bundles
- Strong – withstands rough installation practices
- Grips wires tightly and resists lateral movement

## Dome-Top® Barb Ty Cable Ties

Pages B1.41 – B1.53



- Approved for the demanding MRO and construction requirements as typified in the oil and gas markets
- Stainless steel barb provides consistent performance and reliability
- Infinitely adjustable for tight bundles throughout entire bundle range
- Dome-top head features unique patented design with smooth, round edges

**Cable Tie Styles Overview (continued)**

**Parallel-Entry Cable Ties**

**Pages B1.54 – B1.62**



- Designed for use in the OEM and transportation markets
- All parallel-entry ties provide a low profile head which avoids snags and reduces overall bundle size
- No protrusion of tie cut-off – protects workers’ arms/hands
- Contour-Ty® Cable Ties have outside teeth and smooth, round edges to protect cable jacket – perfect for high vibration applications

B1

B2

B3

C1

C2

**Sta-Strap® Cable Ties**

**Pages B1.63 – B1.69**



- Convenient and easy to use in OEM manual assembly operations
- Exclusive, two-piece design provides lowest threading force in the industry
- Use for normal bundling and through-panel applications
- Releasable prior to final tensioning and cut-off

C3

C4

D1

D2

D3

**Network Cable Ties**

**Pages B1.81 – B1.88**



- Ideal for the telecommunications, financial, education, and government markets
- Adjustable, releasable, and re-usable
- No risk of over-tensioning or damaging high performance network cables
- Variety of styles, sizes, and colors

E1

E2

E3

E4

E5

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PANDUIT®

Industrial Electrical Solutions

B1

**Features and Benefits – Pan-Ty® Cable Ties**

One-piece design for consistent performance and reliability.

Available in lengths from 2.8 to 43.3 inches and a variety of styles, materials, and colors for specific applications.

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

One-piece locking wedge provides consistent, reliable performance

High loop tensile strength exceeds industry standards

Low threading force reduces operator fatigue and improves productivity

Curved tip threads easily and installs faster

Finger grip ensures positive grip during threading of tie

E5

Cable tie tools speed installation and reduce total installed cost.  
Visit [www.panduit.com/tools](http://www.panduit.com/tools).

Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing.  
See pages B2.1 – B2.26.

F

G

H

B1.6

**Selection Guide – Pan-Ty® Cable Ties**



Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	PLT	B1.8, 9
	Releasable Ties/Re-usable	PRT	B1.20
	Clamp Ties/Mount	PLC	B1.24
	Push Mount Ties/Mount	PLWP, PRWP, PLUP, PLP	B1.26, 28, 31
	Marker Ties/Identify	PLF, PLM	B1.32
Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	PLT	B1.10, 11
	Releasable Ties/Re-usable	PRT	B1.21, 22
	Clamp Ties/Mount	PLC	B1.25
	Push Mount Ties/Mount	PLWP, PRWP, PLUP, PLP	B1.27 – B1.31
	Marker Ties/Identify	PLF, PLM	B1.32
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	PLT	B1.12
	Releasable Ties/Re-usable	PRT	B1.21, 22
	Clamp Ties/Mount	PLC	B1.25
	Push Mount Ties/Mount	PLWP, PRLWP, PRWP, PLUP, PLP	B1.27 – B1.31
Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	Locking Ties/Bundle	PLT	B1.13
Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties/Bundle	PLT	B1.12
Flame Retardant Nylon 6.6, Black (60)	Locking Ties/Bundle	PLT	B1.14
Flame Retardant Nylon 6.6, Ivory (69)	Locking Ties/Bundle	PLT	B1.14
	Marker Ties/Identify	PLF, PLM	B1.32
Weather Resistant Nylon 12, Black (120)	Locking Ties/Bundle	PLT	B1.15
Polypropylene, Green (109)	Locking Ties/Bundle	PLT	B1.15
Weather Resistant Polypropylene, Black (100)	Locking Ties/Bundle	PLT	B1.16
	Releasable Ties/Re-usable	PRT	B1.23
HALAR▲, Maroon (702Y) TEFZEL■, Aqua Blue (76)	Locking Ties/Bundle	PLT	B1.16, 17
	Locking Ties/Bundle	PLT	B1.18
PEEK, Translucent Brown (71)	Locking Ties/Bundle	PLT	B1.18
Metal Detectable, Blue (86, 186)	Locking Ties/Bundle	PLT	B1.19

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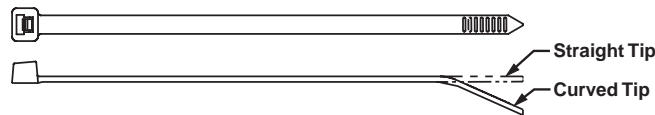
**Part Number System for Pan-Ty® Cable Ties**

PLT	2	S	—	C	
Type	Size	Cross Section	Screw Hole Size	Package Size	Material/Color
PLT = Locking Tie	Approx. Maximum Bundle Dia. (In.)	SM = Subminiature M = Miniature I = Intermediate S = Standard LH = Light-Heavy H = Heavy EH = Extra-Heavy	(Clamp Ties Only) -S4 = #4 (M2.5) -S6 = #6 (M3) -S8 = #8 (M4) -S10 = #10 (M5) -S25 = 1/4 (M6)	Q = 25 L = 50 C = 100 TL = 250 D = 500 M = 1000 VMR = 2 reels/2500 ea. XMR = 2 reels/5000 ea.	See Page B1.33
PRT = Releasable Tie					
PLC = Locking Clamp					
PLF = Locking Flag					
PLM = Locking Marker					
PLP = Locking Push Mount					
PLWP = Locking Wing Push Mount					
PRLWP = Releasable Ladder Wing Push Mount					
PRWP = Releasable Wing Push Mount					
PLUP = Locking Umbrella Push Mount					



## Pan-Ty® Cable Ties – Nylon 6.6

- For indoor use
- Versatile cable ties can be used in countless applications
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- A variety of materials and colors available for specific applications
- UL Listed for use in plenum or air handling spaces per NEC except PLT.6SM and PLT5H/6H/8H/13H



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Subminiature Cross Section

PLT.6SM-C	2.8	71	0.070	1.8	0.030	0.8	0.60	15	8	36	GTS-E, PTS	100	1000
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### Miniature Cross Section – Plenum Rated

PLT.7M-C	3.1	79	0.090	2.3	0.032	0.8	0.68	17	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
PLT1M-C	3.9	99	0.098	2.5	0.043	1.1	0.87	22					
PLT1.5M-C	5.6	142	0.098	2.5	0.043	1.1	1.25	32	18	80			
PLT2M-C	8.0	203	0.098	2.5	0.043	1.1	2.00	51					

### Intermediate Cross Section – Plenum Rated

PLT1.5I-C	5.6	142	0.142	3.6	0.045	1.1	1.38	35	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
PLT2I-C	8.0	203	0.142	3.6	0.045	1.1	2.00	51					
PLT2.5I-C	9.7	246	0.145	3.7	0.052	1.3	2.50	64	40	178			
PLT3I-C	11.4	290	0.145	3.7	0.052	1.3	3.00	76					
PLT4I-C	14.5	368	0.145	3.7	0.052	1.3	4.00	102					

### Standard Cross Section – Plenum Rated UL TYPE 2S Rated

PLT1S-C	4.8	122	0.190	4.8	0.052	1.3	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PPTS, PTH, STS2, STH2	100	1000
PLT1.5S-C	6.2	157	0.190	4.8	0.052	1.3	1.50	38					
PLT2S-C	7.4	188	0.190	4.8	0.052	1.3	1.88	48					
PLT2.5S-C	9.8	249	0.190	4.8	0.052	1.3	2.50	64	50	222		100	1000
PLT3S-C	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PLT4S-C	14.5	368	0.190	4.8	0.052	1.3	4.00	102					
PLT4.5S-C	15.5	394	0.190	4.8	0.052	1.3	4.50	114	50	222	100	500	
PLT5S-C	17.5	445	0.190	4.8	0.052	1.3	5.00	127					

### Light-Heavy Cross Section (Straight Tip) – Plenum Rated

PLT2H-L	8.1	206	0.300	7.6	0.075	1.9	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
PLT2.5H-L	9.8	251	0.300	7.6	0.075	1.9	2.50	64					
PLT3H-L	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PLT4H-L	14.5	368	0.300	7.6	0.075	1.9	4.00	102	120	534		50	500
PLT6LH-L	21.9	556	0.300	7.6	0.075	1.9	6.00	152					
PLT7LH-L	24.7	627	0.300	7.6	0.075	1.9	7.00	178					
PLT8LH-L	27.6	701	0.300	7.6	0.075	1.9	8.00	203	120	534	50	500	
PLT9LH-L*	30.5	775	0.300	7.6	0.075	1.9	9.00	229					
PLT10LH-L*	34.3	871	0.300	7.6	0.075	1.9	10.31	262	120	534	50	1000	

### Heavy Cross Section (Straight Tip)

PLT5H-L*	17.7	450	0.350	8.9	0.078	2.0	5.00	127	175	778	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
PLT6H-L*	20.9	530	0.350	8.9	0.078	2.0	6.00	152					
PLT8H-L*	30.6	779	0.350	8.9	0.078	2.0	9.00	229					
PLT13H-Q*	43.3	1100	0.350	8.9	0.078	2.0	13.00	330	175	778		25	500

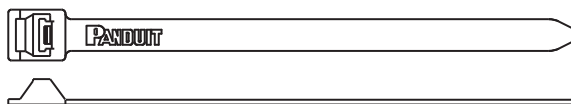
\*UL Listed – meets the requirements of UL 181B-C, for securing UL Listed non-metallic air ducts and air connectors.

Order number of pieces required, in multiples of Standard Package Quantity.



**UL LISTED US** Pan-Ty® Lashing Ties – Nylon 6.6

- For indoor use
- Typically used for heavy duty applications
- Among the strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip, see page B1.22
- UL Listed for use in plenum or air handling spaces per NEC except PLT.6SM and PLT5H/6H/8H/13H



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section – Plenum Rated</b>													
PLT2EH-C	9.0	229	0.500	12.7	0.075	1.9	2.00	51	250	1112	GS4EH-E, ST3EH	100	1000
PLT5EH-Q	20.1	511	0.500	12.7	0.075	1.9	5.00	127	250	1112		25	250
PLT6EH-Q	22.2	564	0.500	12.7	0.075	1.9	6.00	152				100	1000
PLT8EH-C	28.3	719	0.500	12.7	0.085	2.2	8.00	203	250	1112		100	500
PLT10EH-C	34.2	869	0.500	12.7	0.085	2.2	10.00	254					
PLT12EH-C	40.1	1019	0.500	12.7	0.085	2.2	12.00	305					

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Cable Ties – Weather Resistant Nylon 6.6

B2

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Versatile cable ties can be used in countless applications
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC except PLT.6SM and PLT5H/6H/8H/13H

B3

C1

C2

C3

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

#### Subminiature Cross Section

PLT.6SM-C0	2.8	71	0.070	1.8	0.030	0.8	0.60	15	8	36	GTS-E, PTS	100	1000
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C4

#### Miniature Cross Section ★ NEW! Plenum Rated

PLT.7M-M0	3.1	79	0.090	2.3	0.032	0.8	0.68	17	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
PLT1M-C0	3.9	99	0.098	2.5	0.043	1.1	.87	22	18	80		100	1000
PLT1.5M-C0	5.6	142	0.098	2.5	0.043	1.1	1.25	32					
PLT2M-C0	8.0	203	0.098	2.5	0.043	1.1	2.00	51					

D1

D2

#### Intermediate Cross Section ★ NEW! Plenum Rated

PLT1.5I-C0	5.6	142	0.142	3.6	0.045	1.1	1.38	35	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
PLT2I-C0	8.0	203	0.142	3.6	0.045	1.1	2.00	51					
PLT2.5I-C0	9.7	246	0.145	3.7	0.052	1.3	2.50	64					
PLT3I-C0	11.4	290	0.145	3.7	0.052	1.3	3.00	76					
PLT4I-C0	14.5	368	0.145	3.7	0.052	1.3	4.00	102					

D3

E1

#### Standard Cross Section ★ NEW! Plenum Rated

PLT1S-C0	4.8	122	0.190	4.8	0.052	1.3	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PPTS, PTH, STS2, STH2	100	1000
PLT1.5S-C0	6.2	157	0.190	4.8	0.052	1.3	1.50	38					
PLT2S-C0	7.4	188	0.190	4.8	0.052	1.3	1.88	48					
PLT2.5S-C0	9.8	249	0.190	4.8	0.052	1.3	2.50	64					
PLT3S-C0	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PLT4S-C0	14.5	368	0.190	4.8	0.052	1.3	4.00	102					
PLT4.5S-C0	15.5	394	0.190	4.8	0.052	1.3	4.50	114					
PLT5S-C0	17.5	445	0.190	4.8	0.052	1.3	5.00	127	50	222	100	500	

E2

E3

E4

#### Light-Heavy Cross Section (Straight Tip) ★ NEW! Plenum Rated

PLT2H-L0	8.1	206	0.300	7.6	0.075	1.9	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
PLT2.5H-L0	9.8	251	0.300	7.6	0.075	1.9	2.50	64					
PLT3H-L0	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PLT4H-L0	14.5	368	0.300	7.6	0.075	1.9	4.00	102					
PLT4H-TL0/147	14.5	368	0.300	7.6	0.060	1.5	4.11	104.5	120	534		250	2500
PLT6LH-L0	21.9	556	0.300	7.6	0.075	1.9	6.00	152	120	534		50	500
PLT7LH-L0	24.7	627	0.300	7.6	0.075	1.9	7.00	178					
PLT8LH-L0	27.6	701	0.300	7.6	0.075	1.9	8.00	203					
PLT9LH-L0	30.5	775	0.300	7.6	0.075	1.9	9.00	229					

E5

F

G

#### Heavy Cross Section (Straight Tip)

PLT5H-L0	17.7	450	0.350	8.9	0.078	2.0	5.00	127	175	778	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
PLT6H-L0	20.9	530	0.350	8.9	0.078	2.0	6.00	152					
PLT8H-L0	30.6	779	0.350	8.9	0.078	2.0	9.00	229					
PLT13H-Q0	43.3	1100	0.350	8.9	0.078	2.0	13.00	330	175	778		25	500

H

B1.10

Order number of pieces required, in multiples of Standard Package Quantity.



**Pan-Ty® Lashing Ties – Weather Resistant Nylon 6.6**

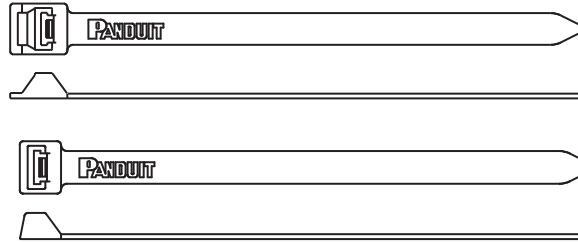
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Typically used for heavy duty applications
- Among the strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip, shown below



Lashing Tie



No Buckle Design



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
PLT2EH-Q0	9.0	229	0.500	12.7	0.075	1.9	2.00	51	250	1112	GS4EH-E, ST3EH	25	250
PLT5EH-Q0	20.1	511	0.500	12.7	0.075	1.9	5.00	127					
PLT6EH-Q0	22.2	564	0.500	12.7	0.075	1.9	6.00	152					
PLT8EH-Q0	28.3	719	0.500	12.7	0.085	2.2	8.00	203					
PLT10EH-Q0	34.2	869	0.500	12.7	0.085	2.2	10.00	254					
PLT12EH-Q0	40.1	1019	0.500	12.7	0.085	2.2	12.00	305					

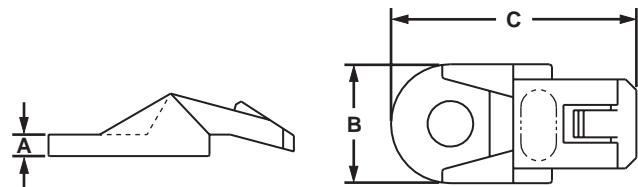
<b>Extra-Heavy Cross Section (No Buckle Design)</b>													
PLT3EH-NB-C0	12.2	310	0.500	12.7	0.075	1.9	3.30	84	250	1112	GS4EH-E, ST3EH	100	1000
PLT5EH-NB-C0	19.8	503	0.500	12.7	0.075	1.9	5.00	127					
PLT6EH-NB-C0	21.8	554	0.500	12.7	0.075	1.9	6.00	152					

Note: UL Recognized and CSA Certified except the No Buckle Design



**Lashing Tie Mounting Clip – Weather Resistant Nylon 6.6**

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Converts Panduit® lashing ties into clamps
- Easily snaps in place for a secure clamp
- Use with lashing ties shown on pages B1.9, B1.11, B1.20, B1.22 and B1.23



Part Number	Height A		Width B		Length C		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm			
MCEH-S25-C0	0.13	3.3	0.67	17.0	1.38	35	1/4" (M6) screw (not flathead)	100	1000

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Cable Ties – Heat Stabilized Nylon 6.6

B2

- For high temperature applications up to 239°F (115°C) – indoor use
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B3

C1

C2

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

C3

#### Subminiature Cross Section

PLT.6SM-M30	2.8	71	0.070	1.8	0.030	0.8	.60	15	8	36	GTS-E, PTS	1000	50000
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#### Miniature Cross Section

PLT.7M-M30	3.1	79	0.090	2.3	0.032	0.8	.68	17	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
PLT1M-C30	3.9	99	0.098	2.5	0.043	1.1	.87	22	18	80		100	1000
PLT1.5M-M30	5.6	142	0.098	2.5	0.043	1.1	1.25	32	18	80		1000	50000
PLT2M-M30	8.0	203	0.098	2.5	0.043	1.1	2.00	51	18	80		1000	25000

D1

#### Intermediate Cross Section

PLT1.5I-C30	5.6	142	0.142	3.6	0.045	1.1	1.38	35	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
PLT2I-C30	8.0	203	0.142	3.6	0.045	1.1	2.00	51					
PLT3I-M30	11.4	290	0.145	3.7	0.052	1.3	3.00	76	40	178		1000	10000
PLT4I-M30	14.5	368	0.145	3.7	0.052	1.3	4.00	102					

D3

#### Standard Cross Section

PLT1S-M30	4.8	122	0.190	4.8	0.052	1.3	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PPTS, PTH, STS2, STH2	1000	10000
PLT1.5S-M30	6.2	157	0.190	4.8	0.052	1.3	1.50	38					
PLT2S-C30	7.4	188	0.190	4.8	0.052	1.3	1.88	48	50	222		1000	1000
PLT2S-M39*	7.4	188	0.190	4.8	0.052	1.3	1.88	48					
PLT2.5S-M30	9.8	249	0.190	4.8	0.052	1.3	2.50	64	50	222		1000	10000
PLT3S-C30	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PLT4S-C30	14.5	368	0.190	4.8	0.052	1.3	4.00	102	50	222	100	1000	
PLT5S-M30	17.5	445	0.190	4.8	0.052	1.3	5.00	127					

E1

E2

#### Light-Heavy Cross Section (Straight Tip)

PLT2H-TL30	8.1	206	0.300	7.6	0.075	1.9	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLT3H-TL30	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PLT4H-TL30	14.5	368	0.300	7.6	0.075	1.9	4.00	102					
PLT4H-TL30/147	14.5	368	0.300	7.6	0.060	1.5	4.11	104.5	120	534		100	2000
PLT7LH-C30	24.7	627	0.300	7.6	0.075	1.9	7.00	178					
PLT9LH-C30	30.5	775	0.300	7.6	0.075	1.9	9.00	229	120	534		100	1000

E3

E4

E5

#### Heavy Cross Section (Straight Tip)

PLT5H-C30	17.7	450	0.350	8.9	0.078	2.0	5.00	127	175	778	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	100	2000
PLT6H-C30	20.9	530	0.350	8.9	0.078	2.0	6.00	152					
PLT8H-C30	30.6	779	0.350	8.9	0.078	2.0	9.00	229					

F

G

H

\*Natural heat stabilized material (39).

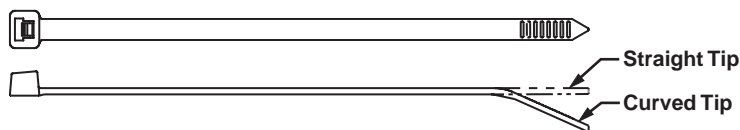
B1.12

Order number of pieces required, in multiples of Standard Package Quantity.



## Pan-Ty® Cable Ties – Heat Stabilized Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light and for high temperature applications up to 239°F (115°C) – indoor or outdoor use
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Miniature Cross Section **NEW!** Plenum Rated

PLT1M-M300	3.9	99	0.098	2.5	0.035	0.9	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
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### Intermediate Cross Section **NEW!** Plenum Rated

PLT1.5I-M300	5.6	142	0.142	3.6	0.045	1.1	1.38	35	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
PLT2I-M300	8.0	203	0.142	3.6	0.045	1.1	2.00	51					

### Standard Cross Section **NEW!** Plenum Rated

PLT1S-M300	4.8	122	0.190	4.8	0.052	1.3	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT2S-M300	7.4	188	0.190	4.8	0.052	1.3	1.88	48					
PLT4S-M300	14.5	368	0.190	4.8	0.052	1.3	4.00	102	50	222		1000	5000

### Light-Heavy Cross Section (Straight Tip) **NEW!** Plenum Rated

PLT2H-TL300	8.4	213	0.300	7.6	0.075	1.9	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLT4H-TL300	14.5	368	0.300	7.6	0.075	1.9	4.00	102					

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Cable Ties – Flame Retardant Nylon 6.6

B2

- Flammability rating of UL 94V-0 – indoor use
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B3

C1

C2

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

#### Miniature Cross Section

PLT1M-M60*	4.0	102	0.098	2.5	0.043	1.1	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
PLT1M-M69													
PLT2M-M69	8.0	203	0.098	2.5	0.043	1.1	2.00	51					

C4

#### Intermediate Cross Section

PLT1.5I-M69	5.6	142	0.142	3.6	0.044	1.1	1.38	35	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
PLT2I-M69	8.0	203	0.142	3.6	0.044	1.1	2.00	51					

D1

#### Standard Cross Section

PLT2S-M60*	7.4	188	0.190	4.8	0.052	1.3	1.88	48	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT2S-M69													
PLT4S-M69	14.5	368	0.190	4.8	0.052	1.3	4.00	102	50	222		1000	5000

D2

#### Light-Heavy Cross Section (Straight Tip)

PLT4H-TL69	14.6	371	0.300	7.6	0.075	1.9	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
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D3

\*Black flame retardant material (60).

E1

### Cable Tie Mounts – Flame Retardant Nylon 6.6

E2

- Flammability rating of UL 94V-0 – indoor use
- Unique cradle design provides maximum stability for the cable bundle
- Low profile design keeps bundle close to mounting surface

E3

E4

E5

F

Part Number	Used with Cable Ties*	Length A		Width B		Height C		Counterbore Diameter		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	Lbs.	N			
TM1S4-M69	M	0.51	13.0	0.32	8.0	0.23	5.8	0.23	5.7	#4 (M2.5) Screw	1000	5000
TM1S6-M69	M	0.51	13.0	0.32	8.0	0.23	5.8	0.28	7.0	#6 (M3) Screw		
TM2S6-M69	M, I, S	0.63	16.0	0.43	10.8	0.28	7.0	0.29	7.1	#6 (M3) Screw		
TM2S8-M69	M, I, S	0.63	16.0	0.43	10.8	0.28	7.0	0.33	8.4	#8 (M4) Screw		
TM3S8-C69	M, I, S, LH	0.86	21.9	0.61	15.5	0.37	9.4	0.32	8.1	#8 (M4) Screw	100	500
TM3S10-M69	M, I, S, LH	0.86	21.9	0.61	15.8	0.37	9.4	0.38	9.7	#10 (M5) Screw	1000	5000

\*Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard and LH = Light-Heavy.

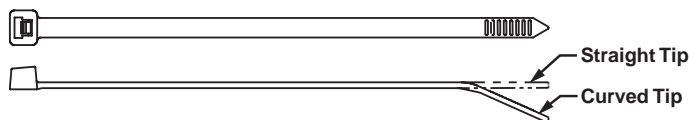
B1.14

Order number of pieces required, in multiples of Standard Package Quantity.

## Pan-Ty® Cable Ties – Weather Resistant Nylon 12



- For high moisture, corrosive (zinc chloride and dilute acids), and low temperature indoor or outdoor applications
- Cable tie of choice for making attachments to galvanized surfaces
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

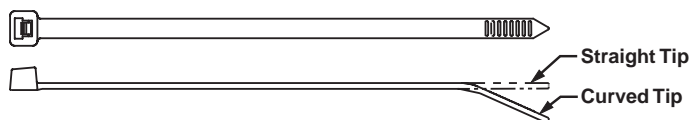


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Intermediate Cross Section</b>													
PLT1.5I-M120	5.6	142	0.142	3.6	0.045	1.1	1.38	35	25	111	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section</b>													
PLT2S-M120	7.4	188	0.190	4.8	0.052	1.3	1.88	48	40	178	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT4S-M120	14.5	368	0.190	4.8	0.052	1.3	4.00	102	40	178		1000	5000
<b>Light-Heavy Cross Section (Straight Tip)</b>													
PLT4H-TL120	14.5	368	0.300	7.6	0.075	1.9	4.00	102	90	400	GTH-E, GTSL, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLT8LH-C120	27.6	701	0.300	7.6	0.075	1.9	8.00	203	90	400		100	2500

## Pan-Ty® Cable Ties – Polypropylene – Distinctive Green Color



- For chemical resistance where high loop tensile strength is not required especially in the presence of hydrochloric acid, salts, and bases
- For indoor use
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
PLT1M-M109	3.9	99	0.098	2.5	0.043	1.1	0.87	22	11	49	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
<b>Intermediate Cross Section</b>													
PLT1.5I-M109	5.6	142	0.142	3.6	0.045	1.1	1.38	35	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section</b>													
PLT2S-M109	7.4	188	0.190	4.8	0.052	1.3	1.88	48	30	133	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT3S-M109	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PLT4S-M109	14.5	368	0.190	4.8	0.052	1.3	4.00	102	30	133		1000	5000
<b>Light-Heavy Cross Section (Straight Tip)</b>													
PLT2H-TL109	8.1	206	0.300	7.6	0.075	1.9	2.00	51	50	222	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLT3H-TL109	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PLT4H-TL109	14.5	368	0.300	7.6	0.075	1.9	4.00	102					

B1

## Pan-Ty® Cable Ties – Weather Resistant Polypropylene

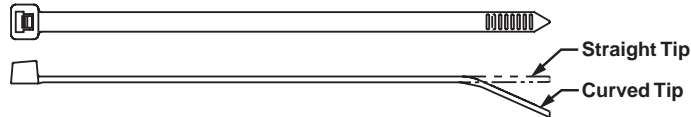


- For chemical resistance where high loop tensile strength is not required especially in the presence of hydrochloric acid, salts, and bases
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B2

B3

C1



C2

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Miniature Cross Section

PLT1M-M100	3.9	99	0.098	2.5	0.043	1.1	0.87	22	11	49	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
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### Intermediate Cross Section

PLT1.5I-M100	5.6	142	0.142	3.6	0.045	1.1	1.38	35	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
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### Standard Cross Section

PLT2S-M100	7.4	188	0.190	4.8	0.052	1.3	1.88	48	30	133	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT3S-M100	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PLT4S-M100	14.5	368	0.190	4.8	0.052	1.3	4.00	102	30	133		1000	5000

### Light-Heavy Cross Section (Straight Tip)

PLT2H-TL100	8.1	206	0.300	7.6	0.075	1.9	2.00	51	50	222	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLT3H-TL100	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PLT4H-TL100	14.5	368	0.300	7.6	0.075	1.9	4.00	102					

D3



## Pan-Ty® Cable Ties – HALAR<sup>▲</sup> – Distinctive Maroon Color

- UL Listed for use in plenum or air handling spaces per NEC, Section 300-22 (C) and (D)
- Low smoke density and excellent flammability rating of UL 94V-0
- Commonly accepted solution for bundling qualified cable without conduit in air handling space applications
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- Provides primary support for a flexible conduit, flexible tubing, or cable in accordance with the relevant national installation code

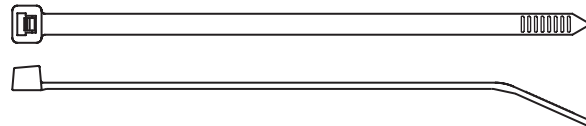
E1

E2

E3

E4

E5



F

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Miniature Cross Section — Plenum Rated

PLT1M-C702Y	4.0	102	0.098	2.5	0.043	1.1	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
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### Standard Cross Section — Plenum Rated UL TYPE 2S Rated

PLT2S-C702Y	7.4	188	0.190	4.8	0.055	1.4	1.88	48	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
PLT3S-C702Y	11.6	295					3.00	76					

G

H

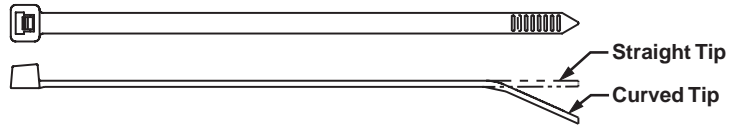
▲HALAR is a registered trademark of Solvay Solexis





**Pan-Ty® Cable Ties – TEFZEL® – Distinctive Aqua Blue Color**

- Ideal for applications requiring resistance to environmental stresses such as chemical attack, gamma radiation, ultraviolet radiation and extreme high and low temperatures
- Ideal for use in nuclear power facilities and chemical processing plants and meets the requirements of IEEE 383
- Low smoke density and excellent flammability rating of UL 94V-0
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- For indoor or outdoor use



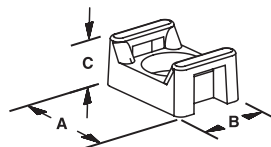
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
PLT1M-C76	4.0	102	0.098	2.5	0.043	1.1	.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Intermediate Cross Section</b>													
PLT2I-C76	8.0	203	0.135	3.4	0.045	1.1	2.00	51	30	133	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Standard Cross Section</b>													
PLT2S-C76	7.4	188	0.190	4.8	0.055	1.4	1.88	48	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
PLT3S-C76	11.6	295	0.190	4.8	0.059	1.5	3.00	76					
PLT4S-C76	14.6	371	0.190	4.8	0.059	1.5	4.00	102					
<b>Light-Heavy Cross Section (Straight Tip)</b>													
PLT3H-L76	11.5	292	0.300	7.6	0.075	1.9	3.00	78	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
PLT4H-L76	14.6	371	0.300	7.6	0.075	1.9	4.00	102					

■ TEFZEL is a registered trademark of The Chemours Company.



**Cable Tie Mounts – TEFZEL®**

- Flammability rating of UL 94V-0 – indoor use
- Unique cradle design provides maximum stability for the cable bundle
- Low profile design keeps bundle close to mounting surface



Part Number	Used with Cable Ties*	Length A		Width B		Height C		Counterbore Diameter		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm			
TM2S8-C76	M, I, S	0.63	16.0	0.43	10.8	0.28	7.0	0.30	7.6	#8 (M4) screw	100	500
TM3S8-C76	S, LH	0.86	21.7	0.62	15.5	0.38	9.5	0.37	9.4	#8 (M4) screw		
TM3S10-C76	S, LH	0.86	21.7	0.62	15.8	0.38	9.5	0.37	9.4	#10 (M5) screw		

\*Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, LH = Light-Heavy.

■ TEFZEL is a registered trademark of The Chemours Company.

B1

## Pan-Ty® Cable Ties – PEEK (Polyetheretherketone)

- Ideal for harsh environments where a cable tie material is required to hold up to chemical or radiation exposure
- Non-conductive material that is excellent for high temperature applications up to 500°F (260°C)
- High strength properties over a wide range of temperatures
- Flammability rating of UL 94V-0 with low smoke and toxicity; halogen-free
- PEEK material meets MIL specification MIL-P-46183, and is approved for use by the Department of Defense
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry

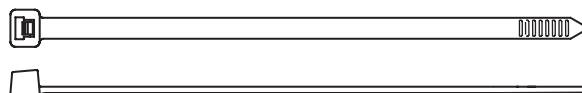
B2

B3

C1

C2

C3



C4

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
PLT1M-C71	4.0	102	0.098	2.5	0.048	1.2	0.87	22	35	156	GTS-E, PTS	100	1000
PLT1.5M-C71	5.9	150	0.098	2.5	0.048	1.2	1.38	35					
<b>Standard Cross Section</b>													
PLT2S-C71	7.4	188	0.190	4.8	0.055	1.4	1.88	48	150	668	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000

D1

D2

D3

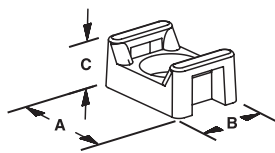
E1

## Cable Tie Mount – PEEK (Polyetheretherketone)

- Unique cradle design provides maximum stability for cable bundle
- Low profile design keeps bundle close to mounting surface where overhead space is limited

E2

E3



E4

E5

Part Number	Used with Cable Ties*	A Length In. mm	B Width In. mm	C Height In. mm	Counterbore Diameter In. (mm)	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
TM2S8-C71	Min., Std.	0.636 (16.2)	0.427 (10.8)	0.278 (7.1)	0.335 (8.5)	#8 (M4) screw	100	500

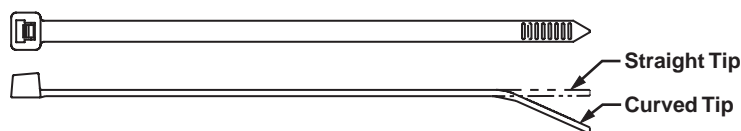
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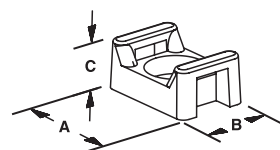
H

## Pan-Ty® Cable Ties – Metal Detectable Nylon 6.6 and Polypropylene

- Metal impregnated material allows identification by metal detector inspection equipment to help meet food, beverage, and pharmaceutical safety standards, to help reduce product contamination, loss, and recall
- Nylon material for general purpose maintenance and repair applications; ideal for use in control panels and overhead cable runs
- Polypropylene material provides excellent chemical resistance for use in processing and packaging areas where aggressive acid and alkaline chemicals are used to clean the equipment
- One-piece construction for consistent performance and reliability
- Among the lowest threading force of any one-piece cable tie in the industry
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Material	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
<b>Nylon 6.6</b>														
<b>Miniature Cross Section</b>														
PLT1M-C86	3.9	100	0.098	2.5	0.044	1.1	.87	22	18	80	GTS-E, GS2B-E, STS2	Nylon 6.6	100	1000
<b>Intermediate Cross Section</b>														
PLT2I-C86	8.0	203	0.135	3.4	0.047	1.2	2.00	51	30	133	GTS-E, GS2B-E, STS2	Nylon 6.6	100	1000
<b>Standard Cross Section</b>														
PLT2S-C86	7.3	186	0.190	4.8	0.057	1.4	1.85	47	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, STS2, STH2	Nylon 6.6	100	1000
PLT3S-C86	11.5	291	0.190	4.8	0.057	1.4	3.00	76						
PLT4S-C86	14.4	366	0.190	4.8	0.057	1.4	4.00	102						
<b>Light-Heavy Cross Section (Straight Tip)</b>														
PLT3H-L86	11.1	282	0.300	7.6	0.075	1.9	3.00	76	120	534	GTH-E, GS4H-E, GS4EH-E, STH2, ST3EH	Nylon 6.6	50	500
PLT4H-L86	14.4	366	0.300	7.6	0.075	1.9	4.00	102						
<b>Polypropylene</b>														
<b>Miniature Cross Section</b>														
PLT1M-C186	3.9	100	0.098	2.5	0.044	1.1	0.87	22	15	67	GTS-E, GS2B-E, STS2	Polypropylene	100	1000
<b>Intermediate Cross Section</b>														
PLT2I-C186	8.0	203	0.135	3.4	0.047	1.2	2.00	51	18	80	GTS-E, GS2B-E, STS2	Polypropylene	100	1000
<b>Standard Cross Section</b>														
PLT2S-C186	7.3	186	0.190	4.8	0.057	1.4	1.85	47	30	133	GTS-E, GS2B-E, GTH-E, GS4H-E, STS2, STH2	Polypropylene	100	1000
PLT3S-C186	11.5	291	0.190	4.8	0.057	1.4	3.00	76						
PLT4S-C186	14.4	366	0.190	4.8	0.057	1.4	4.00	102						
<b>Light-Heavy Cross Section (Straight Tip)</b>														
PLT3H-L186	11.1	282	0.300	7.6	0.075	1.9	3.00	76	60	267	GTH-E, GS4H-E, GS4EH-E, STH2, ST3EH	Polypropylene	50	500
PLT4H-L186	14.4	366	0.300	7.6	0.075	1.9	4.00	102						



Part Number	Material	Used with Cable Ties*	A Lgth. In. mm	B Width In. mm	C Ht. In. mm	Counterbore Diameter In. (mm)	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>Cable Tie Mounts</b>									
TM2S8-C86	Nylon 6.6	Min., Int., Std.	0.630 (16.0)	0.422 (10.7)	0.275 (7.0)	0.325 (8.3)	#8 (M4) screw	100	500
TM3S8-C86	Nylon 6.6	Std., Lt. Hvy.	0.867 (22.0)	0.614 (15.6)	0.373 (9.5)	0.325 (8.3)	#8 (M4) screw		
TM3S10-C86		#10 (M5) screw							
TM2S8-C186	Polypropylene	Min., Int., Std.	0.630 (16.0)	0.422 (10.7)	0.275 (7.0)	0.325 (8.3)	#8 (M4) screw		
TM3S8-C186	Polypropylene	Std., Lt. Hvy.	0.867 (22.0)	0.614 (15.6)	0.373 (9.5)	0.325 (8.3)	#8 (M4) screw		
TM3S10-C186		#10 (M5) screw							

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Releasable Cable Ties – Nylon 6.6

- For indoor use
- Extended release tab permits easy release and re-use where changes are anticipated during development, production, or servicing in the field
- One-piece construction for consistent performance and reliability
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC except PRT2H/3H/4H

B2

B3

C1

C2

To release, grasp the head of the cable tie, deflect release tab, and pull the cable tie away from the bundle.

Straight Tip  
Curved Tip

C3

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Standard Cross Section — Plenum Rated UL Type 2S Rated</b>													
PRT1S-C	4.8	122	0.190	4.8	0.052	1.3	1.00	25	50	222	Hand install only	100	1000
PRT1.5S-C	6.3	160	0.190	4.8	0.052	1.3	1.50	38					
PRT2S-C	7.4	188	0.190	4.8	0.052	1.3	1.88	48					
PRT3S-C	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PRT4S-C	14.5	368	0.190	4.8	0.052	1.3	4.00	102					

C4

D1

D2

<b>Light-Heavy Cross Section (Straight Tip)</b>													
PRT2H-L	8.4	213	0.300	7.6	0.075	1.9	2.00	51	80	356	Hand install only	50	500
PRT3H-L	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PRT4H-L	14.5	368	0.300	7.6	0.075	1.9	4.00	102					

D3

E1

### Pan-Ty® Releasable Lashing Ties – Nylon 6.6

- For indoor use
- Release tab permits easy release and re-use where changes are anticipated during development, production, or servicing in the field
- Typically used for heavy duty applications
- Among the strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip, see page B1.22

E2

E3

E4

PANDUIT

E5

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section — Plenum Rated</b>													
PRT2EH-C	9.0	229	0.500	12.7	0.075	1.9	2.00	51	250	1112	Hand install only	100	1000
PRT5EH-Q	20.1	511	0.500	12.7	0.075	1.9	5.00	127	250	1112	Hand install only	25	250
PRT6EH-Q	22.2	564	0.500	12.7	0.075	1.9	6.00	152					
PRT8EH-C	28.3	719	0.500	12.7	0.085	2.2	8.00	203	250	1112	Hand install only	100	1000
PRT10EH-C	34.2	869	0.500	12.7	0.085	2.2	10.00	254	250	1112	Hand install only	100	500
PRT12EH-C	40.1	1019	0.500	12.7	0.085	2.2	12.00	305	250	1112	Hand install only	50	500

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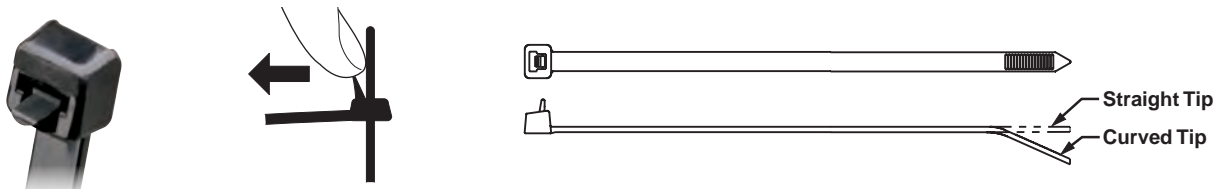
B1.20

Order number of pieces required, in multiples of Standard Package Quantity.



## Pan-Ty® Releasable Cable Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Extended release tab permits easy release and re-use where changes are anticipated during development, production, or servicing in the field
- One-piece construction for consistent performance and reliability
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



To release, grasp the head of the cable tie, deflect release tab, and pull the cable tie away from the bundle.

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Weather Resistant Nylon 6.6

Standard Cross Section **NEW!** Plenum Rated **UL Type 2S Rated**

Part Number	Length (In.)	Length (mm)	Width (In.)	Width (mm)	Thickness (In.)	Thickness (mm)	Max. Bundle Dia. (In.)	Max. Bundle Dia. (mm)	Min. Loop Tensile Str. (Lbs.)	Min. Loop Tensile Str. (N)	Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
PRT1S-C0	4.8	122	0.190	4.8	0.052	1.3	1.00	25	50	222	Hand install only	100	1000
PRT1.5S-C0	6.3	160	0.190	4.8	0.052	1.3	1.50	38					
PRT2S-C0	7.4	188	0.190	4.8	0.052	1.3	1.88	48					
PRT3S-C0	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
PRT4S-C0	14.5	368	0.190	4.8	0.052	1.3	4.00	102					

### Light-Heavy Cross Section (Straight Tip)

Part Number	Length (In.)	Length (mm)	Width (In.)	Width (mm)	Thickness (In.)	Thickness (mm)	Max. Bundle Dia. (In.)	Max. Bundle Dia. (mm)	Min. Loop Tensile Str. (Lbs.)	Min. Loop Tensile Str. (N)	Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
PRT2H-L0	8.4	213	0.300	7.6	0.075	1.9	2.00	51	80	356	Hand install only	50	500
PRT3H-L0	11.4	290	0.300	7.6	0.075	1.9	3.00	76					
PRT4H-L0	14.5	368	0.300	7.6	0.075	1.9	4.00	102					

### Heat Stabilized Nylon 6.6

#### Standard Cross Section

PRT1.5S-M30	6.3	160	0.190	4.8	0.052	1.3	1.50	38	50	222	Hand install only	1000	1000
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A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Releasable Lashing Ties – Weather Resistant and Heat Stabilized Nylon 6.6

B2

- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Release tab permits easy release and re-use where changes are anticipated during development, production, or servicing in the field
- Typically used for heavy duty applications
- Among the strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip shown below

B3

C1

C2

C3

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

C4

#### Weather Resistant Nylon 6.6 Extra-Heavy Cross Section

D1

PRT2EH-Q0	9.0	229	0.500	12.7	0.075	1.9	2.00	51	250	1112	Hand install only	25	250
PRT5EH-Q0	20.1	511	0.500	12.7	0.075	1.9	5.00	127					
PRT6EH-Q0	22.2	564	0.500	12.7	0.075	1.9	6.00	152					
PRT8EH-Q0	28.3	719	0.500	12.7	0.085	2.2	8.00	203					
PRT10EH-Q0	34.2	869	0.500	12.7	0.085	2.2	10.00	254					
PRT12EH-Q0	40.1	1019	0.500	12.7	0.085	2.2	12.00	305					

D2

#### Heat Stabilized Nylon 6.6 Extra-Heavy Cross Section

D3

PRT5EH-C30*	20.1	511	0.500	12.7	0.075	1.9	5.00	127	250	1112	Hand install only	100	1000
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\*PRT5EH-C30 not UL or CSA certified

E1

E2

### Lashing Tie Mounting Clip – Weather Resistant Nylon 6.6

E3

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Converts Panduit® lashing ties into clamps
- Easily snaps in place for a secure clamp
- Use with lashing ties shown on pages B1.9, B1.11, B1.20, B1.22 and B1.23

E4

E5

F

G

Part Number	Height A		Width B		Length C		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm			
MCEH-S25-C0	.13	3.3	.67	17.0	1.38	35	1/4" (M6) screw (not flathead)	100	1000

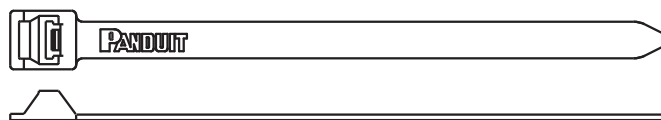
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B1.22

Order number of pieces required, in multiples of Standard Package Quantity.

## Pan-Ty® Releasable Lashing Ties – Weather Resistant Polypropylene

- For chemical resistance where high loop tensile strength is not required especially in the presence of hydrochloric acid, salts, and bases
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Release tab permits easy release and re-use where changes are anticipated during development, production, or servicing in the field
- Typically used for heavy duty applications
- Can be used with MCEH mounting clip, see page B1.22



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
PRT2EH-C100	9.0	229	0.500	12.7	0.075	1.9	2.00	51	90	400	Hand install only	100	1000
PRT5EH-C100	20.1	511	0.500	12.7	0.075	1.9	5.00	127					
PRT6EH-C100	22.2	564	0.500	12.7	0.075	1.9	6.00	152					
PRT8EH-C100	28.3	719	0.500	12.7	0.085	2.2	8.00	203					

B1

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

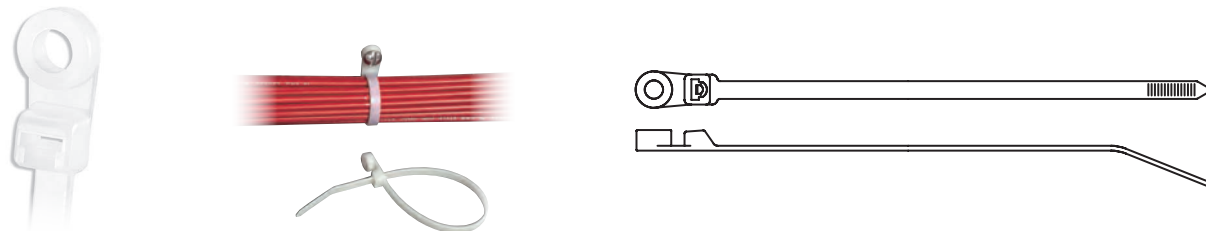
G

H



## Pan-Ty® Clamp Ties – Nylon 6.6

- For indoor use
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Design allows for bundling before or after screwing clamp in place
- One-piece construction for consistent performance and reliability
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC



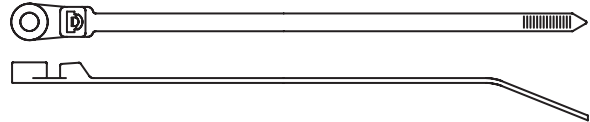
Part Number	Length		Width		Thickness		Nominal Hole Dia.		Screw Size	Metric Screw Size	Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm			In.	mm	Lbs.	N			
<b>Miniature Cross Section — Plenum Rated</b>																	
PLC1M-S4-C	4.3	109	0.100	2.5	0.045	1.1	0.122	3.1	#4	M2.5	.75	19	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Intermediate Cross Section — Plenum Rated</b>																	
PLC1.5I-S8-C	6.1	155	0.135	3.4	0.045	1.1	0.174	4.4	#8	M4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Standard Cross Section — Plenum Rated</b>																	
PLC2S-S6-C	7.9	201	0.190	4.8	0.047	1.2	0.148	3.8	#6	M3	1.84	47	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
PLC2S-S10-C	7.9	201	0.190	4.8	0.047	1.2	0.200	5.1	#10	M5	1.84	47					
PLC3S-S10-C	12.0	305	0.190	4.8	0.047	1.2	0.200	5.1	#10	M5	3.00	76					
PLC4S-S10-C	15.0	381	0.190	4.8	0.052	1.3	0.200	5.1	#10	M5	4.00	102					
<b>Light-Heavy Cross Section — Plenum Rated</b>																	
PLC2H-S25-L	9.0	229	0.300	7.6	0.075	1.9	0.260	6.6	1/4	M6	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
PLC4H-S25-L	15.1	384	0.300	7.6	0.075	1.9	0.260	6.6	1/4	M6	4.00	102					





# Pan-Ty® Clamp Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Design allows for bundling before or after screwing clamp in place
- One-piece construction for consistent performance and reliability
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Nominal Hole Dia.		Screw Size	Metric Screw Size	Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm			In.	mm	Lbs.	N			

## Weather Resistant Nylon 6.6

### Miniature Cross Section

PLC1M-S4-C0	4.3	109	0.100	2.5	0.045	1.1	0.122	3.1	#4	M2.5	.75	19	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
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### Intermediate Cross Section

PLC1.5I-S8-C0	6.1	155	0.135	3.4	0.045	1.1	0.174	4.4	#8	M4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
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### Standard Cross Section

PLC2S-S6-C0	7.9	201	0.190	4.8	0.047	1.2	0.148	3.8	#6	M3	1.84	47	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
PLC2S-S10-C0	7.9	201	0.190	4.8	0.047	1.2	0.200	5.1	#10	M5	1.84	47					
PLC3S-S10-C0	12.0	305	0.190	4.8	0.052	1.3	0.200	5.1	#10	M5	3.00	76					
PLC4S-S10-C0	15.0	381	0.190	4.8	0.052	1.3	0.200	5.1	#10	M5	4.00	102					

### Light-Heavy Cross Section

PLC2H-S25-TL0	9.0	229	0.300	7.6	0.075	1.9	0.260	6.6	1/4	M6	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLC4H-S25-L0	15.1	384	0.300	7.6	0.075	1.9	0.260	6.6	1/4	M6	4.00	102				50	500

## Heat Stabilized Nylon 6.6

### Miniature Cross Section

PLC1M-S4-M30	4.3	109	0.100	2.5	0.045	1.1	0.122	3.1	#4	M2.5	0.75	19	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
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### Intermediate Cross Section

PLC1.5I-S8-M30	6.1	155	0.135	3.4	0.045	1.1	0.174	4.4	#8	M4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
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### Standard Cross Section

PLC2S-S10-M30	7.9	201	0.190	4.8	0.047	1.2	0.200	5.1	#10	M5	1.84	47	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLC4S-S10-M30	15.0	381	0.190	4.8	0.052	1.3	0.200	5.1	#10	M5	4.00	102				1000	5000

### Light-Heavy Cross Section

PLC2H-S25-TL30	9.0	229	0.300	7.6	0.075	1.9	0.260	6.6	1/4	M6	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
PLC4H-S25-TL30	15.1	384	0.300	7.6	0.075	1.9	0.260	6.6	1/4	M6	4.00	102				250	2500

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### UL<sup>®</sup> US<sup>®</sup> C<sup>®</sup> SP<sup>®</sup> US<sup>®</sup> Pan-Ty<sup>®</sup> Wing Push Mount Ties – Nylon 6.6

- For indoor use
- Cable tie, mount, and fastener in a single part
- Used to attach bundles to another surface such as a flat panel
- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

C1

C2

C3

**PLWP\_SA  
Head Design**

C4

**PLWP\_SB  
Head Design**

D1

**PLWP\_H  
Head Design**

D2

**PLWP\_H  
Head Design**

D3

E1

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

#### Miniature Cross Section

E2

<b>PLWP1M-C</b>	4.3	109	0.098	2.5	0.044	1.1	0.187	4.7	0.093	2.4	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
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#### Intermediate Cross Section

E3

<b>PLWP1.5I-C</b>	6.0	152	0.135	3.4	0.045	1.2	0.187	4.7	0.093	2.4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
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#### Standard Cross Section

E4

<b>PLWP1S-C</b>	5.2	132	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
<b>PLWP1SA-D</b>	5.1	130	0.190	4.8	0.052	1.3	0.187	4.7	0.093	2.4	1.00	25	50	222		500	5000
<b>PLWP1SB-D</b>	5.2	132	0.190	4.8	0.052	1.3	0.187	4.7	0.157	4.0	1.00	25					
<b>PLWP1.5S-D</b>	6.8	173	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.50	38	50	222		100	1000
<b>PLWP1.5SA-D</b>	6.7	170	0.190	4.8	0.052	1.3	0.187	4.7	0.093	2.4	1.50	38					
<b>PLWP2S-C</b>	7.8	198	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.75	45	50	222		500	5000
<b>PLWP2SA-D</b>	7.7	196	0.190	4.8	0.052	1.3	0.187	4.7	0.093	2.4	1.75	45	50	222			
<b>PLWP2SB-D</b>	7.8	198	0.190	4.8	0.052	1.3	0.187	4.7	0.157	4.0	1.75	45					

F

#### Light-Heavy Cross Section

G

<b>PLWP2H-TL</b>	8.9	226	0.300	7.6	0.075	1.9	0.266	6.8	0.105	2.7	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
<b>PLWP3H-TL</b>	12.0	305	0.300	7.6	0.075	1.9	0.266	6.8	0.105	2.7	3.00	76					

Note: UL Recognized and CSA Certified except PLWP2H/3H.

H

B1.26

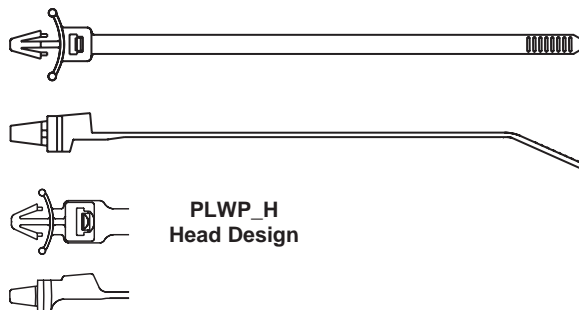
Order number of pieces required, in multiples of Standard Package Quantity.



## Pan-Ty® Wing Push Mount Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Cable tie, mount, and fastener in a single part
- Used to attach bundles to another surface such as a flat panel

- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
<b>Weather Resistant Nylon 6.6</b>																		
<b>Miniature Cross Section</b>																		
PLWP1M-D0	4.3	109	0.098	2.5	0.044	1.1	0.187	4.7	0.093	2.4	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	500	5000	
<b>Standard Cross Section</b>																		
PLWP1S-C0	5.2	132	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000	
PLWP2S-C0	7.8	198	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.75	45						
<b>Light-Heavy Cross Section</b>																		
PLWP2H-TL0	8.9	226	0.300	7.6	0.075	1.9	0.266	6.8	0.105	2.7	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500	
PLWP3H-TL0	12.0	305	0.300	7.6	0.075	1.9	0.266	6.8	0.105	2.7	3.00	76						
<b>Heat Stabilized Nylon 6.6</b>																		
<b>Miniature Cross Section</b>																		
PLWP1M-D30	4.3	109	0.098	2.5	0.044	1.1	0.187	4.7	0.093	2.4	.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	500	5000	
<b>Intermediate Cross Section</b>																		
PLWP1.5I-D30	6.0	152	0.135	3.4	0.045	1.2	0.187	4.7	0.093	2.4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	500	5000	
<b>Standard Cross Section</b>																		
PLWP1S-D30	5.2	132	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000	
PLWP1.5S-D30	6.8	173	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.50	38						
PLWP2S-D30	7.8	198	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.75	45						
<b>Light-Heavy Cross Section</b>																		
PLWP2H-TL30	8.9	226	0.300	7.6	0.075	1.9	0.266	6.8	0.105	2.7	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500	

Note: UL Recognized and CSA Certified except PLWP2H/3H.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### **Pan-Ty® Releasable Wing Push Mount Ties**

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Cable tie, mount, and fastener in a single part
- Used to attach bundles to another surface such as a flat panel
- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Extended release tab permits easy release and re-use where changes are anticipated during development, production, or servicing in the field
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

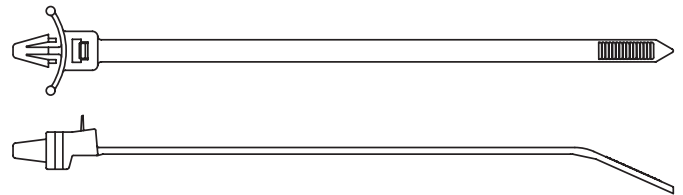
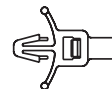
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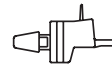


PRWP2S-D



PRWP2S-D0




**PRWP\_SA  
Head Design**


**PRWP\_SB  
Head Design**


**PRWP\_H  
Head Design**


Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

#### Nylon 6.6

##### Standard Cross Section

PRWP1S-C	5.2	132	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.00	25	50	222	Hand install only	500	5000
PRWP1SA-D	5.1	130	0.190	4.8	0.052	1.3	0.187	4.7	0.093	2.4	1.00	25					
PRWP1SB-D	5.2	132	0.190	4.8	0.052	1.3	0.187	4.7	0.157	4.0	1.00	25					
PRWP1.5S-D	6.8	173	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.50	38					
PRWP2S-D	7.8	198	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.75	45					

##### Light-Heavy Cross Section

PRWP2H-TL	8.9	226	0.300	7.6	0.075	1.9	0.266	6.8	0.105	2.7	2.00	51	120	534	Hand install only	250	2500
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#### Weather Resistant Nylon 6.6

##### Standard Cross Section

PRWP1S-D0	5.2	132	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.00	25	50	222	Hand install only	500	5000
PRWP1.5S-D0	6.8	173	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.50	38					
PRWP2S-D0	7.8	198	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.75	45					

#### Heat Stabilized Nylon 6.6

##### Standard Cross Section

PRWP1.5S-D30	6.8	173	0.190	4.8	0.052	1.3	0.250	6.4	0.105	2.7	1.50	38	50	222	Hand install only	500	5000
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Note: UL Recognized and CSA Certified except PRWP2H.

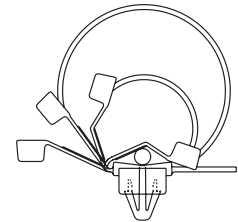
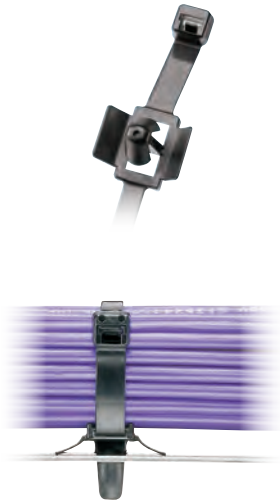
B1.28

Order number of pieces required, in multiples of Standard Package Quantity.



## Pan-Ty® Center Mounted Wing Push Mount Ties – Heat Stabilized Nylon 6.6

- For high temperature applications up to 239°F (115°C) – indoor use
- Used to center the bundle over the mount on all bundle diameters
- Cable tie, mount, and fastener in a single part
- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



**Bundle diameters from .12" to 1.97" (3mm to 50mm)**

**PLWP-SC** – Designed for normal wire bundles.

**PLWP-SD** – Designed for corrugated loom tubing. Bump prevents lateral and axial movement.

**PLWP-SE** – Designed for corrugated loom tubing, see page C3.10. Bump prevents lateral movement.

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
<b>Standard Cross Section</b>																		
PLWP30SC-D30	5.8	147	0.190	4.8	0.050	1.3	0.266	6.8	0.118	3.0	1.18	30	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000	
PLWP40SC-D30	7.0	178	0.190	4.8	0.050	1.3	0.266	6.8	0.118	3.0	1.58	40	50	222		500	5000	
PLWP40SD-D30																500	5000	
PLWP50SC-D30	8.2	208	0.190	4.8	0.050	1.3	0.266	6.8	0.118	3.0	1.97	50	50	222		500	5000	
PLWP50SE-D30															500	5000		

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Ladder Style Releasable Wing Push Mount Ties – Heat Stabilized Nylon 6.6

B2

- For high temperature applications up to 239°F (115°C) – indoor use
- Unique releasable ladder design eliminates the need for multiple clamp sizes
- Cable tie, mount, and fastener in a single part
- Used to attach bundles to another surface such as a flat panel

- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B3

C1

C2

C3

C4

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Standard Cross Section</b>																	
PRLWP30S-D30	4.7	119	0.380	9.7	0.050	1.3	0.266	6.8	0.118	3.0	1.43	36	35	156	Hand install only	500	5000
PRLWP50S-D30	7.1	180	0.380	9.7	0.050	1.3	0.266	6.8	0.118	3.0	2.18	55					

D1

D2

### Pan-Ty® Umbrella Wing Push Mount Ties – Nylon and Heat Stabilized Nylon 6.6

- Natural nylon material for indoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Quick, secure way to fasten to clearance holes in panel
- Anchor is easily pressed into a pre-formed hole in a light gauge metal or plastic and locks in place
- Umbrella shaped disk provides constant tension for a stable, secure, and rattle-free installation

- Disk forms a dust-tight and semi-liquid tight seal to the panel surface
- PLUP40SE style is for use with corrugated loom tubing, see page C3.10
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

D3

E1

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PLUP40SE Head Design

E3

E4

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Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Standard Cross Section</b>																	
PLUP40S-D30*	7.0	177	0.190	4.8	0.047	1.2	0.266	6.8	0.050	1.3	1.57	40	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000
PLUP40SE-D																	
PLUP40SE-D30*																	

G

H

\*Heat stabilized material (30).

B1.30

Order number of pieces required, in multiples of Standard Package Quantity.

**UL<sup>®</sup> US C<sup>®</sup> SP<sup>®</sup> US** Pan-Ty<sup>®</sup> Push Mount Ties

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- *Wingless* design allows tie to be used in confined spaces
- Cable tie, mount, and fastener in a single part

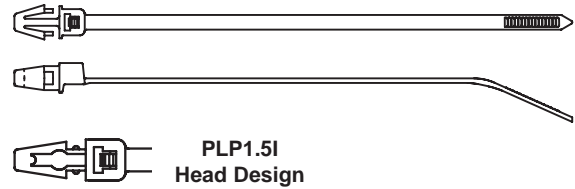
- Economical push mount ties are used to attach bundles to another surface such as a flat panel
- Anchor is easily pressed into a pre-formed hole and locks in place
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



PLP2S-C



PLP2S-M0



PLP1.5I Head Design

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

**Nylon 6.6**

**Intermediate Cross Section**

PLP1.5I-C	6.1	156	0.135	3.4	0.045	1.1	0.187	4.7	0.093	2.4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
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**Standard Cross Section**

PLP1S-M	5.3	135	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLP1.5S-M	6.7	170	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.50	38					
PLP2S-C	7.9	200	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.75	45	50	222		100	1000

**Weather Resistant Nylon 6.6**

**Intermediate Cross Section**

PLP1.5I-M0	6.1	156	0.135	3.4	0.045	1.1	0.187	4.7	0.093	2.4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
------------	-----	-----	-------	-----	-------	-----	-------	-----	-------	-----	------	----	----	-----	--------------------------------	------	-------

**Standard Cross Section**

PLP1S-M0	5.3	135	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLP2S-M0	7.9	200	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.75	45					

**Heat Stabilized Nylon 6.6**

**Intermediate Cross Section**

PLP1.5I-M30	6.1	156	0.135	3.4	0.045	1.1	0.187	4.7	0.093	2.4	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
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**Standard Cross Section**

PLP1S-M30	5.3	135	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.00	25	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLP2S-M30	7.9	200	0.180	4.6	0.050	1.3	0.250	6.4	0.125	3.2	1.75	45					

A

# PANDUIT®

# Industrial Electrical Solutions

B1

## **Pan-Ty® Marker and Flag Ties**

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Flame retardant material has a flammability rating of UL 94V-0 – for indoor use
- Used to fasten and identify bundles at the same time
- One-piece construction for consistent performance and reliability
- Can be marked with Panduit® marker pens on page B1.49 or computer printable labels
- Custom imprinting with text, symbols, or trademarks available using Panduit Custom Hot Stamping Service, see page B1.89
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B2

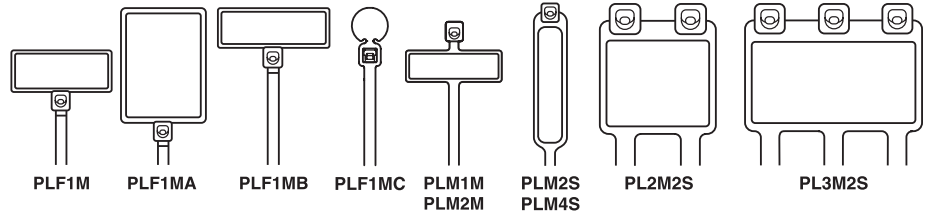
B3

C1

C2

C3

C4

D1

Part Number	Marker Type	Length		Width		Thickness		Marker Write-On Area		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Nylon 6.6

#### Miniature Cross Section

D2	PLF1M-C	Flag	4.3	109	0.098	2.5	0.045	1.1	0.31 x 0.75	7.9 x 19.1	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
	PLF1MA-C		5.1	130	0.098	2.5	0.045	1.1	0.76 x 1.04	19.1 x 26.4	0.87	22					
	PLF1MB-C		4.0	101	0.098	2.5	0.045	1.1	0.31 x 0.92	7.9 x 23.4	0.75	19					
D3	PLF1MC-M	Wrap	4.3	109	0.098	2.5	0.045	1.1	0.29 x 0.32	7.4 x 8.0	0.87	22	18	80		1000	25000
	PLM1M-C		3.9	99	0.098	2.5	0.035	0.9	0.26 x 0.95	6.6 x 24.1	0.75	19					
	PLM2M-C		8.0	203	0.098	2.5	0.035	0.9	0.26 x 0.95	6.6 x 24.1	2.00	51	18	80		100	1000

E1

#### Standard Cross Section

E1	PLM2S-C	Wrap	7.4	188	0.185	4.7	0.052	1.3	0.44 x 0.87	11.1 x 22.1	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
	PLM4S-C		14.6	371	0.185	4.7	0.052	1.3	0.44 x 2.00	11.1 x 50.8	4.00	102					
E2	PL2M2S-L	Wrap	7.4	188	0.185	4.7	0.052	1.3	0.87 x 1.07	22.1 x 27.2	1.75	45	50	222		50	500
	PL3M2S-L		7.4	188	0.185	4.7	0.052	1.3	0.87 x 1.79	22.1 x 45.5	1.75	45					

### Weather Resistant Nylon 6.6

#### Miniature Cross Section

E3	PLF1M-C0	Flag	4.3	109	0.098	2.5	0.045	1.1	0.31 x 0.75	7.9 x 19.1	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
	PLF1MA-M0		5.1	130	0.098	2.5	0.045	1.1	0.76 x 1.04	19.1 x 26.4	0.87	22					
	PLM1M-C0		3.9	99	0.098	2.5	0.035	0.9	0.26 x 0.95	6.6 x 24.1	0.75	19					
	PLM2M-M0	Wrap	8.0	203	0.098	2.5	0.035	0.9	0.26 x 0.95	6.6 x 24.1	2.00	51	18	80		1000	25000

E4

#### Standard Cross Section

E5	PLM2S-C0	Wrap	7.4	188	0.185	4.7	0.052	1.3	0.44 x 0.87	11.1 x 22.1	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
	PLM4S-D0		14.6	371	0.185	4.7	0.052	1.3	0.44 x 2.00	11.1 x 50.8	4.00	102					
E5	PL2M2S-L0	Wrap	7.4	188	0.185	4.7	0.052	1.3	0.87 x 1.07	22.1 x 27.2	1.75	45	50	222		50	500
	PL3M2S-D0		7.4	188	0.185	4.7	0.052	1.3	0.87 x 1.79	22.1 x 45.5	1.75	45					

### Flame Retardant Nylon 6.6

#### Miniature Cross Section

F	PLF1M-M69	Flag	4.3	109	0.098	2.5	0.045	1.1	0.31 x 0.75	7.9 x 19.1	0.87	22	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
	PLM1M-M69	Wrap	3.9	99	0.098	2.5	0.035	0.9	0.26 x 0.95	6.6 x 24.1	0.75	19					

G

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B1.32


Order number of pieces required, in multiples of Standard Package Quantity.



Pan-Ty® Cable Ties

Material and Color Chart

Material	Color	Panduit Suffix
Nylon 6.6	Natural	✓
Weather Resistant Nylon 6.6	Black	0
Weather Resistant Nylon 6.6 (meets Mil Spec.)	Black	00
Nylon 6.6	Brown	1
Nylon 6.6	Red	2
Nylon 6.6	Orange	3
Nylon 6.6	Yellow	4Y
Nylon 6.6	Green	5
Nylon 6.6	Blue	6
Nylon 6.6	Purple	7
Nylon 6.6	Gray	8
Nylon 6.6	White	10
Nylon 6.6	Telephone Gray	14
Nylon 6.6	Black	20
Heat Stabilized Nylon 6.6	Black	30
Heat Stabilized Nylon 6.6	Natural	39

Material	Color	Panduit Suffix
Nylon 6.6	Fluorescent Orange	53
Nylon 6.6	Fluorescent Yellow	54
Nylon 6.6	Fluorescent Green	55
Nylon 6.6	Fluorescent Pink	59
Flame Retardant Nylon 6.6	Black	60
Flame Retardant Nylon 6.6	Natural (Ivory)	69
PEEK (Polyetheretherketone)	Translucent Brown	71
TEFZEL <sup>■</sup>	Aqua Blue	76
Metal Detectable, Nylon	Blue	86
Metal Detectable, Polypropylene	Blue	186
Weather Resistant Polypropylene	Black	100
Polypropylene	Green	109
Nylon 12	Black	120
Heat Stabilized Weather Resistant Nylon 6.6	Black	300
HALAR <sup>▲</sup>	Maroon	702Y
 Heat Stabilized UV Weather Resistant Impact Modified Nylon 6.6	Black	350

✓Denotes Panduit® Natural Nylon 6.6 (no suffix).

■TEFZEL is a registered trademark of The Chemours Company.

▲HALAR is a registered trademark of Solvay Solexis.

Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
PLC1M-S4-C	✓	0	PLC1M-S4-M	✓	0, 30
PLC1.5I-S8-C	✓	0	PLC1.5I-S8-M	✓	0, 30
PLC2S-S6-C	✓	0	PLC2S-S6-M	✓	0
PLC2S-S10-C	✓	0, 14	PLC2S-S10-M	✓	0, 20, 30
PLC3S-S10-C	✓	0	PLC3S-S10-M	✓	0
PLC4S-S10-C	✓	0	PLC4S-S10-M	✓	0, 30
PLC2H-S25-L	✓		PLC2H-S25-TL	✓	0, 30
PLC4H-S25-L	✓	0	PLC4H-S25-TL	✓	0, 30
PLF1M-C	✓	0	PLF1M-M	✓	0, 2, 3, 4Y, 6, 10, 69
PLF1MA-C	✓	3, 4Y	PLF1MA-M	✓	0, 2, 3, 4Y, 5, 6, 10
PLF1MB-C	✓		PLF1MB-M	✓	
			PLF1MC-M		3
PLM1M-C	✓	0	PLM1M-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 69
PLM2M-C	✓		PLM2M-M	✓	0, 4Y, 6
PLM2S-C	✓	0, 4Y	PLM2S-D	✓	0, 2, 3, 4Y, 5, 6, 8
PLM4S-C	✓		PLM4S-D	✓	0, 2, 4Y, 6

Continued on next page

B1

## Pan-Ty® Cable Ties (continued)

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
PL2M2S-L	✓	0	PL2M2S-D	✓	0, 4Y, 10
PL3M2S-L	✓		PL3M2S-D	✓	0, 4Y
PLP1.5I-C	✓		PLP1.5I-M	✓	0, 30
			PLP1S-M	✓	0, 30
			PLP1.5S-M	✓	
PLP2S-C	✓		PLP2S-M	✓	0, 30
PLT.6SM-C	✓	0	PLT.6SM-M	✓	0, 30
PLT.7M-C	✓		PLT.7M-M	✓	0, 30
PLT1M-C	✓	0, 00, 1, 2, 3, 5, 6, 7, 8, 10, 14, 30, 71, 76, 86, 186, 702Y	PLT1M-M	✓	0, 00, 1, 2, 3, 5, 6, 7, 8, 10, 14, 20, 30, 53, 54, 55, 59, 60, 69, 76, 100, 109, 300, 702Y
			PLT1M-XMR	✓	0, 00, 2, 3, 5, 6, 7, 8, 30
PLT1.5M-C	✓	0, 71	PLT1.5M-M	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 14, 20, 30
			PLT1.5M-XMR	✓	0, 00, 30
PLT2M-C	✓	0	PLT2M-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30, 69
PLT1.5I-C	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30	PLT1.5I-M	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30, 69, 100, 109, 120, 300
PLT2I-C	✓	0, 14, 30, 76, 86, 186	PLT2I-M	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 14, 20, 30, 53, 54, 55, 59, 69, 76, 300
PLT2.5I-C	✓	0	PLT2.5I-M	✓	0, 20
PLT3I-C	✓	0, 14	PLT3I-M	✓	0, 2, 3, 4Y, 5, 6, 8, 10, 14, 20, 30
PLT4I-C	✓	0, 14	PLT4I-M	✓	0, 2, 5, 6, 14, 20, 30
PLT1S-C	✓	0	PLT1S-M	✓	0, 30, 38, 300
PLT1.5S-C	✓	0	PLT1.5S-M	✓	0, 30
PLT2S-C	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30, 54, 55, 59, 71, 76, 86, 120, 186, 702Y	PLT2S-M	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30, 38, 39, 53, 54, 55, 59, 60, 69, 71, 76, 100, 109, 120, 300, 702Y
			PLT2S-VMR	✓	0, 30
PLT2.5S-C	✓	0	PLT2.5S-M	✓	0, 30
PLT3S-C	✓	0, 00, 2, 20, 30, 76, 86, 186, 702Y	PLT3S-M	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30, 53, 54, 55, 59, 76, 100, 109, 702Y
			PLT3S-VMR	✓	30
PLT4S-C	✓	0, 00, 2, 3, 4Y, 5, 6, 8, 10, 20, 30, 76, 86, 186	PLT4S-M	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 14, 20, 30, 69, 76, 100, 109, 120, 300
PLT4.5S-C	✓	0	PLT4.5S-M	✓	0
PLT5S-C	✓	0	PLT5S-M	✓	0, 2, 3, 4Y, 5, 6, 8, 30
PLT6LH-L	✓	0	PLT6LH-C	✓	0
PLT7LH-L	✓	0	PLT7LH-C	✓	0, 30
PLT8LH-L	✓	0	PLT8LH-C	✓	0, 120
PLT8LH-Q		0			
PLT9LH-L	✓	0	PLT9LH-C	✓	0, 30
PLT10LH-L	✓		PLT10LH-C	✓	
PLT2H-L	✓	0	PLT2H-TL	✓	0, 2, 4Y, 6, 30, 100, 109, 300
PLT2.5H-L	✓	0	PLT2.5H-TL	✓	0
PLT3H-L	✓	0, 76, 86, 186	PLT3H-TL	✓	0, 30, 76, 100, 109
PLT4H-L	✓	0, 00, 76, 86, 186	PLT4H-TL	✓	0, 00, 1, 2, 3, 4Y, 5, 6, 10, 20, 30, 69, 76, 100, 109, 120, 300
PLT4H-C	✓	0			
PLT5H-L	✓	0	PLT5H-C	✓	0, 30
PLT6H-L	✓	0	PLT6H-C	✓	0, 30
PLT8H-L	✓	0	PLT8H-C	✓	0, 00, 30
PLT13H-Q	✓	0	PLT13H-C	✓	0, 3

Continued on next page

Pan-Ty® Cable Ties (continued)

B1

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
PLT2EH-Q		0	PLT2EH-C	✓	0
			PLT3EH-NB-C		0
PLT5EH-Q	✓	0	PLT5EH-C	✓	0
			PLT5EH-NB-C		0
PLT6EH-Q	✓	0	PLT6EH-C	✓	0
			PLT6EH-NB-C		0
PLT8EH-Q		0	PLT8EH-C	✓	0
PLT10EH-Q		0	PLT10EH-C	✓	0
PLT12EH-Q		0	PLT12EH-C	✓	0
			PLUP40S-D		30
			PLUP40SE-D	✓	30
PLWP1M-C	✓		PLWP1M-D	✓	0, 30
PLWP1.5I-C	✓		PLWP1.5I-D	✓	30
PLWP1S-C	✓	0	PLWP1S-D	✓	0, 20, 30
			PLWP1SA-D	✓	
			PLWP1SB-D	✓	
			PLWP1.5S-D	✓	30
			PLWP1.5SA-D	✓	
PLWP2S-C	✓	0	PLWP2S-D	✓	0, 30
			PLWP2SA-D	✓	
			PLWP2SB-D	✓	
			PLWP2H-TL	✓	0, 30
			PLWP3H-TL	✓	0
			PLWP30SC-D		30
			PLWP40SC-D		30
			PLWP40SD-D		30
			PLWP50SC-D		30
			PLWP50SE-D		30
			PLWS2EH-TL350		350
			PLWS3EH-TL350		350
			PLWS4EH-TL30		350
			PRLWP30S-D		30
			PRLWP50S-D		30
PRT1S-C	✓	0	PRT1S-M	✓	0
PRT1.5S-C	✓	0	PRT1.5S-M	✓	0, 30
PRT2S-C	✓	0	PRT2S-M	✓	0, 2, 3, 4Y, 6, 7
PRT3S-C	✓	0	PRT3S-M	✓	0
PRT4S-C	✓	0	PRT4S-M	✓	0, 2, 3, 4Y, 6
PRT2H-L	✓	0	PRT2H-TL	✓	0
PRT3H-L	✓	0	PRT3H-TL	✓	0
PRT4H-L	✓	0	PRT4H-TL	✓	0
PRT2EH-Q		0	PRT2EH-C	✓	0, 100
PRT5EH-Q	✓	0, 30	PRT5EH-C	✓	0, 30, 100
PRT6EH-Q	✓	0	PRT6EH-C	✓	0, 100
PRT8EH-Q		0	PRT8EH-C	✓	0, 100
PRT10EH-Q		0	PRT10EH-C	✓	0
PRT12EH-Q		0	PRT12EH-C	✓	0
PRWP1S-C	✓		PRWP1S-D	✓	0
			PRWP1SA-D	✓	
			PRWP1SB-D	✓	
			PRWP1.5S-D	✓	0, 20, 30
			PRWP2S-D	✓	0
			PRWP2H-TL	✓	

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

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A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Features and Benefits – Super-Grip® Cable Ties

One-piece design with a thin, wide strap body for improved flexibility.

B2

Dome shaped head and smooth, round strap body protect the cable insulation

B3

C1

C2

C3

C4

D1

D2

D3

Thin, flared neck tolerates rough installation practices and improves small bundle performance

E1

E2

E3

E4

E5

F

G

H

One-piece locking wedge provides consistent, reliable performance  
Strong locking wedge improves strength and allows for rough handling

High loop tensile strength exceeds industry standards

Thin, wide strap body provides increased flexibility while maintaining loop tensile strength

Curved, tapered tip threads easily and installs faster

Aggressive grips allow temporary threading of tie before the strap teeth are engaged

Cable tie tools speed installation and reduce total installed cost.  
Visit [www.panduit.com/tools](http://www.panduit.com/tools).

Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing.  
See pages B2.6, B2.9, B2.11, B2.19.

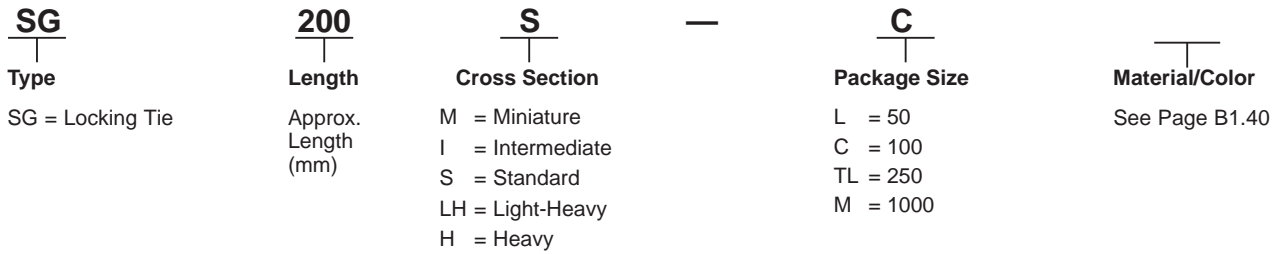
B1.36

**Selection Guide – Super-Grip® Cable Ties**



Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	SG	B1.38
Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	SG	B1.39
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	SG	B1.39

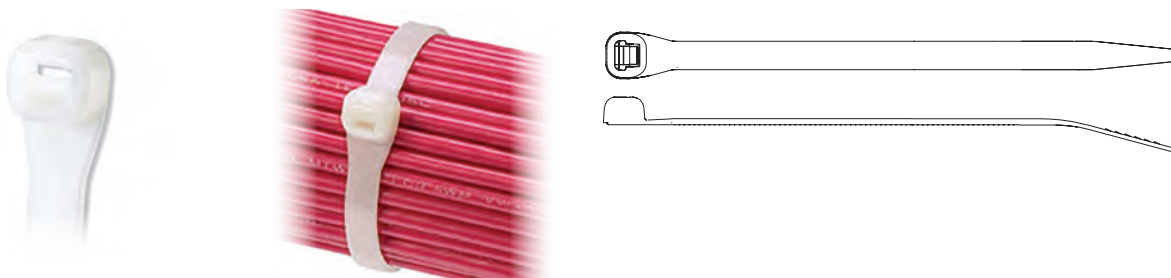
**Part Number System for Super-Grip® Cable Ties**





## Super-Grip® Cable Ties – Nylon 6.6

- For indoor use
- Designed to grip the bundle tightly to resist lateral movement of the tie once installed
- High strength allows the tie to withstand rough installation practices that occur in MRO and construction environments
- Thin, wide strap body provides flexibility enabling it to conform to bundle while maintaining tensile strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC
- Complementary mounts available, see pages B2.6, B2.9, B2.11, B2.19

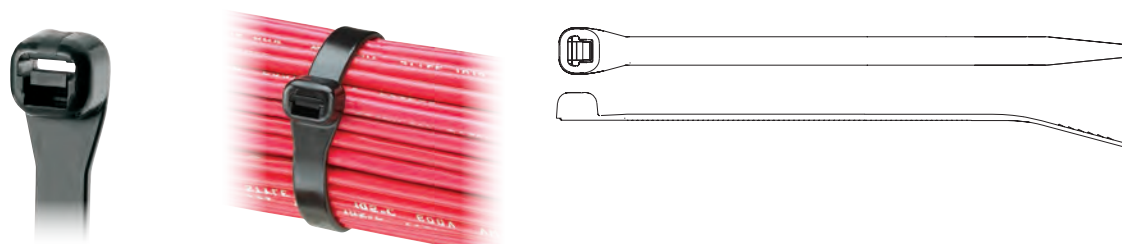


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section – Plenum Rated</b>													
SG100M-C	4.2	106	0.118	3.0	0.038	1.0	0.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Intermediate Cross Section – Plenum Rated</b>													
SG150I-C	6.2	157	0.168	4.3	0.040	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Standard Cross Section – Plenum Rated</b>													
SG200S-C	8.3	211	0.225	5.7	0.046	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTH, PTH, PPTS, STS2, STH2	100	1000
SG250S-C	10.4	264	0.225	5.7	0.050	1.3	2.60	66					
SG300S-C	12.4	315	0.225	5.7	0.050	1.3	3.20	81	75	334			
SG370S-C	15.3	389	0.225	5.7	0.052	1.3	4.20	107					
<b>Light-Heavy Cross Section – Plenum Rated</b>													
SG350LH-L	15.3	389	0.330	8.4	0.064	1.6	4.13	105	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
<b>Heavy Cross Section – Plenum Rated</b>													
SG450H-L	18.6	471	0.380	9.7	0.068	1.7	5.20	132	175	778	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500



## Super-Grip® Cable Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Designed to grip the bundle tightly to resist lateral movement of the tie once installed
- High strength allows the tie to withstand rough installation practices that occur in MRO and construction environments
- Thin, wide strap body provides flexibility enabling it to conform to bundle while maintaining tensile strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- Complementary mounts available, see pages B2.6, B2.9, B2.11, B2.19



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Weather Resistant Nylon 6.6</b>													
<b>Miniature Cross Section</b>													
SG100M-C0	4.2	106	0.118	3.0	0.038	1.0	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Intermediate Cross Section</b>													
SG150I-C0	6.2	157	0.168	4.3	0.040	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>Standard Cross Section</b>													
SG200S-C0	8.3	211	0.225	5.7	0.046	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
SG250S-C0	10.4	264	0.225	5.7	0.050	1.3	2.60	66					
SG300S-C0	12.4	315	0.225	5.7	0.050	1.3	3.20	81					
SG370S-C0	15.3	389	0.225	5.7	0.052	1.3	4.20	107					
<b>Light-Heavy Cross Section</b>													
SG350LH-L0	15.3	389	0.330	8.4	0.064	1.6	4.13	105	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
<b>Heavy Cross Section</b>													
SG450H-L0	18.6	471	0.380	9.7	0.068	1.7	5.20	132	175	778	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
<b>Heat Stabilized Nylon 6.6</b>													
<b>Standard Cross Section</b>													
SG200S-M30	8.3	211	0.225	5.7	0.046	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
SG300S-M30	12.4	315	0.225	5.7	0.050	1.3	3.20	81	70	311			
<b>Light-Heavy Cross Section</b>													
SG350LH-TL30	15.3	389	0.330	8.4	0.064	1.6	4.13	105	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500

Note: UL Listed and CSA Certified except SG450H-L0 and heat stabilized material (30).

**Super-Grip® Cable Ties and Mounts**
**Material and Color Chart**

Material	Color	Panduit Suffix
Nylon 6.6	Natural	✓
Weather Resistant Nylon 6.6	Black	0
Heat Stabilized Nylon 6.6	Black	30

✓Denotes Panduit® Natural Nylon 6.6 (no suffix).

**Part Number Availability List**

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
SG100M-C	✓	0	SG100M-M	✓	0
SG150I-C	✓	0	SG150I-M	✓	0
SG200S-C	✓	0	SG200S-M	✓	0, 30
SG250S-C	✓	0			
SG300S-C	✓	0	SG300S-M	✓	0, 30
SG370S-C	✓	0	SG370S-M	✓	0
SG350LH-L	✓	0	SG350LH-TL	✓	0, 30
SG450H-L	✓	0	SG450H-C	✓	0



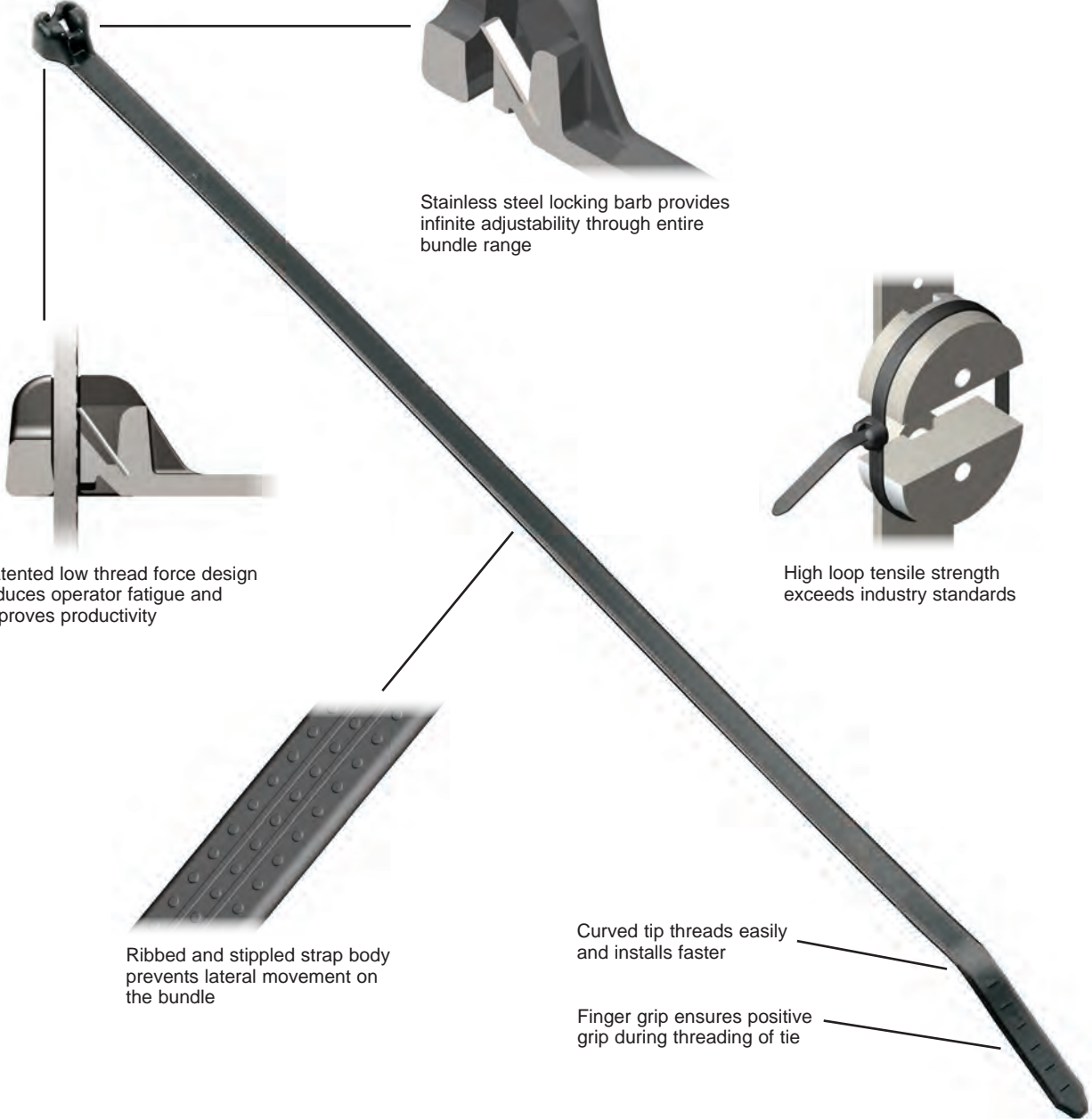
### Features and Benefits – Dome-Top® Barb Ty Cable Ties

Two-piece design incorporates a stainless steel locking barb in a nylon cable tie.

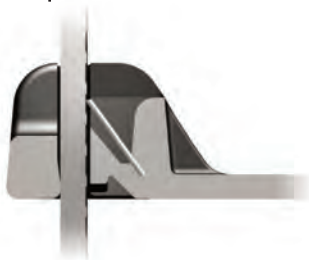
Dome-top head features unique patented design with round, smooth edges



Stainless steel locking barb provides infinite adjustability through entire bundle range



Patented low thread force design reduces operator fatigue and improves productivity



High loop tensile strength exceeds industry standards

Ribbed and stippled strap body prevents lateral movement on the bundle



Curved tip threads easily and installs faster

Finger grip ensures positive grip during threading of tie



Cable tie tools speed installation and reduce total installed cost. Visit [www.panduit.com/tools](http://www.panduit.com/tools).



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.26.

A

# PANDUIT®

# Industrial Electrical Solutions

B1

## Selection Guide – Dome-Top® Barb Ty and Dura-Ty™ Cable Ties

B2

B3

C1

C2

Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
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C3

Nylon 6.6, Natural (No Suffix)

Locking Ties/Bundle	BT	B1.43
Clamp Ties/Mount	BC	B1.46
Push Mount Ties/Mount	BW	B1.48
Marker Ties/Identify	BF, BM, B2M, B3M, B4M	B1.50

C4

Weather Resistant Nylon 6.6, Black (0)

Locking Ties/Bundle	BT	B1.44
Clamp Ties/Mount	BC	B1.47
Push Mount Ties/Mount	BW, BP	B1.48, 49
Marker Ties/Identify	BF, BM, B2M, B3M, B4M	B1.50

D1

**Dome-Top®  
Barb Ty  
Cable Ties**

Heat Stabilized Nylon 6.6, Black (30)

Locking Ties/Bundle	BT	B1.45
Clamp Ties/Mount	BC	B1.47

D2

Heat Stabilized Nylon 6.6, Natural (39)

Locking Ties/Bundle	BT	B1.45
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D3

**Dura-Ty™  
Cable Ties,  
Strapping,  
and Kits**

Weather Resistant Acetal, Black

Locking Ties/Bundle	DT	B1.51
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E1

## Part Number System for Dome-Top® Barb Ty and Dura-Ty™ Cable Ties

E2

**BT**

**2**

**S**

**—**

**C**

**—**

**Type**

**Size**

**Cross Section**

**Screw Hole Size**

**Package Size**

**Material/Color**

E3

BT = Locking Tie  
BC = Clamp Tie  
BF = Flag Tie  
BM = Marker Tie  
BP = Push Mount Tie  
BW = Wing Push Mount Tie  
DT = Locking Tie

Approx. Maximum Bundle Dia. (In.)

M = Miniature  
I = Intermediate  
S = Standard  
LH = Light-Heavy  
H = Heavy  
EH = Extra-Heavy

(Clamp Ties Only)  
-S4 = #4 (M2.5)  
-S6 = #6 (M3)  
-S8 = #8 (M4)  
-S10 = #10 (M5)  
-S25 = 1/4 (M6)

Q = 25  
L = 50  
C = 100  
TL = 250  
D = 500  
M = 1000  
LR = 50' Reel

See Page B1.52

F

G

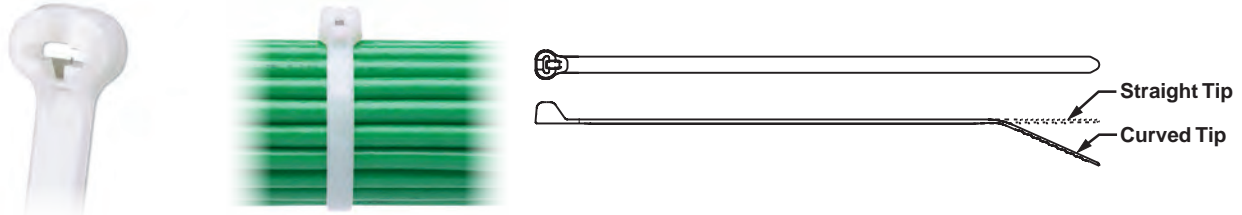
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B1.42



## Dome-Top® Barb Ty Cable Ties – Nylon 6.6

- For indoor use
- Dome-top head features unique patented design with round, smooth edges
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- High strength and low thread force
- A variety of materials and colors are available for specific applications
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC

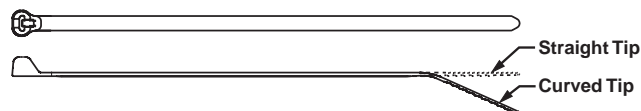


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section – Plenum Rated</b>													
BT1M-C	4.0	102	0.095	2.4	0.036	.9	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
BT1.5M-C	6.3	160	0.095	2.4	0.046	1.2	1.50	38					
BT2M-C	7.9	201	0.095	2.4	0.046	1.2	2.00	51					
BT4M-C	14.2	361	0.095	2.4	0.046	1.2	4.00	102					
<b>Intermediate Cross Section – Plenum Rated</b>													
BT1.5I-C	6.1	155	0.141	3.6	0.041	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
BT2I-C	8.0	203	0.141	3.6	0.041	1.0	2.00	51					
BT3I-C	11.3	287	0.141	3.6	0.049	1.2	3.00	76					
BT4I-C	14.3	363	0.141	3.6	0.049	1.2	4.00	102					
<b>Standard Cross Section – Plenum Rated <sup>NEW!</sup> UL TYPE 2S Rated</b>													
BT2S-C	8.0	203	0.185	4.7	0.045	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
BT3S-C	12.0	305	0.185	4.7	0.052	1.3	3.00	76					
BT4S-C	15.1	384	0.185	4.7	0.052	1.3	4.00	102					
<b>Light-Heavy Cross Section (Straight Tip) – Plenum Rated <sup>NEW!</sup> UL TYPE 2S Rated</b>													
BT2LH-L	8.7	221	0.275	7.0	0.065	1.7	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
BT3LH-L	11.8	300	0.275	7.0	0.065	1.7	3.00	76					
BT4LH-L	14.9	378	0.275	7.0	0.065	1.7	4.00	102					
BT5LH-L	18.1	460	0.275	7.0	0.065	1.7	5.00	127					
BT6LH-L	21.2	538	0.275	7.0	0.065	1.7	6.00	152					
BT7LH-L	24.4	620	0.275	7.0	0.065	1.7	7.00	178					
BT8LH-L	27.5	699	0.275	7.0	0.065	1.7	8.00	203					
BT9LH-L	30.7	780	0.275	7.0	0.065	1.7	9.00	229					



## Dome-Top® Barb Ty Cable Ties – Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Dome-top head features unique patented design with round, smooth edges
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- High strength and low thread force
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Miniature Cross Section Plenum Rated

<b>BT1M-C0</b>	4.0	102	0.095	2.4	0.036	.9	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>BT1.5M-C0</b>	6.3	160	0.095	2.4	0.046	1.2	1.50	38					
<b>BT2M-C0</b>	7.9	201	0.095	2.4	0.046	1.2	2.00	51					
<b>BT4M-C0</b>	14.2	361	0.095	2.4	0.046	1.2	4.00	102					

### Intermediate Cross Section Plenum Rated

<b>BT1.5I-C0</b>	6.1	155	0.141	3.6	0.041	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>BT2I-C0</b>	8.0	203	0.141	3.6	0.041	1.0	2.00	51					
<b>BT3I-C0</b>	11.3	287	0.141	3.6	0.049	1.2	3.00	76					
<b>BT4I-C0</b>	14.3	363	0.141	3.6	0.049	1.2	4.00	102					

### Standard Cross Section Plenum Rated UL TYPE 2S Rated

<b>BT2S-C0</b>	8.0	203	0.185	4.7	0.045	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
<b>BT3S-C0</b>	12.0	305	0.185	4.7	0.052	1.3	3.00	76					
<b>BT4S-C0</b>	15.1	384	0.185	4.7	0.052	1.3	4.00	102					

### Light-Heavy Cross Section (Straight Tip) Plenum Rated UL TYPE 2S Rated

<b>BT2LH-L0</b>	8.7	221	0.275	7.0	0.065	1.7	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
<b>BT3LH-L0</b>	11.8	300	0.275	7.0	0.065	1.7	3.00	76					
<b>BT4LH-L0</b>	14.9	378	0.275	7.0	0.065	1.7	4.00	102					
<b>BT5LH-L0</b>	18.1	460	0.275	7.0	0.065	1.7	5.00	127					
<b>BT6LH-L0</b>	21.2	538	0.275	7.0	0.065	1.7	6.00	152					
<b>BT7LH-L0</b>	24.4	620	0.275	7.0	0.065	1.7	7.00	178					
<b>BT8LH-L0</b>	27.5	699	0.275	7.0	0.065	1.7	8.00	203					
<b>BT9LH-L0</b>	30.7	780	0.275	7.0	0.065	1.7	9.00	229					



**Dome-Top® Barb Ty Cable Ties – Heat Stabilized Nylon 6.6**

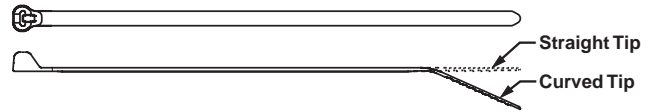
- For high temperature applications up to 239°F (115°C) – indoor use
- Dome-top head features unique patented design with round, smooth edges

- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



BT2S-M30

BT2S-M39



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

**Heat Stabilized Nylon 6.6**

**Miniature Cross Section**

BT1M-C30	4.0	102	0.095	2.4	0.036	0.9	0.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
BT1.5M-M30	6.3	160	0.095	2.4	0.046	1.2	1.50	38	18	80		1000	50000
BT2M-M30	7.9	201	0.095	2.4	0.046	1.2	2.00	51	18	80		1000	25000

**Intermediate Cross Section**

BT1.5I-M30	6.1	155	0.141	3.6	0.041	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
BT2I-M30	8.0	203	0.141	3.6	0.041	1.0	2.00	51					
BT3I-M30	11.3	287	0.141	3.6	0.049	1.2	3.00	76					

**Standard Cross Section**

BT2S-M30	8.0	203	0.185	4.7	0.045	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
BT3S-M30	12.0	305	0.185	4.7	0.052	1.3	3.00	76					
BT4S-M30	15.1	384	0.185	4.7	0.052	1.3	4.00	102					

**Light-Heavy Cross Section (Straight Tip)**

BT4LH-TL30	14.9	378	0.275	7.0	0.065	1.7	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
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**Heat Stabilized Nylon 6.6**

**Miniature Cross Section**

BT1M-M39	4.0	102	0.095	2.4	0.036	0.9	0.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
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**Intermediate Cross Section**

BT1.5I-M39	6.1	155	0.141	3.6	0.041	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
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**Standard Cross Section**

BT2S-M39	8.0	203	0.185	4.7	0.045	1.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
BT3S-M39	12.0	305	0.185	4.7	0.052	1.3	3.00	76					
BT4S-M39	15.1	384	0.185	4.7	0.052	1.3	4.00	102					

**Light-Heavy Cross Section (Straight Tip)**

BT4LH-TL39	14.9	378	0.275	7.0	0.065	1.7	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
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B1



## Dome-Top® Barb Ty Clamp Ties – Nylon 6.6

- For indoor use
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Design allows for bundling before or after screwing clamp in place
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC

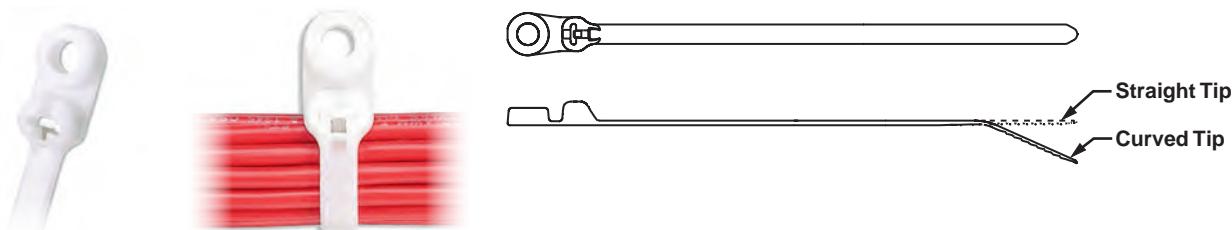
B2

B3

C1

C2

C3



C4

D1

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Screw Size	Metric Screw Size	Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm			In.	mm	Lbs.	N			
<b>Miniature Cross Section — Plenum Rated</b>																	
BC1M-S4-M	4.6	117	0.095	2.4	0.046	1.2	0.122	3.1	#4	M2.5	0.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
BC2M-S4-M	8.3	211	0.095	2.4	0.046	1.2	0.122	3.1	#4	M2.5	2.00	51	18	80		1000	25000
<b>Intermediate Cross Section — Plenum Rated</b>																	
BC1.5I-S8-M	6.6	168	0.141	3.6	0.041	1.0	0.174	4.4	#8	M4	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section — Plenum Rated</b>																	
BC2S-S10-C	8.5	216	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
BC3S-S10-D	12.5	318	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	3.00	76	50	222		500	5000
BC4S-S10-C	15.6	396	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	4.00	102	50	222		100	1000
<b>Light-Heavy Cross Section — Plenum Rated</b>																	
BC4LH-S25-L	15.5	394	0.275	7.0	0.065	1.7	0.260	6.6	1/4	M6	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
<b>Plenum Rated</b>																	

D3

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E2

E3

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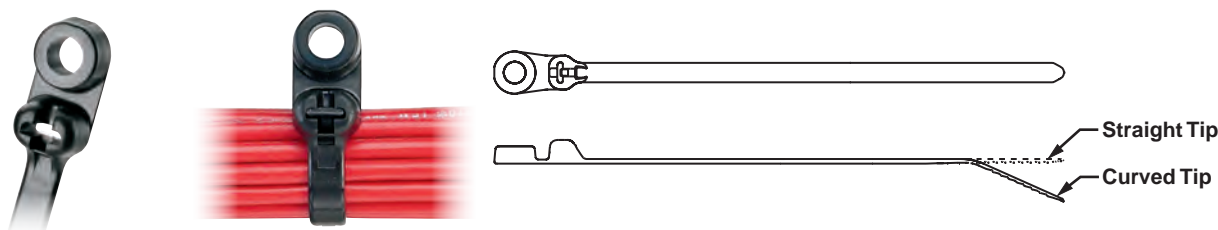
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## Dome-Top® Barb Ty Clamp Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Design allows for bundling before or after screwing clamp in place
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Nominal Hole Dia.		Screw Size	Metric Screw Size	Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm			In.	mm	Lbs.	N			

### Weather Resistant Nylon 6.6

#### Miniature Cross Section

BC1M-S4-M0	4.6	117	0.095	2.4	0.046	1.2	0.122	3.1	#4	M2.5	0.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
BC2M-S4-M0	8.3	211	0.095	2.4	0.046	1.2	0.122	3.1	#4	M2.5	2.00	51	18	80		1000	25000

#### Intermediate Cross Section

BC1.5I-S8-M0	6.6	168	0.141	3.6	0.041	1.0	0.174	4.4	#8	M4	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
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#### Standard Cross Section

BC2S-S10-C0	8.5	216	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
BC3S-S10-D0	12.5	318	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	3.00	76	50	222		500	5000
BC4S-S10-C0	15.6	396	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	4.00	102	50	222		100	1000

#### Light-Heavy Cross Section (Straight Tip)

BC4LH-S25-L0	15.5	394	0.275	7.0	0.065	1.7	0.260	6.6	1/4	M6	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
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### Heat Stabilized Nylon 6.6

#### Standard Cross Section

BC4S-S10-D30	15.6	396	0.185	4.7	0.052	1.3	0.200	5.1	#10	M5	4.00	102	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STH2, STS2	500	5000
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A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Dome-Top® Barb Ty Wing Push Mount Ties – Nylon and Weather Resistant Nylon 6.6

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

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- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Combine cable tie, mount, and fastener into a single part
- Used to attach bundles to another surface such as a flat panel
- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

BW2S-D

BW2S-D0

BW2S Head Design

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
<b>Nylon 6.6</b>																		
<b>Intermediate Cross Section</b>																		
BW1.5I-D	6.6	168	0.141	3.6	0.041	1.0	0.187	4.7	0.093	2.4	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	500	5000	
<b>Standard Cross Section</b>																		
BW2S-D	8.5	216	0.185	4.7	0.052	1.3	0.250	6.4	0.156	4.0	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000	
BW3S-D	12.5	318	0.185	4.7	0.052	1.3	0.250	6.4	0.156	4.0	3.00	76						
<b>Weather Resistant Nylon 6.6</b>																		
<b>Standard Cross Section</b>																		
BW2S-D0	8.5	216	0.185	4.7	0.052	1.3	0.250	6.4	0.156	4.0	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000	
BW3S-D0	12.5	318	0.185	4.7	0.052	1.3	0.250	6.4	0.156	4.0	3.00	76						

B1.48

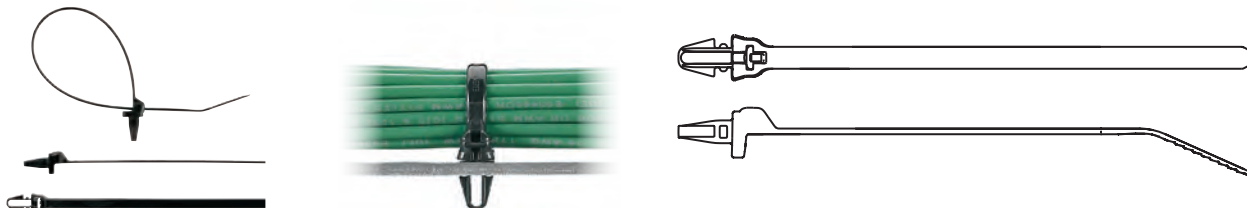
Order number of pieces required, in multiples of Standard Package Quantity.





## Dome-Top® Barb Ty Push Mount Ties – Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Used to attach bundles to another surface such as a flat panel
- Cable tie, mount, and fastener in a single part
- Anchor is easily pressed into a pre-formed hole and locks in place
- Wingless design allows tie to be used in confined spaces
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Standard Cross Section</b>																	
BP2S-D0	8.5	216	0.185	4.7	0.052	1.3	0.255	6.5	0.125	3.2	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000

## Permanent Marking Pens

- Fast drying, permanent ink for identification on marker ties (pages B1.32, B1.50, and B1.68), marker plates (page B2.26), or cable marker straps (page B1.76)
- May be used with any label shown in the catalog when a printer is not available



PX-0  
PX-2



PX-10

Part Number	Color	Description	Std. Pkg. Qty.	Std. Ctn. Qty.
PX-0	Black	Permanent marking pen – regular tip	12	144
PX-2	Red	Permanent marking pen – regular tip		
PX-10	White	Marking pen for black or other dark colored parts – regular tip	12	300

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Dome-Top® Barb Ty Marker and Flag Ties

B2


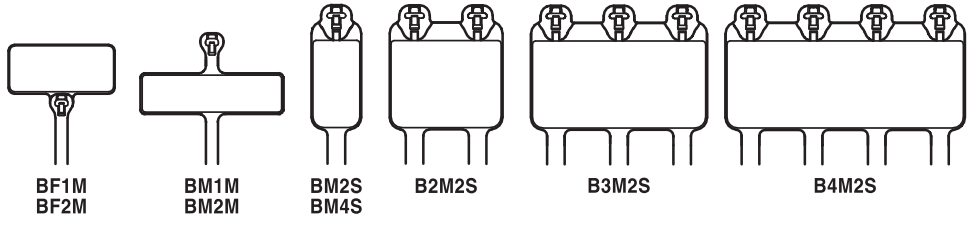
B3

C1

C2

C3

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Used to fasten and identify bundles at the same time
- Stainless steel locking barb provides consistent performance, reliability, and infinite adjustability through entire bundle range
- Can be marked with Panduit® marker pens on the previous page or computer printable labels
- Custom imprinting with text, symbols, or trademarks available using Panduit Custom Hot Stamping Service, see page B1.89
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

C4

D1

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D3

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Part Number	Marker Type	Length		Width		Thickness		Marker Write-On Area		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

#### Nylon 6.6

##### Miniature Cross Section

BF1M-C	Flag	4.6	117	0.095	2.4	0.046	1.2	0.36 x 0.81	9.1 x 20.6	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
BF2M-C		8.3	211	0.095	2.4	0.046	1.2	0.36 x 0.81	9.1 x 20.6	2.00	51					
BM1M-C	Wrap	4.2	107	0.095	2.4	0.046	1.2	0.29 x 1.09	7.4 x 27.7	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
BM2M-C		7.9	201	0.095	2.4	0.046	1.2	0.29 x 1.09	7.4 x 27.7	2.00	51					

##### Standard Cross Section

BM2S-C	Wrap	8.0	203	0.185	4.7	0.045	1.2	0.49 x 0.91	12.4 x 23.1	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
BM4S-C		15.1	384	0.185	4.7	0.052	1.3	0.50 x 2.13	12.7 x 54.1	4.00	102					
B2M2S-D		8.0	203	0.185	4.7	0.045	1.2	1.15 x 0.91	29.2 x 23.1	2.00	51	50	222		500	2500
B3M2S-TL		8.0	203	0.185	4.7	0.045	1.2	1.81 x 0.91	46.0 x 23.1	2.00	51	50	222		250	2500
B4M2S-TL		8.0	203	0.185	4.7	0.045	1.2	2.47 x 0.91	62.7 x 23.1	2.00	51					

#### Weather Resistant Nylon 6.6

##### Miniature Cross Section

BF1M-M0	Flag	4.6	117	0.095	2.4	0.046	1.2	0.36 x 0.81	9.1 x 20.6	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
BF2M-M0		8.3	211	0.095	2.4	0.046	1.2	0.36 x 0.81	9.1 x 20.6	2.00	51					
BM1M-M0	Wrap	4.2	107	0.095	2.4	0.046	1.2	0.29 x 1.09	7.4 x 27.7	.90	23	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
BM2M-M0		7.9	201	0.095	2.4	0.046	1.2	0.29 x 1.09	7.4 x 27.7	2.00	51					

##### Standard Cross Section

BM2S-D0	Wrap	8.0	203	0.185	4.7	0.045	1.2	0.49 x 0.91	12.4 x 23.1	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	10000
BM4S-D0		15.1	384	0.185	4.7	0.052	1.3	0.50 x 2.13	12.7 x 54.1	4.00	102					
B2M2S-D0		8.0	203	0.185	4.7	0.045	1.2	1.15 x 0.91	29.2 x 23.1	2.00	51	50	222		500	2500
B3M2S-TL0		8.0	203	0.185	4.7	0.045	1.2	1.81 x 0.91	46.0 x 23.1	2.00	51	50	222		250	2500
B4M2S-TL0		8.0	203	0.185	4.7	0.045	1.2	2.47 x 0.91	62.7 x 23.1	2.00	51					

B1.50

Order number of pieces required, in multiples of Standard Package Quantity.

### Dura-Ty™ Cable Ties – Weather Resistant Acetal – Heavy Cross Section



- Acetal strap and head materials can provide 20 years + life in outdoor applications. Factors such as installation procedures, tooling and environmental conditions can influence the actual life
- Excellent ultraviolet light, chemical, and moisture resistance
- Double stainless steel locking barbs provide consistent and predictable holding values
- Textured strap provides better gripping surface to prevent tie from moving laterally along the length of the bundle for tight, consistent bundles
- Robust head design allows tie to be tightened over a wide range of angles
- Convenient reel dispenser pack allows installer to cut-to-size for customized field applications; recyclable box has through-hole for attaching to belt, plus storage area for bag of heads
- Ideal for securing cables in outdoor messenger strand applications
- May be used with stackable aerial cable spacer on the next page

Part Number	Description	Strap Length		Strap Width		Min. Loop Tensile Str.		Head Height		Head Width		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
		Ft.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm			
<b>Strapping, Heads, and Kit – Allows user to customize strap length</b>														
DTRH-LR0	50' reel of strapping.	50.0	15,240	0.331	8.40	200	890	–	–	–	–	GTH-E, GS4EH-E, STH2, STHV	1	20
DTHH-Q0	25 cable tie heads.	–	–	–	–	–	–	0.393	9.98	0.557	14.15	–	25	500
DTKH-0	Kit: Strapping (50'), Heads (25)	50.0	15,240	0.331	8.40	200	890	0.393	9.98	0.557	14.15	GTH-E, GS4EH-E, STH2, STHV	1	20

### Dura-Ty™ Cable Ties – Weather Resistant Acetal – Extra-Heavy Cross Section



- Acetal strap and head materials can provide 20 years + life in outdoor applications. Factors such as installation procedures, tooling and environmental conditions can influence the actual life
- Excellent ultraviolet light, chemical, and moisture resistance
- Double stainless steel locking barbs provide consistent and predictable holding values
- Ideal for securing cables in outdoor messenger strand applications
- Meets Telcordia TR-TSY-000789 industry guidelines for lashed cable supports
- Convenient reel dispenser pack allows installer to cut-to-size for customized field applications; recyclable box has through-hole for attaching to belt, plus storage area for bag of heads
- Several pre-cut sizes have lead-in style angled tips on pre-assembled straps for easy installation, even with gloved hands, to speed installation
- May be used with stackable aerial cable spacer on the next page

**Formula to determine amount of strapping required:**  
 Diameter (inches) x 3.14 + 4.5 inches  
 Diameter (mm) x 3.14 + 114mm

Part Number	Description	Strap Length		Strap Width		Min. Loop Tensile Str.		Head Height		Head Width		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
		Ft.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm			
<b>Strapping, Heads, and Kit – Allows user to customize strap length</b>														
DTREH-LR0	50' reel of strapping.	50.0	15,240	0.500	12.70	250	1112	–	–	–	–	GS4EH-E	1	20
DTHEH-Q0	25 cable tie heads.	–	–	–	–	–	–	0.490	12.45	0.718	18.24	–	25	500
DTKEH-0	Kit: Strapping (50'), Heads (25)	50.0	15,240	0.500	12.70	250	1112	0.490	12.45	0.718	18.24	GS4EH-E	1	20

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Discrete Lengths – Speed Installation</b>																	
DT4EH-L0	13.5	343	0.500	12.70	0.059	1.50	0.490	12.45	0.718	18.24	3.8	98	250	1112	GS4EH	50	1000
DT8EH-Q0	27.0	686	0.500	12.70	0.059	1.50	0.490	12.45	0.718	18.24	8.0	203	250	1112		25	500
DT14EH-L0	48.0	1219	0.500	12.70	0.059	1.50	0.490	12.45	0.718	18.24	14.0	355	250	1112		50	250
DT15EH-L0	53.0	1346	0.500	12.70	0.059	1.50	0.490	12.45	0.718	18.24	15.0	381	250	1112	100	–	–
DT28EH-C0	96.0	2438	0.500	12.70	0.059	1.50	0.490	12.45	0.718	18.24	28.0	711				–	–
DT44EH-C0	144.0	3658	0.500	12.70	0.059	1.50	0.490	12.45	0.718	18.24	44.0	1117	–	–	–	–	

A

# Industrial Electrical Solutions

B1

## Stackable Aerial Cable Spacer – Weather Resistant Polypropylene

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Each spacer snaps into another to increase spacer heights by 1/2" increments
- Designed for use in parallel or perpendicular applications
- For use with Dura-Ty™ Cable Ties shown on the previous page

B2

B3

C1

C2

C3

C4

D1

Part Number	Length A		Width B		Height C		Used with Cable Ties*	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm			
<b>SACS50-T100</b>	2.08	52.8	1.16	29.5	0.71	18.0	LH, H, EH	200	2000

\*Cable tie cross section sizes: LH = Light-Heavy, H = Heavy, and EH = Extra-Heavy.

D2

## Dome-Top® Barb Ty and Dura-Ty™ Cable Ties

D3

### Material and Color Chart

Material	Color	Panduit Suffix
Nylon 6.6	Natural	✓
Weather Resistant Nylon 6.6	Black	0
Nylon 6.6	Brown	1
Nylon 6.6	Red	2
Nylon 6.6	Orange	3
Nylon 6.6	Yellow	4Y
Nylon 6.6	Green	5
Nylon 6.6	Blue	6
Nylon 6.6	Purple	7

✓Denotes Panduit® Natural Nylon 6.6 (no suffix).

\*Denotes Dura-Ty™ Weather Resistant Acetal material (no suffix).

Material	Color	Panduit Suffix
Nylon 6.6	Gray	8
Nylon 6.6	White	10
Nylon 6.6	Telephone Gray	14
Nylon 6.6	Black	20
Heat Stabilized Nylon 6.6	Black	30
Heat Stabilized Nylon 6.6	Natural	39
Flame Retardant Nylon 6.6	Natural (Ivory)	69
Weather Resistant Acetal	Black	*

E1

E2

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E4

E5

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B1.52

Order number of pieces required, in multiples of Standard Package Quantity.

Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
			BC1M-S4-M	✓	0
			BC2M-S4-M	✓	0
			BC1.5I-S8-M	✓	0
BC2S-S10-C	✓	0	BC2S-S10-D	✓	0
			BC3S-S10-D	✓	0
BC4S-S10-C	✓	0	BC4S-S10-D	✓	0, 30
BC4LH-S25-L	✓	0	BC4LH-S25-TL	✓	0
BF1M-C	✓		BF1M-M	✓	0
BF2M-C	✓		BF2M-M	✓	0
BM1M-C	✓		BM1M-M	✓	0
BM2M-C	✓		BM2M-M	✓	0
BM2S-C	✓		BM2S-D	✓	0
BM4S-C	✓		BM4S-D	✓	0
			BP2S-D		0
BT1M-C	✓	0, 30	BT1M-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 30, 39, 69, 300
			BT1M-XMR	✓	0, 30
BT1.5M-C	✓	0	BT1.5M-M	✓	0, 30, 69
			BT1.5M-XMR	✓	0, 30
BT2M-C	✓	0	BT2M-M	✓	0, 2, 3, 4Y, 5, 6, 8, 30
BT4M-C	✓	0	BT4M-M	✓	0
BT1.5I-C	✓	0	BT1.5I-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 30, 39, 300
BT2I-C	✓	0	BT2I-M	✓	0, 30, 69, 300
BT3I-C	✓	0	BT3I-M	✓	0, 30
BT4I-C	✓	0	BT4I-M	✓	0
BT2S-C	✓	0	BT2S-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10, 20, 30, 39, 69, 300
BT3S-C	✓	0, 2	BT3S-M	✓	0, 30, 39
BT4S-C	✓	0	BT4S-M	✓	0, 2, 3, 4Y, 5, 6, 7, 8, 10, 30, 39, 300
BT2LH-L	✓	0	BT2LH-TL	✓	0, 300
BT3LH-L	✓	0	BT3LH-TL	✓	0
BT4LH-L	✓	0	BT4LH-TL	✓	0, 30, 39, 69, 300
BT5LH-L	✓	0	BT5LH-C	✓	0, 300
BT6LH-L	✓	0	BT6LH-C	✓	0
BT7LH-L	✓	0	BT7LH-C	✓	0
BT8LH-L	✓	0	BT8LH-C	✓	0
BT9LH-L	✓	0	BT9LH-C	✓	0
			BW1.5I-D	✓	
			BW2S-D	✓	0
			BW3S-D	✓	0
			B2M2S-D	✓	0
			B3M2S-TL	✓	0
			B4M2S-TL	✓	0

Dura-Ty™ Cable Ties and Strapping

DTHEH-Q0, DTHH-Q0	*			
DTKEH-0, DTKH-0	*			
DTREH-LR0	*			
DTRH-LR0	*			
DT4EH-L0	*			
DT8EH-Q0	*			
DT14EH-L0	*	DT14EH-C0		*
DT15EH-L0	*			
DT28EH-C0	*			
DT44EH-C0	*			

\*Denotes Dura-Ty™ Weather Resistant Acetal material (no suffix).

A

# PANDUIT®

# Industrial Electrical Solutions

B1

## Features and Benefits – Parallel-Entry Cable Ties

Parallel-entry cable ties limit exposure to sharp edges and protect workers' arms/hands. The ties are designed with a low profile head to avoid snags and reduce overall bundle size.

B2

### Contour-Ty® Cable Ties

Fully enclosed head for consistent strength

Fully rounded edges on head and strap

Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications

Curved tip threads easily and installs faster

Rounded tip and aggressive grip for faster initial threading

B3

C1

C2

C3

C4

D1

D2

D3

### Hyper-V™ Cable Ties

Design provides for an optional threading position that allows releasable, temporary bundling

Fixed and flexible 2-wedge locking design

Tip bending serrations and threading hole facilitate installations in confined spaces

### Belt-Ty™ In-Line Cable Ties

"Finger grip" shaped head assures positive grip while threading tie

Parallel-entry limits exposure to sharp edges and protects workers' arms/hands

### IN-LINE Cable Ties

Outside teeth protect cable jacket and wire insulation

"Finger grip" shaped head with serrations assures positive grip while threading tie

E1

E2

E3

E4

E5

F

G

H

Cable tie tools speed installation and reduce total installed cost. Visit [www.panduit.com/tools](http://www.panduit.com/tools).

Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.26.

B1.54

**Selection Guide – Parallel-Entry Cable Ties**



	Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
<b>Contour-Ty® Cable Ties</b>	Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	CBR	B1.56
	Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	CBR	B1.57
	Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	CBR	B1.58
	Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties/Bundle	CBR	B1.58
	Flame Retardant Nylon 6.6, Ivory (69)	Locking Ties/Bundle	CBR	B1.58
<b>Belt-Ty™ In-Line Cable Ties</b>	Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	ILT	B1.59
	Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	ILT	B1.59
<b>Hyper-V™ Cable Ties</b>	Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	HV	B1.60
<b>IN-LINE Cable Ties</b>	Weather Resistant Nylon 6.6, Black (0 and colors)	Locking Ties/Bundle	IT	B1.61

**Part Number System for Contour-Ty® and Belt-Ty™ Cable Ties**

<b>CBR</b>	<b>2</b>	<b>S</b>	—	<b>M</b>	—
Type	Size	Cross Section		Package Size	Material/Color
CBR = Locking Tie ILT = Locking Tie	Approx. Maximum Bundle Dia. (In.)	M = Miniature I = Intermediate S = Standard HS = Heavy-Standard LH = Light-Heavy		C = 100 TL = 250 D = 500 M = 1000	See Page B1.62

**Part Number System for Hyper-V™ and IN-LINE Cable Ties**

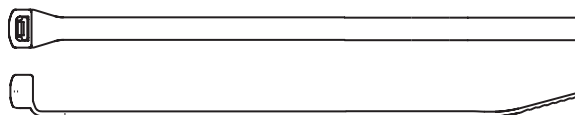
<b>HV</b>	<b>9</b>	<b>100</b>	—	<b>C</b>	—
Type	Width	Size		Package Size	Material/Color
HV = Locking Tie IT = Locking Tie	Approx. Width (mm)	Approx. Maximum Bundle Dia. (mm)		C = 100	See Page B1.62

B1



## Contour-Ty® Cable Ties – Nylon 6.6

- For indoor use
- Unique design prevents wire and cable damage
- Low profile head avoids snags and reduces overall bundle size
- Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Fully enclosed head for consistent strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- UL Listed for use in plenum or air handling spaces per NEC
- Nylon 6.6 cable ties in natural and colors meet the testing requirements of SAE Aerospace Standard AS23190 and the dimensional requirements of SAE Aerospace Standard AS33671



C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

H



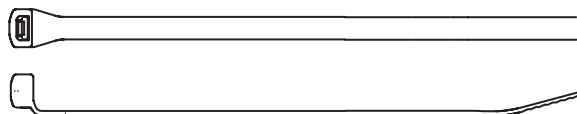
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section – Plenum Rated</b>													
CBR1M-M	4.1	104	0.098	2.5	0.038	1.0	1.00	25	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
CBR1.5M-M	5.8	147	0.098	2.5	0.042	1.1	1.50	38					
CBR2M-M	7.3	185	0.098	2.5	0.042	1.1	2.00	51	18	80		1000	25000
<b>Intermediate Cross Section – Plenum Rated</b>													
CBR1.5I-M	5.9	150	0.140	3.6	0.040	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
CBR3I-M	10.4	264	0.140	3.6	0.052	1.3	3.00	76					
CBR4I-M	13.6	345	0.140	3.6	0.052	1.3	4.00	102	40	178		1000	10000
<b>Standard Cross Section – Plenum Rated</b>													
CBR2S-M	7.6	193	0.190	4.8	0.044	1.1	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
CBR3S-M	10.8	274	0.190	4.8	0.052	1.3	3.00	76					
CBR4S-M	14.0	356	0.190	4.8	0.052	1.3	4.00	102	50	222		1000	5000
<b>Heavy-Standard Cross Section – Plenum Rated</b>													
CBR2HS-D	8.0	203	0.250	6.4	0.058	1.4	2.00	51	85	378	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	500	5000
<b>Light-Heavy Cross Section – Plenum Rated</b>													
CBR4LH-TL	14.6	371	0.300	7.6	0.070	1.8	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
CBR6LH-C	20.9	531	0.300	7.6	0.070	1.8	6.00	152	120	534		100	2000





## Contour-Ty® Cable Ties – Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Unique design prevents wire and cable damage
- Low profile head avoids snags and reduces overall bundle size
- Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Fully enclosed head for consistent strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
CBR1M-M0	4.1	104	0.098	2.5	0.038	1.0	1.00	25	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
CBR1.5M-M0	5.8	147	0.098	2.5	0.042	1.1	1.50	38					
CBR2M-M0	7.3	185	0.098	2.5	0.042	1.1	2.00	51				18	80
<b>Intermediate Cross Section</b>													
CBR1.5I-M0	5.9	150	0.140	3.6	0.040	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
CBR3I-M0	10.4	264	0.140	3.6	0.052	1.3	3.00	76	40	178		1000	10000
CBR4I-M0	13.6	345	0.140	3.6	0.052	1.3	4.00	102					
<b>Standard Cross Section</b>													
CBR2S-M0	7.6	193	0.190	4.8	0.044	1.1	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
CBR3S-M0	10.8	274	0.190	4.8	0.052	1.3	3.00	76	50	222		1000	5000
CBR4S-M0	14.0	356	0.190	4.8	0.052	1.3	4.00	102					
<b>Heavy-Standard Cross Section</b>													
CBR2HS-D0	8.0	203	0.250	6.4	0.058	1.4	2.00	51	85	378	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	500	5000
<b>Light-Heavy Cross Section</b>													
CBR4LH-TL0	14.6	371	0.300	7.6	0.070	1.8	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
CBR6LH-C0	20.9	531	0.300	7.6	0.070	1.8	6.00	152	120	534		100	2000



## Contour-Ty® Cable Ties – Heat Stabilized and Flame Retardant Nylon 6.6

- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Flame retardant material has a flammability rating of UL 94V-0 – indoor use
- Unique design prevents wire and cable damage
- Low profile head avoids snags and reduces overall bundle size
- Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Fully enclosed head for consistent strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



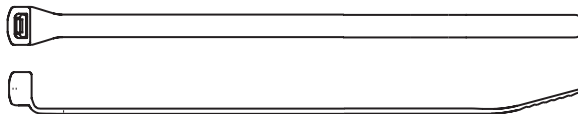
CBR2S-M30



CBR2S-M39



CBR3S-M69



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Heat Stabilized Nylon 6.6 – Black Miniature Cross Section

CBR1M-M30	4.1	104	0.098	2.5	0.038	1.0	0.90	25	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	50000
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### Intermediate Cross Section

CBR1.5I-M30	5.9	150	0.140	3.6	0.040	1.0	1.50	38	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
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### Standard Cross Section

CBR2S-M30	7.6	193	0.190	4.8	0.044	1.1	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
CBR3S-M30	10.8	274	0.190	4.8	0.052	1.3	3.00	76	50	222		1000	5000
CBR4S-M30	14.0	356	0.190	4.8	0.052	1.3	4.00	102					

### Light-Heavy Cross Section

CBR4LH-TL30	14.6	371	0.300	7.6	0.070	1.8	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
CBR6LH-C30	20.9	531	0.300	7.6	0.070	1.8	6.00	152	120	534		100	2000

### Heat Stabilized Nylon 6.6 – Natural Standard Cross Section

CBR2S-M39	7.6	193	0.190	4.8	0.044	1.1	2.00	51	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
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### Flame Retardant Nylon 6.6 – Natural Ivory Standard Cross Section

CBR3S-M69	10.8	274	0.190	4.8	0.052	1.3	3.00	76	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	5000
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Note: UL Recognized, UL Listed, and CSA Certified, except CBR3S-M69.



## Belt-Ty™ In-Line Cable Ties – Nylon and Weather Resistant Nylon 6.6

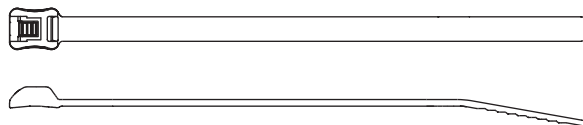
- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Parallel-entry cable tie that threads like a belt (180° entry)
- Low profile head avoids snags and reduces overall bundle size
- Up to 35% lower head height than conventional 90° ties
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation
- Nylon 6.6 cable ties are UL Listed for use in plenum or air handling spaces per NEC



ILT2S-C



ILT2S-C0



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

### Nylon 6.6 – Black

#### Standard Cross Section – Plenum Rated

ILT2S-C	8.3	211	0.190	4.8	0.052	1.3	1.88	48	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
ILT3S-C	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
ILT4S-C	14.7	373	0.190	4.8	0.052	1.3	4.00	102					

#### Light-Heavy Cross Section – Plenum Rated

ILT4LH-TL	14.8	376	0.300	7.6	0.075	1.9	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
ILT6LH-C	21.2	538	0.300	7.6	0.075	1.9	6.00	152	120	534		100	2000

### Weather Resistant Nylon 6.6

#### Standard Cross Section

ILT2S-C0	8.3	211	0.190	4.8	0.052	1.3	1.88	48	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
ILT3S-C0	11.5	292	0.190	4.8	0.052	1.3	3.00	76					
ILT4S-C0	14.7	373	0.190	4.8	0.052	1.3	4.00	102					

#### Light-Heavy Cross Section

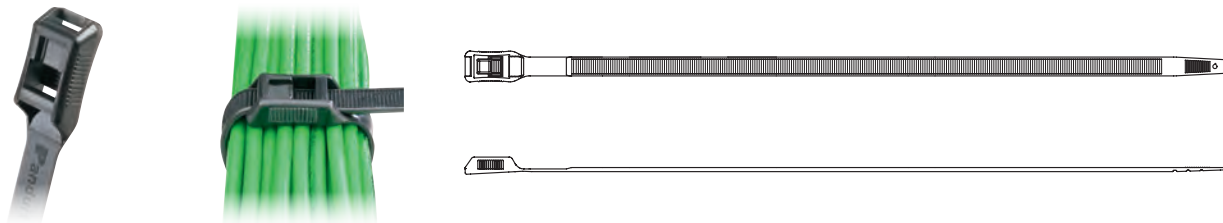
ILT4LH-TL0	14.8	376	0.300	7.6	0.075	1.9	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
ILT6LH-C0	21.2	538	0.300	7.6	0.075	1.9	6.00	152	120	534		100	2000

Weather resistant nylon 6.6 cable ties are UL Listed, and CSA Certified except ILT4LH/6LH.

B1

## Hyper-V™ In-Line Cable Ties – Weather Resistant Nylon 6.6

- Fixed and flexible two-wedge locking design provides a low threading force
- Teeth on both sides of cable tie body provide additional locking strength and improved flexibility to conform to irregular bundle shapes such as securing cables to cable tray systems
- Releasable head position for temporary bundling of cables prior to final locking; no need to replace ties when adding cables/wires to the bundle
- Teeth on full length of body support a wide range of bundle diameters
- Bending serrations on the tip of the tie allow the tip to be easily formed into an arc, enabling installer to “fish” the tie around the bundle in a confined space
- Threading hole in the tip of the tie allows an installer to hook the tip with a simple device to pull the tie through spaces with limited access
- In-Line tie design for parallel-entry of the tie into head resulting in a lower profile on cable bundles
- Complementary mounts shown below



C2

C3

C4

D1

D2

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
HV965-C0	10.4	265	0.350	8.9	0.076	1.9	2.60	65	160	710	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH, STHV	100	1000
HV9100-C0	14.4	367	0.350	8.9	0.076	1.9	3.90	100					
HV9150-C0	20.7	525	0.350	8.9	0.076	1.9	5.90	150					
HV9250-C0	33.1	841	0.350	8.9	0.076	1.9	9.80	250					

D3

## Hyper-V™ Cable Tie Mounts

- Tie mount has retaining tab within window to hold cable tie in position when pre-installed in the mount; low profile design keeps bundle close to mounting surface
- Masonry mounts are used to secure wire, cable, or tubing to masonry surfaces
- For outdoor use

E1

E2

E3



HVTM

HVMPM

E4

Part Number	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>Tie Mounts</b>					
HVTM-06-C0	Weather Resistant Nylon 6.6	Black	#12 (M6) screw	100	500
<b>Masonry Mounts</b>					
HVMPM-08-C0	Impact Modified Weather Resistant Nylon 6.6	Black	Fir tree hole mount	100	500

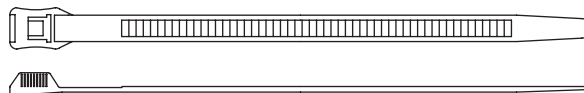
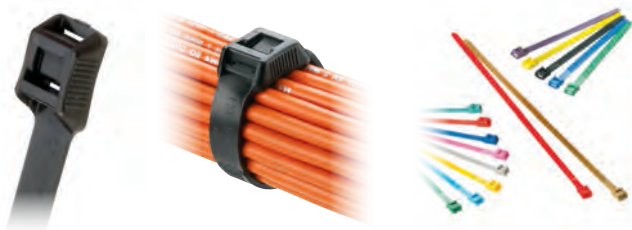
F

G

H

## In-Line Cable Ties – Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Parallel-entry cable tie that threads like a belt (180° entry)
- Wide tie body provides high tensile strength
- Up to 50% lower head height than conventional 90° ties
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Outside teeth protect cable jacket and wire insulation
- “Finger grip” shaped head with serrations assures positive grip while threading tie
- Install by hand or use Panduit® GTH-E installation tool
- Flexible – easy to handle and install
- Available in UV weather resistant colors for color coordination and UV stability



Part Number	Color	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		

### Black Cable Ties

IT940-C0	UV Black	6.8	173	0.350	8.9	0.065	1.7	1.57	40	124	552	100	1000
IT965-C0	UV Black	10.1	257	0.350	8.9	0.065	1.7	2.56	65				
IT9100-C0	UV Black	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9115-C0	UV Black	15.3	389	0.350	8.9	0.065	1.7	4.53	115				

### Colored Cable Ties

IT9100-CUV2	UV Red	14.1	358	0.350	8.9	0.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV4Y	UV Yellow	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9100-CUV6	UV Dark Blue	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9100-CUV6A	UV Light Blue	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9100-CUV7A	UV Purple	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9100-CUV8	UV Gray	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9100-CUV16B	UV Magenta	14.1	358	0.350	8.9	0.065	1.7	3.94	100				
IT9115-CUV2	UV Red	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV2A	UV Bright Red	15.3	389	0.350	8.9	0.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV3	UV Orange	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV4Y	UV Yellow	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV4A	UV Butterscotch	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV5A	UV Green	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV5B	UV Hunter Green	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV6	UV Dark Blue	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV6A	UV Light Blue	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV6B	UV Cobalt Blue	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV7A	UV Purple	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV8	UV Gray	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV8A	UV Charcoal Gray	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV11	UV Teal	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV16B	UV Magenta	15.3	389	0.350	8.9	0.065	1.7	4.53	115				
IT9115-CUV18	UV Tan	15.3	389	0.350	8.9	0.065	1.7	4.53	115				

B1

## Parallel-Entry Cable Ties

## Material and Color Chart

Material	Color	Panduit Suffix	Material	Color	Panduit Suffix
Nylon 6.6	Natural	✓	Nylon 6.6	Ultraviolet Red	UV2
Weather Resistant Nylon 6.6	Black	0	Nylon 6.6	Ultraviolet Bright Red	UV2A
Nylon 6.6	Brown	1	Nylon 6.6	Ultraviolet Orange	UV3
Nylon 6.6	Red	2	Nylon 6.6	Ultraviolet Yellow	UV4Y
Nylon 6.6	Orange	3	Nylon 6.6	Ultraviolet Butterscotch	UV4A
Nylon 6.6	Yellow	4Y	Nylon 6.6	Ultraviolet Green	UV5A
Nylon 6.6	Green	5	Nylon 6.6	Ultraviolet Hunter Green	UV5B
Nylon 6.6	Blue	6	Nylon 6.6	Ultraviolet Dark Blue	UV6
Nylon 6.6	Purple	7	Nylon 6.6	Ultraviolet Light Blue	UV6A
Nylon 6.6	Gray	8	Nylon 6.6	Ultraviolet Cobalt Blue	UV6B
Nylon 6.6	White	10	Nylon 6.6	Ultraviolet Purple	UV7A
Heat Stabilized Nylon 6.6	Black	30	Nylon 6.6	Ultraviolet Gray	UV8
Heat Stabilized Nylon 6.6	Natural	39	Nylon 6.6	Ultraviolet Charcoal Gray	UV8A
Flame Retardant Nylon 6.6	Natural (Ivory)	69	Nylon 6.6	Ultraviolet Teal	UV11
			Nylon 6.6	Ultraviolet Magenta	UV16B
			Nylon 6.6	Ultraviolet Tan	UV18

✓Denotes Panduit® Natural Nylon 6.6 (no suffix).

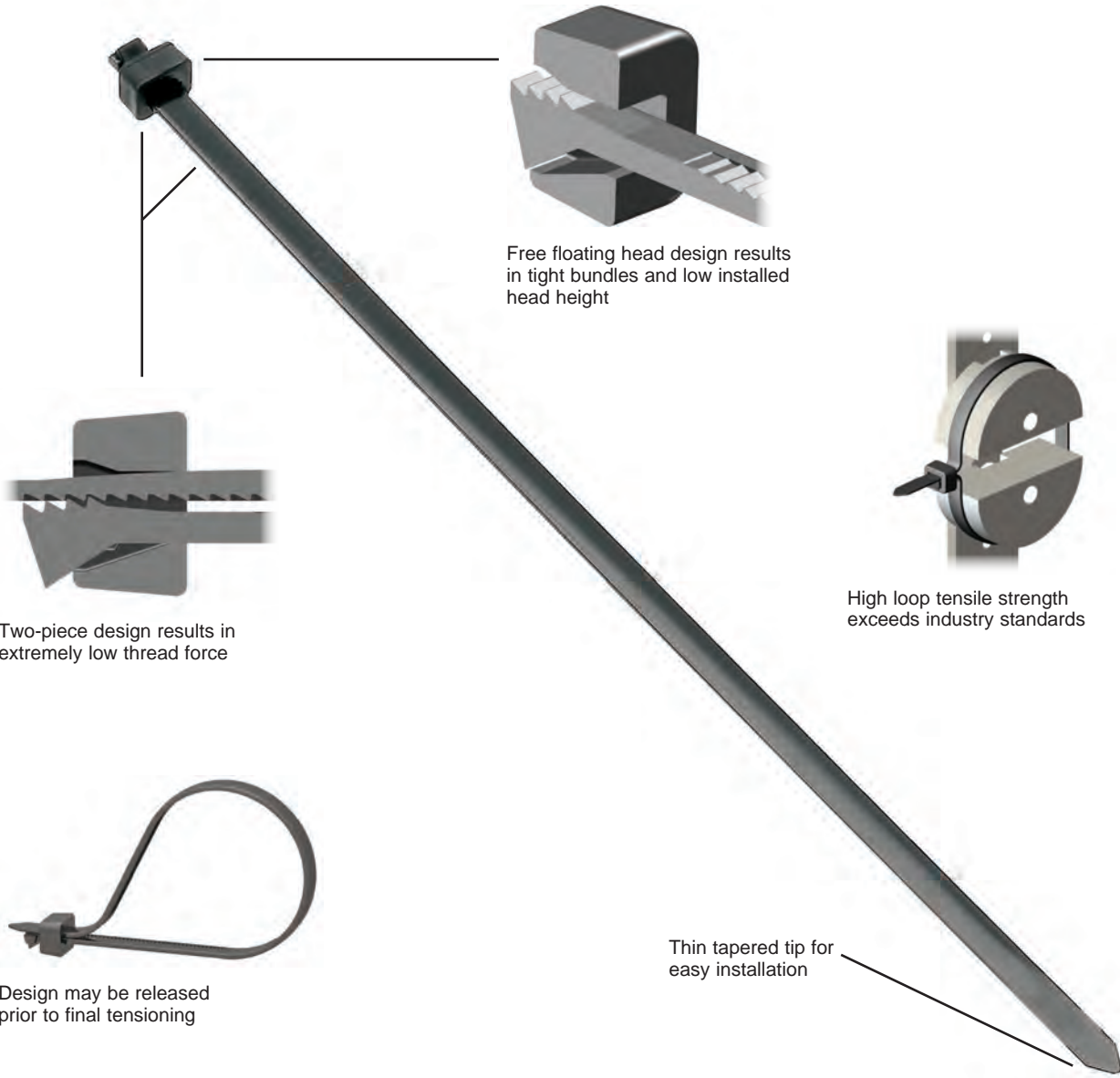
D1

## Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
			CBR1M-M	✓	0, 30
			CBR1.5M-M	✓	0
			CBR2M-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7
			CBR1.5I-M	✓	0, 30
			CBR3I-M	✓	0, 1, 2, 3, 4Y, 5, 6, 7, 8, 10
			CBR4I-M	✓	0
			CBR2S-M	✓	0, 30, 39
			CBR3S-M	✓	0, 30, 69
			CBR4S-M	✓	0, 30
			CBR2HS-D	✓	0
			CBR4LH-TL	✓	0, 30
			CBR6LH-C	✓	0, 30
			HV965-C		0
			HV9100-C		0
			HV9150-C		0
			HV9250-C		0
ILT2S-C	✓	0	ILT2S-M	✓	0
ILT3S-C	✓	0	ILT3S-M	✓	0
ILT4S-C	✓	0	ILT4S-M	✓	0
			ILT4LH-TL	✓	0
			ILT6LH-C	✓	0
			IT940-C		0
			IT965-C		0
			IT9100-C		0, UV2, UV4Y, UV6, UV7A, UV8, UV16B
			IT9115-C		0, UV2, UV2A, UV3, UV4Y, UV4A, UV5A, UV5B, UV6, UV6A, UV6B, UV7A, UV8, UV8A, UV11, UV16B, UV18

### Features and Benefits – Sta-Strap® Cable Ties

Two-piece design incorporates a separate nylon head and strap.



Free floating head design results in tight bundles and low installed head height

High loop tensile strength exceeds industry standards

Two-piece design results in extremely low thread force

Design may be released prior to final tensioning

Thin tapered tip for easy installation



Cable tie tools speed installation and reduce total installed cost. Visit [www.panduit.com/tools](http://www.panduit.com/tools).



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.26.

A

Industrial Electrical Solutions

B1

Selection Guide – Sta-Strap® Cable Ties

B2

B3

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Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
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C2

Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	SST	B1.65
	Clamp Ties/Mount	SSC	B1.67
	Marker Ties/Identify	SSM	B1.68

C3

Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	SST	B1.66
	Clamp Ties/Mount	SSC	B1.67
	Marker Ties/Identify	SSM	B1.68

C4

Heat Stabilized Nylon 6.6, Black (30)	Clamp Ties/Mount	SSC	B1.67
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D1

D2

Part Number System for Sta-Strap® Cable Ties

D3

SST	1	M		C	
Type	Size	Cross Section	Screw Hole Size	Package Size	Material/Color
SST = Locking Tie SSC = Clamp Tie SSM = Flag Tie	Approx. Maximum Bundle Dia. (In.)	M = Miniature I = Intermediate S = Standard H = Heavy HH = Heavy Head	(Clamp Ties Only) -S6 = #6 (M3) -S10 = #10 (M5) -S25 = 1/4 (M6)	L = 50 C = 100 D = 500 M = 1000	See Page B1.69

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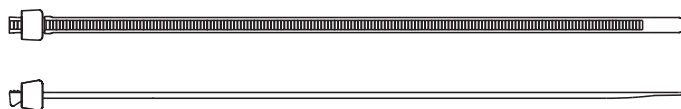




**Sta-Strap® Cable Ties – Nylon 6.6**

- For indoor use
- Used for normal bundling and through-panel applications
- Small head height allows more efficient use of space in compact areas

- Exclusive two-piece design offers the lowest threading force in the industry
- Average 14% lighter than one-piece cable ties
- Releasable prior to final tensioning for bundle modifications



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
SST1M-C	4.0	102	0.095	2.4	0.035	.9	.78	20	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
SST1.5M-C	5.5	140	0.095	2.4	0.037	.9	1.25	32					
<b>Intermediate Cross Section</b>													
SST1.5I-C	5.3	137	0.135	3.4	0.037	.9	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
SST2I-C	8.1	206	0.135	3.4	0.040	1.0	2.00	51					
SST3I-C	11.0	279	0.135	3.4	0.040	1.0	3.00	76					
SST4I-C	14.7	375	0.135	3.4	0.040	1.0	4.00	102					
<b>Standard Cross Section</b>													
SST1.5S-M	5.7	146	0.180	4.6	0.045	1.2	1.25	32	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	25000
SST2S-C	6.7	172	0.180	4.6	0.045	1.2	1.75	45	50	222		100	1000
SST3S-C	11.0	279	0.180	4.6	0.048	1.2	3.00	76					
SST4S-C	15.0	381	0.180	4.6	0.048	1.2	4.00	102					
<b>Light-Heavy Cross Section</b>													
SST2H-D	8.0	203	0.300	7.6	0.062	1.6	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	500	5000
SST4H-L	14.8	376	0.300	7.6	0.067	1.7	4.00	102	120	534		50	500
SST8H-L	27.5	699	0.300	7.6	0.067	1.7	8.00	203					

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### **Sta-Strap® Cable Ties – Weather Resistant Nylon 6.6**

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Used for normal bundling and through-panel applications
- Small head height allows more efficient use of space in compact areas
- Exclusive two-piece design offers the lowest threading force in the industry
- Average 14% lighter than one-piece cable ties
- Releasable prior to final tensioning for bundle modifications

B2

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C2

C3

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

C4

#### Miniature Cross Section

<b>SST1M-C0</b>	4.0	102	0.095	2.4	0.035	0.9	.78	20	18	80	GTS-E, GS2B-E, PTS, PPTS, STS2	100	1000
<b>SST1.5M-M0</b>	5.5	140	0.095	2.4	0.037	0.9	1.25	32	18	80		1000	50000

D1

#### Intermediate Cross Section

<b>SST1.5I-M0</b>	5.3	137	0.135	3.4	0.037	0.9	1.25	32	40	178	GTS-E, GS2B-E, PTS, PPTS, STS2	1000	25000
<b>SST2I-M0</b>	8.1	206	0.135	3.4	0.040	1.0	2.00	51					
<b>SST3I-C0</b>	11.1	279	0.135	3.4	0.040	1.0	3.00	76	40	178		100	1000
<b>SST4I-M0</b>	14.7	375	0.135	3.4	0.040	1.0	4.00	102	40	178	1000	10000	

D2

#### Standard Cross Section

<b>SST1.5S-M0</b>	5.7	146	0.180	4.6	0.045	1.2	1.25	32	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	25000
<b>SST2S-C0</b>	6.7	172	0.180	4.6	0.045	1.2	1.75	45	50	222		100	1000
<b>SST3S-C0</b>	11.0	279	0.180	4.6	0.048	1.2	3.00	76					
<b>SST4S-C0</b>	15.0	381	0.180	4.6	0.048	1.2	4.00	102					

D3

E1

#### Light-Heavy Cross Section

<b>SST2H-D0</b>	8.0	203	0.300	7.6	0.062	1.6	2.00	51	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	500	5000
<b>SST4H-L0</b>	14.8	376	0.300	7.6	0.067	1.7	4.00	102	120	534		50	500
<b>SST8H-L0</b>	27.5	699	0.300	7.6	0.067	1.7	8.00	203					

E2

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B1.66

Order number of pieces required, in multiples of Standard Package Quantity.



**Sta-Strap® Clamp Ties**

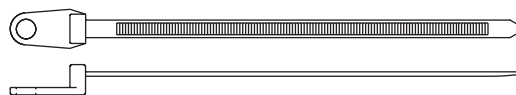
- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Design allows for bundling before or after screwing clamp in place
- Exclusive two-piece design offers the lowest threading force in the industry
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Only clamp tie that is releasable prior to final tensioning



SSC2S-S10-C



SSC2S-S10-M0



Part Number	Length		Width		Thickness		Nominal Hole Dia.		Screw Size	Metric Screw Size	Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm			In.	mm	Lbs.	N			

**Nylon 6.6**

**Standard Cross Section**

SSC2S-S6-C	7.4	187	0.180	4.6	0.045	1.1	0.148	3.8	#6	M3	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
SSC2S-S10-C	7.4	187	0.180	4.6	0.045	1.1	0.200	5.1	#10	M5	1.75	45					
SSC4S-S10-C	15.7	398	0.180	4.6	0.045	1.1	0.200	5.1	#10	M5	4.00	102	50	222		100	500

**Light-Heavy Cross Section**

SSC4H-S25-L	15.6	395	0.300	7.6	0.065	1.7	0.260	6.6	1/4	M6	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	500
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**Weather-Resistant Nylon 6.6**

**Standard Cross Section**

SSC2S-S6-M0	7.4	187	0.180	4.6	0.045	1.1	0.148	3.8	#6	M3	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
SSC2S-S10-M0	7.4	187	0.180	4.6	0.045	1.1	0.200	5.1	#10	M5							

**Light-Heavy Cross Section**

SSC4H-S25-D0	15.6	395	0.300	7.6	0.065	1.7	0.260	6.6	1/4	M6	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	500	2500
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**Heat Stabilized Nylon 6.6**

**Standard Cross Section**

SSC2S-S10-M30	7.4	187	0.180	4.6	0.045	1.2	0.200	5.1	#10	M5	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
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**Light-Heavy Cross Section**

SSC4H-S25-D30	15.6	395	0.300	7.6	0.065	1.7	0.260	6.6	1/4	M6	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	500	2500
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# PANDUIT®

## Industrial Electrical Solutions

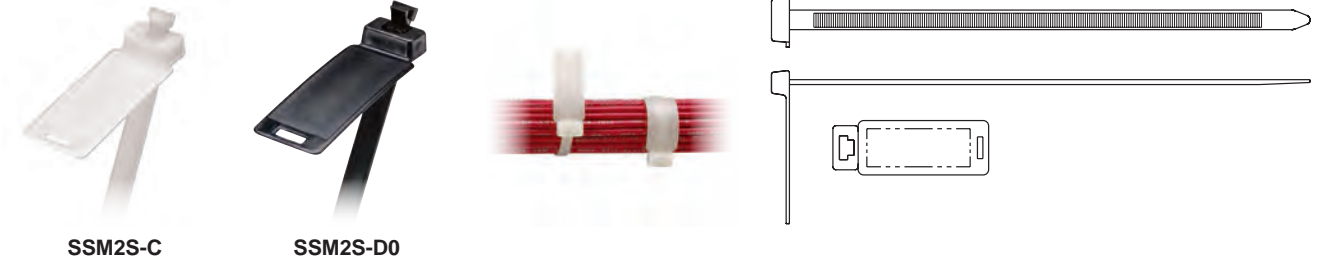
B1

### UL<sup>®</sup> US C<sup>®</sup> SP<sup>®</sup> US Sta-Strap<sup>®</sup> Marker Ties – Nylon and Weather Resistant Nylon 6.6

B2

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Used to fasten and identify bundles at the same time
- Unique design allows tie to be used as a wrap-around or flag marker
- Can be marked with Panduit<sup>®</sup> Marker Pens on page B1.49 or computer printable labels

B3



SSM2S-C                      SSM2S-D0

C1

C2

C3

Part Number	Marker Type	Length		Width		Thickness		Marker Write-On Area		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

C4

#### Nylon 6.6

##### Standard Cross Section

SSM2S-C	Wrap/Flag	6.7	170	0.180	4.6	0.045	1.1	0.44 x 0.96	11.2 x 24.4	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	500
SSM4S-D		14.9	378	0.180	4.6	0.045	1.1	0.44 x 0.96	11.2 x 24.4	4.00	102	50	222			

D2

#### Weather Resistant Nylon 6.6

##### Standard Cross Section

SSM2S-D0	Wrap/Flag	6.7	170	0.180	4.6	0.045	1.1	0.44 x 0.96	11.2 x 24.4	1.75	45	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH	500	10000
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B1.68

Order number of pieces required, in multiples of Standard Package Quantity.

**Sta-Strap® Cable Ties**

B1

**Material and Color Chart**

Material	Color	Panduit Suffix
Nylon 6.6	Natural	✓
Weather Resistant Nylon 6.6	Black	0
Nylon 6.6	Red	2

Material	Color	Panduit Suffix
Nylon 6.6	Black	20
Heat Stabilized Nylon 6.6	Black	30

B2

B3

✓Denotes Panduit® Natural Nylon 6.6 (no suffix).

C1

**Part Number Availability List**

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
SSC2S-S6-C	✓		SSC2S-S6-M	✓	0
SSC2S-S10-C	✓		SSC2S-S10-M	✓	0, 30
SSC4S-S10-C	✓		SSC4S-S10-M	✓	0
SSC4H-S25-L	✓		SSC4H-S25-D	✓	0
SSM2S-C	✓		SSM2S-D	✓	0
			SSM4S-D	✓	
SST1M-C	✓	0	SST1M-M	✓	0, 20, 30
SST1.5M-C	✓		SST1.5M-M	✓	0, 20, 30
SST1.5I-C	✓		SST1.5I-M	✓	0
SST2I-C	✓		SST2I-M	✓	0, 20
SST3I-C	✓	0	SST3I-M	✓	0
SST4I-C	✓		SST4I-M	✓	0
			SST1.5S-M	✓	0
SST2S-C	✓	0	SST2S-M	✓	0, 20, 30
SST3S-C	✓	0	SST3S-M	✓	0, 20, 30
SST4S-C	✓	0	SST4S-M	✓	0, 2, 30
			SST2H-D	✓	0
			SST2HH-D		30
SST4H-L	✓	0	SST4H-D	✓	0, 30
		0	SST4HH-D		30
SST8H-L	✓	0	SST8H-D	✓	0, 30

C2

C3

C4

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# Industrial Electrical Solutions

B1

## Selection Guide – Specialty Ties

B2

B3

C1

**Stud Mounted Cable Ties**
**Material, Color (Suffix)**
**Style/Function**
**Part Number Prefix**
**Catalog Page**

Heat Stabilized Nylon 6.6, Black (30)

Locking Ties/Bundle

PLST

B 1.71

Heat Stabilized Weather Resistant Nylon 6.6, Black (300)

Releasable/Re-usable

PRST

B 1.71

C2

**Ladder Style Stud Mount**

Heat Stabilized Nylon 6.6, Black (30)

Releasable/Re-usable

PRST

B 1.72

C3

**Double Loop Ties – One-Piece**

Nylon 6.6, Natural (No Suffix)

Locking/Bundle

PLB

B 1.72

Weather Resistant Nylon 6.6, Black (0)

Heat Stabilized Nylon 6.6, Black (30)

C4

**Double Loop Ties – Two-Piece**

Nylon 6.6, Natural (No Suffix)

Locking/Bundle

SSB

B 1.73

Weather Resistant Nylon 6.6, Black (0)

Heat Stabilized Nylon 6.6, Black (30)

D1

**Triple Loop Ties**

Weather Resistant Nylon 6.6, Black (0)

Locking/Bundle

PL3B

B 1.74

D2

**Double Hose Clamp**

Weather Resistant Nylon 6.6, Black (0)

Locking/Bundle

DHC

B 1.74

D3

**Chassis/Panel Mount Ties**

Heat Stabilized Weather Resistant Nylon 6.6, Black (300)

Locking/Bundle

SSPM

B 1.75

**Cable Marker Strap**

Polyethylene (No Suffix)

Releasable/Re-usable

CM4S

B 1.76

E1

### Part Number System for Specialty Cable Ties

**PLST**
**4**
**H**
**S25**
**—**
**TL**
**300**
**Type**
**Size**
**Cross Section**
**Stud Size**
**Package Size**
**Material/Color**

CM4S = Cable Marker Strap

Approx. Maximum Bundle Dia. (In.)

S = Standard  
H = Heavy  
EH = Extra-Heavy-S25 = M6  
-SC = 5mm  
-S14 = 5mmL = 50  
C = 100  
TL = 250  
D = 500  
M = 1000

See Page B1.77

PLB = Locking Bow Tie

PL3B = Triple Loop Tie

DHC = Double Hose Clamp

PLST = Locking Stud Mounted Tie

PRST = Releasable Stud Mount Ladder Style

SSB = Sta-Strap® Bow-Ty™ Tie

SSPM = Sta-Strap® Panel Mount

F

Cable tie tools speed installation and reduce total installed cost. Visit [www.panduit.com/tools](http://www.panduit.com/tools).

G

H

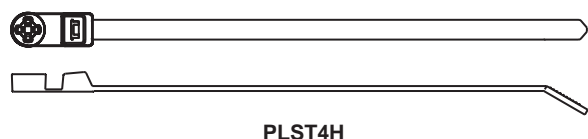
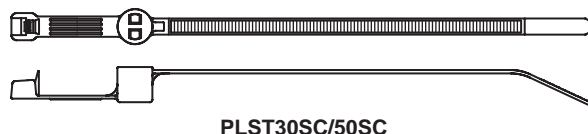
Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.26.

B1.70



## Pan-Ty® Stud Mounted Cable Ties – Heat Stabilized and Heat Stabilized Weather Resistant Nylon 6.6

- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- Heat stabilized weather resistant material has greater resistance to damage caused by ultraviolet light and for high temperature applications up to 293°F (115°C) – indoor or outdoor use
- Integral mount pushes onto a threaded stud and tie wraps around bundle
- Mid-mount style (PLST\_SC) centers the wire bundle over the stud
- Tie can be removed from the stud by turning counterclockwise
- Releasable style available (PRST)
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



Part Number	Length		Width		Thickness		Recommended Stud Size		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Heat Stabilized Nylon 6.6</b>															
<b>Standard Cross Section</b>															
PLST30SC-D30	5.7	146	0.190	4.8	0.050	1.3	10-24	5.0	1.18	30	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	500	5000
PLST50SC-D30	8.1	207	0.190	4.8	0.050	1.3	10-24	5.0	1.97	50					
PRST40SC-D30	6.9	176	0.190	4.8	0.050	1.3	10-24	5.0	1.57	40					
<b>Heat Stabilized Weather Resistant Nylon 6.6</b>															
<b>Light-Heavy Cross Section</b>															
PLST4HS25-TL300	15.3	389	0.300	7.6	0.075	1.9	1/4-20	6.4	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500

Note: UL Recognized and CSA Certified except PLST4H.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Ty® Ladder Style Stud Mounted Cable Tie – Heat Stabilized Nylon 6.6

- For high temperature applications up to 239°F (115°C) – indoor use
- Integral mount pushes onto a threaded stud and tie wraps around bundle
- Tie can be removed from the stud by turning counterclockwise
- Adjustable, releasable, and re-usable
- Install by hand – no tools required

B2

B3

Boss Height

C1

C2

Part Number	Length		Width		Thickness		Boss Height		Recommended Stud Size		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Standard Cross Section</b>																
PRST30S-S14-M30	5.2	132	0.380	9.7	0.050	1.3	0.59	15	10-24	5.0	1.18	30	35	156	1000	10000

C3

C4

### Pan-Ty® Double Loop Cable Ties

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use
- A fast and economical method to secure and separate two bundles
- Reduces part number inventory – single part covers multiple bundle sizes
- Installs easily by hand – second loop can be installed with Panduit® cable tie installation tools

D2

D3

PLB4H Head Design

PLB2S/3S/4S Head Design

Assembled View

E1

E2

Part Number	Max. Combined Bundle Dia. D1 + D2		Length		Width		Thickness		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

#### Nylon 6.6

##### Standard Cross Section

PLB2S-C	1.80	46	7.6	193	0.190	4.8	0.052	1.3	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
PLB3S-C	3.00	76	11.8	300	0.190	4.8	0.052	1.3	50	222			
PLB4S-C	4.10	104	14.8	376	0.190	4.8	0.052	1.3	50	222			

E3

##### Light-Heavy Cross Section

PLB4H-TL	3.60	91	14.7	373	0.300	7.6	0.075	1.9	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
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E4

#### Weather Resistant Nylon 6.6

##### Standard Cross Section

PLB2S-C0	1.80	46	7.6	193	0.190	4.8	0.052	1.3	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	100	1000
PLB3S-C0	3.00	76	11.8	300	0.190	4.8	0.052	1.3	50	222			
PLB4S-M0	4.10	104	14.8	376	0.190	4.8	0.052	1.3	50	222			

E5

##### Light-Heavy Cross Section

PLB4H-TL0	3.60	91	14.7	373	0.300	7.6	0.075	1.9	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
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F

#### Heat Stabilized Nylon 6.6

##### Standard Cross Section

PLB2S-M30	1.80	46	7.6	193	0.190	4.8	0.052	1.3	50	222	GTS-E, GS2B-E, GTH-E, GS4H-E, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLB3S-M30	3.00	76	11.8	300	0.190	4.8	0.052	1.3	50	222			
PLB4S-M30	4.10	104	14.8	376	0.190	4.8	0.052	1.3	50	222			

G

##### Light-Heavy Cross Section

PLB4H-TL30	3.60	91	14.7	373	0.300	7.6	0.075	1.9	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500
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H

B1.72

Order number of pieces required, in multiples of Standard Package Quantity.



**UL<sup>®</sup> US** **CSA<sup>®</sup> US** **Sta-Strap<sup>®</sup> Bow-Ty<sup>™</sup> Cable Ties**

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use

- A fast and economical method to secure and separate two bundles
- Exclusive two-piece design offers the lowest threading force in the industry
- First loop is releasable prior to final tensioning

B1

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

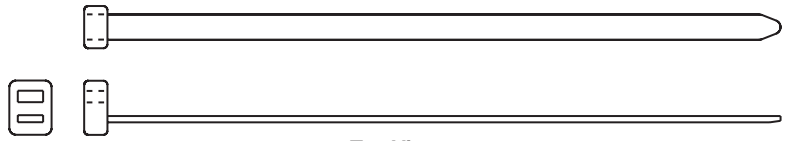
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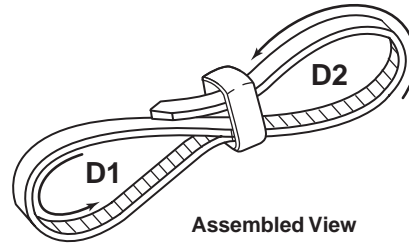


SSB2S-C

SSB2S-M0 (30)



Top View



Assembled View

Part Number	Max. Combined Bundle Dia. D1 + D2		Length		Width		Thickness		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			

**Nylon 6.6**

**Standard Cross Section**

SSB2S-C	1.25	32	6.8	172	0.18	4.6	0.045	1.1	30	133	Hand install only	100	1000
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**Weather Resistant Nylon 6.6**

**Standard Cross Section**

SSB2S-M0	1.25	32	6.8	172	0.18	4.6	0.045	1.1	30	133	Hand install only	1000	10000
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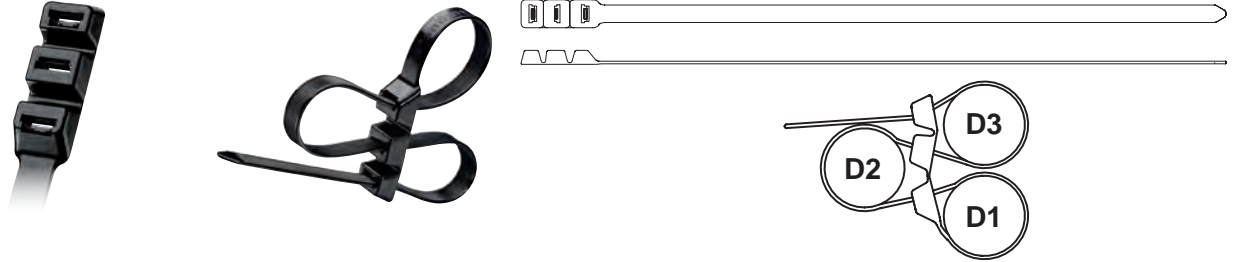
**Heat Stabilized Nylon 6.6**

**Standard Cross Section**

SSB2S-M30	1.25	32	6.8	172	0.18	4.6	0.045	1.1	30	133	Hand install only	1000	10000
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## Pan-Ty® Triple Loop Cable Tie – Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- A fast and economical method to secure and separate three bundles
- Third loop can be installed with Panduit® cable tie installation tools

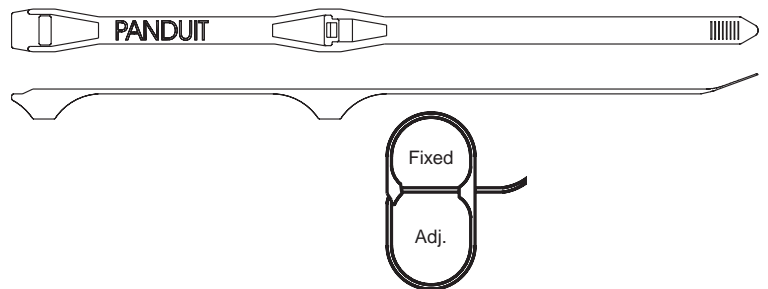


Assembled View

Part Number	Max. Combined Bundle Dia. D1 + D2 + D3		Length		Width		Thickness		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
PL3B5EH-C0	5.00	127	20.0	508	0.500	12.7	0.075	1.9	125	556	GS4EH-E, ST3EH	100	1000

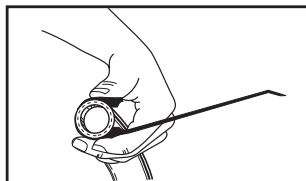
## Double Hose Clamp – Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Holds and separates two gasoline, hydraulic, or pneumatic hoses
- Holds each hose individually to prevent abrasion and twisting

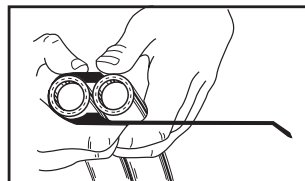


Assembled View

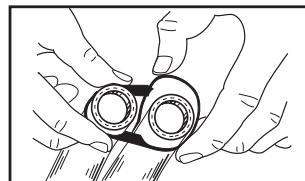
Part Number	Length		Width		Thickness		Fixed Loop Dia.		Adjustable Loop Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
DHC1.12X1.75-D0	11.0	279	0.280	7.1	0.050	1.3	1.12	28	1.00 – 1.75	25 – 44	100	445	GTH-E, GS4H-E, PTH, STH2, ST3EH	500	2500



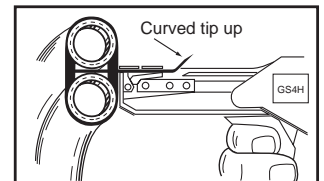
1) Wrap clamp around hose



2) Position second hose in clamp



3) Loop tail around second hose and thread tail through both spacer heads



4) Tension and cut off with recommended tool

**NEW!** Pan-Ty® Double Clamp Cable Ties

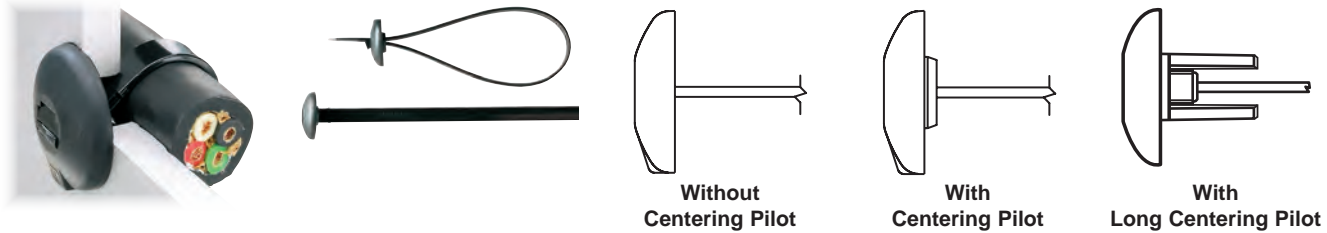


**Materials:** Nylon 6/6, Heat stabilized (continuous use temperature rating of 115°C), UV weather resistant and impact modified

Part Number	Max. Bundle Dia.		Length		Width		Thickness		Min. Loop Tensile		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
PLDC1.5EH-C350	1.3	33	13.1	332.7	0.5	12.73	0.057	1.5	150	667.2	GS4EH-E, PPTHEH	100	500
PLDC2.5EH-C350	2.3	58.4	19.28	489	0.5	12.73	0.057	1.5	150	667.2			

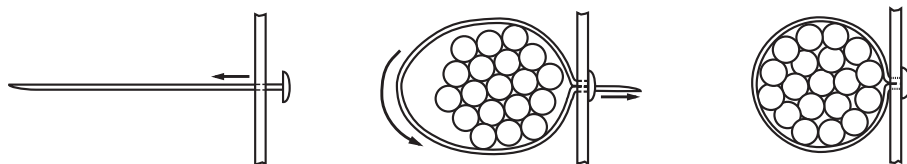
**Sta-Strap® Chassis/Panel Mount Ties – Heat Stabilized Weather Resistant Nylon 6.6**

- Greater resistance to damage caused by ultraviolet light and for high temperature applications up to 239°F (115°C) – indoor or outdoor use
- Unique design allows tie to secure a bundle directly to a chassis or panel without the need for separate fasteners or mounting devices
- Releasable prior to final tensioning for bundle modifications
- Engages clearance hole with optional centering pilot to prevent tie from shifting or abrading in high vibration environments



Part Number	Length		Width		Thickness		Hole Diameter Range		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Without Centering Pilot</b>															
SSPM2.5H-L300	10.1	257	0.300	7.6	0.062	1.6	0.316 – 0.820	8.0 – 21.0	2.76	70	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	2500
SSPM4H-L300	14.8	376	0.300	7.6	0.062	1.6	0.316 – 0.820	8.0 – 21.0	4.00	102					
<b>With Centering Pilot</b>															
SSPM2.5HP-L300	10.1	257	0.300	7.6	0.062	1.6	0.440 – 0.820	11.2 – 21.0	2.76	70	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	50	2500
SSPM4HP-L300	14.8	376	0.300	7.6	0.062	1.6	0.440 – 0.820	11.2 – 21.0	4.00	102					
<b>With Long Centering Pilot</b>															
SSPM4HLP-TL300	14.8	376	0.300	7.6	0.062	1.6	0.440 – 0.820	11.2 – 21.0	4.00	102	120	534	GTH-E, GS4H-E, GS4EH-E, PTH, STH2, ST3EH	250	2500

**Through-Panel Mount Installation in Three Easy Steps:**



- 1) Insert tip of cable tie through the pre-drilled hole in the panel.
- 2) Wrap cable tie around the bundle and insert tip back through the hole and head of the cable tie.
- 3) Pull tip until cable tie is snug on bundle. Tension and cut off excess portion with installation tool.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Cable Marker Straps – Polyethylene

- Identify and code telephone and fiber optic cable
- Eliminate the need for costly and cumbersome lead marking tags
- Lightweight and easy to install
- Use as wrap-around or flag marker
- For underground identification applications
- Can be marked with Panduit® marker pens, see page B1.49
- Custom imprinting with text, symbols, or trademarks available using Panduit Custom Hot Stamping Service, see page B1.89

B2

B3

C1

C2

C3

C4

D1

D2

**Wrap-Around Marker**  
(Min. Dia.: 1.27")

**Flag Marker**  
(Min. Dia.: 0.25")

E1

Part Number	Length		Width		Thickness		Color	Marker Write-On Area		Max. Bundle Dia.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm		In.	mm	In.	mm			
<b>Extra-Heavy Cross Section</b>														
CM4S-L2	15.3	387	0.750	19.1	0.033	0.84	Red	1.50 x 2.62	38.1 x 66.5	4.38	111	Hand install only	50	500
CM4S-L8	15.3	387	0.750	19.1	0.033	0.84	Gray							

E3

E4

E5

F

G

H

B1.76

Order number of pieces required, in multiples of Standard Package Quantity.

Specialty Cable Ties

Material and Color Chart

Material	Color	Panduit Suffix
Nylon 6.6	Natural	✓
Weather Resistant Nylon 6.6	Black	0
Nylon 6.6	Red	2
Nylon 6.6	Gray	8

Material	Color	Panduit Suffix
Heat Stabilized Nylon 6.6	Black	30
Heat Stabilized Weather Resistant Nylon 6.6	Black	300

✓ Denotes Panduit® Natural Nylon 6.6 (no suffix).

Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Material/Color Suffix	Part Number	Natural Nylon 6.6	Material/Color Suffix
CM4S-L		2, 8			
			DHC1.12X1.75-D		0
PLB2S-C	✓	0	PLB2S-M	✓	0, 30
PLB3S-C	✓	0	PLB3S-M	✓	0, 30
PLB4S-C	✓		PLB4S-M	✓	0, 30
			PLB4H-TL	✓	0, 30
			PL3B5EH-C		0
			PLST4HS25-TL		300
			PLST30SC-D		30
			PLST50SC-D		30
			PRST30S-S14-M		30
			PRST40SC-D		30
SSB2S-C	✓		SSB2S-M	✓	0, 30
SSPM2.5H-L		300	SSPM2.5H-TL		300
SSPM2.5HP-L		300	SSPM2.5HP-TL		300
SSPM4H-L		300	SSPM4H-TL		300
SSPM4HP-L		300	SSPM4HP-TL		300
			SSPM4HLP-TL		300

B1

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

H

A

# PANDUIT®

## Industrial Electrical Solutions

B1

**Pan-Ty® Striped Cable Ties – Nylon 6.6**

- Nylon material for indoor use
- Striped Pan-Ty® Cable Ties in 25 color combinations match the universally accepted Even-Count Color Code
- Solid color ties are available for identification of “super groups” in cable containing more than 600 pairs
- Each 50-piece package fits in the Pan-Pouch™ Kit or pocket pouch shown on the next page

B2

B3

C1

C2

C3

Part Number	Color	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Miniature Cross Section (Straight Tip)</b>													
PLT1M-L6-10	Blue/White Stripe	4.0	102	0.100	2.5	0.036	0.9	0.82	21	18	80	50	1000
PLT1M-L3-10	Orange/White Stripe												
PLT1M-L5-10	Green/White Stripe												
PLT1M-L1-10	Brown/White Stripe												
PLT1M-L8-10	Slate/White Stripe												
PLT1M-L6-2	Blue/Red Stripe												
PLT1M-L3-2	Orange/Red Stripe												
PLT1M-L5-2	Green/Red Stripe												
PLT1M-L1-2	Brown/Red Stripe												
PLT1M-L8-2	Slate/Red Stripe												
PLT1M-L6-0	Blue/Black Stripe												
PLT1M-L3-0	Orange/Black Stripe												
PLT1M-L5-0	Green/Black Stripe												
PLT1M-L1-0	Brown/Black Stripe												
PLT1M-L8-0	Slate/Black Stripe												
PLT1M-L6-4	Blue/Yellow Stripe												
PLT1M-L3-4	Orange/Yellow Stripe												
PLT1M-L5-4	Green/Yellow Stripe												
PLT1M-L1-4	Brown/Yellow Stripe												
PLT1M-L8-4	Slate/Yellow Stripe												
PLT1M-L6-7	Blue/Violet Stripe												
PLT1M-L3-7	Orange/Violet Stripe												
PLT1M-L5-7	Green/Violet Stripe												
PLT1M-L1-7	Brown/Violet Stripe												
PLT1M-L8-7	Slate/Violet Stripe												
PLT1M-L0	Black												
PLT1M-L1	Brown												
PLT1M-L2	Red												
PLT1M-L3	Orange												
PLT1M-L4Y	Yellow												
PLT1M-L5	Green												
PLT1M-L6	Blue												
PLT1M-L8	Slate												

Note: CSA Certified on solid colors only.

Note: All part numbers have the same dimensions.

G

H

B1.78

Order number of pieces required, in multiples of Standard Package Quantity.

### Telephone Cable Identification Kits

- Pan-Pouch™ Kit is made of two-ply laminated black nylon/vinyl and folds for easy storage
- Easily hang pouch from cable by using hook and loop fasteners
- Pocket pouch holds five (50-piece) packages and is made of a white vinyl



PPC25X50F



PP5X50F

Part Number	Description	Dimensions		Std. Pkg. Qty.
		Open	Closed	
PPC25X50F	Pouch filled with 1,250 cable ties (50 each of all 24 striped ties and 50 solid red ties)	10.5" x 38" (267mm x 965mm)	10.5" x 6" (267mm x 152mm)	1
PPC25X50	Empty pouch			
PP5X50F	Pocket pouch filled with 250 cable ties (50 of each color: blue, orange, green, brown and slate – all with white stripe)	—	3.5" x 5.25" (89mm x 133mm)	

### Cable Tie Kits in Steel Boxes



K-205



K-504/SR2

Part Number	Part Description	Std. Pkg. Qty.
K-205	<b>Kit for Indoor Use</b> Pan-Ty® Cable Ties, cable tie installation tool, terminals, splices and crimp tool: (1) GTS tool (1) CT-100 crimp tool <u>Natural Nylon 6.6 Cable Ties</u> (100) PLT1M (100) PLT1.5I (100) PLT2S <u>Terminals</u> (100) PV18-6LF (100) PV14-8LF (100) PV14-10LF (50) PV10-10LF <u>Splices</u> (50) BSV10X (100) BSV14X (100) BSV18X	1
K-504	<b>Kit for Indoor Use</b> Pan-Ty® Cable Ties, cable tie installation tool, and mounts: (1) STS2 tool <u>Natural Nylon 6.6 Cable Ties</u> (100) PLT1M (100) PLT1.5I (100) PLT2S (100) PLC2S-S10 <u>Mounts</u> (100) TM2S8 (100) ABM2S-A	
SR2	Two-drawer slide rack to hold K-504 cable tie kit or K-1000 series terminal kit. Dimensions: 6.25"H x 15.25"W x 11.75"D (158.7mm x 387.4mm x 298.5mm)	

B1

## Cable Tie Kits in Plastic Boxes and Bags

B2



KP-506A

B3

C1



KP-506A-0

C2

C3

C4



KP-509

D1

D2

D3



KB-550

E1

E2

E3



KB-551

E4

E5

F

G

H

Part Number	Part Description	Std. Pkg. Qty.
KP-506A	<b>Kit for Indoor Use</b> Pan-Ty® Cable Ties and Mounts: <u>Natural Nylon 6.6</u> (100) PLT1M (100) PLT1.5I (100) PLT2S (50) ABM2S-A mounts	1
KP-506A-0	<b>Kit for Outdoor Use</b> Pan-Ty® Cable Ties and Mounts: <u>Black Weather Resistant Nylon 6.6</u> (100) PLT1M-0 (100) PLT1.5I-0 (100) PLT2S-0 (50) ABM2S-AT-0 mounts	
KP-509	<b>Kit for Indoor Use</b> For prototyping and new product development – contains over 600 pieces. Pan-Ty® Cable Ties in different styles, sizes, and colors. Huge assortment of cable tie mounts and wiring accessories.	
KB-550	<b>Assortment Pack for Indoor and Outdoor Use</b> Pan-Ty® Cable Ties: <u>Natural Nylon 6.6</u> (15) PLT1M (15) PLT1.5I (15) PLT2S (15) PLT3S <u>Black Weather Resistant Nylon 6.6</u> (10) PLT1M-0 (10) PLT1.5I-0 (10) PLT2S-0 (10) PLT3S-0	
KB-551	<b>Assortment Pack for Indoor and Outdoor Use</b> Dome-Top® Barb Ty Cable Ties: <u>Natural Nylon 6.6</u> (15) BT1M (15) BT1.5I (15) BT2S (15) BT3S <u>Black Weather Resistant Nylon 6.6</u> (10) BT1M-0 (10) BT1.5I-0 (10) BT2S-0 (10) BT3S-0	



**Features and Benefits – Hook and Loop Cable Ties**

The comprehensive family of hook and loop cable ties delivers reliability by protecting against over-tensioning of high performance fiber and copper cables. These ties are adjustable, releasable, and re-usable to effectively support frequent moves, adds, and changes (MACs). A wide range of colors provides flexibility and an aesthetically pleasing appearance. The complete line of Panduit® Hook and Loop Cable Ties help maintain the reliable, scalable, and aesthetic requirements of data centers.

**Tak-Ty® Hook & Loop Cable Ties – Premium, durable designs and sizes**

**Loop Style**



Allows for pre-wrapping of bundles

**Roll/Strip/Brick Style**



Available in continuous or perforated rolls and stacked strips

**Plenum Rated**



Distinctive maroon color (also available in black)

B1

B2

B3

C1

C2

C3

C4

D1

**Tak-Tape™ Hook & Loop Rolls**



Strong, low profile hook and loop material

Convenient packaging

**Ultra-Cinch™ Hook & Loop Cable Ties**



Unique same-sided material secures a greater range of bundle diameters

Available in three styles and eight colors; grommet styles used for bundle mounting applications

Low profile contoured cinch ring reduces overall bundle size

D2

D3

E1

E2

E3

E4



Wire management accessories speed and simplify the mounting of high performance cabling.

See pages B2.4, B2.10, B2.19, B2.22, C4.2, C4.3 and C4.7.

E5

F

G

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A

# PANDUIT®

# Industrial Electrical Solutions

B1

## Selection Guide – Hook and Loop Cable Ties

B2

B3

C1

C2

Product, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
-------------------------	----------------	--------------------	--------------

C3

Tak-Ty® Ties, Black (0)	Loop Ties/Re-usable	HLT	B1.83
	Strip Ties/Re-usable	HLS	B1.83
	15' and 75' Rolls/Re-usable	HLM, HLS	B1.83
	Strip Ties/Re-usable/Brick	HLB	B1.83

C4

Tak-Ty® Plenum-Rated Ties, UL Listed Black, Maroon (0, 12)	Loop Ties/Re-usable	HLTP	B1.84
	Strip Ties/Re-usable	HLSP	B1.84

D1

Tak-Tape™ Rolls, Black (0)	20' and 35' Rolls/Re-usable	TTS	B1.84
----------------------------	-----------------------------	-----	-------

D2

Ultra-Cinch™ Ties, Black (0)	Cinch Ties/Re-usable	UCT	B1.85
	Cinch Ties – Center Mount Grommet/Re-usable	UGCTC	B1.85
	Cinch Ties – End Mount Grommet/Re-usable	UGCTE	B1.85

D3

## Part Number System for Hook and Loop Ties

E1

**HLT**

Type

HL = Hook and Loop  
 HLB = HL Brick  
 HLM = HL Miniature  
 HLT = HL Loop Tie  
 HLTP = HL Loop Tie Plenum-Rated  
 HLS = HL Strip Tie  
 HLSP = HL Strip Tie Plenum-Rated  
 TTS = Tak-Tape™ Roll  
 UCT = Ultra-Cinch™ Tie  
 UGCTC = UCT Grommet Cinch Tie – Center Mount  
 UGCTE = UCT Grommet Cinch Tie – End Mount

**2**

Size

Approx. Maximum Bundle Dia. (In.)

**I**

Cross Section

I = Intermediate  
 S = Standard

**—**

**X**

Package Size

X = 10  
 C = 100  
 15R = 15' Roll  
 20R = 20' Roll  
 35R3 = 35' Rolls (3)  
 35RX = 35' Rolls (10)  
 75R = 75' Roll

**0**

Color

See Page B1.86

E2

E3

E4

E5

F

G

H

B1.82

Order number of pieces required, in multiples of Standard Package Quantity.

## Tak-Ty® Hook & Loop Cable Ties

- Soft, premium material is safe to use on high performance cabling protecting against over-tensioning
- Broadest selection of durable designs and sizes to meet your application needs
- Adjustable, releasable, and re-usable multiple times – ideal for applications requiring frequent moves, adds, or changes

- A full range of colors
- Operating temperature range: 0°F to 220°F (-18°C to 104°C)
- Complementary mounts available, see page B2.5

Note: Minimum 2" overlap required to achieve loop tensile rating.



HLT (Loop Ties)



HLS (Strip Ties)



HLM/HLS (Rolls)



HLB2S (Stacked Strips)



Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Loop Ties – Slot allows for pre-wrapping of bundles</b>										
HLT2I-X0	8.0	203	0.500	12.7	1.91	49	40	178	10	100
HLT3I-X0	12.0	305	0.500	12.7	3.18	81				

<b>Strip Ties – Perforated in convenient 6", 12", and 18" strips</b>										
HLS1.5S-X0	6.0	152	0.750	19.1	1.50	38	50	222	10	100
HLS3S-X0	12.0	305	0.750	19.1	3.20	81				
HLS5S-X0	18.0	457	0.750	19.1	5.00	127				

<b>Stacked Strip Ties – Eliminates cutting ties to length and staging them for each job Rounded edges for installer safety – 100 pieces</b>										
HLB2S-C0	7.0	178	0.750	19.1	1.60	41	50	222	100	1000

Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>15' and 75' Continuous Rolls – Can be cut to desired length, eliminating waste</b>										
HLM-15R0	15.0	4.6	0.330	8.4	Various	Various	40	178	1	10
HLS-15R0	15.0	4.6	0.750	19.1			50	222		
HLS-75R0	75.0	22.9	0.750	19.1			50	222		

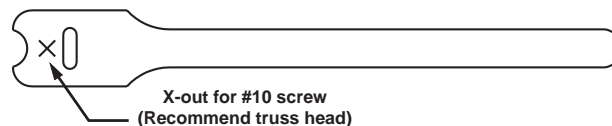
B1



## Tak-Ty® Hook & Loop Cable Ties – Plenum Rated

- Soft, premium material is safe to use on high performance cabling protecting against over-tensioning
- UL Listed for use in plenum or air handling spaces (such as ceiling voids and underfloor areas) per NEC, Section 300-22 (C) and (D)
- Flammability rating: UL 94V-2
- Adjustable, releasable, and re-usable multiple times – ideal for applications requiring frequent moves, adds, or changes
- Operating temperature range: 0°F to 122°F (-18°C to 50°C)

Note: Minimum 2" overlap required to achieve loop tensile rating.



C1

C2

C3

Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	Lbs.	N		

### UL Listed Loop Ties (Maroon) – Slot allows for pre-wrapping of bundles

HLTP2I-X12	8.0	203	0.500	12.7	1.91	49	40	178	10	100
HLTP3I-X12	12.0	305	0.500	12.7	3.18	81				

### UL Listed Loop Ties (Black) – Slot allows for pre-wrapping of bundles

HLTP2I-X0	8.0	203	0.500	12.7	1.91	49	40	178	10	100
HLTP3I-X0	12.0	305	0.500	12.7	3.18	81				

### UL Listed Strip Ties (Maroon) – Perforated in convenient 6", 12", and 18" strips

HLSP1.5S-X12	6.0	152	0.750	19.1	1.50	38	50	222	10	100
HLSP3S-X12	12.0	305	0.750	19.1	3.20	81				
HLSP5S-X12	18.0	457	0.750	19.1	5.00	127				

### UL Listed Strip Ties (Black) – Perforated in convenient 6", 12", and 18" strips

HLSP1.5S-X0	6.0	152	0.750	19.1	1.50	38	50	222	10	100
HLSP3S-X0	12.0	305	0.750	19.1	3.20	81				
HLSP5S-X0	18.0	457	0.750	19.1	5.00	127				

E1

## Tak-Tape™ Hook & Loop Cable Tie Rolls

- Strong, low profile, flexible material is safe to use on high performance cabling protecting against over-tensioning
  - Adjustable, releasable, and re-usable
  - Cost-effective for general purpose bundling
  - Continuous rolls can be easily cut to size – Panduit® cutter included with TTS-35RX0
  - Handy, re-usable plastic case with TTS-20R0, keeps material clean
  - Leaves no residue
  - Available in black color
  - Operating temperature range: -22°F to 194°F (-30°C to 90°C)
  - Complementary mounts available, see page B2.5
- Note: Minimum 2" overlap required to achieve loop tensile rating.



E5

F

Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	Lbs.	N		
TTS-20R0	20.0	6.1	0.750	19.1	Various	Various	40	178	1	10
TTS-35R3-0	35.0	10.7	0.750	19.1	Various	Various	40	178	1	8
TTS-35RX0	35.0	10.7	0.750	19.1	Various	Various	40	178	1	10

Std. Pkg. Qty. of TTS-35R3-0 denotes 1 package of three 35' rolls, TTS-35RX0 denotes 1 package of ten 35' rolls.

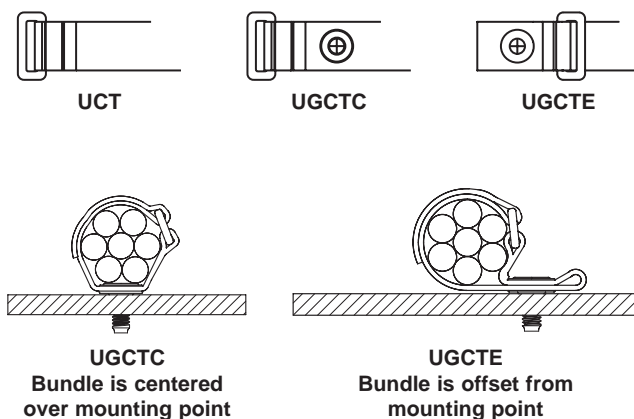
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### Ultra-Cinch™ Hook & Loop Cable Ties

- Unique material with hooks and loops on same side allows user to secure a greater range of bundle diameters, including smaller bundles
- Soft, premium material is safe to use on high performance cabling, protecting against over-tensioning
- Adjustable, releasable, and re-usable multiple times – ideal for applications requiring frequent moves, adds, or changes
- Low profile contoured cinch ring provides extra strength and bundle tightness while reducing overall bundle size

- Grommet (UGCTC and UGCTE styles) offers strength and assures reliable installations that resist pullout when bundling and mounting cables within cabinet applications
- Tapered tip facilitates easy, snag-free threading to speed installation
- Use flat-head screws for grommet applications shown below

Note: Minimum 2" overlap required to achieve loop tensile rating.



Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Cinch Ties</b>										
UCT3S-X0	12.0	305	0.850	21.6	3.00	76	50	222	10	100
UCT5S-X0	18.0	457	0.850	21.6	5.00	127				
<b>Cinch Ties – Center Mount Grommet (Bundle is centered over mounting point)</b>										
UGCTC3S-X0	12.0	305	0.850	21.6	3.00	76	50	222	10	100
UGCTC5S-X0	18.0	457	0.850	21.6	5.00	127				
<b>Cinch Ties – End Mount Grommet (Bundle is offset from mounting point)</b>										
UGCTE3S-X0	12.0	305	0.850	21.6	3.00	76	50	222	10	100
UGCTE5S-X0	18.0	457	0.850	21.6	5.00	127				

Note: 1/4" (6mm) diameter mounting hole on grommet style cinch ties.

### Flat Head Screws for Grommet Cinch Ties

Part Number	Part Description	Std. Pkg. Qty.	Std. Ctn. Qty.
UCTGS1224-X	12-24 UNC x 5/8mm (.625") flat head phillips screw	10	100
UCTGSM5-X	M5 x 16mm flat head phillips screw		
UCTGSM6-X	M6 x 16mm flat head phillips screw		

B1

## Hook and Loop Cable Ties

### Color Chart

Color	Panduit® Suffix	Color	Panduit Suffix
Black	0	Blue	6
Red	2	Gray	8
Orange	3	White	10
Yellow	4	Maroon	12
Green	5		

C1

C2

### Part Number Availability List

Standard Packaging	
Part Number	Color
HLB2S	0
HLM-15R	0, 2, 3, 4, 5, 6, 8, 10
HLS-15R	0, 2, 3, 4, 5, 6, 8, 10
HLS-75R	0, 2, 3, 4, 5, 6, 8, 10
HLS1.5S-X	0, 2, 3, 4, 5, 6, 8, 10
HLS3S-X	0, 2, 3, 4, 5, 6, 8, 10
HLS5S-X	0, 2, 3, 4, 5, 6, 8, 10
HLSP1.5S-X	0, 12
HLSP3S-X	0, 12
HLSP5S-X	0, 12
HLT2I-X	0, 2, 3, 4, 5, 6, 8, 10
HLT3I-X	0, 2, 3, 4, 5, 6, 8, 10
HLTP2I-X	0, 12
HLTP3I-X	0, 12
TTS-20R	0
TTS-35RX	0
TTS-35R3	0
UCT3S-X	0, 2, 3, 4, 5, 6, 8, 10
UCT5S-X	0, 2, 3, 4, 5, 6, 8, 10
UGCTC3S-X	0, 2, 3, 4, 5, 6, 8, 10
UGCTC5S-X	0, 2, 3, 4, 5, 6, 8, 10
UGCTE3S-X	0, 2, 3, 4, 5, 6, 8, 10
UGCTE5S-X	0, 2, 3, 4, 5, 6, 8, 10

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

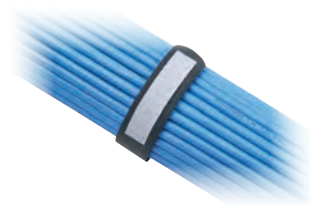
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H

### HLW Marker Hook and Loop Wrap Ties

- Safe choice for network cable bundling
- Re-usable multiple times; use where frequent moves, adds, and changes are anticipated

- Black tie contains a white rectangular “write-on” area where users can write a message using Panduit® permanent marking pens on page B2.26
- Minimum 2" overlap required to achieve loop tensile rating



Part Number	Max. Bundle Diameter		Length		Width		Thickness		Marker Write-on Area		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Miniature Cross Section (Straight Tip)</b>														
HLWM1.5S-X0	1.5	38	6.0	152	0.790	20.1	0.17	4.3	2.5 x 0.50	63.5 x 12.7	50	222	10	100
HLWM3S-X0	3.2	81	12.0	305										

### Elastomeric Cable Ties – ERT

- Elastic material provides a flexible tie body that safely contours around cable bundle to prevent over-tensioning of data cables to maintain network integrity
- UL 94V-0 material provides greater flame resistance and meets stringent telecommunication flammability requirements (i.e. NEBS GR-63-CORE)
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Soft material has no sharp edges to protect the installer and cable bundle for improved jobsite safety and reliability

- The high coefficient of friction material provides a tight grip and prevents lateral movement along cable bundle, minimizing overall installation time and potential re-work
- Releasable design allows release and re-use to accommodate frequent moves, adds, and changes to support evolving equipment and cabling needs
- Halogen-free, non-toxic and environmentally safe material will not release toxic or corrosive gases upon combustion
- Locking head design; the tapered tip tail threads into locking head to speed productivity; industry-accepted, intuitive tie design



Part Number	Color	Length		Width		Thickness		Head Height		Head Width		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		
ERT2M-C20	Black	8.5	216	0.500	12.70	0.090	2.29	0.323	8.20	0.841	21.36	18	80	100	1000
ERT3M-C20		11.0	279												
ERT4.5M-C20		16.0	406												

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Cable Bundle Organizing Tool

- Reduces cable installation time up to 50% compared to traditional methods
- Unique design allows twist-free bundling from the end or the middle of bundle
- Arranges 24 cables prior to applying Panduit® network cable ties
- Smooth edges; safe for use on network cables preventing cable abrasion
- Optimizes bundle size and improves installed appearance
- Ergonomic fit and compact design
- Two inserts handle multiple network cable diameters
- Impact resistant material and low friction design to glide smoothly across cable bundle

B2

B3

C1

C2

C3

C4

Part Number	Description	Recommended for Cable Outer Diameter Range	Use the Following Insert	Insert Used with the Following Panduit® Cable Types	Std. Pkg. Qty.	Std. Ctn. Qty.
CBOT24K	Kit contains jacket cover with hook and loop fastener and two inserts.	0.180" – 0.248" (4.57mm – 6.30mm)	Fluorescent Green	TX5500™ Category 5e UTP TX6000™ Category 6 UTP	1	10
		0.230" – 0.310" (5.84mm – 7.87mm)	Fluorescent Yellow	TX6500™ Enhanced Category 6 TX6A™ 10Gig™ Category 6A** All Shielded Cables		

D1

D2

\*\*When using the CBOT24K on 10 Gigabit cables, it is recommended that Panduit 10Gig™ Category 6A cables be used for optimum performance of installed cable. See [www.panduit.com](http://www.panduit.com) for cable details.

D3

E1

E2

E3

E4

E5

F

G

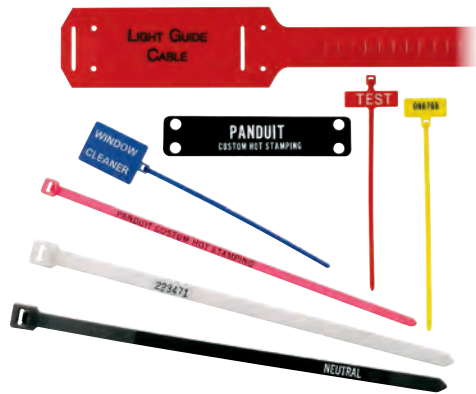
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B1.88

Order number of pieces required, in multiples of Standard Package Quantity.



**Hot Stamping Service  
Custom Printed Cable Ties**



Custom Hot Stamping Service provides a permanent, high quality imprinted message on Panduit® cable ties and marker plates. Graphics, text, numbers and colors provide a variety of choices for customization.

Hot stamped cable ties and marker plates are typically used for identification, or for labeling critical components. Panduit cable ties, marker ties, marker plates and marker straps are available to suit your application.

Your choice of:

- Seven text colors (black, blue, green, red, yellow, orange, white)
- A variety of characters and fonts
- Sequential numbering
- Special customer logos and diagrams

Minimum Order: (Pieces/part number and message)

- 5,000 for Miniature, Intermediate, Standard and Heavy-Standard cross section cable ties
- 3,000 for Light-Heavy, Heavy, and Extra-Heavy cross section cable ties
- 3,000 for Hook and Loop Wrap Ties

For hot stamping orders and inquiries, please call 1-800-777-3300



<p><b>Cable Ties</b></p> <ul style="list-style-type: none"> <li>– Used wherever you need to bundle wire, cable, hose or tubing</li> <li>– A variety of colors for color-coding applications</li> <li>– Cross Sections: Intermediate, Standard, Heavy-Standard, Light-Heavy, Heavy and Extra-Heavy</li> </ul>						
<p><b>Marker and Flag Ties</b></p> <ul style="list-style-type: none"> <li>– Fasten and identify bundles at the same time</li> <li>– A variety of colors for color-coding applications</li> <li>– Cross Sections: Miniature and Standard</li> </ul>						
<p><b>Marker Plates</b></p> <ul style="list-style-type: none"> <li>– Mount in any direction, either vertically or horizontally as flags, tags, or wrap-around identification plates.</li> <li>– White or Weather Resistant black color</li> <li>– Marker plate sizes:                     <table border="0" style="margin-left: 20px;"> <tr> <td>1.50" x 0.75"</td> <td>2.50" x 0.75"</td> </tr> <tr> <td>1.75" x 0.75"</td> <td>3.50" x 0.75"</td> </tr> <tr> <td>2.00" x 0.75"</td> <td>2.50" x 1.75"</td> </tr> </table> </li> </ul>	1.50" x 0.75"	2.50" x 0.75"	1.75" x 0.75"	3.50" x 0.75"	2.00" x 0.75"	2.50" x 1.75"
1.50" x 0.75"	2.50" x 0.75"					
1.75" x 0.75"	3.50" x 0.75"					
2.00" x 0.75"	2.50" x 1.75"					
<p><b>Cable Marker Straps</b></p> <ul style="list-style-type: none"> <li>– Identify and code telephone and fiber optic cable – replaces costly and cumbersome lead marking tags</li> <li>– Lightweight and easy to install</li> <li>– Can be used as wrap-around or flag marker</li> <li>– Also can be used in underground identification applications</li> <li>– Polyethylene material available in red and gray</li> <li>– Marking area: 1.50" x 2.62"</li> </ul>						

## Panduit® Cable Tie Approvals



Logo (Symbol)	Agency	Spec/Approval	Requirement	Applicable Products
	Underwriters Laboratories, Inc.	File E56854 and MH29590	ZODZ(7), ZODZ2(8), ALKW	Most miniature, intermediate, standard, light-heavy and heavy cross section ties are Recognized or Listed in the US and Canada
	Canadian Standards Association	File 031212	CAN/CSA - C22.2 Std. No. 62275 Cable Management Systems - Cable Ties for Electrical Installations	Most miniature, intermediate, standard, light-heavy and heavy cross section ties are Recognized or Listed in the US and Canada
	Conformity European	Low Voltage Directive 2014/35/EU. Pan-Ty and Dome-Top Barb Ty cable ties also meet the requirements from EN62275	CE Marking is required for products sold within the European Union. CE Marking Directives specify the minimum performance of these products. Applying the CE mark signifies compliance with essential requirements of specific directives.	All cable tie products
	ABS (American Bureau of Shipping)	14-HS1245078-PDA	Steel Vessel Rules 1-1-4/7.7, 4-8-4/21.9.3 MODU Rules 4-3-3/5.9.1	PLT Series, BT Series
	Bureau Veritas	Cert 05968/E2 BV File ACE 14/601/01	Bureau Veritas Rules for the Classification of Steel Ships	PLT Series, BT Series, PRT Series, CBR Series
	Det Norske Veritas & Germanischer Lloyd	TAE00000ZD TAE00001UM R1	DNV GL Rules for Classification of Ships and Mobile Offshore Units	PLT Series, PLC Series, PLM Series, PRT Series, PLWP Series, PRWP Series, PRST Series, BT Series, BC Series
	Lloyd's Register of Shipping	15/600006 (E2)	Lloyd's Register Type Approval	PLT Series, BT Series, SST Series, CBR Series, ILT Series, SG Series
	NRC (Nuclear Regulatory Commission)	NRC 10CFR50	Quality Assurance Criteria for Nuclear Plants and Reprocessing Plants	All cable tie products
	Plenum Rated	Panduit logo	Panduit® symbol indicates that the cable ties represented are suitable for use in plenum or air handling spaces in accordance with Sec. 300.22(C) and (D) of the National Electrical Code and Rules 12-010 (3), (4) and (5) and 12-020 of the Canadian Electrical Code, Part I.	Halar (702Y) and select Nylon 6.6 cable ties as noted throughout catalog
	US Military Aerospace Standard	QPL-AS23190	SAE spec AS23190	See Military Cross Reference Page B1.91
	Russian Maritime Register of Shipping	17.00775.315	Russian Maritime Register of Shipping Type Approval	PLT Series, BT Series, SG Series, CBR Series, DT Series

## Military Cross Reference

The Panduit® cable ties and marker ties listed in the following tables meet all of the testing requirements of SAE Aerospace Standard AS23190 and the dimensional requirements of SAE Aerospace Standards AS33671 and AS33681.

Cable Tie Cross Reference						
Mil. Std. Part Number	Color	Pan-Ty®	Dome-Top® Barb Ty	Sta-Strap®	Belt-Ty™ In-Line	Contour-Ty®
MS3367-1-0	Black*	PLT2S-C00, -M00	—	—	—	—
MS3367-1-1	Brown	PLT2S-C1, -M1	BT2S-M1	—	—	—
MS3367-1-2	Red	PLT2S-C2, -M2	BT2S-M2	—	—	—
MS3367-1-3	Orange	PLT2S-C3, -M3	BT2S-M3	—	—	—
MS3367-1-4	Yellow	PLT2S-C4Y, -M4Y	BT2S-M4Y	—	—	—

Continued on next page

Military Cross Reference (continued)

B1

Cable Tie Cross Reference						
Mil. Std. Part Number	Color	Pan-Ty®	Dome-Top® Barb Ty	Sta-Strap®	Belt-Ty™ In-Line	Contour-Ty®
MS3367-1-5	Green	PLT2S-C5, -M5	BT2S-M5	—	—	—
MS3367-1-6	Blue	PLT2S-C6, -M6	BT2S-M6	—	—	—
MS3367-1-7	Purple	PLT2S-C7, -M7	BT2S-M7	—	—	—
MS3367-1-8	Gray	PLT2S-C8, -M8	BT2S-M8	—	—	—
MS3367-1-9	Natural	PLT2S-C, -M, -VMR	BT2S-C, -M	SST2S-C, -M	—	—
MS3367-1-11	Black	PLT2S-C30, -M30	BT2S-M30	SST2S-M30	—	—
MS3367-1-12	Natural	PLT2S-M39	BT2S-M39	—	—	—
MS3367-1-15	Aqua Blue	PLT2S-C76, -M76	—	—	—	—
MS3367-1-16	Trans. Brown	PLT2S-C71, -M71	—	—	—	—
MS3367-2-0	Black*	PLT4S-C00, -M00	—	—	—	—
MS3367-2-1	Brown	PLT4S-M1	—	—	—	—
MS3367-2-2	Red	PLT4S-C2, -M2	BT4S-M2	SST4S-M2	—	—
MS3367-2-3	Orange	PLT4S-C3, -M3	BT4S-M3	—	—	—
MS3367-2-4	Yellow	PLT4S-C4Y, -M4Y	BT4S-M4Y	—	—	—
MS3367-2-5	Green	PLT4S-C5, -M5	BT4S-M5	—	—	—
MS3367-2-6	Blue	PLT4S-C6, -M6	BT4S-M6	—	—	—
MS3367-2-7	Purple	PLT4S-M7	BT4S-M7	—	—	—
MS3367-2-8	Gray	PLT4S-C8, -M8	BT4S-M8	—	—	—
MS3367-2-9	Natural	PLT4S-C, -M	BT4S-C, -M	SST4S-C, -M	—	—
MS3367-2-11	Black	PLT4S-C30, -M30	BT4S-M30	SST4S-M30	—	—
MS3367-2-12	Natural	—	BT4S-M39	—	—	—
MS3367-2-15	Aqua Blue	PLT4S-C76, -M76	—	—	—	—
MS3367-3-0	Black*	PLT4H-L00, -TL00	—	—	—	—
MS3367-3-1	Brown	PLT4H-TL1	—	—	—	—
MS3367-3-2	Red	PLT4H-TL2	—	—	—	—
MS3367-3-3	Orange	PLT4H-TL3	—	—	—	—
MS3367-3-4	Yellow	PLT4H-TL4Y	—	—	—	—
MS3367-3-5	Green	PLT4H-TL5	—	—	—	—
MS3367-3-6	Blue	PLT4H-TL6	—	—	—	—
MS3367-3-9	Natural	PLT4H-L, -C, -TL	BT4LH-L, -TL	SST4H-L, -D	—	—
MS3367-3-11	Black	PLT4H-TL30	BT4LH-TL30	SST4H-D30	—	—
MS3367-3-12	Natural	—	BT4LH-TL39	—	—	—
MS3367-3-15	Aqua Blue	PLT4H-L76, -TL76	—	—	—	—
MS3367-4-0	Black*	PLT1M-C00, -M00, -XMR00	—	—	—	—
MS3367-4-0		PLT1.5M-XMR00	—	—	—	—
MS3367-4-1	Brown	PLT1M-C1, -M1	BT1M-M1	—	—	—
MS3367-4-2	Red	PLT1M-C2, -M2, -XMR2	BT1M-M2	—	—	—
MS3367-4-3	Orange	PLT1M-C3, -M3, -XMR3	BT1M-M3	—	—	—
MS3367-4-4	Yellow	PLT1M-C4Y, -M4Y	BT1M-M4Y	—	—	—
MS3367-4-5	Green	PLT1M-C5, -M5, -XMR5	BT1M-M5	—	—	—
MS3367-4-6	Blue	PLT1M-C6, -M6, -XMR6	BT1M-M6	—	—	—
MS3367-4-7	Purple	PLT1M-C7, -M7, -XMR7	BT1M-M7	—	—	—
MS3367-4-8	Gray	PLT1M-C8, -M8, -XMR8	BT1M-M8	—	—	—
MS3367-4-9	Natural	PLT1M-C, -M, -XMR	BT1M-C, -M, -XMR	SST1M-C, -M	—	—
MS3367-4-9		PLT.7M-C, -M	—	—	—	—
MS3367-4-9		PLT1.5M-XMR	BT1.5M-XMR	—	—	—
MS3367-4-11	Black	PLT1M-C30, -M30	BT1M-C30, -M30	SST1M-M30	—	—
MS3367-4-12	Natural	—	BT1M-M39	—	—	—
MS3367-4-15	Aqua Blue	PLT1M-C76, -M76	—	—	—	—
MS3367-4-16	Trans. Brown	PLT1M-C71, PLT1.5M-C71	—	—	—	—

\*Weather resistant per ASTM D 4066-94B.

-00 Weather Resistant Nylon 6.6

-30, -39 Heat Stabilized Nylon 6.6

-71 PEEK (Polyetheretherketone)

-76 TEFZEL is a registered trademark of the Chemours Company

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C3

C4

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Continued on next page

B1

**Military Cross Reference (continued)**

		Cable Tie Cross Reference					
Mil. Std. Part Number	Color	Pan-Ty®	Dome-Top® Barb Ty	Sta-Strap®	Belt-Ty™ In-Line	Contour-Ty®	
MS3367-5-0	Black*	PLT1.5I-M00	—	—	—	—	
MS3367-5-1	Brown	PLT1.5I-C1, -M1	BT1.5I-M1	—	—	—	
MS3367-5-2	Red	PLT1.5I-C2, -M2	BT1.5I-M2	—	—	—	
MS3367-5-3	Orange	PLT1.5I-C3, -M3	BT1.5I-M3	—	—	—	
MS3367-5-4	Yellow	PLT1.5I-C4Y, -M4Y	BT1.5I-M4Y	—	—	—	
MS3367-5-5	Green	PLT1.5I-C5, -M5	BT1.5I-M5	—	—	—	
MS3367-5-6	Blue	PLT1.5I-C6, -M6	BT1.5I-M6	—	—	—	
MS3367-5-7	Purple	PLT1.5I-C7, -M7	BT1.5I-M7	—	—	—	
MS3367-5-8	Gray	PLT1.5I-C8, -M8	BT1.5I-M8	—	—	—	
MS3367-5-9	Natural	PLT1.5I-C, -M	BT1.5I-C, -M	SST1.5I-C, -M	—	—	
MS3367-5-11	Black	PLT1.5I-C30, -M30	BT1.5I-M30	—	—	—	
MS3367-5-12	Natural	—	BT1.5I-M39	—	—	—	
MS3367-5-15	Aqua Blue	PLT2I-C76, -M76	—	—	—	—	
MS3367-6-9	Natural	PLT8LH-L, -C	BT8LH-L, -C	SST8H-L, -D	—	—	
MS3367-6-9		—	BT9LH-L, -C	—	—	—	
MS3367-6-11	Black	—	—	SST8H-D30	—	—	
MS3367-7-0	Black*	PLT3S-C00, -M00	—	—	—	—	
MS3367-7-1	Brown	PLT3S-M1	—	—	—	—	
MS3367-7-2	Red	PLT3S-C2, -M2	BT3S-C2	—	—	—	
MS3367-7-3	Orange	PLT3S-M3	—	—	—	—	
MS3367-7-4	Yellow	PLT3S-M4Y	—	—	—	—	
MS3367-7-5	Green	PLT3S-M5	—	—	—	—	
MS3367-7-6	Blue	PLT3S-M6	—	—	—	—	
MS3367-7-7	Purple	PLT3S-M7	—	—	—	—	
MS3367-7-8	Gray	PLT3S-M8	—	—	—	—	
MS3367-7-9	Natural	PLT3S-C, -M, -VMR	BT3S-C, -M	SST3S-C, -M	—	—	
MS3367-7-11	Black	PLT3S-C30, -M30	BT3S-M30	SST3S-M30	—	—	
MS3367-7-12	Natural	—	BT3S-M39	—	—	—	
MS3367-7-15	Aqua Blue	PLT3S-C76, -M76	—	—	—	—	
MS3367-8-9	Natural	PLT5H-L, -C	—	—	—	—	
MS3367-8-11	Black	PLT5H-C30	—	—	—	—	
MS3367-9-9	Natural	PLT6H-L, -C	—	—	—	—	
MS3367-9-11	Black	PLT6H-C30	—	—	—	—	
MS3367-11-9	Natural	PLT8H-L, -C	—	—	—	—	
MS3367-11-11	Black	PLT8H-C30	—	—	—	—	
MS3367-14-9	Natural	PLT13H-Q, -C	—	—	—	—	
MS3367-20-9		PLT5EH-Q, -C	—	—	—	—	
MS3367-21-9		PLT6EH-Q, -C	—	—	—	—	
MS3367-22-9		PLT8EH-C	—	—	—	—	
MS3367-23-9		—	—	—	—	ILT2S-C, -M	—
MS3367-24-9		—	—	—	—	ILT4S-C, -M	—
MS3367-25-9		—	—	—	—	ILT4LH-TL	—
MS3367-29-9	—	—	—	—	ILT3S-C, -M	—	
MS3367-30-9	—	—	—	—	—	CBR1M-M	
MS3367-30-11	Black	—	—	—	—	CBR1M-M30	
MS3367-31-9	Natural	—	—	—	—	CBR1.5M-M	
MS3367-32-1	Brown	—	—	—	—	CBR2M-M1	
MS3367-32-2	Red	—	—	—	—	CBR2M-M2	
MS3367-32-3	Orange	—	—	—	—	CBR2M-M3	
MS3367-32-4	Yellow	—	—	—	—	CBR2M-M4Y	
MS3367-32-5	Green	—	—	—	—	CBR2M-M5	
MS3367-32-6	Blue	—	—	—	—	CBR2M-M6	
MS3367-32-7	Purple	—	—	—	—	CBR2M-M7	

\*Weather resistant per ASTM D 4066-94B.

-00 Weather Resistant Nylon 6.6

-30, -39 Heat Stabilized Nylon 6.6

-71 PEEK (Polyetheretherketone)

-76 TEFLON is a registered trademark of the Chemours Company

*Continued on next page*

Military Cross Reference (continued)

Mil. Std. Part Number	Color	Cable Tie Cross Reference				
		Pan-Ty®	Dome-Top® Barb Ty	Sta-Strap®	Belt-Ty™ In-Line	Contour-Ty®
MS3367-32-9	Natural	—	—	—	—	CBR2M-M
MS3367-33-9		—	—	—	—	CBR1.5I-M
MS3367-33-11	Black	—	—	—	—	CBR1.5I-M30
MS3367-34-2	Red	—	—	—	—	CBR3I-M2
MS3367-34-3	Orange	—	—	—	—	CBR3I-M3
MS3367-34-4	Yellow	—	—	—	—	CBR3I-M4Y
MS3367-34-6	Blue	—	—	—	—	CBR3I-M6
MS3367-34-8	Gray	—	—	—	—	CBR3I-M8
MS3367-34-9	Natural	—	—	—	—	CBR3I-M
MS3367-35-9		—	—	—	—	CBR4I-M
MS3367-36-9		—	—	—	—	CBR2S-M
MS3367-36-11	Black	—	—	—	—	CBR2S-M30
MS3367-36-12	Natural	—	—	—	—	CBR2S-M39
MS3367-37-9		—	—	—	—	CBR3S-M
MS3367-37-11	Black	—	—	—	—	CBR3S-M30
MS3367-38-9	Natural	—	—	—	—	CBR4S-M
MS3367-38-11	Black	—	—	—	—	CBR4S-M30
MS3367-39-9	Natural	—	—	—	—	CBR2HS-D
MS3367-40-9		—	—	—	—	CBR4LH-TL
MS3367-40-11	Black	—	—	—	—	CBR4LH-TL30
MS3367-41-9	Natural	—	—	—	—	CBR6LH-C
MS3367-41-11	Black	—	—	—	—	CBR6LH-C30
MS3368-1-2A	Red	PLM2S-D2	—	—	—	—
MS3368-1-3A	Orange	PLM2S-D3	—	—	—	—
MS3368-1-4A	Yellow	PLM2S-C4Y, -D4Y	—	—	—	—
MS3368-1-5A	Green	PLM2S-D5	—	—	—	—
MS3368-1-6A	Blue	PLM2S-D6	—	—	—	—
MS3368-1-8A	Gray	PLM2S-D8	—	—	—	—
MS3368-1-9A	Natural	PLM2S-C, -D	BM2S-C, -D	—	—	—
MS3368-1-9B		—	—	—	SSM2S-C, -D	—
MS3368-2-2A	Red	PLM4S-D2	—	—	—	—
MS3368-2-4A	Yellow	PLM4S-D4Y	—	—	—	—
MS3368-2-6A	Blue	PLM4S-D6	—	—	—	—
MS3368-2-9A	Natural	PLM4S-C, -D	BM4S-C, -D	—	—	—
MS3368-2-9B		—	—	—	SSM4S-D	—
MS3368-3-4C	Yellow	PL2M2S-D4Y	—	—	—	—
MS3368-3-9C	Natural	PL2M2S-L, -D	B2M2S-D	—	—	—
MS3368-4-4D	Yellow	PL3M2S-D4Y	—	—	—	—
MS3368-4-9D	Natural	PL3M2S-L, -D	B3M2S-TL	—	—	—
MS3368-5-1E	Brown	PLM1M-M1	—	—	—	—
MS3368-5-2E	Red	PLM1M-M2	—	—	—	—
MS3368-5-3E	Orange	PLM1M-M3	—	—	—	—
MS3368-5-4E	Yellow	PLM1M-M4Y	—	—	—	—
MS3368-5-5E	Green	PLM1M-M5	—	—	—	—
MS3368-5-6E	Blue	PLM1M-M6	—	—	—	—
MS3368-5-7E	Purple	PLM1M-M7	—	—	—	—
MS3368-5-8E	Gray	PLM1M-M8	—	—	—	—
MS3368-5-9E	Natural	PLM1M-C, -M	BM1M-C, -M	—	—	—

Installation Tools

The Panduit® installation tools listed in the table below meet all of the testing requirements of SAE Aerospace Standard AS81306 and the dimensional requirements of AS90387.

Mil. Std. Part Number	Panduit Part Number
MS90387-1	GTS-E, GS2B-E
MS90387-2	GTH-E, GS4H-E
MS90387-4	GS4EH-E

B1

## Cable Tie Selection and Specification Guidelines

### Selecting the Proper Cable Tie Material for Your Application

B2

By using the information on our material selection chart on pages B1.2 and B1.3 as a guide, the user will be better equipped to select the best cable tie and material suited to perform its intended function over a long period of time.

B3

For long life and dependable service, there are many factors to consider when selecting the proper cable tie for each application. Since it is impossible for Panduit® to provide data on all the various combinations of conditions which may arise, it is suggested that this data be used as a guide. Sample cable ties should be tested under actual end-use conditions to determine the correct cable tie for the application.

C1

To select the optimum cable tie for a specific application, the chart on pages B1.2 and B1.3 can be used as a reference. First, determine the most critical design criteria and then read across the table to find which material is most suitable to meet this need. Next, review the other criteria by scanning in a vertical direction on the chart and then make your final selection.

C2

#### Example No. 1

Application	Selection
The application requires high radiation (2 x 10 <sup>8</sup> rads) resistance and excellent resistance to hydrocarbons.	The best choice is PEEK, TEFZEL ■, or HALAR ▲. The price is higher than other materials, but all have high ratings in resistance to radiation and hydrocarbons.

C4

#### Example No. 2

Application	Selection
The application requires a low cost material, good ultraviolet resistance, and good resistance to acid rains.	The best choice is Weather Resistant Polypropylene. Price is medium, the UV rating is 6, and the acid resistance rating is 9.

D2

## Weathering

D3

Over a period of time, ultraviolet light (a component of sunlight) attacks most plastic materials and reduces their properties by breaking the molecular chain. The material breakdown is accompanied by reductions in tensile strength and elongation, increased brittleness, color changes and loss of surface gloss.

E1

Carbon black, which is used in Panduit® nylon, polypropylene, and acetal cable ties, is one of the most effective stabilizers known today. A uniform dispersion of carbon black provides good ultraviolet light resistance without adversely affecting physical properties. The addition of carbon black, or any other ultraviolet light stabilizer, prolongs the useful outdoor life of plastic products, but it does not totally eliminate the destructive effects of the light. Some plastics, such as TEFZEL ■ or HALAR ▲, are intrinsically very resistant to ultraviolet light and do not require stabilizing additives.

E2

### Weathering Test Methods

E3

In order to monitor the effects of ultraviolet light and the effectiveness of ultraviolet stabilizers, Panduit, in conformance with industry standards, adopted two methods of weatherability testing: Outdoor Aging and Accelerated Weather Aging.

E4

### Outdoor Aging

The Outdoor Aging method is probably the best and most realistic method of the two. It is conducted in accordance with ASTM D 1435 Standard Practice for Outdoor Weathering of Plastics, and allows the material to be affected by not only ultraviolet light, but by all other outdoor elements as well. Although this may more closely approximate an actual application, two drawbacks do exist. The period of time required to produce property decay and material failure may be quite long, and varying adverse chemical environments cannot be tested.

E5

■ TEFZEL is a registered trademark of The Chemours Company.  
▲ HALAR is a registered trademark of Solvay Solexis.

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*Continued on next page*

**Weathering (continued)**

**Accelerated Weather Aging**

Accelerated weathering tests are conducted to estimate the rate of degradation due to a combination of ultraviolet light, temperature, and moisture. The methods used are in accordance with the following standards:

- ASTM D 1499, Operating Light and Water Exposure Apparatus (Carbon-Arc type) for exposure to plastics
- ASTM G 154-04, Operating Light and Water Exposure (Fluorescent UV Condensation type) for exposure of non-metallic materials

The condition specified in ASTM D 1499 utilizes a water spray and a carbon arc to simulate natural sunshine. The test chamber is operated 20 hrs./day with a two-hour cycle of 108 minutes of simulated sunshine and twelve minutes of sunshine and water spray. The temperature of a black body inside the chamber is approximately 63°C (145°F) during the “sunshine only” portion of the cycle. Humidity is not controlled inside the chamber.

The test chamber per ASTM G 154-04 uses fluorescent sun lamps to generate ultraviolet light only. A heated water pan produces condensation during a portion of the cycle. The daily cycle is composed of 20 hours of light followed by 4 hours of condensation. Black body temperatures during the light cycle are 50°C (122°F) and 40°C (104°F) during the condensation cycle.

Panduit® has also designed a special chamber, which is used to simulate the effect of acid rain and ultraviolet light on cable tie materials. The effects of other common chemicals, such as road salt, are also evaluated in this chamber.

These methods are effective in quickly determining the ultraviolet light resistance of the various cable tie materials, but it must be emphasized that there are no exact correlations between accelerated aging and actual outdoor exposure.

**Material Failure Testing**

Property decay can lead to three different modes of failure: loss of strength, loss of toughness, or change in appearance. The critical mode for any given application would depend upon the application and the requirements it places upon the material itself.

Loss of strength is monitored by tensile testing samples of the material before and after it has been weathered. This test will reveal the decreasing strength accompanied by extended weathering.

Loss of toughness can be monitored by measuring changes in elongation and impact strength. As ultraviolet light exposure time increases and the material becomes brittle, its elongation and impact strength are greatly reduced. It is important to note that brittle failures can occur even when the tensile strength shows no change.

Although change in appearance is normally not a failure mode for cable ties, the plastic does tend to discolor and lose its surface gloss as exposure increases. These changes can be measured by color difference using Adams units, which are similar to National Bureau of Standard units.

Panduit has its own weathering test program to determine estimated life of various cable tie materials. This includes examining many previously aged samples obtained throughout the world.

In all cases, the amount of property decay increased with increasing exposure to ultraviolet light. The principal signs of degradation were found to be brittleness, cracking, and loss of surface gloss. It was also determined that the time for failure to occur was shorter than indicated from industry tests performed on material samples. This discrepancy is in part due to the fact that cable ties were tested in an end use, stressed condition, while most plastic resin suppliers conduct weathering tests using unstressed test bars.

Five cable tie materials have superior ultraviolet light resistance: TEFZEL■, HALAR▲, Weather Resistant Acetal, Nylon 12 and Stainless Steel.

Determining the outdoor life expectancy of any material is difficult since there are other factors, besides ultraviolet light stability, which have to be considered. These factors are listed below and should be considered before specifying a cable tie material.

■ TEFZEL is a registered trademark of The Chemours Company.

▲ HALAR is a registered trademark of Solvay Solexis

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*Continued on next page*

B1

## Weathering (continued)

Table A – External Factors That Affect the Life of a Cable Tie

Factor	Effect on Cable Tie Life
Chemicals	Applications which have chemicals present can reduce the life of a tie. <b>This is the most detrimental factor to the life of a tie.</b>
Bundle Diameter	As the bundle diameter is reduced, the tie has more bending stress. A thick strap on a small bundle diameter has more stress.
Loading	If the tie is under high loading, this will add additional stress on the tie body.
Thickness	A thinner tie will have a decreased life since surface cracks will penetrate the thickness of the tie faster.
Vibration	Applications with high vibrations will cause impact, which will propagate any surface cracks.
Degree of Exposure	No shield or shade, southern exposure, higher altitudes and high temperatures, decrease the life of a cable tie.
Moisture	High humidity plus high temperature can result in degradation due to hydrolysis in nylon.
Galvanized metals	Acid rain and acid moisture acting on galvanized metals release chemicals known to attack Nylon 6.6.

Weathering Life Expectancy	
Material, Color (Part Number Suffix)	Years*
Polypropylene, Green (109)	1
Nylon 6.6, Natural (No suffix)	1 – 2
Flame Retardant Nylon 6.6, Black (60)	
Flame Retardant Nylon 6.6, Ivory (69)	
Heat Stabilized Nylon 6.6, Natural (39)	4 – 5
PEEK, Polyetheretherketone, Translucent Brown (71)	
Heat Stabilized Nylon 6.6, Black (30)	7 – 9
Weather Resistant Polypropylene, Black (100)	
Weather Resistant Nylon 6.6, Black (0 and 00)	
Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	12 – 15
Weather Resistant Nylon 12, Black (120)	
TEFZEL ■, Aqua Blue (76)	>15
HALAR ▲, Maroon (702Y)	
Weather Resistant Acetal, Black	>20
Stainless Steel	>30

\*Based on the assumption of minimum loading, no chemical attack and impact-free conditions.

■ TEFZEL is a registered trademark of The Chemours Company.

▲ HALAR is a registered trademark of Solvay Solexis

D1

## Flammability

### Flammability

A number of test procedures have been developed which can be used for the evaluation and comparison of various materials to support combustion.

D3

### UL 94 Vertical Burning Test

Samples of a material, with dimensions 127mm by 12.7mm and the thickness of the intended end use product, are tested in an unaged “as manufactured” state and in an aged state (seven days at 158°F, 70°C). The test requires the placement of a precisely controlled flame under a vertically supported specimen for a ten second period. The controlled flame is removed and the duration of flaming combustion of the specimen is recorded. When the flaming combustion of the specimen extinguishes, it is immediately subjected to an additional controlled flame exposure. After the additional ten seconds of exposure, the controlled flame is removed, and the duration of flaming combustion of the specimen is recorded. A piece of surgical cotton is placed under the specimen. If drips ignite the cotton, this fact is also recorded.

E1

E2

E3

### Materials Classed 94V-0

Requirements:

- None of the specimens will burn with flaming combustion for more than ten seconds after either application of the controlled flame
- The total flaming combustion time will not exceed 50 seconds for the ten controlled flame applications (two controlled flame applications for each of the five specimens)
- None of the specimens will burn with flaming or glowing combustion up to the holding clamp
- None of the specimens will drip flaming particles that ignite the dry absorbent surgical cotton located 12 inches (305mm) below the test specimen
- None of the specimens will exhibit glowing combustion that persists for more than 30 seconds after the second removal of the controlled flame

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Continued on next page



## Flammability (continued)

### Materials Classed 94V-1

Requirements:

- None of the specimens will burn with flaming combustion for more than 30 seconds after either application of the controlled flame
- The total flaming combustion time will not exceed 250 seconds for the ten controlled flame applications (two controlled flame applications for each of the five specimens)
- None of the specimens will burn with flaming or glowing combustion up to the holding clamp
- Specimens may drip flaming particles which burn only briefly, and may not ignite the dry absorbent surgical cotton located 12 inches (305mm) below the test specimen
- None of the specimens will exhibit glowing combustion that persists for more than 60 seconds after the second removal of the controlled flame

### Materials Classed 94V-2

Requirements:

- None of the specimens will burn with flaming combustion for more than 30 seconds after either application of the controlled flame
- The total flaming combustion time will not exceed 250 seconds for the ten controlled flame applications (two controlled flame applications for each of the five specimens)
- None of the specimens will burn with flaming or glowing combustion up to the holding clamp
- Specimens may drip flaming particles which burn only briefly, and may ignite the dry absorbent surgical cotton placed 12 inches (305mm) below the test specimen
- None of the specimens will exhibit glowing combustion that persists for more than 60 seconds after the second removal of the controlled flame

### ASTM D 635

Samples of a material, with dimensions 125mm by 12.5mm and the thickness of the intended end use product, are tested in an unaged “as manufactured” state. A precisely controlled flame is applied to the specimen and a stopwatch is started. The flame is applied for 30 seconds. The stopwatch is stopped when burning or glowing combustion ceases or when the flame has proceeded to a mark 100mm from the free end. Ten specimens are tested. If any of the specimens burn to the 100mm mark, an additional ten specimens are tested.

### Burning Rate

- If two or more specimens have burned to the 100mm mark then Average Burning Rate (cm/min.) shall be reported as the average of the burning rates of all specimens which have burned to the 100mm mark

### Average Time of Burning and Average Extent of Burning

- Average time of burning and average extent of burning of the sample shall be reported if none of the ten samples or no more than one of the twenty specimens have burned to the 100mm mark

- Average Time of Burning (ATB):

$$ATB, s = \frac{\sum_0^N [time(sec) - 30(sec)]}{N}$$

N = Number of specimens tested  
Rounded to the nearest 5 seconds

- Average Extent of Burning (AEB):

$$AEB, mm = \frac{\sum_0^N [10(mm) - unburned length(mm)]}{N}$$

N = Number of specimens tested  
Rounded to the nearest 5mm

B1

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

H

Continued on next page

## Flammability (continued)

Table B – Flammability Ratings

Materials	Part Number Suffix	UL 94	ASTM D 635
Nylon 6.6, Natural	None	94V-2 @ .71mm	AEB = 20mm, ATB = 5 seconds
Weather Resistant Nylon 6.6, Black (Meets Mil. Spec.)	00	94V-2 @ .71mm	AEB = 20mm, ATB = 5 seconds
Weather Resistant Nylon 6.6, Black*	0	94V-2** @ .71mm	AEB = 20mm, ATB = 5 seconds
Heat Stabilized Nylon 6.6, Black	30	94V-2 @ .71mm	AEB = 20mm, ATB = 5 seconds
Heat Stabilized Nylon 6.6, Natural	39	94V-2 @ .71mm	AEB = 20mm, ATB = 5 seconds
Heat Stabilized Weather Resistant Nylon 6.6, Black	300	94V-2 @ .71mm	AEB = 20mm, ATB = 5 seconds
Flame Retardant Nylon 6.6, Black	60	94V-0 @ .81mm	AEB = 15mm, ATB = < 5 seconds
Flame Retardant Nylon 6.6, Natural (Ivory)	69	94V-0 @ .81mm	AEB = 15mm, ATB = < 5 seconds
PEEK, Polyetheretherketone, Translucent Brown	71	94V-0 @ 1.5mm	—
Metal Detectable Nylon 6.6, Blue	86	94 HB @ .71mm	AEB = 20mm, ATB = 5 seconds
Weather Resistant Nylon 12, Black	120	94 HB @ 1.6mm	Avg. Burning Rate 1.6cm/min.
Polypropylene, Green	109	94 HB @ .94mm	Avg. Burning Rate 2cm/min.
Weather Resistant Polypropylene, Black	100	94 HB @ .94mm	Avg. Burning Rate 2cm/min.
TEFZEL ■, Aqua Blue	76	94V-0 @ 1.5mm	AEB = 15mm, ATB = < 5 seconds
HALAR ▲, Maroon	702Y	94V-0 @ .18mm	AEB = 15mm, ATB = < 5 seconds
Weather Resistant Acetal, Black	DT Prefix	94 HB @ 1.5mm	Avg. Burning Rate, 2.8cm/min

\*UL Recognized cable ties meet stated ratings. \*\*UL Recognized -0 parts

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▲ HALAR is a registered trademark of Solvay Solexis.

## Radiation/Moisture/Temperature/Tensile Strength

### Radiation

Installed cable ties of various materials have been exposed to different amounts of radiation to determine the maximum acceptable limit. These tests were conducted by Panduit® to determine the acceptability for use in various areas of nuclear power plants (for radiation exposure accumulated over a 40 year life). See Cable Tie Selection Chart (pages B1.2 and B1.3) for radiation resistance rating.

### Moisture

Many plastics when exposed to high relative humidity absorb water and, as such, the tensile strength of the material can change dramatically. Nylon 6.6 when exposed to 100% relative humidity, will absorb as much as 8.5% water which will reduce tensile strength by 50% when compared to a dry cable tie. Polypropylene, HALAR ▲, Type 12 Nylon, TEFZEL ■, Acetal and PEEK are low water absorbing materials and, as such, the effect of water is minimal. See Cable Tie Selection Chart (pages B1.2 and B1.3) for moisture absorption.

### Proper Storage

Nylon 6.6 is a hygroscopic material (affected by atmospheric moisture variations). The optimum storage requirement for Nylon 6.6 cable ties is 73°F (± 15°F) and 50% RH (relative humidity) in sealed containers. Improper storage, especially in cold/dry conditions can result in moisture loss, which impedes cable tie performance. Panduit packaging provides Nylon 6.6 cable ties conditioned to 2.5% moisture added by weight in heavy-wall, polyethylene heat-sealed bags.

### Temperature

Plastic materials normally undergo property loss due to oxidation caused by exposure to high temperatures. The maximum continuous use temperature for cable tie materials depends upon the time at the elevated temperature as well as other environmental conditions. Initially, plastics become more flexible and weaker when exposed to high temperatures. After a period of time, oxidation may occur which will cause embrittlement, making plastic cable ties more susceptible to failure from impact and vibration.

The maximum continuous use temperature, is based on the UL Relative Thermal Index (mechanical without impact) as determined by UL per UL 746B. It is one indicator of a material's ability to retain a particular physical property when exposed to elevated temperatures over an extended period of time. It is based on the assumption that there is no loading, no chemical attack, and impact-free condition. The continuous use temperature range for cable tie materials are listed in the Cable Tie Selection Chart (pages B1.2 and B1.3).

Continued on next page

**Radiation/Moisture/Temperature/Tensile Strength (continued)**

B1

**Temperature (continued)**

Low temperature exposure will also make most plastics more brittle during the exposure, but little property loss occurs when the material is returned to room temperatures. The minimum installation temperatures for cable tie materials are listed in the Cable Tie Selection Chart (pages B1.2 and B1.3).

B2

**Tensile Strength**

Most cable ties are selected based on material, length, and minimum loop tensile strength. Minimum loop tensile strength was established under SAE Aerospace Standard AS23190. Each cable tie cross section (SM = Subminiature, M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy and EH = Extra-Heavy) has a different loop tensile strength when tested per AS23190.

B3

The cable tie is first conditioned at 49°C (120°F), 20% relative humidity for 24 hours, then the cable tie is installed on a split mandrel and the halves of the mandrel separated at a rate of 1 inch (25.4mm) per minute. The separating force required to unlock or break the cable tie is the loop tensile strength. Loop tensile strength is dependent both on the locking design and the tensile strength (psi) of the material. As an example, the tensile strength of polypropylene material is approximately 1/2 to 1/3 of Nylon 6.6; thus the loop tensile strength of a given cross section tie made of polypropylene would be much less than a tie made of Nylon 6.6. This is another property to be considered when selecting a cable tie. The various representative loop tensile strengths are listed in the Cable Tie Selection Chart (pages B1.2 and B1.3).

C1

C2

C3

**Halogen-Free**

All Panduit® cable ties (with the exception of TEFZEL ■ and HALAR ▲) are halogen-free per IEC Specification 61249-2-21.

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

H

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B1

Table C – Chemical Resistance Table

Many factors combine to determine the useful life of a cable tie material and none is as important as chemical exposure. Various chemicals will have different effects on plastics depending on such variables as chemical concentrations, temperature, stress and ultraviolet light. This table is an excellent guideline for the selection of the best cable tie material for various cable tie environments. It should be noted that the exposure for this chemical resistance chart is at 70°F (21°C).

## Resistance of Panduit® cable tie materials to chemical attack at 70°F (21°C)

A = Excellent                      1 = Pitting occurs under some conditions  
 B = Satisfactory                2 = Attack may occur if sulfuric acid present  
 C = Slight Attack                Aq. = Aqueous  
 D = Attacked                      C.S. = Cold Saturated  
 — = Not Tested

Materials	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL■	HALAR▲	PEEK	304 Stainless Steel	316 Stainless Steel
Acetaldehyde	90	B	—	C	A	A	A	—	—
Acetic Acid	97	D	D	A	A	A	A	A	A
Acetic Acid	10	C	B	A	A	A	—	A	A
Acetic Anhydride	90	—	B	A	A	A	—	A	A
Acetone	100	A	A	A	A	A	A	A	A
Acetophenone	100	—	—	B	A	A	—	A	A
Acetylene	100	—	—	A	A	A	A	A	A
Aluminum Chloride	10	B	A	A	A	A	A	—	—
Aluminum Fluoride	10	B	A	A	A	A	—	—	—
Aluminum Hydroxide	Aq. C.S.	—	A	A	A	A	—	A	A
Aluminum Potassium Sulfate	10	B	A	A	A	A	—	A <sup>1</sup>	A <sup>1</sup>
Ammonia	All	—	A	A	A	A	A	A	A
Ammonium Carbonate	1 to 5	—	A	—	A	A	—	A	A
Ammonium Chloride	10 to 25	D	A	A	A	A	A	A	A
Ammonium Hydroxide	10	A	—	—	A	A	A	—	—
Ammonium Nitrate	100	—	A	A	A	A	A	A	A <sup>1</sup>
Ammonium Sulfate	10	—	A	A	A	A	A	E <sup>1</sup>	A
Amyl Acetate	100	—	—	C	A	A	A	A	A
Aniline	100	—	B	A	A	A	A	A	A
Antimony Trichloride	All	D	—	A	A	A	A	A	A
Arsenic Acid	1 to 80	—	—	A	A	A	—	A	A
Barium Carbonate	All	—	A	A	A	A	—	A	A
Barium Chloride	All	—	A	A	A	A	—	A <sup>1</sup>	A
Barium Sulfate	All	—	A	A	A	A	—	A	A
Barium Sulfide	All	—	A	A	A	A	—	A	A
Benzene	100	A	A	C	A	A	A	A	A
Benzoic Acid	100	D	A	A	A	A	A	A	A
Benzoyl Chloride	100	—	—	C	A	A	—	—	—
Benzyl Alcohol	100	—	—	A	A	A	A	—	—
Boric Acid	All	D	A	A	A	A	A	B	—
Bromine	100	D	D	D	A	A	D	D	D
Butadiene	100	—	—	C	A	A	—	A	A
Butane	100	—	A	A	A	A	A	A	A
Butanediol	100	—	—	A	A	A	—	—	—
Butyl Acetate	100	—	A	C	A	A	A	—	—
N. Butyl Alcohol	100	—	A	A	A	A	A	A	A
Butyl Phthalate	100	—	—	A	A	A	—	—	—
Butyraldehyde	100	—	—	A	A	A	—	—	—
Butyric Acid	10 to 100	D	—	A	A	A	—	A	A
Calcium Carbonate	Aq. C.S.	—	—	A	A	A	A	A	A
Calcium Chlorate	Aq. C.S.	—	—	A	A	A	—	A	A
Calcium Chloride	5	C	A	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Calcium Hydroxide	50	—	—	A	A	A	A	A	A

\*Includes all 6.6 Nylons (weather resistant, heat stabilized, and flame retardant).

■ TEFZEL is a registered trademark of The Chemours Company.

▲ HALAR is a registered trademark of Solvay Solexis

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Continued on next page

Table C – Chemical Resistance Table (continued)

Materials	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL ■	HALAR ▲	PEEK	304 Stainless Steel	316 Stainless Steel
Calcium Hypochlorite	2	D	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Calcium Nitrate	50	—	A	A	A	A	A	—	—
Calcium Sulfate	2	C	—	A	A	A	A	A	A
Carbon Tetrachloride	100	A	A	—	A	A	A	A	A
Carbon Tetrachloride	Aq. 10	—	—	—	—	A	—	C <sup>1</sup>	A <sup>1</sup>
Chlorine	Dry	—	D	D	A	A	D	C	C
Chlorine	Wet	—	D	C	A	A	D	D	D
Chloroacetic Acid	10 to 50	D	—	A	A	A	A	D	C
Chlorobenzene	100	—	C	A	A	A	A	—	—
Chloroform	100	A	C	C	A	A	A	A	A
Chlorosulphonic Acid	10 to 100	D	D	D	B	A	D	D	D
Chromic Acid	10 to 50	D	D	A	A	A	A	C	C
Citric Acid	10 to 50	B	B	A	—	A	A	A	A
Copper Chloride	1 to 10	D	—	A	A	A	A	A <sup>1</sup> -D	A <sup>1</sup> -C <sup>1</sup>
Copper Cyanide	Aq. C.S.	—	—	A	A	A	A	A	A
Copper Nitrate	50	—	—	A	A	A	A	A	A
Cresol	100	D	D	—	A	A	—	A	A
Crotonaldehyde	100	—	—	A	A	A	—	—	—
Cyclohexane	100	—	A	C	A	A	A	A	—
Cyclohexanol	100	—	A	A	A	A	A	A	—
Cyclohexanone	100	—	A	C	A	A	A	A	—
Dibutyl Phthalate	100	—	—	A	A	A	A	—	—
Dichloroethane	100	—	—	A	—	A	A	A	A
Dichloroethylene	100	—	—	C	A	A	—	—	—
Diesel Fuel	100	—	A	C	A	A	A	A	A
Diethyl Ether	100	—	A	A	A	A	A	A	A
Diglycolic Acid	Aq. C.S.	—	—	A	A	A	—	—	—
Diisobutyl Ketone	100	—	—	A	A	A	—	—	—
Dimethyl Amine	100	—	—	A	A	A	—	—	—
Dimethyl Formamide	100	—	A	A	A	A	A	A	—
Dimethyl Sulfate	100	—	—	C	A	A	—	—	—
Diethyl Phthalate	100	—	—	A	A	A	A	A	—
1,4-Dioxane	100	—	B	C	A	A	A	A	—
Ethyl Acetate	100	A	A	B	A	A	A	A	A
Ethyl Alcohol	100	A	A	A	A	A	A	A	A
Ethyl Chloride	100	—	—	C	A	A	—	A	A
Ethylene Chloride	100	A	C	C	A	A	—	A	A
Ethylene Glycol	100	A	A	A	A	A	A	A	A
Ethylene Oxide	100	—	—	C	A	A	A	—	—
Fatty Acids	100	—	—	A	A	A	—	—	—
Ferric Chloride	50	D	—	A	A	A	C	D	D
Ferric Hydroxide	All	—	—	A	A	A	—	A	A
Ferric Nitrate	All	—	—	A	A	A	A	A	A
Ferrous Chloride	Aq. C.S.	D	—	A	A	A	A	D	C
Ferrous Sulfate	10	—	—	A	A	A	A	A <sup>1</sup>	A
Fluorine (Dry)	100	—	—	D	A	—	D	D	D
Formaldehyde	40	A	B	A	A	A	A	A <sup>1</sup>	A
Formic Acid	All	D	D	A	A	A	C	A	A
Freons	100	A	—	—	A	A	A	—	—
Fuel Oil	100	—	A	—	A	A	A	A	A
Furfural	100	A	—	—	A	A	—	A	A
Gallic Acid	Aq. C.S.	—	—	—	A	A	—	A	A
Gasoline	100	A	—	C	A	A	A	A	A
Glycerin	100	—	A	A	—	A	—	A	A
Glycolic Acid	40	D	—	A	A	A	—	—	—
Heptane	100	—	A	A	A	A	A	A	A
Hexane	100	—	A	A	A	A	A	A	A

\*Includes all 6.6 Nylons (weather resistant, heat stabilized, and flame retardant).

■ TEFZEL is a registered trademark of The Chemours Company.

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B1

Table C – Chemical Resistance Table (continued)

	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL■	HALAR▲	PEEK	304 Stainless Steel	316 Stainless Steel
B2	Materials								
	Hydrobromic Acid	All	D	D	A	A	A	D	D
	Hydrochloric Acid	All	D	D	A	A	A	D	D
B3	Hydrocyanic Acid	All	—	D	A	A	A	C	C
	Hydrofluoric Acid	All	D	D	A	A	D	D	D
	Hydrofluorosilicic Acid	30	—	D	A	A	—	D	D
	Hydrogen Peroxide	30	D	B	B	A	A	B	A
C1	Hydrogen Sulfide	Dry	—	—	A	A	A	A	A
	Hydrogen Sulfide	Wet	D	—	A	A	—	C <sup>2</sup>	A <sup>2</sup>
	Hydroquinone	100	—	—	A	A	—	—	—
	Iodine	100	—	—	A	A	C	D	D
C2	Iodoform	100	—	—	—	A	A	A	A
	Isopropyl Alcohol	100	A	A	A	A	A	A	A
	Jet Fuel	100	A	—	A	A	A	A	A
	Lactic Acid	10	A	B	A	A	—	A	A
C3	Lanolin	10	A	A	A	A	—	A	A
	Lead Acetate	Aq. C.S.	—	—	A	A	A	A	A
	Linseed Oil	100	A	A	A	A	—	A	A
C4	Magnesium Carbonate	Aq. C.S.	—	A	A	A	—	A	A
	Magnesium Chloride	Aq. C.S.	C	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
	Magnesium Nitrate	Aq. C.S.	—	A	A	A	—	A	A
	Maleic Acid	100	—	—	A	A	A	—	—
	Malic Acid	Aq. C.S.	—	—	A	A	—	A	A
D1	Mercuric Chloride	Dilute	—	A	A	A	A	D	D
	Mercury	100	—	A	A	A	A	A	A
	Methyl Alcohol	100	A	A	A	A	A	A	A
D2	Methyl Bromide	100	—	—	D	A	A	—	—
	Methyl Chloride	100	—	—	C	A	A	—	A
	Methyl Chloroform	100	A	—	C	A	A	—	—
	Methyl Ethyl Ketone	100	—	A	C	A	A	A	A
D3	Methyl Isobutyl Ketone	100	A	—	C	A	A	—	A
	Methylene Chloride	100	C	D	C	A	A	A	A
	Naphtha	100	—	—	A	A	A	A	A
	Naphthalene	100	—	B	A	A	A	A	A
E1	Nickel Chloride	Aq. C.S.	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
	Nickel Sulfate	Aq. C.S.	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
	Nitric Acid	10 to 30	D	D	A	A	—	A	A
	Nitric Acid	30 to 68	D	D	D	B	A	C	A
E2	Nitro Benzene	100	—	C	C	A	A	A	A
	Nitro Methane	100	A	—	—	A	A	—	—
	Nitrous Acid	5	—	—	—	A	A	A	A
E3	Oleic Acid	100	—	C	A	A	A	A	A
	Oxalic Acid	10	—	C	A	A	A	A	A
	Oxygen	All	—	—	A	A	A	—	—
	Paraffin	100	A	A	A	A	A	—	A
E4	Perchloroethylene	100	—	—	C	A	A	A	A
	Petroleum Ether	100	—	A	A	A	A	A	A
	Phenol	90	D	D	A	A	A	D	A
	Phosphoric Acid	10	D	D	A	A	A	A	A
E5	Phosphorous Pentoxide	100	—	D	A	A	A	—	—
	Phosphorous Trichloride	100	—	D	C	A	A	—	A
	Phthalic Acid	50	—	—	C	A	A	—	A
	Picric Acid	1	—	—	A	A	A	A	A
F	Potassium Borate	1	—	—	A	A	A	—	—
	Potassium Bromide	Aq. C.S.	—	—	A	A	A	A <sup>1</sup>	A <sup>1</sup>
	Potassium Carbonate	Aq. C.S.	—	C	A	A	A	A	A
	Potassium Chlorate	Aq. C.S.	—	B	A	A	A	A	A
G	Potassium Chloride	5	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
	Potassium Dichromate	Aq. C.S.	—	D	A	A	A	A	A

\*Includes all 6.6 Nylons (weather resistant, heat stabilized, and flame retardant).

■ TEFZEL is a registered trademark of The Chemours Company.

▲ HALAR is a registered trademark of Solvay Solexis.

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Table C – Chemical Resistance Table (continued)

Materials	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL ■	HALAR ▲	PEEK	304 Stainless Steel	316 Stainless Steel
Potassium Ferrocyanide	25	—	—	A	A	A	A	A	A
Potassium Hydroxide	30	C	—	A	A	A	A	C	C
Potassium Iodide	Aq. C.S.	—	A	A	—	A	—	A	A
Potassium Nitrate	Aq. C.S.	—	A	A	A	A	A	A	A
Potassium Perchlorate	1	—	—	A	A	A	—	—	—
Potassium Permanganate	5	D	D	A	A	A	A	A	A
Potassium Persulfate	All	—	—	A	A	A	—	—	—
Potassium Sulfate	Aq. C.S.	—	A	A	A	A	A	A	A
Potassium Sulfide	Aq. C.S.	—	—	A	A	A	A	A	A
Propionic Acid	50	—	—	A	A	A	—	—	—
Propyl Alcohol	100	A	—	A	A	A	A	A	A
Pyridine	100	—	A	C	A	A	A	C	C
Sea Water	100	—	A	A	A	A	—	A <sup>1</sup>	A <sup>1</sup>
Silver Chloride	Aq. C.S.	—	A	A	A	A	—	D	D
Silver Nitrate	10	—	A	A	A	A	A	A	A
Sodium Acetate	Aq. C.S.	A	—	A	A	A	A	A <sup>1</sup>	A
Sodium Benzoate	Aq. C.S.	—	—	A	A	A	—	—	—
Sodium Bicarbonate	Aq. C.S.	A	A	A	A	A	A	A	A
Sodium Bisulfate	10	—	—	A	A	A	—	A	A
Sodium Bisulfite	Aq. C.S.	—	B	A	A	A	—	A	A
Sodium Borate	Aq. C.S.	—	—	A	A	A	—	A	A
Sodium Carbonate	2	A	A	A	A	A	A	A	A
Sodium Chlorate	25	—	C	A	A	A	A	A	A
Sodium Chloride	10	A	A	A	A	A	A	A	A
Sodium Chromate	Aq. C.S.	D	—	A	A	A	—	A	A
Sodium Fluoride	5	—	—	A	A	A	—	A <sup>1</sup>	A <sup>1</sup>
Sodium Hydroxide	10	A	A	A	A	A	A	A	A
Sodium Hypochlorite	5	B	C	A	A	A	A	C <sup>1</sup>	A <sup>1</sup>
Sodium Hyposulfite	Aq. C.S.	—	—	—	A	A	—	A	A
Sodium Nitrate	5	A	A	A	A	A	A	A	A
Sodium Perborate	Aq. C.S.	—	B	A	A	A	—	—	C
Sodium Perchlorate	10	—	—	—	A	A	—	A	A
Sodium Phosphate	5	—	A	A	A	A	—	A	A
Sodium Sulfate	5	—	A	A	A	A	A	A	A
Sodium Sulfide	5	—	A	A	A	A	A	A <sup>1</sup>	A
Sodium Thiosulfate	25	—	A	A	A	A	—	A <sup>2</sup>	A <sup>2</sup>
Stannic Chloride	Aq. C.S.	D	—	A	A	A	A	D	C
Stannous Chloride	Aq. C.S.	—	A	A	A	A	A	C	B
Stearic Acid	100	—	C	A	A	A	—	A	A
Succinic Acid	100	—	B	A	A	A	—	—	—
Sulfur	100	—	A	A	A	A	A	B	C
Sulfur Dioxide	All	D	—	C	A	A	A	A	A
Sulfuric Acid	5	D	C	A	A	A	C	C	A
Sulfuric Acid	50	D	D	A	A	A	—	D	C
Sulfuric Acid	Concentrate	D	D	C	A	A	D	C	C
Sulfurous Acid	10	A	—	A	A	A	A	C <sup>1</sup>	A <sup>1</sup>
Tannic Acid	10	—	A	A	A	A	A	A	A
Tartaric Acid	50	—	B	A	A	A	A	A	A
Tetrahydrofuran	100	—	C	C	A	A	A	A	A
Toluene	100	A	A	C	A	A	A	A	A
Trichloroacetic Acid	10	D	—	B	A	A	—	D	D
Trichloroethylene	100	—	D	C	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Turpentine	100	—	B	D	A	A	A	A	A
Urea	50	—	A	A	A	A	—	—	—
Vinyl Acetate	100	—	—	A	A	A	—	—	—
Xylene	100	A	—	D	A	A	A	A	A
Zinc Chloride	70	D	A	A	A	A	A	A	A
Zinc Nitrate	Aq. C.S.	—	A	A	A	A	—	A	A
Zinc Sulfate	Aq. C.S.	—	A	A	A	A	A	A	A

\*Includes all 6.6 Nylons (weather resistant, heat stabilized, and flame retardant).

■ TEFZEL is a registered trademark of The Chemours Company.

▲ HALAR is a registered trademark of Solvay Solexis.

B1



## PLT-XMR Reel-Fed Cable Ties

- Continuously molded cable ties (5,000 ties/reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes
- All-nylon, one-piece locking ties with 18 lbs. minimum loop tensile strength in miniature cross section
- Available in a variety of colors and materials
- Reel-fed cable ties in Nylon 6.6 material (except black) are UL Listed for use in plenum or air handling spaces per NEC

B2

B3



C1

C2

C3



C4

Part Number	Tie Style	Material	Color	Max. Bundle Dia.		Length		Width		Min. Loop Tensile Str.		
				In.	mm	In.	mm	In.	mm	Lbs.	N	
<b>Reel-Fed Cable Ties for PAT1M4.0 System</b>												
PLT1M-XMR*	All-Nylon	Nylon 6.6	Natural	0.82	21	4.0	102	0.100	2.5	18	80	
PLT1M-XMR0	All-Nylon	Weather Resistant Nylon 6.6	Black									
PLT1M-XMR00*												
PLT1M-XMR30	All-Nylon	Heat Stabilized Nylon 6.6	Black									
<b>Reel-Fed Cable Ties for PAT1.5M4.0 System</b>												
PLT1.5M-XMR	All-Nylon	Nylon 6.6	Natural	1.31	33	5.6	142	0.100	2.5	18	80	
PLT1.5M-XMR0	All-Nylon	Weather Resistant Nylon 6.6	Black									
PLT1.5M-XMR00*												
PLT1.5M-XMR30	All-Nylon	Heat Stabilized Nylon 6.6	Black									

\*Military grade weather resistant material.

Note: PLT\_XMR cable ties (natural, 00, and colors) are Class 2 Mil. Spec. per AS23190 and AS33671.

Please visit [www.panduit.com](http://www.panduit.com) for additional colors

E3

E4

E5

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H





### PLT-VMR Reel-Fed Cable Ties

- Continuously molded cable ties (2,500 ties/reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes
- All-nylon, one-piece locking ties with 50 lbs. minimum loop tensile strength in standard cross section for larger bundles up to 1.94" (49mm) diameter

- Reel-fed cable ties in Nylon 6.6 material (Natural color) are UL Listed for use in plenum or air handling spaces per NEC



Part Number	Tie Style	Material	Color	Max. Bundle Dia.		Length		Width		Min. Loop Tensile Str.	
				In.	mm	In.	mm	In.	mm	Lbs.	N
<b>Reel-Fed Cable Ties for PAT2S System</b>											
PLT2S-VMR	All-Nylon	Nylon 6.6	Natural	1.94	49	8.1	206	0.190	4.8	50	222
PLT2S-VMR0	All-Nylon	Weather Resistant Nylon 6.6	Black								
PLT2S-VMR30	All-Nylon	Heat Stabilized Nylon 6.6									
<b>Reel-Fed Cable Ties for PAT3S System</b>											
PLT3S-VMR	All-Nylon	Nylon 6.6	Natural	2.75	70	11.3	287	0.190	4.8	50	222
PLT3S-VMR30	All-Nylon	Heat Stabilized Nylon 6.6	Black								

Note: PLT\_VMR Nylon 6.6 cable ties are Class 2 Mil. Spec. per AS23190 and AS33671.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### BT-XMR Reel-Fed Cable Ties

- Continuously molded cable ties (5,000 ties/reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes
- Reel-fed cable ties with exclusive stainless steel locking barb and 30 lbs. minimum loop tensile strength permit higher tension for demanding applications
- Metal locking barb and tie body design provide greater bundle tightness, reducing both rotational and lateral movement of the tie
- Reel-fed cable ties in Nylon 6.6 material (Natural color) are UL Listed for use in plenum or air handling spaces per NEC

B2

B3

C1

C2

C3

BT\_XMR

BT\_XMR (0, 30)

C4

Part Number	Tie Style	Material	Color	Max. Bundle Dia.		Length		Width		Min. Loop Tensile Str.	
				In.	mm	In.	mm	In.	mm	Lbs.	N

#### Reel-Fed Cable Ties for PAT1M4.0-BT System

BT1M-XMR	Barbed	Nylon 6.6	Natural	0.82	21	4.0	102	0.100	2.5	30	133
BT1M-XMR0	Barbed	Weather Resistant Nylon 6.6	Black								
BT1M-XMR30	Barbed	Heat Stabilized Nylon 6.6									

D1

D2

#### Reel-Fed Cable Ties for PAT1.5M4.0-BT System

BT1.5M-XMR	Barbed	Nylon 6.6	Natural	1.31	33	5.6	142	0.100	2.5	30	133
BT1.5M-XMR0	Barbed	Weather Resistant Nylon 6.6	Black								
BT1.5M-XMR30	Barbed	Heat Stabilized Nylon 6.6									

D3

E1

E2

E3

E4

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B1.106

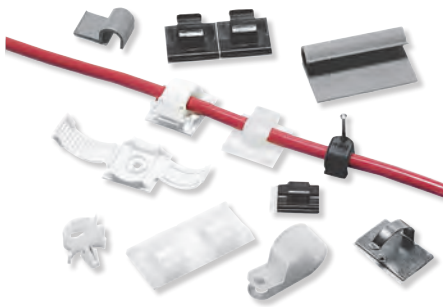
Order number of pieces required, in multiples of Standard Package Quantity.

# Cable Accessories

Panduit® provides a comprehensive offering of cable accessories. These accessories are engineered to speed installation and lower installed costs for routing and managing cable. Panduit cable accessories are designed and manufactured to meet applicable quality standards including International, UL, Military, ISO and Aerospace.

- **Largest selection of mounts, clips, and clamps for cable management**
- **Panduit cable ties and accessories can be used in a variety of applications and environments, providing the optimal cable management solution**
- **Installation methods include adhesive backed, user applied adhesive, screws, rivets or push barb**

Panduit mounts, clips, and clamps are manufactured in an environment committed to design innovation, high quality, and knowledgeable service to our customers. Adhesive backed mounts provide a strong adhesive bond for long-term reliability. Cable clips offer a one-piece solution to save time and reduce inventory. Harness board accessories speed the routing and forming of cable bundles in the fabrication of a harness. They hold bundles at a uniform height above the board and are ideal for use with Panduit manual and automatic cable tie tooling.



## Cable Accessories Products Overview – Used with Cable Ties

### Adhesive Backed Cable Tie Mounts

Pages B2.4 – B2.8



- Uses premium Panduit adhesive for a long-term, reliable bond
- Adhesive backing allows routing of wires and cables where mounting holes cannot be drilled
- Mounts should be used with Panduit cable ties for a complete wire routing solution

### Screw Applied Cable Tie Mounts

Pages B2.9 – B2.15



- Screw/rivet applied cable tie mounts offer a countersunk or through hole in the mount through which a screw or rivet can be secured
- Offered in a wide selection of specialty materials for resistance to severe conditions such as heat, radiation, chemicals, and outdoor environments
- Available in styles ranging from low profile mounts with integral push-rivet to high stability cradle mounts for Extra-Heavy strength cable ties

### Other Cable Tie Mounts

Pages B2.16 – B2.26



- Push mount designs lock into a hole in a metallic panel or in a blind masonry hole
- Edge clip mounts secure to a panel edge using metal barbs that dig into panel surface
- Stud mounts secure onto threaded bolts by screwing or hammering on the bolt
- Connector rings can be used to attach adjacent bundles to provide spacing and prevent vibration damage

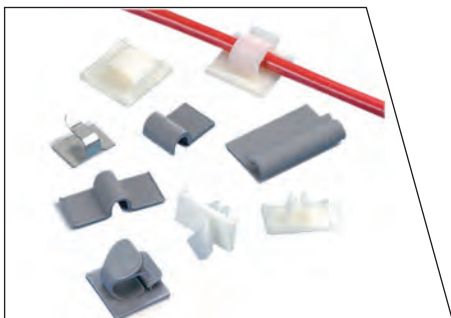
## Cable Accessories Products Overview – Used without Cable Ties

B1

## Adhesive Back Clips and Clamps

Pages B2.27 – B2.36

B2



- A wide range of styles and sizes of adhesive backed clips and clamps to secure a variety of cables, from individual small diameter wires to large flat cables
- Products come in designs that use friction to hold a few cables, or more secure releasable latching designs
- Uses premium Panduit adhesive for a long-term, reliable bond

B3

C1

C2

C3

## Other Clips and Clamps

Pages B2.36 – B2.43

C4



- Screw clips use a screw, nail, or rivet to secure the clip to surface
- Plastic edge clips secure to an edge in a panel which incorporates a punched hole to provide mechanical retention
- Push-in clips use an arrow-head shaped barb to lock into a hole in a panel, and is available in a range of bundle sizes

D1

D2

D3

E1

## Harness Board Accessories

Pages B2.44 – B2.50

E2



- Allow an installer to quickly configure a specific arrangement of wires, to aid in required wire bundling and termination
- Hold wire bundles at a uniform height from a harness board to ease manual or automatic cable tie installation
- Aid in the proper routing and forming of wire bundles to help maintain end product consistency, reduce expensive rework and maximize safety

E3

E4

E5

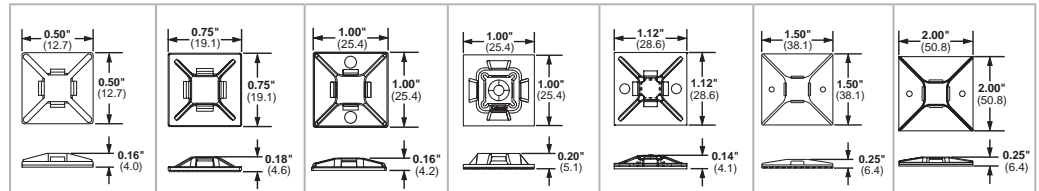
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**c** **us** **4-Way Adhesive Backed Cable Tie Mounts**

- Allow cable tie entry from all four sides
- Available in multiple sizes to match application load requirements
- Produced 2-up or 4-up for fast and easy liner removal to speed installation



Model	Dimensions	Accepted Cable Ties
<b>ABM1M</b> 0.50" x 0.50"	0.50" (12.7) x 0.50" (12.7) 0.16" (4.0)	Accepts MCable Ties
<b>ABMM</b> 0.75" x 0.75"	0.75" (19.1) x 0.75" (19.1) 0.48" (4.8)	Accepts M, I Cable Ties
<b>ABM2S</b> 1.00" x 1.00"	1.00" (25.4) x 1.00" (25.4) 0.16" (4.2)	Accepts M, I, S Cable Ties
<b>ABM100</b> 1.00" x 1.00"	1.00" (25.4) x 1.00" (25.4) 0.20" (5.1)	Accepts M, I, S Cable Ties
<b>ABM112</b> 1.12" x 1.12"	1.12" (28.6) x 1.12" (28.6) 0.14" (4.1)	Accepts M, I, S Cable Ties
<b>ABM3H</b> 1.50" x 1.50"	1.50" (38.1) x 1.50" (38.1) 0.25" (6.4)	Accepts M, I, S, HS, LH, H, HLM Cable Ties
<b>ABM4H</b> 2.00" x 2.00"	2.00" (50.8) x 2.00" (50.8) 0.25" (6.4)	Accepts M, I, S, HS, LH, H, HLM Cable Ties

White Nylon 6.6; Rubber Adhesive; Indoor Environment	ABM1M-A-C 100 pc/pkg	-	-	ABM100-A-C** 100 pc/pkg	ABM112-A-C 100 pc/pkg	ABM3H-A-L 100 pc/pkg	ABM4H-A-L 100 pc/pkg
White Nylon 6.6; Acrylic Adhesive; Indoor/High Temp Environment	ABM1M-AT-C 100 pc/pkg	-	-	ABM100-AT-C 100 pc/pkg	ABM112-AT-C 100 pc/pkg	ABM3H-AT-L 100 pc/pkg	ABM4H-AT-L 100 pc/pkg
Black Weather Resistant Nylon 6.6; Acrylic Adhesive; Outdoor/High Temp Environment	ABM1M-AT-M0 1000 pc/pkg	-	-	ABM100-AT-C0 100 pc/pkg	ABM112-AT-C0 100 pc/pkg	ABM3H-AT-L0 50 pc/pkg	ABM4H-AT-T0 200 pc/pkg
White ABS; Rubber Adhesive; Indoor Environment	-	ABMM-A-C	ABM2S-A-C* <sup>^</sup> 100 pc/pkg	-	-	-	-
White ABS; Acrylic Adhesive; Indoor/High Temp Environment	-	ABMM-AT-C 100 pc/pkg	ABM2S-AT-C 100 pc/pkg	-	-	-	-
Black ABS; Rubber Adhesive; Indoor Environment	-	-	ABM2S-A-C0 100 pc/pkg	-	-	-	-
Black Weather Resistant ABS; Acrylic Adhesive; Outdoor/High Temp Environment	-	ABMM-AT-C0 100 pc/pkg	ABM2S-AT-C0 100 pc/pkg	-	-	-	-
White ABS; Indoor Environment; User Supplied Adhesive	-	ABMM-D 500 pc/pkg	-	-	-	-	-
White ABS; Indoor Environment; User Supplied Adhesive or #6 (M3) screw(s)	-	-	ABM2S-S6-D 500 pc/pkg	-	-	-	-
Black Weather Resistant ABS; Outdoor Environment; User Supplied Adhesive or #6 (M3) screw(s)	-	-	ABM2S-S6-D0 500 pc/pkg	-	-	-	-
White Nylon 6.6; Indoor Environment; User Supplied Adhesive or #6 (M3) screw(s)	-	-	-	ABM100-S6-C 100 pc/pkg	ABM112-S6-C 100 pc/pkg	ABM3H-S6-T 200 pc/pkg	ABM4H-S6-T 200 pc/pkg
Natural Flame Retardant Nylon 6.6; Indoor Environment; User Supplied Adhesive or #6 (M3) screw(s)	-	-	-	ABM100-S6-C69 100 pc/pkg	ABM112-S6-C69 100 pc/pkg	-	-
Black Weather Resistant Nylon 6.6; User Supplied Adhesive or #6 (M3) screw(s)	-	-	-	-	ABM112-S6-D0 500 pc/pkg	ABM3H-S6-T0 200 pc/pkg	-

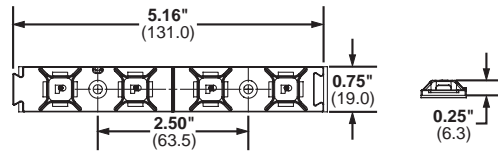
\*Also available in Gray ABS material with Rubber Adhesive for Indoor environments. Part number ABM2S-A-C14

<sup>^</sup>Also available in Ivory ABS material with Rubber Adhesive for Indoor environments. Part number ABM2S-A-C15

\*\*Also available in Ivory Nylon 6.6 material with Rubber Adhesive for Indoor environments. Part number ABM100-A-C15

**UL<sup>®</sup> US ABMQ Multiple Bridge Adhesive Backed Cable Tie Mounts**

- Multiple cable tie bridges on one mount speeds installation of cable bundles by reducing the number of mounts applied
- Dovetail connection system provides alignment and a joining method to expand routing capabilities
- V-groove allows for easy separation into two mounts with two bridges each for separate applications
- 4-way cable tie bridges allow cable bundles to be secured perpendicular to the mount for even spacing or inline to secure a bundle in multiple places
- Large adhesive surface area provides long-term reliability and keeps product in place despite heavy load or high stress



Part Number	Used with Cable Ties	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
ABMQS-A-C	M, I, S	ABS	White	Indoors	Rubber	100	1000
ABMQS-A-Q	M, I, S	ABS	White	Indoors	Rubber	25	250
ABMQS-A-Q20			Black				

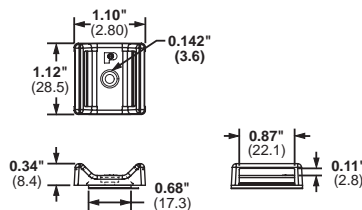
**UL<sup>®</sup> US LISTED ABMQ Mounts for Installation with Screws or User-Supplied Adhesive**

ABMQS-S6-C	M, I, S	ABS	White	Indoors	Two #6 M3 Screws	100	1000
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‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

**Tak-Ty<sup>®</sup> Hook & Loop Cable Tie Mounts**

- For use with hook and loop cable ties, see page B1.83, B1.84
- Unique cradle design provides maximum stability for cable bundle
- For indoor use only
- Dimensions: 1.10"L x 1.12"W x 0.34"H (27.9mm x 28.4mm x 8.6mm)



Part Number	Used with Cable Ties‡	Material	Color	Max. Static Load		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
				Lbs.	g			
ABMT-A-C	HLT, HLS, TTS, UCT	Nylon 6.6	Natural	0.38	174	Pre-Installed Rubber Adhesive	100	1000
ABMT-A-C20			Black					
ABMT-S6-C	HLT, HLS, TTS, UCT	Nylon 6.6	Natural	—	—	#6 (M3) Screw	100	1000
ABMT-S6-C20			Black					
ABMT-S6-C60	HLT, HLS, TTS, UCT	Flame Retardant Nylon 6.6	Black	—	—	#6 (M3) Screw	100	1000
ABMT-S6-C69			Natural					

‡Cable tie cross section sizes: HLT = Tak-Ty<sup>™</sup> Hook & Loop Ties, HLS = Tak-Ty<sup>™</sup> Hook & Loop Strip Tie, TTS = Tak-Tape<sup>™</sup> Roll, UCT = Ultra-Cinch<sup>™</sup> Tie.

\*For proper selection of adhesives see page B2.53.

A

# Industrial Electrical Solutions

B1

## Super-Grip™ Adhesive Backed Cable Tie Mounts

- Low profile design keeps bundle close to mounting surface
- Small overall size allows use where space is limited
- For use with Super-Grip™ Cable Ties found on page B1.36
- High Bond Adhesive available

B2

B3

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C2

C3

C4

D1

D2

D3

	 <b>SGABM20</b> <b>0.75" x 0.75"</b>	 <b>SGABM25</b> <b>1.00" x 1.00"</b>	 <b>SGABM30</b> <b>1.12" x 1.12"</b>	 <b>SGABM40</b> <b>1.50" x 1.50"</b>	 <b>SGABM50</b> <b>2.00" x 2.00"</b>
	Accepts SGM, SGI Cable Ties	Accepts SGM, SGI, SGS Cable Ties	Accepts SGM, SGI, SGS Cable Ties	Accepts SGM, SGI, SGS, SGLH, SGH Cable Ties	Accepts SGM, SGI, SGS, SGLH, SGH Cable Ties
White Nylon 6.6; Rubber Adhesive; Indoor Environment	SGABM20-A-C 100 pc/pkg	SGABM25-A-C 100 pc/pkg	SGABM30-A-C 100 pc/pkg	SGABM40-A-L 50 pc/pkg	SGABM50-A-L 50 pc/pkg
Black Weather Resistant Nylon 6.6; Acrylic Adhesive; Outdoor/High Temp Environment	SGABM20-AT-C0 100 pc/pkg	SGABM25-AT-C0 100 pc/pkg	SGABM30-AT-C0 100 pc/pkg	SGABM40-AT-L0 50 pc/pkg	SGABM50-AT-L0 50 pc/pkg
Black Weather Resistant Heat Stabilized Nylon 6.6; High Bond Acrylic Adhesive; Outdoor/High Temp Environment	SGABM20-AV-C300 100 pc/pkg	SGABM25-AV-C300 100 pc/pkg	SGABM30-AV-C300 100 pc/pkg	-	-
White Nylon 6.6; Indoor Environment; User Supplied Adhesive or #6 (M3) screw(s)	-	SGABM25-S6-C 100 pc/pkg	-	-	-
Black Weather Resistant Nylon 6.6; Outdoor Environment; User Supplied Adhesive or #6 (M3) screw(s)	-	SGABM25-S6-C0 100 pc/pkg	-	-	-

E1

## Combination Adhesive Mount/Cable Ties

- Adhesive mount and cable tie molded as one-piece helps reduce inventory costs
- Available with locking or releasable tie
- For indoor use only
- Material: Nylon 6.6

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Part Number	Tool	Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>Locking Cable Tie</b>					
PLA2S-A-Q	GTS, GTSL, GS2B, GS4H, PTS, PTH, PPTS, STS2, STH2	White	Rubber	25	250
<b>Releasable Cable Tie</b>					
PRA2S-A-Q	Hand installed only	White	Rubber	25	250

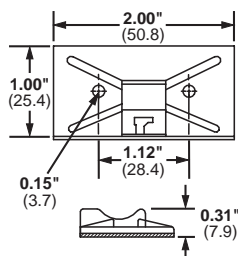
B2.6

Order number of pieces required, in multiples of Standard Package Quantity.



**cUL<sup>us</sup> Snap-In Cable Tie Mounts – Mechanically Applied**

- For use with Panduit Standard cross section cable ties including PLT1S, PLT1.5S, PLT2S, PRT1.5S and PRT2S
- Integral retaining notch holds cable tie head in place below bundle
- Eliminates protruding tie head and facilitates one hand tie threading
- Quickly route wire and cable where mounting holes cannot be drilled
- For indoor use only
- Material: ABS



Part Number	Used with Cable Ties‡	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
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**Snap-In Mounts with Pre-Installed Adhesive**

SMS-A-C	S	White	Rubber	100	500
SMS-A-C14	S	Gray			
SMS-A-C15	S	Ivory			

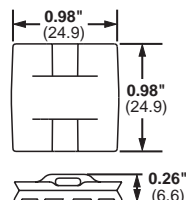
**cUL<sup>us</sup> LISTED Snap-In Mounts for Application with Screws or User-Supplied Adhesive**

SMS-S6-D	S	White	User Supplied Adhesive and/or Two #6 M3 Screws	500	5000
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‡Cable tie cross section size: S = Standard.

**Epoxy Applied Mounts**

- Provide a fast, strong, economical method to secure wire/ cable to most surfaces
- Eliminate the need to drill holes



Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
EMS-A-C	M, I, S	Nylon 6.6	Natural	Indoors	EMA epoxy	100	1000
EMS-A-C0		Weather Resistant Nylon 6.6	Black	Outdoors			

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

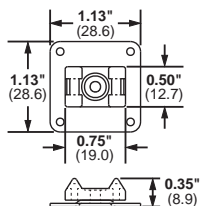
B1

## Epoxy Applied Swivel Mount

- Swivels 360° to assure proper orientation with harness
- For indoor use only
- Four inspection holes to check adhesive coverage

B2

B3



Part Number	Used with Cable Ties‡	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
ASMS-A-X	M, I, S, SGM, SGI	EMA epoxy	10	100

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, SGM = Super-Grip® Miniature, and SGI = Super-Grip® Intermediate.

C1

C2

## Epoxy Applied Cable Tie Mount Kits

- EMA Epoxy supplied in convenient two-compartment mixer cup with a mixer stick for each cup
- After full 24 hour cure time, bonding strength will exceed 50 lbs. on a clean, grease-free surface
- Each cup contains adhesive for three EMS or ASMS mounts
- Not recommended for use on polyethylene and polypropylene surfaces
- Epoxy hardens in approximately five minutes

C3

C4



Part Number	Used with Cable Ties‡	Environment	Epoxy Cups	Mixer Sticks	EMS Mounts	Cable Ties	Std. Pkg. Qty.	Std. Ctn. Qty.
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### Epoxy Adhesive Only

EMA-X	—	Indoors/Outdoors	10	10	—	—	10	—
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### Epoxy Mounting Kit with EMS Mounts

EMSK3-1-X0	M, I, S	Indoors/Outdoors	1	1	3	—	1	10
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### Epoxy Mounting Kit with EMS Mounts and Cable Ties

EMSK3-1-3-0	M, I, S	Indoors/Outdoors	1	1	3	3	1	10
EMSK12-4-12-X0			4	4	12	12	10	

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

D1

D2

D3

E1

## RU<sup>US</sup> Tie Mounts – Applied with User Supplied Adhesives

- Solid flat bottom surface provides maximum holding area
- Material: Nylon 6.6
- For indoor use only

E2



Part Number	Used with Cable Ties‡	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
TM1A-C	M	Natural	User Supplied Adhesive	100	1000
TM2A-C	M, I, S	Natural	User Supplied Adhesive	100	500
TM3A-C	M, I, S, HS, LH				

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard and LH = Light-Heavy.

E3

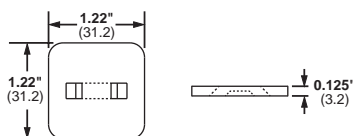
E4

E5

## RU<sup>US</sup> Low Profile Tie Mounts – User Supplied Adhesive Mounts

- Low profile design keeps bundle close to mounting surface
- For indoor use only
- Material: Nylon 6.6

F



Part Number	Used with Cable Ties‡	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
AM2-C	M, I, S	Natural	User Supplied Adhesive	100	500

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

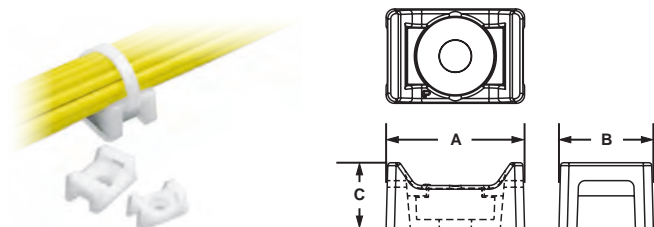
G

H



### Cable Tie Mounts – Screw Applied

- Unique cradle design provides maximum stability for the cable bundle
- Low profile design keeps bundle close to mounting surface
- Wide selection of materials available
- UL Recognized except HVTM and SGTM series



Part Number	Used with Cable Ties‡	Counterbore Diameter		Length A		Width B		Height C		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm			
TM1S4-C	M	0.23	5.7	0.51	13.0	0.32	8.0	0.23	5.8	#4 (M2.5) Screw	100	500
TM1S6-C		0.28	7.0	0.51	13.0	0.32	8.0	0.23	5.8	#6 (M3) Screw		
TM2S6-C	M, I, S	0.29	7.1	0.63	16.0	0.43	10.8	0.28	7.0	#6 (M3) Screw		
TM2S8-C		0.33	8.4	0.63	16.0	0.43	10.8	0.28	7.0	#8 (M4) Screw		
TM3S8-C	M, I, S, LH	0.32	8.1	0.86	21.9	0.61	15.5	0.37	9.4	#8 (M4) Screw		
TM3S10-C		0.38	9.7	0.86	21.9	0.61	15.8	0.37	9.4	#10 (M5) Screw		

#### Super-Grip® Cable Tie Mounts

SGTM1S6-C	SGM	0.28	7.0	0.51	13.0	0.38	9.7	0.22	5.6	#6 (M3) Screw	100	500
SGTM2S8-C	SGM,SGI,SGS	0.33	8.4	0.66	16.7	0.48	12.2	0.34	8.6	#8 (M4) Screw		
SGTM3S10-C	SGM, SGI, SGS, SGLH	0.38	9.7	0.91	23.1	0.61	15.4	0.43	11.0	#10 (M5) Screw		

#### Hyper-V™ Cable Tie Mounts

HVTM-06-C0*	HV	0.40	10.2	0.81	20.6	0.68	17.3	0.41	10.4	#12 (M6) Screw	100	500
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‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, LH = Light-Heavy, SGM = Super-Grip® Miniature, SGI = Super-Grip® Intermediate, SGS = Super-Grip® Standard, SGLH = Super-Grip® Light-Heavy, and HV = Hyper-V™.

\*Not UL Listed

Additional tie mounts available in specified materials.  
All are available as standard Panduit® parts.

Metal Detectable Nylon*	Metal Detectable Polypropylene*	PEEK*	Heat Stabilized Nylon	Flame Retardant Nylon	Weather Resistant Nylon	Weather Resistant Polypropylene	Tefzel®
TM2S8-C86	TM2S8-C186	TM2S8-C71	TM1S4-M30	TM1S4-M69	TM1S6-M0	TM2S8-C100	TM2S8-C76
TM3S8-C86	TM3S8-C186		TM1S6-M30	TM1S6-M69	TM2R6-M0	TM3S8-C100	TM3S8-C76
TM3S10-C86	TM3S10-C186		TM2R6-M30	TM2S6-M69	TM2S6-M0	TM3S8-M100	TM3S10-C76
			TM2S6-M30	TM2S8-M69	TM2S8-M0		
			TM2S8-M30	TM3S8-C69	TM3R6-M0		
			TM3S8-M30	TM3S8-M69	TM3S10-M0		
			TM3S10-M30	TM3S10-M69	TM3S25-M0		
			TM3S25-M30		SGTM1S6-C0		
					SGTM2S8-C0		
					SGTM3S10-C0		

■TEFZEL is a registered trademark of E.I. du Pont de Nemours and Company.

\*Not UL Listed

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Extra-Heavy Cable Tie Mounts – Screw Applied

- Unique cradle design provides maximum stability for cable bundle

- Route and support large diameter and heavy cable bundles

B2

B3

C1

C2

C3

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>TMEH-S8-Q0</b>	M, I, S, HS, LH, H, EH, HLM	Weather Resistant Nylon 6.6	Black	Outdoors	#8 (M4) Screw	25	250
<b>TMEH-S10-Q0</b>					#10 (M5) Screw		
<b>TMEH-S25-Q0</b>					1/4 (M6) Screw		
<b>TMEH-S10-C100</b>	M, I, S, HS, LH, H, EH, HLM	Weather Resistant Polypropylene	Black	Outdoors	#10 (M5) Screw	100	500
<b>TMEH-S10-C109</b>		Polypropylene	Green	Indoors	#10 (M5) Screw		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy and HLM = Miniature Tak-Ty® Hook & Loop Ties.

C4

### Heavy Duty Cable Tie Mounts

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>TMEH2S5-D350</b>	I, S, H, EH	Heat Stabilized, Impact Modified, Weather Resistant Nylon 6.6	Black	Outdoors	#10 (M5) Screw	500	2000
<b>TMEH2S6-D350</b>					1/4" (M6) Screw		
<b>TMEH2S8-D350</b>					5/16" (M8) Screw		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy and HLM = Miniature Tak-Ty® Hook & Loop Ties.

D2

### Heavy Duty Cable Tie Mount Assemblies

Part Number	Used with Cable Ties‡	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>TMEH2S5-3E-C350</b>	M, I, S, HS, LH, H, EH, HLM	Black	Outdoors	#10 (M5) Screw	100	1000
<b>TMEH2S6-3E-C350</b>				1/4" (M6) Screw		
<b>TMEH2S8-3E-C350</b>				5/16" (M8) Screw		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy and HLM = Miniature Tak-Ty® Hook & Loop Ties.

D3

E1

E2

### Swivel Mounts

- The two mounts are securely fastened together with a connecting rivet that allows both mounts to rotate
- Can join bundles of cable, tubing, or hoses that may need to move or are not parallel

- Separates bundles to avoid abrasion
- Material: Weather Resistant Nylon 6.6

E3

E4

E5

TMEH

TM3

TM3

F

G

H

Part Number	Used with Cable Ties‡	Pull Apart Force		Color	Environment	Std. Pkg. Qty.	Std. Ctn. Qty.
		Lbs.	g				
<b>TM3-X2-C0Y</b>	M, I, S, HS, LH	120	54,431	Black	Indoors/Outdoors	100	1000
<b>TMEH-X2-L0Y</b>	M, I, S, HS, LH, H, EH, HLM	250	113,398			50	500

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy and HLM = Miniature Tak-Ty® Hook & Loop Ties.

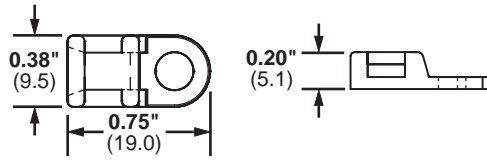
B2.10

Order number of pieces required, in multiples of Standard Package Quantity.



### 4-Way Tie Anchor Mounts – Screw Applied

- 4-way cable tie entry makes part orientation fast and easy
- Small overall size allows for use where space is limited



Part Number	Used with Cable Ties‡	Hole Diameter A		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm						
TA1S8-C	M, I, S	0.17	4.3	Nylon 6.6	Natural	Indoors	#8 (M4) Screw	100	500
TA1S8-M0	M, I, S	0.17	4.3	Weather Resistant Nylon 6.6	Black	Outdoors	#8 (M4) Screw	1000	5000
TA1S8-M30	M, I, S	0.17	4.3	Heat Stabilized Nylon 6.6	Black	Indoors			
TA1S8-M69	M, I, S	0.17	4.3	Flame Retardant Nylon 6.6	Natural	Indoors	#8 (M4) Screw	1000	5000
TA1S10-C	M, I, S	0.17	4.3	Nylon 6.6	Natural	Indoors	#10 (M5) Screw	100	500
TA1S10-M0	M, I, S	0.20	5.1	Weather Resistant Nylon 6.6	Black	Outdoors	#10 (M5) Screw	1000	5000

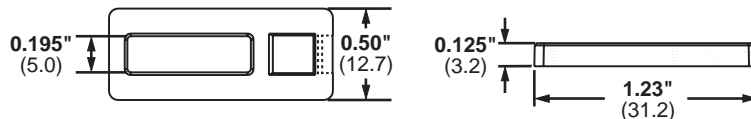
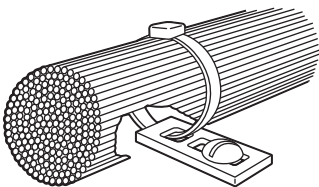
#### Super-Grip® Cable Tie Mounts

SGTA1S8-C*	SGM, SGI, SGS	0.17	4.3	Nylon 6.6	Natural	Indoors	#8 (M4) Screw	100	500
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‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, SGM = Super-Grip® Miniature, SGI = Super-Grip® Intermediate, and SGS = Super-Grip® Standard.  
 \* Not UL Listed

### UL US Tie Anchor Mounts – Screw Applied

- Install perpendicular to the wire bundle
- Elongated slot permits cable bundle adjustment in application
- Low profile design keeps bundle close to mounting surface where overhead space is limited
- Material: Nylon 6.6



Part Number	Used with Cable Ties‡	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
TA2-C	M, I, S	Natural	Indoors	#10 (M5) Screw	100	1000
TA2-M					1000	500

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Low Profile Mounts – Screw Applied

- Low profile design keeps bundle close to mounting surface
- Small overall size

- Install with a screw or rivet for a strong, secure installation
- For indoor use only
- Material: Nylon 6.6

B2

B3

LPMM

LPMS

C1

C2

C3

Part Number	Used with Cable Ties‡	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
LPMM-S2-C	M	Natural	#2 (M2) Countersunk Screw	100	1000
LPMM-S5-C			#5 (M3) Countersunk Screw		
LPMS-S8-C	M, I, S	Natural	#8 (M4) Countersunk Screw		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

C4

D1

### Low Profile Mounts – Push Rivet Applied

- Eliminate screws
- Secure wires to any pre-drilled panel
- Can be installed in any panel thickness

- Low profile design keeps bundle close to mounting surface
- For indoor use only
- Material: Nylon 6.6

D2

D3

E1

E2

E3

E4

E5

Part Number	Used with Cable Ties‡	Hole Diameter A		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm				
KIMS-H366-C2	M, I, S	0.144	3.7	Red	Integral Push Rivet	100	1000
KIMS-H430-C6		0.169	4.3	Blue			
KIMS-H500-C4		0.196	5.0	Yellow			

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

F

G

H

B2.12

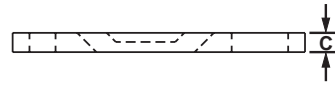
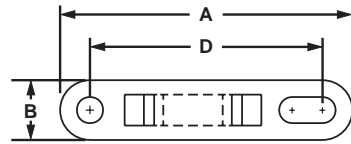
Order number of pieces required, in multiples of Standard Package Quantity.



### Cable Tie Plates

- Slotted mounting hole accommodates various fastener spacing
- Low profile design keeps bundle close to mounting surface

- For indoor use only
- Material: Nylon 6.6



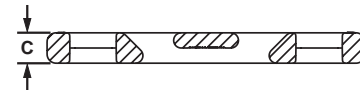
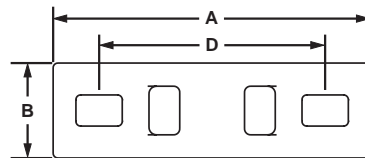
Part Number	Used with Cable Ties†	Length A		Width B		Height C		Hole Spacing D		Color	Mil. Std. Part Number	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm					
TP2-C	M, I, S	1.98	50.3	0.50	12.7	0.13	3.2	1.60	40.6	Natural	MS3341-2-9	#10 (M5) Screw	100	1000
TP4H-C	M, I, S, HS, LH, H	3.08	78.2	0.62	15.7	0.20	5.2	2.50	63.5			1/4 (M6) Screw	500	

†Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy and H = Heavy.

### Contour Multiple Tie Plates

- Designed for aerospace industry to minimize chance for abrasion
- Low profile design keeps bundle close to mounting surface

- For indoor use only
- Heat stabilized Nylon 6.6 material



Part Number	No. of Bundles	Used with Cable Ties†	Length A		Width B		Height C		Hole Spacing D		Mounting Method	Mil. Std. Part Number	Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm				
MTPC1H-E10-C39	1	M, I, S, HS, LH, H	2.09	53.1	0.63	16.0	0.20	5.2	1.50	38.1	#10 (M5) Screw	—	100	1000
MTPC2H-E10-C39	2	M, I, S, HS, LH, H	3.59	91.2	0.63	16.0	0.20	5.2	3.00	6.2				
MTPC3H-E10-C39	3	M, I, S, HS, LH, H	5.09	129.3	0.63	16.0	0.20	5.2	4.50	114.3				
MTPC4H-E10-C39	4	M, I, S, HS, LH, H	6.59	167.4	0.63	15.7	0.20	5.2	6.00	152.4				
MTPC5H-E10-C39	5	M, I, S, HS, LH, H	8.09	205.5	0.63	16.0	0.20	5.2	7.50	190.5				
MTPC6H-E10-C39	6	M, I, S, HS, LH, H	9.59	243.6	0.63	16.0	0.20	5.2	9.00	228.6				
MTPC7H-E10-C39	7	M, I, S, HS, LH, H	11.09	281.7	0.63	16.0	0.20	5.1	10.50	266.7				

†Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy and H = Heavy.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Multiple Tie Plates

- Used to secure closely spaced wire bundles
- For indoor use only
- Low profile design keeps bundle close to mounting surface
- Material: Nylon 6.6

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

H

Part Number	No. of Bundles	Used with Cable Ties†	Length A		Width B		Height C		Hole Spacing D		Mounting Method	Mil. Std. Part Number	Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm				
MTP1S-E6-C	1	M, I, S	1.75	44.5	0.50	12.7	0.13	3.2	1.25	31.8	#6 (M3) Screw	MS3339-1-9	100	1000
MTP1S-E10-C			1.75	44.5	0.50	12.7	0.13	3.2	1.25	31.8	#10 (M5) Screw	—		
MTP1H-E6-C	1	M, I, S, HS, LH, H	2.09	53.1	0.63	16.0	0.20	5.2	1.50	31.8	#6 (M3) Screw	MS3339-6-9		
MTP1H-E10-C			2.09	53.1	0.63	16.0	0.20	5.2	1.50	31.8	#10 (M5) Screw	—		
MTP2S-E6-C	2	M, I, S	3.00	76.2	0.50	12.7	0.13	3.2	2.50	63.5	#6 (M3) Screw	MS3339-2-9		
MTP2S-E10-C			3.00	76.2	0.50	12.7	0.13	3.2	2.50	63.5	#10 (M5) Screw	—		
MTP2H-E6-C	2	M, I, S, HS, LH, H	3.59	91.2	0.63	16.0	0.20	5.2	3.00	76.2	#6 (M3) Screw	MS3339-7-9		
MTP2H-E10-C			3.59	91.2	0.63	16.0	0.20	5.2	3.00	76.2	#10 (M5) Screw	—		
MTP3S-E6-C	3	M, I, S	4.25	108.0	0.50	12.7	0.13	3.2	3.75	95.3	#6 (M3) Screw	MS3339-3-9		
MTP3S-E10-C			4.25	108.0	0.50	12.7	0.13	3.2	3.75	95.3	#10 (M5) Screw	—		
MTP3H-E6-C	3	M, I, S, HS, LH, H	5.09	129.3	0.63	16.0	0.20	5.2	4.50	114.3	#6 (M3) Screw	MS3339-8-9		
MTP3H-E10-C			5.09	129.3	0.63	16.0	0.20	5.2	4.50	114.3	#10 (M5) Screw	—		
MTP4S-E6-C	4	M, I, S	5.50	139.7	0.50	12.7	0.13	3.2	5.00	127.0	#6 (M3) Screw	MS3339-4-9		
MTP4S-E10-C			5.50	139.7	0.50	12.7	0.13	3.2	5.00	127.0	#10 (M5) Screw	—		
MTP4H-E6-C	4	M, I, S, HS, LH, H	6.59	167.4	0.63	16.0	0.20	5.2	6.00	152.4	#6 (M3) Screw	MS3339-9-9		
MTP4H-E10-C			6.59	167.4	0.63	16.0	0.20	5.2	6.00	152.4	#10 (M5) Screw	—		
MTP5S-E6-C	5	M, I, S	6.75	171.5	0.50	12.7	0.13	3.2	6.25	158.8	#6 (M3) Screw	MS3339-5-9		
MTP5S-E10-C			6.75	171.5	0.50	12.7	0.13	3.2	6.25	158.8	#10 (M5) Screw	—		
MTP5H-E6-C	5	M, I, S, HS, LH, H	8.09	205.5	0.63	16.0	0.20	5.2	7.50	190.5	#6 (M3) Screw	MS3339-10-9		
MTP5H-E10-C			8.09	205.5	0.63	16.0	0.20	5.2	7.50	190.5	#10 (M5) Screw	—		
MTP6H-E6-C	6	M, I, S, HS, LH, H	9.59	243.6	0.63	16.0	0.20	5.2	9.00	228.6	#6 (M3) Screw	MS3339-11-9		
MTP6H-E10-C			9.59	243.6	0.63	16.0	0.20	5.2	9.00	228.6	#10 (M5) Screw	—		

†Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy and H = Heavy.

B2.14

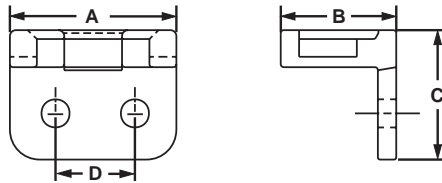
Order number of pieces required, in multiples of Standard Package Quantity.





### Right Angle Mounts

- Hold cable bundles away from the sharp edges of bulkheads or cabinet holes
- Can also be used to mount cable bundles adjacent to any surface
- For indoor use only
- Material: Nylon 6.6



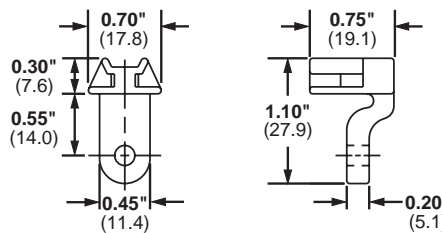
Part Number	Used with Cable Ties‡	Length A		Width B		Height C		Hole Spacing D		Color	Mil. Std. Part Number	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm					
RAMS-S3-M	M, I, S	0.56	14.2	0.39	0.99	0.44	11.0	0.28	7.1	Natural	MS3341-2-9	#3 (M2.5) Screw or 3/32 (2.4) Rivet	100	5000
RAMH-S6-D	M, I, S, HS, LH, H	1.00	25.4	0.75	19.1	1.00	0.28	0.28	7.1	Natural	MS3341-1-9	#6 (M3) Screw or 1/8 (3.2) Rivet	500	5000
RAMH-S10-D		1.00	25.4	0.75	19.1	1.00	0.50	0.50	12.7			#10 (M5) Screw or 3/16 (4.7) Rivet		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard, LH = Light-Heavy and H = Heavy.



### Lightening Hole Mounts

- Secure cable bundles that run through bulkhead lightening holes
- Protect cable bundles from sharp edges
- For indoor use only
- Material: Nylon 6.6



Part Number	Used with Cable Ties‡	Color	Mil. Std. Part Number	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
LHMS-S5-D	M, I, S	Natural	—	#5 (M3) Screw or 1/8 (3.2) Rivet	500	2500
LHMS-S6-D			MS3340-1-9	#6 (M3) Screw or 9/64 (3.5) Rivet		
LHMS-S10-D			—	#10 (M5) Screw or 3/16 (4.7) Rivet		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Stud Tie Mounts

- Easily applied to bolts or studs with a light hammer blow or turning of the mount
- Designed for use with cable ties to route and secure cable bundles, air, water and hydraulic lines
- Material: Impact Modified Weather Resistant Nylon 6.6

B2

B3

C1

C2

Part Number	Used with Cable Ties‡	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
TMSTLHS6-M0	M, I, S, HS, LH	Black	Outdoors	1/4" stud dia. (6mm)	1000	5000
TMSTLHS8-M0				5/16" stud dia. (8mm)		
TMSTHS10-D0	M, I, S, HS, LH, H	Black	Outdoors	3/8" stud dia. (10mm)	500	—
TMSTHS11-D0				7/16" stud dia. (11mm)		
TMSTHS12-D0				12mm stud dia.		
TMSTHS13-D0	M, I, S, HS, LH, H	Black	Outdoors	1/2" stud dia. (13mm)	500	—
TMSTHS16-D0				5/8" stud dia. (16mm)		
TMSTHS19-D0				3/4" stud dia. (19mm)		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy and H = Heavy.

D2

D3

### Metal Clip-On Mounts

- Clips on sheet metal edges for fast mounting of harness with cable ties
- For indoor use only
- Allows cable tie entry from all four sides for easy harness orientation
- Material: Zinc plated steel

E1

E2

E3

E4

E5

F

Part Number	Used with Cable Ties‡	Height A		Max. Panel Thickness		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm			
MCMS12-P-C	M, I, S	0.31	8.0	0.13	3.2	Clip-On	100	500
MCMS25-P-C		0.46	11.5	0.24	6.1			
MCMS30-P-C		0.55	14.0	0.27	6.9			
MCMS12-PJ-C*		0.31	8.0	0.13	3.2			

‡Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, and S = Standard.  
\*Note: Product is outdoor rated with superior plating.

G

H

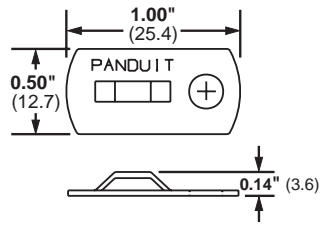
B2.16

Order number of pieces required, in multiples of Standard Package Quantity.



**Metal Screw-On Mount**

- Screw applied aluminum mounting base for a secure support in demanding applications



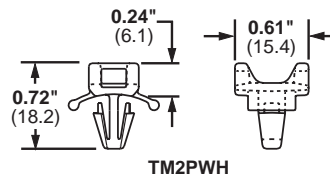
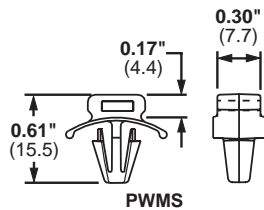
Part Number	Used with Cable Ties‡	Material	Environment	Mounting Method	Max Static Load		Std. Pkg. Qty.	Std. Ctn. Qty.
					Lbs.	g		
MBMS-S10-CY	M, I, S	Aluminum	Indoors/Outdoors	#10 (M5) Screw	10.00	4540	100	1000

‡Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, and S = Standard.



**Push Barb Cable Tie Mounts**

- Wing provides added stability
- Requires no adhesive or additional mounting hardware
- Can be used where only one side of the panel is accessible



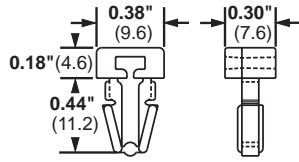
Part Number	Used with Cable Ties‡	Max. Panel Thickness		Panel Hole Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm						
PWMS-H25-C	M, I, S	0.11	2.7	0.25	6.5	Nylon 6.6	Natural	Indoors	Push Barb	100	1000
PWMS-H25-M0		0.11	2.7	0.25	6.5	Weather Resistant Nylon 6.6	Black	Outdoors		1000	5000
TM2PWH25-C	M, I, S	0.10	2.3	0.25	6.5	Nylon 6.6	Natural	Indoors	Push Barb	100	500

‡Cable tie cross section Sizes: M = Miniature, I = Intermediate, and S = Standard.



## Push Mounts

- Require no adhesive or additional mounting hardware
- Can be used where only one side of the panel is accessible



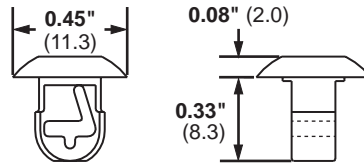
Part Number	Used with Cable Ties‡	Max. Panel Thickness		Panel Hole Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm						
PM2H25-C	M, I, S	0.125	3.2	0.250	6.4	Nylon 6.6	Natural	Indoors	Push Barb	100	500
PM2H25-M0	M, I, S	0.125	3.2	0.250	6.4	Weather Resistant Nylon 6.6	Black	Outdoors	Push Barb	1000	5000
PM2H25-M30	M, I, S	0.125	3.2	0.250	6.4	Heat Stabilized Nylon 6.6	Black	Indoors	Push Barb		

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.



## Push Button Mounts

- Require no adhesive or additional mounting hardware
- Designed for use where both sides of the panel are accessible



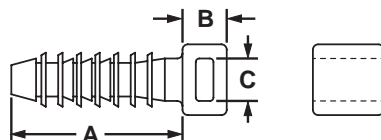
Part Number	Used with Cable Ties‡	Max. Panel Thickness		Panel Hole Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm						
PBMS-H25-C	M, I, S	0.13	3.2	0.250	6.4	Nylon 6.6	Natural	Indoors	Push Barb	100	1000
PBMS-H25-C14		0.13	3.2	0.250	6.4	Nylon 6.6	Gray				
PBMS-H25-M0	M, I, S	0.13	3.2	0.250	6.4	Weather Resistant Nylon 6.6	Black	Outdoors	Push Barb	1000	5000
PBMS-H25-M30	M, I, S	0.13	3.2	0.250	6.4	Heat Stabilized Nylon 6.6	Black	Indoors	Push Barb	1000	5000
PBM SL-H25-M30*		0.29	7.2	0.250	6.4						

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

\*not cULus listed

### Masonry Push Mounts

- Used to secure wire, cable, or tubing to masonry surfaces
- Installed quickly into pre-drilled holes; design holds bundle securely
- Material: Impact Modified Weather Resistant Nylon 6.6



Part Number	Used with Cable Ties‡	Grip Length A		Height B		Hole Diameter D		Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm					

#### Pan-Ty® Masonry Push Mounts

MPMS19-C0	M, I, S	0.97	24.6	0.25	6.4	0.19	5.0	Black	Indoors/ Outdoors	Fir Tree Hole Mount	100	500
MPMS25-C0		0.97	24.6	0.27	6.9	0.25	6.4					
MPMH38-L0	M, I, S, HS, LH, H, HLM	1.25	31.8	0.30	7.5	0.38	9.5	Black	Indoors/ Outdoors	Fir Tree Hole Mount	50	
MPMWH32-L0*		1.41	35.8	0.28	7.1	0.32	8.0					

#### Super-Grip® Masonry Push Mounts

SGMPMS19-C0	SGM, SGI, SGS	0.97	24.6	1.19	30.2	0.19	5.0	Black	Indoors/ Outdoors	Fir Tree Hole Mount	100	500
SGMPMS25-C0		0.97	24.6	1.24	31.5	0.25	6.4					
SGMPMH38-L0	SGM, SGI, SGS	1.25	31.8	1.49	37.8	0.38	9.5	Black	Indoors/ Outdoors	Fir Tree Hole Mount	50	
SGMPMWH32-L0*	SGM, SGI, SGS, SGLH, SGH	1.41	35.8	0.28	7.1	0.32	8.0	Black	Indoors/ Outdoors	Fir Tree Hole Mount	50	

#### Hyper-V™ Masonry Push Mounts

HVMPM-08-C0	HV	1.41	35.8	1.63	41.4	0.31	8.0	Black	Indoors/ Outdoors	Fir Tree Hole Mount	100	500
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‡Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, HLM = Tak-Ty® Miniature, SGM = Super-Grip® Miniature, SGI = Super-Grip® Intermediate, SGS = Super-Grip® Standard, SGLH = Super-Grip® Light-Heavy, SGH = Super-Grip® Heavy, and HV = Hyper-V™.  
\*cRUus listed

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Fir Tree Push Mounts

- Unique alternating barb design
- Lock securely into position
- Umbrella tensing
- Exclusive contoured anvil head

B2

B3

C1

C2

Part Number	Used with Cable Ties‡	Head Diameter		Panel to Top of Mount		Overall Height		Panel Hole Diameter Range		Panel Thickness Range		Material	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm			
PUM-049-M30	M, I, S	0.67	17.0	0.26	6.6	0.54	13.8	0.18 – 0.19	4.6 – 4.9	0.03 – 0.19	0.7 – 3.0	Heat Stabilized Nylon 6.6	1000	5000
PUM-071-M30	M, I, S	0.67	17.0	0.26	6.5	0.67	16.9	0.25 – 0.28	6.3 – 7.1	0.03 – 0.28	0.8 – 7.0		1000	
PUM-100-M30		0.64	16.0	0.26	6.5	0.67	16.9	0.35 – 0.40	9.0 – 10.0	0.03 – 0.28	0.8 – 7.0		1000	
PUM-925-M30	M, I, S, LH	0.77	20.0	0.30	7.6	1.05	26.7	0.34 – 0.36	8.8 – 9.3	0.04 – 0.62	1.0 – 16.0		1000	
PUME925-D350	M, I, S, LH, H, EH	1.80	30.0	0.27	7.0	1.10	28.0	0.34 – 0.36	8.8 – 9.3	0.04 – 0.62	1.0 – 16.0		500	

‡Cable Tie Cross Section: M = Miniature, I = Intermediate, S = Standard, LH = Light-Heavy, H = Heavy, and EH = Extra Heavy.

D2

### Fir Tree Push Mount Assemblies

- Cable tie/mount assemblies significantly reduce installation time compared to loose parts
- Fewer parts throughout the manufacturing/assembly process

D3

E1

E2

E3

E4

Part Number	Head Diameter		Panel to Top of Mount		Overall Height		Panel Hole Diameter Range		Panel Thickness Range		Max. Bundle Diameter		Material	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm			
PUM-049-2S-D30	0.67	17.0	0.26	6.6	0.54	13.8	0.18 – 0.19	4.6 – 4.9	0.03 – 0.19	0.7 – 3.0	1.88	48.0	Heat Stabilized Nylon 6.6	500	5000
PUM-071-2S-D30	0.67	17.0	0.26	6.6	0.67	16.9	0.25 – 0.28	6.3 – 7.1	0.03 – 0.28	0.8 – 7.0	1.88	48.0		500	5000
PUM-100-2S-D30	0.64	16.0	0.26	6.6	0.67	16.9	0.35 – 0.40	9.0 – 10.0	0.03 – 0.28	0.8 – 7.0	1.88	48.0		200	1000
PUM-925-3H-T30	0.77	20.0	0.30	7.6	1.05	26.7	0.34 – 0.36	8.8 – 9.3	0.04 – 0.62	1.0 – 16.0	3.00	76.0		100	1000
PUME925-3E-C350	1.80	30.0	0.27	7.0	1.1	28	0.34 – 0.36	8.8 – 9.3	0.04 – 0.62	1.0 – 16.0	3.25	82.6		100	1000
PUME925-4E-C350	1.80	30.0	0.27	7.0	1.1	28	0.34 – 0.36	8.8 – 9.3	0.04 – 0.62	1.0 – 16.0	4.13	105.0			

‡Use with PLT2S Cable Ties except PUM-925-3H-T30, use with PLT3H Cable Ties.

G

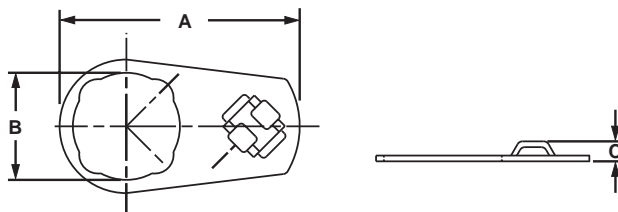
H

B2.20

Order number of pieces required, in multiples of Standard Package Quantity.

### Control Panel Mounts

- Installed behind control panel switch
- Ideal for high strain areas where cable is routed from panel to panel door
- Compatible with most control panel switch designs
- Indoor use only

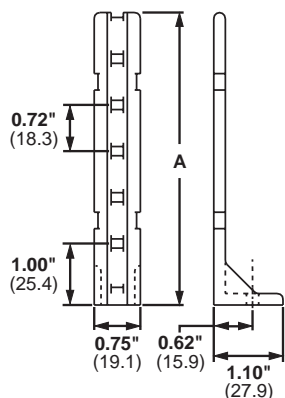


Part Number	Used with Cable Ties‡	Length A		Width B		Height C		Material	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm				
CPM87S-C	M, I, S	2.01	51.1	0.89	22.6	0.17	4.3	Zinc plated steel	Control panel switch	100	1000
CPM122S-C		2.82	71.7	1.22	31.0	0.17	4.3				

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

**UL LISTED** Pan-Post™ Standoff

- Supports cable bundles above or away from surface
- For indoor use only
- Material: Nylon 6.6

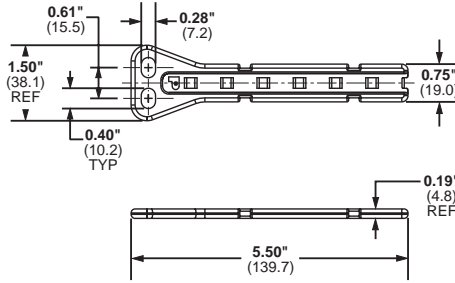
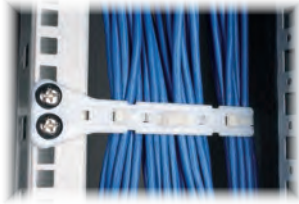


Part Number	Used with Cable Ties‡	Height A		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm				
PP1S-S10-X	M, I, S	2.00	50.8	Natural	#10 (M5) Screw	10	100
PP1S-S12-X					#12 (M5.5) Screw		
PP2S-S10-X		4.60	116.8		#10 (M5) Screw		
PP2S-S12-X					#12 (M5.5) Screw		
PP2S-S10-C0				Black	#10 (M5) Screw	100	1000

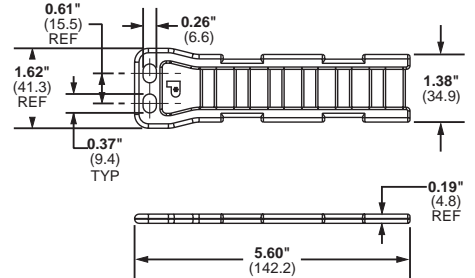
‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

**Flat Pan-Post™ Standoffs**

- Standard EIA hole spacing allows product to be mounted with user supplied screws up to 1/4" diameter
- Organize cables in standard cabinets and racks
- Mounting method: 1/4" (M6) screw
- Use where space is limited
- For indoor use only



**PPF2S**



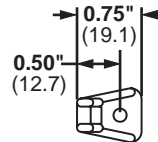
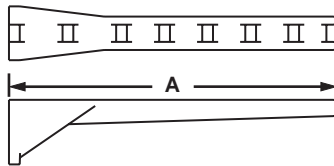
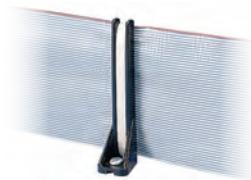
**PPF2SV**

Part Number	Used with Cable Ties‡	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
PPF2S-S25-V	M, I, S	Nylon 6.6	Natural	Two 1/4" (M6) screws	5	100
PPF2S-S25-V69		Flame Retardant Nylon 6.6				
PPF2SV-S25-V	M, I, S, HS, LH, H, HLM, HLS	Nylon 6.6				
PPF2SV-S25-V69		Flame Retardant Nylon 6.6				

‡Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, HLM = Miniature Tak-Ty® Hook & Loop Ties and HLS = Standard Tak-Ty® Hook & Loop Ties.

**UL LISTED Right Angle Bases**

- Support cable above the mounting surface



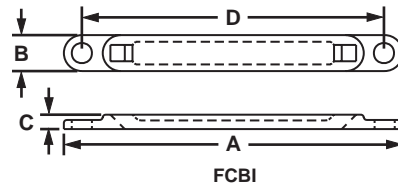
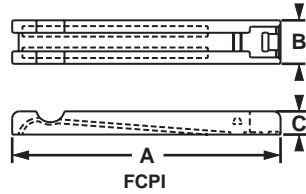
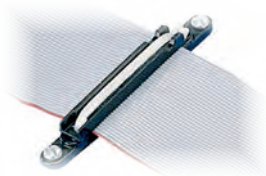
Part Number	Used with Cable Ties‡	Max. Flat Cable Width		Length A		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm						
RAFCB1-S6-C20	I	1.00	25.4	1.75	44.4	Nylon 6.6	Black	Indoors	#6 (M3) Screw	100	1000
RAFCB2-S6-C20	I	2.00	50.8	2.78	70.6						
RAFCB3-S6-C20	I	3.00	76.2	3.81	96.8						

‡Cable tie cross section sizes: I = Intermediate.



**UL<sup>®</sup> US Flat Cable Mounting System – FCB Base and FCPI Plate**

- Secures stacked cables, folds, and breakouts, as well as laminated and molded bus bars
- Use one base, one corresponding size plate (FCPI), and one Intermediate cross section cable tie
- For indoor use only
- See also Latching Flat Cable Mounts on page B2.35
- Material: Nylon 6.6

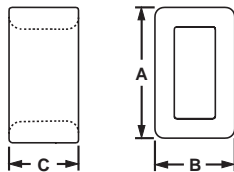


Part Number	Max. Flat Cable Width		Length A		Width B		Height C		Hole Spacing D		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm				
FCBI1-A-C20	1.04	26.4	2.50	63.5	0.38	9.5	0.15	3.8	—	—	Black	User Supplied Adhesive	100	1000
FCBI2-A-C20	2.04	51.8	3.50	88.9	0.38	9.5	0.15	3.8	—	—				
FCBI3-A-C20	3.32	7.72	4.52	114.8	0.38	9.5	0.15	3.8	—	—				
FCBI1-S10-C20	1.04	26.4	2.50	63.5	0.38	9.5	0.15	3.8	2.08	52.8	Black	#10 (M5) Screw	100	1000
FCBI2-S10-C20	2.04	51.8	3.50	88.9	0.38	9.5	0.15	3.8	3.10	78.7				
FCBI3-S10-C20	3.32	7.72	4.52	114.8	0.38	9.5	0.15	3.8	4.12	104.6				
FCPI1-C20*	1.04	26.4	1.29	32.8	0.38	9.5	0.20	5.1	—	—	Black	Cable Ties	100	1000
FCPI2-C20*	2.04	51.8	2.31	58.7	0.38	9.5	0.20	5.1	—	—				
FCPI3-C20*	3.32	7.72	3.32	84.3	0.38	9.5	0.20	5.1	—	—				

\*Recommend for use with PLT2I cable ties on page B1.8

**UL<sup>®</sup> US LISTED Closed Connector Rings**

- Connect multiple cable bundles



Part Number	Used with Cable Ties ‡	Length A		Width B		Height C		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm						
CR2-M	M, I, S	0.33	8.4	0.20	5.1	0.20	5.0	Nylon 6.6	Natural	Indoors	Cable Ties	1000	10000
CR4H-M		0.57	14.5	0.36	9.1	0.30	7.6	Nylon 6.6	Natural	Indoors			
CR4H-M0	M, I, S, HS, LH	0.57	14.5	0.36	9.1	0.30	7.6	Weather Resistant Nylon 6.6	Black	Indoors/Outdoors			

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard and LH = Light-Heavy.

A

# PANDUIT®

# Industrial Electrical Solutions

B1

## Open Connector Ring

- Designed to add on cable bundles without removing cable ties

B2

B3

C1

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
CROS-M	M, I, S	Nylon 6.6	Natural	Indoors	Cable Ties	1000	5000

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

C3

## Cable Spacers

- Used to separate and/or hang cords, cables, and tubing

C4

D1

D2

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
CSH-D20	M, I, S, HS, LH, H	Nylon 6.6	Black	Indoors	Cable Ties	500	2500
CSH-D0		Weather Resistant Nylon 6.6	Black	Indoors/Outdoors			

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy and H = Heavy.

E1

E2

## Cable Spacer Cross

- Connects two bundles at 90°
- Separates bundles to prevent abrasion
- Dual cradle design stabilizes cable bundle

E3

E4

E5

F

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
CSCS-M	M, I, S	Nylon 6.6	Natural	Indoors	Cable Ties	1000	10000

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

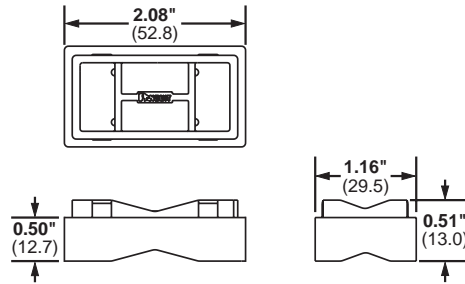
H

B2.24

Order number of pieces required, in multiples of Standard Package Quantity.

### Stackable Aerial Cable Spacer

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Each spacer snaps into another to increase spacer heights by 1/2" increments
- Designed for use in parallel or perpendicular applications
- For use with Dura-Ty™ Cable Ties shown on page B1.51 or Pan-Steel® Self-Locking Cable Ties on page B3.5 – B3.6.

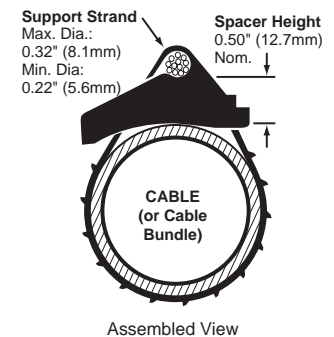
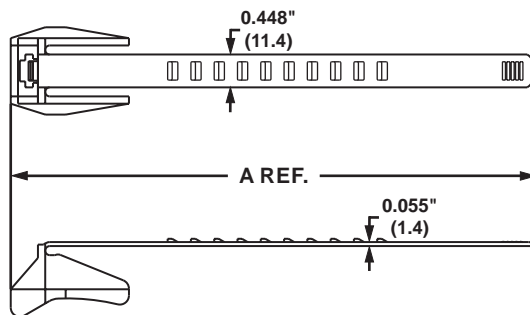


Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
SACS50-T100	LH, H, EH	Weather Resistant Polypropylene	Black	Outdoors	Cable Ties	200	2000

\*Cable tie cross sizes: LH = Light-Heavy, H = Heavy, and EH = Extra-Heavy.

### Aerial Support Ties – Weather Resistant Polypropylene

- Designed to attach coax or telephone cable to the 1/4" (6.4mm) or 5/16" (7.9mm) support strand to form the expansion loop and keep equipment and cables clear of pole hardware
- One-piece construction with integral 1/2" (12.7mm) spacer reduces inventory costs of separate spacer and bands, and installs faster to lower installed cost
- Releasable and re-usable
- Hand install only



Part Number	Length A		Max. Bundle Diameter		Min. Loop Tensile Strength		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	Lbs.	N		
AST10-5-C100	5.6	142	1.00	25	75	334	100	1000
AST15-5-C100	6.9	175	1.50	38	75	334		
AST20-5-C100	8.4	214	2.00	51	75	334		
AST25-5-C100	10.0	254	2.50	64	75	334		

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Permanent Marking Pens

- Fast drying, permanent ink for identification on marker ties (pages B1.32, B1.50), marker plates (page B2.26), or cable marker straps (page B1.76)
- May be used with any label shown in the catalog when a printer is not available

B2

B3

C1

C2

PX-0  
PX-2

PX-10

C3

Part Number	Color	Description	Std. Pkg. Qty.	Std. Ctn. Qty.
PX-0	Black	Permanent marking pen – regular tip	12	144
PX-2	Red			
PX-10	White	Marking pen for black or other dark colored parts – regular tip	12	300

C4

D1

### Marker Plates – Loose Piece

- Install as flags, tags, or wrap-around identification plates to clearly identify all wire harnesses
- Use with nylon marking pens for an easy and economic alternative to identify wire harnesses
- Available in black or white to match the wire harness
- Thickness: 0.02 inches (0.5mm)

D2

D3

E1

E2

Part Number	Used with Cable Ties‡	Length A		Width B		Hole Spacing C		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm						
MP150-C	M, I, S	1.50	38.1	0.75	19.0	1.03	26.2	Nylon 6.6	White	Indoors	Cable Ties	100	500
MP175-C		1.75	44.4	0.75	19.0	1.28	32.5						
MP200-C		2.00	50.8	0.75	19.0	1.53	38.9						
MP250-C		2.50	63.5	0.75	19.0	2.03	51.6						
MP350-C	M, I, S	3.50	88.9	0.75	19.0	3.03	77.7	Nylon 6.6	White	Indoors	Cable Ties	100	1000
MP250W175-C		2.50	63.5	1.75	44.5	2.03	51.6						
MP150-C0	M, I, S	1.50	38.1	0.75	19.0	1.03	26.2	Weather Resistant Nylon 6.6	Black	Indoors/Outdoors	Cable Ties	100	500
MP175-C0		1.75	44.4	0.75	19.0	1.28	32.5						
MP200-C0		2.00	50.8	0.75	19.0	1.53	38.9						
MP250-C0		2.50	63.5	0.75	19.0	2.03	51.6						
MP350-C0	M, I, S	3.50	88.9	0.75	19.0	3.03	77.7	Weather Resistant Nylon 6.6	Black	Indoors/Outdoors	Cable Ties	100	1000

E3

E4

E5

F

G

H

‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

B2.26

Order number of pieces required, in multiples of Standard Package Quantity.

## Cable and Wire Mounting Devices (Used without Cable Ties)



Wiring accessories are an integral part of the Panduit comprehensive selection of wire management products.

These accessories are one piece solutions that help provide the lowest installed cost for controlling, mounting, and protecting wire and cable. Mounting methods include:

- Adhesive-backed
- Screw applied
- Rivet applied
- Push mounts

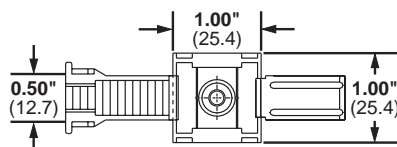
### Adhesive Backed Mounting Devices

#### Faster Liner Removal Speeds Installation and Lowers Installed Cost

- The adhesive backed mounts are offered either as one or two mounts per liner
- The 2-up mounts are easily removed by bending the mounts away from the liner
- The individual mounts have a convenient tear tab for quick removal

### Clincher™ Adjustable Releasable Clamp

- Adjustable clamp designed to contain a range of cable bundle diameters
- Latch can be released to provide access to cable bundles
- For indoor use only
- Material: Polypropylene



Part Number	Bundle Diameter Range		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm				
ARC.68-A-Q	0.19 – 0.68	4.8 – 17.3	White	Rubber Adhesive Tape	25	250
ARC.68-A-Q14	0.19 – 0.68	4.8 – 17.3	Gray			
ARC.68-S6-Q	0.19 – 0.69	4.8 – 17.5	White	#6 (M3) Screw	25	250
ARC.68-S6-Q14	0.19 – 0.69	4.8 – 17.5	Gray			

A

# PANDUIT®

# Industrial Electrical Solutions

B1

## c<sup>®</sup> **US Adhesive Backed Cord Clips**

- Cables are easily snapped into or out of the clips

B2

**A**  
Max Bundle: 0.19"

**B**  
Max Bundle: 0.38"

**C**  
Max Bundle: 0.62"

C1

C2

	Max. Bundle Dia.: 0.19"	Max. Bundle Dia.: 0.38"	Max. Bundle Dia.: 0.62"
Natural Nylon 6.6; Rubber Adhesive; 100 pc/pkg	ACC19-A-C	ACC38-A-C	ACC62-A-C
Natural Nylon 6.6; Acrylic Adhesive; 100 pc/pkg	ACC19-AT-C	ACC38-AT-C	ACC62-AT-C
Black Nylon 6.6; Rubber Adhesive; 100 pc/pkg	ACC19-A-C0	ACC38-A-C0	ACC62-A-C0
Black Weather Resistant Nylon 6.6; Acrylic Adhesive; 100 pc/pkg	ACC19-AT-C0	ACC38-AT-C0	ACC62-AT-C0
Black Heat Stabilized Weather Resistant Nylon; High Bond Acrylic Adhesive, 1,000 pc/pkg	ACC19-AV-M300*	ACC38-AV-M300*	ACC62-AV-M300*

\*Not UL recognized

D2

D3

## c<sup>®</sup> **US Push Mount Cord Clip**

- Cables are easily snapped into or out of clips
- Winged design holds mount in place even in applications where vibration is present
- Design of wing provides added stability

E2

E3

E4

E5

Part Number	Max. Bundle Diameter		Max. Panel Thickness		Panel Hole Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm						
PMCC38H25-C	0.38	9.6	0.105	2.7	0.250	6.4	Nylon 6.6	Natural	Indoors	Push Barb	100	1000
PMCC38H25-M0	0.38	9.6	0.105	2.7	0.250	6.4	Weather Resistant Nylon 6.6	Black	Outdoors		1000	5000

G

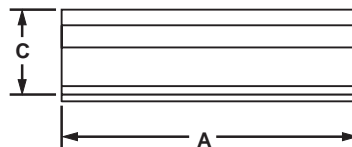
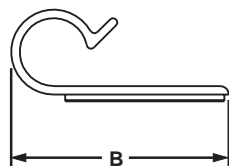
H

B2.28

Order number of pieces required, in multiples of Standard Package Quantity.

**cFL<sup>®</sup> US “J” Clips**

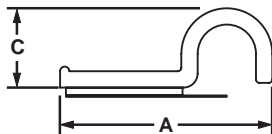
- Low profile clips retain cords, cables, or tubing
- Flexible design allows for easy cord insertion, yet holds bundle tightly
- For indoor use only
- Material: PVC



Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Diameter		Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm				
AJC12-A-C	0.12	3.0	1.00	2.54	0.86	21.8	0.19	4.8	0.13	3.3	Light Gray	Rubber Adhesive Tape	100	500
AJC19-A-C	0.19	4.8	1.25	3.18	0.87	22.1	0.26	6.6	0.18	4.6				
AJC25-A-C	0.25	6.4	1.50	38.1	0.97	24.6	0.31	7.9	0.23	5.8				
AJC31-A-C	0.31	7.9	1.75	44.5	1.22	30.1	0.40	10.2	0.29	7.4				
AJC38-A-C	0.38	9.6	2.00	50.8	1.27	32.3	0.50	12.7	0.39	9.9	Light Gray	Rubber Adhesive Tape	100	1000

**cFL<sup>®</sup> US A1C Type Clips**

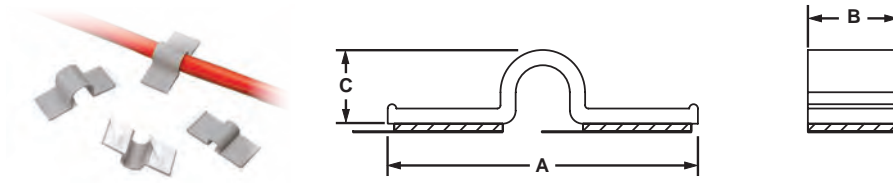
- Hold cords, cables, and tubing
- Single rubber adhesive pad for confined areas
- For indoor use only
- Material: PVC



Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
A1C12-A-C8	0.12	3.0	0.77	19.6	0.63	16.0	0.23	5.8	Light Gray	Rubber	100	1000
A1C25-A-C8	0.25	6.4	0.91	23.1	0.63	16.0	0.38	9.7				
A1C38-A-C8	0.38	9.5	1.04	26.4	0.63	16.0	0.51	13.0				
A1C50-A-C8	0.50	12.7	1.17	29.7	0.63	16.0	0.64	16.3				

## c **RU** us **A2C Type Clips**

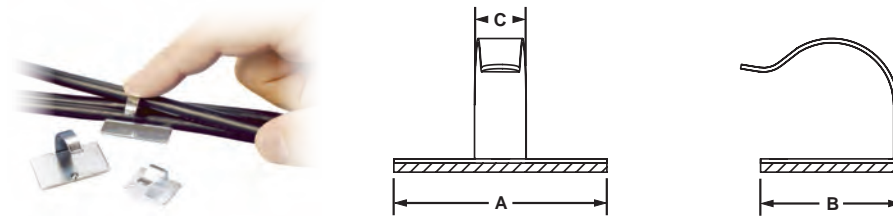
- Hold cords, cables, and tubing
- Two rubber adhesive pads for added strength
- For indoor use only
- Material: PVC



Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
A2C12-A-C8	0.12	3.0	1.30	33.0	0.63	16.0	0.23	5.8	Light Gray	Rubber	100	1000
A2C25-A-C8	0.25	6.4	1.43	36.3	0.63	16.0	0.36	9.1				
A2C38-A-C8	0.38	9.5	1.56	39.6	0.63	16.0	0.49	12.4				
A2C50-A-C8	0.50	12.7	1.72	43.7	0.63	16.0	0.61	15.5				

## D1 **Metal Adhesive Backed Cord Clips**

- Can be opened and closed without damaging clip in order to remove or add cables quickly and easily
- For indoor use only



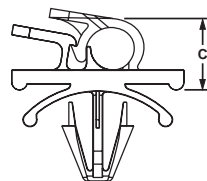
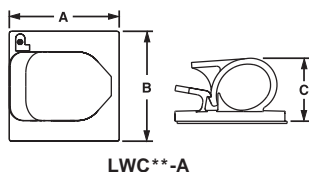
Part Number	Max. Bundle Diameter		Length A		Width B		Clip Width C		Material	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
MACC25-A-C	0.25	6.4	0.77	19.6	0.54	13.7	0.29	7.4	Zinc Plated Steel	Rubber	100	1000
MACC62-A-C	0.62	15.7	1.18	30.0	0.78	19.7	0.29	7.4				
MACC25-AV-D	0.25	6.4	0.77	19.6	0.54	13.7	0.29	7.4	Zinc Plated Steel	High Bond Acrylic	500	
MACC62-AV-C	0.62	15.7	1.18	30.0	0.78	19.7	0.29	7.4	Zinc Plated Steel	High Bond Acrylic	100	



**c PA<sup>®</sup> US Latching Wire Clips**

- Route and secure cords and cables
- Convenient releasable latch
- Available in six sizes with releasable latch

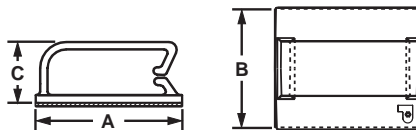
- Push barb parts are for use with a max panel thickness of 0.11" (2.7mm) and a hole diameter of 0.22" (5.6mm)
- For indoor use only
- Material: Nylon 6.6



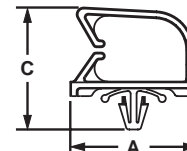
Part Number	Max. Bundle Diameter		Length		Width		Height		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
<b>Adhesive Backed</b>												
LWC19-A-C	0.19	4.8	0.85	21.6	0.61	15.5	0.39	9.9	Natural	Rubber Adhesive	100	1000
LWC19-A-C14	0.19	4.8	0.85	21.6	0.61	15.5	0.39	9.9	Gray			
LWC19-A-C20	0.19	4.8	0.85	21.6	0.61	15.5	0.39	9.9	Black			
LWC25-A-C	0.25	6.4	0.88	22.2	1.00	25.4	0.45	11.4	Natural			
LWC25-A-C14	0.25	6.4	0.88	22.2	1.00	25.4	0.45	11.4	Gray			
LWC25-A-C20	0.25	6.4	0.88	22.2	1.00	25.4	0.45	11.4	Black			
LWC38-A-C	0.38	9.5	1.00	25.4	1.00	25.4	0.56	14.2	Natural			
LWC38-A-C14	0.38	9.5	1.00	25.4	1.00	25.4	0.56	14.2	Gray			
LWC38-A-C20	0.38	9.5	1.00	25.4	1.00	25.4	0.56	14.2	Black			
LWC50-A-L	0.50	12.7	1.26	32.0	1.00	25.4	0.67	17.0	Natural	Rubber Adhesive	50	1000
LWC50-A-L14	0.50	12.7	1.26	32.0	1.00	25.4	0.67	17.0	Gray			
LWC50-A-L20	0.50	12.7	1.26	32.0	1.00	25.4	0.67	17.0	Black			
LWC75-A-L	0.75	19.1	1.48	37.6	1.24	31.5	0.90	22.9	Natural			
LWC75-A-L14	0.75	19.1	1.48	37.6	1.24	31.5	0.90	22.9	Gray			
LWC75-A-L20	0.75	19.1	1.48	37.6	1.24	31.5	0.90	22.9	Black			
LWC100-A-L	1.00	25.4	2.21	56.1	1.97	50.0	1.26	32.0	Natural			
LWC100-A-L14	1.00	25.4	2.21	56.1	1.97	50.0	1.26	32.0	Gray			
LWC100-A-L20	1.00	25.4	2.21	56.1	1.97	50.0	1.26	32.0	Black			
<b>Push Mount</b>												
LWC19-H25-C	0.19	4.8	0.85	21.6	0.51	12.8	0.41	10.4	Natural	Push Barb	100	1000
LWC19-H25-C14	0.19	4.8	0.85	21.6	0.51	12.8	0.41	10.4	Gray			
LWC25-H25-C	0.25	6.4	0.86	21.8	0.58	14.7	0.47	11.9	Natural			
LWC25-H25-C14	0.25	6.4	0.86	21.8	0.58	14.7	0.47	11.9	Gray			
LWC25-H25-C20	0.25	6.4	0.86	21.8	0.58	14.7	0.47	11.9	Black			
LWC38-H25-C	0.38	9.5	0.94	23.9	0.58	14.7	0.57	14.5	Natural			
LWC38-H25-C14	0.38	9.5	0.94	23.9	0.58	14.7	0.57	14.5	Gray			
LWC38-H25-C20	0.38	9.5	0.94	23.9	0.58	14.7	0.57	14.5	Black			
LWC50-H25-L	0.50	12.7	1.25	31.8	0.76	19.3	0.78	19.8	Natural			
LWC50-H25-L14	0.50	12.7	1.25	31.8	0.76	19.3	0.78	19.8	Gray			
LWC50-H25-L20	0.50	12.7	1.25	31.8	0.76	19.3	0.78	19.8	Black			
LWC75-H25-L	0.75	19.1	1.45	36.8	0.87	22.1	0.97	24.7	Natural			
LWC75-H25-L14	0.75	19.1	1.45	36.8	0.87	22.1	0.97	24.7	Gray			
LWC75-H25-L20	0.75	19.1	1.45	36.8	0.87	22.1	0.97	24.7	Black			
LWC100-H25-L	1.00	25.4	1.89	47.9	0.99	25.2	1.30	33.0	Natural			
LWC100-H25-L14	1.00	25.4	1.89	47.9	0.99	25.2	1.30	33.0	Gray			
LWC100-H25-L20	1.00	25.4	1.89	47.9	0.99	25.2	1.30	33.0	Black			

**Bevel Entry Clips**

- Beveled entry allows for easy insertion of cable bundle



BEC



BECP

Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm						

**Adhesive Backed**

<b>BEC38-A-L</b>	0.38	9.6	1.46	37.1	1.24	31.5	0.52	13.2	Nylon 6.6	Natural	Indoors	Rubber Adhesive	50	500
<b>BEC38-A-L20</b>	0.38	9.6	1.46	37.1	1.24	31.5	0.52	13.2	Nylon 6.6	Black				
<b>BEC62-A-L</b>	0.62	15.7	1.46	37.1	1.24	31.5	0.79	20.1	Nylon 6.6	Natural				
<b>BEC62-A-L20</b>	0.62	15.7	1.46	37.1	1.24	31.5	0.79	20.1	Nylon 6.6	Black				
<b>BEC75-A-L</b>	0.75	19.0	1.46	37.1	1.49	37.8	0.89	22.6	Nylon 6.6	Natural				
<b>BEC75-A-L20</b>	0.75	19.0	1.46	37.1	1.49	37.8	0.89	22.6	Nylon 6.6	Black				

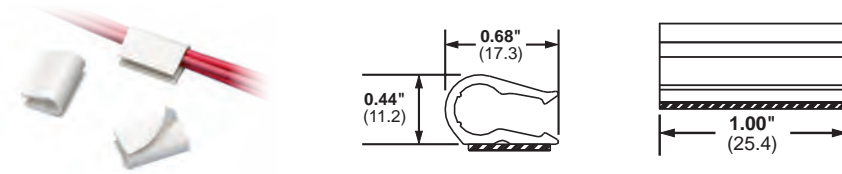
**Push Barb**

<b>BECP38H25-L</b>	0.38	9.6	1.46	37.1	0.73	18.5	1.00	25.4	Nylon 6.6	Natural	Indoors	Push Barb	50	500
<b>BECP38H25-L20</b>	0.38	9.6	1.46	37.1	0.73	18.5	1.00	25.4	Nylon 6.6	Black				
<b>BECP75H25-L</b>	0.75	19.0	1.47	37.3	0.73	18.5	1.00	25.4	Nylon 6.6	Black				
<b>BECP75H25-L20</b>	0.75	19.0	1.47	37.3	0.73	18.5	1.00	25.4	Nylon 6.6	Natural				

\*For proper selection of adhesive see page B2.53.

### Adhesive Backed Dual Cord Clip

- Holds two cables in high temperature applications

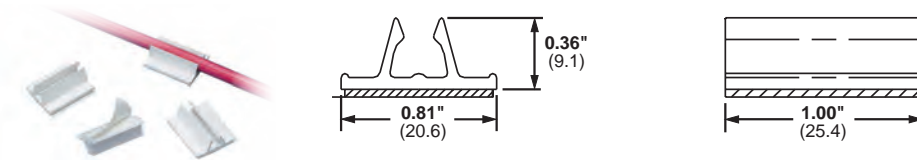


Part Number	Max. Bundle Diameter		Material	Color	Environment	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm						
<b>Adhesive Backed</b>								
ADCC31-AT-C10	0.33	9.0	NORYL*	White	Indoors	Acrylic	100	500

\*NORYL Thermoplastic Resin is a registered trademark of General Electric Company.

### Adhesive Backed Mount Cord Clip

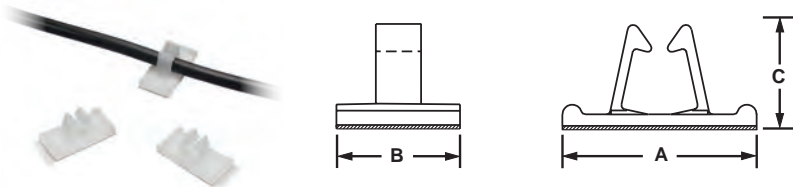
- Holds a single cable
- Funnel entry speeds cable insertion
- Vertical cable entry for ease of installation



Part Number	Max. Bundle Diameter		Material	Color	Environment	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm						
<b>Adhesive Backed</b>								
AMC25-AT-C10	0.22 – 0.28	6.0 – 7.0	PVC	White	Indoors	Acrylic	100	1000

### Vertical Cord Clips

- Funnel entry design allows for easy insertion of cords and cables
- Vertical cable entry for ease of installation
- For indoor use only

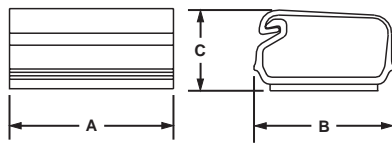
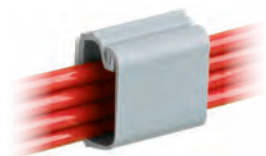


Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Material	Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm					
<b>Adhesive Backed</b>													
VCC25-A-C	0.25	6.4	1.00	25.4	0.50	12.7	0.44	11.2	Nylon 6.6	Natural	Rubber	100	500
VCC50-A-C	0.25	12.7	1.56	39.7	1.00	25.4	0.81	20.6					

B1

**US Adhesive Backed Latching Clips**

- Latching cover withstands vibration
- For indoor use only



B2

B3

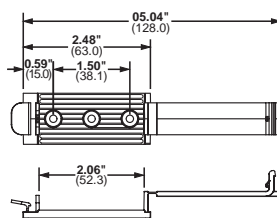
C1

Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Material	Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm					
LC3-A-C8	0.20	5.0	0.75	19.1	0.75	19.0	0.47	11.9	PVC	Light Gray	Rubber	100	1000
LC5-A-C8	0.36	9.1	1.01	25.7	1.01	25.7	0.61	15.5					
LC10-A-L8	0.93	23.6	1.51	38.4	1.51	38.4	0.84	21.3	PVC	Light Gray	Rubber	50	500

C3

**US Cable Holder – Adhesive Backed**

- Convenient releasable latch allows easy addition and removal of cables
- Low profile design provides a compact cable routing solution
- For indoor use only



D1

D2

D3

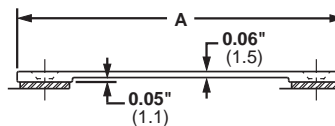
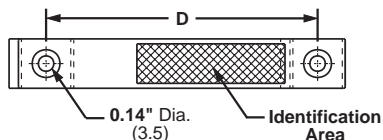
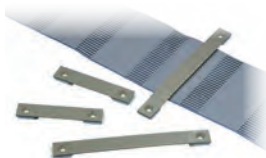
Part Number	Cable Width		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
CH105-A-C14	2.06	52.3	Nylon 6.6	Gray	Rubber Adhesive Tape	100	1000
CH105-S6-C14	2.06	52.3	Nylon 6.6	Gray	#6 (M3) Screw		

E1

E2

**US Low Profile Flat Cable Mounts**

- Three sizes provide a cost effective flat cable containment for stack heights up to 0.105 inches (2.7mm)
- Features a matte, textured surface, for either hand written identification or application of computer labels
- Low profile design holds wires, cables, and tubing
- For indoor use only



E4

E5

F

Part Number	Cable Width		Length A		Hole Spacing D		Material	Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm					

**Adhesive Backed**

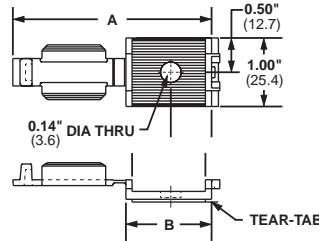
LPFCM14-A-C14	1.44	37.0	2.56	65.0	0.75	19.0	Nylon 6.6	Gray	Rubber	100	500
LPFCM22-A-C14	2.19	56.0	3.31	84.0	1.01	25.7					
LPFCM34-A-C14	3.44	87.0	4.56	115.8	1.51	38.4					

G

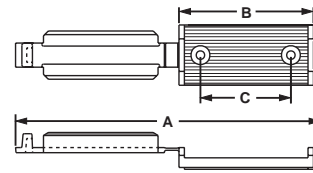
H

**FCM<sup>®</sup> US Latching Flat Cable Mounts**

- Available in four sizes with a stack height of 0.17 inches (4.3mm) to accommodate different flat cable widths
- Low profile design holds wires, cables, and tubing
- Convenient releasable latch
- Large mounting base for high bonding strength
- For indoor use only
- Material: Nylon 6.6



FCM1 and FCM1.2



FCM2 and FCM3.25

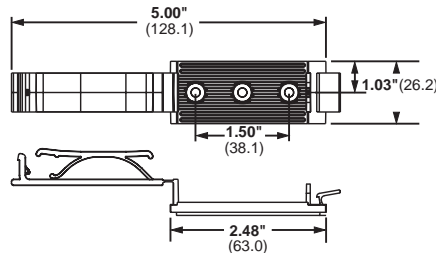
Part Number	Cable Width		Length A		Width B		Hole Spacing C		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
<b>Adhesive Backed</b>												
FCM1-A-C14	1.05	26.7	2.90	73.7	1.05	26.7	—	—	Gray	Rubber Adhesive	100	500
FCM1.2-A-C14	1.20	30.5	3.16	80.3	1.37	34.8	—	—			100	1000
FCM2-A-C14	2.05	52.1	5.06	128.5	2.22	56.4	1.53	38.9			100	500
FCM3.25-A-L14	3.38	85.9	7.30	185.4	3.38	85.9	1.50	38.1	Gray	Rubber Adhesive	50	500

**Screw Mounted**

FCM1-S6-C14	1.05	26.7	2.90	73.7	1.05	26.7	—	—	Gray	#6 (M3) Screw	100	1000
FCM1.2-S6-C14	1.20	30.5	3.16	80.3	1.37	34.8	—	—				
FCM2-S6-C14	2.05	52.1	5.06	128.5	2.22	56.4	1.53	38.9				
FCM3.25-S6-L14	3.38	85.9	7.30	185.4	3.38	85.9	1.50	38.1	Gray	#6 (M3) Screw	50	500

**FCM<sup>®</sup> US Latching Flat Cable Holders**

- Low profile design holds wires, cables, and tubing
- Convenient releasable latch
- Large mounting base for high bonding strength
- For indoor use only
- See also Flat Cable Mounting System on Page B2.23
- Material: Nylon 6.6



Part Number	Length		Cable Width		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm				
<b>Adhesive Backed</b>								
FCH2-A-C14	2.48	63.0	2.06	50.8	Gray	Rubber Adhesive	100	500
FCH2-S6-C14	2.48	63.0	2.06	50.8	Gray	#6 (M3) Screw		

See also Flat Cable Mounting System on Page B2.23.

A

# PANDUIT®

# Industrial Electrical Solutions

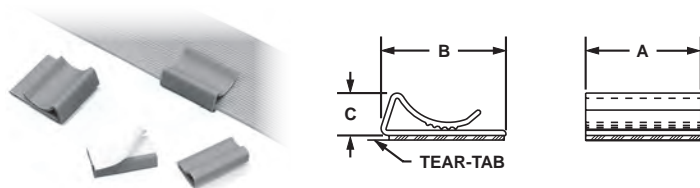
B1

## c Flat Cable Clips

- Use with any width flat cable for a maximum stack height of 0.17 inches (4.3mm)
- Low profile design holds wires, cables, and tubing
- For indoor use only
- Material: PVC

B2

B3



C1

C2

Part Number	Cable Width	Length A		Width B		Height C		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm				
FCC5-A-C8	Any width flat cable	1.00	25.4	0.56	14.2	0.29	7.4	Gray	Rubber	100	1000
FCC-A-C8		1.00	25.4	1.09	27.7	0.38	9.7				

C3

C4

## Pan-Clamp™ Heavy Duty Fixed Diameter Clamps

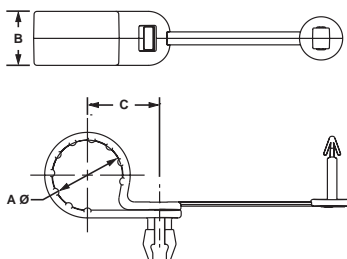
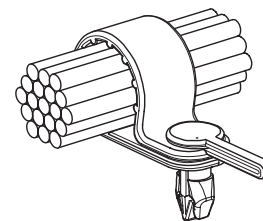
- One-piece design significantly reduces installation time
- Integrated ribs prevent rotation of cable bundles and ensures secure grip on hoses
- Material: Impact modified Weather Resistant Nylon 6.6

D1

D2



D3

E1

E2

E3

Part Number	Max. Bundle Diameter A		Width B		Bundle Offset C		Max. Panel Thickness		Panel Hole Diameter		Color	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm			
PC038-H25D-C0	0.38	9.5	0.62	15.7	0.64	16.3	0.13	3.2	0.28	7.1	Black	100	500
PC050-H25D-C0	0.50	12.7	0.62	15.7	0.71	17.9	0.13	3.2	0.28	7.1			
PC062-H25D-C0	0.63	15.8	0.62	15.7	0.77	19.5	0.13	3.2	0.28	7.1			
PC075-H25D-C0	0.75	19.1	0.62	15.7	0.83	21.1	0.13	3.2	0.28	7.1		100	1000
PC087-H25D-C0	0.88	22.1	0.62	15.7	0.89	22.7	0.13	3.2	0.28	7.1			
PC100-H25D-C0	1.00	25.4	0.62	15.7	0.96	24.3	0.13	3.2	0.28	7.1			
PC112-H25D-C0	1.13	28.5	0.62	15.7	1.02	25.8	0.13	3.2	0.28	7.1			
PC125-H25D-C0	1.25	31.8	0.62	15.7	1.08	27.4	0.13	3.2	0.28	7.1			

F

G

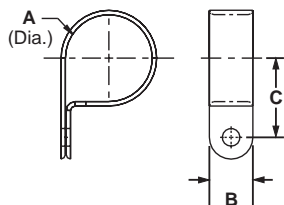
H

B2.36

Order number of pieces required, in multiples of Standard Package Quantity.

**PA<sup>®</sup> US Fixed Diameter Cable Clamps**

- Durable Nylon 6.6 cable clamps



Part Number	Max. Bundle Diameter A		Width B		Bundle Offset C		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm			
CCS12-S8-C	0.12	3.1	0.37	9.4	0.33	8.4	#8 (M4) Screw	100	500
CCS19-S8-C	0.19	4.8	0.37	9.4	0.43	10.9			
CCS25-S8-C	0.25	6.3	0.37	9.4	0.41	10.4			
CCS25-S10-C	0.25	6.3	0.37	9.4	0.41	10.4	#10 (M5) Screw	100	500
CCS31-S8-C	0.31	7.9	0.37	9.4	0.49	12.4	#8 (M4) Screw	100	500
CCS38-S8-C	0.38	9.5	0.37	9.4	0.59	15.0			
CCS44-S8-C	0.44	11.1	0.37	9.4	0.57	14.5			
CCS50-S8-C	0.50	12.7	0.37	9.4	0.60	15.2			
CCH12-S10-C	0.12	3.1	0.50	12.7	0.36	9.1			
CCH19-S10-C	0.19	4.8	0.50	12.7	0.42	10.7	#10 (M5) Screw	100	500
CCH25-S10-C	0.25	6.3	0.50	12.7	0.46	11.7			
CCH31-S10-C	0.31	7.9	0.50	12.7	0.50	12.7			
CCH38-S10-C	0.38	9.5	0.50	12.7	0.53	13.5			
CCH44-S10-C	0.44	11.1	0.50	12.7	0.56	14.2			
CCH50-S10-C	0.50	12.7	0.50	12.7	0.59	15.0			
CCH56-S10-C	0.56	14.2	0.50	12.7	0.61	15.5			
CCH62-S10-C	0.62	15.7	0.50	12.7	0.65	16.5			
CCH69-S10-C	0.69	17.5	0.50	12.7	0.75	19.1			
CCH75-S10-C	0.75	19.1	0.50	12.7	0.78	19.8			
CCH81-S10-C	0.81	20.6	0.50	12.7	0.81	20.6			
CCH87-S10-C	0.87	22.1	0.50	12.7	0.84	21.3			
CCH100-S10-C	1.00	25.4	0.50	12.7	0.91	23.1			
CCH112-S10-C	1.12	28.4	0.50	12.7	0.97	24.6			
CCH119-S10-C	1.19	30.2	0.50	12.7	1.00	25.4			
CCH125-S10-C	1.25	31.8	0.50	12.7	1.06	26.9			
CCH138-S10-C	1.37	34.8	0.50	12.7	1.12	28.4			
CCH150-S10-C	1.50	38.1	0.50	12.7	1.19	30.2			

All parts listed are also available in black weather resistant material (add suffix 0). Bulk package only.

A

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## Industrial Electrical Solutions

B1

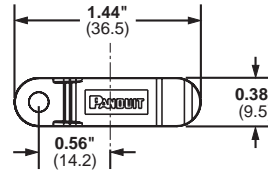
### c Wire Retainers

- Wires slide into the clip and are held in place by tension
- Low profile design holds wires, cables, and tubing
- Funnel entry design allows for easy insertion of cords and cables

B2

B3





C1

C2

Part Number	Max. Bundle Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm						
TWR-C	0.38	9.5	Nylon 6.6	Natural	Indoors	#6 (M3) Screw	100	500
TWR-C0	0.38	9.5	Weather Resistant Nylon 6.6	Black	Outdoors			

C3

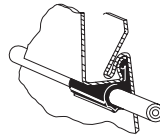
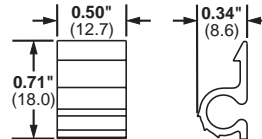
C4

### Horizontal Siding Clips

- Low profile installs without drilling or nailing
- Will not corrode or stain siding
- Attach coax cable to buildings having "Pittsburgh Interlok" type aluminum or steel siding

D1

D2

D3

E1

Part Number	Max. Bundle Diameter		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
HSC.25-L	0.25	6.4	Nylon 6.6	White	Clip	50	500
HSC.25-L100	0.25	6.4	Weather Resistant Polypropylene	Black			

E2

E3

E4

E5

F

G

H

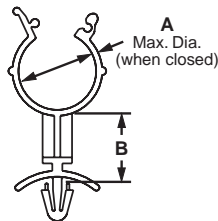
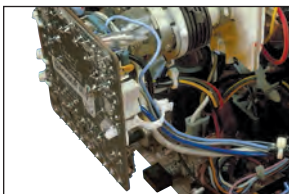
B2.38

Order number of pieces required, in multiples of Standard Package Quantity.



**c** **PA** **US** Wire Standoffs

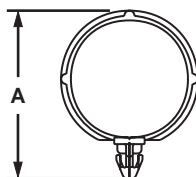
- For retaining wires, cable, components or tubing away from panel or conductive chassis
- Design of wing provides added stability
- Material: Nylon 6.6
- Finger grip flanges can be easily locked or unlocked for revisions
- For indoor use only



Part Number	Max. Bundle Diameter A		Standoff Height B		Max. Panel Thickness		Panel Hole Diameter		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
WS25-25-C	0.25	6.4	0.25	6.4	0.08	2.0	0.19	4.7	Natural	Push Barb	100	500
WS25-50-C	0.25	6.4	0.50	12.7	0.08	2.0	0.19	4.7				
WS25-75-C	0.25	6.4	0.75	19.1	0.08	2.0	0.19	4.7				
WS35-25-C	0.35	8.9	0.25	6.4	0.08	2.0	0.19	4.7				
WS35-50-C	0.35	8.9	0.50	12.7	0.08	2.0	0.19	4.7				
WS35-75-C	0.35	8.9	0.75	19.1	0.08	2.0	0.19	4.7				
WS50-25-C	0.47	11.9	0.25	6.4	0.08	2.0	0.19	4.7				
WS50-50-C	0.47	11.9	0.50	12.7	0.08	2.0	0.19	4.7				
WS50-75-C	0.47	11.9	0.75	19.1	0.08	2.0	0.19	4.7				
WS75-25-C	0.78	19.8	0.25	6.4	0.08	2.0	0.19	4.7				
WS75-50-C	0.78	19.8	0.50	12.7	0.08	2.0	0.19	4.7				
WS75-75-C	0.78	19.8	0.75	19.1	0.08	2.0	0.19	4.7				

**c** **PA** **US** Snap-In Clips

- Clip around bundle to hold securely in place
- Material: Nylon 6.6
- Clips are placed on the bundle then attached to the panel
- For indoor use only



Part Number	Max. Bundle Diameter A		Standoff Height B		Max. Panel Thickness		Panel Hole Diameter		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
SICH25-C	0.25	6.4	0.40	20.9	0.10	2.5	0.25	6.4	Natural	Push Barb	100	500
SICH38-C	0.38	9.7	0.54	24.9	0.10	2.5	0.25	6.4				
SICH50-C	0.50	12.7	0.67	28.2	0.10	2.5	0.25	6.4				
SICH75-C	0.75	19.1	0.96	35.6	0.10	2.5	0.25	6.4				
SICH100-C	1.00	25.4	1.21	41.9	0.10	2.5	0.25	6.4				
SICH150-C	1.50	38.0	1.71	54.6	0.10	2.5	0.25	6.4				

A

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B1

## c Wire Saddles

- Funnel entry design for fast insertion of wires and cables
- Available in vertical and horizontal loading configurations
- Design of wing provides added stability
- Material: Nylon 6.6
- For indoor use only

B2

B3

VWS Vertical

HWS Horizontal

C1

C2

C3

C4

Part Number	Max. Bundle Diameter		Height A		Width B		Max. Panel Thickness		Panel Hole Diameter		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm				
VWS3750-C	0.38 x 0.50	9.7 x 12.7	0.90	22.9	0.25	6.4	0.08	2.0	0.19	4.7	Natural	Push Barb	100	500
VWS3775-C	0.38 x 0.75	9.7 x 19.1	1.17	29.7	0.25	6.4	0.08	2.0	0.19	4.7				
VWS50100-C	0.50 x 1.00	12.7 x 25.4	1.47	37.3	0.25	6.4	0.08	2.0	0.19	4.7	Natural	Push Barb	100	1000
HWS2819-C	0.19 x 0.28	5.0 x 7.1	0.42	10.7	0.44	11.2	0.08	2.0	0.19	4.7	Natural	Push Barb	100	500

D1

D2

## Corrugated Tubing Holder with Push Mount

- Use to secure and route all standard sizes of solid wall or slit corrugated loom tubing
- Rugged clip prevents accidental disassembly of tubing due to shock or vibration
- Ribs prevent lateral movement of corrugated loom tubing along the mount

D3

E1

E2

E3

E4

E5

F

G

H

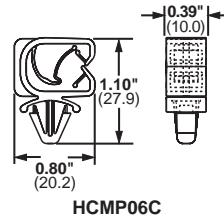
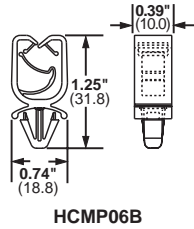
Part Number	Nominal Diameter A		Max. Panel Thickness		Panel Hole Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm		
CTH19U04-C30	0.19	5	0.125	3.2	0.386	9.8	100	—
CTH35U08-C30	0.35	9	0.125	3.2	0.386	9.8	100	500
CTH38U10-C30	0.38	10	0.125	3.2	0.386	9.8	100	—
CTH50U13-C30	0.50	13	0.125	3.2	0.386	9.8		
CTH62U17-C30	0.62	17	0.125	3.2	0.386	9.8		
CTH87U22-C30	0.87	22	0.125	3.2	0.386	9.8		

B2.40

Order number of pieces required, in multiples of Standard Package Quantity.

### Harness Clips

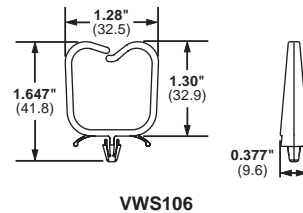
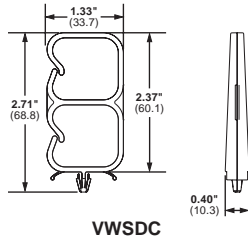
- Integral “spring” holds wire bundles tightly
- Available in vertical and horizontal loading configurations
- Design of wing provides added stability



Part Number	Max. Bundle Diameter Range		Max. Panel Thickness		Panel Hole Diameter		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm					
HCMP06B12-M20	0.24 – 0.47	5.9 – 12.5	0.118	3.0	0.25	6.4	Nylon 6.6	Black	Push Mount	100	500
HCMP06C12-M20	0.24 – 0.47	5.9 – 12.5	0.105	2.7	0.25	6.4					

### Optical Fiber Network Saddles

- Use in pre-drilled 0.18 inch (4.0mm) holes in panels up to 0.09 inch (2.0mm) thick
- Smooth rounded edges eliminate potential for snagging and stress on cable

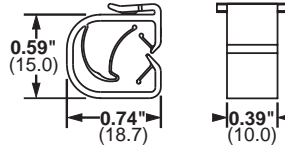


Part Number	Max. Bundle Diameter		Material	Mounting Method	Color	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
VWSDC-C*	1.06	26.9	Nylon 6.6	Push Barb	Natural	100	500
VWSDC-C20*	1.06	26.9	Nylon 6.6	Push Barb	Black	100	—
VWS106-C	1.06	26.9	Nylon 6.6	Push Barb	Natural	100	500
VWS106-C20	1.06	26.9			Black		

\*Accepts two bundles.

## Nylon Edge Clips

- Integral “spring” holds wire bundles tightly
- Available in vertical and horizontal loading configurations
- Design of wing provides added stability
- Indoor/Outdoor use

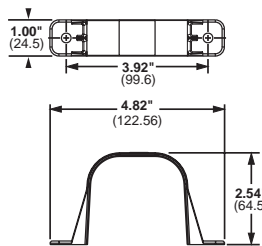


HCME06A12

Part Number	Max. Bundle Diameter Range		Max. Panel Thickness		Material	Color	Mounting Method	Std. Pkg. Qty.
	In.	mm	In.	mm				
HCME06Y12-M30	0.32 - 0.47	8.0 - 12.0	0.16	4	Heat Stabilized Nylon 6.6	Black	Clip onto Edge	1000
HCME06A12-M130	0.24 - 0.47	6.0 - 12.0	0.05	1.2	Acetal			
HCME04Y09-M30	0.16 - 0.35	4.0 - 9.0	0.16	4	Heat Stabilized Nylon 6.6			
HCME06X12-VM139	0.24 - 0.47	6.0 - 12.0	0.09	2.2	Acetal	Natural	Clip onto Edge	5000

## Wire Bundle Strap

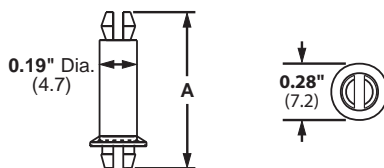
- Securely routes large cable bundles
- Rounded edges prevent damage to cable jackets



Part Number	Bundle Retaining Area In. <sup>2</sup>	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
WBS6-Q	6.00	ABS	White	Natural	25	125

### Circuit Board Posts

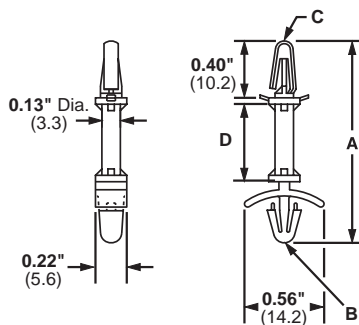
- For board-to-board or board-to-chassis mounting
- Bell flange on bottom end provides greater stability
- Releasable and reusable
- Material: Nylon 6.6
- Color: Natural



Part Number	Standoff Height		Height A		Panel Hole Diameter		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm			
CBP12-C	0.12	3.0	0.40	10.2	0.156	3.96	Push Barb	100	500
CBP25-C	0.25	6.4	0.54	13.5	0.156	3.96			
CBP31-C	0.31	7.9	0.59	15.0	0.156	3.96			
CBP37-C	0.37	9.4	0.62	15.7	0.156	3.96			
CBP50-C	0.50	12.7	0.78	19.8	0.156	3.96			
CBP62-C	0.62	15.7	0.91	23.0	0.156	3.96			
CBP75-C	0.75	19.1	1.04	26.2	0.156	3.96			
CBP87-C	0.87	22.1	1.15	29.2	0.156	3.96			
CBP100-C	1.00	25.4	1.28	32.5	0.156	3.96			

### Circuit Board Locking Supports

- For board-to-chassis support
- Snap-in design for fast assembly
- Design of wing provides added stability
- Releasable and reusable
- Material: Nylon 6.6



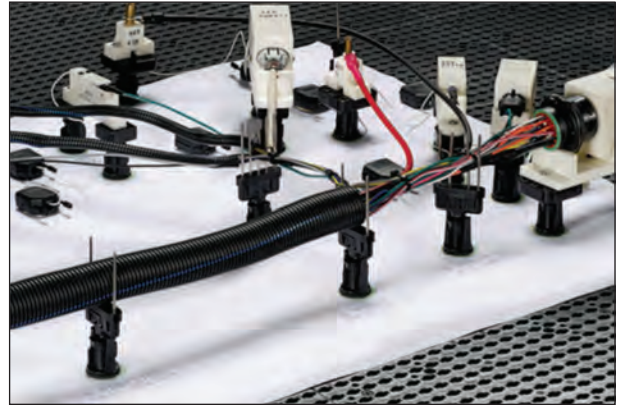
Part Number	Height A		Panel Hole Diameter B		Chassis Panel Hole Diameter C		Standoff Height D		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
CBLS18-C	0.92	23.4	0.19	4.8	0.16	4.0	0.19	4.7	Natural	Push Barb	100	500
CBLS25-C	0.98	24.9	0.19	4.8	0.16	4.0	0.25	6.4				
CBLS37-C	1.11	28.2	0.19	4.8	0.16	4.0	0.38	9.5				
CBLS50-C	1.23	31.2	0.19	4.8	0.16	4.0	0.50	12.7				
CBLS62-C	1.35	34.3	0.19	4.8	0.16	4.0	0.63	15.9				
CBLS75-C	1.48	37.5	0.19	4.8	0.16	4.0	0.75	19.1				

## B1 Quick-Build™ Harness Board System

### A Revolutionary Modular Solution for Harness Manufacturers

The modular, reusable solution consists of 1' X 1' (305mm x 305mm) grid tiles and specially designed, repositionable accessories that improve the productivity of wire harness assembly builds by up to 18%. The Quick-Build™ Accessories are more effective than nail, magnetic, or snap-in routing fixture methods. Accessories easily twist and lock in place until you're ready to make a change for faster routing of wires and design flexibility.

Low-Volume-High-Mix (LVHM) manufacturers achieve the greatest savings due to reduced material costs — up to 65% of layout and board builds. By reducing the number of bulky plywood boards, the Quick-Build™ Harness Board System delivers more than 50% in storage space savings. Whether you need to build a variety of wire and cable assemblies to meet different customer specifications or for prototyping new harness designs, the more you build, the greater your profitability.



B2

B3

C1

C2

C3

C4

## D1 Quick-Build™ Starter Kit

- Kit of Quick-Build™ components and various harness board accessories allows customers to evaluate the Quick-Build™ solution by simply ordering a single part number

D1

D2



D3

E1

E2

Part Number	Description	Std. Pkg. Qty.
QB-KIT2	Starter Kit assortment that includes our core Quick-Build™ Components essential for faster wire harness builds. Black.	1
QB-KIT2-GRY	Starter Kit assortment that includes our core Quick-Build™ Components essential for faster wire harness builds. Gray.	

E3

## E3 Quick-Build™ Grid Tile

- Install on top of plywood backing to provide mounting surface
- Secure to plywood with user supplied screws

E4



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Part Number	Description	Std. Pkg. Qty.
QB-TILE	1' X 1' (305mm x 305mm) square base component that allows Quick-Build™ mounting pegs and platforms to create a modular harness system. One package includes 8 tiles. Black.	1 PK
QB-TILE-GRY	1' X 1' (305mm x 305mm) square base component that allows Quick-Build™ mounting pegs and platforms to create a modular harness system. One package includes 8 tiles. Gray.	

## Quick-Build™ Mounting Pegs

- Repositionable to allow user to build different harness configurations as needed
- Pointed end inserts through drawing secured to grid tiles, providing the ability to create a harness on top of a drawing

Replacement Washers	
Part Number	Qty
QB-WASHER-Q	25

Note: Required for use with Quick-Build™ mounting platform and Quick-Build™ nail holders to provide a modular harness board system



Part Number	Description	Std. Pkg. Qty
QB-MOUNT-L	Peg can be positioned and relocated. Accepts single nail holders, five nail holders, and Quick-Build™ mounting platforms. Allows accessories to rotate as needed even after mounting peg is installed into grid tile. Black.	50

## Quick-Build™ Mounting Platform

- Requires the use of the Quick-Build™ mounting pegs to provide a modular solution
- Repositionable, allowing user to build different harness configurations as needed
- Provides the ability to rotate to allow breakouts and cable pathways to accommodate various harness design requirements
- Use Quick-Build™ mounting screws (sold separately, see page B2.45) to secure harness board accessories to the Quick-Build™ mounting platform



Part Number	Description	Std. Pkg. Qty
QB-BASE175-Q	Mounting platform that is inserted in Quick-Build™ mounting pegs 1.75" x 1.75" (44.45mm x 44.45mm). Allows elastic retainers, wire end holders, corner posts, bundle retainers and other harness board accessories to create a complete Quick-Build™ harness system. Compatible with: #4, #6, #8, and 1/4" screws. Black.	25
QB-BASE120-Q	Mounting platform that is inserted in Quick-Build™ pegs 1.2" x 1.2" (30.48mm x 30.48mm). Allows test fixtures corner posts, wire end holders, and other harness board accessories to be installed to provide a complete Quick-Build™ harness system. Compatible with #8 screw size. Screw length will vary based on test fixtures and accessories used. Note: Consider multiple QB-BASE120-Q components for large test fixtures. Black.	

## Quick-Build™ Screws

- Used to secure traditional harness board accessories and test fixtures to Quick-Build™ mounting platform
- Phillips/slot combination screw style



Part Number	Description	Std. Pkg. Qty
QB-S6-500-C	#6 screw; 1/2" long	100
QB-S8-500-C	#8 screw; 1/2" long	
QB-S8-750-C	#8 screw; 3/4" long	
QB-S25-500-C	1/4" screw; 1/2" long	
QB-S25-1000-L	1/4" screw; 1" long	50

B1

## Quick-Build™ Single Nail Holder

- Requires the use of the Quick-Build™ mounting pegs to provide a modular solution
- Repositionable, allowing user to build different harness configurations as needed
- Allows the use of harness board nails (sold separately, see page B2.47)
- Use with single nails to create pathways and breakout channels

B2

B3



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C2

Part Number	Description	Compatible Harness Board Single Nail Part Number (see Page B2.47)	Std. Pkg. Qty.
QB-SN1-Q	Single nail holder to accommodate one 1" nail. White	HBN1-T	25
QB-SN2-Q	Single nail holder to accommodate one 2" nail. Black	HBN2-T	
QB-SN3-Q	Single nail holder to accommodate one 3" nail. Gray	HBN3-T	

C3

C4

## Quick-Build™ Five Nail Holder

- Requires the use of Quick-Build™ mounting pegs to provide a modular solution
- Repositionable, allowing user to build different harness configurations as needed
- Allows the use of up to five harness board nails (sold separately, see B2.47)
- Use with nails to create pathways and breakout channels with harness board nails

D1

D2



D3

E1

Part Number	Description	Compatible Harness Board Single Nail Part Number (see Page B2.47)	Std. Pkg. Qty.
QB-FN1-Q	Five nail holder to accommodate up to five 1" nails. White	HBN1-T	25
QB-FN2-Q	Five nail holder to accommodate up to five 2" nails. Black	HBN2-T	
QB-FN3-Q	Five nail holder to accommodate up to five 3" nails. Gray	HBN3-T	

E2

## Quick-Build Wire End Holders

- Requires the use of Quick-Build™ Mounting Pegs to provide a modular solution
- Repositionable, allowing user to build different harness configurations as needed
- Multiple sizes available to provide a securing point for different gauge wires

E4

E5



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Part Number	Description	Std. Pkg. Qty.
QB-WEH1012-Q	Wire end holder for Quick-Build™ System. Suitable for #10 – #12 gauge wire. Holds three wires. Yellow.	25
QB-WEH1416-Q	Wire end holder for Quick-Build™ System. Suitable for #14 – #16 gauge wire. Holds four wires. Blue.	
QB-WEH1822-Q	Wire end holder for Quick-Build™ System. Suitable for #18 – #22 gauge wire. Holds six wires. Red.	



### Quick-Build™ Wire Elastic Retainers

- Requires the use of Quick-Build™ Mounting Pegs to provide a modular solution
- Repositionable, allowing user to build different harness configurations as needed
- Multiple sizes available to provide a securing point for different size bundles



Part Number	Description	Std. Pkg. Qty.
QB-RER.5-X	Quick-Build™ Peg with RER.5-S6-X pre-installed for use with Quick-Build™ System. Suitable for 1/2" bundle.	10
QB-RER.75-X	Quick-Build™ Peg with RER.75-S6-X pre-installed for use with Quick-Build™ System. Suitable for 3/4" bundle.	
QB-RER1.25-X	Quick-Build™ Peg with RER1.25-S6-X pre-installed for use with Quick-Build™ System. Suitable for 1.25" bundle.	
QB-RERBASE-X	Quick-Build™ Peg suitable for user to permanently install user-supplied RER.5-S6-X, RER.75-S6-X, or RER1.25-S6-X. Products sold separately – see below.	

### Quick-Build™ Grid Tile Connector

- Optional accessory for use with grid tiles to prevent the need for plywood backing and ensure accurate alignment of grid system
- Recommended for adjacent tiles where corners of two or four tiles come together



Part Number	Description	Std. Pkg. Qty.
QB-CONN	Grid tile connector to ensure accurate alignment of Grid System. One package includes five pieces. Black	1

### Traditional Harness Board Accessories

Panduit harness board accessories have been around for a long time and continue to provide easy routing and forming of wires in harness fabrication.

#### Harness Board Nails

- Manufactured from Nickel Plated Steel
- Smooth finish on nails prevents abrasion to wire jackets



Part Number	Description	Compatible QB Components (see Page B2.46)	Std. Pkg. Qty.
HBN1-T	Harness Board Nail - 1" long (1.65" overall).	QB-SN1-Q and QB-FN1-Q	200
HBN2-T	Harness Board Nail - 2" long (2.66" overall).	QB-SN2-Q and QB-FN2-Q	
HBN3-T	Harness Board Nail - 3" long (3.67" overall).	QB-SN3-Q and QB-FN3-Q	

### Elastic Retainers – Replaceable Version



- Cable bundles are formed as individual wires are inserted
- Completed bundles can be easily removed
- The elastic band is replaceable

Replacement Elastic	
Part Number	Qty
RER.5E-X	10
RER.75E-X	
RER1.25E-X	
RER2.0E-X	

Part Number	Description	Compatible QB Components (see Page B2.45)	Std. Pkg. Qty.
RER.5-S6-X	Elastic retainer with replaceable elastic band. Suitable for 0.5" maximum bundle capacity.	QB-BASE175-Q and QB-S6-500-C	10
RER.75-S6-X	Elastic retainer with replaceable elastic band. Suitable for 0.75" maximum bundle capacity.		
RER1.25-S6-X	Elastic retainer with replaceable elastic band. Suitable for 1.25" maximum bundle capacity.		
RER2.0-S6-X	Elastic retainer with replaceable elastic band. Suitable for 2.0" maximum bundle capacity.		

B1

## Elastic Retainers

- Cable bundles are formed as individual wires are inserted
- Completed bundles can be easily removed



B2

B3

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Part Number	Description	Compatible QB Components (see B2.45)	Std. Pkg. Qty.
ER.5-E4-X	Elastic Retainer. Suitable for 0.5" maximum bundle capacity.	QB-BASE175-Q and QB-S6-500-C	10
ER1.25-E4-X	Elastic Retainer. Suitable for 1.25" maximum bundle capacity.		

## Bundle Retainers

- Funnel entry allows fast cable insertion
- Completed bundles can be easily removed



C2

C3

C4

D1

D2

D3

Part Number	Description	Compatible QB Components (see pages B2.45)	Std. Pkg. Qty.
BR.5-E6-C	Bundle Retainer. Suitable for 0.5" maximum bundle capacity. 1.07" standoff height. Black	QB-BASE175-Q and QB-S6-500-L	100
BR.75-E6-C	Bundle Retainer. Suitable for 0.75" maximum bundle capacity. 0.95" standoff height. Black		
BR2-1.3-X	Bundle Retainer. Suitable for 2.0" maximum bundle capacity. 1.32" standoff height. Black	QB-BASE175-Q and QB-S25-500-L	10
BR2-1.5-X	Bundle Retainer. Suitable for 2.0" maximum bundle capacity. 1.59" standoff height. Black	QB-BASE175-Q and QB-S25-1000-L	10
BR2-4-X	Bundle Retainer. Suitable for 2.0" maximum bundle capacity. 4.06" standoff height. Black		
BR2-6-X	Bundle Retainer. Suitable for 2.0" maximum bundle capacity. 6.02" standoff height. Black		

## Corner Posts

- Designed to pre-form tight bundles at harness corners and breakouts
- Top arm rotates upward for easy removal of completed harness



E2

E3

E4

Part Number	Description	Compatible QB Components (see pages B2.45)	Std. Pkg. Qty.
CPH.75-S8-X	Corner post to assist in tight corners of harness systems. 0.75" maximum bundle diameter. Center of bundle is 1.35" from surface.	QB-BASE120-Q or QB-BASE175-Q and QB-S8-500-C	10
CPL.75-S8-X	Corner post to assist in tight corners of harness systems. 0.75" maximum bundle diameter. Center of bundle is 0.56" from surface.		

## Wire End Holder

- Secures wire ends while harness is being fabricated
- Use with #28 thru #16 AWG wires



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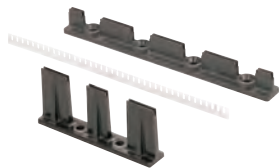
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Part Number	Description	Compatible QB Components (see pages B2.45)	Std. Pkg. Qty.
WEH-E8-C	Use to retain end of wire in secure position. Helps when making terminations or dressing harness.	QB-BASE120-Q or QB-BASE175-Q and QB-S8-500-C	100

### Fanning Strip System

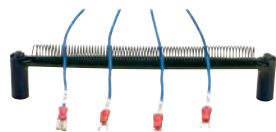
- Holds wires in a specific orientation
- No sharp edges to damage wire insulation
- Accepts wires up to 18 AWG
- Fanning strip can remain as part of completed harness



Part Number	Description	Compatible QB Components (see pages B2.45)	Std. Pkg. Qty.
FSH40-X	Fanning strip holder to elevate FS156 Fanning Strip 0.62" above surface. 6.00" long. Black	QB-BASE120-Q or QB-BASE175-Q and QB-S8-500-C	10
FSHH-X	Fanning strip holder to elevate FS156 Fanning Strip 1.42" above surface. 3.2" long. Black		
FS156-C	Fanning strip with 76 spaces for wires up to 18 AWG. 12.1" long and 0.31" tall.	N/A	100

### Spring Wire Breakout System

- Harness board spring and spring holder secures wire ends while harness is being fabricated
- Wires simply pull out from spring when harness is removed
- Each SHH Spring Holder is supplied with one rigid wire piece to hold the spring laterally and two #8 (M4), 2" (50.8mm) hex head wood screws; purchase spring separately



Part Number	Description	Compatible QB Components (see pages B2.45)	Std. Pkg. Qty.
SHH1-S8-X	Spring Wire Holder that elevates spring 1.3" above surface. Compatible with PBSC1-X spring. Black	QB-BASE120-Q or QB-BASE175-Q and QB-S8-500-C	10
SHH3-S8-X	Spring Wire Holder that elevates spring 1.3" above surface. Compatible with PBSC3-X spring. Black		
PBSC1-X	Spring compatible with SHH1-S8-X Spring Wire Holder.	NA	
PBSC3-X	Spring compatible with SHH3-S8-X Spring Wire Holder.		
PBSC6-X	Spring used independent of Spring Wire Holder. Requires 6" spacing for mounting. Can be secured directly to Quick-Build™ Mounting Platform.	QB-BASE175-Q and QB-S25-500-L	
PBSC12-X	Spring used independent of Spring Wire Holder. Requires 12" spacing for mounting. Can be secured directly to Quick-Build™ Mounting Platform.		

B1

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C2

C3

C4

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D2

D3

E1

E2

E3

E4

E5

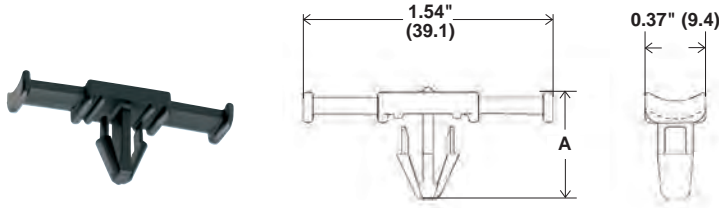
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## US Tie Harness Mounts for Corrugated Tubing

- Designed to be attached to the wire harness during assembly
- Cable ties can be installed by hand or with Panduit® automatic cable tie tools
- Used with harness board standoff posts
- A location tab on the mount shelf aligns with the corrugated tubing grooves to ensure proper mount location during assembly
- Natural nylon material for indoor use
- Heat stabilized nylon material (30) for high temperature applications – indoor use

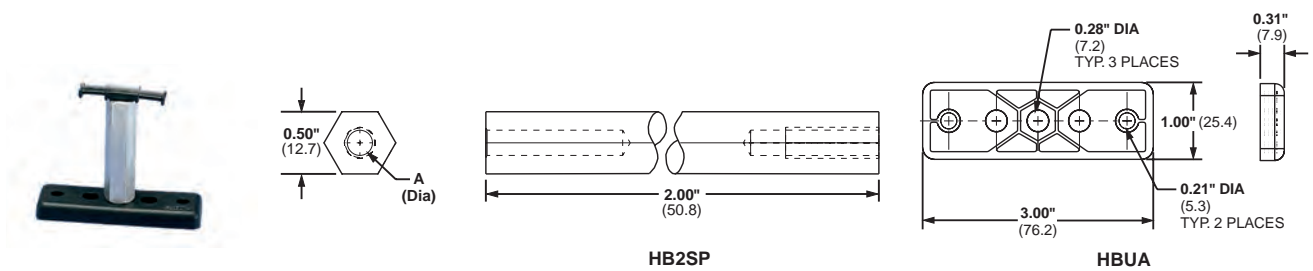


Part Number	Used with Cable Ties†	Maximum Panel Thickness		Panel Hole Diameter		Height A		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm					
THMSP20-C	M, I, S	0.160	4.1	0.244 – 0.283	6.2 – 7.2	0.65	16.5	Nylon 6.6	Natural	Push Barb	100	1000
THMSP20-C30	M, I, S	0.160	4.1	0.244 – 0.283	6.2 – 7.2	0.65	16.5	Heat Stabilized Nylon 6.6	Black			
THMSP25-C	M, I, S	0.230	5.8	0.244 – 0.283	6.2 – 7.2	0.72	18.3	Nylon 6.6	Natural			
THMSP25-C30	M, I, S	0.230	5.8	0.244 – 0.283	6.2 – 7.2	0.72	18.3	Heat Stabilized Nylon 6.6	Black			

\*Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard.

## Harness Board Standoff Posts and Adapter

- Used to hold a push mount accessory or cable tie at a specific location on a harness board



Part Number	Hole Diameter A		For Use With	Material	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
<b>Posts</b>							
HB2SP19-X	0.20	5.2	PLWP, PRWP, WS, VWS, HWS, TPM	Aluminum	Bolt – Included	10	100
HB2SP25-X	0.30	7.5	PLWP, PRWP, PLP, THMS, HCMP, PMCC				
<b>Adapter</b>							
HBUA-X	—	—	HB2SP19-X, HB2SP25-X	Nylon 6.6	#10 (M5) Screw	10	100

Order number of pieces required, in multiples of Standard Package Quantity.

Physical Properties and Colors of Cable Accessory Materials

B1

Design Criteria	Nylon 6.6	Flame Retardant Nylon 6.6	Weather Resistant Nylon 6.6	Heat Stabilized Nylon 6.6	Heat Stabilized Weather Resistant Nylon 6.6	Impact Resistant Nylon 6.6
Part Number Suffix	None (Natural or White), 14 (Gray), 20 (Black), 15 (Ivory)	60, 69	0	30	300	None
Color	Natural, White, Gray, Black, Ivory	Black, Natural	Black	Black	Black	Black
Maximum Continuous Use Temperature	185F (85C)	212F (100C)	185F (85C)	239F (115C)	167F (75C)	185F (85C)
Minimum Continuous Use Temperature	-76F (-60C)	-76F (-60C)	-76F (-60C)	-76F (-60C)	-40F (-40C)	-40F (-40C)
UL Flammability - UL94	V-2	V-0	V-2	V-2	V-2	HB
UV Resistance	Poor	Poor	Good	Fair	Good	Poor
Water Absorption	1.3% (24 hrs)	1.1% (24 hrs)	1.2% (24hrs)	1.2% (24hrs)	1.2% (24hrs)	1.0% (24 hrs)
Gamma Radiation Resistance	Good	1x10 <sup>5</sup> Rads	Good	Good	Good	Good

B2

B3

C1

C2

C3

C4

D1

Design Criteria	PVC	Acetal	Acetal Heat Stabilized	-39 Material for Contour Multiple Tie Plates	Metal Detectable Nylon	Metal Detectable Polypropylene
Part Number Suffix	None, 8, 810	None	130, 139	39	86	186
Color	Gray, White	Black	Natural	Natural	Light Blue	Dark Blue
Maximum Continuous Use Temperature	122F (50C)	194F (90C)	194F (90C)	239F (115C)	149F (65C)	149F (65C)
Minimum Continuous Use Temperature	-40F (-40C)	-40F (-40C)	-40F (-40C)	-76F (-60C)	-40F (-40C)	-40F (-40C)
UL Flammability - UL94	V-0	HB	HB	V-2	N/A	N/A
UV Resistance	Poor	Good	Good	Poor		
Water Absorption	0.3% (24 hrs)	0.43% (24 hrs)	0.65% (24 hrs)	1.2% (24 hrs)		
Gamma Radiation Resistance	N/A	Poor	Poor	Good		

D2

D3

E1

E2

E3

E4

E5

F

G

H

Continued on next page

B1

## Physical Properties and Colors of Cable Accessory Materials (continued)

B2

Design Criteria	Glass Filled Nylon 6.6	Impact Modified Weather Resistant Nylon 6.6	Glass Filled Flame Retardant Nylon 6.6	ABS	Weather Resistant ABS
Part Number Suffix	None	0	60,69	None, 15 (Ivory)	0
Color	Black	Black	Black, Natural	White, Natural, Ivory	Black
Maximum Continuous Use Temperature	167F (75C)	185F (85C)	230F (110C)	158F (70C)	158F (70C)
Minimum Continuous Use Temperature	-40F (-40C)	-40F (-40C)	-40F (-40C)	-76F (-60C)	-76F (-60C)
UL Flammability - UL94	HB	HB	V-0	HB	HB
UV Resistance	Poor	Poor	Poor	Poor	Fair
Water Absorption	1.2% (24hrs)	1.2% (24hrs)	0.7% (24 hrs)	0.3% (24 hrs)	0.3% (24 hrs)
Gamma Radiation Resistance	Good	N/A	N/A	Good	Good

B3

C1

C2

C3

C4

Design Criteria	PEEK	Polypropylene	Weather Resistant Polypropylene	Flame Retardant Polypropylene	Tefzel	NORYL
Part Number Suffix	71	None / 14 / 109	100	None	76	10
Color	Natural	White, Gray, Green	Black	Black	Aqua	White
Maximum Continuous Use Temperature	266F (130C)	230F (110C)	230F (110C)	257F (125C)	338F (170C)	176F (80C)
Minimum Continuous Use Temperature	-40F (-40C)	-76F (-60C)	-76F (-60C)	-40F (-40C)	-76F (-60C)	-40F (-40C)
UL Flammability - UL94	N/A	HB	HB	V-0	N/A	V-1
UV Resistance	Fair	Poor	Good	Good	Excellent	Good
Water Absorption	0.1% (24hrs)	0.1% (24 hrs)	0.1% (24 hrs)	0.15% (24 hrs)	<0.01% (24 HRS)	0.7% (24 hrs)
Gamma Radiation Resistance	Good	1x10 <sup>5</sup> Rads	1x10 <sup>5</sup> Rads	N/A	Good	N/A

D1

D2

D3

E1

E2

### Application Chart

Since Panduit manufactures adhesive backed mounts with a variety of adhesive types, this chart should be used as a guideline for choosing the best adhesive for often-encountered conditions. Each type of adhesive is rated good, fair or poor for some specific mounting surfaces and/or chemical environments.

E3

E4

E5

### Mount Spacing

To determine the number of mounts to use in a given application, the following formula can be used as a guideline:

F

G

H

$$\frac{\text{Cable or weight (Lbs./ft.)}}{\text{Static Load rating of Mount (Lbs./mt.)}} = \text{Spacing} \frac{\text{Mounts}}{\text{Ft.}}$$

Surfaces	Rubber Based Foam Tape Mounts	Acrylic Based Foam Tape Mounts	Epoxy Applied Adhesive Mounts
Plastics	Good	Good	Good
Wood			
Glass	Fair	Good	Good
Painted Surfaces	Good	Good	Fair
Powder Coating	Good	Fair	Good
Metal	Good <sub>1</sub>	Good <sub>1</sub>	Good
Paper	Good	Good	Fair
Concrete, Stone, Masonry	Not Recommended	Not Recommended	Good
<b>Chemical Resistance</b>			
Water	Good	Good	Poor
Oil	Poor	Fair <sub>3</sub>	Good
Gasoline	Poor	Fair <sub>3</sub>	Fair
Dilute Acids			
Dilute Alkalis	Good	Fair <sub>3</sub>	Fair
Organic Solvents	Poor	Fair <sub>3</sub>	Not Recommended
Outdoor Exposure	Not Recommended	Good	Good <sub>2</sub>

1. Not recommended for use on copper or brass.

2. Mounts manufactured from outdoor material only. For specific applications, individual testing prior to extensive use is suggested.

3. Depends on concentration, exposure time, and chemical composition.

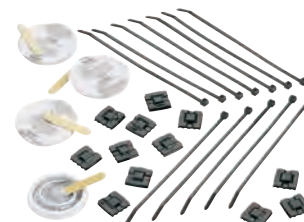
## Selection and Use of Adhesive Mounts

Panduit® adhesive mounts provide a quick, economical, and dependable method of supporting, routing, and protecting wires or cables. Some are used with Panduit cable ties and others can be used without cable ties. Adhesive backed mounts adhere to a variety of surfaces. This alternative to mechanical fasteners offers the advantage of lower installed cost with safe, easy to use, quality products.



## Applications

- To route wires in control panels and switchboards
- To support bundles of wires away from moving mechanical devices
- Routing and harnessing cables, both indoors and out, to prevent safety hazards
- To organize flat cables in many locations with low profile construction
- Ideal for supporting wire bundles where holes cannot be made in the substrate
- To separate groups of wires for identification



## General Mount Guidelines

Panduit pressure sensitive adhesive (foam tape) mounts are intended to secure wire bundles or other light objects to smooth surfaces. These mounts are not designed to support excessive loads and should not be used when the maximum expected load exceeds the rated capacity of the mount.

## Choosing the Right Adhesive

Panduit offers two standard pressure sensitive foam tapes which are available on most adhesive backed wiring accessories products. The general purpose tape is produced with a rubber based adhesive and is identified by an “-A” in the part number. This tape develops its strength extremely fast and can be used in environments with temperatures ranging from -20°F (-29°C) to 120°F (49°C). It is recommended that rubber based adhesive mounts dwell 2 hours after installation, prior to loading. The rubber based tape is rated for a static load of 1/2 pound per square inch. Rubber based adhesive tape is the best choice for most adhesive mount applications, including powder coated surfaces.

Acrylic based adhesive tape is also available and is identified by an “-AT” in the part number. This tape is for use in environments where continuous exposure to temperatures ranging from -20°F (-29°C) to 180°F (82°C) is possible. Acrylic based adhesive develops its maximum strength over a longer period of time than rubber based adhesive. It is recommended that acrylic adhesive mounts dwell 8 hours after installation, prior to loading. The standard acrylic based tape is also rated for a static load of 1/2 pound per square inch. Acrylic based adhesive tape is a good choice for environments with exposure to UV rays or temperatures above 120°F (49°C).

Panduit adhesive backed cable accessories are also available pre-installed with high bond acrylic based adhesive and is identified with a “-AV” in the part number. This adhesive can be used in applications with continuous use temperatures ranging from -31°F (-35°C) to 200°F (93°C), though higher temperatures may be possible for short-term exposure. Like the standard acrylic adhesive, it is still recommended that the high bond acrylic adhesive mounts also dwell for 8 hours after installation, prior to loading. The high bond acrylic based adhesive is rated for a higher static load of one pound per square inch. High Bond cable accessories are recommended for use in demanding applications such as where high temperatures are required, or where fatigue loading is expected.

Panduit also offers a 2-part epoxy for use in applications where excessive loading is required, or where the surface to which the mount must be applied is porous rather than smooth. Panduit EMA adhesive is a 2-part epoxy cement which is packaged in convenient mixer cups containing an equal amount of resin and hardener. Peel the protective covering off and pop the center of the cup in to form a mixing bowl. Each cup is supplied with a mixer stick and contains enough epoxy to properly apply three EMS mounts. The resin and hardener should be thoroughly mixed together until the epoxy is a consistent and uniform color. The mixer stick can then be used to apply the adhesive to the mount. The epoxy should be forced into the grooves on the bottom of the mount to obtain optimum bond performance. The mount should be applied to the surface with light pressure and a back-and-forth twisting motion. Hardening of the epoxy begins five minutes after mixing at room temperature.

*Continued on next page*

A

# Industrial Electrical Solutions

B1

## Selection and Use of Adhesive Mounts (continued)

### Surface Preparation

For best results, Panduit® adhesive mounts should be applied to clean, dry, grease-free surfaces. We recommend that the surface be cleaned prior to mount installation. For rubber and acrylic based foam tape adhesives, a blend of isopropyl alcohol and water 50/50 may be used to clean most surfaces.

B2

B3

For epoxy type adhesives, especially masonry surfaces, be sure to clean all loose particles away before mount installation. Some surface abrasion is recommended to achieve maximum strength. A light rubbing with medium grit emery cloth or sandpaper is best. Wash after abrading.

C1

### Proper Installation Techniques For Pressure Sensitive Adhesive Mounts

For proper installation of adhesive mounts with foam tape, simply remove the release liner and place the mount in the desired location. Avoid touching the adhesive prior to positioning the mount. Apply firm pressure (minimum of 10 pounds) to the mount for 5 seconds to insure proper adhesion.

C2

C3

C4

1) Clean surface with a clean cloth and isopropyl alcohol.

2) Allow surface to air dry.

3) Remove the release liner, being careful not to touch the adhesive.

4) Apply 10 pounds of thumb pressure for at least 5 seconds.

5) Allow mount to properly dwell.

D1

D2

### Proper Storage Conditions

All Panduit adhesive products have an expiration date printed on the package label. Use the following storage guidelines:

D3

1. For rubber and acrylic based foam tape adhesives, store in temperatures of 70°F (21°C) and 45% Relative Humidity (R.H.).

E1

2. For epoxy type adhesives, store in temperatures of 40°F (4°C) to 75°F (25°C) and relative humidity not in excess of 45%. Storage in opened containers is not recommended. Using the guidelines above, the shelf life of foam tape is 3 years. Shelf life of epoxy is 1 year. Deviation from the recommended storage conditions may reduce the shelf life or adhesive strength. In any case, adhesive products should never be stored near heating vents or other heat sources, and storage in lower temperatures than those recommended may increase the shelf life.

E2

### Stock Rotation

Adhesive mount inventory should be rotated in order to insure the quality of the adhesive foam tape. Each package of Panduit adhesive backed mounts has a quality control number and a best-if-used-by date on the package label. The best-if-used-by date provides the customer with an accurate way to control the rotation of inventory, and, as is the case with all Panduit products, the quality control number provides complete traceability for all components that go into a specific production run of product.

E3

E4

E5

### Mount Removal

There is no simple or easy method for removing Panduit adhesives. A thin wire or razor blade can be moved in between the surfaces when removing foam tape mounts; however, the adhesive residue will remain on the surface. Epoxy adhesives may be removed with a commercial paint stripping solution.

F

G

H

B2.54

Order number of pieces required, in multiples of Standard Package Quantity.





# Stainless Steel Cable Ties and Accessories

The Pan-Steel® System provides a strong, durable method of bundling and mechanical fastening for all indoor, outdoor, and underground (including direct burial) applications. The ties are designed for use in critical applications where strength, vibration, radiation, weathering, corrosion, and temperature extremes are a factor.

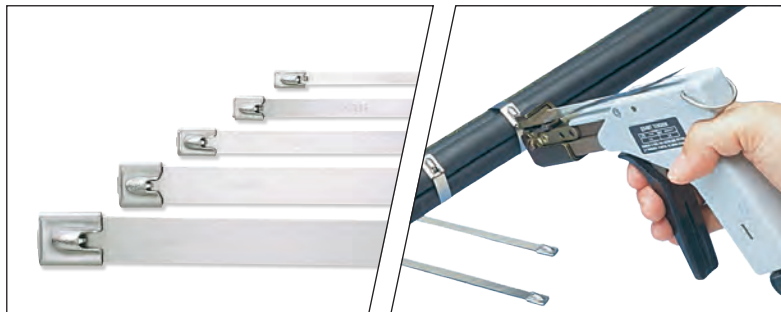
- **Patented locking head design assures locking in any position, with a high rated loop tensile strength for a durable solution that delivers an extra margin of safety**
- **201, 304, or 316 grade stainless steel provides a strong, long-lasting method of bundling and mechanical fastening in harsh environments**
- **Accessories available to protect, speed, and simplify the mounting of wires, cable, and tubing with Panduit® Pan-Steel® Stainless Steel Cable Ties**
- **Complete line of manual and powered installation tools available with controlled tension and automatic cut-off for lower installed cost**
- **Large selection of stainless steel cable ties to deliver maximum design flexibility to match specific application requirements**

Panduit continues to develop stainless steel solutions for harsh environment applications by solving customer problems with innovative products and reliable tooling to achieve lowest installed cost.

## B1 Pan-Steel® Products Overview

## Pan-Steel® Cable Ties

Pages B3.4 – B3.6, B3.10 – B3.11, B3.13



- Designed for use in indoor, outdoor, and underground applications
- Self-locking head design speeds installation
- Strong, durable method of cable bundling
- Rounded edges assure cable protection and worker safety

B2

B3

C1

C2

C3

## Pan-Steel® Coated Cable Ties

Pages B3.10 – B3.11



- Designed for use in indoor, outdoor, and underground applications
- Self-locking head design speeds installation
- Provides additional edge protection
- Prevents corrosion between dissimilar metals

C4

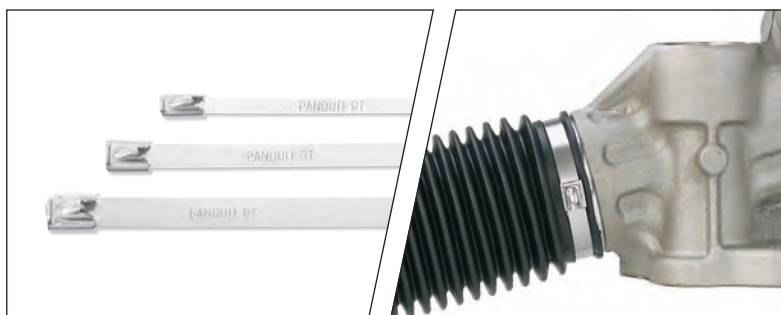
D1

D2

D3

## Pan-Steel® Retained Tension Ties

Pages B3.16 – B3.18



- Designed for use in Industrial, OEM, and Transportation Markets
- Provides tight bundling of armored cables, pipes, conduit, and rigid materials
- Locks into place at any length along the tie body
- 360° seal design option eliminates gaps for a completely sealed installation

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E4

E5

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**Pan-Steel® Products Overview (continued)**

**Pan-Steel® Strapping**

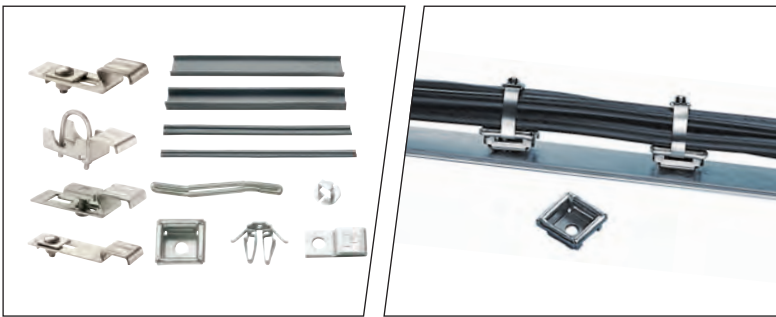
**Pages B3.19 – B3.23**



- Fold over design provides high retained tension
- Cut end is locked inside low profile buckle – no sharp edges
- Coil-in-box packaging option for job site versatility with minimum inventory
- Coated design option for additional edge protection

**Accessories**

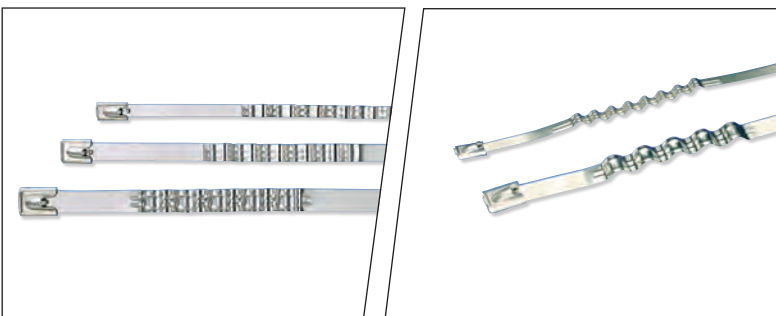
**Pages B3.24 – B3.27**



- Cushion sleeving provides full separation between ties and bundles
- Multiple mount options for range of applications and panel thicknesses
- Mounts secure ties to structure quickly and easily
- Metal brackets allow stainless steel ties and straps to be installed on any style cable tray

**Pan-Steel® Wave-Ty™**

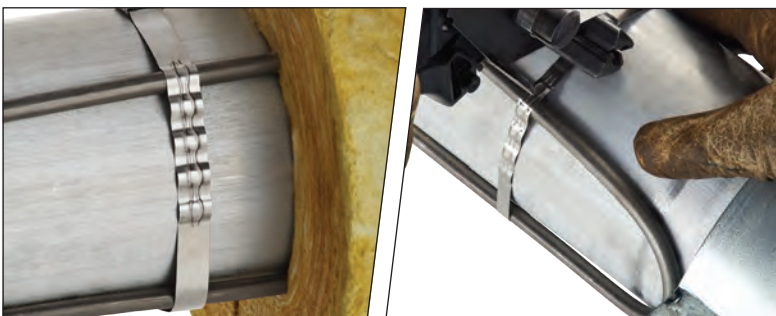
**Pages B3.7**



- Patented wave-form spring maintains greater installed tension on non-resilient objects
- Tightly clamps on applications where other stainless steel ties will not function
- Retains tension on a solid bundle with minimal applied force
- Available in 316 material for the most corrosive environments
- Guarantees performance in critical applications
- Self-locking with low thread force

**Heat Trace Wave-Ty™**

**Pages B3.8 – B3.9**



- Patented Wave-Ty™ wave-form spring maintains greater installed tension on non-resilient objects
- Heat trace Wave-Ty™ cable tie is a safe, efficient, and reliable method to install heat trace - commonly used for temperature maintenance, viscosity control, or freeze protection

A

# PANDUIT®

# Industrial Electrical Solutions

B1

## Features and Benefits – Pan-Steel® Cable Ties

Panduit® Pan-Steel® Stainless Steel Ties are engineered for safety, productivity, and durability by providing round edges and smooth surfaces, easy threading, high loop tensile strength, and tight clamping.

B2

B3

### Self-Locking Head Construction

**Patented Aggressive Locking Head**  
Quicker locking, tighter installation

**Unique Locking Ramp**  
Assures locking in any position

**Patented Lead in Design**  
Wider entrance for easier threading

**Strengthening Ribs**  
Stronger head increases lock strength

**Patented Innovative Displacement Lock**  
Assures superior locking strength

**Extended Retaining Tab**  
Increases overall tie strength

C1

C2

C3

C4

D1

D2

### Fully Rounded Edges

Panduit tie body

Other manufacturer's tie body

D3

E1

E2

The Pan-Steel® Stainless Steel Cable Tie features fully rounded edges to assure bundle protection and operator safety. Panduit not only removes the burr, but actually passes the material through a secondary process which removes the top and bottom corners of the material.

E3

E4

### Self-Locking for Fast Installation

Self-locking design can be fastened by hand requiring no fold over or additional installation steps.

Pan-Steel® Installation Tools for adjustable tension control and automatic cut-off for quick, consistent, and secure installation.

E5

F

G

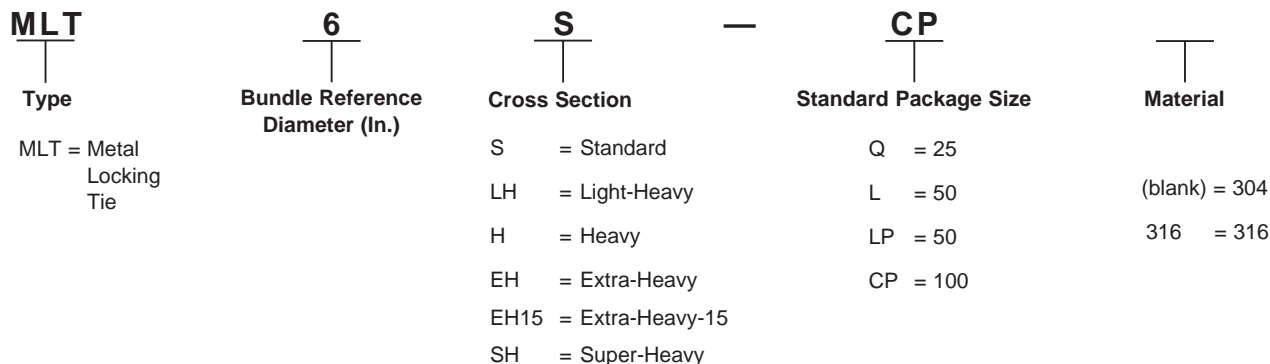
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Pan-Steel® System Accessories are used with Pan-Steel® Stainless Steel Cable Ties to speed and simplify the mounting of wires, cables, and tubing. Installation methods include brackets, screw mounts, and push mounts. See pages B3.24 – B3.27.

B3.4

Order number of pieces required, in multiples of Standard Package Quantity.

**Part Number System for Pan-Steel® Cable Ties**



**UL LISTED Pan-Steel® Self-Locking Cable Ties – MLT Series**

- Self-locking head design speeds installation and locks into place at any length along the tie body
- Provides a strong, durable method of cable bundling
- Can be used in a wide range of indoor, outdoor, and underground (including direct burial) applications
- Smooth surfaces and rounded edges assures cable protection and worker safety
- Available in AISI 304 stainless steel for general-purpose applications
- Available in AISI 316 stainless steel for the most corrosive environments



Part Number	Max. Bundle Diameter		Length*		Min. Loop Tensile Strength**		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm	In.	mm			

**AISI 304 Stainless Steel — For General Purpose**

**Standard Cross Section**

MLT1S-CP	1.0	25	5.0	127	200	890	0.50	12.7	0.18	4.6	0.010	0.25	GS4MT-E, HTMT, PPTMT, ST2MT	100	500
MLT2S-CP	2.0	51	7.9	201	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	
MLT2S-L	2.0	51	7.9	201	200	890	0.50	12.7	0.18	4.6	0.010	0.25		50	
MLT2.7S-CP	2.7	69	10.2	259	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	
MLT4S-CP	4.0	102	14.3	362	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	
MLT4S-L	4.0	102	14.3	362	200	890	0.50	12.7	0.18	4.6	0.010	0.25	50		
MLT6S-CP	6.0	152	20.5	521	200	890	0.50	12.7	0.18	4.6	0.010	0.25	GS4MT-E, HTMT, PPTMT, ST2MT	100	500
MLT8S-CP	8.0	203	26.8	679	200	890	0.50	12.7	0.18	4.6	0.010	0.25			
MLT10S-CP	10.0	254	33.0	838	200	890	0.50	12.7	0.18	4.6	0.010	0.25			
MLT12S-Q	12.0	304	39.3	998	200	890	0.50	12.7	0.18	4.6	0.010	0.25	GS4MT-E, HTMT, PPTMT, ST2MT	25	125
MLT14S-Q	14.0	355	45.5	1156	200	890	0.50	12.7	0.18	4.6	0.010	0.25			
MLT15S-Q	15.0	380	49.2	1250	200	890	0.50	12.7	0.18	4.6	0.010	0.25			

\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to www.panduit.com.

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to www.panduit.com/tools.

*Continued on next page*



## Pan-Steel® Self-Locking Cable Ties – MLT Series (continued)

Part Number	Max. Bundle Diameter		Length*		Min. Loop Tensile Strength**		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm	In.	mm			
<b>Light-Heavy Cross Section</b>															
MLT2LH-LP	2.0	51	7.9	201	250	1112	0.50	12.7	0.25	6.4	0.010	0.25	GS4MT-E, HTMT, PPTMT, ST2MT	50	250
MLT4LH-LP	4.0	102	14.3	362	250	1112	0.50	12.7	0.25	6.4	0.010	0.25			
MLT6LH-LP	6.0	152	20.5	521	250	1112	0.50	12.7	0.25	6.4	0.010	0.25			
MLT8LH-LP	8.0	203	26.8	679	250	1112	0.50	12.7	0.25	6.4	0.010	0.25			
<b>Heavy Cross Section</b>															
MLT2H-LP	2.0	51	7.9	201	450	2000	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT, PBTMT	50	250
MLT4H-LP	4.0	102	14.3	362	450	2000	0.50	12.7	0.31	7.9	0.010	0.25			
MLT6H-LP	6.0	152	20.5	521	450	2000	0.50	12.7	0.31	7.9	0.010	0.25			
MLT8H-LP	8.0	203	26.8	679	450	2000	0.50	12.7	0.31	7.9	0.010	0.25			
MLT10H-LP	10.0	254	33.0	838	450	2000	0.50	12.7	0.31	7.9	0.010	0.25			
MLT14H-Q	14.0	355	45.5	1156	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		25	125
<b>Extra-Heavy Cross Section</b>															
MLT4EH-LP	4.0	102	17.1	434	600	2670	1.00	25.4	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	50	250
MLT6EH-LP	6.0	152	23.4	594	600	2670	1.00	25.4	0.50	12.7	0.010	0.25			
MLT8EH-LP	8.0	203	29.7	754	600	2670	1.00	25.4	0.50	12.7	0.010	0.25			
MLT10EH-LP	10.0	254	35.9	912	600	2670	1.00	25.4	0.50	12.7	0.010	0.25			
MLT12EH-Q	12.0	305	42.2	1072	600	2670	1.00	25.4	0.50	12.7	0.010	0.25		25	125
<b>Super-Heavy Cross Section</b>															
MLT4SH-LP	4.0	102	17.1	434	900	4005	1.00	25.4	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	50	250
MLT6SH-LP	6.0	152	23.4	594	900	4005	1.00	25.4	0.63	15.9	0.015	0.38			
MLT8SH-LP	8.0	203	29.7	754	900	4005	1.00	25.4	0.63	15.9	0.015	0.38			
MLT10SH-LP	10.0	254	35.9	912	900	4005	1.00	25.4	0.63	15.9	0.015	0.38			
MLT12SH-Q	12.0	305	42.2	1072	900	4005	1.00	25.4	0.63	15.9	0.015	0.38		25	125

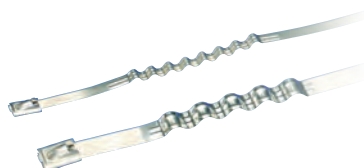
\*\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to [www.panduit.com](http://www.panduit.com).

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

**Pan-Steel® Wave-Ty™**

- Patented wave-form spring maintains greater installed tension on non-resilient objects
- Tightly clamps on applications where other stainless steel ties will not function
- Retains tension on a solid bundle with minimal applied force
- Also available in 316 material for the most corrosive environments
- Guarantees performance in critical applications
- Self-locking with low thread force



Part Number	Max. Bundle Diameter		Length**		Min. Loop Tensile Strength*		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm	In.	mm			

**AISI 304 Stainless Steel – For Superior Grip on Rigid Bundles  
Standard Cross Section**

MLT2.7WS-LP	2.7	69	10.2	259	200	890	2.0	51	0.18	4.6	0.010	0.25	GS4MT-E, HTMT, PPTMT, or ST2MT	50	250
MLT4WS-LP	4.0	102	14.3	362	200	890	2.0	51	0.18	4.6	0.010	0.25			
MLT6WS-LP	6.0	152	20.5	521	200	890	2.0	51	0.18	4.6	0.010	0.25			
MLT8WS-LP	8.0	203	26.8	679	200	890	2.0	51	0.18	4.6	0.010	0.25			

**Light-Heavy Cross Section**

MLT2.7WLH-LP	2.7	69	10.2	259	250	1112	2.0	51	0.25	6.4	0.010	0.25	GS4MT-E, HTMT, PPTMT, or ST2MT	50	250
MLT4WLH-LP	4.0	102	14.3	362	250	1112	2.0	51	0.25	6.4	0.010	0.25			
MLT6WLH-LP	6.0	152	20.5	521	250	1112	2.0	51	0.25	6.4	0.010	0.25			
MLT8WLH-LP	8.0	203	26.8	679	250	1112	2.0	51	0.25	6.4	0.010	0.25			

**Heavy Cross Section**

MLT2.7WH-LP	2.7	69	10.2	259	450	2000	2.0	51	0.31	7.9	0.010	0.25	GS4MT-E, HTMT, PPTMT, or ST2MT	50	250
MLT4WH-LP	4.0	102	14.3	362	450	2000	2.0	51	0.31	7.9	0.010	0.25			
MLT6WH-LP	6.0	152	20.5	521	450	2000	2.0	51	0.31	7.9	0.010	0.25			
MLT8WH-LP	8.0	203	26.8	679	450	2000	2.0	51	0.31	7.9	0.010	0.25			
MLT10WH-LP	10.0	254	33.0	838	450	2000	2.0	51	0.31	7.9	0.010	0.25			

\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to [www.panduit.com](http://www.panduit.com).

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

B1

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

G

H

*Continued on next page*

A

# Industrial Electrical Solutions

B1

## Heat Trace Applications

- Electric Heat Trace is commonly used for temperature maintenance, viscosity control, and freeze protection
- Installing a Heat Trace Wave-Ty™ tie does not damage the mineral insulation and prevents damage to the electric heat trace during installation
- Installs 2-3 times faster than tie wire depending upon fixture
- Significantly lowers risk of health and safety concerns versus tie wire

B2

B3

## Features and Benefits

C1	<b>Safety:</b> Significantly lower risk of health and safety concerns versus tie wire. Tie wire can result in puncture risk along with blood poisoning concerns due to residual coating. Tie wire installation can result in repetitive strain injuries and carpal tunnel syndrome.
C2	<b>Installation Speed:</b> Installs 2 – 3 times faster than tie wire depending upon fixture. Ball valve took 883 seconds to install using tie wire and only 271 seconds using a Heat Trace Wave-Ty™ for 225% savings (time).
C3	<b>Lower Installed Cost:</b> Can deliver approximately 30% lower overall installed cost versus tie wire depending upon pipe diameter. Approximately 50% of the overall cost for installation of heat trace can be attributed to labor.
C4	<b>Reliability:</b> Heat Trace Wave-Ty™ ties do not damage mineral insulated heat trace. Their wide, flat profile and spring design do not damage the heat trace.
D1	<b>Reduced Down Time:</b> Prevents damage to electric heat trace due installation. Over tensioning of tie wire can result in damage to electric heat trace ultimately leading to failures and an increase in downtime.

Information based upon results of Test Report SS-PLR-367 – Heat Trace Wire and Insulation Installation Time Study.

D2

## Application

D3

Electric Heat Trace is commonly used for temperature maintenance, viscosity control, or freeze protection. This is typically done by using traced pipes with insulation and cladding. The traced pipes can be accomplished in several ways. For the purposes of this document, we will be focusing solely on mineral insulated electric heat trace.

E1

Tie wire is commonly used within the industry to install mineral insulated electric heat trace. Heat trace installation using tie wire requires training and tensioning is dependent on installer skill and experience. Tooling used with tie wire consists of a pair of nippers or linesman's pliers. The installer twists and turns the tie wire in order pull the heat trace closer to the pipes. Too much tension can result in damage to the heat trace. The installation process requires a great deal of repetitive twisting and pulling to position the heat trace close to the pipes.

E2

Heat trace tie wire is generally applied approximately every 12 inches on vertical and horizontal runs. In a time study, Panduit found the installers took approximately 1.6 minutes on average for vertical and horizontal runs. Elbows, ball valves, flanges, and T-valves just added to the complexity with average times ranging from 2.58 minutes to 14.72 minutes depending upon the fixture. Installation problems associated with tie wire tend to fall into two categories. The first are safety concerns ranging from puncture hazards (from cut tie wire), blood poisoning, pulling and twisting tie wire (RSI, CTS), and more. The other area is around damage to and system reliability of the heat trace. Tie wire if over tensioned can damage the heat trace.

E3

E4

E5

F

G

H

Order number of pieces required, in multiples of Standard Package Quantity.

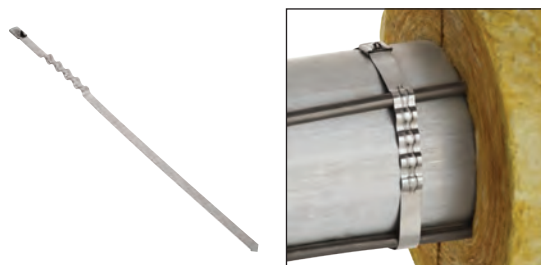
B3.8



**Technical Information**

**Heat Trace Wave-Ty™ Cable Ties**

Material:	<b>304 Grade Stainless Steel</b>
Minimum Loop Tensile Strength:	<b>600 lbs., 2670 Newtons</b>
Maximum Temperature Rating:	<b>538°C, 1000°F</b>
Minimum Temperature Rating:	<b>-60°C, -76°F</b>
RoHS:	<b>Compliant</b>
Flammability:	<b>Non Flammable</b>
Ultra-Violet Light Resistance:	<b>Excellent</b>



**Heat Trace Applications**

**Ordering Information**

Part Number	Length In.	Width In.	Qty. (Units)	Tools
HTMLT2.7WEH-LP	10.2	0.5	50	ST4MT and RT2HT
HTMLT4WEH-LP	14.3			
HTMLT6WEH-LP	20.5			
HTMLT8WEH-LP	26.8			
HTMLT10WEH-LP	33.0			
HTMLT12WEH-Q	42.2	0.5	25	ST4MT and RT2HT
HTMLT16WEH-Q	54.8			
HTMLT26WEH-Q	86.2			
HTMLT38WEH-Q*	123.9			

\*300 lb loop tensile strength.

B1

B2

B3

C1

C2

C3

C4

D1

D2

D3

E1

E2

E3

E4

E5

F

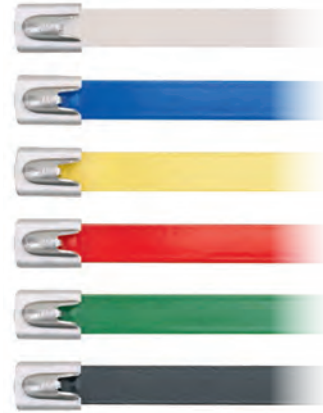
G

H

B1

## Pan-Steel® Polyester Fully Coated Cable Ties – MLTFC Series

- Polyester coating, available in six color options, provides a visual indicator for easy identification in color-coding applications (heavy cross section only)
- Self-locking head design speeds installation and locks into place at any length along the tie body
- Polyester coating provides additional edge protection and prevents corrosion between dissimilar metals
- AISI 316 stainless steel for the most corrosive environments
- Available in standard, heavy, extra-heavy, and super-heavy cross sections
- UV resistant, low smoke, halogen-free material
- Temperature tolerance -40°F (-40°C) to 302°F (150°C)



C1

C2

C3

C4

Part Number	Max. Bundle Diameter		Length*		Color	Min. Loop Tensile Strength**		Width		Thickness^		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm		Lbs.	N	In.	mm	In.	mm			

### Standard Cross Section^^

MLTFC2S-CP316	2.0	51	7.9	201	Black	100	445	0.18	4.6	0.010	0.25	GS4MT-E, HTMT, PPTMT, ST2MT	100	500
MLTFC4S-CP316	4.0	102	14.3	362		100	445	0.18	4.6	0.010	0.25			
MLTFC6S-CP316	6.0	152	20.5	521		100	445	0.18	4.6	0.010	0.25			
MLTFC8S-CP316	8.0	203	26.8	679		100	445	0.18	4.6	0.010	0.25			

D2

### Heavy Cross Section^^

MLTFC2H-LP316RD	2.0	51	7.9	201	Red	250	1112	0.31	7.9	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT, PBTMT	50	250
MLTFC4H-LP316RD	4.0	102	14.3	362		250	1112	0.31	7.9	0.010	0.25			
MLTFC6H-LP316RD	6.0	152	20.5	521		250	1112	0.31	7.9	0.010	0.25			
MLTFC2H-LP316YL	2.0	51	7.9	201	Yellow	250	1112	0.31	7.9	0.010	0.25			
MLTFC4H-LP316YL	4.0	102	14.3	362		250	1112	0.31	7.9	0.010	0.25			
MLTFC6H-LP316YL	6.0	152	20.5	521		250	1112	0.31	7.9	0.010	0.25			
MLTFC2H-LP316GR	2.0	51	7.9	201	Green	250	1112	0.31	7.9	0.010	0.25			
MLTFC4H-LP316GR	4.0	102	14.3	362		250	1112	0.31	7.9	0.010	0.25			
MLTFC6H-LP316GR	6.0	152	20.5	521		250	1112	0.31	7.9	0.010	0.25			

E2

### Heavy Cross Section^^

MLTFC2H-LP316BU	2.0	51	7.9	201	Blue	250	1112	0.31	7.9	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT, PBTMT	50	250
MLTFC4H-LP316BU	4.0	102	14.3	362		250	1112	0.31	7.9	0.010	0.25			
MLTFC6H-LP316BU	6.0	152	20.5	521		250	1112	0.31	7.9	0.010	0.25			
MLTFC2H-LP316WH	2.0	51	7.9	201	White	250	1112	0.31	7.9	0.010	0.25			
MLTFC4H-LP316WH	4.0	102	14.3	362		250	1112	0.31	7.9	0.010	0.25			
MLTFC6H-LP316WH	6.0	152	20.5	521		250	1112	0.31	7.9	0.010	0.25			
MLTFC2H-LP316	2.0	51	7.9	201	Black	250	1112	0.31	7.9	0.010	0.25			
MLTFC4H-LP316	4.0	102	14.3	362		250	1112	0.31	7.9	0.010	0.25			
MLTFC6H-LP316	6.0	152	20.5	521		250	1112	0.31	7.9	0.010	0.25			
MLTFC8H-LP316	8.0	203	26.8	679		250	1112	0.31	7.9	0.010	0.25			

E5

\*Other lengths available, contact Panduit Customer Service.

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

^Base material less coating. ^^Minimum bundle diameter is 0.50" (12.7mm).

F

G

H

**Pan-Steel® Polyester Fully Coated Cable Ties – MLTFC Series (continued)**

Part Number	Max. Bundle Diameter		Length*		Color	Min. Loop Tensile Strength**		Width		Thickness^		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm		Lbs.	N	In.	mm	In.	mm			
<b>Extra-Heavy Cross Section^^^</b>														
MLTFC4EH-LP316	4.0	102	17.1	434	Black	300	1335	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	50	250
MLTFC6EH-LP316	6.0	152	23.4	594		300	1335	0.50	12.7	0.010	0.25			
MLTFC8EH-LP316	8.0	203	29.7	754		300	1335	0.50	12.7	0.010	0.25			
<b>Super-Heavy Cross Section^^^</b>														
MLTFC4SH-LP316	4.0	102	17.1	434	Black	450	2000	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	50	250
MLTFC6SH-LP316	6.0	152	23.4	594		450	2000	0.63	15.9	0.015	0.38			
MLTFC8SH-LP316	8.0	203	29.7	754		450	2000	0.63	15.9	0.015	0.38			

\*Other lengths available, contact Panduit Customer Service.

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

^Base material less coating. ^^Minimum bundle diameter is 0.50"(12.7mm). ^^Minimum bundle diameter is 1.0"(25.4mm).

**Pan-Steel® Nylon 11 Selectively Coated Cable Ties – MLTC Series**

- Self-locking head design speeds installation and locks into place at any length along the tie body
- Nylon 11 coating provides additional edge protection and prevents corrosion between dissimilar metals
- AISI 316 stainless steel for the most corrosive environments
- Available in heavy cross section
- UV resistant, low smoke, halogen-free material
- Temperature tolerance -40°F (-40°C) to 285°F (140°C)



Part Number	Max. Bundle Diameter		Length*		Min. Loop Tensile Strength**		Min. Bundle Diameter		Width		Thickness^		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm	In.	mm			

**AISI 316 Stainless Steel – For Nylon 11 Selectively Coated Cable Ties**

**Heavy Cross Section**

MLTC2H-LP316	2.0	51	7.9	201	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT, PBTMT	50	250
MLTC4H-LP316	4.0	102	14.3	362	250	1112	0.50	12.7	0.31	7.9	0.010	0.25			
MLTC6H-LP316	6.0	152	20.5	521	250	1112	0.50	12.7	0.31	7.9	0.010	0.25			
MLTC8H-LP316	8.0	203	26.8	679	250	1112	0.50	12.7	0.31	7.9	0.010	0.25			
MLTC10H-LP316	10.0	254	33.0	838	250	1112	0.50	12.7	0.31	7.9	0.010	0.25			

\*Other lengths available, contact Panduit Customer Service.

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

^Base material less coating.

## Pan-Alum™ Aluminum Cable Ties – MLT Series

- Self-locking head design speeds installation and locks into place at any length along the tie body
- Lightweight, aluminum construction for flexibility and ease of handling
- Smooth surfaces and rounded edges assures cable protection and worker safety
- For use with Pan-Alum™ Marker Plates on page E4.4, for fast installation at the lowest installed cost



Part Number	Max. Bundle Diameter		Length*		Color	Min. Loop Tensile Strength*		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool**	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm		Lbs.	N	In.	mm	In.	mm	In.	mm			

### Heavy Cross Section^^

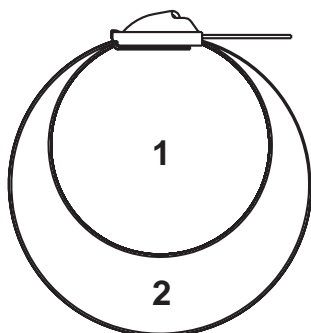
MLT1H-LPAL	1.0	25	5.5	140	Aluminum	50	222	0.50	12.7	0.31	7.9	0.010	0.25	ST2MT, HTMT	50	250
MLT2H-LPAL	2.0	51	7.9	201		50	222	0.50	12.7	0.31	7.9	0.010	0.25			
MLT4H-LPAL	4.0	102	14.3	362		50	222	0.50	12.7	0.31	7.9	0.010	0.25			

\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

**Pan-Steel® Double Wrapped Cable Ties – MLTD Series**

- Self-locking head design speeds installation and locks into place at any length along the tie body
- Cable tie body passes through the head two times for additional strength
- Available in heavy, extra-heavy, and super-heavy cross sections
- Available in AISI 304 stainless steel for general-purpose applications
- Available in AISI 316 stainless steel for EH and SH cross sections
- Super-heavy double wrapped tested for short circuit applications up to 71.5 kA



Part Number	Max. Bundle Diameter		Length*		Min. Loop Tensile Strength**		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm	In.	mm			

**AISI 304 Stainless Steel — MLTD Double Wrapped Ties**

**Heavy Cross Section**

MLT2DH-L	2.0	51	18.5	470	600	2670	1.00	25.4	0.31	7.9	0.010	0.25	GS4MT-E, HTMT, PPTMT, ST2MT	50	250
MLT4DH-L	4.0	102	28.0	711	600	2670	1.00	25.4	0.31	7.9	0.010	0.25		50	250
MLT6DH-Q	6.0	152	40.0	1016	600	2670	1.00	25.4	0.31	7.9	0.010	0.25		25	250

**Extra-Heavy Cross Section**

MLT4DEH-Q	4.0	102	29.5	749	800	3560	1.00	25.4	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	25	125
MLT6DEH-Q	6.0	152	41.5	1054	800	3560	1.00	25.4	0.50	12.7	0.010	0.25		25	125
MLT8DEH-Q	8.0	203	53.5	1359	800	3560	1.00	25.4	0.50	12.7	0.010	0.25		25	125

**Super-Heavy Cross Section**

MLT6DSH-Q	6.0	152	41.5	1054	1200	5340	1.00	25.4	0.62	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	25	125
MLT8DSH-Q	8.0	203	53.5	1359	1200	5340	1.00	25.4	0.62	15.9	0.015	0.38		25	125

**AISI 316 Stainless Steel — For MLTD Double Wrapped Ties**

**Extra-Heavy Cross Section**

MLT6DEH-Q316	6.0	152	41.5	1054	800	3560	1.00	25.4	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	25	125
MLT8DEH-Q316	8.0	203	53.5	1359	800	3560	1.00	25.4	0.50	12.7	0.010	0.25		25	125

**Super-Heavy Cross Section**

MLT6DSH-Q316	6.0	152	41.5	1054	1200	5340	1.00	25.4	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	25	125
MLT8DSH-Q316	8.0	203	53.5	1359	1200	5340	1.00	25.4	0.63	15.9	0.015	0.38		25	125

\*\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to [www.panduit.com](http://www.panduit.com).

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Pan-Steel® Custom Length Banding MBS, MBH, MBEH, and MBSH Series

B2

- For applications that require various bundle diameters
- Supplied in reels of 82.5 feet (25m), 200 feet (61m), 250 feet (76m), or 1000 feet (305m)
- Provides job site versatility with minimum inventory
- Packaging speeds removal of steel and includes bundle diameter cut-off guide

B3

#### Polyester coating (optional):

- Polyester coating provides additional edge protection and prevents corrosion between dissimilar metals
- UV resistant, low smoke, halogen-free material
- Temperature tolerance -40°F (-40°C) to 302°F (150°C)
- AISI 316 stainless steel for the most corrosive environments

C1

C2

C3

C4

D1

Part Number	Max. Bundle Diameter		Length*		Min. Loop Tensile Strength**		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool***	Recommended Banding Head	Std. Pkg. Qty. †
	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm	In.	mm			

D2

#### AISI 304 Stainless Steel — For General Purpose Banding

##### Standard Cross Section

D3

MBS-TLR	Any	Any	250	76	100	445	0.50	12.7	0.18	4.4	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT	MTHS-C	1
MBS-MR	Any	Any	1000	305	100	445	0.50	12.7	0.18	4.4	0.010	0.25			

E1

##### Heavy Cross Section

MBH-TLR	Any	Any	250	76	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT, PBTMT	MTHH-C	1
MBH-MR	Any	Any	1000	305	250	1112	0.50	12.7	0.31	7.9	0.010	0.25			

E2

##### Extra-Heavy Cross Section

MBEH-TLR	Any	Any	250	76	300	1335	1.00	25.4	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	MTHEH-C	1
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E3

##### Super-Heavy Cross Section

MBSH-TR	Any	Any	200	61	450	2000	1.00	25.4	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	MTHSH-C	1
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E4

\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to [www.panduit.com](http://www.panduit.com).

\*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

†Order in number of reels required.

E5

F

G

H

B3.14

Order number of pieces required, in multiples of Standard Package Quantity.

**Pan-Steel® Custom Length Banding – MBCH, MBCEH, and MBCSH Series**

Part Number	Max. Bundle Diameter		Length*		Min. Loop Tensile Strength**		Min. Bundle Diameter		Width		Thickness <sup>^</sup>		Recommended Installation Tool***	Recommended Banding Head	Std. Pkg. Qty.‡
	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm	In.	mm			
<b>Polyester Coated AISI 316 Stainless Steel</b>															
<b>Heavy Cross Section</b>															
<b>MBCH-QR316</b>	Any	Any	82	25	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT-E, ST2MT, HTMT, PPTMT, PBTMT	MTHCH-C316	1
<b>Extra-Heavy Cross Section</b>															
<b>MBCEH-QR316</b>	Any	Any	82	25	300	1335	1.00	25.4	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	MTHCEH-C316	1
<b>Super-Heavy Cross Section</b>															
<b>MBCSH-QR316</b>	Any	Any	82	25	450	2000	1.00	25.4	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	MTHCSH-C316	1

\*Other lengths available, contact Panduit Customer Service.  
 \*\*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.30.  
 \*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).  
<sup>^</sup>Base material less coating  
 ‡Order in number of reels required.

To determine the proper amount of banding required, use the following formula:

**Calculate S and H Cross Section** Diameter inches (mm) x 3.14 + 3 inches (76mm)

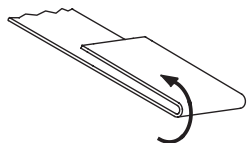
**Calculate EH and SH Cross Section** Diameter inches (mm) x 3.14 + 4.5 inches (114mm)

**Pan-Steel® Custom Length Banding Heads – MTH Series**

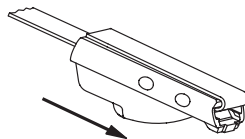
- Self-locking head design speeds installation and locks into place at any length along the tie body



Part Number	Part Description	Std. Pkg. Qty.	Std. Ctn. Qty.
<b>AISI 304 Stainless Steel</b>			
<b>MTHS-C</b>	Loose piece banding head for standard cross section banding.	100	1000
<b>MTHH-C</b>	Loose piece banding head for heavy cross section banding.		
<b>MTHEH-C</b>	Loose piece banding head for extra-heavy cross section banding.		
<b>MTHSH-C</b>	Loose piece banding head for super-heavy cross section banding.		
<b>AISI 316 Stainless Steel</b>			
<b>MTHS-C316</b>	Loose piece banding head for standard cross section banding.	100	1000
<b>MTHH-C316</b>	Loose piece banding head for heavy cross section banding.		
<b>MTHEH-C316</b>	Loose piece banding head for extra-heavy cross section banding.		
<b>MTHSH-C316</b>	Loose piece banding head for super-heavy cross section banding.		
<b>AISI 316 Coated Stainless Steel</b>			
<b>MTHCH-C316</b>	Loose piece coated banding head for heavy cross section banding.	100	1000
<b>MTHCEH-C316</b>	Loose piece coated banding head for extra-heavy cross section banding.		
<b>MTHCSH-C316</b>	Loose piece coated banding head for super-heavy cross section banding.		



1) Take one end of the cut banding and bend back 1" (25.4mm).



2) Take a self-locking head and slide it the entire length of the band until it reaches the bend.



3) Bend tail flat against bottom of banding head to complete assembly.

A

# PANDUIT®

## Industrial Electrical Solutions

B1

### Features and Benefits – Pan-Steel® Retained Tension Ties – MRT/MRS Series

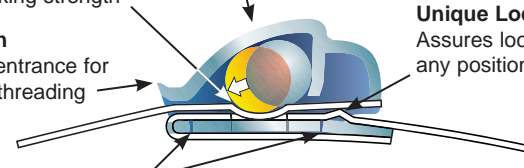
Panduit® Pan-Steel® Retained Tension Ties are engineered for safety, productivity, and durability by providing round edges and smooth surfaces, easy threading, high loop tensile strength, and tight clamping.

B2

B3

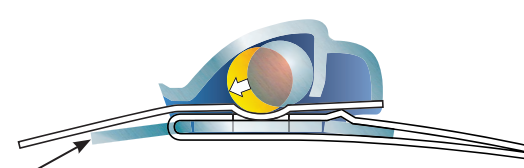
### Panduit Retained Tension Tie Technology

#### Features of Retained Tension Ties (MRT and MRS Series)



- \*Displacement Lock**  
Assures superior locking strength
- \*Aggressive Locking Head**  
Quicker locking, tighter installation
- Lead In**  
Wider entrance for easier threading
- Unique Locking Ramp**  
Assures locking in any position
- \*Relief Slots**  
For improved bundle conformance
- \*Patented**

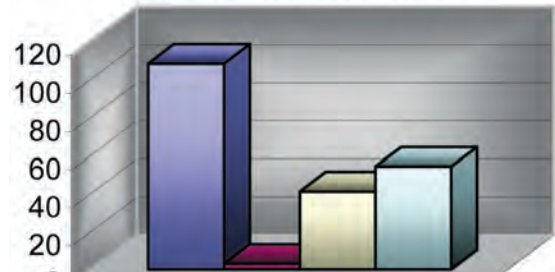
#### Additional Features of 360° Radial Seal Retained Tension Ties (MRS Series Only)



- \*Front Tab**  
Improves bundle conformance
- Extra Long Body**  
Improves bundle conformance

D1

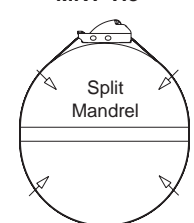
### Retained Tension Performance Comparison\*\*



**Retained Tension Performance Comparison**

Product	Retained Tension (Lbs.)
Panduit Retained Tension Tie (Heavy)	~115
Metal Locking Tie	~10
Band Clamp	~55
Pinch Ear Clamp	~65

\*\*Representative sample, actual results may vary.



**MRT Tie**

Split Mandrel

**Retained Tension**

Split mandrel test fixture measures retained tension of installed tie

F

G

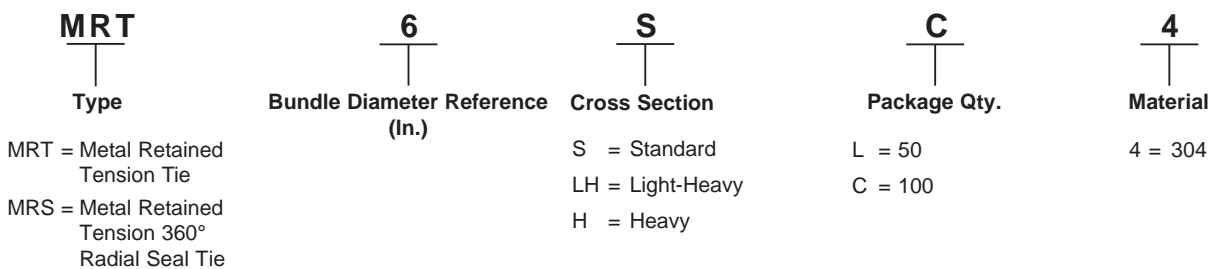
H

B3.16

Order number of pieces required, in multiples of Standard Package Quantity.



Part Number System for Pan-Steel® Retained Tension Ties – MRT Series



Pan-Steel® Retained Tension Ties – MRT Series

- Provide tight bundling of armored cables, pipes, conduit, and other rigid materials in harsh conditions for a reliable, easy to install fastening solution
- Self-locking cable tie design locks into place at any length along the tie body, unlike fixed diameter band clamps
- Available in AISI 304 stainless steel with a thickness of 0.010" (0.25mm)



Part Number	Max. Bundle Diameter		Length		Min. Loop Tensile Strength		Min. Bundle Diameter		Width		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm			

AISI 304 Stainless Steel — For General Purpose

Standard Cross Section

MRT1S-C4	1.0	25	9.0	229	180	800	0.75	19.1	0.18	4.4	MTRTLS	100	500
MRT2S-C4	2.0	51	12.2	310	180	800	0.75	19.1	0.18	4.4			
MRT4S-C4	4.0	102	18.5	470	180	800	0.75	19.1	0.18	4.4			
MRT6S-C4	6.0	152	24.8	630	180	800	0.75	19.1	0.18	4.4			

Light-Heavy Cross Section

MRT1.5LH-L4	1.5	38	10.6	269	225	1000	1.00	25.4	0.25	6.4	MTRTLS	50	250
MRT2LH-L4	2.0	51	12.2	310	225	1000	1.00	25.4	0.25	6.4			
MRT4LH-L4	4.0	102	18.5	470	225	1000	1.00	25.4	0.25	6.4			
MRT6LH-L4	6.0	152	24.8	630	225	1000	1.00	25.4	0.25	6.4			

Heavy Cross Section

MRT1.5H-L4	1.5	38	10.6	269	400	1780	1.00	25.4	0.31	7.9	MTRTH	50	250
MRT2H-L4	2.0	51	12.2	310	400	1780	1.00	25.4	0.31	7.9			
MRT4H-L4	4.0	102	18.5	470	400	1780	1.00	25.4	0.31	7.9			
MRT6H-L4	6.0	152	24.8	630	400	1780	1.00	25.4	0.31	7.9			

Double Wrapped — For Additional Strength

Standard Cross Section

MRT1.5DS-C4	1.5	38	14.4	366	250	1112	1.00	25.4	0.17	4.4	MTRTLS	100	500
MRT2.5DS-C4	2.5	63	20.7	526	250	1112	1.00	25.4	0.17	4.4			

Light-Heavy Cross Section

MRT2.5DLH-L4	2.5	63	20.7	526	350	1556	1.00	25.4	0.25	6.4	MTRTLS	50	250
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Heavy Cross Section

MRT2DH-L4	2.0	51	18.5	470	550	2447	1.00	25.4	0.31	7.9	MTRTH	50	250
MRT4DH-L4	4.0	102	31.1	790	550	2447	1.00	25.4	0.31	7.9			

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

## Pan-Steel® 360° Radial Seal Retained Tension Ties – MRS Series

- 360° radial seal eliminates gaps under the head of the tie to provide a completely sealed installation
- Self-locking cable tie design locks into place at any length along the tie body, unlike fixed diameter band clamps
- Available in AISI 304 stainless steel with a thickness of 0.010" (0.25mm)



Part Number	Max. Bundle Diameter		Length		Min. Loop Tensile Strength		Min. Bundle Diameter		Width		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm			

### AISI 304 Stainless Steel — For General Purpose

#### Standard Cross Section

Part Number	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm	MTRTLS	100	500
MRS1S-C4	1.0	25	9.0	229	180	800	0.75	19.1	0.18	4.4			
MRS2S-C4	2.0	51	12.2	310	180	800	0.75	19.1	0.18	4.4			
MRS4S-C4	4.0	102	18.5	470	180	800	0.75	19.1	0.18	4.4			
MRS6S-C4	6.0	152	24.8	630	180	800	0.75	19.1	0.18	4.4			

#### Light-Heavy Cross Section

Part Number	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm	MTRTLS	50	250
MRS1.5LH-L4	1.5	38	10.6	269	225	1000	1.00	25.4	0.25	6.4			
MRS2LH-L4	2.0	51	12.2	310	225	1000	1.00	25.4	0.25	6.4			
MRS4LH-L4	4.0	102	18.5	470	225	1000	1.00	25.4	0.25	6.4			
MRS6LH-L4	6.0	152	24.8	630	225	1000	1.00	25.4	0.25	6.4			

#### Heavy Cross Section

Part Number	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm	MTRTH	50	250
MRS1.5H-L4	1.5	38	10.6	269	400	1780	1.00	25.4	0.31	7.9			
MRS2H-L4	2.0	51	12.2	310	400	1780	1.00	25.4	0.31	7.9			
MRS4H-L4	4.0	102	18.5	470	400	1780	1.00	25.4	0.31	7.9			
MRS6H-L4	6.0	152	24.8	630	400	1780	1.00	25.4	0.31	7.9			

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

**Features and Benefits – Pan-Steel® Strapping System**

The Panduit® Pan-Steel® Stainless Steel Strapping is the ultimate solution for strapping applications. The buckle design and tension controlled installation tool offer a quick and safe installation for all harsh environments. Available in four widths 3/8" (9.5mm), 1/2" (12.7mm) 5/8" (15.9mm), and 3/4" (19.1mm) in base 201 (3/4" width only), 304, or 316 stainless steel with a temperature range of -60°C (-76°F) to 1000°F (538°C).

**Unique Locking Methods  
Pan-Steel® Stainless Steel Strapping**

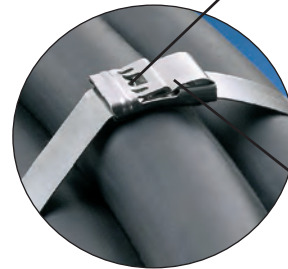
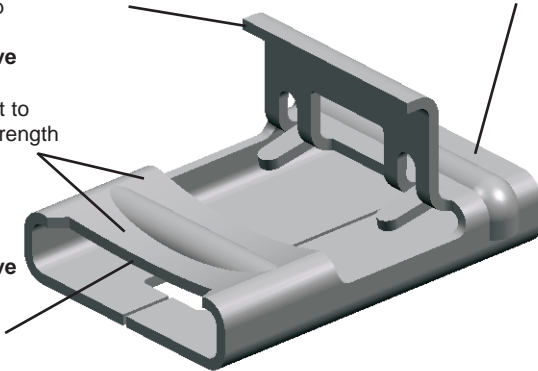
**\*Patented Hooked Clamping Tab**  
Bends strap body within retention area of buckle for increased loop tensile strength and full coverage of cut end of strap

**\*Patented Cross Rib Support**  
Enhanced rigidity for higher loop tensile strength

**Buckle Design**  
Provides a low finished profile

**\*Patented Concave Cross Section**  
Enhanced support to improve tensile strength

**\*Patented Concave Buckle Recess**  
Increases body resistance for increased loop tensile strength



**No Sharp Edges**  
After tensioning, cut end is locked inside buckle

**Pan-Steel® Stainless Steel MS75 Strapping**

**Hooked Clamping Tab**  
Provides full coverage of cut end of strap for enhanced safety

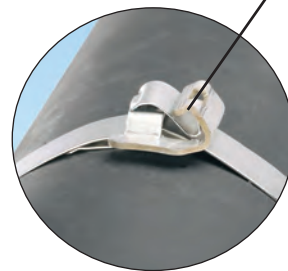
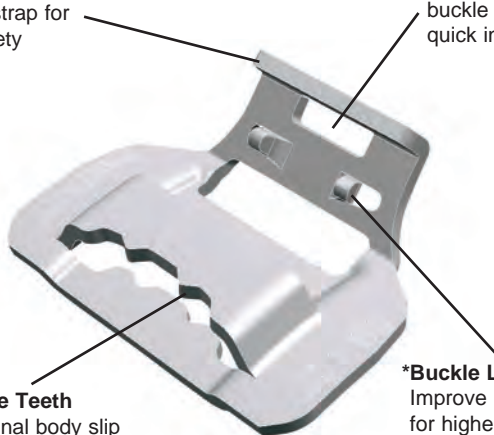
**Buckle Screwdriver Slot**  
Allows use of screwdriver for buckle closure for a simple quick installation

**No Sharp Edges**  
After tensioning, cut end is locked inside buckle

**Buckle Bridge Teeth**  
Deliver additional body slip resistance for optimum strength

**\*Buckle Locking Tabs**  
Improve locking mechanism for higher strength

\*Patented



Custom length strapping available for applications that require various bundle diameters to provide job safety and versatility with minimum inventory. See page B3.23.

A

# Industrial Electrical Solutions

B1

## The Panduit Method Reduces Installation Time

### Pan-Steel® Stainless Steel Strapping

B2

1) Place strap around the material and insert tail of strap through buckle. Pull strapping tight and bend up to hold in place. Insert tail of strapping into tool nose section. Squeeze handle to tension.

2) Once proper tension is reached, maintain tension and raise tool 90° – 120° over buckle and pull down on cutter lever, cutting strap.

3) Remove tool, press cut end down and toward retaining tab.

C1

C2

C3

4) Using the closure lever on the handle of the tool, bend retaining tab down and over cut end.

**Provides a finished, safe, and secure closure.**

C4

D1

### Pan-Steel® Stainless Steel MS75 Strapping

D2

1) Place strap around the material and insert tail of strap through buckle. Pull strapping tight and bend up to hold in place.

2) Insert tail of strapping into tool nose section. Rotate handle to tension.

3) After tensioning, raise tool 90° – 120° over buckle and pull down on cutter lever, cutting strap.

D3

E1

4) Remove tool and press cut end down toward retaining tab.

5) Using a flathead screwdriver, bend retaining tab down and over cut end.

**Provides a finished, safe, and secure closure.**

E2

E3

E4

E5

F

G

H

B3.20

Order number of pieces required, in multiples of Standard Package Quantity.

**Part Number System for Discrete Length Strapping**

<b>MS</b>   Type	<b>4</b>   Bundle Diameter (In.)	<b>W</b>   Width	<b>38</b>   Inches	<b>T</b>   Thickness	<b>15</b>   15 = 0.015" 30 = 0.030"	<b>L</b>   Standard Package Size	<b>4</b>   Material
MS = Metal Strap MSC = Metal Strap Coated			38 = 3/8 50 = 1/2 63 = 5/8 75 = 3/4			L = 50 Pcs. Q = 25 Pcs.	2 = 201 SS 4 = 304 SS 6 = 316 SS

**Pan-Steel® Strapping – MS Series**

- Fold over design provides high-retained tension in mechanical fastening and cable bundling applications
- After tensioning, cut end is locked inside low profile buckle – no sharp edges
- Can be used in a wide range of indoor, outdoor, and underground (including direct burial) applications
- Smooth surfaces and rounded edges assures cable protection and worker safety
- Available in AISI 201 (3/4" width only) and 304 stainless steel for general-purpose applications
- Available in AISI 316 stainless steel for the most corrosive environments



Part Number	Max. Bundle Diameter		Length*		Strap Breaking Strength		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.			
	In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm	In.	mm						
<b>AISI 201 Stainless Steel</b>																		
MS4W75T30-Q2	4.0	102	20.2	513	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76	BT75SDT	25	25			
MS6W75T30-Q2	6.0	152	26.5	673	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76						
MS8W75T30-Q2	8.0	203	32.7	831	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76						
MS10W75T30-Q2	10.0	254	39.0	991	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76						
<b>AISI 304 Stainless Steel</b>																		
MS2W38T15-L4	2.0	51	11.8	300	502	2229	1.00	25.4	0.38	9.5	0.015	0.38	BT2HT	50	250			
MS4W38T15-L4	4.0	102	18.0	457	502	2229	1.00	25.4	0.38	9.5	0.015	0.38						
MS6W38T15-L4	6.0	152	24.4	620	502	2229	1.00	25.4	0.38	9.5	0.015	0.38						
MS8W38T15-L4	8.0	203	30.7	780	502	2229	1.00	25.4	0.38	9.5	0.015	0.38						
MS10W38T15-L4	10.0	254	37.0	940	502	2229	1.00	25.4	0.38	9.5	0.015	0.38						
MS4W50T15-L4	4.0	102	18.0	457	671	2979	1.00	25.4	0.50	12.7	0.015	0.38						
MS6W50T15-L4	6.0	152	24.4	620	671	2979	1.00	25.4	0.50	12.7	0.015	0.38						
MS8W50T15-L4	8.0	203	30.7	780	671	2979	1.00	25.4	0.50	12.7	0.015	0.38						
MS10W50T15-L4	10.0	254	37.0	940	671	2979	1.00	25.4	0.50	12.7	0.015	0.38						
MS4W63T15-L4	4.0	102	18.0	457	839	3725	1.00	25.4	0.63	15.9	0.015	0.38						
MS6W63T15-L4	6.0	152	24.4	620	839	3725	1.00	25.4	0.63	15.9	0.015	0.38						
MS8W63T15-L4	8.0	203	30.7	780	839	3725	1.00	25.4	0.63	15.9	0.015	0.38						
MS10W63T15-L4	10.0	254	37.0	940	839	3725	1.00	25.4	0.63	15.9	0.015	0.38						
<b>AISI 316 Stainless Steel</b>																		
MS12W75T30-Q6	12	304	45.3	1150	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76				BT75SDT	25	25
MS14W75T30-Q6	14	355	51.0	1295	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76						

\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to www.panduit.com.

\*\*\*For information on installation tools, refer to www.panduit.com/tools.

## Pan-Steel® Nylon 11 Coated Strapping – MSC Series

- Fold over design provides high-retained tension in mechanical fastening and cable bundling applications
- After tensioning, cut end is locked inside low profile buckle – no sharp edges
- AISI 316 stainless steel for the most corrosive environments
- Available in 0.38 inch (9.5mm), 0.50 inch (12.7mm), 0.63 inch (15.9mm) cross sections
- UV resistant, low smoke, halogen-free material
- Temperature tolerance -40°F (-40°C) to 285°F (140°C)



Part Number	Max. Bundle Diameter		Length*		Strap Breaking Strength		Min. Bundle Diameter		Width		Thickness <sup>^</sup>		Recommended Installation Tool***	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	Ft.	m	Lbs.	N	In.	mm	In.	mm	In.	mm			
MSC2W38T15-L6	2.0	51	11.8	300	502	2229	1.00	2.54	0.38	9.5	0.015	0.38	BT2HT	50	250
MSC4W38T15-L6	4.0	102	18.0	457	502	2229	1.00	2.54	0.38	9.5	0.015	0.38			
MSC6W38T15-L6	6.0	152	24.4	620	502	2229	1.00	2.54	0.38	9.5	0.015	0.38			
MSC8W38T15-L6	8.0	203	30.7	780	502	2229	1.00	2.54	0.38	9.5	0.015	0.38			
MSC10W38T15-L6	10.0	254	37.0	940	502	2229	1.00	2.54	0.38	9.5	0.015	0.38			
MSC4W50T15-L6	4.0	102	18.0	457	671	2979	1.00	2.54	0.50	12.7	0.015	0.38			
MSC6W50T15-L6	6.0	152	24.4	620	671	2979	1.00	2.54	0.50	12.7	0.015	0.38			
MSC8W50T15-L6	8.0	203	30.7	780	671	2979	1.00	2.54	0.50	12.7	0.015	0.38			
MSC10W50T15-L6	10.0	254	37.0	940	671	2979	1.00	2.54	0.50	12.7	0.015	0.38			
MSC4W63T15-L6	4.0	102	18.0	457	839	3725	1.00	2.54	0.63	15.9	0.015	0.38			
MSC6W63T15-L6	6.0	152	24.4	620	839	3725	1.00	2.54	0.63	15.9	0.015	0.38			
MSC8W63T15-L6	8.0	203	30.7	780	839	3725	1.00	2.54	0.63	15.9	0.015	0.38			
MSC10W63T15-L6	10.0	254	37.0	940	839	3725	1.00	2.54	0.63	15.9	0.015	0.38			

\*Other lengths available, contact Panduit Customer Service.

\*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

<sup>^</sup>Base material less coating.

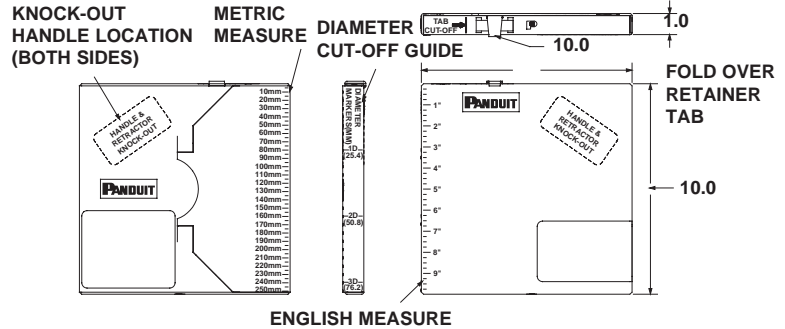
**Pan-Steel® Custom Length Strapping**

- Fold over design provides high retained tension in mechanical fastening and cable bundling applications
- After tensioning, cut end is locked inside low profile buckle – no sharp edges
- For applications that require various bundle diameters
- Supplied in reels of 82.5 feet (25m) (coated) or 100 feet (30.5m) (uncoated)

- Provides job site versatility with minimum inventory
- Packaging speeds removal of steel and includes bundle diameter cut-off guide
- Available in AISI 201 (3/4" width only) and 304 stainless steel for general-purpose applications
- Available in AISI 316 stainless steel for the most corrosive environments

**Nylon 11 coating (optional):**

- Nylon 11 coating provides additional edge protection and prevents corrosion between dissimilar metals
- UV resistant, low smoke, halogen-free material
- Temperature tolerance -40°F (-40°C) to 285°F (140°C)
- AISI 316 stainless steel for the most corrosive environments



Part Number	Length*		Strap Breaking Strength		Width		Thickness <sup>^</sup>		Used With Buckle	Recommended Installation Tool***	Std. Pkg. Qty.‡
	Ft.	m	Lbs.	N	In.	mm	In.	mm			
<b>201 Stainless Steel</b>											
MSW75T30-CR2	100	30.5	2400	10656	0.75	19.1	0.030	0.80	MSBW75-C2	BT75SDT	1
<b>304 Stainless Steel</b>											
MSW38T15-CR4	100	30.5	502	2229	0.38	9.5	0.015	0.38	MSBW38-C4	BT2HT	1
MSW50T15-CR4	100	30.5	671	2979	0.50	12.7	0.015	0.38	MSBW50-C4		
MSW63T15-C4	100	30.5	839	3275	0.63	15.9	0.015	0.38	MSBW63-C4		
<b>Coated Custom Length Strapping</b>											
MSCNW38T15-QR6	82.5	25.0	502	2229	0.38	9.5	0.015	0.38	MSBW38-C6	BT2HT	1
MSCNW50T15-QR6	82.5	25.0	671	2979	0.50	12.7	0.015	0.38	MSBW50-C6		
MSCNW63T15-QR6	82.5	25.0	839	3275	0.63	15.9	0.015	0.38	MSBW63-C6		

\*For other lengths, thicknesses and material grades (316SS) available, contact Panduit Customer Service or refer to [www.panduit.com](http://www.panduit.com).  
‡Order in number of reels required. \*\*\*For information on installation tools, refer to [www.panduit.com/tools](http://www.panduit.com/tools).

To determine the proper amount of strapping required, use the following formula:

**Calculate** Diameter inches (mm) x 3.14 + 6 inches (152.4 mm)

**Pan-Steel® Buckles for Custom Length Strapping**



Part Number	Material	Width		Part Description	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm			
<b>AISI 201 Stainless Steel</b>						
MSBW75-C2	201	0.75	19.1	Individual low profile buckles used with metal strapping.	100	—
<b>AISI 304 Stainless Steel</b>						
MSBW38-C4	304	0.38	9.5	Individual low profile buckles used with custom length strapping.	100	1000
MSBW50-C4	304	0.50	12.7			
MSBW63-C4	304	0.63	15.9			

Buckles also available in 316 material grade. Contact Panduit Customer Service or refer to [www.panduit.com](http://www.panduit.com) for additional information.

B1

## PCS Cushion Sleeve

- Black cushion sleeving used with Pan-Steel® Stainless Steel Ties, custom length banding, and MS strap
- Used on applications requiring improved gripping on non-resilient objects
- Can be used indoors or outdoors (excellent ultraviolet resistance, good resistance to petroleum, and many chemicals)
- Isolation between dissimilar metals allows the ties and straps to be used with aluminum cable tray
- Provides full separation between the ties and the bundle
- Operating temperature range -40°F (-40°C) to 200°F (93°C)

B3

C1



C2

C3

C4

Part Number	Material	Used with Pan-Steel® Ties/Strapping	Width		Length		Std. Pkg. Qty. (reels)‡
			In.	mm	Ft.	m	
PCSS-B-CR	Neoprene	MLT/S	0.33	8.4	100	30.5	1
PCSH-B-CR		MLT/LH/H	0.47	11.9	100	30.5	
PCSSH-B-CR*		MLT/EH/SH and MS Straps	0.91	23.1	100	30.5	
PCSLSH-B-CR	TPE	MLT/EH/SH and MS Straps	1.05	26.8	100	30.5	

\*Meets MIL-R-6855

‡Order in number of reels required.  
Pkg. -CR = 100 ft. (30.5m) reel.

D1

## Metal Uniclip Brackets

- Allows Panduit stainless steel ties and straps to be installed on any style or design of cable tray; slotted or un-slotted
- Eliminate consideration of diagonal installations
- High resistance to lateral and axial movement

D2

D3



E1



E2



E3



E4

E5

F

G

H

Part Number	Material	Used with Pan-Steel® Ties	Description
UCSQ1-VC	Galvanized Steel	MLTS/LH/H/EH/EH15/SH, MLTC/H, MLTFC/S/LH/H/EH/SH, or MSW75	Universal Metal Rung Bracket – Strut Type
UCRND1-VC			Universal Metal Rung Bracket – Round
UCIB1-VC			Universal Metal Rung Bracket – I-Beam
UCTH1-VC	Universal Metal Rung Bracket – Top Hat		
UCSQ1-V316	Stainless Steel Type 316		Universal Metal Rung Bracket – Strut Type
UCRND1-V316			Universal Metal Rung Bracket – Round
UCIB1-V316		Universal Metal Rung Bracket – I-Beam	
UCTH1-V316		Universal Metal Rung Bracket – Top Hat	

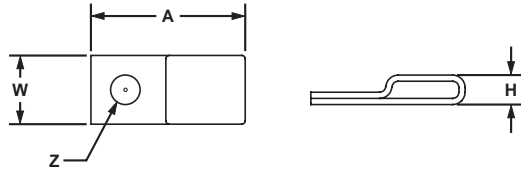
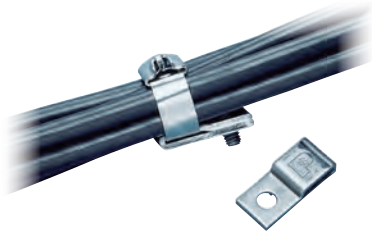
Contact Customer Service for additional sizes, styles, or material grade.



### Stainless Steel Tie Mounts

- Low profile
- One hole mounting

- For use with standard, light-heavy, and heavy cross section Pan-Steel® Ties as well as 0.38 inch (9.5mm) wide strapping
- 304 Stainless Steel



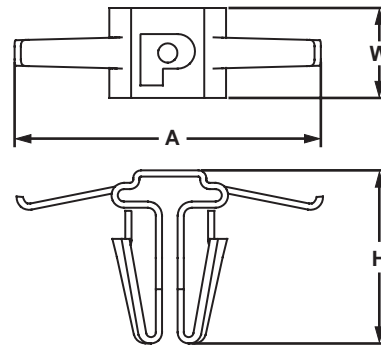
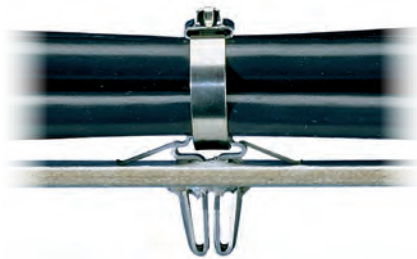
Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method*	Length A		Width W		Height H		Hole Diameter Z		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm		
MTM1H-C	MLTS/LH/H, MLTC/H, MLTFC/S/LH/H or MSW38	#8 (4mm) screw	0.90	22.6	0.40	10.2	0.17	4.4	0.17	4.4	100	1000
MTM1H10-C		#10 (5mm) screw	0.90	22.6	0.40	10.2	0.17	4.4	0.21	5.4		
MTM1H25-C		1/4" (6mm) screw	0.90	22.6	0.40	10.2	0.17	4.4	0.28	7.1		

\*Stainless steel screws are recommended for fastening to avoid corrosion problems associated with dissimilar metals. Contact Customer Service for additional sizes and material grades available.

### Stainless Steel Push Mount

- No tapping required
- Used where only one side of the panel is accessible
- Nothing to assemble

- For use with standard, light-heavy, and heavy cross section Pan-Steel® Ties
- 304 Stainless Steel

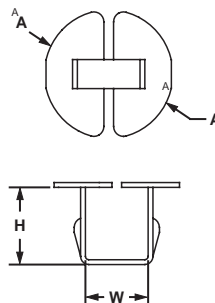


Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method	Length A		Width W		Height H		Panel Thickness		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm		
MPWM-H56-Q	MLTS/LH/H, MLTC/H or MLTFC/S/LH/H	Inserted into pre-drilled hole 5/16" (8mm)	0.84	21.3	0.29	7.3	0.56	14.2	0.03 – 0.09	0.8 – 2.4	25	250

### Stainless Steel Push Button Mount

- Low profile
- No tapping required
- Designed for use only where both sides of the panel are accessible

- For use with standard cross section Pan-Steel® Ties
- 304 Stainless Steel

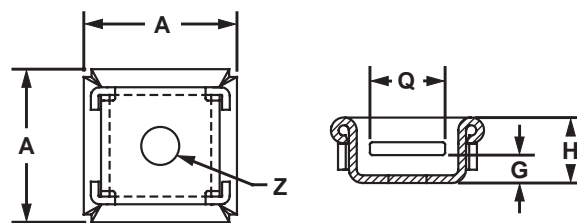


Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method	Diameter A		Width W		Height H		Panel Thickness		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm		
MBM-H25-Q	MLT/S or MLTFC/S	Inserted into pre-drilled hole 0.25" (6.4mm)	0.40	10.0	0.20	5.0	0.26	6.5	0.03 – 0.12	0.8 – 3.0	25	250

### Stainless Steel 2-Way Tie Mount

- Allows stainless steel cable ties to be inserted from either of two sides
- Low profile
- Single hole center mounting for maximum holding and stability

- Maximum screw head height 0.09 inches (2.3mm)
- For use with standard, light-heavy, and heavy cross section Pan-Steel® Ties
- 304 Stainless Steel



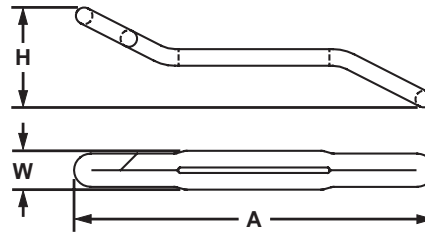
Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method*	Length A		Height H		Screw Head Height G		Slot Width Q		Hole Diameter Z		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	Lbs.	N	In.	mm	In.	mm		
MTM2H-Q	MLTS/LH/H, MLTC/H or MLTFC/S/LH/H	#8 (4mm) screw	0.71	18.0	0.30	8.0	0.09	2.3	0.35	9.0	0.17	4.5	25	250

\*Stainless steel screws are recommended for fastening to avoid corrosion problems associated with dissimilar metals.

**Stainless Steel Bulkhead Mount**

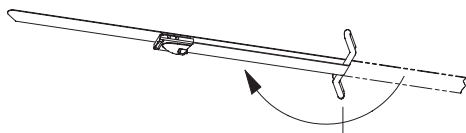
- Zero profile
- Mounts directly to surface
- Used where only one side of the panel is accessible

- Permanent, secure application
- Used with standard, light-heavy, and heavy cross section Pan-Steel® Ties
- 304 Stainless Steel

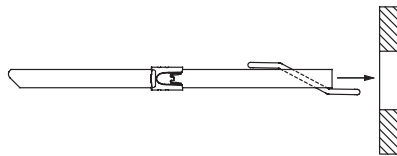


Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method	Length A		Width W		Height H		Max. Panel Thickness		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm		
MTMBH-Q	MLTS/LH/H/ EH/SH, MLTC/H, or MLTFC/S/ LH/H/EH/SH	Pre-drilled hole size standard and light-heavy cross section MLT-S/LH 0.38" (9.5mm) – 0.50" (12.7mm). Heavy cross section MLT-H 0.50" (12.7mm) – 0.63" (15.9mm).	1.92	48.5	0.21	5.3	0.54	13.7	0.50	12.7	25	250

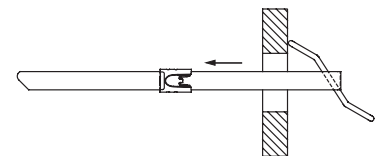
**To Install Bulkhead Mount:**



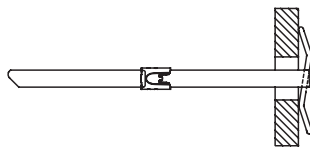
1) Insert cable tie through mount slot and fold cable tie.



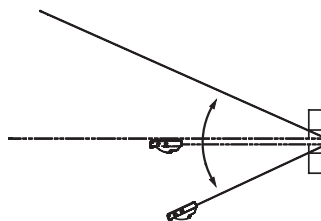
2) Insert cable tie and mount through panel/framework hole.



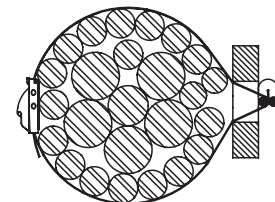
3) Pull cable tie back to secure the mount in the panel/framework.



4) Mount shown in correct position for installation.



5) Separate cable tie to allow for bundling of cables/wires, etc.



6) Install cable tie around bundle and fasten.

B1

## Stainless Steel Technical Information

### Physical Characteristics of Stainless Steel and Aluminum

B2

	Pan-Steel® Stainless Steel MS Strapping and Buckles	Pan-Steel® Stainless Steel Cable Ties
<b>Material:</b>	201, 304, and 316 Grade Stainless Steel	304 and 316 Grade Stainless Steel
<b>Maximum Temperature Rating</b>	1000°F (538°C)	1000°F (538°C)
<b>Minimum Temperature Rating</b>	-76°F (-60°C)	-76°F (-60°C)
<b>RoHS:</b>	Compliant	Compliant
<b>Flammability:</b>	Non-Flammable	Non-Flammable
<b>Ultraviolet light resistance:</b>	Excellent	Excellent

B3

C1

C2

### Panduit Stainless Steel Cable Tie and Strapping Approvals

Logo (Symbol)	Agency	Spec/Approval	Requirement	Applicable Products
	Underwriters Laboratories, Inc.	Listing E56854	Dimensional, tensile, temp., cycling, humidity	MLT-S, MLT-LH, MLT-H, MLTEH15, MLTSH, MLTDEH and MLTDSH in 304 and 316. MSW38T15, MSW50T15, MSW63T15, MSBW38, MSBW50, MSBW63 in both 304 and 316 material. MLT-EH, MLT-DH, MLT-DEH15, MLT-FCH, MLT-FCEH, MSCNW63-T15, MSW75T30, MSBW75, MSCW38T15, MSCW50T15, MSCW63T15, MSCNW38T15, MLTFCS, SH, MLTCH, MSCNW50T15, and MSW63T15 in 316 material.
	Conformite European	Low Voltage Directive 73/23/EEC (amended 93/68/EEC) MLT cable ties and MS straps also meet the requirements from EN62275	CE Marking is required for products sold within the European Union. CE Marking Directives specify the minimum performance of these products. Applying the CE mark signifies compliance with essential requirements of specific directives.	All MLT, MRT, MRS ties and MS straps.
	Amer. Bureau of Shipping	Cert. # 14-HS1189616-3-PDA	Mechanical	All MLT ties and MS straps.
	Bureau Veritas	Cert. #05968/E2BV	Material specification, dimensional, visual	All uncoated MLT ties in 304 and 316 material.
	Det Norske Veritas and Germanischer Lloyd	Cert. # TAE000012M	Salt mist test, tensile test, accelerated aging, vibration tests, Mechanical	All coated and uncoated MLT ties.
		Cert. # TAE000013N		All coated and uncoated MS straps.
	Lloyd's Register of Shipping	Cert. # L5/60006(E1)	Material specification, tensile test, vibration tests	All uncoated stainless steel MLT ties and all MS straps.
	SAE Int'l formerly US MIL	AS23190 formerly MS23109E	Dimensional, visual, vibration, temp. cycling, immersion	MLT-S and MLT-H ties in 304 and 316 material.
	US Coast Guard	File No.16703/46	Mechanical	MLT-H series cable ties.
	US Military	SAE AS81306/MS90387-3	Mechanical	GS4MT-E installation tools.
	Russian Maritime	17.00775.315	Mechanical	All MLT ties and MS straps.

H

**Chemical Resistance at 70°F (21°C) Temperature**

Chemical	%	304 and 316 Stainless Steel*	Chemical	%	304 and 316 Stainless Steel*	Chemical	%	304 and 316 Stainless Steel*	Chemical	%	304 and 316 Stainless Steel*
Arsenic Acid	40	E	Cider	?	E	Methyl Alcohol	100	E	Sodium Bisulfate	10	E
Acetone	100	E	Dichloroethane	100	E	Methyl Chloride	100	E	Sodium Borate	All	E
Aluminum Hydroxide	AQ C.S.	E	Diethyl Ether	100	E	Methyl Ethyl Ketone	100	E	Sodium Carbonate	5	E
Ammonium Carbonate	5	E	Ethyl Alcohol	100	E	Naphtha	100	E	Sodium Chlorate	25	E
Ammonium Hydroxide	10	E	Ethyl Chloride	100	E	Nitric Acid	30-70	E	Sodium Chloride	2	E
Ammonium Nitrate	100	E	Ethyl Glycol	100	E	Nitrous Acid	5	E	Sodium Fluoride	5	F
Ammonium Sulfate	10	E	Ferric Hydroxide	All	E	Oleic Acid	100	E	Sodium Hydroxide	10	E
Barium Carbonate	All	E	Ferric Nitrate	10	E	Oxalic Acid	10	E	Sodium Hyposulfite	AQ C.S.	E
Barium Chloride	5	E	Ferrous Sulfate	10	E	Paraffin	100	E	Sodium Nitrate	5	E
Barium Sulfate	10	E	Fuel Oil	100	E	Petroleum Ether	100	E	Sodium Nitrite	AQ C.S.	E
Barium Sulfide	10	E	Futural	100	E	Phenol	90	E	Sodium Percolate	10	E
Benzene	100	E	Gallic Acid	AQ C.S.	E	Phosphoric Acid	10	E	Sodium Phosphate	5	E
Benzoic Acid	100	E	Gasoline	100	E	Picric Acid	1	S	Sodium Sulfate	5	E
Butyric Acid	50	E	Glycerine	100	E	Potassium Bromide	AQ C.S.	S	Sodium Thiosulfate	5	S
Calcium Carbonate	AQ C.S.	E	Hydrocyanic Acid	All	E	Potassium Carbonate 1%	1	E	Stearic Acid	100	E
Calcium Chlorate	10	E	Hydrogen Peroxide	30	E	Potassium Chlorate	AQ C.S.	E	Sulfur	100	E
Calcium Hydroxide	20	E	Hydrogen Sulfide	Dry	E	Potassium Dichromate	40	E	Sulfur Dioxide	All	E
Calcium Hydrochlorite	2	F	Idoform	100	E	Potassium Ferrocyanide	25	E	Sulfuric Acid	100	E
Calcium Sulfate	2	E	Isopropyl Alcohol	100	E	Potassium Hydroxide	5	E	Sulfuric Acid	5	F
Carbon	100	E	Jet Fuel	100	E	Potassium Iodide	All	E	Tannic Acid	10	E
Chlorine (Wet)	Wet	F	Lactic Acid	100	E	Potassium Nitrate	50	E	Tartaric Acid	50	E
Chlorine (Dry)	Dry	F	Lanolin	10	E	Potassium Permanganate	5	E	Tetrahydrofuran	100	E
Chloroacetic Acid	30	F	Lead Acetate	5	E	Potassium Sulfate	5	E	Toluene	100	F
Chloroform	100	E	Magnesium Carbonate	All	E	Potassium Sulfide	AQ C.S.	E	Xylene	100	E
Chromic Acid	5	E	Magnesium Chloride	10	E	Propyl Alcohol	100	E	Zinc Chloride	70	E
Citric Acid	50	E	Magnesium Nitrate	All	E	Silver Nitrate	10	E	Zinc Nitrate	AQ C.S.	E
Copper Cyanide	10	E	Malic Acid	AQ C.S.	E	Sodium Acetate	60	E	Zinc Sulfate	AQ C.S.	E
Copper Nitrate	50	E	Mercury	100	E	Sodium Bicarbonate	All	E			

\*E = Excellent, S = Satisfactory, F = Fair, AQ C.S. = Aqueous Cold Saturated, All = All % Concentrations.

B1

## Rigorous Tests and Physical Properties of Stainless Steel

B2

**STRENGTH:** Panduit® Pan-Steel® Stainless Steel Ties and Straps are tested per the SAE Standard AS23190 formerly U.S. Military Specification MIL-S-23190, minimum loop tensile test. This test consists of applying a tie to a split mandrel and then measuring the force required to separate the (two) halves until the tie fails. These minimum loop tensile strengths are given for the various products on pages B3.5 – B3.26.

B3

**TEMPERATURE EXTREMES:** Panduit® Pan-Steel® Stainless Steel Ties and Straps are 100% stainless steel in the alloy provided (locking head, locking ball, and body all provided from the same grade of material ordered).

Various temperature tests have been successfully completed. One such test is the U.S. Military Temperature Cycling Test per Thermal Shock Method 107, Test Condition B of MIL-STD-202. This test exposes the parts from low temperature -85°F (-65°C) to high temperature 275°F (135°C) to low temperature -85°F (-65°C). After exposure, the parts must be free of cracks, distortions, breaks, release of locking device, and meet the minimum loop tensile requirements.

C1

**SHOCK AND VIBRATION:** Panduit® Pan-Steel® Standard and Heavy Cross Section ties have passed the U.S. Military random vibration Test Method 214. Test Condition II, Letter J of MIL-STD-202. This test consists of applying parts to a bundle and then vibrating them with random vibration for eight hours in each of two mutually perpendicular directions. The parts are then subjected to further temperature testing and finally have to pass the minimum loop tensile strength test.

C2

Panduit® Pan-Steel® Extra-Heavy, Super-Heavy, MSW50 Strapping and MSW63 Strapping have passed the U.S. Military Shock and Vibration Testing per MIL-STD-167 and MIL-S-901D. The ties were subjected to vibrations in all three planes from 4 – 50 Hz and Shock testing in all three planes utilizing a hammer shock machine.

C3

**SALT SPRAY:** Panduit® Pan-Steel® Stainless Steel Ties and Straps have been subjected to salt spray tests without signs of corrosion or reduction in performance.

C4

**OUTDOOR EXPOSURE:** Panduit® Pan-Steel® Stainless Steel Ties and Straps have been exposed outdoors in Northern Illinois, USA since 1985. At the printing of this catalog, there has been no sign of corrosion or loss of performance.

D1

**FLUID IMMERSION:** Panduit® Pan-Steel® Stainless Steel Ties were immersed in: 1-Hydraulic Fluid, 2-Turbine Fuel, 3-Lubricating Oil, and 4-Isopropyl Alcohol for four hours at temperatures of 122°F (50°C). Per SAE Standard MS23190, the parts were then subjected to and passed the minimum loop tensile test.

D2

**RADIATION:** Installed cable ties of various materials have been exposed to different amounts of radiation to determine the maximum acceptable limit. These tests were conducted by Panduit to determine the acceptability for use in various areas of nuclear power plants (accumulated over 40 year life). Radiation resistance is 2x10<sup>8</sup> rads.

D3

### Military Cross Reference (M23190)

Military Standard Part Number	Panduit Part Number
M23190/3-1	MLT2S-CP
M23190/3-1	MLT2S-CP316
M23190/3-2	MLT4S-CP
M23190/3-2	MLT4S-CP316
M23190/3-3	MLT6S-CP
M23190/3-3	MLT6S-CP316
M23190/3-4	MLT8S-CP
M23190/3-4	MLT8S-CP316
M23190/3-5	MLT2H-LP
M23190/3-5	MLT2H-LP316
M23190/3-6	MLT4H-LP
M23190/3-6	MLT4H-LP316
M23190/3-7	MLT6H-LP
M23190/3-7	MLT6H-LP316
M23190/3-8	MLT8H-LP
M23190/3-8	MLT8H-LP316
M23190/3-9	MLT10H-LP
M23190/3-9	MLT10H-LP316

G

H

