

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.



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A. System Overview

Cable Tie Selection Chart

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

B1. Cable Ties

Cable Tie Function

- 1) 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

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

Cable Tie Family

- 3) Select the cable tie family that meets your overall needs

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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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
	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 ⁵	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵
	Weathering Life Expectancy (Years)/UV Resistance	—	1 – 2	7 – 9	7 – 9	4 – 5	1 – 2	7 – 9
	Impact Resistance	—	○	○	●	○	○	○
	Salts	—	●	●	●	●	●	●
	Hydrocarbons (Gas, Oil, Lubricants)	—	●	●	●	●	●	●
	Chlorinated Hydrocarbons	—	●	●	●	●	●	●
	Acids	—	●	●	●	●	●	●
	Bases	—	●	●	●	●	●	●
	Acid Rain	—	●	●	●	●	●	●
	Max. Continuous Use Temperature (Note 1)	UL 746B	185°F 85°C	185°F 85°C	185°F 85°C	239°F 115°C	239°F 115°C	212°F 100°C (Note 2)
	Min. Application Use Temperature	EN 50146	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C
	Flammability Rating (Note 4)	UL 94	V-2	V-2	HB	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

Product Line		Cross Sections				
Pan-Ty® (B1.6 - Note 5)	✓	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, LH, 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 B1.85.

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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 ⁵	1 x 10 ⁵	3.5 x 10 ⁶	1 x 10 ⁶	1 x 10 ⁶	2 x 10 ⁸	2 x 10 ⁸	1 x 10 ⁹	—	1 x 10 ⁶	6 x 10 ⁵
1 – 2	1 – 2	12 – 15	1	7 – 9	>15	>15	—	—	1	>20
◑	◑	○	◐	◐	●	●	●	○	◐	◐
◑	◑	◐	●	●	●	●	●	●	●	○
●	●	●	○	○	●	●	●	●	○	●
◐	◐	◐	○	○	●	●	●	◐	○	◐
●	●	●	●	●	●	●	○	●	●	●
◐	◐	◐	●	●	●	●	●	◐	●	●
○	○	◐	●	●	●	●	◐	○	●	○
212°F 100°C	212°F 100°C	194°F 90°C	239°F 115°C	239°F 115°C	338°F 170°C	302°F 150°C	500°F 260°C (Note 3)	185°F 85°C	239°F 115°C	185°F 85°C
-40°F -40°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C	-76°F -60°C
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: Also known as Relative Thermal Index (RTI), see Temperature (page B1.103)

Note 2: Estimated
Note 3: Based on the UL RTI for electrical properties

Note 4: See Table B (page B1.102)
Note 5: Also available in 00 material (meets Mil Spec)

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

▲HALAR is a registered trademark of Ausimont USA, Inc.

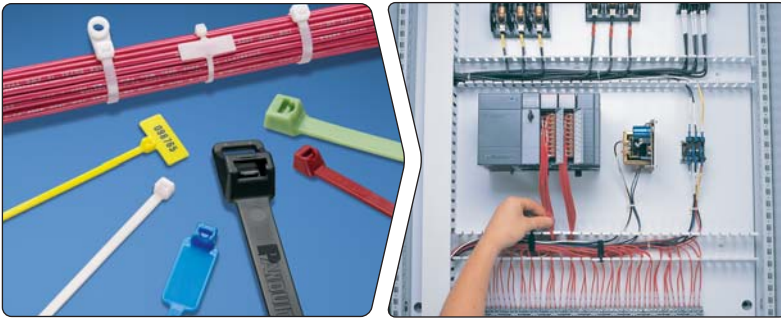
A.
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Cable Tie Styles Overview

B1.
Cable Ties

Pan-Ty® Cable Ties

Pages B1.6 – B1.37



- 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

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

Super-Grip® Cable Ties

Pages B1.38 – B1.42



- 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

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

Dome-Top® Barb Ty Cable Ties

Pages B1.43 – B1.55



- 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

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

Parallel-Entry Cable Ties

Pages B1.56 – B1.64



- 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

E3.
Pre-Printed
& Write-On
Markers

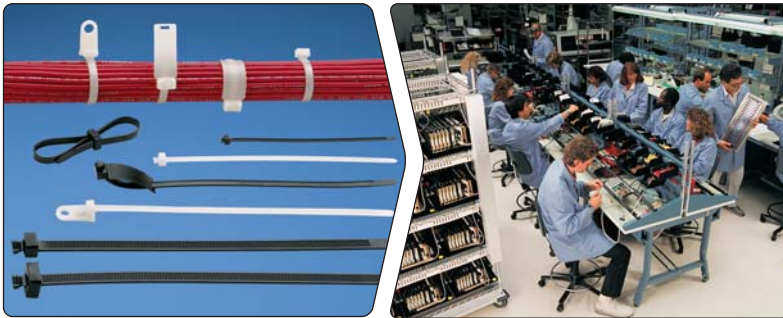
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Sta-Strap® Cable Ties

Pages B1.65 – B1.72



- 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

Network Cable Ties

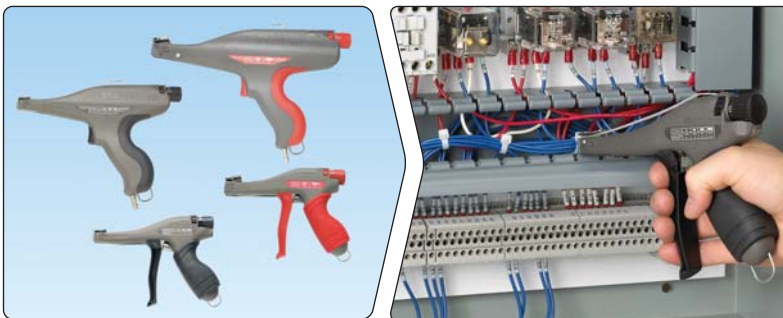
Pages B1.85 – B1.92



- 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

Manual Cable Tie Installation Tools

Pages B1.109 – B1.114



- Used in production, maintenance, and construction applications
- Designed for ease of use and to reduce repetitive stress injuries
- Full line of lightweight, ergonomic hand tools – Panduit leads the industry in reliability and performance
- Flush cut-off of cable tie limits exposure to sharp edges

Automatic Cable Tie Installation Tools

Pages B1.115 – B1.122



- An efficient solution for high volume OEM harness, assembly, fastening and packaging applications
- High-speed tools lower installed cost and reduce operator fatigue
- Wrap, tension, and cut-off cable ties in less than a second
- Reel-fed systems for miniature and standard cross section cable ties

A. System Overview

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.

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

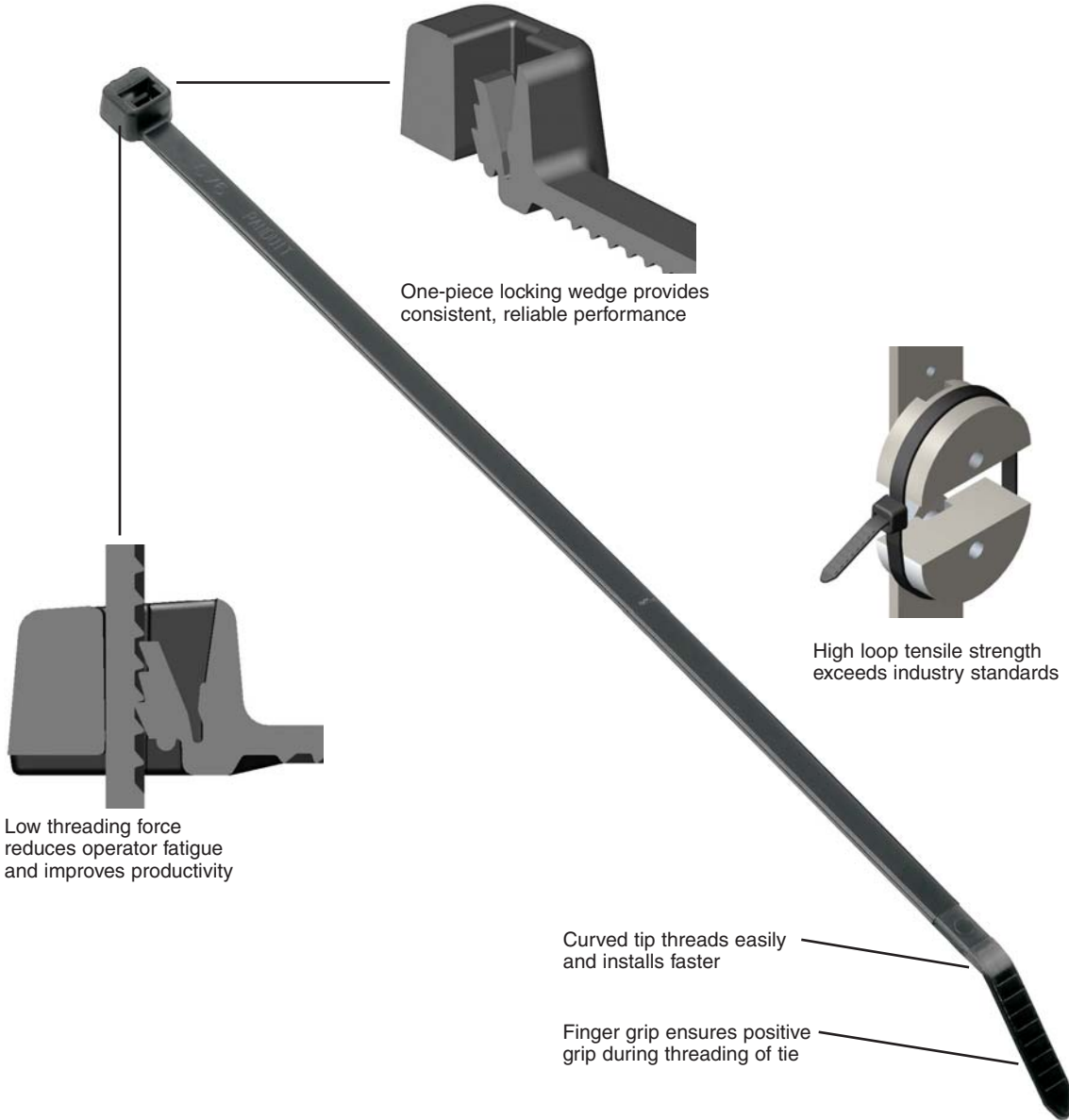
E2. Labels

E3. Pre-Printed & Write-On Markers

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E5. Lockout/Tagout & Safety Solutions

F. Index



Cable tie tools speed installation and reduce total installed cost.
See pages B1.109 – B1.114.



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing.
See pages B2.1 – B2.29.

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	B1.22
	Clamp Ties/Mount	PLC	B1.26
	Push Mount Ties/Mount	PLWP, PRWP, PLUP, PLP	B1.28,30,33
	Marker Ties/Identify	PLF, PLM	B1.34
Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	PLT	B1.10,11
	Releasable Ties/Re-usable	PRT	B1.23,24
	Clamp Ties/Mount	PLC	B1.27
	Push Mount Ties/Mount	PLWP, PRWP, PLUP, PLP	B1.29 – B1.33
	Marker Ties/Identify	PLF, PLM	B1.34
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	PLT	B1.12
	Releasable Ties/Re-usable	PRT	B1.23,24
	Clamp Ties/Mount	PLC	B1.27
	Push Mount Ties/Mount	PLWP, PRLWP, PRWP, PLUP, PLP	B1.29 – B1.33
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	B1.34
Weather Resistant Nylon 12, Black (120)	Locking Ties/Bundle	PLT	B1.15
Polypropylene, Green (109)	Locking Ties/Bundle	PLT	B1.16
Weather Resistant Polypropylene, Black (100)	Locking Ties/Bundle	PLT	B1.17
	Releasable Ties/Re-usable	PRT	B1.25
HALAR [▲] , Maroon (702) TEFZEL [■] , Aqua Blue (76)	Locking Ties/Bundle	PLT	B1.18,19
	Locking Ties/Bundle	PLT	B1.18,19
PEEK, Translucent Brown (71)	Locking Ties/Bundle	PLT	B1.20
Metal Detectable, Blue (86, 186)	Locking Ties/Bundle	PLT	B1.21

▲HALAR is a registered trademark of Ausimont USA, Inc. ■TEFZEL is a registered trademark of E.I. du Pont de Nemours and Company.

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.	SM = Subminiature	(Clamp Ties Only)	Q = 25	See Page B1.35
PRT = Releasable Tie	Maximum	M = Miniature	-S4 = #4 (M2.5)	L = 50	
PLC = Locking Clamp	Bundle	I = Intermediate	-S6 = #6 (M3)	C = 100	
PLF = Locking Flag	Dia. (In.)	S = Standard	-S8 = #8 (M4)	TL = 250	
PLM = Locking Marker		LH = Light-Heavy	-S10 = #10 (M5)	D = 500	
PLP = Locking Push Mount		H = Heavy	-S25 = 1/4 (M6)	M = 1000	
PLWP = Locking Wing Push Mount		EH = Extra-Heavy		VMR = 2 reels/2500 ea.	
PRLWP = Releasable Ladder Wing Push Mount				XMR = 2 reels/5000 ea.	
PRWP = Releasable Wing Push Mount					
PLUP = Locking Umbrella Push Mount					

A. System Overview

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

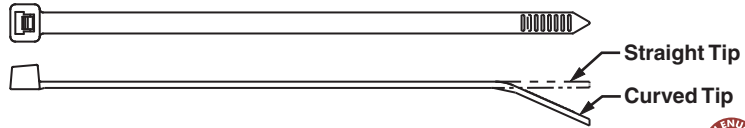
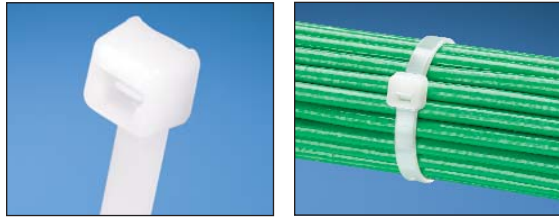
B1. Cable Ties

- For indoor use
- Versatile cable ties can be used in countless applications
- One-piece construction for consistent performance and reliability
- 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

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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	.070	1.8	.030	.8	.60	15	8	36	GTS, GTSL, PTS	100	1000
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Miniature Cross Section – Plenum-Rated

PLT.7M-C	3.1	79	.090	2.3	.032	.8	.68	17	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
PLT1M-C	3.9	99	.098	2.5	.043	1.1	.87	22	18	80		100	1000
PLT1.5M-C	5.6	142	.098	2.5	.043	1.1	1.25	32	18	80		100	1000
PLT2M-C	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		100	1000

Intermediate Cross Section – Plenum-Rated

PLT1.5I-C	5.6	142	.142	3.6	.045	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
PLT2I-C	8.0	203	.142	3.6	.045	1.1	2.00	51	40	178		100	1000
PLT2.5I-C	9.7	246	.145	3.7	.052	1.3	2.50	64	40	178		100	1000
PLT3I-C	11.4	290	.145	3.7	.052	1.3	3.00	76	40	178		100	1000
PLT4I-C	14.5	368	.145	3.7	.052	1.3	4.00	102	40	178		100	1000

Standard Cross Section – Plenum-Rated

PLT1S-C	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PPTS, PTH, STS2, STH2	100	1000
PLT1.5S-C	6.2	157	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
PLT2S-C	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
PLT2.5S-C	9.8	249	.190	4.8	.052	1.3	2.50	64	50	222		100	1000
PLT3S-C	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
PLT4S-C	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000
PLT4.5S-C	15.5	394	.190	4.8	.052	1.3	4.50	114	50	222		100	1000
PLT5S-C	17.5	445	.190	4.8	.052	1.3	5.00	127	50	222		100	500

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

PLT2H-L	8.1	206	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
PLT2.5H-L	9.8	251	.300	7.6	.075	1.9	2.50	64	120	534		50	500
PLT3H-L	11.4	290	.300	7.6	.075	1.9	3.00	76	120	534		50	500
PLT4H-L	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		50	500
PLT6LH-L	21.9	556	.300	7.6	.075	1.9	6.00	152	120	534		50	500
PLT7LH-L	24.7	627	.300	7.6	.075	1.9	7.00	178	120	534		50	500
PLT8LH-L	27.6	701	.300	7.6	.075	1.9	8.00	203	120	534		50	500
PLT9LH-L*	30.5	775	.300	7.6	.075	1.9	9.00	229	120	534		50	500
PLT10LH-L*	34.3	871	.300	7.6	.075	1.9	10.31	262	120	534		50	1000

Heavy Cross Section (Straight Tip)

PLT5H-L*	17.7	450	.350	8.9	.078	2.0	5.00	127	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
PLT6H-L*	20.9	530	.350	8.9	.078	2.0	6.00	152	175	778		50	500
PLT8H-L*	30.6	779	.350	8.9	.078	2.0	9.00	229	175	778		50	500
PLT13H-Q*	43.3	1100	.350	8.9	.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.

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

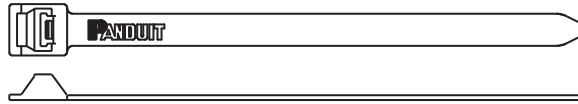
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

Pan-Ty® Lashing Ties – Nylon 6.6

- For indoor use
- Typically used for heavy duty applications
- Strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip, see page B1.24



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			
Extra-Heavy Cross Section													
PLT2EH-C	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	GS4EH, ST3EH	100	1000
PLT5EH-Q	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
PLT6EH-Q	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
PLT8EH-C	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		100	1000
PLT10EH-C	34.2	869	.500	12.7	.085	2.2	10.00	254	250	1112		100	500
PLT12EH-C	40.1	1019	.500	12.7	.085	2.2	12.00	305	250	1112		100	500

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Overview

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Accessories

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Steel Ties

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C2.
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C3.
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F.
Index

A. System Overview



Pan-Ty® Cable Ties – Weather Resistant Nylon 6.6

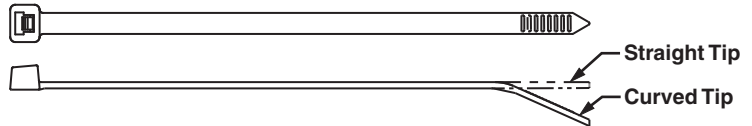
B1. Cable Ties

- 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
- 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. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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	.070	1.8	.030	.8	.60	15	8	36	GTS, GTSL, PTS	100	1000
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Miniature Cross Section

PLT.7M-M0	3.1	79	.090	2.3	.032	.8	.68	17	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
PLT1M-C0	3.9	99	.098	2.5	.043	1.1	.87	22	18	80		100	1000
PLT1.5M-C0	5.6	142	.098	2.5	.043	1.1	1.25	32	18	80		100	1000
PLT2M-C0	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		100	1000

Intermediate Cross Section

PLT1.5I-C0	5.6	142	.142	3.6	.045	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
PLT2I-C0	8.0	203	.142	3.6	.045	1.1	2.00	51	40	178		100	1000
PLT2.5I-C0	9.7	246	.145	3.7	.052	1.3	2.50	64	40	178		100	1000
PLT3I-C0	11.4	290	.145	3.7	.052	1.3	3.00	76	40	178		100	1000
PLT4I-C0	14.5	368	.145	3.7	.052	1.3	4.00	102	40	178		100	1000

Standard Cross Section

PLT1S-C0	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLT1.5S-C0	6.2	157	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
PLT2S-C0	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
PLT2.5S-C0	9.8	249	.190	4.8	.052	1.3	2.50	64	50	222		100	1000
PLT3S-C0	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
PLT4S-C0	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000
PLT4.5S-C0	15.5	394	.190	4.8	.052	1.3	4.50	114	50	222		100	1000
PLT5S-C0	17.5	445	.190	4.8	.052	1.3	5.00	127	50	222		100	500

Light-Heavy Cross Section (Straight Tip)

PLT2H-L0	8.1	206	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
PLT2.5H-L0	9.8	251	.300	7.6	.075	1.9	2.50	64	120	534		50	500
PLT3H-L0	11.4	290	.300	7.6	.075	1.9	3.00	76	120	534		50	500
PLT4H-L0	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		50	500
PLT6LH-L0	21.9	556	.300	7.6	.075	1.9	6.00	152	120	534		50	500
PLT7LH-L0	24.7	627	.300	7.6	.075	1.9	7.00	178	120	534		50	500
PLT8LH-L0	27.6	701	.300	7.6	.075	1.9	8.00	203	120	534		50	500
PLT9LH-L0	30.5	775	.300	7.6	.075	1.9	9.00	229	120	534		50	500

Heavy Cross Section (Straight Tip)

PLT5H-L0	17.7	450	.350	8.9	.078	2.0	5.00	127	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
PLT6H-L0	20.9	530	.350	8.9	.078	2.0	6.00	152	175	778		50	500
PLT8H-L0	30.6	779	.350	8.9	.078	2.0	9.00	229	175	778		50	500
PLT13H-Q0	43.3	1100	.350	8.9	.078	2.0	13.00	330	175	778		25	500

Note: UL Listed and UL Recognized except PLT.6SM and PLT2H/2.5H/3H/4H/5H/6H/8H/13H; CSA Certified except LH and H cross sections.

F. Index

Pan-Ty® Lashing Ties – Weather Resistant Nylon 6.6

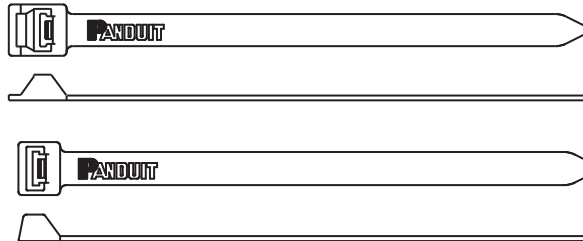
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Typically used for heavy duty applications
- Strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip, shown below



Lashing Tie



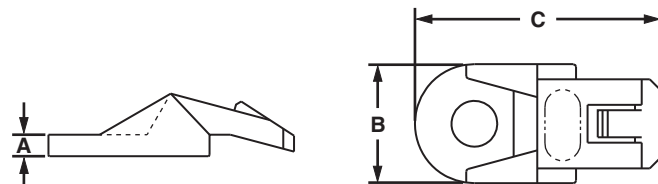
No Buckle Design



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			
Extra-Heavy Cross Section													
PLT2EH-Q0	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	GS4EH, ST3EH	25	250
PLT5EH-Q0	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
PLT6EH-Q0	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
PLT8EH-Q0	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		25	250
PLT10EH-Q0	34.2	869	.500	12.7	.085	2.2	10.00	254	250	1112		25	250
PLT12EH-Q0	40.1	1019	.500	12.7	.085	2.2	12.00	305	250	1112		25	250
Extra-Heavy Cross Section (No Buckle Design)													
PLT3EH-NB-C0	12.2	310	.500	12.7	.075	1.9	3.30	84	250	1112	GS4EH, ST3EH	100	1000
PLT5EH-NB-C0	19.8	503	.500	12.7	.075	1.9	5.00	127	250	1112		100	1000
PLT6EH-NB-C0	21.8	554	.500	12.7	.075	1.9	6.00	152	250	1112		100	1000

MCEH® 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, B1.22, B1.24 and B1.25



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

A. System Overview

Pan-Ty® Cable Ties – Heat Stabilized Nylon 6.6

B1. Cable Ties

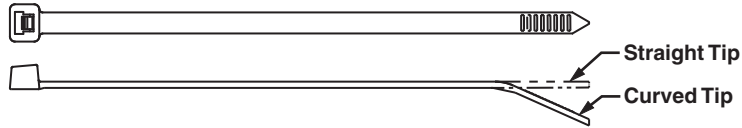
- For high temperature applications up to 239°F (115°C) – indoor use
- One-piece construction for consistent performance and reliability

- 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. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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-M30	2.8	71	.070	1.8	.030	.8	.60	15	8	36	GTS, GTSL, PTS	1000	50000
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Miniature Cross Section

PLT.7M-M30	3.1	79	.090	2.3	.032	.8	.68	17	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
PLT1M-C30	3.9	99	.098	2.5	.043	1.1	.87	22	18	80		100	1000
PLT1.5M-M30	5.6	142	.098	2.5	.043	1.1	1.25	32	18	80		1000	50000
PLT2M-M30	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		1000	25000

Intermediate Cross Section

PLT1.5I-C30	5.6	142	.142	3.6	.045	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
PLT2I-C30	8.0	203	.142	3.6	.045	1.1	2.00	51	40	178		100	1000
PLT3I-M30	11.4	290	.145	3.7	.052	1.3	3.00	76	40	178		1000	10000
PLT4I-M30	14.5	368	.145	3.7	.052	1.3	4.00	102	40	178		1000	10000

Standard Cross Section

PLT1S-M30	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT1.5S-M30	6.2	157	.190	4.8	.052	1.3	1.50	38	50	222		1000	10000
PLT2S-C30	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
PLT2S-M39*	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		1000	10000
PLT2.5S-M30	9.8	249	.190	4.8	.052	1.3	2.50	64	50	222		1000	10000
PLT3S-C30	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
PLT4S-C30	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000
PLT5S-M30	17.5	445	.190	4.8	.052	1.3	5.00	127	50	222		1000	5000

Light-Heavy Cross Section (Straight Tip)

PLT2H-TL30	8.1	206	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLT3H-TL30	11.4	290	.300	7.6	.075	1.9	3.00	76	120	534		250	2500
PLT4H-TL30	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		250	2500
PLT7LH-C30	24.7	627	.300	7.6	.075	1.9	7.00	178	120	534		100	2000
PLT9LH-C30	30.5	775	.300	7.6	.075	1.9	9.00	229	120	534		100	1000

Heavy Cross Section (Straight Tip)

PLT5H-C30	17.7	450	.350	8.9	.078	2.0	5.00	127	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	100	2000
PLT6H-C30	20.9	530	.350	8.9	.078	2.0	6.00	152	175	778		100	2000
PLT8H-C30	30.6	779	.350	8.9	.078	2.0	9.00	229	175	778		100	1500

*Natural heat stabilized material (39).
Note: UL Listed except PLT.6SM and PLT5H/6H/8H.

E5. Lockout/Tagout & Safety Solutions

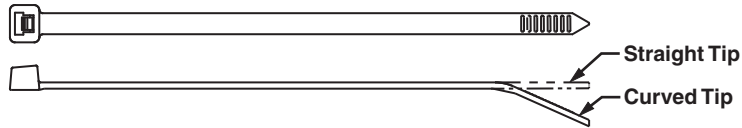
F. Index



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 212°F (100°C) – indoor or outdoor use
- One-piece construction for consistent performance and reliability

- 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													
PLT1M-M300	3.9	99	.098	2.5	.035	.9	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
Intermediate Cross Section													
PLT1.5I-M300	5.6	142	.142	3.6	.045	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
PLT2I-M300	8.0	203	.142	3.6	.045	1.1	2.00	51	40	178		1000	25000
Standard Cross Section													
PLT1S-M300	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT2S-M300	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		1000	10000
PLT4S-M300	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000
Light-Heavy Cross Section (Straight Tip)													
PLT2H-TL300	8.4	213	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLT4H-TL300	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		250	2500

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

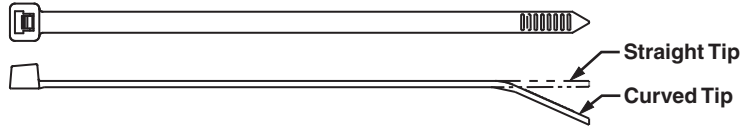
E5. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview

UL US c SP US Pan-Ty® Cable Ties – Flame Retardant Nylon 6.6

- Flammability rating of UL 94V-0 – indoor use
- One-piece construction for consistent performance and reliability
- 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



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

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	.098	2.5	.043	1.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
PLT1M-M69	4.0	102	.098	2.5	.043	1.1	.87	22	18	80		1000	25000
PLT2M-M69	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		1000	25000

Intermediate Cross Section

PLT1.5I-M69	5.6	142	.142	3.6	.044	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
PLT2I-M69	8.0	203	.142	3.6	.044	1.1	2.00	51	40	178		1000	25000

Standard Cross Section

PLT2S-M60*	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT2S-M69	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		1000	10000
PLT4S-M69	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000

Light-Heavy Cross Section (Straight Tip)

PLT4H-TL69	14.6	371	.300	7.6	.075	1.9	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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*Black flame retardant material (60).
Note: UL Recognized and CSA Certified except 60 material.

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

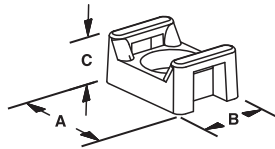
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

Cable Tie Mounts – Flame Retardant Nylon 6.6

- 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

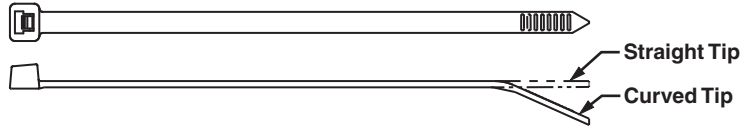


Part Number	Used with Cable Ties*	Length A		Width B		Height C		Counterbore Diameter		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm			
TM1S4-M69	M	0.51	13.0	0.32	8.0	0.23	5.8	0.23	5.7	#4 (M2.5) Screw	1000	5000
TM1S6-M69		0.51	13.0	0.32	8.0	0.23	5.8	0.28	7.0	#6 (M3) Screw	1000	5000
TM2S6-M69	M, I, S	0.63	16.0	0.43	10.8	0.28	7.0	0.29	7.1	#6 (M3) Screw	1000	5000
TM2S8-M69		0.63	16.0	0.43	10.8	0.28	7.0	0.33	8.4	#8 (M4) Screw	1000	5000
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		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.

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
- 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			
Intermediate Cross Section													
PLT1.5I-M120	5.6	142	.142	3.6	.045	1.1	1.38	35	25	111	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
Standard Cross Section													
PLT2S-M120	7.4	188	.190	4.8	.052	1.3	1.88	48	40	178	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLT4S-M120	14.5	368	.190	4.8	.052	1.3	4.00	102	40	178		1000	5000
Light-Heavy Cross Section (Straight Tip)													
PLT4H-TL120	14.5	368	.300	7.6	.075	1.9	4.00	102	90	400	GTH, GTSL, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLT8LH-C120	27.6	701	.300	7.6	.075	1.9	8.00	203	90	400		100	2000

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A. System Overview

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

B1. Cable Ties

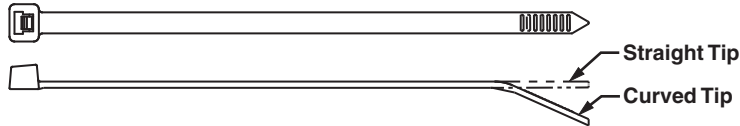
- For chemical resistance where high loop tensile strength is not required especially in the presence of hydrochloric acid, salts, and bases
- For indoor use
- Material requires lowering the tool setting (see table below)

- One-piece construction for consistent performance and reliability
- 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. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

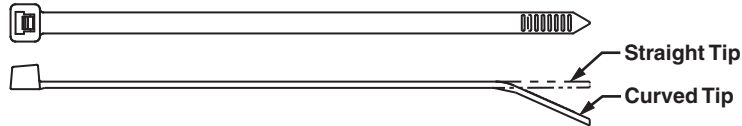
F. Index

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Tool Setting	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
Miniature Cross Section														
PLT1M-M109	3.9	99	.098	2.5	.043	1.1	.87	22	11	49	GTS, GTSL, GS2B, PTS, PPTS, STS2	2	1000	50000
Intermediate Cross Section														
PLT1.5I-M109	5.6	142	.142	3.6	.045	1.1	1.38	35	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	3	1000	25000
Standard Cross Section														
PLT2S-M109	7.4	188	.190	4.8	.052	1.3	1.88	48	30	133	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	5 (GTS, GS2B, PTS, PPTS) 2 (GTH, GS4H)	1000	10000
PLT3S-M109	11.5	292	.190	4.8	.052	1.3	3.00	76	30	133			1000	10000
PLT4S-M109	14.5	368	.190	4.8	.052	1.3	4.00	102	30	133			1000	5000
Light-Heavy Cross Section (Straight Tip)														
PLT2H-TL109	8.1	206	.300	7.6	.075	1.9	2.00	51	50	222	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	5	250	2500
PLT3H-TL109	11.4	290	.300	7.6	.075	1.9	3.00	76	50	222		5	250	2500
PLT4H-TL109	14.5	368	.300	7.6	.075	1.9	4.00	102	50	222		5	250	2500

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

- Material requires lowering the tool setting (see table below)
- One-piece construction for consistent performance and reliability
- 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	Tool Setting	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
Miniature Cross Section														
PLT1M-M100	3.9	99	.098	2.5	.043	1.1	.87	22	11	49	GTS, GTSL, GS2B, PTS, PPTS, STS2	2	1000	50000
Intermediate Cross Section														
PLT1.5I-M100	5.6	142	.142	3.6	.045	1.1	1.38	35	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	3	1000	25000
Standard Cross Section														
PLT2S-M100	7.4	188	.190	4.8	.052	1.3	1.88	48	30	133	GTS, GTSL, GS2B, GTH, GS4H, PTS, PPTS, STS2, STH2	5 (GTS, GS2B, PTS, PPTS)	1000	10000
PLT3S-M100	11.5	292	.190	4.8	.052	1.3	3.00	76	30	133		2 (GTH, GS4H)	1000	10000
PLT4S-M100	14.5	368	.190	4.8	.052	1.3	4.00	102	30	133		1000	5000	
Light-Heavy Cross Section (Straight Tip)														
PLT2H-TL100	8.1	206	.300	7.6	.075	1.9	2.00	51	50	222	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	5	250	2500
PLT3H-TL100	11.4	290	.300	7.6	.075	1.9	3.00	76	50	222		5	250	2500
PLT4H-TL100	14.5	368	.300	7.6	.075	1.9	4.00	102	50	222		5	250	2500

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A. System Overview



Pan-Ty® Cable Ties – HALAR® – Distinctive Maroon Color

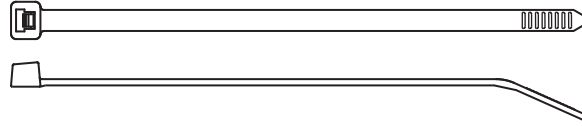
B1. Cable Ties

- 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
- 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. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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	.098	2.5	.043	1.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Standard Cross Section – Plenum-Rated													
PLT2S-C702Y	7.4	188	.190	4.8	.055	1.4	1.88	48	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLT3S-C702Y	11.6	295	.190	4.8	.055	1.4	3.00	76	50	222		100	1000

C4. Cable Management

D1. Terminals

*HALAR is a registered trademark of Ausimont USA, Inc.

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

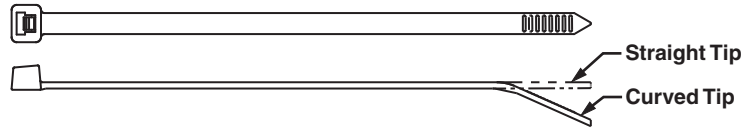
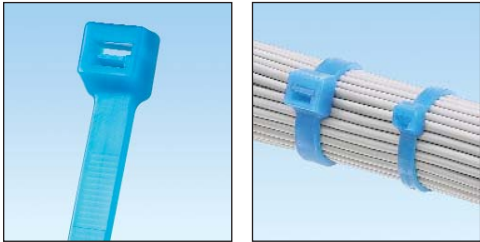
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Pan-Ty® Cable Ties – TEFZEL® – Distinctive Aqua Blue Color

- 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
- 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



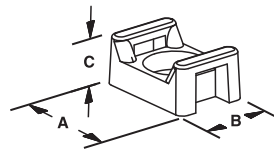
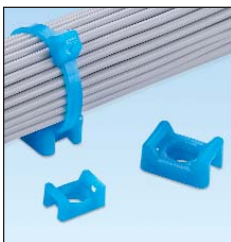
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
Miniature Cross Section													
PLT1M-C76	4.0	102	.098	2.5	.043	1.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Intermediate Cross Section													
PLT2I-C76	8.0	203	.135	3.4	.045	1.1	2.00	51	25	111	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Standard Cross Section													
PLT2S-C76	7.4	188	.190	4.8	.055	1.4	1.88	48	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLT3S-C76	11.6	295	.190	4.8	.059	1.5	3.00	76	50	222		100	1000
PLT4S-C76	14.6	371	.190	4.8	.059	1.5	4.00	102	50	222		100	1000
Light-Heavy Cross Section (Straight Tip)													
PLT3H-L76	11.5	292	.300	7.6	.075	1.9	3.00	78	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
PLT4H-L76	14.6	371	.300	7.6	.075	1.9	4.00	102	120	534		50	500

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

Panduit® 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	.63	16.0	.43	10.8	.28	7.0	.30	7.6	#8 (M4) screw	100	500
TM3S8-C76	S, LH	.86	21.7	.62	15.5	.38	9.5	.37	9.4	#8 (M4) screw	100	500
TM3S10-C76		.86	21.7	.62	15.8	.38	9.5	.37	9.4	#10 (M5) screw	100	500

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

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

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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A. System Overview

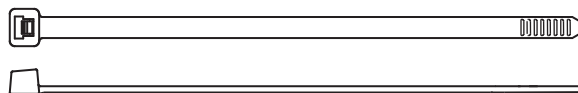
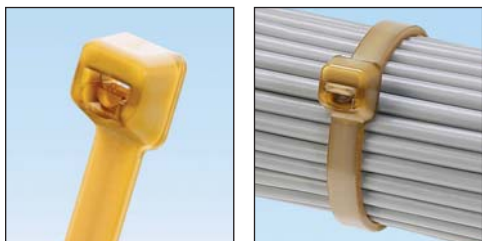
Pan-Ty® Cable Ties – PEEK (Polyetheretherketone)

B1. Cable Ties

- 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
- Lowest threading force of any one-piece cable tie in the industry

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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-C71	3.9	99	0.098	2.5	0.048	1.2	0.87	22	35	156	GTS, GTSL, PTS	100	1000
PLT1.5M-C71	5.8	147	0.098	2.5	0.048	1.2	1.38	35	35	156	GTS, GTSL, PTS	100	1000
Standard Cross Section													
PLT2S-C71	7.4	188	0.190	4.8	0.055	1.4	1.88	48	150	668	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

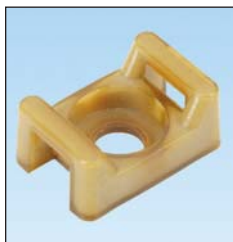
D2. Power Connectors

D3. Grounding Connectors

Cable Tie Mounts – (Polyetheretherketone)

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

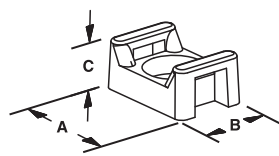
E1. Labeling Systems



E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification



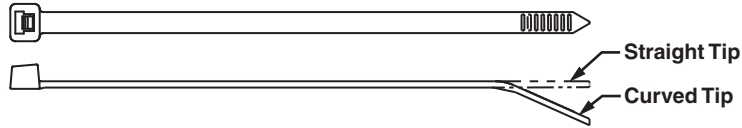
E5. Lockout/Tagout & Safety Solutions

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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.	.636 (16.2)	.427 (10.8)	.278 (7.1)	.335 (8.5)	#8 (M4) screw	100	500

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

- Metal impregnated material allows identification by metal detectors or x-ray 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
- 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				

Nylon 6.6

Miniature Cross Section

PLT1M-C86	3.9	100	.098	2.5	.044	1.1	.87	22	18	80	GTS, GTSL, GS2B, STS2	Nylon 6.6	100	1000
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Intermediate Cross Section

PLT2I-C86	8.0	203	.135	3.4	.047	1.2	2.00	51	40	178	GTS, GTSL, GS2B, STS2	Nylon 6.6	100	1000
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Standard Cross Section

PLT2S-C86	7.3	186	.190	4.8	.057	1.4	1.85	47	50	222	GTS, GTSL, GS2B, GTH, GS4H, STS2, STH2	Nylon 6.6	100	1000
PLT3S-C86	11.5	291	.190	4.8	.057	1.4	3.00	76	50	222		Nylon 6.6	100	1000
PLT4S-C86	14.4	366	.190	4.8	.057	1.4	4.00	102	50	222		Nylon 6.6	100	1000

Light-Heavy Cross Section (Straight Tip)

PLT3H-L86	11.1	282	.300	7.6	.075	1.9	3.00	76	120	120	GTH, GS4H, GS4EH, STH2, ST3EH	Nylon 6.6	50	500
PLT4H-L86	14.4	366	.300	7.6	.075	1.9	4.00	102	120	120		Nylon 6.6	50	500

Polypropylene

Miniature Cross Section

NEW!

PLT1M-C186	3.9	100	0.098	2.5	0.044	1.1	0.87	22	15	67	GTS, GTSL, GS2B, STS2	Polypropylene	100	1000
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Intermediate Cross Section

PLT2I-C186	8.0	203	.135	3.4	.047	1.2	2.00	51	24	107	GTS, GTSL, GS2B, STS2	Polypropylene	100	1000
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Standard Cross Section

PLT2S-C186	7.3	186	.190	4.8	.057	1.4	1.85	47	30	133	GTS, GTSL, GS2B, GTH, GS4H, STS2, STH2	Polypropylene	100	1000
PLT3S-C186	11.5	291	.190	4.8	.057	1.4	3.00	76	30	133		Polypropylene	100	1000
PLT4S-C186	14.4	366	.190	4.8	.057	1.4	4.00	102	30	133		Polypropylene	100	1000

Light-Heavy Cross Section (Straight Tip)

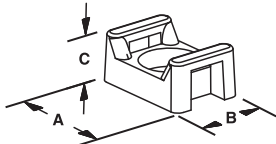
PLT3H-L186	11.1	282	.300	7.6	.075	1.9	3.00	76	60	267	GTH, GS4H, GS4EH, STH2, ST3EH	Polypropylene	50	500
PLT4H-L186	14.4	366	.300	7.6	.075	1.9	4.00	102	60	267		Polypropylene	50	500

Part Number	Material	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.
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NEW!

Cable Tie Mounts

TM2S8-C86	Nylon 6.6	Min., Int., Std.	.630 (16.0)	.422 (10.7)	.275 (7.0)	.325 (8.3)	#8 (M4) screw	100	500
TM3S8-C86		Std., Lt. Hvy.	.867 (22.0)	.614 (15.6)	.373 (9.5)	.325 (8.3)	#8 (M4) screw	100	500
TM3S10-C86							#10 (M5) screw	100	500
TM2S8-C186	Polypropylene	Min., Int., Std.	.630 (16.0)	.422 (10.7)	.275 (7.0)	.325 (8.3)	#8 (M4) screw	100	500
TM3S8-C186		Std., Lt. Hvy.	.867 (22.0)	.614 (15.6)	.373 (9.5)	.325 (8.3)	#8 (M4) screw	100	500
TM3S10-C186							#10 (M5) screw	100	500



A. System Overview

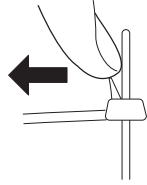


Pan-Ty® Releasable Cable Ties – Nylon 6.6

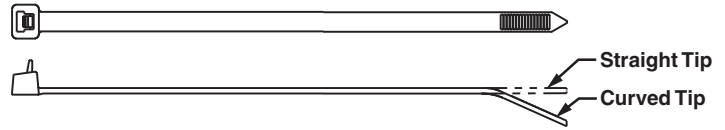
B1. Cable Ties

- 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 PR2H/3H/4H



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



C1. Wiring Duct

C2. Surface Raceway

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			

Standard Cross Section – Plenum-Rated

PRT1S-C	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	Hand install only	100	1000
PRT1.5S-C	6.3	160	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
PRT2S-C	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
PRT3S-C	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
PRT4S-C	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000

C4. Cable Management

Light-Heavy Cross Section (Straight Tip)

PRT2H-L	8.4	213	.300	7.6	.075	1.9	2.00	51	80	356	Hand install only	50	500
PRT3H-L	11.4	290	.300	7.6	.075	1.9	3.00	76	80	356		50	500
PRT4H-L	14.5	368	.300	7.6	.075	1.9	4.00	102	80	356		50	500

D1. Terminals

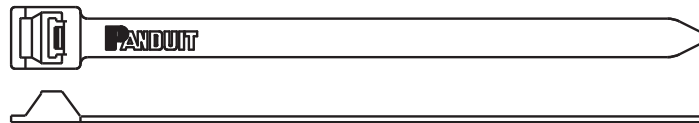
D2. Power Connectors

Pan-Ty® Releasable Lashing Ties – Nylon 6.6

D3. Grounding Connectors

- 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
- Strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip, see page B1.24

E1. Labeling Systems



E2. Labels

E3. Pre-Printed & Write-On Markers

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			

Extra-Heavy Cross Section

PRT2EH-C	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	Hand install only	100	1000
PRT5EH-Q	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
PRT6EH-Q	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
PRT8EH-C	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		100	1000
PRT10EH-C	34.2	869	.500	12.7	.085	2.2	10.00	254	250	1112		100	500
PRT12EH-C	40.1	1019	.500	12.7	.085	2.2	12.00	305	250	1112		100	500

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

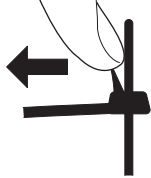
F. Index



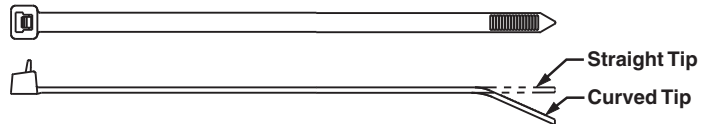
Pan-Ty® Releasable Cable Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- 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

PRT1S-C0	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	Hand install only	100	1000
PRT1.5S-C0	6.3	160	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
PRT2S-C0	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
PRT3S-C0	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
PRT4S-C0	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000

Light-Heavy Cross Section (Straight Tip)

PRT2H-L0	8.4	213	.300	7.6	.075	1.9	2.00	51	80	356	Hand install only	50	500
PRT3H-L0	11.4	290	.300	7.6	.075	1.9	3.00	76	80	356		50	500
PRT4H-L0	14.5	368	.300	7.6	.075	1.9	4.00	102	80	356		50	500

Heat Stabilized Nylon 6.6

Standard Cross Section

PRT1.5S-M30	6.3	160	.190	4.8	.052	1.3	1.50	38	50	222	Hand install only	1000	10000
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Note: UL Listed, UL Recognized, and CSA Certified, except PRT2H/3H/4H.

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview

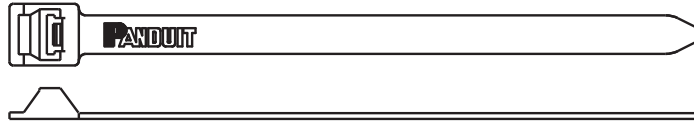
Pan-Ty® Releasable Lashing Ties – Weather Resistant and Heat Stabilized Nylon 6.6

B1. Cable Ties

- 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
- Strongest Pan-Ty® Cable Tie available
- Can be used with MCEH mounting clip shown below

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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. Abrasion Protection

Weather Resistant Nylon 6.6

Extra-Heavy Cross Section

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	250	1112		25	250
PRT6EH-Q0	22.2	564	0.500	12.7	0.075	1.9	6.00	152	250	1112		25	250
PRT8EH-Q0	28.3	719	0.500	12.7	0.085	2.2	8.00	203	250	1112		25	250
PRT10EH-Q0	34.2	869	0.500	12.7	0.085	2.2	10.00	254	250	1112		25	250
PRT12EH-Q0	40.1	1019	0.500	12.7	0.085	2.2	12.00	305	250	1112		25	250

C4. Cable Management

D1. Terminals

Heat Stabilized Nylon 6.6

Extra-Heavy Cross Section

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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D2. Power Connectors

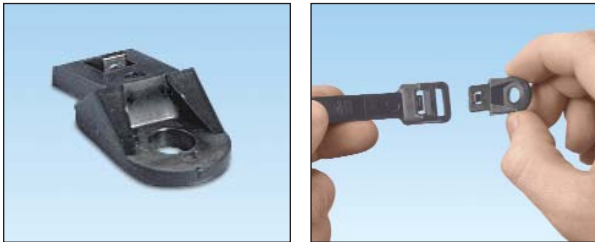
D3. Grounding Connectors

Lashing Tie Mounting Clip – Weather Resistant Nylon 6.6

E1. Labeling Systems

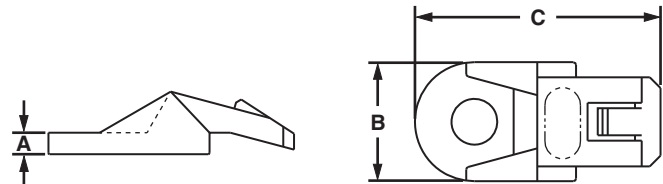
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Converts Panduit lashing ties into clamps
- Easily snaps in place for a secure clamp
- Use with lashing ties shown on pages B1.9, B1.11, B1.22, B1.24 and B1.25

E2. Labels



E3. Pre-Printed & Write-On Markers

E4. Permanent Identification



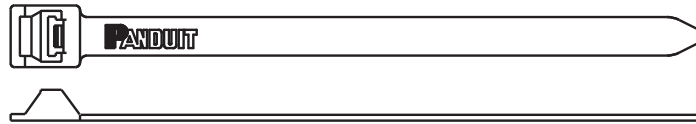
E5. Lockout/Tagout & Safety Solutions

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

F. Index

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 B1.24



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			
Extra-Heavy Cross Section													
PRT2EH-C100	9.0	229	.500	12.7	.075	1.9	2.00	51	90	400	Hand install only	100	1000
PRT5EH-C100	20.1	511	.500	12.7	.075	1.9	5.00	127	90	400		100	1000
PRT6EH-C100	22.2	564	.500	12.7	.075	1.9	6.00	152	90	400		100	1000
PRT8EH-C100	28.3	719	.500	12.7	.085	2.2	8.00	203	90	400		100	1000

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

F.
Index

A. System Overview

UL **UL** **SP** **Pan-Ty® Clamp Ties – Nylon 6.6**

B1. Cable Ties

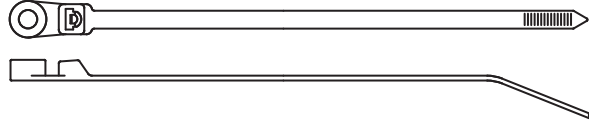
- For indoor use
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Design allows for bundling before or after screwing clamp in place

- 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

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct



C2. Surface Raceway

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			

Miniature Cross Section – Plenum-Rated

PLC1M-S4-C	4.3	109	.100	2.5	.045	1.1	.122	3.1	#4	M2.5	.75	19	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
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Intermediate Cross Section – Plenum-Rated

PLC1.5I-S8-C	6.1	155	.135	3.4	.045	1.1	.174	4.4	#8	M4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
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Standard Cross Section – Plenum-Rated

PLC2S-S6-C	7.9	201	.190	4.8	.047	1.2	.148	3.8	#6	M3	1.84	47	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLC2S-S10-C	7.9	201	.190	4.8	.047	1.2	.200	5.1	#10	M5	1.84	47	50	222		100	1000
PLC3S-S10-C	12.0	305	.190	4.8	.047	1.2	.200	5.1	#10	M5	3.00	76	50	222		100	1000
PLC4S-S10-C	15.0	381	.190	4.8	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222		100	1000

Light-Heavy Cross Section – Plenum-Rated

PLC2H-S25-L	9.0	229	.300	7.6	.075	1.9	.260	6.6	1/4	M6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
PLC4H-S25-L	15.1	384	.300	7.6	.075	1.9	.260	6.6	1/4	M6	4.00	102	120	534		50	500

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

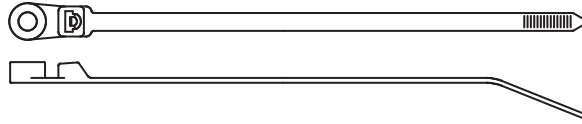
E5. Lockout/Tagout & Safety Solutions

F. Index

UL[®] US[®] CS[®] 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	.100	2.5	.045	1.1	.122	3.1	#4	M2.5	.75	19	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
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Intermediate Cross Section

PLC1.5I-S8-C0	6.1	155	.135	3.4	.045	1.1	.174	4.4	#8	M4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
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Standard Cross Section

PLC2S-S6-C0	7.9	201	.190	4.8	.047	1.2	.148	3.8	#6	M3	1.84	47	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLC2S-S10-C0	7.9	201	.190	4.8	.047	1.2	.200	5.1	#10	M5	1.84	47	50	222		100	1000
PLC3S-S10-C0	12.0	305	.190	4.8	.052	1.3	.200	5.1	#10	M5	3.00	76	50	222		100	1000
PLC4S-S10-C0	15.0	381	.190	4.8	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222		100	1000

Light-Heavy Cross Section

PLC2H-S25-TL0	9.0	229	.300	7.6	.075	1.9	.260	6.6	1/4	M6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLC4H-S25-L0	15.1	384	.300	7.6	.075	1.9	.260	6.6	1/4	M6	4.00	102	120	534		50	500

Heat Stabilized Nylon 6.6

Miniature Cross Section

PLC1M-S4-M30	4.3	109	.100	2.5	.045	1.1	.122	3.1	#4	M2.5	.75	19	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
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Intermediate Cross Section

PLC1.5I-S8-M30	6.1	155	.135	3.4	.045	1.1	.174	4.4	#8	M4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
----------------	-----	-----	------	-----	------	-----	------	-----	----	----	------	----	----	-----	----------------------------------	------	-------

Standard Cross Section

PLC2S-S10-M30	7.9	201	.190	4.8	.047	1.2	.200	5.1	#10	M5	1.84	47	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLC4S-S10-M30	15.0	381	.190	4.8	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222		1000	5000

Light-Heavy Cross Section

PLC2H-S25-TL30	9.0	229	.300	7.6	.075	1.9	.260	6.6	1/4	M6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLC4H-S25-TL30	15.1	384	.300	7.6	.075	1.9	.260	6.6	1/4	M6	4.00	102	120	534		250	2500

Note: UL Recognized and CSA Certified except PLC2H/4H in Weather Resistant material (0).

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

F.
Index

A. System Overview

UL[®] CS[®] Pan-Ty[®] Wing Push Mount Ties – Nylon 6.6

B1. Cable Ties

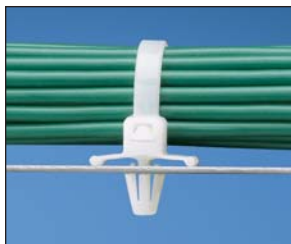
- For indoor use
- Cable tie, mount, and fastener in a single part
- Used to attach bundles to another surface such as a flat panel
- Anchor is easily pressed into a pre-formed hole and locks in place
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Curved tip is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

B2. Cable Accessories



B3. Stainless Steel Ties

C1. Wiring Duct



C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

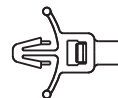
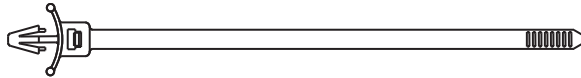
E2. Labels

E3. Pre-Printed & Write-On Markers

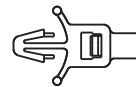
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

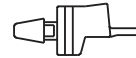
F. Index



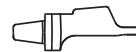
PLWP_SA Head Design



PLWP_SB Head Design



PLWP_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			
Miniature Cross Section																	
PLWP1M-C	4.3	109	.098	2.5	.044	1.1	.187	4.7	.093	2.4	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Intermediate Cross Section																	
PLWP1.5I-C	6.0	152	.135	3.4	.045	1.2	.187	4.7	.093	2.4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Standard Cross Section																	
PLWP1S-C	5.2	132	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLWP1SA-D	5.1	130	.190	4.8	.052	1.3	.187	4.7	.093	2.4	1.00	25	50	222		500	5000
PLWP1SB-D	5.2	132	.190	4.8	.052	1.3	.187	4.7	.157	4.0	1.00	25	50	222		500	5000
PLWP1.5S-D	6.8	173	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.50	38	50	222		500	5000
PLWP1.5SA-D	6.7	170	.190	4.8	.052	1.3	.187	4.7	.093	2.4	1.50	38	50	222		500	5000
PLWP2S-C	7.8	198	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.75	45	50	222		100	1000
PLWP2SA-D	7.7	196	.190	4.8	.052	1.3	.187	4.7	.093	2.4	1.75	45	50	222		500	5000
PLWP2SB-D	7.8	198	.190	4.8	.052	1.3	.187	4.7	.157	4.0	1.75	45	50	222		500	5000
Light-Heavy Cross Section																	
PLWP2H-TL	8.9	226	.300	7.6	.075	1.9	.266	6.8	.105	2.7	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLWP3H-TL	12.0	305	.300	7.6	.075	1.9	.266	6.8	.105	2.7	3.00	76	120	534		250	2500

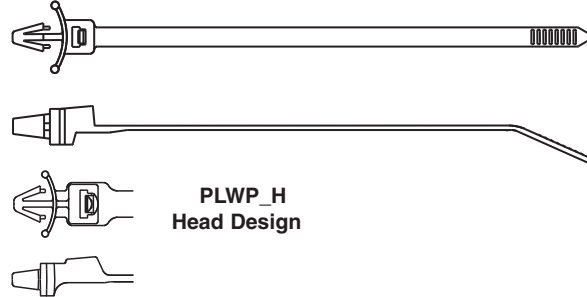
Note: UL Recognized and CSA Certified except PLWP2H/3H.



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			

Weather Resistant Nylon 6.6

Miniature Cross Section

PLWP1M-D0	4.3	109	.098	2.5	.044	1.1	.187	4.7	.093	2.4	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	500	5000
------------------	-----	-----	------	-----	------	-----	------	-----	------	-----	-----	----	----	----	----------------------------------	-----	------

Standard Cross Section

PLWP1S-C0	5.2	132	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLWP2S-C0	7.8	198	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.75	45	50	222		100	1000

Light-Heavy Cross Section

PLWP2H-TL0	8.9	226	.300	7.6	.075	1.9	.266	6.8	.105	2.7	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
PLWP3H-TL0	12.0	305	.300	7.6	.075	1.9	.266	6.8	.105	2.7	3.00	76	120	534		250	2500

Heat Stabilized Nylon 6.6

Miniature Cross Section

PLWP1M-D30	4.3	109	.098	2.5	.044	1.1	.187	4.7	.093	2.4	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	500	5000
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Intermediate Cross Section

PLWP1.5I-D30	6.0	152	.135	3.4	.045	1.2	.187	4.7	.093	2.4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	500	5000
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Standard Cross Section

PLWP1S-D30	5.2	132	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000
PLWP1.5S-D30	6.8	173	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.50	38	50	222		500	5000
PLWP2S-D30	7.8	198	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.75	45	50	222		500	5000

Light-Heavy Cross Section

PLWP2H-TL30	8.9	226	.300	7.6	.075	1.9	.266	6.8	.105	2.7	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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Note: UL Recognized and CSA Certified except PLWP2H/3H.

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

F.
Index

A. System Overview

UL® US CSA® Pan-Ty® Releasable Wing Push Mount Ties

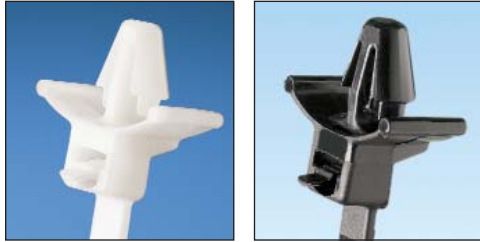
B1. Cable Ties

- 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
- 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. Cable Accessories

B3. Stainless Steel Ties



PRWP2S-D

PRWP2S-D0

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management



D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

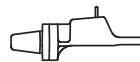
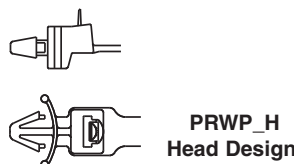
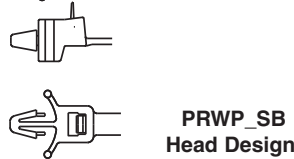
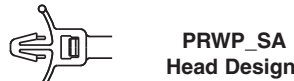
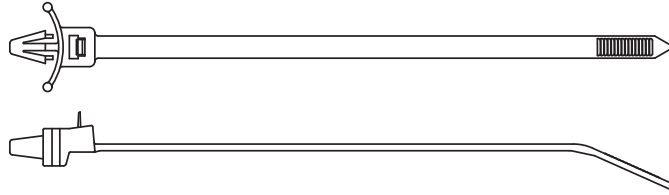
E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index



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	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.00	25	50	222	Hand install only	100	1000
PRWP1SA-D	5.1	130	.190	4.8	.052	1.3	.187	4.7	.093	2.4	1.00	25	50	222		500	5000
PRWP1SB-D	5.2	132	.190	4.8	.052	1.3	.187	4.7	.157	4.0	1.00	25	50	222		500	5000
PRWP1.5S-D	6.8	173	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.50	38	50	222		500	5000
PRWP2S-D	7.8	198	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.75	45	50	222		500	5000

Light-Heavy Cross Section

PRWP2H-TL	8.9	226	.300	7.6	.075	1.9	.266	6.8	.105	2.7	2.00	51	120	534	Hand install only	250	2500
------------------	-----	-----	------	-----	------	-----	------	-----	------	-----	------	----	-----	-----	-------------------	-----	------

Weather Resistant Nylon 6.6

Standard Cross Section

PRWP1S-D0	5.2	132	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.00	25	50	222	Hand install only	500	5000
PRWP1.5S-D0	6.8	173	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.50	38	50	222		500	5000
PRWP2S-D0	7.8	198	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.75	45	50	222		500	5000

Heat Stabilized Nylon 6.6

Standard Cross Section

PRWP1.5S-D30	6.8	173	.190	4.8	.052	1.3	.250	6.4	.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.



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

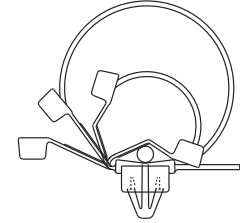
- Wings provide constant tension for a stable, secure, and rattle-free installation
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



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 C3.11. Bump prevents lateral movement.



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

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			
Standard Cross Section																	
PLWP30SC-D30	5.8	147	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.18	30	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000
PLWP40SC-D30	7.0	178	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.58	40	50	222		500	5000
PLWP40SD-D30	7.0	178	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.58	40	50	222		500	5000
PLWP50SC-D30	8.2	208	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.97	50	50	222		500	5000
PLWP50SE-D30	8.2	208	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.97	50	50	222		500	5000

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview

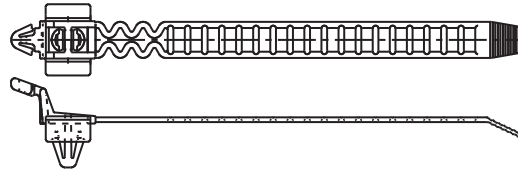
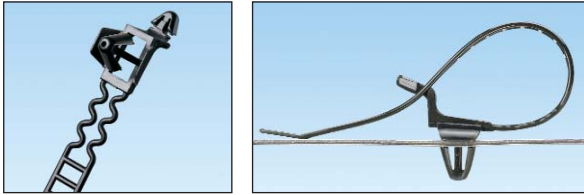


Pan-Ty® Ladder Style Releasable Wing Push Mount Ties – Heat Stabilized Nylon 6.6

B1. Cable Ties

- 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. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

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			
Standard Cross Section																	
PRLWP30S-D30	4.7	119	.380	9.7	.050	1.3	.266	6.8	.118	3.0	1.43	36	35	156	Hand install only	500	5000
PRLWP50S-D30	7.1	180	.380	9.7	.050	1.3	.266	6.8	.118	3.0	2.18	55	35	156		500	5000

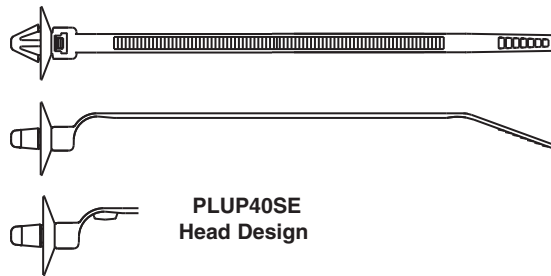
C3. Abrasion Protection

C4. Cable Management

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 C3.11
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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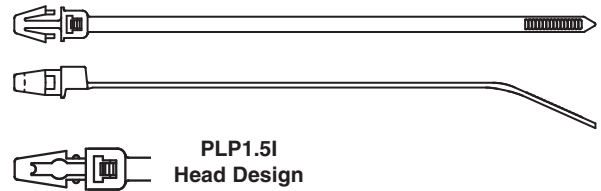
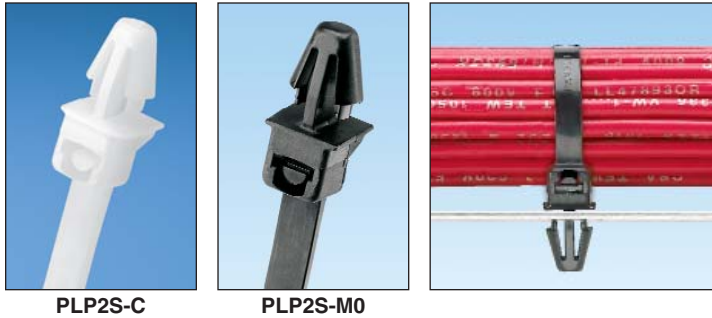
Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
Standard Cross Section																	
PLUP40S-D30*	7.0	177	.190	4.8	.047	1.2	.266	6.8	.050	1.3	1.57	40	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000
PLUP40SE-D	7.0	177	.190	4.8	.047	1.2	.266	6.8	.050	1.3	1.57	40	50	222		500	5000
PLUP40SE-D30*	7.0	177	.190	4.8	.047	1.2	.266	6.8	.050	1.3	1.57	40	50	222		500	5000

*Heat stabilized material (30).

Pan-Ty® 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



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	.135	3.4	.045	1.1	.187	4.7	.093	2.4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
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Standard Cross Section

PLP1S-M	5.3	135	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLP1.5S-M	6.7	170	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.50	38	50	222		1000	10000
PLP2S-C	7.9	200	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.75	45	50	222		100	1000

Weather Resistant Nylon 6.6

Intermediate Cross Section

PLP1.5I-M0	6.1	156	.135	3.4	.045	1.1	.187	4.7	.093	2.4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
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Standard Cross Section

PLP1S-M0	5.3	135	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLP2S-M0	7.9	200	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.75	45	50	222		1000	10000

Heat Stabilized Nylon 6.6

Intermediate Cross Section

PLP1.5I-M30	6.1	156	.135	3.4	.045	1.1	.187	4.7	.093	2.4	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
-------------	-----	-----	------	-----	------	-----	------	-----	------	-----	------	----	----	-----	----------------------------------	------	-------

Standard Cross Section

PLP1S-M30	5.3	135	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.00	25	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLP2S-M30	7.9	200	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.75	45	50	222		1000	10000

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

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Terminals

D2.
Power
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D3.
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E4.
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E5.
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A. System Overview



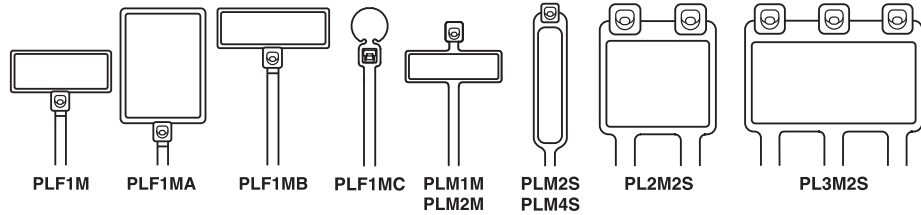
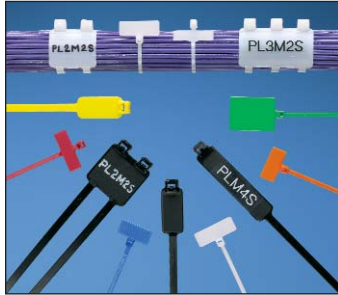
Pan-Ty® Marker and Flag Ties

- 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 B1.51 or computer printable labels
- Custom imprinting with text, symbols, or trademarks available using Panduit Custom Hot Stamping Service, see page B1.93
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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

PLF1M-C	Flag	4.3	109	.098	2.5	.045	1.1	.31 x .75	7.9 x 19.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
PLF1MA-C	Flag	5.1	130	.098	2.5	.045	1.1	.76 x 1.04	19.1 x 26.4	.87	22	18	80		100	1000
PLF1MB-C	Flag	4.0	101	.098	2.5	.045	1.1	.31 x .92	7.9 x 23.4	.75	19	18	80		100	1000
PLF1MC-M	Flag	4.3	109	.098	2.5	.045	1.1	.29 x .32	7.4 x 8.0	.87	22	18	80		1000	25000
PLM1M-C	Wrap	3.9	99	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	.75	19	18	80		100	1000
PLM2M-C	Wrap	8.0	203	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	2.00	51	18	80		100	1000

Standard Cross Section

PLM2S-C	Wrap	7.4	188	.185	4.7	.052	1.3	.44 x .87	11.1 x 22.1	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLM4S-C	Wrap	14.6	371	.185	4.7	.052	1.3	.44 x 2.00	11.1 x 50.8	4.00	102	50	222		100	1000
PL2M2S-L	Wrap	7.4	188	.185	4.7	.052	1.3	.87 x 1.07	22.1 x 27.2	1.75	45	50	222		50	500
PL3M2S-L	Wrap	7.4	188	.185	4.7	.052	1.3	.87 x 1.79	22.1 x 45.5	1.75	45	50	222		50	500

Weather Resistant Nylon 6.6

Miniature Cross Section

PLF1M-C0	Flag	4.3	109	.098	2.5	.045	1.1	.31 x .75	7.9 x 19.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
PLF1MA-M0	Flag	5.1	130	.098	2.5	.045	1.1	.76 x 1.04	19.1 x 26.4	.87	22	18	80		1000	10000
PLM1M-C0	Wrap	3.9	99	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	.75	19	18	80		100	1000
PLM2M-M0	Wrap	8.0	203	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	2.00	51	18	80		1000	25000

Standard Cross Section

PLM2S-C0	Wrap	7.4	188	.185	4.7	.052	1.3	.44 x .87	11.1 x 22.1	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLM4S-D0	Wrap	14.6	371	.185	4.7	.052	1.3	.44 x 2.00	11.1 x 50.8	4.00	102	50	222		500	5000
PL2M2S-L0	Wrap	7.4	188	.185	4.7	.052	1.3	.87 x 1.07	22.1 x 27.2	1.75	45	50	222		50	500
PL3M2S-D0	Wrap	7.4	188	.185	4.7	.052	1.3	.87 x 1.79	22.1 x 45.5	1.75	45	50	222		500	2500

Flame Retardant Nylon 6.6

Miniature Cross Section

PLF1M-M69	Flag	4.3	109	.098	2.5	.045	1.1	.31 x .75	7.9 x 19.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
PLM1M-M69	Wrap	3.9	99	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	.75	19	18	80		1000	25000

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

Material	Color	Panduit Suffix
Heat Stabilized Nylon 6.6	Natural	39
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 [■]	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 [▲]	Maroon	702Y

✓Denotes Panduit Natural Nylon 6.6 (no suffix).

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

▲HALAR is a registered trademark of Ausimont USA, Inc.

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

List continues on page B1.36

A. System Overview

Pan-Ty® Cable Ties (continued)

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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	✓	0,00,1,2,3,4Y,5,6,7,8,10,14,30,71,76,86,186,702Y	PLT1M-M	✓	0,00,1,2,3,4Y,5,6,7,8,10,14,20,30,53,54,55,59,60,69,76,100,109,300,702Y
			PLT1M-XMR	✓	0,1,2,3,4Y,5,6,7,8,10,30
PLT1.5M-C	✓	0	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,5,6,7,8,10,20,30,71,76,86,186,702Y	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
PLT4S-C	✓	0,00,2,3,4Y,5,6,8,20,30,76,86,186	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
PLT8H-L	✓	0			
PLT13H-Q	✓	0	PLT13H-C	✓	0,3

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
			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	PRT5EH-C	✓	0,100
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	✓	

A.
System
Overview

B1.
Cable
Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
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D3.
Grounding
Connectors

E1.
Labeling
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E2.
Labels

E3.
Pre-Printed
& Write-On
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E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

F.
Index

A. System Overview

Features and Benefits – Super-Grip® Cable Ties

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

B1. Cable Ties

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

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

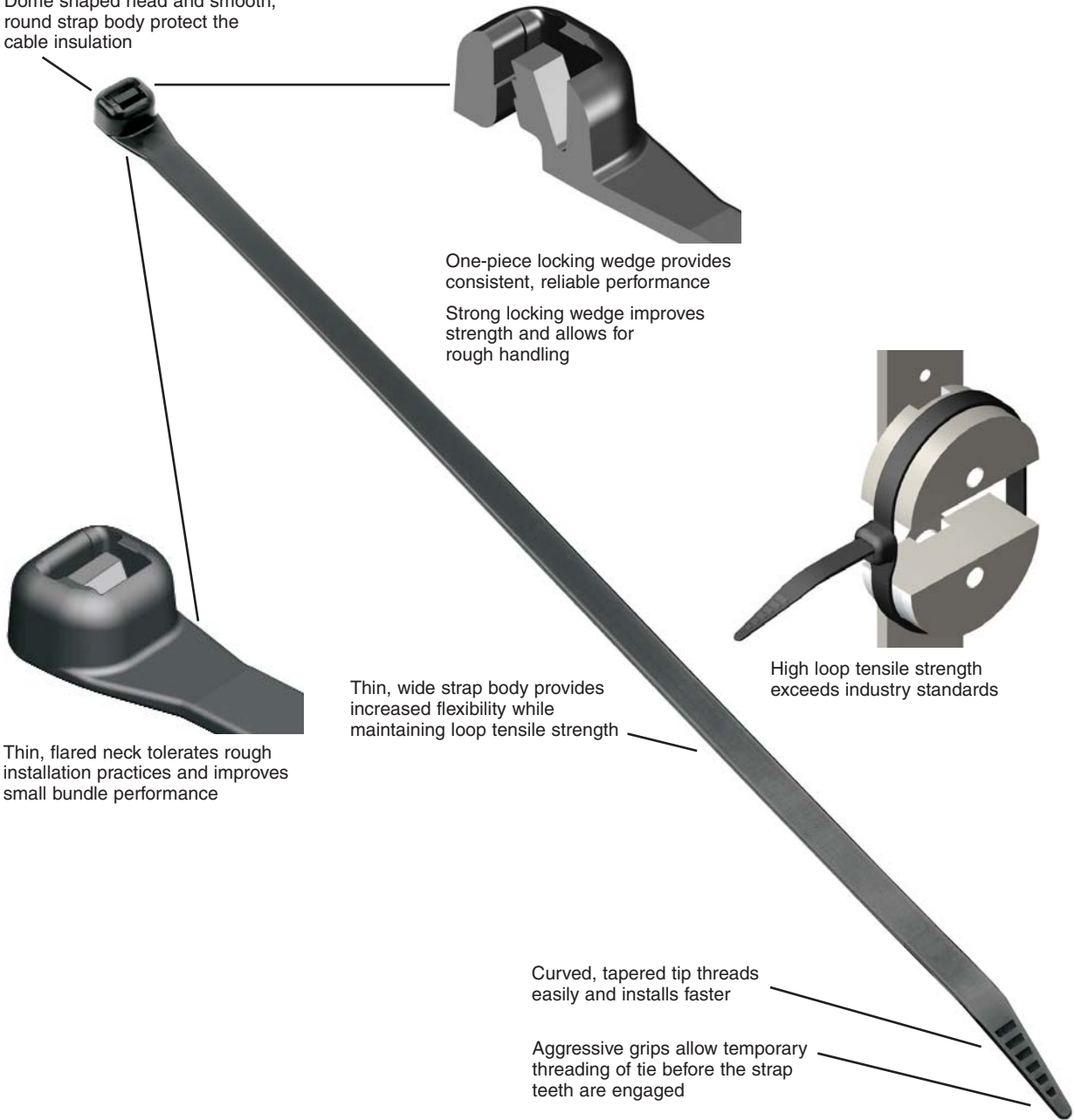
E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index



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

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. See pages B1.107 – B1.112.



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing.

See pages B2.7, B2.11, B2.13, B2.21.

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	B1.40
Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	SG	B1.41
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	SG	B1.41

Part Number System for Super-Grip® Cable Ties

SG

Type

SG = Locking Tie

200

Length

Approx. Length (mm)

S

Cross Section

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

C

Package Size

L = 50
C = 100
TL = 250
M = 1000

—

Material/Color

See Page B1.42

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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A.
System
Overview



Super-Grip® Cable Ties – Nylon 6.6

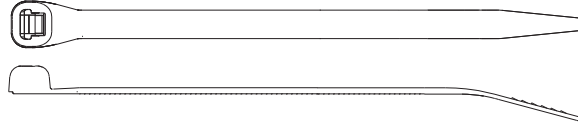
B1.
Cable Ties

- 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 B2.7, B2.11, B2.13 and B2.21

B2.
Cable
Accessories

B3.
Stainless
Steel Ties



C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout/
& Safety
Solutions

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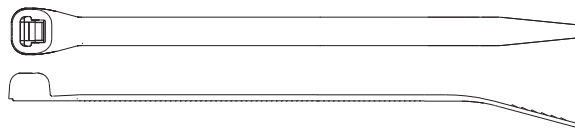
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
Miniature Cross Section – Plenum-Rated													
SG100M-C	4.2	106	.118	3.0	.038	1.0	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Intermediate Cross Section – Plenum-Rated													
SG150I-C	6.2	157	.168	4.3	.040	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Standard Cross Section – Plenum-Rated													
SG200S-C	8.3	211	.225	5.7	.046	1.2	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
SG250S-C	10.4	264	.225	5.7	.050	1.3	2.60	66	75	334		100	1000
SG300S-C	12.4	315	.225	5.7	.050	1.3	3.20	81	75	334		100	1000
SG370S-C	15.3	389	.225	5.7	.052	1.3	4.20	107	75	334		100	1000
Light-Heavy Cross Section – Plenum-Rated													
SG350LH-L	15.3	389	.330	8.4	.064	1.6	4.13	105	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
Heavy Cross Section – Plenum-Rated													
SG450H-L	18.6	471	.380	9.7	.068	1.7	5.20	132	175	778	GTH, GS4H, GS4EH, 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 B2.7, B2.11, B2.13 and B2.21



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													
Miniature Cross Section													
SG100M-C0	4.2	106	.118	3.0	.038	1.0	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Intermediate Cross Section													
SG150I-C0	6.2	157	.168	4.3	.040	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
Standard Cross Section													
SG200S-C0	8.3	211	.225	5.7	.046	1.2	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
SG250S-C0	10.4	264	.225	5.7	.050	1.3	2.60	66	75	334		100	1000
SG300S-C0	12.4	315	.225	5.7	.050	1.3	3.20	81	75	334		100	1000
SG370S-C0	15.3	389	.225	5.7	.052	1.3	4.20	107	75	334		100	1000
Light-Heavy Cross Section													
SG350LH-L0	15.3	389	.330	8.4	.064	1.6	4.13	105	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
Heavy Cross Section													
SG450H-L0	18.6	471	.380	9.7	.068	1.7	5.20	132	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
Heat Stabilized Nylon 6.6													
Standard Cross Section													
SG200S-M30	8.3	211	.225	5.7	.046	1.2	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
SG300S-M30	12.4	315	.225	5.7	.050	1.3	3.20	81	70	311		1000	10000
Light-Heavy Cross Section													
SG350LH-TL30	15.3	389	.330	8.4	.064	1.6	4.13	105	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500

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

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B3. Stainless Steel Ties

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E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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A.
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Overview

Super-Grip® Cable Ties and Mounts

B1.
Cable Ties

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).

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

Part Number Availability List

Part Number	Standard Packaging		Part Number	Bulk Packaging	
	Natural Nylon 6.6	Material/Color Suffix		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

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

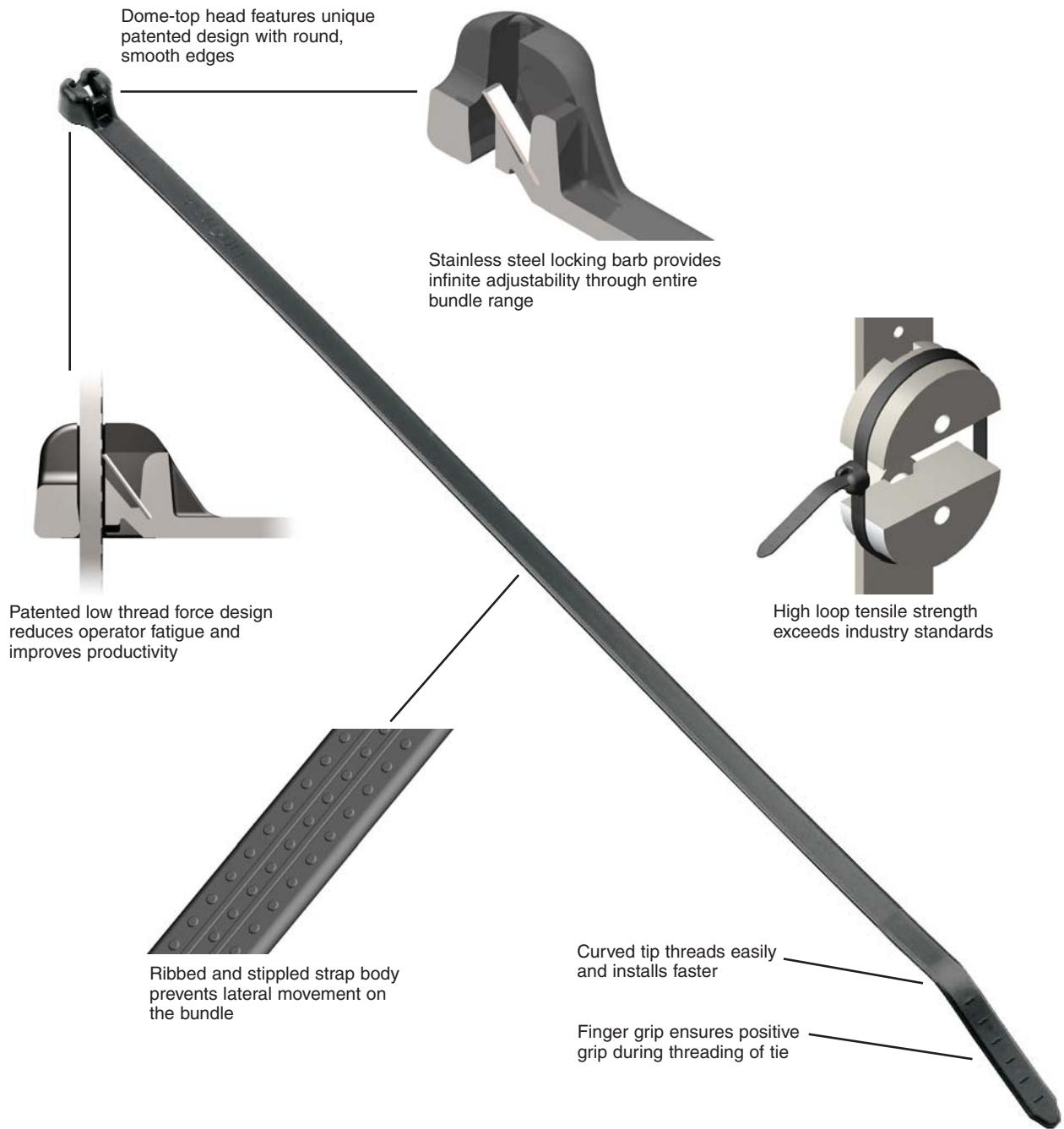
E4.
Permanent
Identification

E5.
Lockout/
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Solutions

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

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



Cable tie tools speed installation and reduce total installed cost. See pages B1.109 – B1.114.



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.29.

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Dome-Top® Barb Ty Cable Ties

Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	BT	B1.45
	Clamp Ties/Mount	BC	B1.48
	Push Mount Ties/Mount	BW	B1.50
	Marker Ties/Identify	BF, BM, B2M, B3M, B4M	B1.52
Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	BT	B1.46
	Clamp Ties/Mount	BC	B1.49
	Push Mount Ties/Mount	BW, BP	B1.50,51
	Marker Ties/Identify	BF, BM, B2M, B3M, B4M	B1.52
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	BT	B1.47
	Clamp Ties/Mount	BC	B1.49
Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties/Bundle	BT	B1.47

Dura-Ty™ Cable Ties, Strapping, and Kits

Weather Resistant Acetal, Black	Locking Ties/Bundle	DT	B1.53
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Part Number System for Dome-Top® Barb Ty and Dura-Ty™ Cable Ties

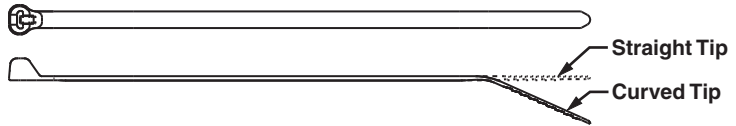
BT	2	S	—	C	T
Type	Size	Cross Section	Screw Hole Size	Package Size	Material/Color
BT = Locking Tie BC = Clamp Tie BF = Flag Tie BM = Marker Tie BP = Push Mount Tie BW = Wing Push Mount Tie DT = Locking Tie	Approx. Maximum Bundle Dia. (In.)	M = Miniature I = Intermediate S = Standard LH = Light-Heavy H = 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 B1.54



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			
Miniature Cross Section – Plenum-Rated													
BT1M-C	4.0	102	.095	2.4	.036	.9	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
BT1.5M-C	6.3	160	.095	2.4	.046	1.2	1.50	38	18	80		100	1000
BT2M-C	7.9	201	.095	2.4	.046	1.2	2.00	51	18	80		100	1000
BT4M-C	14.2	361	.095	2.4	.046	1.2	4.00	102	18	80		100	1000
Intermediate Cross Section – Plenum-Rated													
BT1.5I-C	6.1	155	.141	3.6	.041	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
BT2I-C	8.0	203	.141	3.6	.041	1.0	2.00	51	40	178		100	1000
BT3I-C	11.3	287	.141	3.6	.049	1.2	3.00	76	40	178		100	1000
BT4I-C	14.3	363	.141	3.6	.049	1.2	4.00	102	40	178		100	1000
Standard Cross Section – Plenum-Rated													
BT2S-C	8.0	203	.185	4.7	.045	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
BT3S-C	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		100	1000
BT4S-C	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		100	1000
Light-Heavy Cross Section (Straight Tip) – Plenum-Rated													
BT2LH-L	8.7	221	.275	7.0	.065	1.7	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
BT3LH-L	11.8	300	.275	7.0	.065	1.7	3.00	76	120	534		50	500
BT4LH-L	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534		50	500
BT5LH-L	18.1	460	.275	7.0	.065	1.7	5.00	127	120	534		50	500
BT6LH-L	21.2	538	.275	7.0	.065	1.7	6.00	152	120	534		50	500
BT7LH-L	24.4	620	.275	7.0	.065	1.7	7.00	178	120	534		50	500
BT8LH-L	27.5	699	.275	7.0	.065	1.7	8.00	203	120	534		50	500
BT9LH-L	30.7	780	.275	7.0	.065	1.7	9.00	229	120	534		50	500

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B3. Stainless Steel Ties

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C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

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E5. Lockout/Tagout & Safety Solutions

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A. System Overview

UL **UL** **CSA** **Dome-Top® Barb Ty Cable Ties – Weather Resistant Nylon 6.6**

B1. Cable Ties

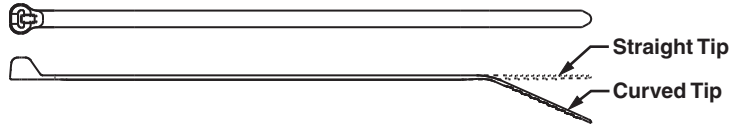
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Dome-top head features unique patented design with round, smooth edges

- 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

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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. Abrasion Protection

Miniature Cross Section													
BT1M-C0	4.0	102	.095	2.4	.036	.9	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
BT1.5M-C0	6.3	160	.095	2.4	.046	1.2	1.50	38	18	80		100	1000
BT2M-C0	7.9	201	.095	2.4	.046	1.2	2.00	51	18	80		100	1000
BT4M-C0	14.2	361	.095	2.4	.046	1.2	4.00	102	18	80		100	1000

C4. Cable Management

Intermediate Cross Section													
BT1.5I-C0	6.1	155	.141	3.6	.041	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
BT2I-C0	8.0	203	.141	3.6	.041	1.0	2.00	51	40	178		100	1000
BT3I-C0	11.3	287	.141	3.6	.049	1.2	3.00	76	40	178		100	1000
BT4I-C0	14.3	363	.141	3.6	.049	1.2	4.00	102	40	178		100	1000

D1. Terminals

Standard Cross Section													
BT2S-C0	8.0	203	.185	4.7	.045	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
BT3S-C0	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		100	1000
BT4S-C0	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		100	1000

D2. Power Connectors

D3. Grounding Connectors

Light-Heavy Cross Section (Straight Tip)													
BT2LH-L0	8.7	221	.275	7.0	.065	1.7	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
BT3LH-L0	11.8	300	.275	7.0	.065	1.7	3.00	76	120	534		50	500
BT4LH-L0	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534		50	500
BT5LH-L0	18.1	460	.275	7.0	.065	1.7	5.00	127	120	534		50	500
BT6LH-L0	21.2	538	.275	7.0	.065	1.7	6.00	152	120	534		50	500
BT7LH-L0	24.4	620	.275	7.0	.065	1.7	7.00	178	120	534		50	500
BT8LH-L0	27.5	699	.275	7.0	.065	1.7	8.00	203	120	534		50	500
BT9LH-L0	30.7	780	.275	7.0	.065	1.7	9.00	229	120	534		50	500

E1. Labeling Systems

E2. Labels

Note: UL Recognized, UL Listed, and CSA Certified, except LH cross section.

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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

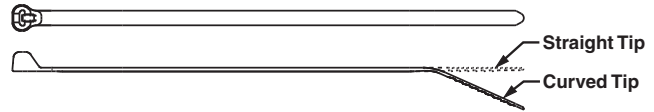
- For high temperature applications up to 239°F (115°C) – indoor use
- Dome-top head features unique patented design with round, smooth edges

- 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 – Black

Miniature Cross Section

BT1M-C30	4.0	102	.095	2.4	.036	.9	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
BT1.5M-M30	6.3	160	.095	2.4	.046	1.2	1.50	38	18	80		1000	50000
BT2M-M30	7.9	201	.095	2.4	.046	1.2	2.00	51	18	80		1000	25000

Intermediate Cross Section

BT1.5I-M30	6.1	155	.141	3.6	.041	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
BT2I-M30	8.0	203	.141	3.6	.041	1.0	2.00	51	40	178		1000	25000
BT3I-M30	11.3	287	.141	3.6	.049	1.2	3.00	76	40	178		1000	10000

Standard Cross Section

BT2S-M30	8.0	203	.185	4.7	.045	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTS, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
BT3S-M30	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		1000	10000
BT4S-M30	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		1000	5000

Light-Heavy Cross Section (Straight Tip)

BT4LH-TL30	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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Heat Stabilized Nylon 6.6 – Natural

Miniature Cross Section

BT1M-M39	4.0	102	.095	2.4	.036	.9	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
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Intermediate Cross Section

BT1.5I-M39	6.1	155	.141	3.6	.041	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
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Standard Cross Section

BT2S-M39	8.0	203	.185	4.7	.045	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTS, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
BT3S-M39	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		1000	10000
BT4S-M39	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		1000	5000

Light-Heavy Cross Section (Straight Tip)

BT4LH-TL39	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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Dome-Top® Barb Ty Clamp Ties – Nylon 6.6

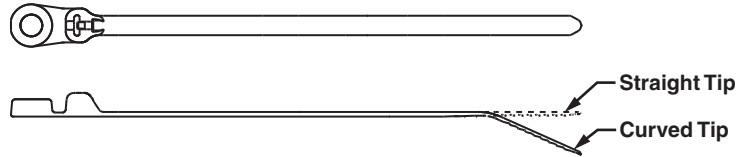
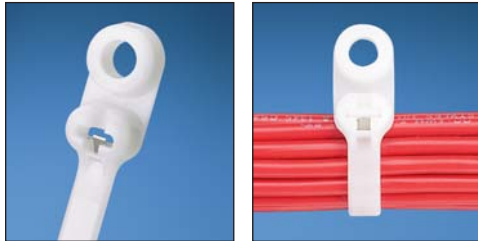
B1. Cable Ties

- 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. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

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			

C3. Abrasion Protection

Miniature Cross Section – Plenum-Rated

BC1M-S4-M	4.6	117	.095	2.4	.046	1.2	.122	3.1	#4	M2.5	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
BC2M-S4-M	8.3	211	.095	2.4	.046	1.2	.122	3.1	#4	M2.5	2.00	51	18	80		1000	25000

C4. Cable Management

Intermediate Cross Section – Plenum-Rated

BC1.5I-S8-M	6.6	168	.141	3.6	.041	1.0	.174	4.4	#8	M4	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
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D1. Terminals

Standard Cross Section – Plenum-Rated

BC2S-S10-C	8.5	216	.185	4.7	.052	1.3	.200	5.1	#10	M5	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
BC3S-S10-D	12.5	318	.185	4.7	.052	1.3	.200	5.1	#10	M5	3.00	76	50	222		500	5000
BC4S-S10-C	15.6	396	.185	4.7	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222		100	1000

D2. Power Connectors

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

BC4LH-S25-L	15.5	394	.275	7.0	.065	1.7	.260	6.6	1/4	M6	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
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D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

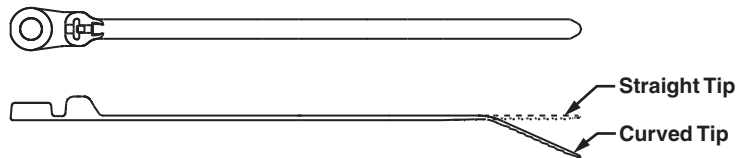
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Dome-Top® Barb Ty Clamp Ties – Weather Resistant and Heat Stabilized Nylon 6.6

- 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	.095	2.4	.046	1.2	.122	3.1	#4	M2.5	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
BC2M-S4-M0	8.3	211	.095	2.4	.046	1.2	.122	3.1	#4	M2.5	2.00	51	18	80		1000	25000

Intermediate Cross Section

BC1.5I-S8-M0	6.6	168	.141	3.6	.041	1.0	.174	4.4	#8	M4	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
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Standard Cross Section

BC2S-S10-C0	8.5	216	.185	4.7	.052	1.3	.200	5.1	#10	M5	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
BC3S-S10-D0	12.5	318	.185	4.7	.052	1.3	.200	5.1	#10	M5	3.00	76	50	222		500	5000
BC4S-S10-C0	15.6	396	.185	4.7	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222		100	1000

Light-Heavy Cross Section (Straight Tip)

BC4LH-S25-L0	15.5	394	.275	7.0	.065	1.7	.260	6.6	1/4	M6	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
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Heat Stabilized Nylon 6.6

Standard Cross Section

BC4S-S10-D30	15.6	396	.185	4.7	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STH2, STS2	500	5000
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Note: UL Recognized and CSA Certified except BC4LH-S25-L0.

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
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Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
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C4.
Cable
Management

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D2.
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D3.
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E3.
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E4.
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A. System Overview



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

B1. Cable Ties

- 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

B2. Cable Accessories

B3. Stainless Steel Ties



BW2S-D

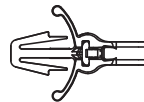
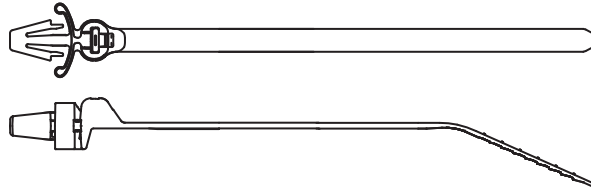
BW2S-D0

C1. Wiring Duct

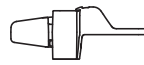
C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management



BW2S Head Design



D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

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F. Index

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

BW1.5I-D	6.6	168	.141	3.6	.041	1.0	.187	4.7	.093	2.4	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	500	5000
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Standard Cross Section

BW2S-D	8.5	216	.185	4.7	.052	1.3	.250	6.4	.156	4.0	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000
BW3S-D	12.5	318	.185	4.7	.052	1.3	.250	6.4	.156	4.0	3.00	76	50	222		500	5000

Weather Resistant Nylon 6.6

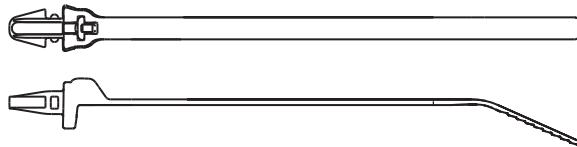
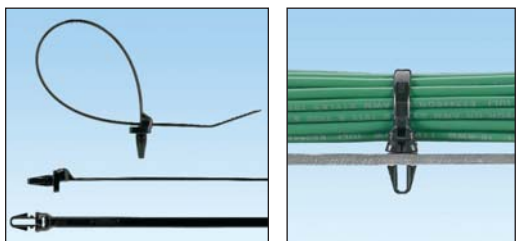
Standard Cross Section

BW2S-D0	8.5	216	.185	4.7	.052	1.3	.250	6.4	.156	4.0	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000
BW3S-D0	12.5	318	.185	4.7	.052	1.3	.250	6.4	.156	4.0	3.00	76	50	222		500	5000

UL US CS 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			
Standard Cross Section																	
BP2S-D0	8.5	216	.185	4.7	.052	1.3	.255	6.5	.125	3.2	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000

Permanent Marking Pens

- Fast drying, permanent ink for identification on marker ties (pages B1.34, B1.52, and B1.71), marker plates (page B2.29), or cable marker straps (page B1.80)
- May be used with any label shown in the catalog when a printer is not available



PX-0
PX-2



PFX-0
PFX-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.	12	144
PFX-0	Black	Permanent marking pen – fine tip.	12	144
PFX-2	Red	Permanent marking pen – fine tip.	12	144
PX-10	White	Marking pen for black or other dark colored parts – regular tip.	12	300

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System
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B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

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C2.
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Raceway

C3.
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C4.
Cable
Management

D1.
Terminals

D2.
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D3.
Grounding
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Labeling
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E2.
Labels

E3.
Pre-Printed
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E4.
Permanent
Identification

E5.
Lockout/
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Solutions

F.
Index

A. System Overview

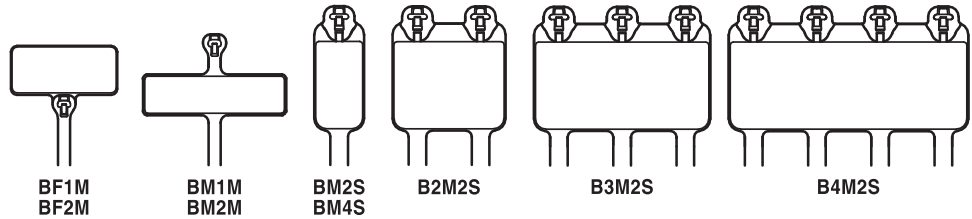
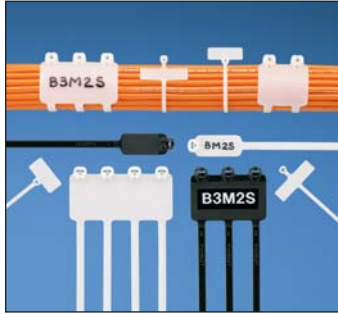
UL® US CS® Dome-Top® Barb Ty Marker and Flag Ties

- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- 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 B1.93
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

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. Cable Management

Nylon 6.6

Miniature Cross Section

BF1M-C	Flag	4.6	117	.095	2.4	.046	1.2	.36 x .81	9.1 x 20.6	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
BF2M-C	Flag	8.3	211	.095	2.4	.046	1.2	.36 x .81	9.1 x 20.6	2.00	51	18	80		100	1000
BM1M-C	Wrap	4.2	107	.095	2.4	.046	1.2	.29 x 1.09	7.4 x 27.7	.90	23	18	80		100	1000
BM2M-C	Wrap	7.9	201	.095	2.4	.046	1.2	.29 x 1.09	7.4 x 27.7	2.00	51	18	80		100	1000

D1. Terminals

Standard Cross Section

BM2S-C	Wrap	8.0	203	.185	4.7	.045	1.2	.49 x .91	12.4 x 23.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
BM4S-C	Wrap	15.1	384	.185	4.7	.052	1.3	.50 x 2.13	12.7 x 54.1	4.00	102	50	222		100	1000
B2M2S-D	Wrap	8.0	203	.185	4.7	.045	1.2	1.15 x .91	29.2 x 23.1	2.00	51	50	222		500	2500
B3M2S-TL	Wrap	8.0	203	.185	4.7	.045	1.2	1.81 x .91	46.0 x 23.1	2.00	51	50	222		250	2500
B4M2S-TL	Wrap	8.0	203	.185	4.7	.045	1.2	2.47 x .91	62.7 x 23.1	2.00	51	50	222		250	2500

D2. Power Connectors

D3. Grounding Connectors

Weather Resistant Nylon 6.6

Miniature Cross Section

BF1M-M0	Flag	4.6	117	.095	2.4	.046	1.2	.36 x .81	9.1 x 20.6	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
BF2M-M0	Flag	8.3	211	.095	2.4	.046	1.2	.36 x .81	9.1 x 20.6	2.00	51	18	80		1000	25000
BM1M-M0	Wrap	4.2	107	.095	2.4	.046	1.2	.29 x 1.09	7.4 x 27.7	.90	23	18	80		1000	25000
BM2M-M0	Wrap	7.9	201	.095	2.4	.046	1.2	.29 x 1.09	7.4 x 27.7	2.00	51	18	80		1000	25000

E1. Labeling Systems

E2. Labels

Standard Cross Section

BM2S-D0	Wrap	8.0	203	.185	4.7	.045	1.2	.49 x .91	12.4 x 23.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	10000
BM4S-D0	Wrap	15.1	384	.185	4.7	.052	1.3	.50 x 2.13	12.7 x 54.1	4.00	102	50	222		500	5000
B2M2S-D0	Wrap	8.0	203	.185	4.7	.045	1.2	1.15 x .91	29.2 x 23.1	2.00	51	50	222		500	2500
B3M2S-TL0	Wrap	8.0	203	.185	4.7	.045	1.2	1.81 x .91	46.0 x 23.1	2.00	51	50	222		250	2500
B4M2S-TL0	Wrap	8.0	203	.185	4.7	.045	1.2	2.47 x .91	62.7 x 23.1	2.00	51	50	222		250	2500

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index



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

- Black acetal strap and head material provide 20+ years outdoor life and high impact resistance
- 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.	m	In.	mm	Lbs.	N	In.	mm	In.	mm			
Strapping, Heads, and Kit – Allows user to customize strap length														
DTRH-LR0	50' reel of strapping.	50.0	15.2	.331	8.40	200	890	—	—	—	—	GTH, GS4EH, STH2, STHV, ST3EH	1	20
DTHH-Q0	25 cable tie heads.	—	—	—	—	—	—	.393	9.98	.557	14.15	—	25	500
DTKH-0	Kit: Strapping (50'), Heads (25)	50.0	15.2	.331	8.40	200	890	.393	9.98	.557	14.15	GTH, GS4EH, STH2, STHV, ST3EH	1	20

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

- Black acetal strap and head material provide 20+ years outdoor life and high impact resistance
- 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.	m	In.	mm	Lbs.	N	In.	mm	In.	mm			
Strapping, Heads, and Kit – Allows user to customize strap length														
DTREH-LR0	50' reel of strapping.	50.0	15.2	.500	12.70	250	1112	—	—	—	—	GS4EH, ST3EH	1	20
DTHEH-Q0	25 cable tie heads.	—	—	—	—	—	—	.490	12.45	.718	18.24	—	25	500
DTKEH-0	Kit: Strapping (50'), Heads (25)	50.0	15.2	.500	12.70	250	1112	.490	12.45	.718	18.24	GS4EH, ST3EH	1	20

Part Number	Length		Width		Thickness	Head Height		Head Width		Max. Bundle Dia.		Min. Loop Tensile Strength		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N					
Discrete Lengths – Speed installation																	
DT4EH-L0	13.5	343	.500	12.70	.059	1.50	.490	12.45	.718	18.24	3.8	98	250	1112	GS4EH, ST3EH	50	1000
DT8EH-Q0	27.0	686	.500	12.70	.059	1.50	.490	12.45	.718	18.24	8.0	203	250	1112		25	500
DT14EH-L0	48.0	1219	.500	12.70	.059	1.50	.490	12.45	.718	18.24	14.0	355	250	1112		50	250
DT15EH-L0	53.0	1346	.500	12.70	.059	1.50	.490	12.45	.718	18.24	15.0	381	250	1112		50	250
DT28EH-C0	96.0	2438	.500	12.70	.059	1.50	.490	12.45	.718	18.24	28.0	711	250	1112		100	—
DT44EH-C0	144.0	3658	.500	12.70	.059	1.50	.490	12.45	.718	18.24	44.0	1117	250	1112		100	—

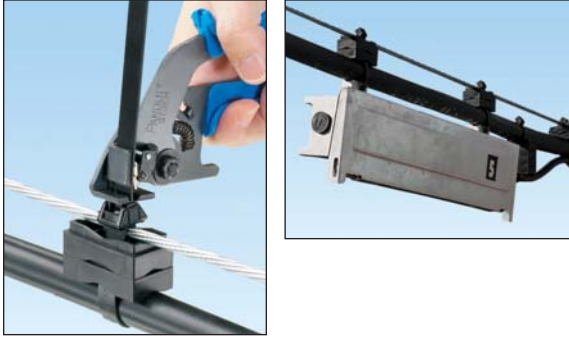
A.
System
Overview

Stackable Aerial Cable Spacer – Weather Resistant Polypropylene

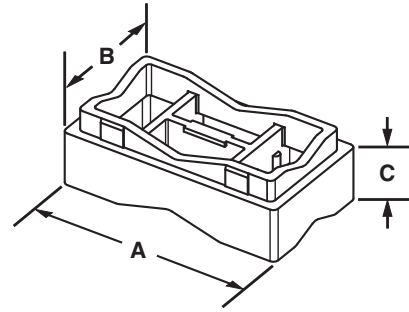
B1.
Cable Ties

- 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.
Cable
Accessories



B3.
Stainless
Steel Ties



C1.
Wiring
Duct

C2.
Surface
Raceway

Part Number	Length A		Width B		Height C		Used with Cable Ties*	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm			
SACS50-T100	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.

C4.
Cable
Management

D1.
Terminals

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

D2.
Power
Connectors

Material and Color Chart

D3.
Grounding
Connectors

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

Material	Color	Panduit Suffix
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
Flame Retardant Nylon 6.6	Natural (Ivory)	69
Weather Resistant Acetal	Black	*

✓ Denotes Panduit Natural Nylon 6.6 (no suffix).

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

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout/
& Safety
Solutions

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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
			BT1M-XMR	✓	0,30
BT1.5M-C	✓	0	BT1.5M-M	✓	0,30
			BT1.5M-XMR	✓	0,30,69
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
BT2I-C	✓	0	BT2I-M	✓	0,30
BT3I-C	✓	0	BT3I-M	✓	0,14,30
BT4I-C	✓	0	BT4I-M	✓	0,14
BT2S-C	✓	0	BT2S-M	✓	0,1,2,3,4Y,5,6,7,8,10,20,30,39
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
BT2LH-L	✓	0	BT2LH-TL	✓	0
BT3LH-L	✓	0	BT3LH-TL	✓	0
BT4LH-L	✓	0	BT4LH-TL	✓	0,30,39
BT5LH-L	✓	0	BT5LH-C	✓	0
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. System Overview

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.

B1. Cable Ties

Contour-Ty® Cable Ties

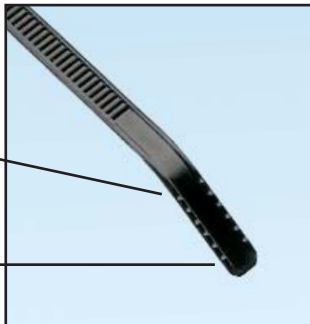
Fully enclosed head for consistent strength

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

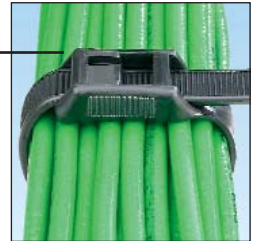


Hyper-V™ Cable Ties

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



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

Belt-Ty™ In-Line Cable Ties

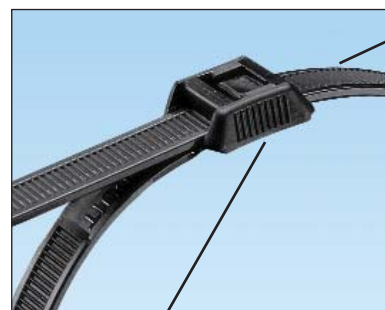


"Finger grip" shaped head assures positive grip while threading tie

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

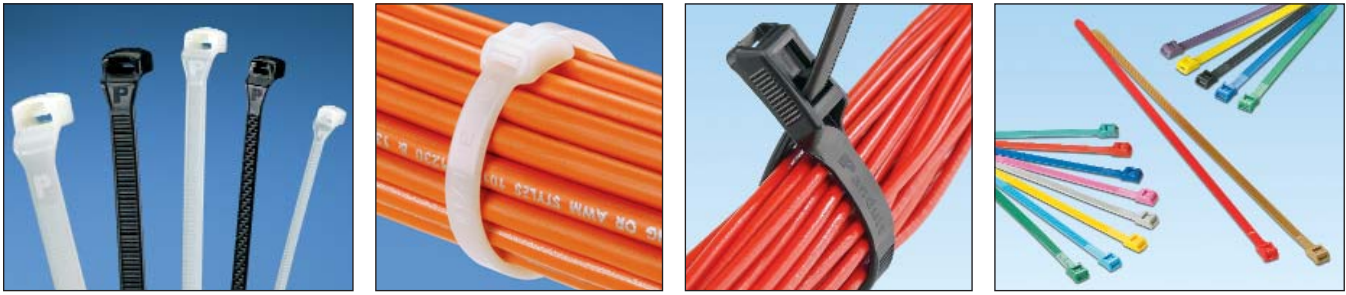


Cable tie tools speed installation and reduce total installed cost. See pages B1.109 – B1.114.



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.29.

Selection Guide – Parallel-Entry Cable Ties



	Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
Contour-Ty® Cable Ties	Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	CBR	B1.58
	Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	CBR	B1.59
	Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	CBR	B1.60
	Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties/Bundle	CBR	B1.60
	Flame Retardant Nylon 6.6, Ivory (69)	Locking Ties/Bundle	CBR	B1.60
Belt-Ty™ In-Line Cable Ties	Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	ILT	B1.61
	Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	ILT	B1.61
Hyper-V™ Cable Ties	Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	HV	B1.62
IN-LINE Cable Ties	Weather Resistant Nylon 6.6, Black (0 and colors)	Locking Ties/Bundle	IT	B1.63

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

CBR	2	S	—	M	—
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 B1.64

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

HV	9	100	—	C	—
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 B1.64

A. System Overview



Contour-Ty® Cable Ties – Nylon 6.6

B1. Cable Ties

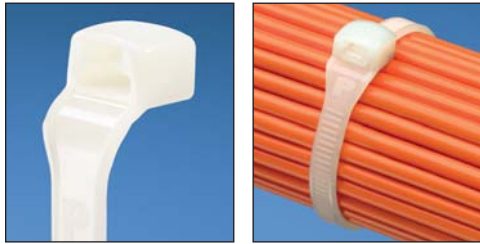
- For indoor use
- Unique design prevents wire and cable damage
- Low profile head avoids snags and reduces overall bundle size
- Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- 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

Note: Nylon 6.6 cable ties in natural and colors meet the testing requirements of the U.S. Military Aerospace Standard SAE-AS23190A and the dimensional requirements of Aerospace Standard SAE-AS33671

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

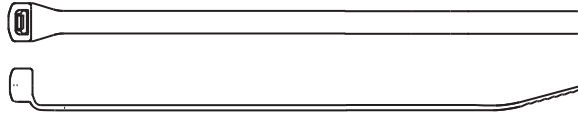
E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index



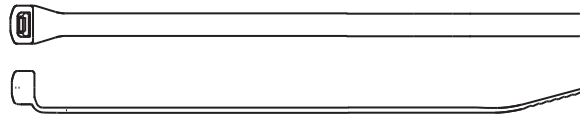
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
Miniature Cross Section – Plenum-Rated													
CBR1M-M	4.1	104	.098	2.5	.038	1.0	1.00	25	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
CBR1.5M-M	5.6	142	.098	2.5	.042	1.1	1.50	38	18	80		1000	50000
CBR2M-M	7.2	183	.098	2.5	.042	1.1	2.00	51	18	80		1000	25000
Intermediate Cross Section – Plenum-Rated													
CBR1.5I-M	5.9	150	.140	3.6	.040	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
CBR3I-M	10.4	264	.140	3.6	.052	1.3	3.00	76	40	178		1000	10000
CBR4I-M	13.6	345	.140	3.6	.052	1.3	4.00	102	40	178		1000	10000
Standard Cross Section – Plenum-Rated													
CBR2S-M	7.6	193	.190	4.8	.044	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
CBR3S-M	10.8	274	.190	4.8	.052	1.3	3.00	76	50	222		1000	5000
CBR4S-M	14.0	356	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000
Heavy-Standard Cross Section – Plenum-Rated													
CBR2HS-D	8.0	203	.250	6.4	.058	1.4	2.00	51	85	378	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	5000
Light-Heavy Cross Section – Plenum-Rated													
CBR4LH-TL	14.6	371	.300	7.6	.070	1.8	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
CBR6LH-C	20.9	531	.300	7.6	.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			
Miniature Cross Section													
CBR1M-M0	4.1	104	.098	2.5	.038	1.0	1.00	25	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
CBR1.5M-M0	5.6	142	.098	2.5	.042	1.1	1.50	38	18	80		1000	50000
CBR2M-M0	7.2	183	.098	2.5	.042	1.1	2.00	51	18	80		1000	25000
Intermediate Cross Section													
CBR1.5I-M0	5.9	150	.140	3.6	.040	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
CBR3I-M0	10.4	264	.140	3.6	.052	1.3	3.00	76	40	178		1000	10000
CBR4I-M0	13.6	345	.140	3.6	.052	1.3	4.00	102	40	178		1000	10000
Standard Cross Section													
CBR2S-M0	7.6	193	.190	4.8	.044	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
CBR3S-M0	10.8	274	.190	4.8	.052	1.3	3.00	76	50	222		1000	5000
CBR4S-M0	14.0	356	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000
Heavy-Standard Cross Section													
CBR2HS-D0	8.0	203	.250	6.4	.058	1.4	2.00	51	85	378	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	5000
Light-Heavy Cross Section													
CBR4LH-TL0	14.6	371	.300	7.6	.070	1.8	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
CBR6LH-C0	20.9	531	.300	7.6	.070	1.8	6.00	152	120	534		100	2000

A. System Overview



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

B1. Cable Ties

- 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

B2. Cable Accessories

B3. Stainless Steel Ties



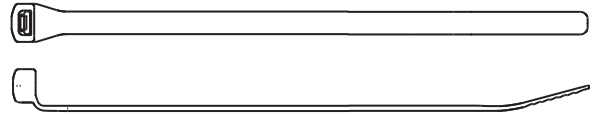
CBR2S-M30



CBR2S-M39



CBR3S-M69



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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	.098	2.5	.038	1.0	1.00	25	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
------------------	-----	-----	------	-----	------	-----	------	----	----	----	----------------------------------	------	-------

Intermediate Cross Section

CBR1.5I-M30	5.9	150	.140	3.6	.040	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
--------------------	-----	-----	------	-----	------	-----	------	----	----	-----	----------------------------------	------	-------

Standard Cross Section

CBR2S-M30	7.6	193	.190	4.8	.044	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
CBR3S-M30	10.8	274	.190	4.8	.052	1.3	3.00	76	50	222		1000	5000
CBR4S-M30	14.0	356	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000

Light-Heavy Cross Section

CBR4LH-TL30	14.6	371	.300	7.6	.070	1.8	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
CBR6LH-C30	20.9	531	.300	7.6	.070	1.8	6.00	152	120	534		100	2000

Heat Stabilized Nylon 6.6 – Natural

Standard Cross Section

CBR2S-M39	7.6	193	.190	4.8	.044	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
------------------	-----	-----	------	-----	------	-----	------	----	----	-----	--	------	-------

Flame Retardant Nylon 6.6 – Natural Ivory

Standard Cross Section

CBR3S-M69	10.8	274	.190	4.8	.052	1.3	3.00	76	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	5000
------------------	------	-----	------	-----	------	-----	------	----	----	-----	--	------	------

Note: UL Recognized, UL Listed, and CSA Certified, except CBR3S-M69.



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

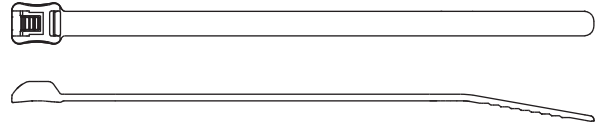
- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Parallel-entry cable tie that threads like a belt (180° entry)
- Low profile head avoids snags and reduces overall bundle size
- 35% lower head height 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

Standard Cross Section – Plenum-Rated

ILT2S-C	8.3	211	.190	4.8	.052	1.3	1.88	48	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
ILT3S-C	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
ILT4S-C	14.7	373	.190	4.8	.052	1.3	4.00	102	50	222		100	1000

Light-Heavy Cross Section – Plenum-Rated

ILT4LH-TL	14.8	376	.300	7.6	.075	1.9	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
ILT6LH-C	21.2	538	.300	7.6	.075	1.9	6.00	152	120	534		100	2000

Weather Resistant Nylon 6.6

Standard Cross Section

ILT2S-C0	8.3	211	.190	4.8	.052	1.3	1.88	48	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
ILT3S-C0	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
ILT4S-C0	14.7	373	.190	4.8	.052	1.3	4.00	102	50	222		100	1000

Light-Heavy Cross Section

ILT4LH-TL0	14.8	376	.300	7.6	.075	1.9	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
ILT6LH-C0	21.2	538	.300	7.6	.075	1.9	6.00	152	120	534		100	2000

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

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

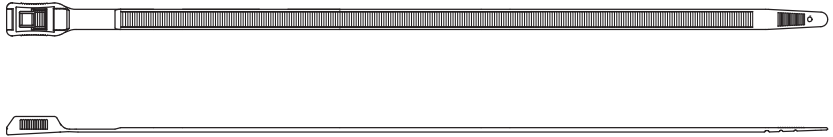
A. System Overview

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

B1. Cable Ties

- 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



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

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	.350	8.9	.076	1.9	2.60	65	160	710	GTH, GS4H, GS4EH, PTH, STH2, ST3EH, STHV	100	1000
HV9100-C0	14.4	367	.350	8.9	.076	1.9	3.90	100	160	710		100	1000
HV9150-C0	20.7	525	.350	8.9	.076	1.9	5.90	150	160	710		100	1000
HV9250-C0	33.1	841	.350	8.9	.076	1.9	9.80	250	160	710		100	1000

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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



HVTM

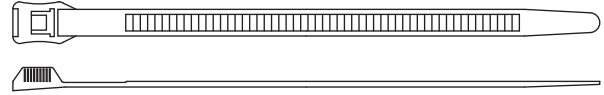
HVMPM

Part Number	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
Tie Mounts					
HVTM3S10-C0	Weather Resistant Nylon 6.6	Black	#10 (6mm) screw	100	500
Masonry Mounts					
HVMPM32-C0	Impact Modified Weather Resistant Nylon 6.6	Black	Tree barb for .31" (7.9mm) hole diameter	100	500

Note: UL Recognized except HVTM mount.

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
- 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 installation tool, see page B1.111
- 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	.350	8.9	.065	1.7	1.57	40	124	552	100	1000
IT965-C0	UV Black	10.1	257	.350	8.9	.065	1.7	2.56	65	124	552	100	1000
IT9100-C0	UV Black	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9115-C0	UV Black	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
Colored Cable Ties													
IT9100-CUV2	UV Red	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV4Y	UV Yellow	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV6	UV Dark Blue	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV6A	UV Light Blue	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV7A	UV Purple	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV8	UV Silver	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9100-CUV16B	UV Magenta	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
IT9115-CUV2	UV Red	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV2A	UV Bright Red	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV4Y	UV Yellow	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV4A	UV Butterscotch	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV5A	UV Green	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV5B	UV Hunter Green	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV6	UV Dark Blue	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV6A	UV Light Blue	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV6B	UV Cobalt Blue	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV7A	UV Purple	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV8	UV Gray	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV11	UV Teal	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV16B	UV Magenta	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
IT9115-CUV18	UV Tan	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000

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System
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Parallel-Entry Cable Ties

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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
Nylon 6.6	Gray	8
Nylon 6.6	White	10
Heat Stabilized Nylon 6.6	Black	30
Heat Stabilized Nylon 6.6	Natural	39
Flame Retardant Nylon 6.6	Natural (Ivory)	69

Material	Color	Panduit Suffix
Nylon 6.6	Ultraviolet Red	UV2
Nylon 6.6	Ultraviolet Bright Red	UV2A
Nylon 6.6	Ultraviolet Yellow	UV4Y
Nylon 6.6	Ultraviolet Butterscotch	UV4A
Nylon 6.6	Ultraviolet Green	UV5A
Nylon 6.6	Ultraviolet Hunter Green	UV5B
Nylon 6.6	Ultraviolet Dark Blue	UV6
Nylon 6.6	Ultraviolet Light Blue	UV6A
Nylon 6.6	Ultraviolet Cobalt Blue	UV6B
Nylon 6.6	Ultraviolet Purple	UV7A
Nylon 6.6	Ultraviolet Gray	UV8
Nylon 6.6	Ultraviolet Teal	UV11
Nylon 6.6	Ultraviolet Magenta	UV16B
Nylon 6.6	Ultraviolet Tan	UV18

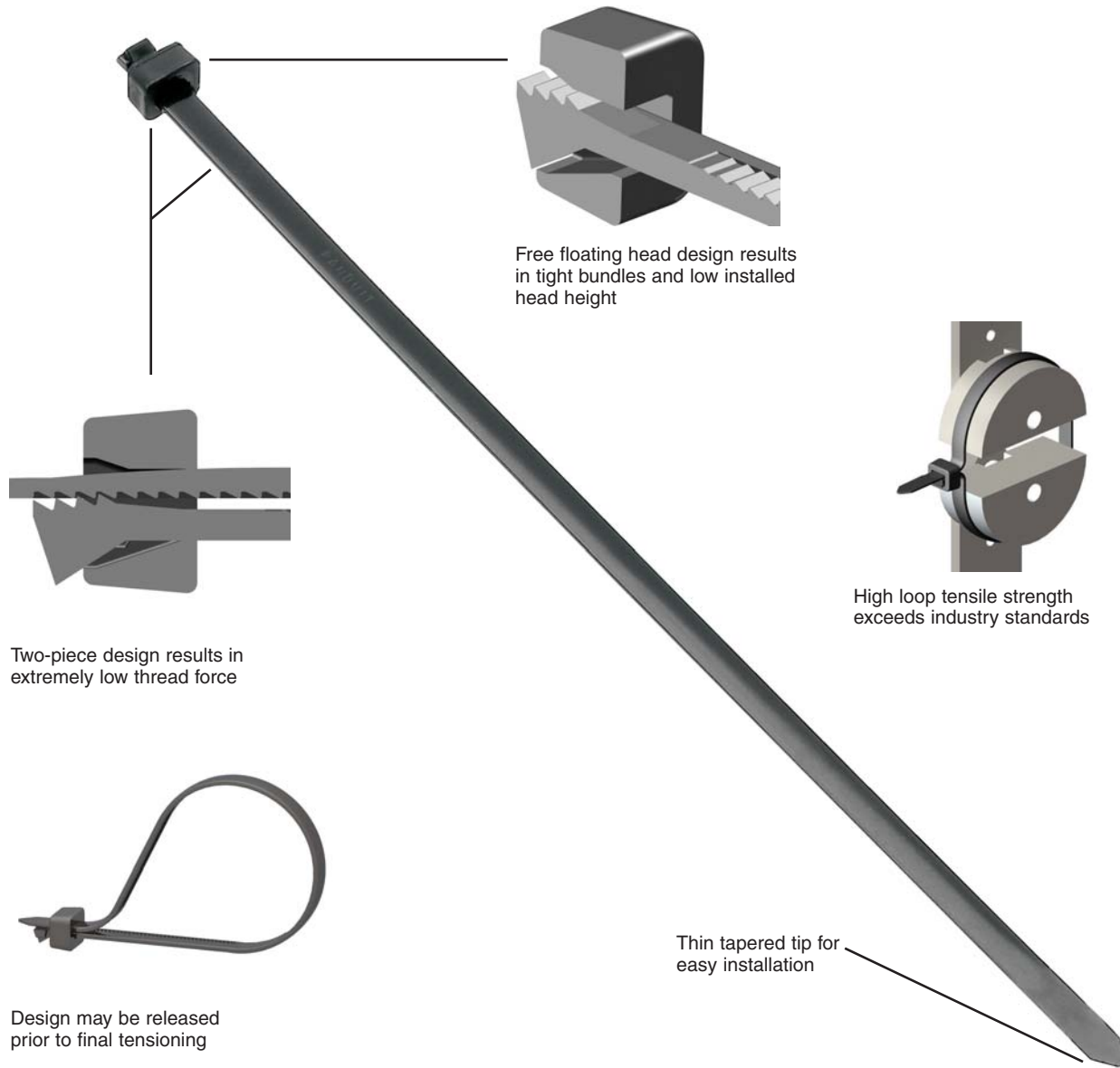
✓Denotes Panduit Natural Nylon 6.6 (no suffix).

Part Number Availability List

Part Number	Standard Packaging		Part Number	Bulk Packaging	
	Natural Nylon 6.6	Material/Color (Suffix)		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,UV6A,UV7A,UV8,UV16B
			IT9115-C		0,UV2,UV2A,UV4Y,UV4A,UV5A,UV5B,UV6,UV6A,UV6B,UV7A,UV8,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. See pages B1.109 – B1.114.



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.29.

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B2. Cable Accessories

B3. Stainless Steel Ties

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C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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Selection Guide – Sta-Strap® Cable Ties

B1. Cable Ties



B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties/Bundle	SST	B1.67
	Clamp Ties/Mount	SSC	B1.70
	Marker Ties/Identify	SSM	B1.71

C2. Surface Raceway

C3. Abrasion Protection

Weather Resistant Nylon 6.6, Black (0)	Locking Ties/Bundle	SST	B1.68
	Clamp Ties/Mount	SSC	B1.70
	Marker Ties/Identify	SSM	B1.71

C4. Cable Management

Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	SST	B1.69
	Clamp Ties/Mount	SSC	B1.70

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

Part Number System for Sta-Strap® Cable Ties

E3. Pre-Printed & Write-On Markers

SST	1	M	—	C	—
Type	Size	Cross Section	Screw Hole Size	Package Size	Material/Color
SST = Locking Tie SSC = Clamp Tie SSM = Marker 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 B1.72

E4. Permanent Identification

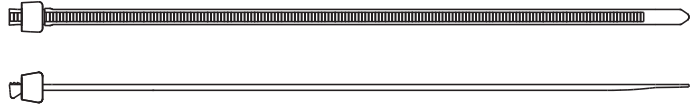
E5. Lockout/Tagout & Safety Solutions

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UL® US C SP® 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			
Miniature Cross Section													
SST1M-C	4.0	102	.095	2.4	.035	.9	.78	20	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
SST1.5M-C	5.5	140	.095	2.4	.037	.9	1.25	32	18	80		100	1000
Intermediate Cross Section													
SST1.5I-C	5.3	137	.135	3.4	.037	.9	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
SST2I-C	8.1	206	.135	3.4	.040	1.0	2.00	51	40	178		100	1000
SST3I-C	11.0	279	.135	3.4	.040	1.0	3.00	76	40	178		100	1000
SST4I-C	14.7	375	.135	3.4	.040	1.0	4.00	102	40	178		100	1000
Standard Cross Section													
SST1.5S-M	5.7	146	.180	4.6	.045	1.2	1.25	32	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	25000
SST2S-C	6.7	172	.180	4.6	.045	1.2	1.75	45	50	222		100	1000
SST3S-C	11.0	279	.180	4.6	.048	1.2	3.00	76	50	222		100	1000
SST4S-C	15.0	381	.180	4.6	.048	1.2	4.00	102	50	222		100	1000
Light-Heavy Cross Section													
SST2H-D	8.0	203	.300	7.6	.062	1.6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	5000
SST4H-L	14.8	376	.300	7.6	.067	1.7	4.00	102	120	534		50	500
SST8H-L	27.5	699	.300	7.6	.067	1.7	8.00	203	120	534		50	500

A. System Overview

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B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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Overview

Sta-Strap® Cable Ties – Weather Resistant Nylon 6.6

B1.
Cable Ties

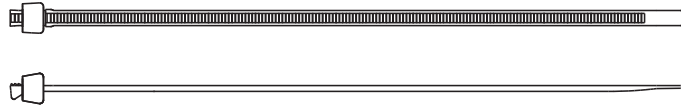
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Used for normal bundling and through-panel applications
- Small head height allows more efficient use of space in compact areas

- 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.
Cable
Accessories



B3.
Stainless
Steel Ties



C1.
Wiring
Duct

C2.
Surface
Raceway

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													
SST1M-C0	4.0	102	.095	2.4	.035	.9	.78	20	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
SST1.5M-M0	5.5	140	.095	2.4	.037	.9	1.25	32	18	80		1000	50000
Intermediate Cross Section													
SST1.5I-M0	5.3	137	.135	3.4	.037	.9	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
SST2I-M0	8.1	206	.135	3.4	.040	1.0	2.00	51	40	178		1000	25000
SST3I-C0	11.0	279	.135	3.4	.040	1.0	3.00	76	40	178		100	1000
SST4I-M0	14.7	375	.135	3.4	.040	1.0	4.00	102	40	178		1000	10000
Standard Cross Section													
SST1.5S-M0	5.7	146	.180	4.6	.045	1.2	1.25	32	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	25000
SST2S-C0	6.7	172	.180	4.6	.045	1.2	1.75	45	50	222		100	1000
SST3S-C0	11.0	279	.180	4.6	.048	1.2	3.00	76	50	222		100	1000
SST4S-C0	15.0	381	.180	4.6	.048	1.2	4.00	102	50	222		100	1000
Light-Heavy Cross Section													
SST2H-D0	8.0	203	.300	7.6	.062	1.6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	5000
SST4H-L0	14.8	376	.300	7.6	.067	1.7	4.00	102	120	534		50	500
SST8H-L0	27.5	699	.300	7.6	.067	1.7	8.00	203	120	534		50	500

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

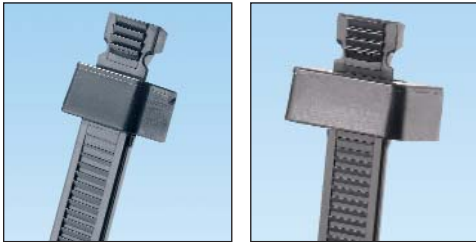
E5.
Lockout/
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c_{UL}® c_{SP}® Sta-Strap® Cable Ties – Heat Stabilized Nylon 6.6

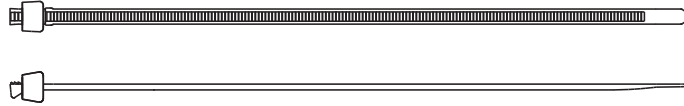
- For high temperature applications up to 239°F (115°C) – indoor use
- Used for normal bundling and through-panel applications
- *Heavy head* design is available for use in through-panel applications with a larger opening up to .400" (10.2mm)
- Small head height allows more efficient use of space in 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



SST

SST2HH



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													
SST1M-M30	4.0	102	.095	2.4	.035	.9	.78	20	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
SST1.5M-M30	5.5	140	.095	2.4	.037	.9	1.25	32	18	80		1000	50000
Standard Cross Section													
SST2S-M30	6.7	172	.180	4.6	.045	1.2	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	15000
SST3S-M30	11.0	279	.180	4.6	.048	1.2	3.00	76	50	222		1000	10000
SST4S-M30	15.0	381	.180	4.6	.048	1.2	4.00	102	50	222		1000	5000
Light-Heavy Cross Section													
SST4H-D30	14.8	376	.300	7.6	.067	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	2500
SST8H-D30	27.5	699	.300	7.6	.067	1.7	8.00	203	120	534		500	2000
Heavy Head Design Light-Heavy Cross Section													
SST2HH-D30	8.0	203	.300	7.6	.062	1.6	2.00	50	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	2500
SST4HH-D30	14.8	376	.300	7.6	.062	1.6	4.00	102	120	534		500	2500

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B2. Cable Accessories

B3. Stainless Steel Ties

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C2. Surface Raceway

C3. Abrasion Protection

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D3. Grounding Connectors

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E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview

UL® cUL® 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

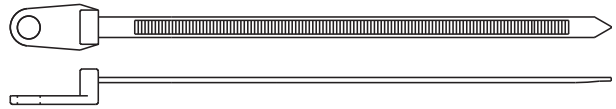
- Exclusive two-piece design offers the lowest threading force in the industry
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling
- Only clamp tie that is releasable prior to final tensioning



SSC2S-S10-C



SSC2S-S10-M0



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

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E1. Labeling Systems

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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	.180	4.6	.045	1.1	.148	3.8	#6	M3	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
SSC2S-S10-C	7.4	187	.180	4.6	.045	1.1	.200	5.1	#10	M5	1.75	45	50	222		100	1000
SSC4S-S10-C	15.7	398	.180	4.6	.045	1.1	.200	5.1	#10	M5	4.00	102	50	222		100	500

Light-Heavy Cross Section

SSC4H-S25-L	15.6	395	.300	7.6	.065	1.7	.260	6.6	1/4	M6	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	500
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Weather Resistant Nylon 6.6

Standard Cross Section

SSC2S-S6-M0	7.4	187	.180	4.6	.045	1.1	.148	3.8	#6	M3	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
SSC2S-S10-M0	7.4	187	.180	4.6	.045	1.1	.200	5.1	#10	M5	1.75	45	50	222		1000	10000
SSC4S-S10-M0	15.7	398	.180	4.6	.045	1.1	.200	5.1	#10	M5	4.00	102	50	222		1000	5000

Light-Heavy Cross Section

SSC4H-S25-D0	15.6	395	.300	7.6	.065	1.7	.260	6.6	1/4	M6	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	2500
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Heat Stabilized Nylon 6.6

Standard Cross Section

SSC2S-S10-M30	7.4	187	.180	4.6	.045	1.2	.200	5.1	#10	M5	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
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Light-Heavy Cross Section

SSC4H-S25-D30	15.6	395	.300	7.6	.065	1.7	.260	6.6	1/4	M6	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	500	2500
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UL[®] CS[®] Sta-Strap[®] Marker 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
- Used to fasten and identify bundles at the same time
- Unique design allows tie to be used as a wrap-around or flag marker

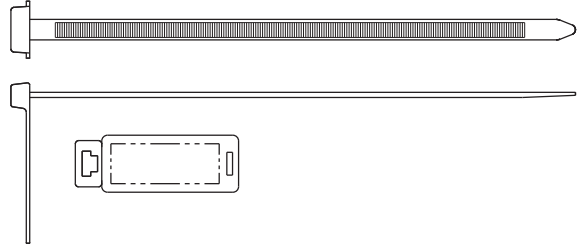
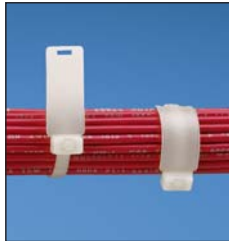
- Can be marked with Panduit Marker Pens on page B1.51 or computer printable labels
- Custom imprinting with text, symbols, or trademarks available using Panduit Custom Hot Stamping Service, see page B1.91



SSM2S-C



SSM2S-D0



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

Standard Cross Section

SSM2S-C	Wrap/Flag	6.7	170	.180	4.6	.045	1.1	.44 x .96	11.2 x 24.4	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	500
SSM4S-D	Wrap/Flag	14.9	378	.180	4.6	.045	1.1	.44 x .96	11.2 x 24.4	4.00	102	50	222		500	5000

Weather Resistant Nylon 6.6

Standard Cross Section

SSM2S-D0	Wrap/Flag	6.7	170	.180	4.6	.045	1.1	.44 x .96	11.2 x 24.4	1.75	45	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	10000
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B2.
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D2.
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A.
System
Overview

Sta-Strap® Cable Ties

B1.
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

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

✓Denotes Panduit Natural Nylon 6.6 (no suffix).

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

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
C4. Cable Management	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
D1. Terminals				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
D2. Power Connectors	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
D3. Grounding Connectors	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
E1. Labeling Systems	SST8H-L	✓	0	SST8H-D	✓	0,30
E2. Labels						
E3. Pre-Printed & Write-On Markers						
E4. Permanent Identification						
E5. Lockout/ Tagout & Safety Solutions						
F. Index						

Selection Guide – Specialty Ties



	Material, Color (Suffix)	Style/Function	Part Number Prefix	Catalog Page
Stud Mounted Cable Ties	Heat Stabilized Nylon 6.6, Black (30)	Locking Ties/Bundle	PLST	B1.74
		Releasable/Re-usable	PRST	B1.74
	Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	Locking/Bundle	PLST	B1.74
Ladder Style Stud Mount	Heat Stabilized Nylon 6.6, Black (30)	Releasable/Re-usable	PRST	B1.75
Double Loop Ties – One-Piece	Nylon 6.6, Natural (No Suffix)	Locking/Bundle	PLB	B1.76
	Weather Resistant Nylon 6.6, Black (0)			
	Heat Stabilized Nylon 6.6, Black (30)			
Double Loop Ties – Two-Piece	Nylon 6.6, Natural (No Suffix)	Locking/Bundle	SSB	B1.77
	Weather Resistant Nylon 6.6, Black (0)			
	Heat Stabilized Nylon 6.6, Black (30)			
Triple Loop Ties	Weather Resistant Nylon 6.6, Black (0)	Locking/Bundle	PL3B	B1.78
Double Hose Clamp	Weather Resistant Nylon 6.6, Black (0)	Locking/Bundle	DHC	B1.78
Chassis/Panel Mount Ties	Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	Locking/Bundle	SSPM	B1.79
Cable Marker Strap	Polyethylene (No Suffix)	Releasable/Re-usable	CM4S	B1.80

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 = 5mm		L = 50 C = 100 TL = 250 D = 500 M = 1000	See Page B1.81
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						



Cable tie tools speed installation and reduce total installed cost. See pages B1.109 – B1.114.



Cable tie accessories are used to speed and simplify the mounting of wires, cables, and tubing. See pages B2.1 – B2.29.

A. System Overview



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

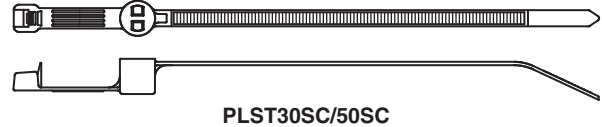
B1. Cable Ties

- 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 212°F (100°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

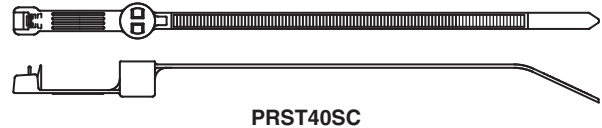
B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway



C3. Abrasion Protection

C4. Cable Management



D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

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			

E1. Labeling Systems

Heat Stabilized Nylon 6.6 Standard Cross Section

PLST30SC-D30	5.7	146	.190	4.8	.050	1.3	10-24	5.0	1.18	30	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	500	5000
PLST50SC-D30	8.1	207	.190	4.8	.050	1.3	10-24	5.0	1.97	50	50	222		500	5000
PRST40SC-D30	6.9	176	.190	4.8	.050	1.3	10-24	5.0	1.57	40	50	222	Hand install only	500	5000

E2. Labels

E3. Pre-Printed & Write-On Markers

Heat Stabilized Weather Resistant Nylon 6.6 Light-Heavy Cross Section

PLST4HS25-TL300	15.3	389	.300	7.6	.075	1.9	1/4-20	6.4	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

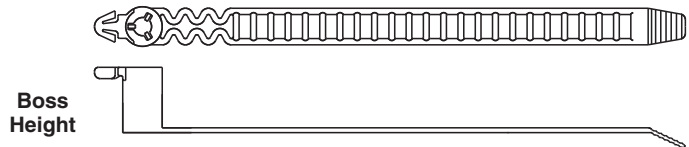
F. Index

Note: UL Recognized and CSA Certified except PLST4H.

cUL^{us} cSP^{us} 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



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		
Standard Cross Section																
PRST30S-S14-M30	5.2	132	.380	9.7	.050	1.3	.59	15	10-24	5.0	1.18	30	35	156	1000	10000

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B3.
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Cable Management

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D3.
Grounding Connectors

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Labeling Systems

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Pre-Printed & Write-On Markers

E4.
Permanent Identification

E5.
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A. System Overview

UL® CS® Pan-Ty® Double Loop Cable Ties

B1. 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

B2. Cable Accessories

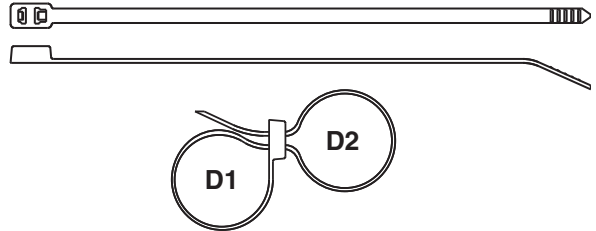
B3. Stainless Steel Ties



PLB4H
Head Design



PLB2S/3S/4S
Head Design



Assembled View

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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	.190	4.8	.052	1.3	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLB3S-C	3.00	76	11.8	300	.190	4.8	.052	1.3	50	222		100	1000
PLB4S-C	4.10	104	14.8	376	.190	4.8	.052	1.3	50	222		100	1000

Light-Heavy Cross Section

PLB4H-TL	3.60	91	14.7	373	.300	7.6	.075	1.9	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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Weather Resistant Nylon 6.6

Standard Cross Section

PLB2S-C0	1.80	46	7.6	193	.190	4.8	.052	1.3	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000
PLB3S-C0	3.00	76	11.8	300	.190	4.8	.052	1.3	50	222		100	1000
PLB4S-M0	4.10	104	14.8	376	.190	4.8	.052	1.3	50	222		1000	5000

Light-Heavy Cross Section

PLB4H-TL0	3.60	91	14.7	373	.300	7.6	.075	1.9	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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Heat Stabilized Nylon 6.6

Standard Cross Section

PLB2S-M30	1.80	46	7.6	193	.190	4.8	.052	1.3	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	1000	10000
PLB3S-M30	3.00	76	11.8	300	.190	4.8	.052	1.3	50	222		1000	10000
PLB4S-M30	4.10	104	14.8	376	.190	4.8	.052	1.3	50	222		1000	5000

Light-Heavy Cross Section

PLB4H-TL30	3.60	91	14.7	373	.300	7.6	.075	1.9	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500
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Note: UL Recognized and CSA Certified except PLB4H-TL0.

UL® CS® Sta-Strap® Bow-Ty™ Cable Ties

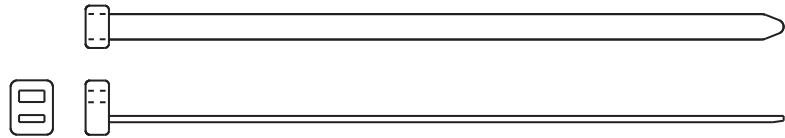
- Natural nylon material for indoor use
- Weather resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat stabilized material for high temperature applications up to 239°F (115°C) – indoor use

- 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

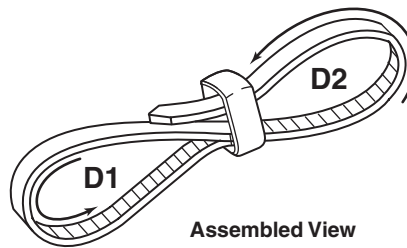


SSB2S-C

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	.18	4.6	.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	.18	4.6	.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	.18	4.6	.045	1.1	30	133	Hand install only	1000	10000
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A. System Overview

Pan-Ty® Triple Loop Cable Tie – Weather Resistant Nylon 6.6

B1. Cable Ties

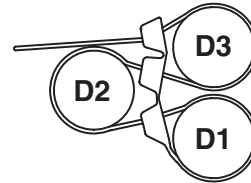
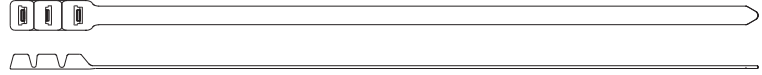
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- A fast and economical method to secure and separate three bundles

- Third loop can be installed with Panduit cable tie installation tools

B2. Cable Accessories



B3. Stainless Steel Ties



Assembled View

C1. Wiring Duct

C2. Surface Raceway

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			
Extra-Heavy Cross Section													
PL3B5EH-C0	5.00	127	20.0	508	.500	12.7	.075	1.9	125	556	GS4EH, ST3EH	100	1000

C3. Abrasion Protection

C4. Cable Management

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

D1. Terminals



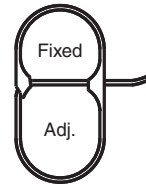
D2. Power Connectors



D3. Grounding Connectors



E1. Labeling Systems

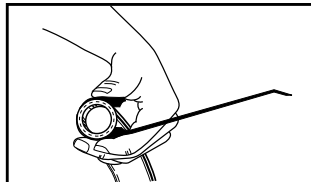


Assembled View

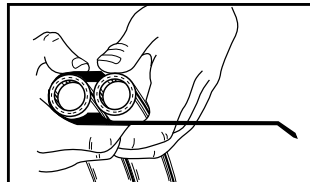
E2. Labels

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	0.28	7.1	0.05	1.3	1.12	28	1.00 – 1.75	25 – 44	100	445	GTH, GS4H, PTH, STH2, ST3EH	500	2500

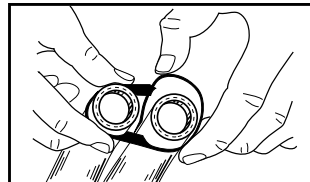
E3. Pre-Printed & Write-On Markers



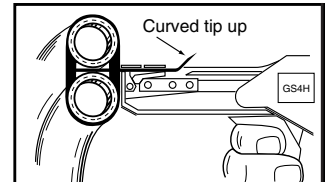
1) Wrap clamp around hose



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

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

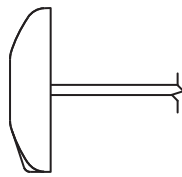
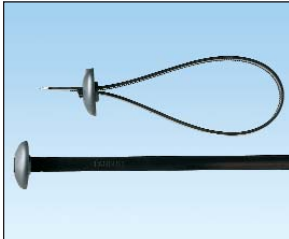
F. Index



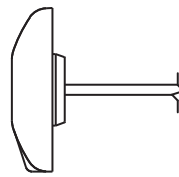
Sta-Strap® Chassis/Panel Mount Ties – Heat Stabilized Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light and for high temperature applications up to 212°F (100°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

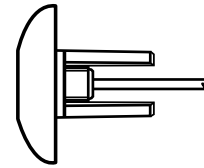
- Releasable prior to final tensioning for bundle modifications
- Engages clearance hole with optional centering pilot to prevent tie from shifting or abrading in high vibration environments



Without Centering Pilot



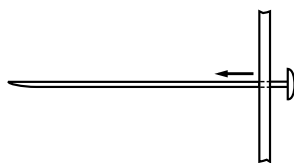
With Centering Pilot



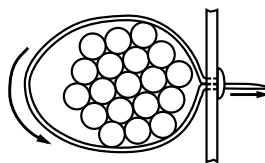
With Long Centering Pilot

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			
Without Centering Pilot															
SSPM2.5H-L300	10.1	257	.300	7.6	.062	1.6	.316 – .820	8.0 – 21.0	2.76	70	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	2500
SSPM4H-L300	14.8	376	.300	7.6	.062	1.6	.316 – .820	8.0 – 21.0	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	2500
With Centering Pilot															
SSPM2.5HP-L300	10.1	257	.300	7.6	.062	1.6	.440 – .820	11.2 – 21.0	2.76	70	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	2500
SSPM4HP-L300	14.8	376	.300	7.6	.062	1.6	.440 – .820	11.2 – 21.0	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	50	2500
With Long Centering Pilot															
SSPM4HLP-TL300	14.8	376	.300	7.6	.062	1.6	.440 – .820	11.2 – 21.0	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST3EH	250	2500

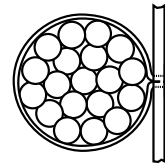
Through-Panel Mount Installation in Three Easy Steps:



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. System Overview

Cable Marker Straps – Polyethylene

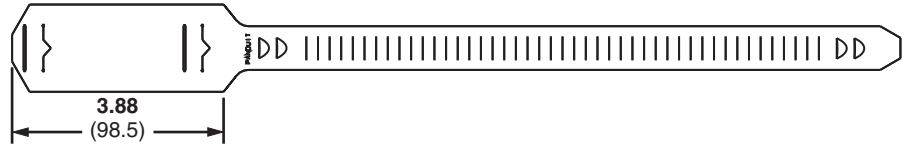
B1. Cable Ties

- 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 B1.51
- Custom imprinting with text, symbols, or trademarks available using Panduit Custom Hot Stamping Service, see page B1.93

B2. Cable Accessories

B3. Stainless Steel Ties

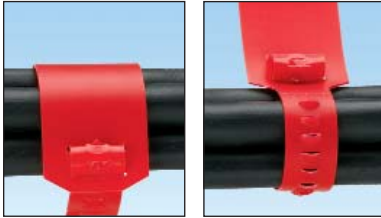


C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management



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

Flag Marker
(Min. Dia.: .25")

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

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			
Standard Cross Section														
CM4S-L2	15.3	387	.750	19.1	.033	.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	.750	19.1	.033	.84	Gray	1.50 x 2.62	38.1 x 66.5	4.38	111		50	500

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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-SD		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

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
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E4.
Permanent
Identification

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PANDUIT® ELECTRICAL SOLUTIONS

A. System Overview

UL® US C SP® US Pan-Ty® Striped Cable Ties – Nylon 6.6

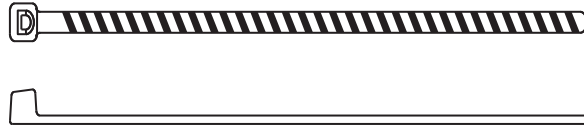
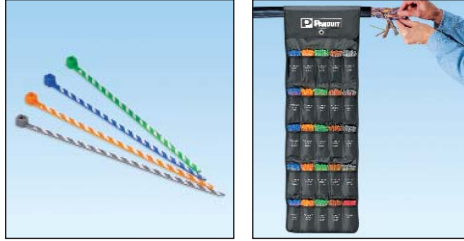
B1. Cable Ties

- 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. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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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		
Miniature Cross Section (Straight Tip)													
PLT1M-L6-10	Blue/White Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L3-10	Orange/White Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L5-10	Green/White Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L1-10	Brown/White Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L8-10	Slate/White Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L6-2	Blue/Red Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L3-2	Orange/Red Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L5-2	Green/Red Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L1-2	Brown/Red Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L8-2	Slate/Red Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L6-0	Blue/Black Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L3-0	Orange/Black Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L5-0	Green/Black Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L1-0	Brown/Black Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L8-0	Slate/Black Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L6-4	Blue/Yellow Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L3-4	Orange/Yellow Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L5-4	Green/Yellow Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L1-4	Brown/Yellow Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L8-4	Slate/Yellow Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L6-7	Blue/Violet Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L3-7	Orange/Violet Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L5-7	Green/Violet Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L1-7	Brown/Violet Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L8-7	Slate/Violet Stripe	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L0	Black	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L1	Brown	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L2	Red	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L3	Orange	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L4Y	Yellow	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L5	Green	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L6	Blue	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000
PLT1M-L8	Slate	4.0	102	.100	2.5	.036	.9	.82	21	18	80	50	1000

Note: CSA Certified on solid colors only.

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	10.5" x 38" (267mm x 965mm)	10.5" x 6" (267mm x 152mm)	1
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)	1

Cable Tie Kits in Steel Boxes



K-205



K-504/SR2

Part Number	Part Description	Std. Pkg. Qty.
K-205	Kit for Indoor Use 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	Kit for Indoor Use 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	1
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)	1

A.
System
Overview

Cable Tie Kits in Plastic Boxes and Bags

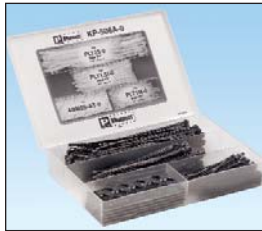
B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties



KP-506A



KP-506A-0



KP-509



KB-550



KB-551

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
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E3.
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& Write-On
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E4.
Permanent
Identification

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Part Number	Part Description	Std. Pkg. Qty.
KP-506A	Kit for Indoor Use 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	Kit for Outdoor Use 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	1
KP-509	Kit for Indoor Use 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.	1
KB-550	Assortment Pack for Indoor and Outdoor Use 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	1
KB-551	Assortment Pack for Indoor and Outdoor Use 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	1

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)

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



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

See pages B2.4, B2.5, B2.12, B2.21, B2.24, C4.4 – C4.6, C4.10, C4.11, C4.13, and C4.14.

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B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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A. System Overview

Selection Guide – Hook and Loop Cable Ties

B1. Cable Ties



B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

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

C2. Surface Raceway

Tak-Ty® Ties, Black (0)	Loop Ties/Re-usable	HLT	B1.87
	Strip Ties/Re-usable	HLS	B1.87
	15' and 75' Rolls/Re-usable	HLM, HLS	B1.87
	Strip Ties/Re-usable/Brick	HLB	B1.87

C3. Abrasion Protection

Tak-Ty® Plenum-Rated Ties, UL Listed Black, Maroon (0, 12)	Loop Ties/Re-usable	HLTP	B1.88
	Strip Ties/Re-usable	HLSP	B1.88

C4. Cable Management

Tak-Tape™ Rolls, Black (0)	20' and 35' Rolls/Re-usable	TTS	B1.88
----------------------------	-----------------------------	-----	-------

D1. Terminals

Ultra-Cinch™ Ties, Black (0)	Cinch Ties/Re-usable	UCT	B1.89
	Cinch Ties – Center Mount Grommet/Re-usable	UGCTC	B1.89
	Cinch Ties – End Mount Grommet/Re-usable	UGCTE	B1.89

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

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E3. Pre-Printed & Write-On Markers

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Part Number System for Hook and Loop Ties

HLT	2	I	—	X	0
Type	Size	Cross Section		Package Size	Color
HL = Hook and Loop	Approx. Maximum Bundle Dia. (In.)	I = Intermediate S = Standard		X = 10 C = 100 15R = 15' Roll 20R = 20' Roll 35R3 = 35' Rolls (3) 35RX = 35' Rolls (10) 75R = 75' Roll	See page B1.90
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					

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 B2.6

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		

Loop Ties – Slot allows for pre-wrapping of bundles

HLT21-X0	8.0	203	0.500	12.7	1.91	49	40	178	10	100
HLT31-X0	12.0	305	0.500	12.7	3.18	81	40	178	10	100

Strip Ties – Perforated in convenient 6", 12", and 18" strips

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	50	222	10	100
HLS5S-X0	18.0	457	0.750	19.1	5.00	127	50	222	10	100

Stacked Strip Ties – Eliminates cutting ties to length and staging them for each job

Rounded edges for installer safety – 100 pieces

HLB2S-C0	7.0	178	0.750	19.1	1.60	41	50	222	1	10
-----------------	-----	-----	-------	------	------	----	----	-----	---	----

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

15' and 75' Continuous Rolls – Can be cut to desired length, eliminating waste

HLM-15R0	15.0	4.6	.330	8.4	Various	Various	40	178	1	10
HLS-15R0	15.0	4.6	.750	19.1	Various	Various	50	222	1	10
HLS-75R0	75.0	22.9	.750	19.1	Various	Various	50	222	1	10

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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A. System Overview



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

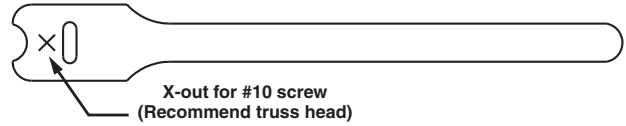
B1. Cable Ties

- 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.

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

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E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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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	.500	12.7	1.91	49	40	178	10	100
HLTP3I-X12	12.0	305	.500	12.7	3.18	81	40	178	10	100
UL Listed Loop Ties (Black) – Slot allows for pre-wrapping of bundles										
HLTP2I-X0	8.0	203	.500	12.7	1.91	49	40	178	10	100
HLTP3I-X0	12.0	305	.500	12.7	3.18	81	40	178	10	100
UL Listed Strip Ties (Maroon) – Perforated in convenient 6", 12", and 18" strips										
HLSP1.5S-X12	6.0	152	.750	19.1	1.50	38	50	222	10	100
HLSP3S-X12	12.0	305	.750	19.1	3.20	81	50	222	10	100
HLSP5S-X12	18.0	457	.750	19.1	5.00	127	50	222	10	100
UL Listed Strip Ties (Black) – Perforated in convenient 6", 12", and 18" strips										
HLSP1.5S-X0	6.0	152	.750	19.1	1.50	38	50	222	10	100
HLSP3S-X0	12.0	305	.750	19.1	3.20	81	50	222	10	100
HLSP5S-X0	18.0	457	.750	19.1	5.00	127	50	222	10	100

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 B2.6

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



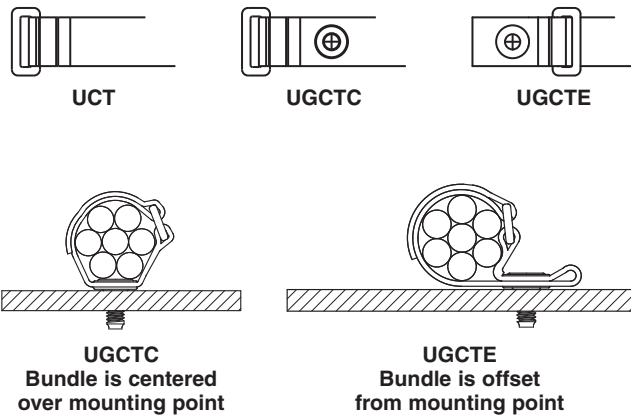
Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	Ft.	m	In.	mm	In.	mm	Lbs.	N		
TTS-20R0	20.0	6.1	.750	19.1	Various	Various	40	178	1	10
TTS-35R3-0	35.0	10.7	.750	19.1	Various	Various	40	178	1	8
TTS-35RX0	35.0	10.7	.750	19.1	Various	Various	40	178	1	10

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

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		
Cinch Ties										
UCT3S-X0	12.0	305	.850	21.6	3.00	76	50	222	10	100
UCT5S-X0	18.0	457	.850	21.6	5.00	127	50	222	10	100
Cinch Ties – Center Mount Grommet (Bundle is centered over mounting point)										
UGCTC3S-X0	12.0	305	.850	21.6	3.00	76	50	222	10	100
UGCTC5S-X0	18.0	457	.850	21.6	5.00	127	50	222	10	100
Cinch Ties – End Mount Grommet (Bundle is offset from mounting point)										
UGCTE3S-X0	12.0	305	.850	21.6	3.00	76	50	222	10	100
UGCTE5S-X0	18.7	475	.850	21.6	5.00	127	50	222	10	100

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	10	100
UCTGSM6-X	M6 x 16mm flat head phillips screw	10	100

A.
System
Overview

Hook and Loop Cable Ties

B1.
Cable Ties

Color Chart

Color	Panduit Suffix
Black	0
Red	2
Orange	3
Yellow	4
Green	5

Color	Panduit Suffix
Blue	6
Gray	8
White	10
Maroon	12

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

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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



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 B2.28
- Minimum 2" overlap required to achieve loop tensile rating



Part Number	Max. Bundle Diameter In. (mm)	Length In. (mm)	Width In. (mm)	Thickness In. (mm)	Marker Write-on Area In. (mm)	Min. Loop Tensile Strength Lbs. (N)	Std. Pkg. Qty.	Std. Ctn. Qty.
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)	0.790 (20.1)	0.17 (4.3)	2.5 x 0.50 63.5 x 12.7	50 (222)	10	100

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 In. (mm)	Width In. (mm)	Thickness In. (mm)	Head Height In. (mm)	Head Width In. (mm)	Min. Loop Tensile Strength Lbs. (N)	Std. Pkg. Qty.	Std. Ctn. Qty.
ERT2M-C20	Black	8.5 (216)	0.500 (12.70)	0.090 (2.29)	.323 (8.20)	.841 (21.36)	18 (80)	100	1000
ERT3M-C20	Black	11.0 (279)						100	1000
ERT4.5M-C20	Black	16.0 (406)						100	1000

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B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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Cable Bundle Organizing Tool

A. System Overview

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B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

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- Reduces cable installation time up to 50% compared to traditional methods
- Arranges 24 cables prior to applying Panduit network cable ties
- Optimizes bundle size and improves installed appearance
- Two inserts handle multiple network cable diameters

- Unique design allows twist-free bundling from the end or the middle of bundle
- Smooth edges; safe for use on network cables preventing cable abrasion
- Ergonomic fit and compact design
- Impact resistant material and low friction design to glide smoothly across cable bundle

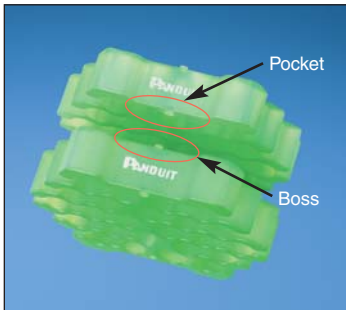


Part Number	Description	Recommended for Cable Outer Diameter Range	Use the Following Insert	Insert Used with the Following Panduit Cable Types	Std. Pkg. Qty.	Std. Ctn. Qty.
CBOT24K	Kit contains jacket cover with hook and loop fastener and two inserts.	0.180" – 0.248" (4.57mm – 6.30mm)	Fluorescent Green	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		

**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 for cable details.

Installation Instructions

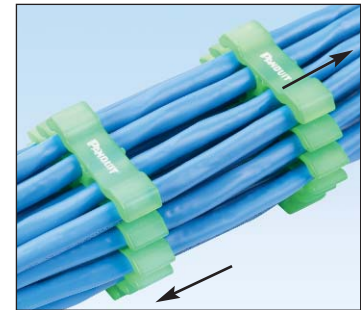
The steps below outline how easy it is to use the Panduit cable bundle organizing tool starting from the middle of the bundle outwards, using two tools. For starting at the end of the bundle, follow the same steps using only one tool. (Use above table to select appropriate insert based on cable diameter/type.)



Step 1
Use the unique pocket and boss features to align two same color inserts. Hold both together.



Step 2
Insert cables, one at a time, into the pre-formed slots of both inserts until all cables are installed.



Step 3
Pull the two inserts apart.



Step 4
Place the jacket cover around each insert and secure with the attached hook and loop fastener.

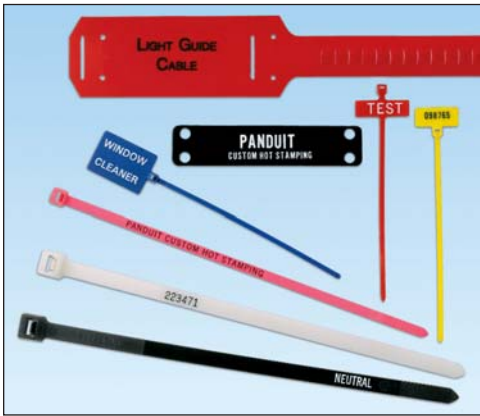


Step 5
Guide the tool along the bundle length to organize the cables, stopping at desired intervals to apply Panduit Network Cable Ties.



Step 6
When completed, slide tool off of cable bundle. The Panduit cable bundle organizing tool reduces installation time up to 50% and delivers a professional, organized installation.

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

FAST! TWO WEEK LEAD TIME

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



Cable Ties

- Used wherever you need to bundle wire, cable, hose or tubing
- A variety of colors for color-coding applications
- Cross Sections: Intermediate, Standard, Heavy-Standard, Light-Heavy, Heavy and Extra-Heavy

Marker and Flag Ties

- Fasten and identify bundles at the same time
- A variety of colors for color-coding applications
- Cross Sections: Miniature and Standard

Marker Plates

- Mount in any direction, either vertically or horizontally as flags, tags, or wrap-around identification plates.
- White or Weather Resistant black color
- Marker plate sizes:

1.50" x .75"	2.50" x .75"
1.75" x .75"	3.50" x .75"
2.00" x .75"	2.50" x 1.75"

Cable Marker Straps

- Identify and code telephone and fiber optic cable – replaces costly and cumbersome lead marking tags
- Lightweight and easy to install
- Can be used as **wrap-around** or **flag** marker
- Also can be used in underground identification applications
- Polyethylene material available in red and gray
- Marking area: 1.50" x 2.62"

*Custom imprinting available on Miniature cross section for the Flag Style Cable Ties (PLF) only.



Panduit Cable Tie Approvals

Logo (Symbol)	Agency	Spec/Approval	Requirement	Applicable Products
	Underwriters Laboratories, Inc.	File E56854 and MH29590	ZODZ(7), ZODZ(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	C22.2 No. 18.5-02 under the category "Fittings – Positioning Devices"	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 73/23/EEC (amended 93/68/EEC). PAN-TY AND Dome-Top Barb Ty cable ties also meet the requirements from EN50146	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)	05-HS463235-PDA	2005 Vessel Rules 1-1-4/7.7, 4-8/421.9.3 2001 MODU Rules 4-3-3/5.9.1	PLT Series, BT Series
	Bureau Veritas	Cert 05968/C0 BV1178B/BVN/04 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	E-6405	Det Norske Veritas' Rules for Classification of Ships and Mobile Offshore Units	PLT Series, PLC Series, PLM Series, PRT Series, PLWP Series, PRWP Series, PRST Series
	Germany (VG) Military	K17/97165	VG 95 387 – 100 MS 3367F	PLT Series, BT Series, SST Series
	Lloyd's Register of Shipping	89/60111 (E3)	Lloyd's Register Type Approval	PLT Series, BT Series, SST 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-AS23190-2	SAE spec AS23190	See Military Cross Reference Page B1.95
	AQA International	ISO/TS16949	AQA registration. Quality management system assessment certificate	Tinley Park, Illinois Manufacturing Operations (Cable Tie Division) Quality Management System.

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B3. Stainless Steel Ties

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E2. Labels

E3. Pre-Printed & Write-On Markers

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Military Cross Reference

The Panduit cable ties and marker ties listed in the following tables meet all of the testing requirements of Aerospace Standard SAE-AS23190A (formerly MIL-S-23190E) and the dimensional requirements of Aerospace Standards SAE-AS33671 (formerly MS3367) and SAE-AS33681 (formerly MS3368).

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	—	—	—
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	—	—
MS3367-2-0	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-C7, -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	—	—
MS3367-3-0	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	—	—
MS3367-4-0	Black*	PLT1M-C00, -M00, -XMR00	—	—	—	—
MS3367-4-0	Black*	PLT1.5M-XMR00	—	—	—	—
MS3367-4-1	Brown	PLT1M-C1, -M1, -XMR1	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, -XMR4Y	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	Natural	PLT.7M-C, -M	—	—	—	—
MS3367-4-9	Natural	PLT1.5M-XMR	BT1.5M-XMR	—	—	—
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	—	—	—

*Weather resistant per ASTM D 4066-94B.

Table continues on page B1.96

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Cable
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Cable Tie Cross Reference

Mil. Std. Part Number	Color	Pan-Ty®	Dome-Top® Barb Ty	Sta-Strap®	Belt-Ty™ In-Line	Contour-Ty®
MS3367-5-5	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	—	—
MS3367-6-9	Natural	PLT8LH-L, -C	BT8LH-L, -C	SST8H-L, -D	—	—
MS3367-6-9	Natural	—	BT9LH-L, -C	—	—	—
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	BT3S-C, -M	SST3S-C, -M	—	—
MS3367-8-9	Natural	PLT5H-L, -C	—	—	—	—
MS3367-9-9	Natural	PLT6H-L, -C	—	—	—	—
MS3367-11-9	Natural	PLT8H-L, -C	—	—	—	—
MS3367-14-9	Natural	PLT13H-Q, -C	—	—	—	—
MS3367-20-9	Natural	PLT5EH-Q, -C	—	—	—	—
MS3367-21-9	Natural	PLT6EH-Q, -C	—	—	—	—
MS3367-22-9	Natural	PLT8EH-C	—	—	—	—
MS3367-23-9	Natural	—	—	—	ILT2S-C, -M	—
MS3367-24-9	Natural	—	—	—	ILT4S-C, -M	—
MS3367-25-9	Natural	—	—	—	ILT4LH-TL	—
MS3367-29-9	Natural	—	—	—	ILT3S-C, -M	—
MS3367-30-9	Natural	—	—	—	—	CBR1M-M
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
MS3367-32-9	Natural	—	—	—	—	CBR2M-M
MS3367-33-9	Natural	—	—	—	—	CBR1.5I-M
MS3367-34-1	Brown	—	—	—	—	CBR3I-M1
MS3367-34-2	Red	—	—	—	—	CBR3I-M2
MS3367-34-3	Orange	—	—	—	—	CBR3I-M3
MS3367-34-4	Yellow	—	—	—	—	CBR3I-M4Y
MS3367-34-5	Green	—	—	—	—	CBR3I-M5
MS3367-34-6	Blue	—	—	—	—	CBR3I-M6
MS3367-34-7	Purple	—	—	—	—	CBR3I-M7
MS3367-34-8	Gray	—	—	—	—	CBR3I-M8
MS3367-34-9	Natural	—	—	—	—	CBR3I-M
MS3367-35-9	Natural	—	—	—	—	CBR4I-M

*Weather resistant per ASTM D 4066-94B.

Cable Tie Cross Reference

Mil. Std. Part Number	Color	Pan-Ty®	Dome-Top® Barb Ty	Sta-Strap®	Belt-Ty™ In-Line	Contour-Ty®
MS3367-36-9	Natural	—	—	—	—	CBR2S-M
MS3367-37-9	Natural	—	—	—	—	CBR3S-M
MS3367-38-9	Natural	—	—	—	—	CBR4S-M
MS3367-39-9	Natural	—	—	—	—	CBR2HS-D
MS3367-40-9	Natural	—	—	—	—	CBR4LH-TL
MS3367-41-9	Natural	—	—	—	—	CBR6LH-C
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	Natural	—	—	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	Natural	—	—	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 MIL-T-81306 and the dimensional requirements of MS90387.

Mil. Spec. Part Number	Panduit Part Number
MS90387-1	GTS, GS2B
MS90387-2	GS4H, GTH
MS90387-4	GS4EH
MS90387-5	GTSL

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Cable Tie Selection and Specification Guidelines

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Selecting the Proper Cable Tie Material for Your Application

B2.
Cable
Accessories

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.
Stainless
Steel Ties

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.
Wiring
Duct

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.
Surface
Raceway

Example No. 1

Application	Selection
The application requires high radiation (2 x 10 ⁶ 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.

C3.
Abrasion
Protection

C4.
Cable
Management

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.

D1.
Terminals

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▲HALAR is a registered trademark of Ausimont USA, Inc.

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Weathering

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.

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.

Weathering Test Methods

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.

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.

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.

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▲HALAR is a registered trademark of Ausimont USA, Inc.

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A.
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Weathering (continued)

B1.
Cable Ties

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.

B2.
Cable
Accessories

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.

B3.
Stainless
Steel Ties

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.

C1.
Wiring
Duct

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.

C2.
Surface
Raceway

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.

C3.
Abrasion
Protection

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.

C4.
Cable
Management

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

D1.
Terminals

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.

D2.
Power
Connectors

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. This is the most detrimental factor to the life of a tie.
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)	1 – 2
Flame Retardant Nylon 6.6, Ivory (69)	1 – 2
Heat Stabilized Nylon 6.6, Natural (39)	1 – 2
PEEK, Polyetheretherketone, Translucent Brown (71)	1 – 2
Heat Stabilized Nylon 6.6, Black (30)	4 – 5
Weather Resistant Polypropylene, Black (100)	7 – 9
Weather Resistant Nylon 6.6, Black (0 and 00)	7 – 9
Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	7 – 9
Weather Resistant Nylon 12, Black (120)	12 – 15
TEFZEL [■] , Aqua Blue (76)	>15
HALAR [▲] , Maroon (702Y)	>15
Weather Resistant Acetal, Black	>20
Stainless Steel	>30

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

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▲HALAR is a registered trademark of Ausimont USA, Inc.

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.

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.

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

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

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Flammability (continued)

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

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 Ausimont USA, Inc.

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 maximum continuous use temperatures for cable tie materials are listed in the Cable Tie Selection Chart (pages B1.2 and B1.3).

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 application use temperatures for cable tie materials are listed in the Cable Tie Selection Chart (pages B1.2 and B1.3).

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.

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).

Halogen-Free

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

[▲]HALAR is a registered trademark of Ausimont USA, Inc.

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

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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

B = Satisfactory

C = Slight Attack

D = Attacked

— = Not Tested

¹ = Pitting occurs under some conditions

² = Attack may occur if sulfuric acid present

Aq. = Aqueous

C.S. = Cold Saturated

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Agent	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	D	C
Aluminum Fluoride	10	B	A	A	A	A	—	D	C
Aluminum Hydroxide	Aq. C.S.	—	A	A	A	A	—	A	A
Aluminum Potassium Sulfate	10	B	A	A	A	A	—	A ¹	A ¹
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 ¹	A
Ammonium Hydroxide	10	A	—	—	A	A	A	—	—
Ammonium Nitrate	100	—	A	A	A	A	A	A	A ¹
Ammonium Sulfate	10	—	A	A	A	A	A	E ¹	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 ¹	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

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

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

‡HALAR is a registered trademark of Ausimont USA, Inc.

Agent	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL®	HALAR®	PEEK	304 Stainless Steel	316 Stainless Steel
Calcium Chloride	5	C	A	A	A	A	A	A ¹	A ¹
Calcium Hydroxide	50	—	—	A	A	A	A	A	A
Calcium Hypochlorite	2	D	—	A	A	A	A	A ¹	A ¹
Calcium Nitrate	50	—	A	A	A	A	A	—	—
Calcium Sulfate	2	C	—	A	A	A	A	A	A
Carbon Tetrachloride	100	A	A	D	A	A	A	A	A
Carbon Tetrachloride	Aq. 10	—	—	—	—	A	—	C ¹	A ¹
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 ¹ -D	A ¹ -C ¹
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	—	—	—
Diocetyl 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 ¹	A
Fluorine (Dry)	100	—	—	D	A	—	D	D	D
Formaldehyde	40	A	B	A	A	A	A	A ¹	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
Hydrobromic Acid	All	D	D	A	A	A	D	D	D

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

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

®HALAR is a registered trademark of Ausimont USA, Inc.

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Table C – Chemical Resistance Table (continued)

	Agent	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL [■]	HALAR [▲]	PEEK	304 Stainless Steel	316 Stainless Steel
A. System Overview	Hydrochloric Acid	All	D	D	A	A	A	A	D	D
	Hydrocyanic Acid	All	—	D	A	A	A	A	C	C
B1. Cable Ties	Hydrofluoric Acid	All	D	D	A	A	A	D	D	D
	Hydrofluorosilicic Acid	30	—	D	A	A	A	—	D	D
B2. Cable Accessories	Hydrogen Peroxide	30	D	B	B	A	A	A	B	A
	Hydrogen Sulfide	Dry	—	—	A	A	A	A	A	A
B3. Stainless Steel Ties	Hydrogen Sulfide	Wet	D	—	A	A	A	—	C ²	A ²
	Hydroquinone	100	—	—	A	A	A	—	—	—
C1. Wiring Duct	Iodine	100	—	—	A	A	A	C	D	D
	Iodoform	100	—	—	—	A	A	—	A	A
C2. Surface Raceway	Isopropyl Alcohol	100	A	A	A	A	A	A	A	A
	Jet Fuel	100	A	—	A	A	A	A	A	A
C3. Abrasion Protection	Lactic Acid	10	A	B	A	A	A	—	A	A
	Lanolin	10	A	A	A	A	A	—	A	A
C4. Cable Management	Lead Acetate	Aq. C.S.	—	—	A	A	A	A	A	A
	Linseed Oil	100	A	A	A	A	A	—	A	A
D1. Terminals	Magnesium Carbonate	Aq. C. S.	—	A	A	A	A	—	A	A
	Magnesium Chloride	Aq. C.S.	C	A	A	A	A	A	A ¹	A ¹
D2. Power Connectors	Magnesium Nitrate	Aq. C. S.	—	A	A	A	A	—	A	A
	Maleic Acid	100	—	—	A	A	A	A	—	—
D3. Grounding Connectors	Malic Acid	Aq. C.S.	—	—	A	A	A	—	A	A
	Mercuric Chloride	Dilute	—	A	A	A	A	A	D	D
E1. Labeling Systems	Mercury	100	—	A	A	A	A	A	A	A
	Methyl Alcohol	100	A	A	A	A	A	A	A	A
E2. Labels	Methyl Bromide	100	—	—	D	A	A	—	—	—
	Methyl Chloride	100	—	—	C	A	A	—	—	A
E3. Pre-Printed & Write-On Markers	Methyl Chloroform	100	A	—	C	A	A	—	—	—
	Methyl Ethyl Ketone	100	—	A	C	A	A	A	A	A
E4. Permanent Identification	Methyl Isobutyl Ketone	100	A	—	C	A	A	—	A	A
	Methylene Chloride	100	C	D	C	A	A	A	A	A
E5. Lockout/Tagout & Safety Solutions	Naphtha	100	—	—	A	A	A	A	A	A
	Naphthalene	100	—	B	A	A	A	A	A	A
F. Index	Nickel Chloride	Aq. C.S.	—	A	A	A	A	A	A ¹	A ¹
	Nickel Sulfate	Aq. C.S.	—	A	A	A	A	A	A ¹	A ¹
F. Index	Nitric Acid	10 to 30	D	D	A	A	A	—	A	A
	Nitric Acid	30 to 68	D	D	D	B	A	C	A	A
F. Index	Nitro Benzene	100	—	C	C	A	A	A	A	A
	Nitro Methane	100	A	—	—	A	A	—	—	—
F. Index	Nitrous Acid	5	—	—	—	A	A	A	A	A
	Oleic Acid	100	—	C	A	A	A	A	A	A
F. Index	Oxalic Acid	10	—	C	A	A	A	A	A	A
	Oxygen	All	—	—	A	A	A	A	—	—
F. Index	Paraffin	100	A	A	A	A	A	—	A	A
	Perchloroethylene	100	—	—	C	A	A	A	A	A
F. Index	Petroleum Ether	100	—	A	A	A	A	A	A	A
	Phenol	90	D	D	A	A	A	D	A	A
F. Index	Phosphoric Acid	10	D	D	A	A	A	A	A	A
	Phosphorous Pentoxide	100	—	D	A	A	A	A	—	—
F. Index	Phosphorous Trichloride	100	—	D	C	A	A	—	A	A
	Phthalic Acid	50	—	—	C	A	A	—	A	A
F. Index	Picric Acid	1	—	—	A	A	A	A	A	A
	Potassium Borate	1	—	—	A	A	A	—	—	—
F. Index	Potassium Bromide	Aq. C.S.	—	—	A	A	A	A	A ¹	A ¹
	Potassium Carbonate	Aq. C.S.	—	C	A	A	A	A	A	A
F. Index	Potassium Chlorate	Aq. C. S.	—	B	A	A	A	A	A	A
	Potassium Chloride	5	—	A	A	A	A	A	A ¹	A ¹
F. Index	Potassium Dichromate	Aq. C.S.	—	D	A	A	A	A	A	A
	Potassium Ferrocyanide	25	—	—	A	A	A	A	A	A
F. Index	Potassium Hydroxide	30	C	—	A	A	A	A	C	C

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

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▲HALAR is a registered trademark of Ausimont USA, Inc.

Agent	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL [®]	HALAR [▲]	PEEK	304 Stainless Steel	316 Stainless Steel
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 ¹	A ¹
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 ¹	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 ¹	A ¹
Sodium Chromate	Aq. C.S.	D	—	A	A	A	—	A	A
Sodium Fluoride	5	—	—	A	A	A	—	A ¹	A ¹
Sodium Hydroxide	10	A	A	A	A	A	A	A	A
Sodium Hypochlorite	5	B	C	A	A	A	A	C ¹	A ¹
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 ¹	A
Sodium Thiosulfate	25	—	A	A	A	A	—	A ²	A ²
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	D	C
Sulfuric Acid	Concentrate	D	D	C	A	A	D	C	C
Sulfurous Acid	10	A	—	A	A	A	A	C ¹	A ¹
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 ¹	A ¹
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).

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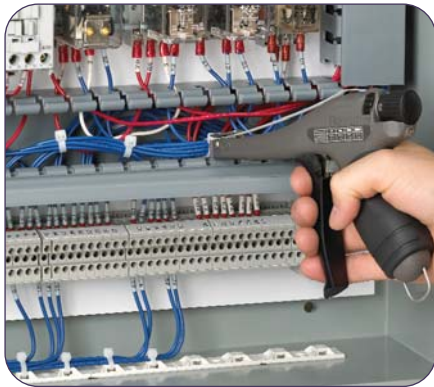
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MANUAL CABLE TIE INSTALLATION TOOLS

Panduit provides the most preferred hand-operated tools in the industry. These versatile tools can be used for production, maintenance, or construction applications.



Tool Highlights:

- Tool controlled tension and cut-off
 - Ergonomic tools are durable, lightweight, and easy to use
 - Manual tools
 - Pneumatic tools
- Installer controlled tension and cut-off
 - Large selection of tools available for complete range of Panduit cable ties
 - Cost-effective alternative for small volume applications



Panduit cable tie installation tools promote worker safety, help reduce downtime, improve productivity and provide the lowest total installed cost. As with all Panduit products, quality in design and production along with customer service excellence, are assured.

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Selection Guide – Hand Tools, Accessories, and Kits

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Hand Tools

Manual

Tool Controlled Tension and Cut-Off

Recommended usage: under 50,000 ties/year

Typical applications: Low to medium volume tie usage in OEM, MRO, or construction

Cross Section	Tool Part Number – Page B1.111					
	GTS	GTSL	GS2B	GTH	GS4H	GS4EH
SM	X	X				
M	X	X	X			
I	X	X	X			
S	X	X	X	X	X	
HS				X	X	
LH				X	X	X
H				X	X	X
EH						X

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

Installer Controlled Tension and Cut-Off

Recommended usage: under 10,000 ties/year

Typical applications: MRO or construction

Cross Section	Tool Part Number – Page B1.112			
	STS2	STH2	ST3EH	STHV
M	X			
I	X			
S	X	X		
HS		X		
LH		X	X	X
H		X	X	X
EH			X	

Pneumatic

Recommended usage: under 250,000 ties/year

Typical applications: Medium to high volume tie usage in OEM

Cross Section	Tool Part Number – Page B1.113	
	PTS	PTH
SM	X	
M	X	
I	X	
S	X	X
HS		X
LH		X
H		X

Accessories/Kits

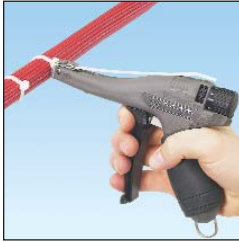
Manual

	Part Number	For Tool	Page
Tool Tension Locking Kits	KGTSTL	GTS, GTSL	B1.114
	KGHTL	GTH	B1.114
	TTLK3	GS2B, GS4H	B1.114
Blade Replacement Kits	KGTSBLD	GTS, GTSL	B1.114
	KGTHBLD	GTH	B1.114
	K2-BLD2	GS2B	B1.114
	K4H-BLD	GS4H	B1.114
Tool Holster	GHH	GTS, GTSL, GS2B, GTH, GS4H, GS4EH	B1.114
	KGTHSLV	GTH	B1.114
Cushion Sleeve Kit	KGTSBLV	GTS	B1.114
	KGTHSLV	GTH	B1.114
Pneumatic Hose Assembly, Filter/Regulator, Adapter Fittings	PPH10		B1.113
	PL289N1		B1.113
	PHCAQ	PTS, PTH, PPTS	B1.113
	PHCAT		B1.113

Pneumatic

Part Number	For Tool	Page
KPTSTL	PTS, PTH	B1.114
TTLK3	PPTS	B1.114
KGTSBLD	PTS	B1.114
KPTHBLD	PTH	B1.114
K2-BLD2	PPTS	B1.114
GHH	PTS, PPTS	B1.114
PPH10		B1.113
PL289N1		B1.113
PHCAQ	PTS, PTH, PPTS	B1.113
PHCAT		B1.113

Cable Tie Tools – Tool Controlled Tension and Cut-Off



GTS

- Used in production, maintenance, or construction applications
- Tool controlled tension provides flush cut-off and speeds installation to lower installed cost
- Lightweight and balanced
- Easy to change tension adjustment and easy to operate
- A combination of design, operation, and construction features, provides a long service life
- Replacement blades available, see page B1.114
- No special maintenance required



GTS



GTSL



GS2B



GTH



GS4H



GS4EH

Part Number	Used with Cable Ties	Weight		Part Features	Standards	Std. Pkg. Qty.
		Oz.	g			
GTS	SM, M, I, S	9.8	278	Ergonomic design with impact resistant resin housing, narrow nose, and cushion handle.	QPL per Mil. Std. SAE AS81306 and Mil. Spec. SAE AS90387-1	1
GTSL	SM, M, I, S	8.8	249	Ergonomic design with impact resistant resin housing, narrow nose, and cushion handle. Shorter handle reach (than GTS) for users with smaller hands.	QPL per Mil. Std. SAE AS81306 and Mil. Spec. SAE AS90387-5	1
GS2B	M, I, S	11.5	327	Metal tool with a durable powder coat finish.	QPL per Mil. Std. SAE AS81306 and Mil. Spec. SAE AS90387-1	1
GTH	S, HS, LH, H	12.0	340	Ergonomic design with impact resistant resin housing, narrow nose, and cushion handle.	QPL per Mil. Std. SAE AS81306 and Mil. Spec. SAE AS90387-2	1
GS4H	S, HS, LH, H	16.0	454	Metal tool with a durable powder coat finish.	QPL per Mil. Std. SAE AS81306 and Mil. Spec. SAE AS90387-2	1
GS4EH	LH, H, EH	16.0	454	Metal tool with a durable powder coat finish.	QPL per Mil. Std. SAE AS81306 and Mil. Spec. SAE AS90387-4	1

Cable tie cross section sizes: SM = Subminiature, M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy.

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Cable Tie Tools – Installer Controlled Tension and Cut-Off

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STS2

- Economical series of tools for maintenance or construction applications

- Excellent tools for low volume applications

C1.
Wiring
Duct



STS2

C2.
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Raceway



STH2

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ST3EH

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Part Number	Used with Cable Ties	Color	Weight		Part Features	Std. Pkg. Qty.
			Oz.	g		
STS2	M, I, S	Black	2.5	71	Economical tool with short handle span and top loading feature for right- or left-handed users.	1
STH2	S, HS, LH, H	Red	2.5	71	Economical tool with short handle span and top loading feature for right- or left-handed users.	1
ST3EH	LH, H, EH	Blue/Black	9.0	256	Durable, all steel construction with comfortable plastic handles.	1
STHV	LH, H	Yellow	12.0	341	Durable all steel construction and "travel stop" to prevent pinched fingers.	1

Cable tie cross section sizes: SM = Subminiature, M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy.

Installation Procedure (STS2/STH2/ST3EH):

Install cable tie around bundle and tension tie by squeezing tool handle. Reduce tension slightly and twist tool 1/4" turn either direction to cut off excess cable tie.

Installation Procedure (STHV):

Install cable tie around bundle and tension tie by squeezing tool handle. A separate lever cuts off excess cable tie.

Pneumatic Hand Tools – Tool Controlled Tension and Cut-Off



PTS



PTS



PTH

- Pneumatic, push button operation tensions and cuts off excess tie in a fraction of a second
- Durable, lightweight, ergonomic design is easy to operate and designed to reduce operator fatigue
- Easy to change tension adjustment
- Operates on non-lubricated air, without special maintenance

Part Number	Used with Cable Ties	Weight		Part Features	Std. Pkg. Qty.
		Oz.	g		
PTS	SM, M, I, S	17.3	490	Ergonomic design with impact resistant resin housing and black knob; replacement parts can be part of a scheduled maintenance program.	1
PTH	S, HS, LH, H	32.0	907	Ergonomic design with impact resistant resin housing and red knob; replacement parts can be part of a scheduled maintenance program.	1

Note: All tools require the PPH10 hose and PL289N1 filter/regulator for proper operation.

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

Pneumatic Tool Accessories



PL289N1/PPH10



PHCAQ



PHCAT

Part Number	Used with Installation Tool	Part Description	Std. Pkg. Qty.
PL289N1	PTS, PPTS, PTH	Filter/regulator .5 micron element, regulated range 3 – 100 psig, features 1/8" NPT female output port (to hose PPH10) and 1/4" male quick disconnect to source air line.	1
PPH10	PTS, PPTS, PTH	10.0' (3m) hose assembly (regulator to tool); includes a 1/8" NPT male connector (to regulator) and 1/8" female quick disconnect (to tool).	1
PHCAQ	PTS, PPTS, PTH	Adapter fitting for 10.0' (3m) hose (PPH10) to regulator with 1/4" female quick disconnect output, features 1/8" NPT female connection (to hose) and 1/4" male quick disconnect (to regulator).	1
PHCAT	PTS, PPTS, PTH	Adapter fitting for 10.0' (3m) hose (PPH10) to regulator with 1/4" NPT female output port, features 1/8" NPT female connection (to hose) and 1/4" NPT male connection (to regulator).	1

A. System Overview

Hand Tool Accessories: Tool Tension Locking Kits

B1. Cable Ties

- For applications requiring a locking device on either the selector knob (one cross section size and tension only) or tension level adjustment (but allow cross section size changes)

B2. Cable Accessories



KGTHTL

B3. Stainless Steel Ties

Part Number	Used with Installation Tool	Contents	Std. Pkg. Qty.
KGTSTL	GTS, GTSL	Lockout cap and screw.	1
KGTHTL	GTH	Lockout cap and screw.	1
KPTSTL	PTS, PTH	Lockout cap and screw.	1
TTLK3	GS2B, GS4H, PPTS	Selection locking clip and screws.	1

C1. Wiring Duct

Blade Replacement Kits

C2. Surface Raceway

- Blade replacement kits can be part of a user's scheduled maintenance plan or used when cut-offs are not clean and crisp

C3. Abrasion Protection



KGTSBLD

C4. Cable Management

Part Number	Used with Installation Tool	Contents	Std. Pkg. Qty.
KGTSBLD	GTS, GTSL, PTS	Threadlocker, screw, washer and replacement blade.	1
KGTHBLD	GTH	Threadlocker, screw, and replacement blade.	1
K2-BLD2	GS2B, PPTS	Threadlocker, screws, and replacement blade.	1
K4H-BLD	GS4H	Threadlocker, screws, and replacement blade.	1
K4EH-BLD	GS4EH	Threadlocker, screw, and replacement blade.	1
KPTHBLD	PTH	Threadlocker, screw, and replacement blade.	1

D1. Terminals

Hand Tool Holster

D2. Power Connectors

- Durable leather construction holster with rivets and extra tie-down strap to hold tool in place – easily fits on belt

D3. Grounding Connectors



Part Number	Used with Installation Tool	Color	Std. Pkg. Qty.
GHH	GTS, GTSL, GS2B, GTH, GS4H, GS4EH, PTS, PPTS, ST3EH	Black	1

E1. Labeling Systems

E2. Labels

NEW! Cushion Sleeve Kits

E3. Pre-Printed & Write-On Markers

- Cushion sleeve can be added to existing GTS or GTH hand tool
- Reduce the amount of shock an operator may experience while tensioning and cutting off cable ties
- Reduce operator fatigue
- Unique thermoplastic elastomer material that won't split or fall off the tool over time

E4. Permanent Identification



KGTSSLV

E5. Lockout/Tagout & Safety Solutions

Part Number	Used with Installation Tool	Color	Contents	Std. Pkg. Qty.
KGTSSLV	GTS	Black	Cushion sleeve and lubricant.	1
KGTHSLV	GTH	Red	Cushion sleeve and lubricant.	1

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AUTOMATIC CABLE TIE INSTALLATION SYSTEMS



The complete line of Panduit automatic cable tie installation systems offers a superior solution for high volume harness, assembly, fastening and packaging applications. These ergonomic systems increase productivity, provide consistent performance, and reduce activities that lead to repetitive motion injuries. A variety of tool options provide users with flexible solutions for their unique application needs.



System Highlights

Multiple systems improve productivity, reliability, and versatility:

- Install a cable tie in less than one second
- Multiple cable tie styles and sizes for maximum productivity
- Optional software for advanced system monitoring and performance



Combined, these innovations improve reliability, maximize productivity, and lower installed costs. As with all Panduit products, quality in design and production along with customer service excellence, are assured.

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Selection Guide – Automatic Installation Systems and Reel-Fed Cable Ties

Recommended for annual usage of over 250,000 cable ties/year.
Typical applications: High volume OEM/contract manufacturing.

PAT1M/PAT1.5M Systems

Tool Head for use with MINIATURE Cross Section

Part Number	Description	Page
PAT1M	For miniature cross section up to .82" (21mm) bundle diameter.	B1.117
PAT1.5M	For miniature cable ties up to 1.31" (33mm) bundle diameter.	B1.117

Dispenser

Part Number	Description	Page
PDM	Stationary dispenser.	B1.117
PDM-DI	Dispenser and data interface software.	B1.119
PD-DIA	Data interface accessory – software and interface card.	B1.119

Transfer Hose

Part Number	Description	Page
PHM1	3.2' (1m) transfer hose.	B1.118
PHM2	6.5' (2m) transfer hose.	B1.118
PHM3	10.0' (3m) transfer hose.	B1.118
PHM4	13.1' (4m) transfer hose.	B1.118

Optional System Accessories

Part Number	Description	Page
PDH10-37	Air hose.	B1.118
PL283N1	Filter/regulator.	B1.118
PATMBM	Bench mount and foot pedal.	B1.118

Reel-Fed Cable Ties

MINIATURE Cross Section

Part Number	Description	Color	Page
Barbed Tie – Max. Bundle Dia.: .82" (21mm), 30 lbs.			
BT1M-XMR	Nylon 6.6.	Natural	B1.120
BT1M-XMR0	Weather Resistant Nylon 6.6.	Black	B1.120
BT1M-XMR30	Heat Stabilized Nylon 6.6.	Black	B1.120
Barbed Tie – Max. Bundle Dia.: 1.31" (33mm), 30 lbs.			
BT1.5M-XMR	Nylon 6.6.	Natural	B1.120
BT1.5M-XMR0	Weather Resistant Nylon 6.6.	Black	B1.120
BT1.5M-XMR30	Heat Stabilized Nylon 6.6.	Black	B1.120
BT1.5M-XMR69	Flame Retardant Nylon 6.6.	Natural Ivory	B1.120
All-Nylon Tie – Max. Bundle Dia.: .82" (21mm), 18 lbs.			
PLT1M-XMR	Nylon 6.6.	Natural	B1.121
PLT1M-XMR0	Weather Resistant Nylon 6.6.	Black	B1.121
PLT1M-XMR00	Weather Resistant Nylon 6.6 (Meets Mil Spec).	Black	B1.121
PLT1M-XMR30	Heat Stabilized Nylon 6.6.	Black	B1.121
All-Nylon Tie – Max. Bundle Dia.: 1.31" (33mm), 18 lbs.			
PLT1.5M-XMR	Nylon 6.6.	Natural	B1.121
PLT1.5M-XMR0	Weather Resistant Nylon 6.6.	Black	B1.121
PLT1.5M-XMR00	Weather Resistant Nylon 6.6 (Meets Mil Spec).	Black	B1.121
PLT1.5M-XMR30	Heat Stabilized Nylon 6.6.	Black	B1.121

PAT2S/PAT3S Systems

Tool Head for use with STANDARD Cross Section

Part Number	Description	Page
PAT2S	For standard cross section up to 2.00" (51mm) bundle diameter.	B1.117
PAT3S	For standard cross section up to 2.75" (70mm) bundle diameter.	B1.117

Dispenser

Part Number	Description	Page
PDS	Stationary dispenser, PAT2S.	B1.117
PD3S	Stationary dispenser, PAT3S.	B1.117
PDS-DI	Dispenser and data interface software.	B1.119
PDS-DIA	Data interface accessory – software and interface card.	B1.119

Transfer Hose

Part Number	Description	Page
PHS2	6.5' (2m) transfer hose.	B1.118
PHS3	10.0' (3m) transfer hose.	B1.118

Dispenser Frame

Part Number	Description	Page
PDSF	Dispenser frame, PAT2S.	B1.118
PD3SF	Dispenser frame, PAT3S.	B1.118

Optional System Accessories

Part Number	Description	Page
PDH10-37	Air hose.	B1.118
PL283N1	Filter/regulator.	B1.118
PAT2SBM	Bench mount and foot pedal for PAT2S and PAT3S.	B1.118

Reel-Fed Cable Ties

STANDARD Cross Section

Part Number	Description	Color	Page
All-Nylon Tie – Max. Bundle Dia.: 2.00" (51mm), 50 lbs.			
PLT2S-VMR	Nylon 6.6.	Natural	B1.122
PLT2S-VMR0	Weather Resistant Nylon 6.6.	Black	B1.122
PLT2S-VMR00	Weather Resistant Nylon 6.6 (Meets Mil Spec).	Black	B1.122
PLT2S-VMR30	Heat Stabilized Nylon 6.6.	Black	B1.122
All-Nylon Tie – Max. Bundle Dia.: 2.75" (70mm), 50 lbs.			
PLT3S-VMR	Nylon 6.6.	Natural	B1.122
PLT3S-VMR30	Heat Stabilized Nylon 6.6.	Black	B1.122

Tool Head – Multiple sizes accommodate a wide variety of applications

- Ergonomic, lightweight design reduces operator fatigue and repetitive motion injuries – no counter balance required
- Right or left hand operation
- Durable, one-piece cable tie tip collector (for cut-off tips)
- Includes tension adjustment
- Built-in safety interlock prevents false triggering if anything obstructs jaw path



PAT1M



PAT1.5M



PAT2S



PAT3S



PAT1.5M-ATM
For Bundling and
Mounting Applications

Part Number	Max. Bundle Dia.		Dispenser/Frame	Transfer Hose	Used with Cable Ties	Std. Pkg. Qty.
	In.	mm				
PAT1M	.82	21	PDM	PHM1, PHM2, PHM3, PHM4	PLT1M-XMR, BT1M-XMR	1
PAT1.5M	1.31	33	PDM		PLT1.5M-XMR, BT1.5M-XMR	1
PAT2S	2.00	51	PDS/PDSF	PHS2, PHS3	PLT2S-VMR	1
PAT3S	2.75	70	PD3S/PD3SF		PLT3S-VMR	1
PAT1.5M-ATM	1.31	33	PDM	PHM1, PHM2, PHM3, PHM4	PLT1.5M-XMR, BT1.5M-XMR	1

Dispensers

- Microprocessor based controller monitors system performance through LCD display; provides production data and reporting, including error detection and cycle count for improved reliability
- Online HELP menu through LCD display in five languages (English, Spanish, German, Italian or French), is user-friendly for quick and simple training



PDM



PDS/PD3S

Part Number	Used with Tool Head	Description	Std. Pkg. Qty.
PDM	PAT1M, PAT1.5M, PAT1.5M-ATM	Stationary dispenser with electronic display. Online help menu. System operates on 65 psig (minimum) non-lubricated filtered air and 100 – 24 FAC/TP or 60 MHz.	1
PDS	PAT2S		1
PD3S	PAT3S		1

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Transfer Hoses



PHM3

Part Number	Used with Tool Head	Part Description	Length		Std. Pkg. Qty.
			Ft.	m	
PHM1	PAT1M, PAT1.5M	Transfers cable tie and signal from dispenser to tool head; electrical connectors designed for easy attachment provide a reliable, secure connection.	3.2	1	1
PHM2			6.5	2	1
PHM3			10.0	3	1
PHM4			13.1	4	1
PHS2	PAT2S, PAT3S		6.5	2	1
PHS3			10.0	3	1

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Dispenser Frame



PDSF



PD3SF

Part Number	Used with Dispenser	Description	Std. Pkg. Qty.
PDSF	PDS (PAT2S)	Metal frame supports the PDS dispenser for PAT2S above the cable tie reel as ties are loaded into the dispenser; can be used as a freestanding unit or permanently mounted to a bench or cart.	1
PD3SF	PD3S (PAT3S)	Assembly holds cable tie reel and rewinds the packaging paper liner as cable ties are being loaded into the dispenser.	1

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

Optional System Accessories:

Filter/Regulator and Air Supply Hose



PL283N1



PDH10-37

Part Number	Used with Dispenser	Description	Std. Pkg. Qty.
PL283N1	PDM, PDS	Regulates air flow to dispenser. Filter/regulator 25 micron (max.) element, 3/8" ports. Includes a male connector and a 3/8" port.	1
PDH10-37	PDM, PDS	Air hose from filter/regulator to dispenser; 10.0' (3m) – includes standard air fittings.	1

D1.
Terminals

D2.
Power
Connectors

D3.
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Connectors

E1.
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Systems

Bench Mount



PATMBM

Part Number	Used with Tool Head	Description	Std. Pkg. Qty.
PATMBM	PAT1M, PAT1.5M	Allows hands-free operation for high volume usage. Includes bench mount fixture and foot pedal assembly.	1
PATSBM	PAT2S, PAT3S		1

E2.
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Data Interface Software and Ethernet Enabled Dispenser

Panduit exclusive Ethernet enabled dispenser and customized data interface software allow production personnel to monitor real-time data in a shop floor environment.

The Ethernet enabled dispenser provides a physical connection between the cable tie installation system and an Industrial Ethernet Network via an RJ45 connection and internal Ethernet card.

- Allows production and/or engineering personnel the capability to measure and track production performance such as job tracking, cycle counts, tool and dispenser serial numbers, and routine maintenance
- Provides the ability to send email notifications for specific system messages
- Data extraction and reporting capabilities on system performance through an exportable electronic log; helps identify operator training needs
- Ability to monitor alerts from remote desktop locations



Part Number	Used with Dispenser	Description	Std. Pkg. Qty.
PDM-DI	PDM	Ethernet enabled PDM dispenser and data interface software.	1
PDS-DI	PDS	Ethernet enabled PDS dispenser and data interface software.	1
PD-DIA	PDM/PDS	Data interface accessory for existing PDM, PDS dispensers; software and network interface card.	1

PAT/Robot Integration Kit

- Used with the PAT1M and PAT1.5M tool heads
- Utilizes the PAT system electronic interface option, PDM-EI, to optimally integrate the PAT system to a robot for a completely automated cable tie installation process
- Significantly reduces labor costs while improving installation quality, reliability, and consistency



PATM-RK



PATM-TT

Part Number	Components	Description	Std. Pkg. Qty.
PATM-RK	Metallic housing	Includes a pneumatic trigger actuator for remote cable tie installation and a mounting bolt pattern to ease PAT tool integration with a robot end effector for a robust and accurate grip.	1
	Transfer hose strain relief kit	Strain relief to maintain transfer hose bend radius reducing tie misfeeds due to sharp hose bend radii during robot motion; also sold separately under part number PATM-RKS (includes two 1-foot strain relief tubes with fastening cable ties).	
	Quick start guides	Provides easily understood electrical, network, and mechanical installation instructions minimizing the robot integrator's design time and simplifying the integration process.	
	Best practices document	List of best practices when integrating the PAT system to a robot optimizing system performance and productivity.	
PATM-TT	Test tool with rubber jaws	This test tool is used during robot cable tie installation programming, providing a safe method to debug robot software without damaging actual PAT tools (test tool is not provided with the PAT/Robot Integration Kit).	1
PATM-RKS	Transfer hose strain relief kit	Strain relief to maintain transfer hose bend radius reducing cable tie misfeeds due to sharp hose bend radii during robot motion; kit is also included on the PATM-RK kit or sold separately (includes two 1-foot strain relief tubes with fastening cable ties).	1

A. System Overview



BT-XMR Reel-Fed Cable Ties

B1. Cable Ties

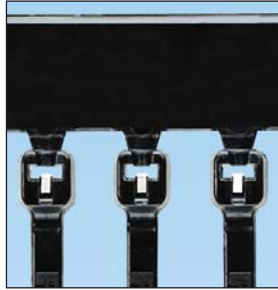
- Continuously molded cable ties (5,000 ties/reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes
- Reel-fed cable ties with exclusive stainless steel locking barb and 30 lbs. minimum loop tensile strength permit higher tension for demanding applications
- 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. Cable Accessories

B3. Stainless Steel Ties



BT_XMR



BT_XMR (0, 30)

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index



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 PAT1M System											
BT1M-XMR	Barbed	Nylon 6.6	Natural	.82	21	4.0	102	.100	2.5	30	133
BT1M-XMR0	Barbed	Weather Resistant Nylon 6.6	Black	.82	21	4.0	102	.100	2.5	30	133
BT1M-XMR30	Barbed	Heat Stabilized Nylon 6.6	Black	.82	21	4.0	102	.100	2.5	30	133

Reel-Fed Cable Ties for PAT1.5M System											
BT1.5M-XMR	Barbed	Nylon 6.6	Natural	1.31	33	5.6	142	.100	2.5	30	133
BT1.5M-XMR0	Barbed	Weather Resistant Nylon 6.6	Black	1.31	33	5.6	142	.100	2.5	30	133
BT1.5M-XMR30	Barbed	Heat Stabilized Nylon 6.6	Black	1.31	33	5.6	142	.100	2.5	30	133



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



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 PAT1M System											
PLT1M-XMR	All-Nylon	Nylon 6.6	Natural	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR0	All-Nylon	Weather Resistant Nylon 6.6	Black	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR00*	All-Nylon	Weather Resistant Nylon 6.6	Black	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR1	All-Nylon	Nylon 6.6	Brown	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR2	All-Nylon	Nylon 6.6	Red	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR3	All-Nylon	Nylon 6.6	Orange	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR4Y	All-Nylon	Nylon 6.6	Yellow	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR5	All-Nylon	Nylon 6.6	Green	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR6	All-Nylon	Nylon 6.6	Blue	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR7	All-Nylon	Nylon 6.6	Purple	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR8	All-Nylon	Nylon 6.6	Gray	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR10	All-Nylon	Nylon 6.6	White	.82	21	4.0	102	.100	2.5	18	80
PLT1M-XMR30	All-Nylon	Heat Stabilized Nylon 6.6	Black	.82	21	4.0	102	.100	2.5	18	80

Reel-Fed Cable Ties for PAT1.5M System

PLT1.5M-XMR	All-Nylon	Nylon 6.6	Natural	1.31	33	5.6	142	.100	2.5	18	80
PLT1.5M-XMR0	All-Nylon	Weather Resistant Nylon 6.6	Black	1.31	33	5.6	142	.100	2.5	18	80
PLT1.5M-XMR00*	All-Nylon	Weather Resistant Nylon 6.6	Black	1.31	33	5.6	142	.100	2.5	18	80
PLT1.5M-XMR30	All-Nylon	Heat Stabilized Nylon 6.6	Black	1.31	33	5.6	142	.100	2.5	18	80

*Military grade weather resistant material.

Note: PLT_XMR cable ties (natural, 00, and colors) are Class 2 Mil. Spec. per SAE-AS23190A and SAE-AS33671.

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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A. System Overview

PLT-VMR Reel-Fed Cable Ties



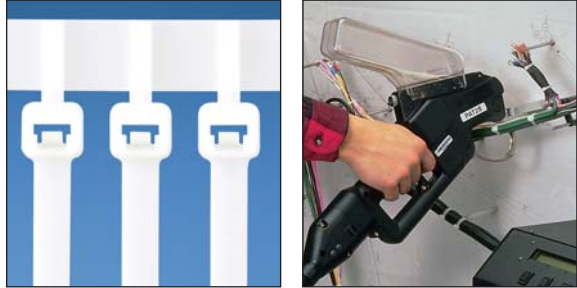
- Continuously molded cable ties (2,500 ties/reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes
- All-nylon, one-piece locking ties with 50 lbs. minimum loop tensile strength in standard cross section for larger bundles up to 1.94" (49mm) diameter
- Reel-fed cable ties in Nylon 6.6 material (Natural color) are UL Listed for use in plenum or air handling spaces per NEC

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct



C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

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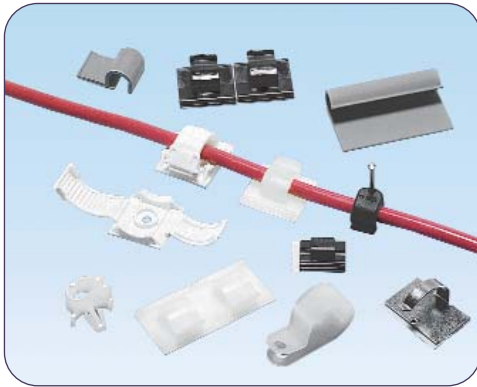
Part Number	Tie Style	Material	Color	Max. Bundle Dia.		Length		Width		Min. Loop Tensile Str.		
				In.	mm	In.	mm	In.	mm	Lbs.	N	
Reel-Fed Cable Ties for PAT2S System												
PLT2S-VMR	All-Nylon	Nylon 6.6	Natural	1.94	49	8.1	206	0.190	4.8	50	222	
PLT2S-VMR0	All-Nylon	Weather Resistant Nylon 6.6	Black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

Note: PLT_VMR Nylon 6.6 cable ties are Class 2 Mil. Spec. per SAE-AS23190A and SAE-AS33671.

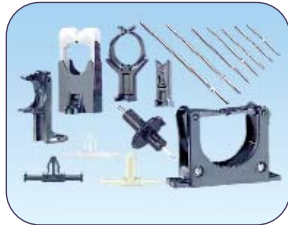
CABLE ACCESSORIES



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.

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C2.
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A.
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Cable Accessories Products Overview – Used with Cable Ties

B1.
Cable Ties

Adhesive Backed Cable Tie Mounts

Pages B2.4 – B2.10

B2.
Cable
Accessories



- 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

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

Screw Applied Cable Tie Mounts

Pages B2.11 – B2.17

C4.
Cable
Management



- Screw/riev 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

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

Other Cable Tie Mounts

Pages B2.18 – B2.29

E2.
Labels



- 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

E3.
Pre-Printed
& Write-On
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Cable Accessories Products Overview – Used without Cable Ties

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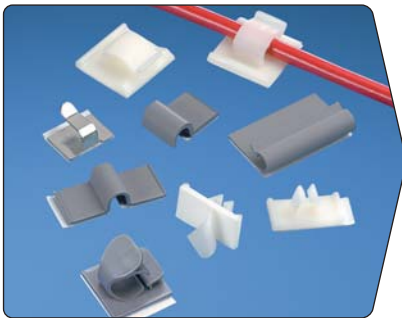
E4.
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Adhesive Backed Clips and Clamps

Pages B2.30 – B2.39



- 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

Other Clips and Clamps

Pages B2.39 – B2.46



- 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

Harness Board Accessories

Pages B2.47 – B2.52



- 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

A. System Overview

4-Way Adhesive Backed Cable Tie Mounts

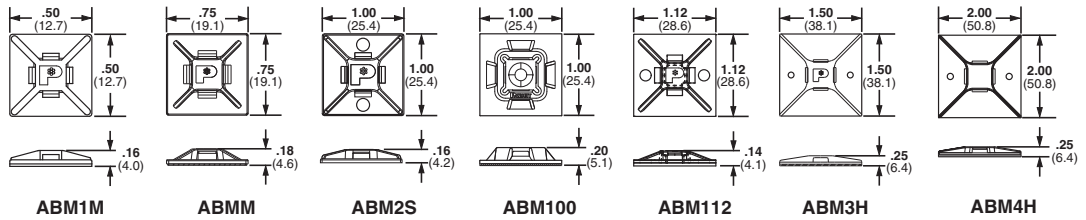
B1. Cable Ties

- 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

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method*	Std. Pkg. Qty.	Std. Ctn. Qty.
-------------	-----------------------	----------	-------	-------------	------------------	----------------	----------------

4-Way Mounts with Pre-Installed Adhesive

ABM1M-A-C	M	Nylon 6.6	White	Indoors	Rubber	100	500
ABM1M-AT-C		Nylon 6.6	White	Indoors/High Temp	Acrylic	100	500
ABMM-A-C	M, I	ABS	White	Indoors	Rubber	100	500
ABMM-AT-C		ABS	White	Indoors/High Temp	Acrylic	100	500
ABMM-AT-C0		Weather Resistant ABS	Black	Outdoors/High Temp	Acrylic	100	500
ABM2S-A-C	M, I, S	ABS	White	Indoors	Rubber	100	500
ABM2S-A-C14		ABS	Gray	Indoors	Rubber	100	500
ABM2S-A-C15		ABS	Ivory	Indoors	Rubber	100	500
ABM2S-AT-C		ABS	White	Indoors/High Temp	Acrylic	100	500
ABM2S-AT-C0		Weather Resistant ABS	Black	Outdoors/High Temp	Acrylic	100	500
ABM100-A-C	M, I, S	Nylon 6.6	White	Indoors	Rubber	100	1000
ABM100-A-C15		Nylon 6.6	Ivory	Indoors	Rubber	100	1000
ABM100-AT-C		Nylon 6.6	White	Indoors/High Temp	Acrylic	100	1000
ABM100-AT-C0		Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic	100	1000
ABM112-A-C		Nylon 6.6	White	Indoors	Rubber	100	500
ABM112-AT-C	Nylon 6.6	White	Indoors/High Temp	Acrylic	100	1000	
ABM112-AT-C0	Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic	100	1000	
ABM3H-A-L	M, I, S, HS, LH, H, HLM	Nylon 6.6	White	Indoors	Rubber	50	500
ABM3H-AT-L		Nylon 6.6	White	Indoors/High Temp	Acrylic	50	500
ABM4H-A-L		Nylon 6.6	White	Indoors	Rubber	50	500
ABM4H-AT-L		Nylon 6.6	White	Indoors/High Temp	Acrylic	50	500

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

*For proper selection of adhesives see page B2.54.

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

4-Way Adhesive Backed Cable Tie Mounts (continued)

Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method*	Std. Pkg. Qty.	Std. Ctn. Qty.	
4-Way Mounts for Installation with Screws or User-Supplied Adhesive								
ABMM-D	M, I	ABS	White	Indoors	User Supplied Adhesive	500	5000	
ABM2S-S6-D	M, I, S	ABS	White	Indoors	User Supplied Adhesive and/or two #6 (M3) Screws	500	5000	
ABM100-S6-C		Nylon 6.6	White	Indoors		100	1000	
ABM100-S6-C69		Flame Retardant Nylon 6.6	Natural	Indoors	User Supplied Adhesive and/or #6 (M3) Screw	100	1000	
ABM112-S6-C		Nylon 6.6	White	Indoors	User Supplied Adhesive and/or Two #6 (M3) Screws	100	1000	
ABM112-S6-C69		Flame Retardant Nylon 6.6	Natural	Indoors		100	500	
ABM3H-S6-T		M, I, S, HS, LH, H, HLM	Nylon 6.6	White	Indoors	User Supplied Adhesive and/or Two #6 (M3) Screws	200	2000
ABM4H-S6-T			Nylon 6.6	White	Indoors		200	1000

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

*For proper selection of adhesives see page B2.54.

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C2.
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C4.
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D2.
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D3.
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A. System Overview

ABMQ® Multiple Bridge Adhesive Backed Cable Tie Mounts

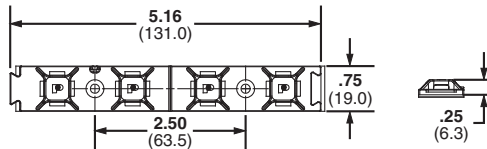
B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

- 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



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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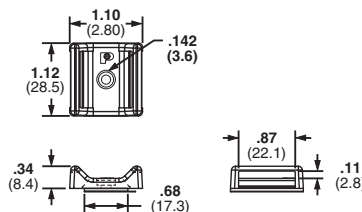
Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
ABMQ Mounts with Pre-Installed Adhesive							
ABMQS-A-Q	M, I, S	ABS	White	Indoors	Rubber	25	250
ABMQS-A-Q20		ABS	Black	Indoors	Rubber	25	250
ABMQS-AT-Q		ABS	White	Indoors/High Temp	Acrylic	25	250
ABMQS-AT-Q0		Weather Resistant ABS	Black	Outdoors/High Temp	Acrylic	25	250
ABMQ Mounts for Installation with Screws or User-Supplied Adhesive							
ABMQS-S6-C0	M, I, S	Weather Resistant ABS	Black	Outdoors/High Temp	Two #6 M3 Screws	100	1000
ABMQS-S6-C		ABS	White	Indoors/High Temp		100	1000

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

Tak-Ty® Hook & Loop Cable Tie Mounts

- For use with hook and loop cable ties, see page B1.87, B1.88
- 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			Natural	—	—	#6 (M3) Screw	100	1000
ABMT-S6-C20		Black						
ABMT-S6-C60		Black						
ABMT-S6-C69		Flame Retardant Nylon 6.6	Natural	—	—	100	1000	

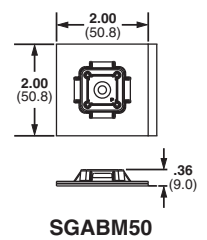
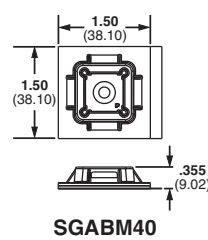
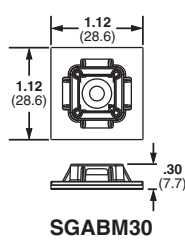
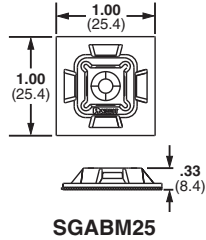
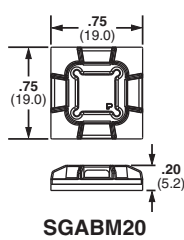
‡Cable tie cross section sizes: HLT = Tak-Ty™ Hook & Loop Ties, HLS = Tak-Ty™ Hook & Loop Strip Tie, TTS = Tak-Tape™ Roll, UCT = Ultra-Cinch™ Tie.

*For proper selection of adhesives see page B2.54.

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 B1.38
- New! High Bond Adhesive available



Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method*	Std. Pkg. Qty.	Std. Ctn. Qty.
Super-Grip™ Mounts with Pre-Installed Adhesive							
SGABM20-A-C	SGM, SGI	Nylon 6.6	White	Indoor Use	Rubber Adhesive	100	500
SGABM20-AT-C0		Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic Adhesive	100	500
SGABM20-AV-C300		Heat Stabilized Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	High Bond Acrylic Adhesive	100	500
SGABM25-A-C	SGM, SGI, SGS	Nylon 6.6	White	Indoor Use	Rubber Adhesive	100	1000
SGABM25-AT-C0		Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic Adhesive	100	1000
SGABM25-AV-C300		Heat Stabilized Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	High Bond Acrylic Adhesive	100	1000
SGABM30-A-C		Nylon 6.6	White	Indoor Use	Rubber Adhesive	100	500
SGABM30-AT-C0		Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic Adhesive	100	500
SGABM30-AV-C300		Heat Stabilized Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	High Bond Acrylic Adhesive	100	500
SGABM40-A-L	SGM, SGI, SGS, SGLH, SGH	Nylon 6.6	White	Indoor Use	Rubber Adhesive	50	500
SGABM40-AT-L0		Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic Adhesive	50	500
SGABM50-A-L		Nylon 6.6	White	Indoor Use	Rubber Adhesive	50	500
SGABM50-AT-L0		Weather Resistant Nylon 6.6	Black	Outdoors/High Temp	Acrylic Adhesive	50	500
Super-Grip™ Mounts for Installation with Screws or User-Supplied Adhesive							
SGABM25-S6-C	SGM, SGI, SGS	Nylon 6.6	White	Indoors	#6 (M3) Screw	100	1000
SGABM25-S6-C0		Weather Resistant Nylon 6.6	Black	Outdoors	#6 (M3) Screw or User Supplied Adhesive	100	1000

‡Cable tie cross section sizes: SGM = Super-Grip® Miniature, SGI = Super-Grip® Intermediate, SGS = Super-Grip® Standard, SGLH = Super-Grip® Light-Heavy, and SGH = Super-Grip® Heavy.

*For proper selection of adhesive see page B2.54.

A. System Overview

Combination Adhesive Mount/Cable Ties

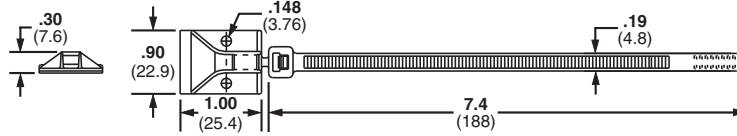
B1. Cable Ties

- 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

B2. Cable Accessories



B3. Stainless Steel Ties



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

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

Snap-In Cable Tie Mounts – Mechanically Applied

D1. Terminals

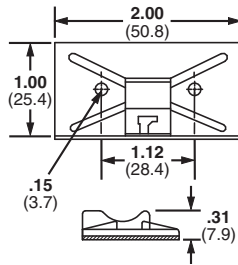
- For use with Panduit Standard cross section cable ties including PLT1S, PLT1.5S, PLT2S, PRT1.5S and PRT2S
- Integral retaining notch holds cable tie head in place below bundle
- Eliminates protruding tie head and facilitates one hand tie threading
- Quickly route wire and cable where mounting holes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

D2. Power Connectors

D3. Grounding Connectors



E1. Labeling Systems



E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

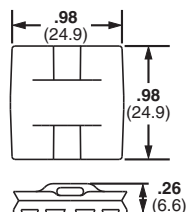
F. Index

Part Number	Used with Cable Ties†	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
Snap-In Mounts with Pre-Installed Adhesive					
SMS-A-C	S	White	Rubber	100	500
SMS-A-C14		Gray	Rubber	100	500
SMS-A-C15		Ivory	Rubber	100	500
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

†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

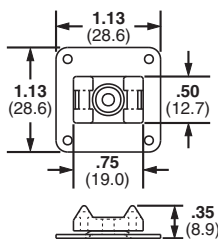


Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
EMS-A-C	M, I, S	Nylon 6.6	Natural	Indoors	EMA epoxy	100	1000
EMS-A-C0		Weather Resistant Nylon 6.6	Black	Outdoors			

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

Epoxy Applied Swivel Mount

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

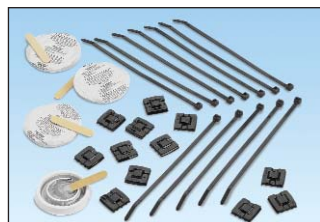


Part Number	Used with Cable Ties‡	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
ASMS-A-X	M, I, S, SGM, SGI	EMA Epoxy	10	100

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

Epoxy Applied Cable Tie Mount Kits

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



Part Number	Used with Cable Ties‡	Environment	Epoxy Cups	Mixer Sticks	EMS Mounts	Cable Ties	Std. Pkg. Qty.	Std. Ctn. Qty.
Epoxy Adhesive Only								
EMA-X	—	Indoors/Outdoors	10	10	—	—	10	—
Epoxy Mounting Kit with EMS Mounts								
EMSK3-1-X0	M, I, S	Indoors/Outdoors	1	1	3	—	10	—
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		Indoors/Outdoors	4	4	12	12	10	10

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

A.
System
Overview

Tie Mounts – Applied with User Supplied Adhesives

B1.
Cable Ties

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

B2.
Cable
Accessories



B3.
Stainless
Steel Ties

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			100	500
TM3A-C	M, I, S, HS, LH			100	500

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

C1.
Wiring
Duct

C2.
Surface
Raceway

Low Profile Tie Mounts – User Supplied Adhesive Mounts

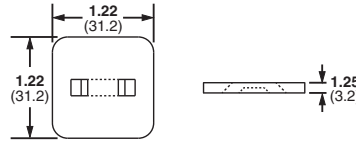
C3.
Abrasion
Protection

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

C4.
Cable
Management



D1.
Terminals



D2.
Power
Connectors

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.

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

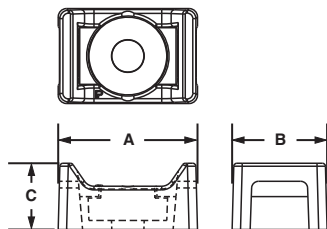
E5.
Lockout/
Tagout
& Safety
Solutions

F.
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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	100	500
TM2S6-C	M, I, S	0.29	7.1	0.63	16.0	0.43	10.8	0.28	7.0	#6 (M3) Screw	100	500
TM2S8-C		0.33	8.4	0.63	16.0	0.43	10.8	0.28	7.0	#8 (M4) Screw	100	500
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	100	500
TM3S10-C		0.38	9.7	0.86	21.9	0.61	15.8	0.37	9.4	#10 (M5) Screw	100	500

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
SGTM1S6-C0	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	7.0	#8 (M4) Screw	100	500
SGTM2S8-C0	SGM, SGI, SGS	0.33	8.4	0.66	16.7	0.48	12.2	0.34	8.6	#8 (M4) Screw	100	500
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	100	500
SGTM3S10-C0	SGM, SGI, SGS, SGLH	0.38	9.7	0.91	23.1	0.61	15.4	0.43	11.0	#10 (M5) Screw	100	500

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	#10 (6mm) 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™.

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®
TMS28-C86	TMS28-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				

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Ties

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Cable
Accessories

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E4.
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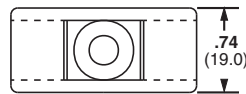
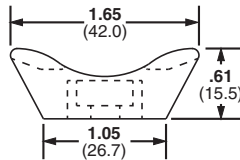
F.
Index

A. System Overview

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

B1. Cable Ties



B2. Cable Accessories

B3. Stainless Steel Ties

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

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

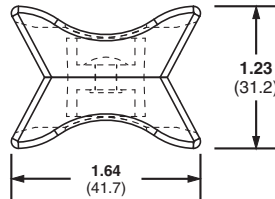
Swivel Mounts

- The two mounts are securely fastened together with a connecting rivet that allows both mounts to rotate
- Separates bundles to avoid abrasion
- Material: Weather Resistant Nylon 6.6
- Can join bundles of cable, tubing, or hoses that may need to move or are not parallel

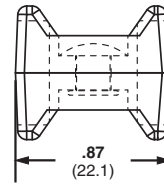
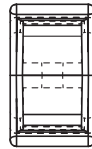
D1. Terminals

D2. Power Connectors

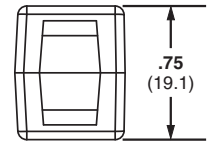
D3. Grounding Connectors



TMEH



TM3



E1. Labeling Systems

E2. Labels

Part Number	Used with Cable Ties‡	Pull Apart Force		Color	Environment	Std. Pkg. Qty.	Std. Ctn. Qty.
		Lbs.	g				
TM3-X2-C0Y	M, I, S, HS, LH	120	54,431	Black	Indoors/Outdoors	100	1000
TMEH-X2-L0Y	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.

E3. Pre-Printed & Write-On Markers

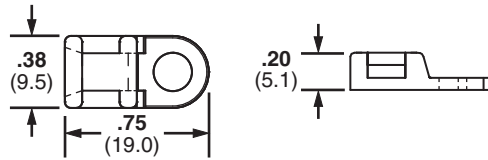
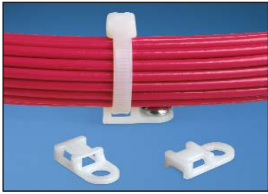
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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		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		0.17	4.3	Weather Resistant Nylon 6.6	Black	Outdoors	#8 (M4) Screw	1000	5000
TA1S8-M30		0.17	4.3	Heat Stabilized Nylon 6.6	Black	Indoors	#8 (M4) Screw	1000	5000
TA1S8-M69		0.17	4.3	Flame Retardant Nylon 6.6	Natural	Indoors	#8 (M4) Screw	1000	5000
TA1S10-C		0.17	4.3	Nylon 6.6	Natural	Indoors	#10 (M5) Screw	100	500
TA1S10-M0		0.20	5.1	Weather Resistant Nylon 6.6	Black	Outdoors	#10 (M5) Screw	1000	5000

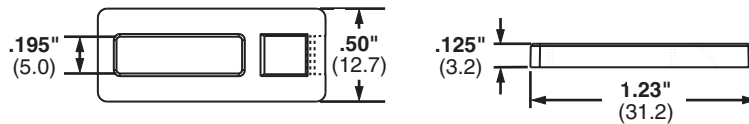
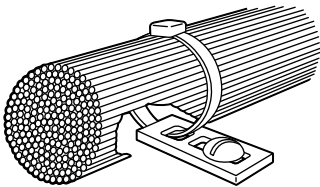
Super-Grip® Cable Tie Mounts

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.

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	5000

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

A.
System
Overview

B1.
Cable Ties

B2.
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B3.
Stainless
Steel Ties

C1.
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C2.
Surface
Raceway

C3.
Abrasion
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C4.
Cable
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D1.
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D2.
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F.
Index

A. System Overview

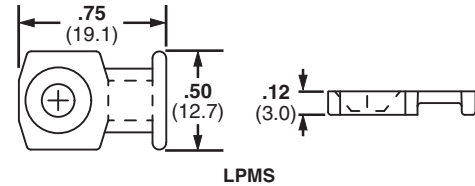
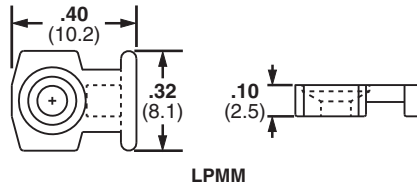
Low Profile Mounts – Screw Applied

- 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

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties



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	M		#5 (M3) Countersunk Screw	100	1000
LPMS-S8-C	M, I, S		#8 (M4) Countersunk Screw	100	1000

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

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

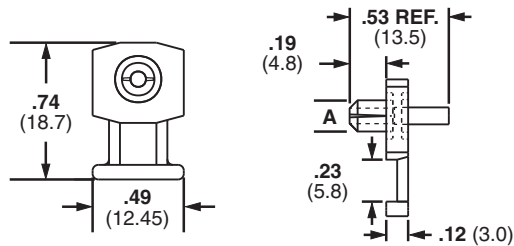
Low Profile Mounts – Push Rivet Applied

- 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

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors



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	.144	3.7	Red	Integral Push Rivet	100	1000
KIMS-H430-C6		.169	4.3	Blue	Integral Push Rivet	100	1000
KIMS-H500-C4		.196	5.0	Yellow	Integral Push Rivet	100	1000

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

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

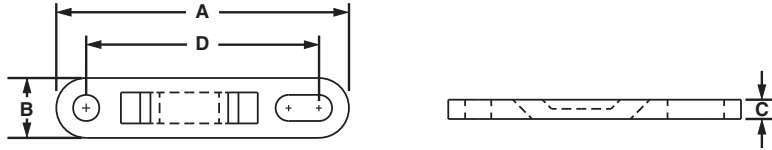
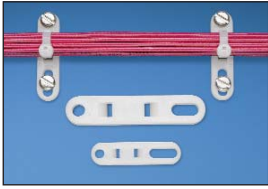
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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

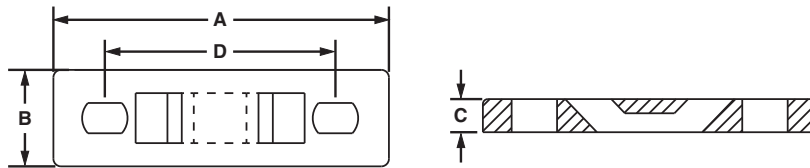


Part Number	Used with Cable Ties‡	Length A		Width B		Height C		Hole Spacing D		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm				
TP2-C	M, I, S	1.98	50.3	.50	12.7	.13	3.2	1.60	40.6	Natural	#10 (M5) Screw	100	1000
TP4H-C	M, I, S, HS, LH, H	3.08	78.2	.62	15.7	.20	5.2	2.50	63.5	Natural	1/4 (M6) Screw	100	1000

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

Multiple Tie Plates

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



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	.50	12.7	.13	3.2	1.25	31.8	#6 (M3) Screw	MS3339-1-9	100	1000
MTP1S-E10-C			1.75	44.5	.50	12.7	.13	3.2	1.25	31.8	#10 (M5) Screw	—	100	1000
MTP1H-E6-C		M, I, S, HS, LH, H	2.09	53.1	.63	16.0	.20	5.2	1.50	38.1	#6 (M3) Screw	MS3339-6-9	100	1000
MTP1H-E10-C			2.09	53.1	.63	16.0	.20	5.2	1.50	38.1	#10 (M5) Screw	—	100	1000
MTP2S-E6-C	2	M, I, S	3.00	76.2	.50	12.7	.13	3.2	2.50	63.5	#6 (M3) Screw	MS3339-2-9	100	1000
MTP2S-E10-C			3.00	76.2	.50	12.7	.13	3.2	2.50	63.5	#10 (M5) Screw	—	100	1000
MTP2H-E6-C		M, I, S, HS, LH, H	3.59	91.2	.63	16.0	.20	5.2	3.00	76.2	#6 (M3) Screw	MS3339-7-9	100	1000
MTP2H-E10-C			3.59	91.2	.63	16.0	.20	5.2	3.00	76.2	#10 (M5) Screw	—	100	1000

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

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Multiple Tie Plates (continued)

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

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C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

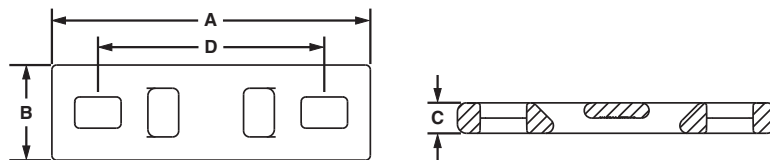
E5. Lockout/Tagout & Safety Solutions

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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				
MTP3S-E6-C	3	M, I, S	4.25	108.0	.50	12.7	.13	3.2	3.75	95.3	#6 (M3) Screw	MS3339-3-9	100	1000
MTP3S-E10-C			4.25	108.0	.50	12.7	.13	3.2	3.75	95.3	#10 (M5) Screw	—	100	1000
MTP3H-E6-C		M, I, S, HS, LH, H	5.09	129.3	.63	16.0	.20	5.2	4.50	114.3	#6 (M3) Screw	MS339-8-9	100	1000
MTP3H-E10-C			5.09	129.3	.63	16.0	.20	5.2	4.50	114.3	#10 (M5) Screw	—	100	1000
MTP4S-E6-C	4	M, I, S	5.50	139.7	.50	12.7	.13	3.2	5.00	127.0	#6 (M3) Screw	MS3339-4-9	100	1000
MTP4S-E10-C			5.50	139.7	.50	12.7	.13	3.2	5.00	127.0	#10 (M5) Screw	—	100	1000
MTP4H-E6-C		M, I, S, HS, LH, H	6.59	167.4	.63	15.7	.20	5.2	6.00	152.4	#6 (M3) Screw	MS3339-9-9	100	1000
MTP4H-E10-C			6.59	167.4	.63	15.7	.20	5.2	6.00	152.4	#10 (M5) Screw	—	100	1000
MTP5S-E6-C	5	M, I, S	6.75	171.5	.50	12.7	.13	3.2	6.25	158.8	#6 (M3) Screw	MS3339-5-9	100	1000
MTP5S-E10-C			6.75	171.5	.50	12.7	.13	3.2	6.25	158.8	#10 (M5) Screw	—	100	1000
MTP5H-E6-C		M, I, S, HS, LH, H	8.09	205.5	.63	16.0	.20	5.2	7.50	190.5	#6 (M3) Screw	MS3339-10-9	100	1000
MTP5H-E10-C			8.09	205.5	.63	16.0	.20	5.2	7.50	190.5	#10 (M5) Screw	—	100	1000
MTP6H-E6-C	6	M, I, S, HS, LH, H	9.59	243.6	.63	16.0	.20	5.2	9.00	228.6	#6 (M3) Screw	MS3339-11-9	100	1000
MTP6H-E10-C			9.59	243.6	.63	16.0	.20	5.2	9.00	228.6	#10 (M5) Screw	—	100	1000

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

Contour Multiple Tie Plates

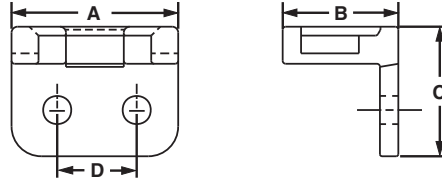


Part Number	No. of Bundles	Used with Cable Ties‡	Length A		Width B		Height C		Hole Spacing D		Mounting Method	Mil. Std. Part Number	Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm				
MTPC1H-E10-C39	1	M, I, S, HS, LH, H	2.09	53.1	.63	16.0	.20	5.2	1.5	38.1	#10 (M5) Screw	—	100	1000
MTPC2H-E10-C39	2		3.59	91.2	.63	16.0	.20	5.2	3.0	6.2	#10 (M5) Screw	—	100	1000
MTPC3H-E10-C39	3		5.09	129.3	.63	16.0	.20	5.2	4.50	114.3	#10 (M5) Screw	—	100	1000
MTPC4H-E10-C39	4		6.59	167.4	.63	15.7	.20	5.2	6.00	152.4	#10 (M5) Screw	—	100	1000
MTPC5H-E10-C39	5		8.09	205.5	.63	16.0	.20	5.2	7.50	190.5	#10 (M5) Screw	—	100	1000
MTPC6H-E10-C39	6		9.59	243.6	.63	16.0	.20	5.2	9.00	228.6	#10 (M5) Screw	—	100	1000

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

Right Angle Mounts

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

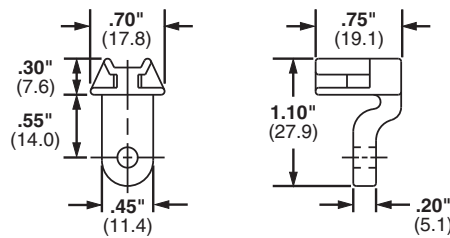


Part Number	Used with Cable Ties†	Length A		Width B		Height C		Hole Spacing D		Color	Mil. Std. Part Number	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm					
RAMS-S3-M	M, I, S	.56	14.2	.39	9.9	.44	11.0	.28	7.1	Natural	MS3341-2-9	#3 (M2.5) Screw or 3/32 (2.4) Rivet	1000	5000
RAMH-S6-D	M, I, S, HS, LH, H	1.00	25.4	.75	19.1	1.00	25.4	.28	7.1		MS3341-1-9	#6 (M3) Screw or 1/8 (3.2) Rivet	500	5000
RAMH-S10-D	M, I, S, HS, LH, H	1.00	25.4	.75	19.1	1.00	25.4	.50	12.7		—	#10 (M5) Screw or 3/16 (4.7) Rivet	500	5000

†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
- For indoor use only
- Protect cable bundles from sharp edges
- 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	500	2500
LHMS-S10-D			—	#10 (M5) Screw or 3/16 (4.7) Rivet	500	2500

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

A. System Overview

Stud Tie Mounts

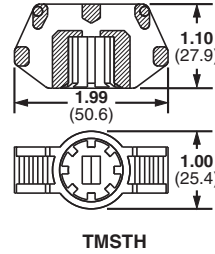
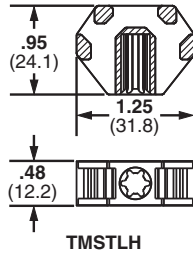
B1. Cable Ties

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

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

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	M, I, S, HS, LH			5/16" stud dia. (8mm)	1000	5000
TMSTHS10-D0	M, I, S, HS, LH, H			3/8" stud dia. (10mm)	500	—
TMSTHS11-D0	M, I, S, HS, LH, H			7/16" stud dia. (11mm)	500	—
TMSTHS12-D0	M, I, S, HS, LH, H			12mm stud dia.	500	—
TMSTHS13-D0	M, I, S, HS, LH, H			1/2" stud dia. (13mm)	500	—
TMSTHS16-D0	M, I, S, HS, LH, H			5/8" stud dia. (16mm)	500	—
TMSTHS19-D0	M, I, S, HS, LH, H			3/4" stud dia. (19mm)	500	—

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

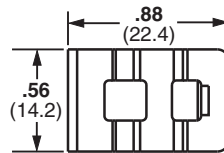
D1. Terminals

Metal Clip-On Mounts

D2. Power Connectors

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

D3. Grounding Connectors



E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

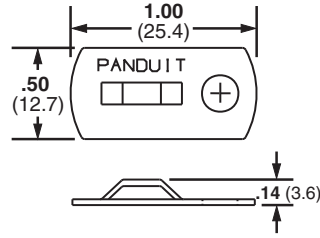
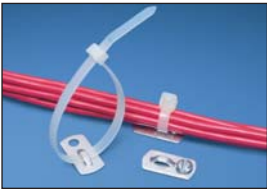
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Part Number	Used with Cable Ties‡	Height A		Max. Panel Thickness		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm			
MCMS12-P-C	M, I, S	.31	8.0	.13	3.2	Clip-On	100	500
MCMS25-P-C		.46	11.5	.24	6.1		100	500
MCMS30-P-C		.55	14.0	.27	6.9		100	500

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

Metal Screw-On Mount

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

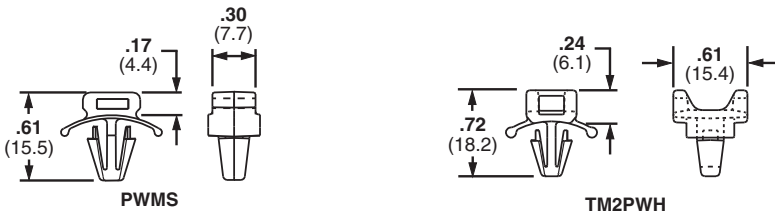


Part Number	Used with Cable Ties‡	Material	Environment	Mounting Method	Max. Static Load		Std. Pkg. Qty.	Std. Ctn. Qty.
					Lbs.	g		
MBMS-S10-CY	M, I, S	Aluminum	Indoors/Outdoors	#10 (M5) Screw	10.00	4540	100	1000

‡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	.11	2.7	.25	6.5	Nylon 6.6	Natural	Indoors	Push Barb	100	1000
PWMS-H25-M0		.11	2.7	.25	6.5	Weather Resistant Nylon 6.6	Black	Outdoors	Push Barb	1000	5000
TM2PWH25-C		.10	2.3	.25	6.5	Nylon 6.6	Natural	Indoors	Push Barb	100	500

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

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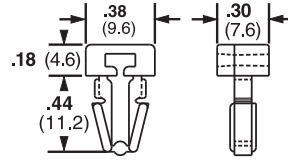
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A. System Overview

Push Mounts

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



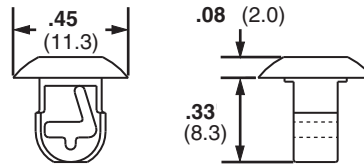
Part Number	Used with Cable Ties‡	Max. Panel Thickness		Panel Hole Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm						
PM2H25-C	M, I, S	.125	3.2	.250	6.4	Nylon 6.6	Natural	Indoors	Push Barb	100	500
PM2H25-M0		.125	3.2	.250	6.4	Weather Resistant Nylon 6.6	Black	Outdoors		1000	5000
PM2H25-M30		.125	3.2	.250	6.4	Heat Stabilized Nylon 6.6	Black	Indoors		1000	5000

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

C3. Abrasion Protection

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	.13	3.2	.25	6.4	Nylon 6.6	Natural	Indoors	Push Barb	100	1000
PBMS-H25-C14		.13	3.2	.25	6.4	Nylon 6.6	Gray	Indoors		100	1000
PBMS-H25-M0		.13	3.2	.25	6.4	Weather Resistant Nylon 6.6	Black	Outdoors		1000	5000
PBMS-H25-M30		.13	3.2	.25	6.4	Heat Stabilized Nylon 6.6	Black	Indoors		1000	5000
PBMSL-H25-C30		.29	7.2	.25	6.4	Heat Stabilized Nylon 6.6	Black	Indoors		100	1000
PBMSL-H25-M30		.29	7.2	.25	6.4	Heat Stabilized Nylon 6.6	Black	Indoors		1000	5000

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

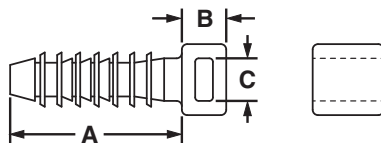
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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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

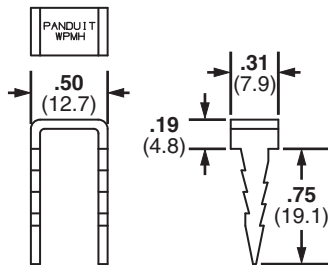


Part Number	Used with Cable Ties‡	Grip Length A		Height B		Hole Diameter C		Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm					
Pan-Ty® Masonry Push Mounts												
MPMS19-C0	M, I, S	0.97	24.6	0.25	6.4	0.19	5.0	Black	Indoors/ Outdoors	Fir Tree Hole Mount	100	500
MPMS25-C0		0.97	24.6	0.27	6.9	0.25	6.4				100	500
MPMH38-L0	M, I, S, HS, LH, H, HLM	1.25	31.8	0.30	7.5	0.38	9.5				50	500
MPMWH32-L0	M, I, S, HS, LH, H, HLM	1.41	35.8	0.28	7.1	0.32	8.0				50	500
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				100	500
SGMPMH38-L0		1.25	31.8	1.49	37.8	0.38	9.5				50	500
SGMPMWH32-L0	SGM, SGI, SGS, SGLH, SGH	1.41	35.8	0.28	7.1	0.32	8.0				50	500
Hyper-V™ Masonry Push Mounts												
HVMPM32-C0	HV	1.41	35.8	1.63	41.4	0.31	8.0	Black	Outdoors	Fir Tree Hole Mount	100	500

‡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™.

Wood Push Mount

- Used to secure wire, cable, or tubing to wood surfaces
- Barbed design holds mount in place – rated for 60 lb. pullout



Part Number	Used with Cable Ties‡	Material	Environment	Mounting Method	Std. Pkg. Qty.
WPMH-C	M, I, S, HS, LH, H, HLM	Plated Steel	Indoors/Outdoors	Hammer into wood	100

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

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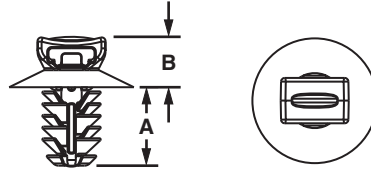
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A.
System
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Fir Tree Push Mounts

- Unique alternating barb design
- Lock securely into position
- Umbrella tensing
- Exclusive contoured anvil head
- Material: Heat Stabilized Nylon 6.6



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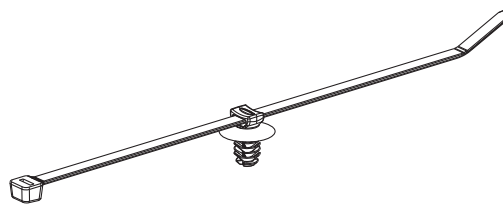
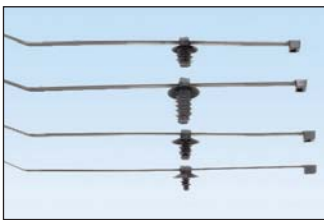
F.
Index

Part Number	Used with Cable Ties‡	Head Diameter		Panel to Top of Mount		Overall Height		Panel Hole Diameter Range		Panel Thickness Range		Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm		
PUM-049-M30	M, I, S	.67	17.0	.26	6.6	.54	13.8	.18 – .19	4.6 – 4.9	.03 – .19	0.7 – 3.0	1000	5000
PUM-071-M30	M, I, S	.67	17.0	.26	6.5	.67	16.9	.25 – .28	6.3 – 7.1	.03 – .28	0.8 – 7.0	1000	5000
PUM-100-M30	M, I, S	.64	16.0	.26	6.5	.67	16.9	.35 – .40	9.0 – 10.0	.03 – .28	0.8 – 7.0	1000	5000
PUM-925-M30	M, I, S, LH	.77	20.0	.30	7.6	1.05	26.7	.34 – .36	8.8 – 9.3	.04 – .62	1.0 – 16.0	1000	5000

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

Fir Tree Push Mount Assemblies

- Cable tie/mount assemblies significantly reduce installation time compared to loose parts
- Fewer parts throughout the manufacturing/assembly process
- Heat Stabilized Nylon 6.6 standard on cable ties and mounts

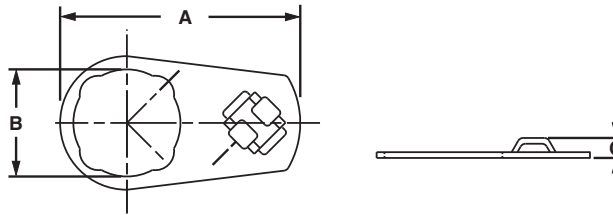


Part Number‡	Head Diameter		Panel to Top of Mount		Overall Height		Panel Hole Diameter Range		Panel Thickness Range		Max. Bundle Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm		
PUM-049-2S-D30	0.67	17.0	0.26	6.6	0.54	13.8	0.18 - 0.19	4.6 - 4.9	0.03 - 0.19	0.7 - 3.0			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	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			500	5000
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	200	1000

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

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

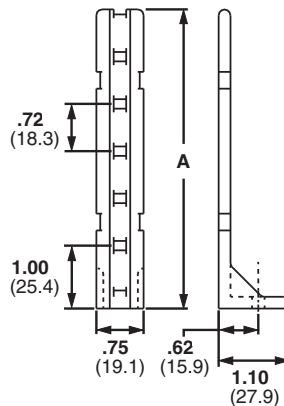


Part Number	Used with Cable Ties‡	Length A		Width B		Height C		Material	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm				
CPM87S-C	M, I, S	2.01	51.1	.89	22.6	.17	4.3	Zinc plated steel	Control panel switch	100	1000
CPM122S-C	M, I, S	2.82	71.7	1.22	31.0	.17	4.3	Zinc plated steel	Control panel switch	100	1000

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

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		2.00	50.8		#12 (M5.5) Screw	10	100
PP2S-S10-X		4.60	116.8		#10 (M5) Screw	10	100
PP2S-S12-X		4.60	116.8		#12 (M5.5) Screw	10	100

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

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System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
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D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
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E4.
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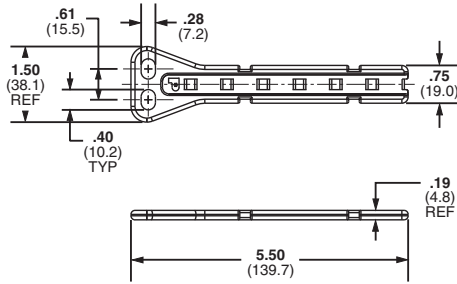
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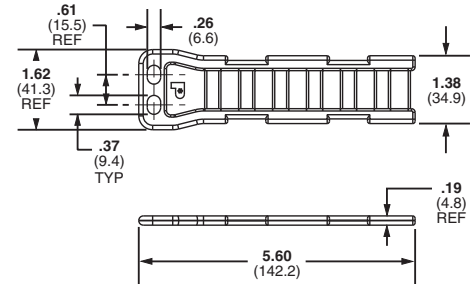
A. System Overview

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

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

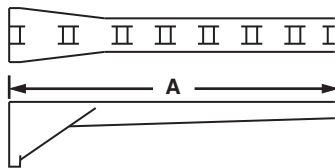
Part Number	Used with Cable Ties‡	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
PPF2S-S25-V	M, I, S	Nylon 6.6	Natural	Two 1/4" (M6) screws	5	100
PPF2S-S25-V69		Flame Retardant Nylon 6.6				
PPF2SV-S25-V	M, I, S, HS, LH, H, HLM, HLS	Nylon 6.6				
PPF2SV-S25-V69		Flame Retardant Nylon 6.6				

‡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 .

D1. Terminals

Right Angle Bases

- Support cable above the mounting surface



D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

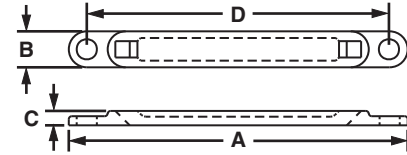
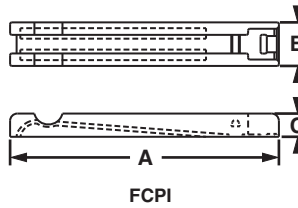
F. Index

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						
RAFCBI1-S6-C20	I	1.00	25.4	1.75	44.4	Nylon 6.6	Black	Indoors	#6 (M3) Screw	100	1000
RAFCBI2-S6-C20	I	2.00	50.8	2.78	70.6						
RAFCBI3-S6-C20	I	3.00	76.2	3.81	96.8						

‡Cable tie cross section sizes: I = Intermediate.

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 B2.38
- 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	.38	9.5	.15	3.8	—	—	Black	User Supplied Adhesive	100	1000
FCBI2-A-C20	2.04	51.8	3.50	88.9	.38	9.5	.15	3.8	—	—		User Supplied Adhesive	100	1000
FCBI3-A-C20	3.32	7.72	4.52	114.8	.38	9.5	.15	3.8	—	—		User Supplied Adhesive	100	1000
FCBI1-S10-C20	1.04	26.4	2.50	63.5	.38	9.5	.15	3.8	2.08	52.8		#10 (M5) Screw	100	1000
FCBI2-S10-C20	2.04	51.8	3.50	88.9	.38	9.5	.15	3.8	3.10	78.7		#10 (M5) Screw	100	1000
FCBI3-S10-C20	3.32	77.2	4.52	114.8	.38	9.5	.15	3.8	4.12	104.6		#10 (M5) Screw	100	1000
FCPI1-C20*	1.04	26.4	1.29	32.8	.38	9.5	.20	5.1	—	—		Cable Ties	100	1000
FCPI2-C20*	2.04	51.8	2.31	58.7	.38	9.5	.20	5.1	—	—		Cable Ties	100	1000
FCPI3-C20*	3.32	77.2	3.32	84.3	.38	9.5	.20	5.1	—	—		Cable Ties	100	1000

*Recommend for use with PLT2I cable ties on page B1.8.

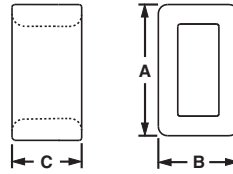
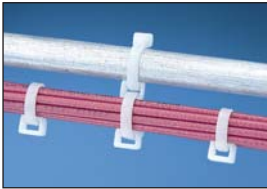
- A. System Overview
- B1. Cable Ties
- B2. Cable Accessories
- B3. Stainless Steel Ties
- C1. Wiring Duct
- C2. Surface Raceway
- C3. Abrasion Protection
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- D1. Terminals
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- D3. Grounding Connectors
- E1. Labeling Systems
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- E4. Permanent Identification
- E5. Lockout/Tagout & Safety Solutions
- F. Index

A.
System
Overview

Closed Connector Rings

- Connect multiple cable bundles

B1.
Cable Ties



B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

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	M, I, S, HS, LH	0.57	14.5	0.36	9.1	0.30	7.6			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	Indoors/Outdoors				

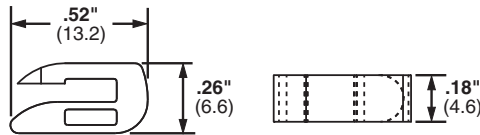
‡Cable tie cross section sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard and LH = Light-Heavy.

C3.
Abrasion
Protection

Open Connector Ring

- Designed to add on cable bundles without removing cable ties

C4.
Cable
Management



D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

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

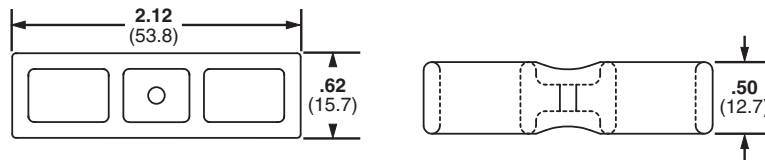
‡Cable tie cross section sizes: M = Miniature, I = Intermediate, and S = Standard.

E1.
Labeling
Systems

Cable Spacers

- Used to separate and/or hang cords, cables, and tubing

E2.
Labels



E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

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	M, I, S, HS, LH, H	Weather Resistant Nylon 6.6	Black	Indoors/Outdoors	Cable Ties	500	2500

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

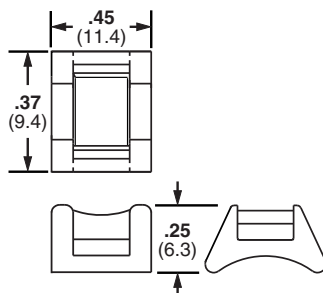
E5.
Lockout/
Tagout
& Safety
Solutions

F.
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Cable Spacer Cross

- Connects two bundles at 90°
- Separates bundles to prevent abrasion

- Dual cradle design stabilizes cable bundle



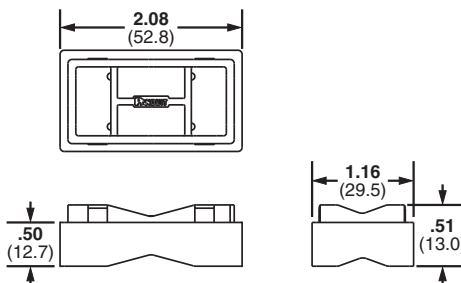
Part Number	Used with Cable Ties‡	Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
CSCS-M	M, I, S	Nylon 6.6	Natural	Indoors	Cable Ties	1000	10000

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

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 B1.53 or Pan-Steel® Self-Locking Ties on page B3.5, B3.6, B3.7.



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.

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System
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B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
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D3.
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E1.
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A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

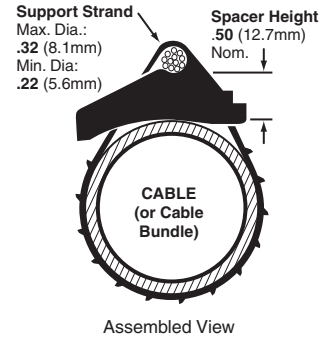
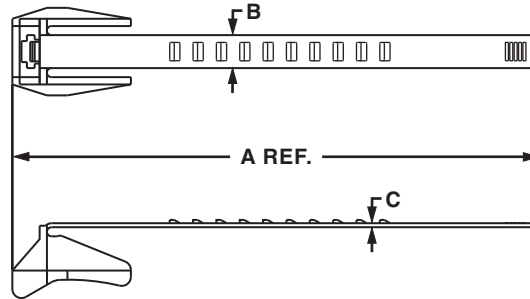
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

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		Width B		Thickness C		Max. Bundle Diameter		Min. Loop Tensile Strength		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		
AST10-5-C100	5.6	142	.448	11.4	.055	1.4	1.00	25	75	334	100	1000
AST15-5-C100	6.9	175	.448	11.4	.055	1.4	1.50	38	75	334	100	1000
AST20-5-C100	8.4	214	.448	11.4	.055	1.4	2.00	51	75	334	100	1000
AST25-5-C100	10.0	254	.448	11.4	.055	1.4	2.50	64	75	334	100	1000

Permanent Marking Pens

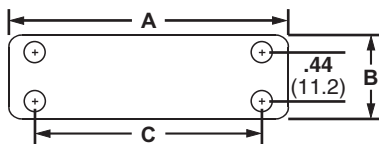
- Fast drying, permanent ink for identification on marker ties (pages B1.34, B1.52, and B1.71), marker plates (page B2.29), or cable marker straps (page B1.80)
- May be used with any label shown in the catalog when a printer is not available



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.	12	144
PFX-0	Black	Permanent marking pen – fine tip.	12	144
PFX-2	Red	Permanent marking pen – fine tip.	12	144
PX-10	White	Marking pen for black or other dark colored parts – regular tip.	12	300

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: .02 inches (0.5mm)



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						
Loose Piece													
MP150-C	M, I, S	1.50	38.1	.75	19.0	1.03	26.2	Nylon 6.6	White	Indoors	Cable Ties	100	500
MP175-C	M, I, S	1.75	44.4	.75	19.0	1.28	32.5					100	500
MP200-C	M, I, S	2.00	50.8	.75	19.0	1.53	38.9					100	500
MP250-C	M, I, S	2.50	63.5	.75	19.0	2.03	51.6					100	500
MP350-C	M, I, S	3.50	88.9	.75	19.0	3.03	77.7					100	1000
MP250W175-C	M, I, S	2.50	63.5	1.75	44.5	2.03	51.6					100	1000
MP150-C0	M, I, S	1.50	38.1	.75	19.0	1.03	26.2	Weather Resistant Nylon 6.6	Black	Indoors/Outdoors	Cable Ties	100	500
MP175-C0	M, I, S	1.75	44.4	.75	19.0	1.28	32.5					100	500
MP200-C0	M, I, S	2.00	50.8	.75	19.0	1.53	38.9					100	500
MP250-C0	M, I, S	2.50	63.5	.75	19.0	2.03	51.6					100	500
MP350-C0	M, I, S	3.50	88.9	.75	19.0	3.03	77.7					100	1000
Marker Plates on Rolls													
MP150-R	M, I, S	1.50	38.1	.75	19.0	1.03	26.2	Nylon 6.6	White	Indoors	Cable Ties	1000	5000
MP175-R	M, I, S	1.75	44.4	.75	19.0	1.28	32.5					1000	5000
MP200-R	M, I, S	2.00	50.8	.75	19.0	1.53	38.9					1000	5000
MP250-R	M, I, S	2.50	63.5	.75	19.0	2.03	51.6					1000	5000

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

A. System Overview

Cable and Wire Mounting Devices (Used without Cable Ties)

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel 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

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

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

C4. Cable Management

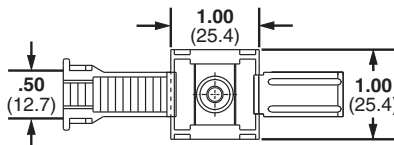
D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

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



E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

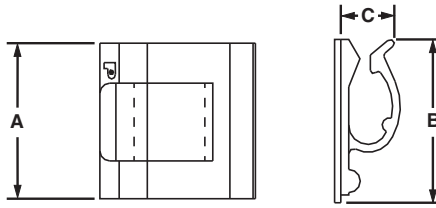
E5. Lockout/Tagout & Safety Solutions

F. Index

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	Rubber Adhesive Tape	25	250
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	#6 (M3) Screw	25	250

Adhesive Backed Cord Clips

- Cables are easily snapped into or out of the clips



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					
ACC19-A-C	0.19	4.8	0.75	19.0	0.62	15.7	0.25	6.4	Nylon 6.6	Natural	Rubber	100	500
ACC19-AT-C	0.19	4.8	0.75	19.0	0.62	15.7	0.25	6.4		Natural	Acrylic	100	500
ACC19-A-C20	0.19	4.8	0.75	19.0	0.62	15.7	0.25	6.4		Black	Rubber	100	500
ACC19-AT-C0	0.19	4.8	0.75	19.0	0.62	15.7	0.25	6.4		Black	Acrylic	100	500
ACC19-AV-M300	0.19	4.8	0.75	19.0	0.62	15.7	0.38	6.4	Weather Resistant Nylon 6.6	Black	Acrylic	100	500
ACC19-AV-M300	0.19	4.8	0.75	19.0	0.62	15.7	0.38	6.4	Heat Stabilized Weather Resistant Nylon 6.6	Black	High Bond Acrylic	1000	5000
ACC38-A-C	0.38	9.7	1.00	25.4	1.00	25.4	0.38	9.7	Nylon 6.6	Natural	Rubber	100	500
ACC38-AT-C	0.38	9.7	1.00	25.4	1.00	25.4	0.38	9.7		Natural	Acrylic	100	500
ACC38-A-C20	0.38	9.7	1.00	25.4	1.00	25.4	0.38	9.7		Black	Rubber	100	500
ACC38-AT-C0	0.38	9.7	1.00	25.4	1.00	25.4	0.38	9.7	Weather Resistant Nylon 6.6	Black	Acrylic	100	500
ACC38-AV-M300	0.38	9.7	1.00	25.4	1.00	25.4	0.40	10.2	Heat Stabilized Weather Resistant Nylon 6.6	Black	High Bond Acrylic	1000	5000
ACC62-A-C	0.62	15.7	1.24	31.5	1.12	28.4	0.63	16.0	Nylon 6.6	Natural	Rubber	100	500
ACC62-AT-C	0.62	15.7	1.24	31.5	1.12	28.4	0.63	16.0		Natural	Acrylic	100	500
ACC62-A-C20	0.62	15.7	1.24	31.5	1.12	28.4	0.63	16.0		Black	Rubber	100	500
ACC62-AT-C0	0.62	15.7	1.24	31.5	1.12	28.4	0.63	16.0	Weather Resistant Nylon 6.6	Black	Acrylic	100	500
ACC62-AV-D300	0.62	15.7	1.24	31.5	1.12	28.4	0.63	16.0	Heat Stabilized Weather Resistant Nylon 6.6	Black	High Bond Acrylic	500	5000

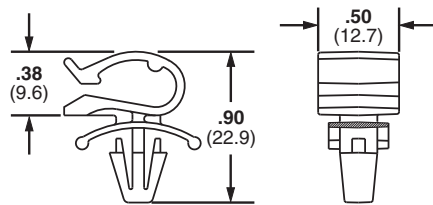
NEW!

NEW!

NEW!

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

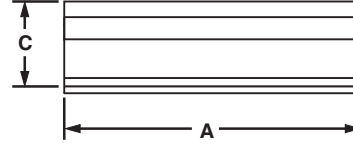
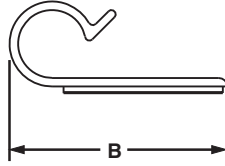
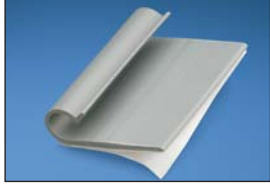


Part Number	Max. Bundle Diameter		Max. Panel Thickness		Panel Hole Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm						
PMCC38H25-C	.38	9.6	.105	2.7	.250	6.4	Nylon 6.6	Natural	Indoors	Push Barb	100	1000
PMCC38H25-M0	.38	9.6	.105	2.7	.250	6.4	Weather Resistant Nylon 6.6	Black	Outdoors	Push Barb	1000	5000

A. System Overview

"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



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

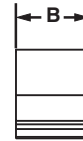
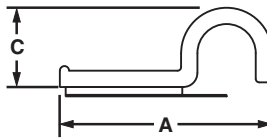
C3. Abrasion Protection

C4. Cable Management

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	25.4	0.86	21.8	0.19	4.8	0.13	3.3	Light Gray	Rubber Adhesive Tape	100	1000
AJC19-A-C	0.19	4.8	1.25	31.8	0.87	22.1	0.26	6.6	0.18	4.6			100	1000
AJC25-A-C	0.25	6.4	1.50	38.1	0.97	24.6	0.31	7.9	0.23	5.8			100	1000
AJC31-A-C	0.31	7.9	1.75	44.5	1.22	30.1	0.40	10.2	0.29	7.4			100	1000
AJC38-A-C	0.38	9.6	2.00	50.8	1.27	32.3	0.50	12.7	0.39	9.9			100	1000

A1C Type Clips

- Hold cords, cables, and tubing
- Single rubber adhesive pad for confined areas
- For indoor use only
- Material: PVC



D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

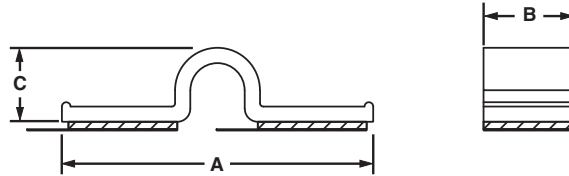
F. Index

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			100	1000
A1C38-A-C8	0.38	9.5	1.04	26.4	0.63	16.0	0.51	13.0			100	1000
A1C50-A-C8	0.50	12.7	1.17	29.7	0.63	16.0	0.64	16.3			100	1000

A2C Type Clips

- Hold cords, cables, and tubing
- Two rubber adhesive pads for added strength

- For indoor use only
- Material: PVC

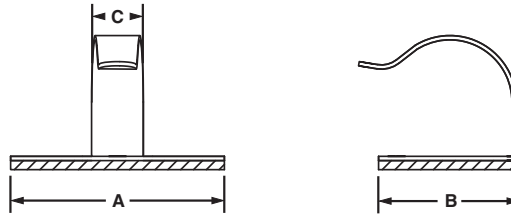


Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
A2C12-A-C8	0.12	3.0	1.30	33.0	0.63	16.0	0.23	5.8	Light Gray	Rubber	100	1000
A2C25-A-C8	0.25	6.4	1.43	36.3	0.63	16.0	0.36	9.1			100	1000
A2C38-A-C8	0.38	9.5	1.56	39.6	0.63	16.0	0.49	12.4			100	1000
A2C50-A-C8	0.50	12.7	1.72	43.7	0.63	16.0	0.61	15.5			100	1000

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			100	1000
MACC25-AV-D	0.25	6.4	0.77	19.6	0.54	13.7	0.29	7.4		High Bond Acrylic	500	1000
MACC62-AV-C	0.62	15.7	1.18	30.0	0.78	19.7	0.29	7.4			100	1000



A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview

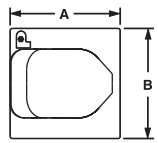
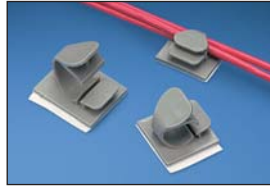
Latching Wire Clips

B1. Cable Ties

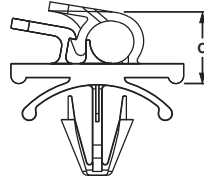
- Route and secure cords and cables
- Convenient releasable latch
- Available in six sizes with releasable latch

- Push barb parts are for use with a max panel thickness of 0.11" (2.7mm) and a hole diameter of .22" (5.6mm)
- For indoor use only
- Material: Nylon 6.6

B2. Cable Accessories



LWC**-A



LWC**-H25

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				

Adhesive Backed

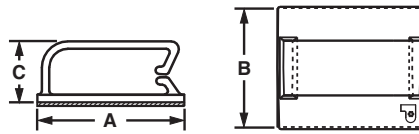
LWC19-A-C	0.19	4.8	0.85	21.6	0.61	15.5	0.39	9.9	Natural	Rubber Adhesive	100	1000
LWC19-A-C14	0.19	4.8	0.85	21.6	0.61	15.5	0.39	9.9	Gray		100	1000
LWC19-A-C20	0.19	4.8	0.85	21.6	0.61	15.5	0.39	9.9	Black		100	1000
LWC25-A-C	0.25	6.4	0.88	22.2	1.00	25.4	0.45	11.4	Natural		100	1000
LWC25-A-C14	0.25	6.4	0.88	22.2	1.00	25.4	0.45	11.4	Gray		100	1000
LWC25-A-C20	0.25	6.4	0.88	22.2	1.00	25.4	0.45	11.4	Black		100	1000
LWC38-A-C	0.38	9.5	1.00	25.4	1.00	25.4	0.56	14.2	Natural		100	1000
LWC38-A-C14	0.38	9.5	1.00	25.4	1.00	25.4	0.56	14.2	Gray		100	1000
LWC38-A-C20	0.38	9.5	1.00	25.4	1.00	25.4	0.56	14.2	Black		100	1000
LWC50-A-L	0.50	12.7	1.26	32.0	1.00	25.4	0.67	17.0	Natural		50	500
LWC50-A-L14	0.50	12.7	1.26	32.0	1.00	25.4	0.67	17.0	Gray		50	500
LWC50-A-L20	0.50	12.7	1.26	32.0	1.00	25.4	0.67	17.0	Black		50	500
LWC75-A-L	0.75	19.1	1.48	37.6	1.24	31.5	0.90	22.9	Natural		50	500
LWC75-A-L14	0.75	19.1	1.48	37.6	1.24	31.5	0.90	22.9	Gray		50	500
LWC75-A-L20	0.75	19.1	1.48	37.6	1.24	31.5	0.90	22.9	Black		50	500
LWC100-A-L	1.00	25.4	2.21	56.1	1.97	50.0	1.26	32.0	Natural		50	500
LWC100-A-L14	1.00	25.4	2.21	56.1	1.97	50.0	1.26	32.0	Gray		50	500
LWC100-A-L20	1.00	25.4	2.21	56.1	1.97	50.0	1.26	32.0	Black		50	500

Push Mount

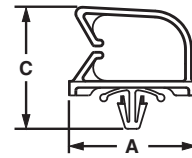
LWC19-H25-C	0.19	4.8	0.85	21.6	0.51	12.8	0.41	10.4	Natural	Push Barb	100	1000
LWC19-H25-C14	0.19	4.8	0.85	21.6	0.51	12.8	0.41	10.4	Gray		100	1000
LWC25-H25-C	0.25	6.4	0.86	21.8	0.58	14.7	0.47	11.9	Natural		100	1000
LWC25-H25-C14	0.25	6.4	0.86	21.8	0.58	14.7	0.47	11.9	Gray		100	1000
LWC25-H25-C20	0.25	6.4	0.86	21.8	0.58	14.7	0.47	11.9	Black		100	1000
LWC38-H25-C	0.38	9.5	0.94	23.9	0.58	14.7	0.57	14.5	Natural		100	1000
LWC38-H25-C14	0.38	9.5	0.94	23.9	0.58	14.7	0.57	14.5	Gray		100	1000
LWC38-H25-C20	0.38	9.5	0.94	23.9	0.58	14.7	0.57	14.5	Black		100	1000
LWC50-H25-L	0.50	12.7	1.25	31.8	0.76	19.3	0.78	19.8	Natural		50	500
LWC50-H25-L14	0.50	12.7	1.25	31.8	0.76	19.3	0.78	19.8	Gray		50	500
LWC50-H25-L20	0.50	12.7	1.25	31.8	0.76	19.3	0.78	19.8	Black		50	500
LWC75-H25-L	0.75	19.1	1.45	36.8	0.87	22.1	0.97	24.7	Natural		50	500
LWC75-H25-L14	0.75	19.1	1.45	36.8	0.87	22.1	0.97	24.7	Gray		50	500
LWC75-H25-L20	0.75	19.1	1.45	36.8	0.87	22.1	0.97	24.7	Black		50	500
LWC100-H25-L	1.00	25.4	1.89	47.9	0.99	25.2	1.30	33.0	Natural		50	500
LWC100-H25-L14	1.00	25.4	1.89	47.9	0.99	25.2	1.30	33.0	Gray		50	500
LWC100-H25-L20	1.00	25.4	1.89	47.9	0.99	25.2	1.30	33.0	Black		50	500

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														
BEC38-A-L	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
BEC38-A-L20	0.38	9.6	1.46	37.1	1.24	31.5	0.52	13.2		Black		Rubber Adhesive	50	500
BEC38-AT-L0	0.38	9.6	1.46	37.1	1.24	31.5	0.52	13.2	Weather Resistant Nylon 6.6	Black	Outdoors	Acrylic Adhesive	50	500
BEC62-A-L	0.62	15.7	1.46	37.1	1.24	31.5	0.79	20.1	Nylon 6.6	Natural	Indoors	Rubber Adhesive	50	500
BEC62-A-L20	0.62	15.7	1.46	37.1	1.24	31.5	0.79	20.1		Black		Rubber Adhesive	50	500
BEC62-AT-L0	0.62	15.7	1.46	37.1	1.24	31.5	0.79	20.1	Weather Resistant Nylon 6.6	Black	Outdoors	Acrylic Adhesive	50	500
BEC75-A-L	0.75	19.0	1.46	37.1	1.49	37.8	0.89	22.6	Nylon 6.6	Natural	Indoors	Rubber Adhesive	50	500
BEC75-A-L20	0.75	19.0	1.46	37.1	1.49	37.8	0.89	22.6		Black		Rubber Adhesive	50	500
BEC75-AT-L0	0.75	19.0	1.46	37.1	1.49	37.8	0.89	22.6	Weather Resistant Nylon 6.6	Black	Outdoors	Acrylic Adhesive	50	500
Push Barb														
BECP38H25-L	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
BECP38H25-L20	0.38	9.6	1.46	37.1	0.73	18.5	1.00	25.4		Black			50	500
BECP75H25-L	0.75	19.0	1.47	37.3	0.73	18.5	1.35	34.3		Natural			50	500
BECP75H25-L20	0.75	19.0	1.47	37.3	0.73	18.5	1.35	34.3		Black			50	500

*For proper selection of adhesive see page B2.54.

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
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C3.
Abrasion
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Markers

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Tagout
& Safety
Solutions

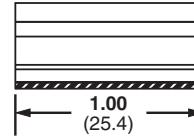
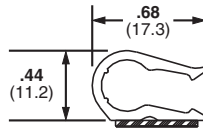
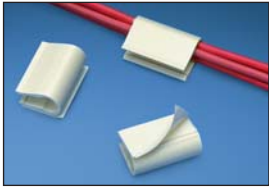
F.
Index

A. System Overview

Adhesive Backed Dual Cord Clip

- Holds two cables in high temperature applications

B1. Cable Ties



B2. Cable Accessories

B3. Stainless Steel Ties

Part Number	Max. Bundle Diameter		Material	Color	Environment	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm						
ADCC31-AT-C10	0.33	9.0	NORYL*	White	Indoors	Acrylic	100	500

*NORYL Thermoplastic Resin is a registered trademark of General Electric Company.

C1. Wiring Duct

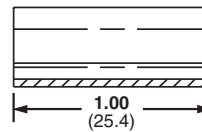
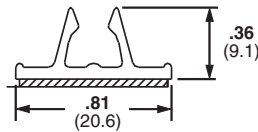
C2. Surface Raceway

Adhesive Backed Mount Cord Clip

- Holds a single cable
- Vertical cable entry for ease of installation
- Funnel entry speeds cable insertion

C3. Abrasion Protection

C4. Cable Management



D1. Terminals

D2. Power Connectors

Part Number	Max. Bundle Diameter		Material	Color	Environment	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm						
AMC25-AT-C10	.22 – .28	6.0 – 7.0	PVC	White	Indoors	Acrylic	100	1000

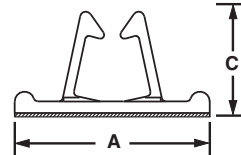
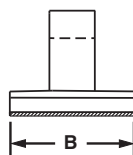
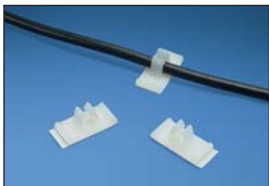
D3. Grounding Connectors

E1. Labeling Systems

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

E2. Labels



E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

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					
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	0.50	12.7	1.56	39.7	1.00	25.4	0.81	20.6		Natural		100	500

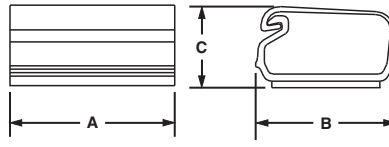
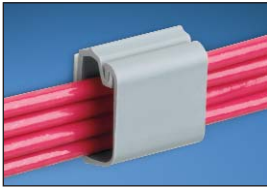
E5. Lockout/Tagout & Safety Solutions

F. Index

Adhesive Backed Latching Clips

- Latching cover withstands vibration

- For indoor use only



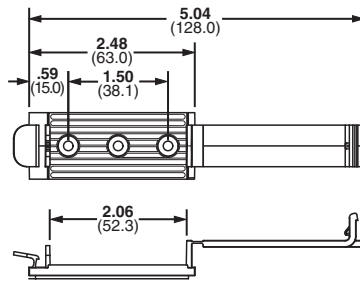
Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Material	Color	Adhesive Type	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm					
LC3-A-C8	0.20	5.0	0.75	19.1	0.75	19.0	0.47	11.9	PVC	Light Gray	Rubber	100	1000
LC5-A-C8	0.36	9.1	1.01	25.7	1.01	25.7	0.61	15.5				100	1000
LC10-A-L8	0.93	23.6	1.51	38.4	1.51	38.4	0.84	21.3				50	500

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



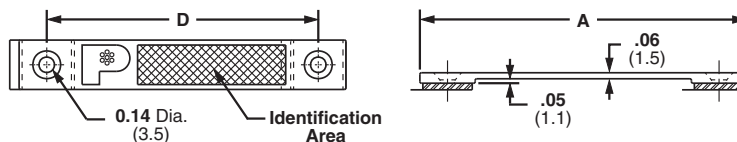
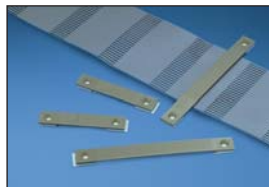
Part Number	Cable Width		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
CH105-A-C14	2.06	52.3	Nylon 6.6	Gray	Rubber Adhesive Tape	100	1000
CH105-S6-C14	2.06	52.3			#6 (M3) Screw	100	1000

Low Profile Flat Cable Mounts

- Three sizes provide a cost effective flat cable containment for stack heights up to .105 inches (2.7mm)

- Low profile design holds wires, cables, and tubing

- For indoor use only



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					
LPFCM14-A-C14	1.44	37.0	2.56	65.0	2.00	50.8	Nylon 6.6	Gray	Rubber	100	500
LPFCM22-A-C14	2.19	56.0	3.31	84.0	2.75	69.9				100	500
LPFCM34-A-C14	3.44	87.0	4.56	115.8	4.00	101.6				100	500

A. System Overview

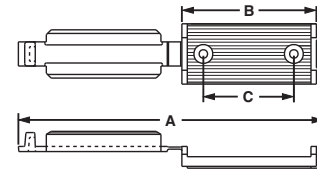
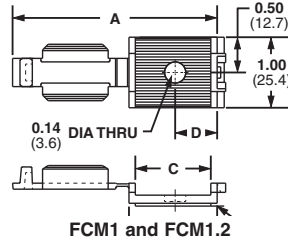
Latching Flat Cable Mounts

- Available in four sizes with a stack height of .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

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

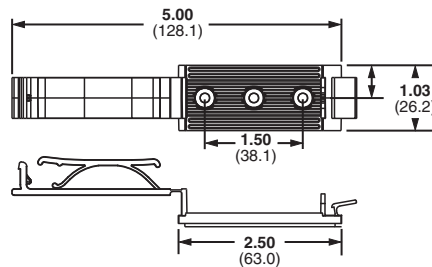
E5. Lockout/Tagout & Safety Solutions

F. Index

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				
Adhesive Backed												
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			50	500
Screw Mounted												
FCM1-S6-C14	1.05	26.7	2.90	73.7	1.00	25.4	—	—	Gray	#6 (M3) Screw	100	1000
FCM1.2-S6-C14	1.20	30.5	3.16	80.3	1.37	34.8	—	—			100	1000
FCM2-S6-C14	2.05	52.1	5.06	128.5	2.22	56.4	1.53	38.9			100	1000
FCM3.25-S6-L14	3.38	85.9	7.30	185.4	3.38	85.9	1.50	38.1			50	500

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 B2.25
- Material: Nylon 6.6

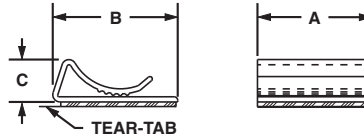
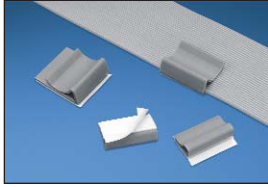


Part Number	Length		Cable Width		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm				
FCH2-A-C14	2.48	63.0	2.00	50.8	Gray	Rubber Adhesive	100	500
FCH2-S6-C14	2.48	63.0	2.00	50.8	Gray	#6 (M3) Screw	100	500

See also Flat Cable Mounting System on Page B2.25.

Flat Cable Clips

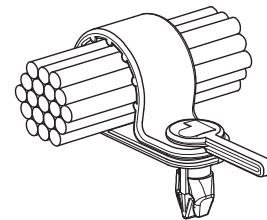
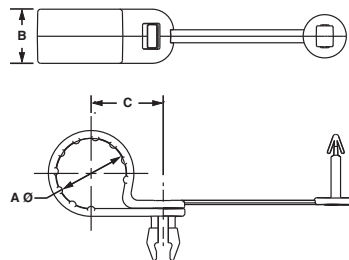
- Use with any width flat cable for a maximum stack height of .17 inches (4.3mm)
- Low profile design holds wires, cables, and tubing
- For indoor use only
- Material: PVC



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	.56	14.2	.29	7.4	Gray	Rubber	100	1000
FCC-A-C8		1.00	25.4	1.09	27.7	.38	9.7			100	1000

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

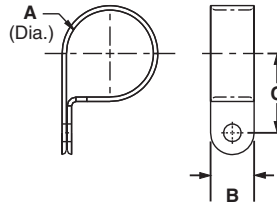


Part Number	Max. Bundle Diameter A		Width B		Bundle Offset C		Max. Panel Thickness		Panel Hole Diameter		Color	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm			
PC038-H25D-C0	.38	9.5	.62	15.7	.64	16.3	.13	3.2	.28	7.1	Black	100	500
PC050-H25D-C0	.50	12.7	.62	15.7	.71	17.9	.13	3.2	.28	7.1		100	500
PC062-H25D-C0	.63	15.8	.62	15.7	.77	19.5	.13	3.2	.28	7.1		100	500
PC075-H25D-C0	.75	19.1	.62	15.7	.83	21.1	.13	3.2	.28	7.1		100	1000
PC087-H25D-C0	.88	22.1	.62	15.7	.89	22.7	.13	3.2	.28	7.1		100	1000
PC100-H25D-C0	1.00	25.4	.62	15.7	.96	24.3	.13	3.2	.28	7.1		100	1000
PC112-H25D-C0	1.13	28.5	.62	15.7	1.02	25.8	.13	3.2	.28	7.1		100	1000
PC125-H25D-C0	1.25	31.8	.62	15.7	1.08	27.4	.13	3.2	.28	7.1		100	1000

A.
System
Overview

Fixed Diameter Cable Clamps

- Durable Nylon 6.6 cable clamps



B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

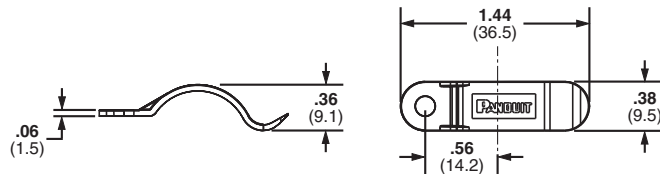
F.
Index

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	.12	3.1	.37	9.4	.33	8.4	#8 (M4) Screw	100	500
CCS19-S8-C	.19	4.8	.37	9.4	.43	10.9	#8 (M4) Screw	100	500
CCS25-S8-C	.25	6.3	.37	9.4	.41	10.4	#8 (M4) Screw	100	500
CCS25-S10-C	.25	6.3	.37	9.4	.41	10.4	#10 (M5) Screw	100	500
CCS31-S8-C	.31	7.9	.37	9.4	.49	12.4	#8 (M4) Screw	100	500
CCS38-S8-C	.38	9.5	.37	9.4	.59	15.0		100	500
CCS44-S8-C	.44	11.1	.37	9.4	.57	14.5		100	500
CCS50-S8-C	.50	12.7	.37	9.4	.60	15.2		100	500
CCH12-S10-C	.12	3.1	.50	12.7	.36	9.1	#10 (M5) Screw	100	500
CCH19-S10-C	.19	4.8	.50	12.7	.42	10.7		100	500
CCH25-S10-C	.25	6.3	.50	12.7	.46	11.7		100	500
CCH31-S10-C	.31	7.9	.50	12.7	.50	12.7		100	500
CCH38-S10-C	.38	9.5	.50	12.7	.53	13.5		100	500
CCH44-S10-C	.44	11.1	.50	12.7	.56	14.2		100	500
CCH50-S10-C	.50	12.7	.50	12.7	.59	15.0		100	500
CCH56-S10-C	.56	14.2	.50	12.7	.61	15.5		100	500
CCH62-S10-C	.62	15.7	.50	12.7	.65	16.5		100	500
CCH69-S10-C	.69	17.5	.50	12.7	.75	19.1		100	500
CCH75-S10-C	.75	19.1	.50	12.7	.78	19.8		100	500
CCH81-S10-C	.81	20.6	.50	12.7	.81	20.6		100	500
CCH87-S10-C	.87	22.1	.50	12.7	.84	21.3		100	500
CCH100-S10-C	1.00	25.4	.50	12.7	.91	23.1		100	500
CCH112-S10-C	1.12	28.4	.50	12.7	.97	24.6	100	500	
CCH119-S10-C	1.19	30.2	.50	12.7	1.00	25.4	100	500	
CCH125-S10-C	1.25	31.8	.50	12.7	1.06	26.9	100	500	
CCH138-S10-C	1.37	34.8	.50	12.7	1.12	28.4	100	500	
CCH150-S10-C	1.50	38.1	.50	12.7	1.19	30.2	100	500	

All parts listed are also available in black weather resistant material (add suffix 0). Bulk package only.

Wire Retainers

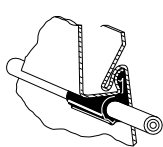
- Wires slide into the clip and are held in place by tension
- Low profile design holds wires, cables, and tubing
- Funnel entry design allows for easy insertion of cords and cables



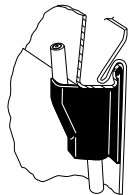
Part Number	Max. Bundle Diameter		Material	Color	Environment	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm						
TWR-C	0.38	9.5	Nylon 6.6	Natural	Indoors	#6 (M3) Screw	100	500
TWR-C0	0.38	9.5	Weather Resistant Nylon 6.6	Black	Outdoors		100	500

Siding Clips

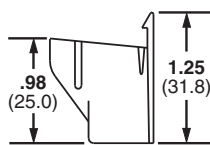
- Low profile installs without drilling or nailing
- Attach coax cable to buildings having "Pittsburgh Interlok" type aluminum or steel siding
- Will not corrode or stain siding



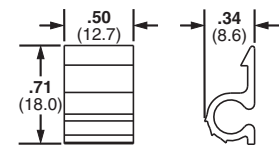
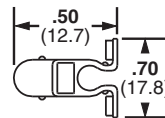
Horizontal Siding Clip



Vertical Siding Clip



VSC Vertical Clip



HSC Horizontal Clip

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		50	500
VSC.25-L	0.25	6.4	Nylon 6.6	White		50	500
VSC.25-L100	0.25	6.4	Weather Resistant Polypropylene	Black		50	500

A. System Overview

Wire Standoffs

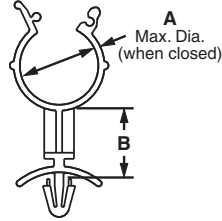
B1. Cable Ties

- 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

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

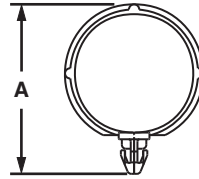
E5. Lockout/Tagout & Safety Solutions

F. Index

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	.25	6.4	.25	6.4	.08	2.0	.19	4.7	Natural	Push Barb	100	500
WS25-50-C	.25	6.4	.50	12.7	.08	2.0	.19	4.7			100	500
WS25-75-C	.25	6.4	.75	19.1	.08	2.0	.19	4.7			100	500
WS35-25-C	.35	8.9	.25	6.4	.08	2.0	.19	4.7			100	500
WS35-50-C	.35	8.9	.50	12.7	.08	2.0	.19	4.7			100	500
WS35-75-C	.35	8.9	.75	19.1	.08	2.0	.19	4.7			100	500
WS50-25-C	.47	11.9	.25	6.4	.08	2.0	.19	4.7			100	500
WS50-50-C	.47	11.9	.50	12.7	.08	2.0	.19	4.7			100	500
WS50-75-C	.47	11.9	.75	19.1	.08	2.0	.19	4.7			100	500
WS75-25-C	.78	19.8	.25	6.4	.08	2.0	.19	4.7			100	500
WS75-50-C	.78	19.8	.50	12.7	.08	2.0	.19	4.7			100	500
WS75-75-C	.78	19.8	.75	19.1	.08	2.0	.19	4.7			100	500

® Snap-In Clips

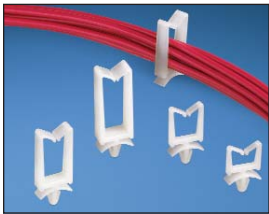
- Clip around bundle to hold securely in place
- Clips are placed on the bundle then attached to the panel
- Material: Nylon 6.6
- For indoor use only



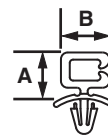
Part Number	Max. Bundle Diameter		Height A		Max. Panel Thickness		Panel Hole Diameter		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm				
SICH25-C	.25	6.4	.40	20.9	.10	2.5	.25	6.4	Natural	Push Barb	100	500
SICH38-C	.38	9.7	.54	24.9	.10	2.5	.25	6.4			100	500
SICH50-C	.50	12.7	.67	28.2	.10	2.5	.25	6.4			100	500
SICH75-C	.75	19.1	.96	35.6	.10	2.5	.25	6.4			100	500
SICH100-C	1.00	25.4	1.21	41.9	.10	2.5	.25	6.4			100	500
SICH150-C	1.50	38.0	1.71	54.6	.10	2.5	.25	6.4			100	500

® 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



VWS Vertical



HWS Horizontal

Part Number	Max. Bundle Capacity		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				
VWS4218-C	0.18 x 0.42	5.0 x 10.7	0.58	14.7	0.60	15.2	0.08	2.0	0.19	4.7	Natural	Push Barb	100	500
VWS4238-C	0.40 x 0.42	10.2 x 10.7	0.78	19.8	0.60	15.2	0.08	2.0	0.19	4.7			100	500
VWS4274-C	0.74 x 0.42	19.0 x 10.7	1.14	29.0	0.60	15.2	0.08	2.0	0.19	4.7			100	500
VWS42105-C	1.05 x .42	27.0 x 10.7	1.45	36.8	0.60	15.2	0.08	2.0	0.19	4.7			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			100	500

A. System Overview



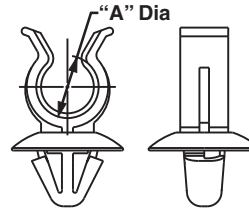
Corrugated Tubing Holder with Push Mount

B1. Cable Ties

- Use to secure and route all standard sizes of solid wall or slit corrugated loom tubing
- Ribs prevent lateral movement of corrugated loom tubing along the mount

- Rugged clip prevents accidental disassembly of tubing due to shock or vibration

B2. Cable Accessories



B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

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	100	—
CTH62U17-C30	0.62	17	0.125	3.2	0.386	9.8	100	—
CTH87U22-C30	0.87	22	0.125	3.2	0.386	9.8	100	—

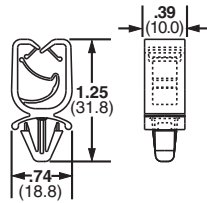
D1. Terminals

Harness Clips

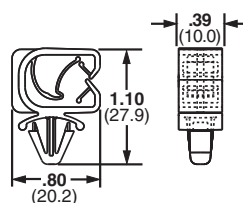
- Integral "spring" holds wire bundles tightly
- Available in vertical and horizontal loading configurations

- Design of wing provides added stability

D2. Power Connectors



HCMP06B



HCMP06C

D3. Grounding Connectors

E1. Labeling Systems

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-C20	.24 - .47	5.9 - 12.5	.118	3.0	.25	6.4	Nylon 6.6	Black	Push Mount	100	500
HCMP06C12-C20	.24 - .47	5.9 - 12.5	.105	2.7	.25	6.4				100	500

E4. Permanent Identification

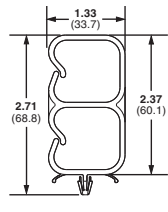
E5. Lockout/Tagout & Safety Solutions

F. Index

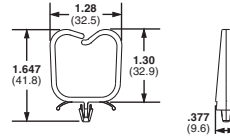
Optical Fiber Network Saddles

- Use in pre-drilled .18 inch (4.0mm) holes in panels up to .09 inch (2.0mm) thick

- Smooth rounded edges eliminate potential for snagging and stress on cable



VWSDC



VWS106



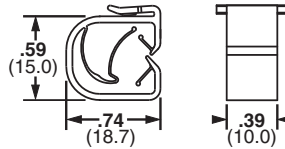
Part Number	Max. Bundle Diameter		Material	Mounting Method	Color	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
VWSDC-C*	1.06	26.9	Nylon 6.6	Push Barb	Natural	100	500
VWSDC-C20*	1.06	26.9	Nylon 6.6	Push Barb	Black	100	—
VWS106-C	1.06	26.9	Nylon 6.6	Push Barb	Natural	100	500
VWS106-C20	1.06	26.9	Nylon 6.6	Push Barb	Black	100	500

*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

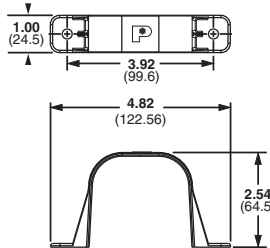
Part Number	Max. Bundle Diameter Range		Max. Panel Thickness		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm					
HCME04Y09-C30*	0.16 – 0.35	4.0 – 9.0	0.16	4.0	Nylon 6.6 Heat Stabilized	Black	Clip onto Edge	100	—
HCME06A12-C130	0.24 – 0.47	5.9 – 12.5	0.05	1.2	Acetal Heat Stabilized			100	500
HCME06Y12-C30*	0.31 – 0.47	8.0 – 12.0	0.16	4.0	Nylon 6.6 Heat Stabilized			100	—

*Bulk packaging size available.

Wire Bundle Strap

- Securely routes large cable bundles

- Rounded edges prevent damage to cable jackets



Part Number	Bundle Retaining Area In. ²	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
WBS6-Q	6.00	ABS	White	(2) 1/4" (M6) Screws	25	125

A. System Overview

Circuit Board Posts

B1. Cable Ties

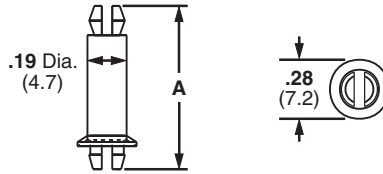
- For board-to-board or board-to-chassis mounting
- Bell flange on bottom end provides greater stability
- Releasable and reusable

- Material: Nylon 6.6
- Color: Natural

B2. Cable Accessories



B3. Stainless Steel Ties



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	.12	3.0	.40	10.2	.156	3.96	Push Barb	100	500
CBP25-C	.25	6.4	.54	13.5	.156	3.96		100	500
CBP31-C	.31	7.9	.59	15.0	.156	3.96		100	500
CBP37-C	.37	9.4	.62	15.7	.156	3.96		100	500
CBP50-C	.50	12.7	.78	19.8	.156	3.96		100	500
CBP62-C	.62	15.7	.91	23.0	.156	3.96		100	500
CBP75-C	.75	19.1	1.04	26.2	.156	3.96		100	500
CBP87-C	.87	22.1	1.15	29.2	.156	3.96		100	500
CBP100-C	1.00	25.4	1.28	32.5	.156	3.96		100	500

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

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

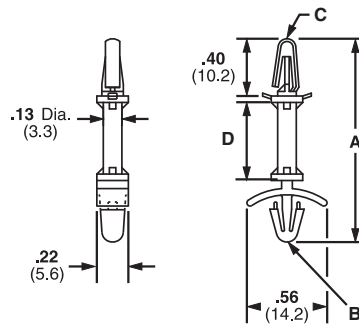
D2. Power Connectors

D3. Grounding Connectors



E1. Labeling Systems

E2. Labels



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	.92	23.4	.19	4.8	.16	4.0	.19	4.7	Natural	Push Barb	100	500
CBLS25-C	.98	24.9	.19	4.8	.16	4.0	.25	6.4			100	500
CBLS37-C	1.11	28.2	.19	4.8	.16	4.0	.38	9.5			100	500
CBLS50-C	1.23	31.2	.19	4.8	.16	4.0	.50	12.7			100	500
CBLS62-C	1.35	34.3	.19	4.8	.16	4.0	.63	15.9			100	500
CBLS75-C	1.48	37.5	.19	4.8	.16	4.0	.75	19.1			100	500

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

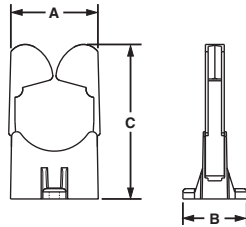
Harness Board Accessories

Panduit harness board accessories provide fast routing and forming of wires in harness fabrication. They hold the wires off the harness board at a uniform height for easy application of cable ties. The accessories are designed for use with various Panduit cable tie installation tools. To maintain the harness at a uniform height of approx. 1.33 inches (33.8mm) (at the center of the harness) above the board, use RER Elastic Retainers, BR.75-E6 or BR.5-E6, CPH.75-S8, TJF and SHH1-S8 or SHH3-S8 harness board accessories. This height is suitable for use with PAT1M Automatic Cable Tie Installation Tool.



Elastic Retainers

- Cable bundles are formed as individual wires are inserted
- Completed bundles can be easily removed
- The elastic band is replaceable
- For indoor use only



Replacement Elastic

Part Number	Pkg. Qty.
RER.5E-X	10
RER.75E-X	10
RER1.25E-X	10
RER2.0E-X	10

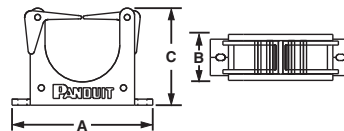
For economy, the elastic band can be replaced in the RER Elastic Retainers without removing the RER base.

Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm					
RER.5-S6-X	0.50	12.7	1.18	30.0	0.84	21.3	1.89	48.0	Nylon 6.6	Black Base, White Arm	Two #6 (M3) Screws	10	50
RER.75-S6-X	0.75	19.0	1.18	30.0	1.12	28.4	2.21	56.1				10	50
RER1.25-S6-X	1.25	31.8	1.18	30.0	1.64	41.7	2.86	72.6		10		50	
RER2.0-S6-X	2.00	50.8	1.31	33.3	2.81	71.4	3.94	100.2		Natural		10	50



Elastic Retainers – ER Type

- Cable bundles are formed as cable bundles are inserted
- Completed bundles can be easily removed
- For indoor use only



Part Number	Max. Bundle Diameter		Length A		Width B		Height C		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm					
ER.5-E4-X	.50	12.7	1.96	49.8	.56	14.2	1.00	25.4	Nylon 6.6	Black	Two #6 (M3) Screws	10	100
ER1.25-E4-X	1.25	31.8	2.90	73.7	.95	24.1	2.00	50.8				10	100

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

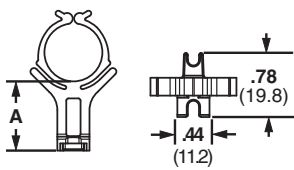
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

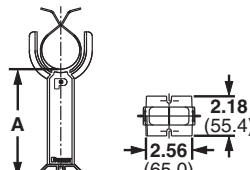
F. Index

Bundle Retainers

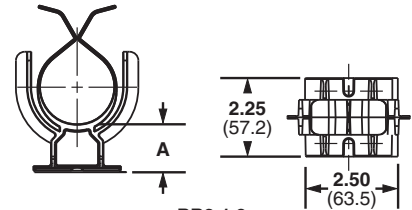
- Funnel entry allows fast cable insertion
- Completed bundles can be easily removed
- For indoor use only
- Color: Black



BR.5 and BR.75



BR2

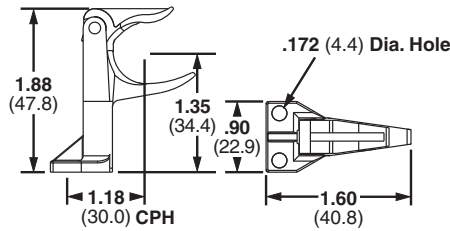


BR2-1.3

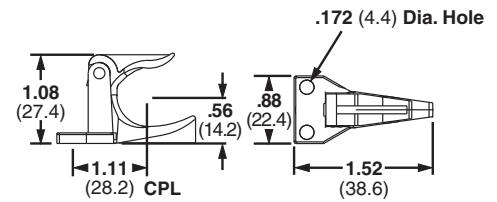
Part Number	Max. Bundle Diameter		Standoff Height A		Material	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm				
BR.5-E6-C	0.50	12.7	1.07	27.2	Impact Resistant Nylon 6.6	Two #6 (M3) Screws	100	500
BR.75-E6-C	0.75	19.0	0.95	24.1			100	500
BR2-1.3-X	2.00	50.8	1.32	33.5	Glass Filled Nylon 6.6	Two 1/4" (M6) Screws	10	10
BR2-1.3-A-X	2.00	50.8	1.35	34.3		Rubber Adhesive Tape	10	10
BR2-1.5-X	2.00	50.8	1.59	40.4		Two 1/4" (M6) Screws	10	10
BR2-4-X	2.00	50.8	4.06	103.1			10	10
BR2-6-X	2.00	50.8	6.02	152.9	10	10		

Corner Posts

- Designed to pre-form tight bundles at harness corners and breakouts
- Top arm rotates upward for easy removal of completed harness
- For indoor use only



CPH

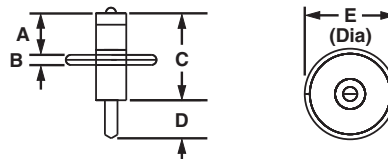


CPL

Part Number	Max. Bundle Diameter		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
CPH.75-S8-X	.75	19.0	Nylon 6.6	Black	Two #8 (M4) Screws	10	100
CPL.75-S8-X							

T-Junction Fixture

- Forms cable junctions
- Fixture moves down for easy harness removal
- For indoor use only

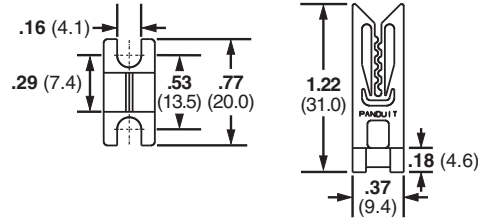


Part Number	Max. Bundle Diameter		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
TJF-X	1.34	34.0	Nylon 6.6 and Nickel Plated Steel	Black	Nail	10	100

Wire End Holder

- Secures wire ends while harness is being fabricated
- Used with #28 thru #16 AWG wires

- For indoor use only

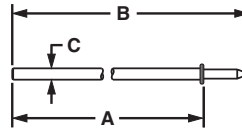


Part Number	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
WEH-E8-C	Acetal	Black	Two #8 (M4) Screws	100	1000

Harness Board Nails

- Speed routing of wires
- Uniform driving depth is insured by a collar stop

- Smooth finish on nails prevents abrasion to wire jackets
- For indoor use only



Part Number	Length A		Overall Length B		Thickness C		Material	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm				
HBN.75-T	.75	19.1	1.40	35.6	.07	1.9	Nickel Plated Steel	Hammered into harness board	200	1000
HBN1-T	1.00	25.4	1.65	41.9	.07	1.9			200	1000
HBN1.5-T	1.50	38.1	2.16	54.9	.08	2.1			200	1000
HBN2-T	2.00	50.8	2.66	67.6	.09	2.4			200	1000
HBN2.5-T	2.50	63.5	3.16	80.3	.11	2.8			200	1000
HBN3-T	3.00	76.2	3.67	93.2	.12	3.0			200	1000
HBN4-T	4.00	101.6	4.67	118.6	.14	3.7			200	1000

A. System Overview

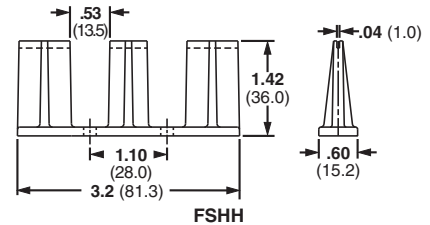
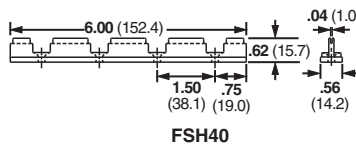
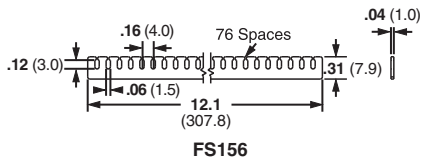
Fanning Strip System

- Holds wires in a specific orientation
- No sharp edges to damage wire insulation
- Will accept wires up to 18 AWG
- Fanning strip can remain as part of completed harness

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway



Part Number	Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
FS156-C	Nylon 6.6	Natural	FSH Holder	100	1000
FSH40-X	ABS	Black	Four #8 (M4) Screws	10	100
FSHH-X			Two #8 (M4) Screws	10	100

C3. Abrasion Protection

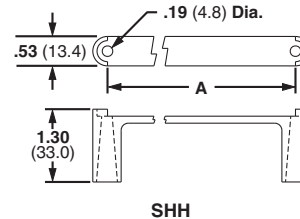
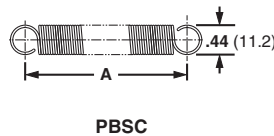
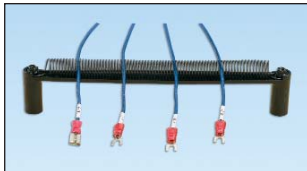
C4. Cable Management

Spring Wire Breakout System

- Harness board spring and spring holder holds wire ends secure 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

D1. Terminals

D2. Power Connectors



D3. Grounding Connectors

Part Number	Hole Spacing A		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm					
PBSC1-X	1.00	25.4	Steel	—	SHH1 Spring Holder	10	100
PBSC3-X	3.00	76.2		—	Two #8 (M4) Screws	10	100
PBSC6-X	6.00	152.4		—	SHH3 Spring Holder	10	100
PBSC12-X	12.00	304.8		—	Two #8 (M4) Screws	10	100
SHH1-S8-X	1.85	47.0	Nylon 6.6	Natural	Two #8 (M4) Screws	10	100
SHH3-S8-X	6.80	172.7			Two #8 (M4) Screws	10	100

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

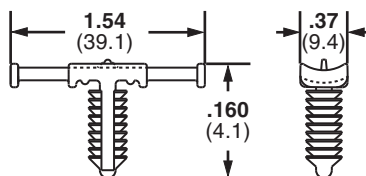
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

Tie Harness Mounts

- 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
- Available with or without corrugated tubing location tab
- 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		Material	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm					

FOR CORRUGATED TUBING – A location tab on the mount shelf aligns with the corrugated tubing grooves to ensure proper mount location during assembly

THMSP20-C	M, I, S	.160	4.1	0.244 – 0.283	6.2 – 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP20-C30	M, I, S	.160	4.1	0.244 – 0.283	6.2 – 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000
THMSP25-C	M, I, S	.230	5.8	0.244 – 0.283	6.2 – 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP25-C30	M, I, S	.230	5.8	0.244 – 0.283	6.2 – 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000

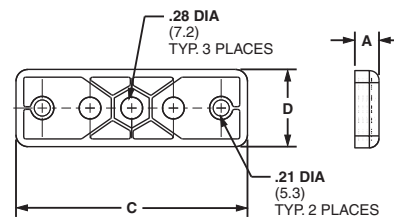
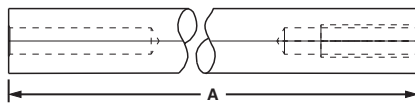
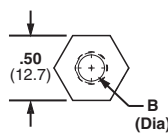
FOR DISCRETE WIRING – No location tab

THMSP20F-C	M, I, S	.160	4.1	0.244 – 0.283	6.2 – 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP20F-C30	M, I, S	.160	4.1	0.244 – 0.283	6.2 – 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000
THMSP25F-C	M, I, S	.230	5.8	0.244 – 0.283	6.2 – 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP25F-C30	M, I, S	.230	5.8	0.244 – 0.283	6.2 – 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000

*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



HB2SP

HBUA

Part Number	Height A		Hole Diameter B		Length C		Width D		For Use With	Material	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm					

Posts

HB2SP19-X	2.00	50.8	.20	5.2	—	—	0.50	12.7	PLWP, PRWP, WS, VWS, HWS, TPM	Aluminum	Bolt – Included	10	100
HB2SP25-X	2.00	50.8	.30	7.5	—	—	0.50	12.7	PLWP, PRWP, PLP, THMS, HCMP, PMCC	Aluminum	Bolt – Included	10	100

Adapter

HBUA-X	.31	7.9	.28	7.1	3.00	76.2	1.00	25.4	HB2SP19-X, HB2SP25-X	Nylon 6.6	#10 (M5) Screw	10	100
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A. System Overview



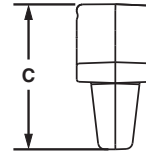
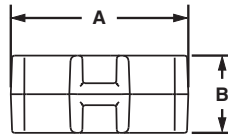
Automatic Cable Tie Mounts

B1. Cable Ties

- Multiple sizes work with industry standard panel thickness and hole diameters for greater application flexibility
- Low profile design keeps bundle close to mounting surface, saving space and providing greater protection for bundles in high vibration applications

- Supports Miniature and Intermediate cross section cable ties

B2. Cable Accessories



B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

Part Number	Used with Cable Ties	A Length		B Width		C Height		Maximum Panel Thickness		Panel Hole Diameter Range		Material	Color	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm				
ATM-W187-M	BT1.5M-XMR, PLT1.5M-XMR	0.80	20.5	0.35	9.0	0.58	14.6	0.12	3.0	0.17 – 0.20	4.3 – 4.9	Nylon 6.6	Natural	1000	5000
ATM-W187-M20													Black	1000	5000
ATM-W187-M30												Heat Stabilized Nylon 6.6	1000	5000	
ATM-W250-M										0.23 – 0.26	5.7 – 6.6	Nylon 6.6	Natural	1000	5000
ATM-W250-M20													Black	1000	5000
ATM-W250-M30												Heat Stabilized Nylon 6.6	1000	5000	

Auto Tie Mounts work with Reel-fed Cable Ties and Automatic Tooling. See page B1.115.

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

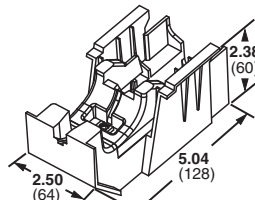
F. Index



Harness Board Fixtures

- Automatic alignment orients the tool head with the mount for reliable feeding of the cable through the mount to speed installation
- Multiple fixture configurations allow mounting in horizontal, vertical, or 45° orientation

- Integrated switch* capability enables placement of a switch to detect the mount's presence providing an input to a quality control system
- Activation device on harness board fixture prevents tool from operating unless it is properly engaged in the fixture for operator safety



ATMB

Part Number	Description	Mounting	Color	Material	Std. Pkg. Qty.	Std. Ctn. Qty.
ATMB	Base	Screw base to harness board with 1/4" screws	Black	Acetal	—	10
ATMI-W187-X	Insert for ATM-W187 mount	Snaps into ATMB	Yellow		10	—
ATMI-W250-X	Insert for ATM-W250 mount	Snaps into ATMB	Red		10	—
ATMI-XMR-X	Used for cable tie installations where mounts are NOT required	Snaps into ATMB	Black		10	—
ATMC	Clamp used to secure the ATMB (base) in a vertical or 45° position	Screw clamp to harness board with 1/4" screws	Black	—	10	

*The Omron Electronics D2SW-3L1HS switch is compatible with the ATM system. Similar switches from other manufacturers may also be suitable. See page B1.115 for Panduit Automatic Cable Tie Installation Systems.

Physical Properties and Colors of Cable Accessory Materials[‡]

Design Criteria	Flame Retardant Nylon 6.6	Glass Filled Flame Retardant Nylon 6.6	General Purpose Polypropylene	Weather Resistant Polypropylene	General Purpose ABS	General Purpose ABS	Weather Resistant ABS	Flame Retardant Polypropylene	Acetal	PVC
Color	Black, Natural	Black	Black	Black	Black	Natural	Black	Black	Black	Gray, White
Part Number Suffix	60, 69	None	None/109	100	None	20	0	None	None	810
UL Flammability – UL 94	V-0	V-0	HB	HB	HB	HB	HB	V-0	HB	V-0
Gamma Radiation Resistance	1x10 ⁵ Rads	N/A	1x10 ⁵ Rads	1x10 ⁵ Rads	N/A	N/A	N/A	N/A	N/A	N/A
Water Absorption	1.1% (24 hrs.)	0.7% (24 hrs.)	0.1% (24 hrs.)	0.1% (24 hrs.)	0.3% (24 hrs.)	0.3% (24 hrs.)	0.3% (24 hrs.)	0.15% (24 hrs.)	0.43% (24 hrs.)	0.3% (24 hrs.)
UV Resistance	Poor	Poor	Poor	Good	Poor	Fair	Good	Good	Good	Poor
Maximum Continuous Use Temperature	230°F (110°C)	230°F (110°C)	221°F (105°C)	221°F (105°C)	185°F (85°C)	185°F (85°C)	185°F (85°C)	257°F (125°C)	194°F (90°C)	122°F (50°C)
Minimum Continuous Use Temperature	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)

[‡]TEFZEL is a registered trademark of E.I. du Pont de Nemours and Company.

[‡]For more detail and additional materials, see Selection Chart on Pages B1.2 – B1.3.

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.

Mount Spacing

To determine the number of mounts to use in a given application, the following formula can be used as a guideline:

$$\frac{\text{Cable or weight (Lbs./ft.)}}{\text{Static Load rating of Mount (Lbs./mt.)}} = \text{Spacing} \frac{\text{Mounts}}{\text{Ft.}}$$

Surfaces	Rubber Based Foam Tape Mounts	Acrylic Based Foam Tape Mounts	Epoxy Applied Adhesive Mounts
Plastics	Good	Good	Good
Wood	Good	Good	Good
Glass	Fair	Good	Good
Painted Surfaces	Good	Good	Fair
Powder Coating	Good	Fair	Good
Metal	Good ¹	Good ¹	Good
Paper	Good	Good	Fair
Concrete, Stone, Masonry	Not Recommended	Not Recommended	Good
Chemical Resistance			
Water	Good	Good	Poor
Oil	Poor	Fair ³	Good
Gasoline	Poor	Fair ³	Fair
Dilute Acids	Poor	Fair ³	Fair
Dilute Alkalis	Good	Fair ³	Fair
Organic Solvents	Poor	Fair ³	Not Recommended
Outdoor Exposure	Not Recommended	Good	Good ²

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.

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B2. Cable Accessories

B3. Stainless Steel Ties

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C2. Surface Raceway

C3. Abrasion Protection

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E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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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.



B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

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



C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

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.

C4.
Cable
Management

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. Rubber based adhesive tape is the best choice for most adhesive mount applications, including powder coated surfaces.

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

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. Acrylic based adhesive tape is a good choice for environments with exposure to UV rays or temperatures above 120°F (49°C).

E1.
Labeling
Systems

E2.
Labels

Panduit adhesive backed cable accessories are also available pre-installed with high bond acrylic-based adhesive. 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. High Bond cable accessories are recommended for use in demanding applications such as where high temperatures are required, or where fatigue loading is expected.

E3.
Pre-Printed
& Write-On
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E4.
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E5.
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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.

Selection and Use of Adhesive Mounts (continued)

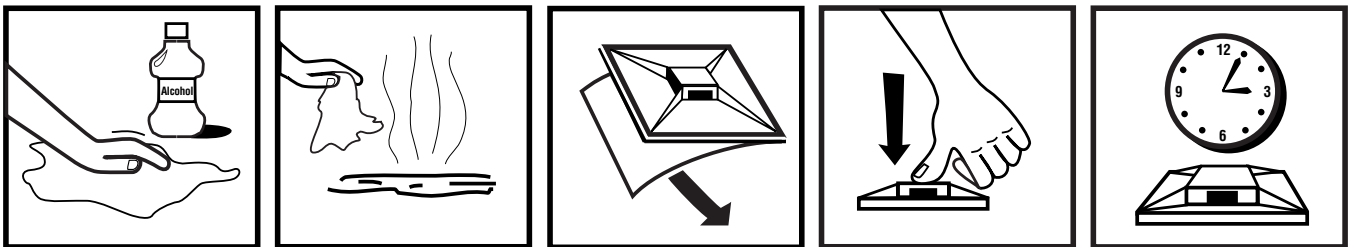
Surface Preparation

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.

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.

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 to the mount for 5 seconds to insure proper adhesion.



- 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 full thumb pressure for at least 5 seconds.
- 5) Allow mount to properly dwell.

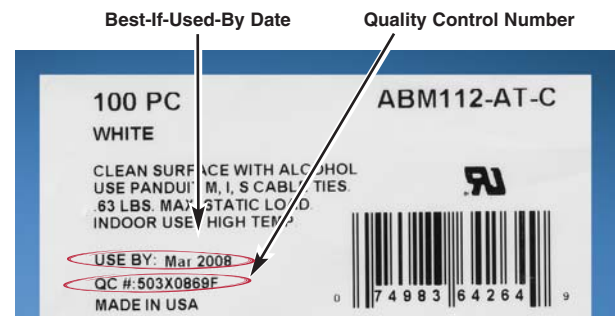
Proper Storage Conditions

All Panduit adhesive products have an expiration date printed on the package label. Use the following storage guidelines:

1. For rubber and acrylic based foam tape adhesives, store in temperatures of 70°F (21°C) and 45% Relative Humidity (R.H.).
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.

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.



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.

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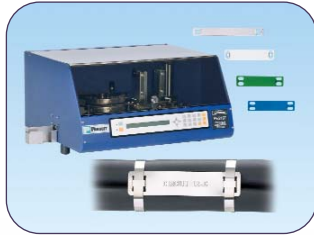
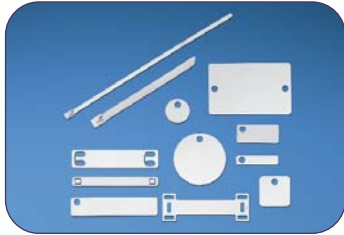
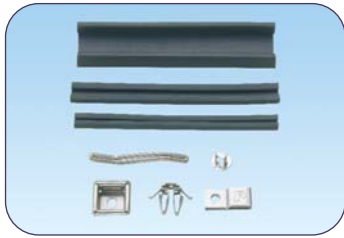
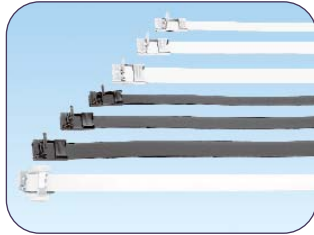
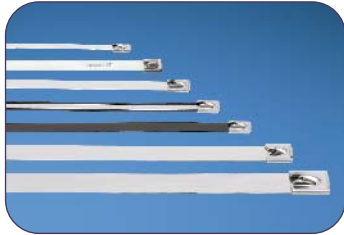
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NOTES

PAN-STEEL® SYSTEM

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 marker plates, tags, and cable ties to deliver maximum design flexibility to match your specific application requirements; for details, refer to Permanent Identification Section E4

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.

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Pan-Steel® Products Overview

B1.
Cable Ties

Pan-Steel® Cable Ties

Pages B3.4 – B3.7, 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.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

Pan-Steel® Coated Cable Ties

Pages B3.8 – B3.9, B3.12 – B3.13



- Designed for use in indoor, outdoor, and underground applications
- Self-locking head design speeds installation
- Provides additional edge protection
- Prevents corrosion between dissimilar metals

C3.
Abrasion
Protection

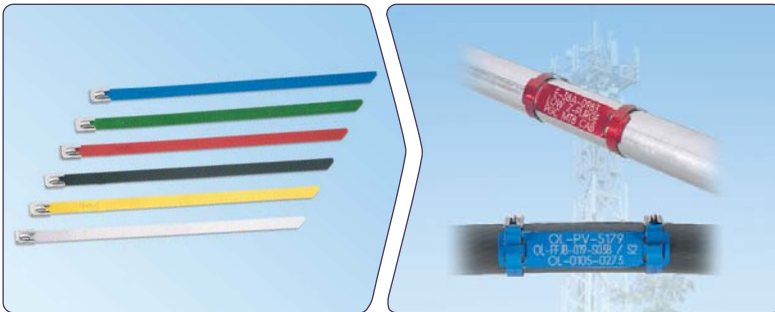
C4.
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D2.
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Pan-Alum™ Cable Ties

Page B3.10



- Ideal for use in permanent identification and color-coding applications
- Five color options in addition to natural aluminum
- Lightweight construction for flexibility and ease of handling
- Used with aluminum marker plates for fast and easy installation

D3.
Grounding
Connectors

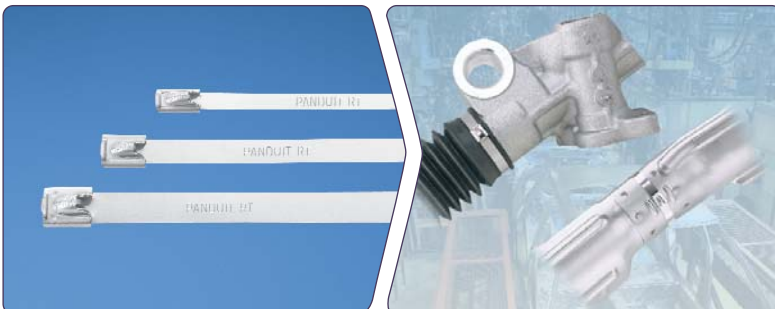
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Pan-Steel® Retained Tension Ties

Pages B3.17 – B3.20



- 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

E4.
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Pan-Steel® Products Overview (continued)

Installation Tools

Pages B3.14 – B3.16, B3.20, B3.26



- Used in production, maintenance, and construction applications
- Full line of lightweight, ergonomic hand tools
- Highest reliability in the industry
- Flush cut-off of ties limits exposure to sharp edges

Pan-Steel® Strapping

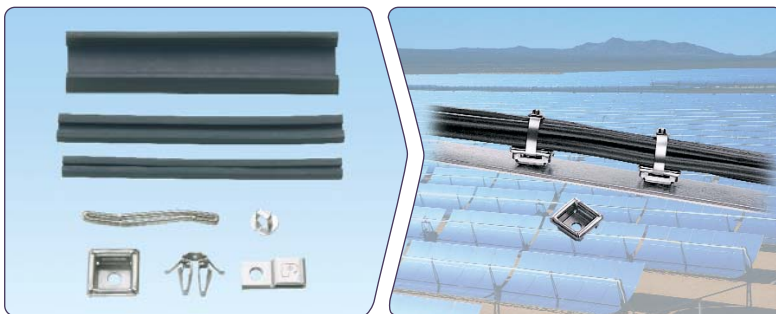
Pages B3.21 – B3.26



- 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 B3.26 – B3.29



- 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

Permanent Identification Products

Pages E4.1 – E4.6



- Withstand the test of time and provide legibility in harsh environments
- Factory Custom Marking Service creates custom embossed or laser etched metal plates, tags, and ties
- Portable marking tools for quick and easy on-site identification
- Large selection delivers maximum design flexibility

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A. System Overview

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.

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

Self-Locking Head Construction

***Aggressive locking head**
Quicker locking, tighter installation

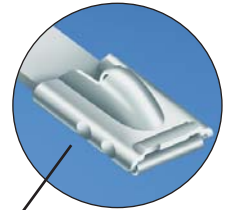
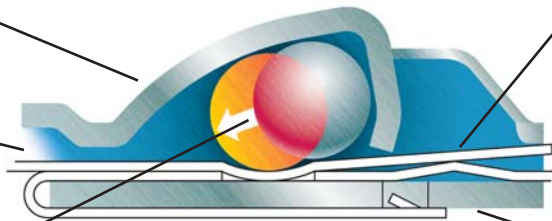
Unique locking ramp
Assures locking in any position

***Lead in design**
Wider entrance for easier threading

Strengthening ribs
Stronger head increases lock strength

***Innovative displacement lock**
Assures superior locking strength

Extended retaining tab
Increases overall tie strength



*Patented

Fully Rounded Edges

Self-Locking for Fast Installation



Panduit tie body

Other manufacturer's tie body

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.



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.

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

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Large selection of installation tools, the proper tool available to meet the requirements of every application. See pages B3.14 – B3.16.



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 screw mounts and push mounts. See pages B3.26 – B3.29.



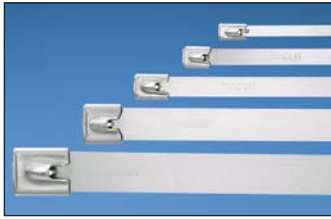
Pan-Steel® Permanent Identification Solutions are designed for use with Panduit® Pan-Steel® Stainless Cable Ties and Pan-Alum™ Aluminum Cable Ties for quick and easy on-demand identification in harsh environments. See pages E4.1 – E4.6.

Part Number System for Pan-Steel® Cable Ties

MLT	6	S	—	CP	
Type	Bundle Diameter Reference (In.)	Cross Section		Standard Package Size	Material
MLT = Metal Locking Tie		S = Standard LH = Light Heavy H = Heavy EH = Extra-Heavy EH15 = Extra-Heavy-15 SH = Super-Heavy		Q = 25 L* = 50 LP** = 50 CP = 100 *Standard Cross Section **Heavy Cross Section	(blank) = 304 316 = 316

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, 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	500
MLT2S-L	2.0	51	7.9	201	200	890	0.50	12.7	0.18	4.6	0.010	0.25		50	500
MLT2.7S-CP	2.7	69	10.2	259	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500
MLT4S-CP	4.0	102	14.3	362	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500
MLT4S-L	4.0	102	14.3	362	200	890	0.50	12.7	0.18	4.6	0.010	0.25		50	500
MLT6S-CP	6.0	152	20.5	521	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500
MLT8S-CP	8.0	203	26.8	679	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500
MLT10S-CP	10.0	254	33.0	838	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500
MLT12S-Q	12.0	304	39.3	998	200	890	0.50	12.7	0.18	4.6	0.010	0.25		25	125
MLT14S-Q	14.0	355	45.5	1156	200	890	0.50	12.7	0.18	4.6	0.010	0.25		25	125
MLT15S-Q	15.0	380	49.2	1250	200	890	0.50	12.7	0.18	4.6	0.010	0.25		25	125

*Other lengths available, contact Panduit Customer Service.

**Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.

***For information on installation tools, refer to pages B3.14 – B3.16.

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A. System Overview



Pan-Steel® Self-Locking Cable Ties – MLT Series (continued)

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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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				
Light-Heavy Cross Section																
MLT2LH-LP	2.0	51	7.9	201	250	1112	0.50	12.7	0.25	6.4	0.010	0.25	GS4MT, 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		50	250	
MLT6LH-LP	6.0	152	20.5	521	250	1112	0.50	12.7	0.25	6.4	0.010	0.25		50	250	
MLT8LH-LP	8.0	203	26.8	679	250	1112	0.50	12.7	0.25	6.4	0.010	0.25		50	250	
Heavy Cross Section																
MLT2H-LP	2.0	51	7.9	201	450	2000	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	50	250	
MLT2.7H-LP	2.7	69	10.2	259	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250	
MLT4H-LP	4.0	102	14.3	362	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250	
MLT6H-LP	6.0	152	20.5	521	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250	
MLT8H-LP	8.0	203	26.8	679	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250	
MLT10H-LP	10.0	254	33.0	838	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250	
MLT12H-Q	12.0	304	39.3	998	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		25	125	
MLT14H-Q	14.0	355	45.5	1156	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		25	125	
Extra-Heavy Cross Section																
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	50		250	
MLT8EH-LP	8.0	203	29.7	754	600	2670	1.00	25.4	0.50	12.7	0.010	0.25	50		250	
MLT10EH-LP	10.0	254	35.9	912	600	2670	1.00	25.4	0.50	12.7	0.010	0.25	50		250	
MLT12EH-Q	12.0	305	42.2	1072	600	2670	1.00	25.4	0.50	12.7	0.010	0.25	25		125	
MLT4EH15-LP	4.0	102	17.1	434	700	3115	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MLT6EH15-LP	6.0	152	23.4	594	700	3115	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MLT8EH15-LP	8.0	203	29.7	754	700	3115	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MLT10EH15-LP	10.0	254	35.9	912	700	3115	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MLT12EH15-Q	12.0	305	42.2	1072	700	3115	1.00	25.4	0.50	12.7	0.015	0.38	25		125	
Super-Heavy Cross Section																
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		50	250	
MLT8SH-LP	8.0	203	29.7	754	900	4005	1.00	25.4	0.63	15.9	0.015	0.38		50	250	
MLT10SH-LP	10.0	254	35.9	912	900	4005	1.00	25.4	0.63	15.9	0.015	0.38		50	250	
MLT12SH-Q	12.0	305	42.2	1072	900	4005	1.00	25.4	0.63	15.9	0.015	0.38		25	125	
AISI 316 Stainless Steel – For Superior Corrosion Resistance																
Standard Cross Section																
MLT1S-CP316	1.0	25	5.0	127	200	890	0.50	12.7	0.18	4.6	0.010	0.25	GS4MT, HTMT, PPTMT, ST2MT	100	500	
MLT2S-CP316	2.0	51	7.9	201	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500	
MLT2.7S-CP316	2.7	69	10.2	259	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500	
MLT4S-CP316	4.0	102	14.3	362	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500	
MLT6S-CP316	6.0	152	20.5	521	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500	
MLT8S-CP316	8.0	203	26.8	679	200	890	0.50	12.7	0.18	4.6	0.010	0.25		100	500	
MLT10S-CP316	10.0	254	33.0	838	200	890	0.50	12.7	0.18	4.6	0.010	0.25	100	500		
Light-Heavy Cross Section																
MLT2LH-LP316	2.0	51	7.9	201	250	1112	0.50	12.7	0.25	6.4	0.010	0.25	GS4MT, HTMT, PPTMT, ST2MT	50	250	
MLT4LH-LP316	4.0	102	14.3	362	250	1112	0.50	12.7	0.25	6.4	0.010	0.25		50	250	
MLT6LH-LP316	6.0	152	20.5	521	250	1112	0.50	12.7	0.25	6.4	0.010	0.25		50	250	
MLT8LH-LP316	8.0	203	26.8	679	250	1112	0.50	12.7	0.25	6.4	0.010	0.25		50	250	

*Other lengths available, contact Panduit Customer Service.

**Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.

***For information on installation tools, refer to pages B3.14 – B3.16.



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			
Heavy Cross Section															
MLT2H-LP316	2.0	51	7.9	201	450	2000	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	50	250
MLT2.7H-LP316	2.7	69	10.2	259	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250
MLT4H-LP316	4.0	102	14.3	362	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250
MLT6H-LP316	6.0	152	20.5	521	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250
MLT8H-LP316	8.0	203	26.8	679	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250
MLT10H-LP316	10.0	254	33.0	838	450	2000	0.50	12.7	0.31	7.9	0.010	0.25		50	250
Extra-Heavy Cross Section															
MLT4EH-LP316	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-LP316	6.0	152	23.4	594	600	2670	1.00	25.4	0.50	12.7	0.010	0.25		50	250
MLT8EH-LP316	8.0	203	29.7	754	600	2670	1.00	25.4	0.50	12.7	0.010	0.25		50	250
MLT4EH15-LP316	4.0	102	17.1	434	700	3115	1.00	25.4	0.50	12.7	0.015	0.38		50	250
MLT6EH15-LP316	6.0	152	23.4	594	700	3115	1.00	25.4	0.50	12.7	0.015	0.38		50	250
MLT8EH15-LP316	8.0	203	29.7	754	700	3115	1.00	25.4	0.50	12.7	0.015	0.38		50	250
Super-Heavy Cross Section															
MLT4SH-LP316	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-LP316	6.0	152	23.4	594	900	4005	1.00	25.4	0.63	15.9	0.015	0.38		50	250
MLT8SH-LP316	8.0	203	29.7	754	900	4005	1.00	25.4	0.63	15.9	0.015	0.38		50	250

*Other lengths available, contact Panduit Customer Service.

**Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.

***For information on installation tools, refer to pages B3.14 – B3.16.

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D1. Terminals

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D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

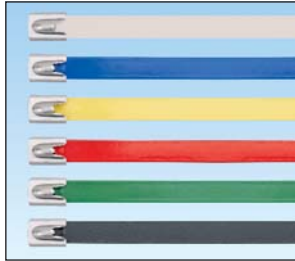
E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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Pan-Steel® Polyester Fully Coated Cable Ties – MLTFC Series

- Polyester coating available in six color options provides visual indication 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)



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, HTMT, PPTMT, ST2MT	100	500
MLTFC4S-CP316	4.0	102	14.3	362	Black	100	445	0.18	4.6	0.010	0.25		100	500
MLTFC6S-CP316	6.0	152	20.5	521	Black	100	445	0.18	4.6	0.010	0.25		100	500
MLTFC8S-CP316	8.0	203	26.8	679	Black	100	445	0.18	4.6	0.010	0.25		100	500

Heavy Cross Section^^														
MLTFC2H-LP316RD	2.0	51	7.9	201	Red	250	1112	0.31	7.9	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	50	250
MLTFC4H-LP316RD	4.0	102	14.3	362	Red	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC6H-LP316RD	6.0	152	20.5	521	Red	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC2H-LP316YL	2.0	51	7.9	201	Yellow	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC4H-LP316YL	4.0	102	14.3	362	Yellow	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC6H-LP316YL	6.0	152	20.5	521	Yellow	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC2H-LP316GR	2.0	51	7.9	201	Green	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC4H-LP316GR	4.0	102	14.3	362	Green	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC6H-LP316GR	6.0	152	20.5	521	Green	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC2H-LP316BU	2.0	51	7.9	201	Blue	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC4H-LP316BU	4.0	102	14.3	362	Blue	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC6H-LP316BU	6.0	152	20.5	521	Blue	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC2H-LP316WH	2.0	51	7.9	201	White	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC4H-LP316WH	4.0	102	14.3	362	White	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC6H-LP316WH	6.0	152	20.5	521	White	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC2H-LP316	2.0	51	7.9	201	Black	250	1112	0.31	7.9	0.010	0.25		50	250
MLTFC4H-LP316	4.0	102	14.3	362	Black	250	1112	0.31	7.9	0.010	0.25	50	250	
MLTFC6H-LP316	6.0	152	20.5	521	Black	250	1112	0.31	7.9	0.010	0.25	50	250	
MLTFC8H-LP316	8.0	203	26.8	679	Black	250	1112	0.31	7.9	0.010	0.25	50	250	

Extra-Heavy Cross Section^^														
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	Black	300	1335	0.50	12.7	0.010	0.25		50	250
MLTFC8EH-LP316	8.0	203	29.7	754	Black	300	1335	0.50	12.7	0.010	0.25		50	250

Super-Heavy Cross Section^^														
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	Black	450	2000	0.63	15.9	0.015	0.38		50	250
MLTFC8SH-LP316	8.0	203	29.7	754	Black	450	2000	0.63	15.9	0.015	0.38		50	250

*Other lengths available, contact Panduit Customer Service.
 **Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.
 ***For information on installation tools, refer to pages B3.14 – B3.16.
 ^Base material less coating. ^^Minimum bundle diameter is .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, 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		50	250
MLTC6H-LP316	6.0	152	20.5	521	250	1112	0.50	12.7	0.31	7.9	0.010	0.25		50	250
MLTC8H-LP316	8.0	203	26.8	679	250	1112	0.50	12.7	0.31	7.9	0.010	0.25		50	250
MLTC10H-LP316	10.0	254	33.0	838	250	1112	0.50	12.7	0.31	7.9	0.010	0.25		50	250

*Other lengths available, contact Panduit Customer Service.
 **Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.
 ***For information on installation tools, refer to pages B3.14 – B3.16.
 ^Base material less coating.

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- B2. Cable Accessories
- B3. Stainless Steel Ties
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- E1. Labeling Systems
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- E3. Pre-Printed & Write-On Markers
- E4. Permanent Identification
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A. System Overview

Pan-Alum™ Aluminum Cable Ties – MLT Series

B1. Cable Ties

- 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
- Five color options in addition to natural aluminum finish for color-coding applications
- Smooth surfaces and rounded edges assures cable protection and worker safety
- For use with Pan-Alum™ Marker Plates on page E4.5, for fast installation at the lowest installed cost

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

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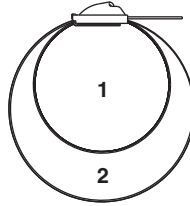
Part Number	Max. Bundle Diameter		Length		Color	Min. Loop Tensile Strength*		Min. Bundle Diameter		Width		Thickness		Recommended Installation Tool**	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm		Lbs.	N	In.	mm	In.	mm	In.	mm			
MLT1H-LPALBL	1.0	25	5.5	140	Black	50	222	0.50	12.7	0.31	7.9	0.012	0.03	ST2MT, HTMT	50	250
MLT2H-LPALBL	2.0	51	7.9	201	Black	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT4H-LPALBL	4.0	102	14.3	362	Black	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT1H-LPALRD	1.0	25	5.5	140	Red	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT2H-LPALRD	2.0	51	7.9	201	Red	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT4H-LPALRD	4.0	102	14.3	362	Red	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT1H-LPALYL	1.0	25	5.5	140	Yellow	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT2H-LPALYL	2.0	51	7.9	201	Yellow	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT4H-LPALYL	4.0	102	14.3	362	Yellow	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT1H-LPALGR	1.0	25	5.5	140	Green	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT2H-LPALGR	2.0	51	7.9	201	Green	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT4H-LPALGR	4.0	102	14.3	362	Green	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT1H-LPALBU	1.0	25	5.5	140	Blue	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT2H-LPALBU	2.0	51	7.9	201	Blue	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT4H-LPALBU	4.0	102	14.3	362	Blue	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT1H-LPAL	1.0	25	5.5	140	Aluminum	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT2H-LPAL	2.0	51	7.9	201	Aluminum	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250
MLT4H-LPAL	4.0	102	14.3	362	Aluminum	50	222	0.50	12.7	0.31	7.9	0.012	0.03		50	250

*Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.

**For information on installation tools, refer to page B3.15.

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 the most corrosive environments
- 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, 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
MLT5DH-L	5.0	127	34.0	863	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
MLT4DEH15-Q	4.0	102	29.5	749	1000	4450	1.00	25.4	0.50	12.7	0.015	0.38		25	125
MLT6DEH15-Q	6.0	152	41.5	1054	1000	4450	1.00	25.4	0.50	12.7	0.015	0.38		25	125
MLT8DEH15-Q	8.0	203	53.5	1359	1000	4450	1.00	25.4	0.50	12.7	0.015	0.38		25	125

Super-Heavy Cross Section

MLT4DSH-Q	4.0	102	29.5	749	1200	5340	1.00	25.4	0.62	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	25	125
MLT6DSH-Q	6.0	152	41.5	1054	1200	5340	1.00	25.4	0.62	15.9	0.015	0.38		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

MLT4DEH-Q316	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-Q316	6.0	152	41.5	1054	800	3560	1.00	25.4	0.50	12.7	0.010	0.25		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
MLT4DEH15-Q316	4.0	102	29.5	749	1000	4450	1.00	25.4	0.50	12.7	0.015	0.38		25	125
MLT6DEH15-Q316	6.0	152	41.5	1054	1000	4450	1.00	25.4	0.50	12.7	0.015	0.38		25	125
MLT8DEH15-Q316	8.0	203	53.5	1359	1000	4450	1.00	25.4	0.50	12.7	0.015	0.38		25	125

Super-Heavy Cross Section

MLT4DSH-Q316	4.0	102	29.5	749	1200	5340	1.00	25.4	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	25	125
MLT6DSH-Q316	6.0	152	41.5	1054	1200	5340	1.00	25.4	0.63	15.9	0.015	0.38		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

*Other lengths available, contact Panduit Customer Service.

**Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.

***For information on installation tools, refer to pages B3.14 – B3.16.

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A. System Overview

Pan-Steel® Custom Length Banding – MBS, MBH, MBEH and MBSH Series

B1. Cable Ties

- For applications that require various bundle diameters
- Supplied in reels of 82.50 feet (25.0m), 200.00 feet (60.9m), 250.00 feet (76.2m) or 1000.00 feet (304.8m)
- Provides job site versatility with minimum inventory
- Packaging speeds removal of steel and includes bundle diameter cut-off guide

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

B2. Cable Accessories

B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

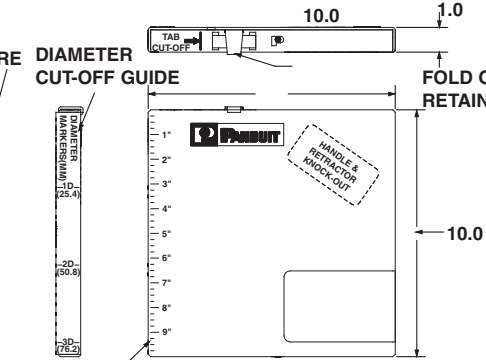
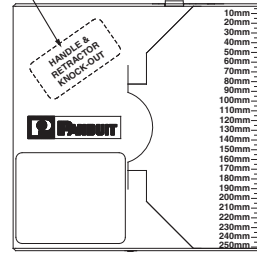
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KNOCK-OUT HANDLE LOCATION (BOTH SIDES)

METRIC MEASURE

DIAMETER CUT-OFF GUIDE

FOLD OVER RETAINER TAB



ENGLISH MEASURE

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			
AISI 304 Stainless Steel — For General Purpose Banding															
Standard Cross Section															
MBS-TLR	Any	Any	250	76	100	445	0.50	12.7	0.18	4.4	0.010	0.25	GS4MT, 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	GS4MT, ST2MT, HTMT, PPTMT	MTHS-C	1
Heavy Cross Section															
MBH-TLR	Any	Any	250	76	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT, 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	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	MTHH-C	1
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
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

AISI 316 Stainless Steel — For Superior Corrosion Resistance															
Standard Cross Section															
MBS-TLR316	Any	Any	250	76	100	445	0.50	12.7	0.18	4.4	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT	MTHS-C316	1
MBS-MR316	Any	Any	1000	305	100	445	0.50	12.7	0.18	4.4	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT	MTHS-C316	1
Heavy Cross Section															
MBH-TLR316	Any	Any	250	76	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	MTHH-C316	1
MBH-MR316	Any	Any	1000	305	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	MTHH-C316	1
Extra-Heavy Cross Section															
MBEH-TLR316	Any	Any	250	76	300	1335	1.00	25.4	0.50	12.7	0.010	0.25	ST2MT, RT2HT, RT2HTN, PBTMT	MTHEH-C316	1
Super-Heavy Cross Section															
MBSH-TR316	Any	Any	200	61	450	2000	1.00	25.4	0.63	15.9	0.015	0.38	RT2HT, RT2HTN, PBTMT	MTHSH-C316	1

*Other lengths available, contact Panduit Customer Service.
 **Per SAE Standard AS23190/3 (formerly MIL). For additional details, refer to page B3.32.
 ***For information on installation tools, refer to pages B3.14 – B3.16.
 ^Base material less coating
 ‡Order in number of reels required.

Pan-Steel® Custom Length Banding – MBS, MBH, MBEH and MBSH Series

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			
Polyester Coated AISI 316 Stainless Steel															
Heavy Cross Section															
MBCH-QR316	Any	Any	82	25	250	1112	0.50	12.7	0.31	7.9	0.010	0.25	GS4MT, ST2MT, HTMT, PPTMT, PBTMT	MTHCH-C316	1
Extra-Heavy Cross Section															
MBCEH-QR316	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
Super-Heavy Cross Section															
MBCSH-QR316	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 B3.32.
 ***For information on installation tools, refer to pages B3.14 – B3.16.
 ^Base material less coating
 ‡Order in number of reels required.

To determine the proper amount of banding required, use the following formula:

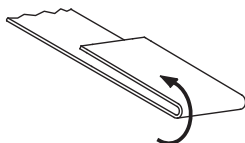
Calculate S and H Cross Section	Diameter inches (mm) x 3.14 + 3 inches (76mm)
Calculate EH and SH Cross Section	Diameter inches (mm) x 3.14 + 4.5 inches (114mm)

Pan-Steel® Custom Length Banding Heads – MTH Series

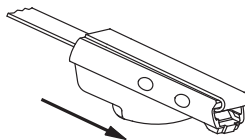
- Self-locking head design speeds installation and locks into place at any length along the tie body



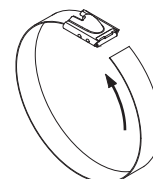
Part Number	Part Description	Std. Pkg. Qty.	Std. Ctn. Qty.
AISI 304 Stainless Steel			
MTHS-C	Loose piece banding head for standard cross section banding.	100	1000
MTHH-C	Loose piece banding head for heavy cross section banding.	100	1000
MTHEH-C	Loose piece banding head for extra-heavy cross section banding.	100	1000
MTHSH-C	Loose piece banding head for super-heavy cross section banding.	100	1000
AISI 316 Stainless Steel			
MTHS-C316	Loose piece banding head for standard cross section banding.	100	1000
MTHH-C316	Loose piece banding head for heavy cross section banding.	100	1000
MTHEH-C316	Loose piece banding head for extra-heavy cross section banding.	100	1000
MTHSH-C316	Loose piece banding head for super-heavy cross section banding.	100	1000
AISI 316 Coated Stainless Steel			
MTHCH-C316	Loose piece coated banding head for heavy cross section banding.	100	1000
MTHCEH-C316	Loose piece coated banding head for extra-heavy cross section banding.	100	1000
MTHCSH-C316	Loose piece coated banding head for super-heavy cross section banding.	100	1000



1) Take one end of the cut banding and bend back 1/2" (13mm).



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.
System
Overview

GS4MT Hand Operated Installation Tool

B1.
Cable Ties

- Single handle operation for fast installation
- Cable tie side entry for immediate positioning of tie and tool
- Controlled tension, fully adjustable
- Easy removal of excess tie

- Qualified product listed per MIL Standard MS90387-3
- Automatically tensions and cuts off tie when predetermined tension is reached
- Installs standard .18 inch (4.6mm), light-heavy .25 inch (6.4mm) and heavy .31 inch (7.9mm) cross section ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties



GS4MT

Part Number	Part Description	Std. Pkg. Qty.
GS4MT	Used with standard, light-heavy, and heavy cross section Pan-Steel® type MLT ties, type MLTC/MLTFC coated ties, and type MLTDH double wrapped ties.	1
K4M-BLD	Replacement cutter blade for GS4MT.	1
K4MTG	Replacement tension gripper for GS4MT.	1
CAMT	Cut-off accessory. Use this accessory with GS4MT tool to cut MBH or MBS continuous banding. Accessory drops in place for use.	1

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management



Side Entry



CAMT

D1.
Terminals

D2.
Power
Connectors

Tool Tension Locking Kits

- For applications requiring a locking device on either the selector knob (one cross section size and tension only) or tension level adjustment (but allow cross section size changes)

D3.
Grounding
Connectors

E1.
Labeling
Systems



Part Number	Part Description	Std. Pkg. Qty.
TTLK3	Tool tension locking kit for GS4MT and PPTMT installation tools.	1

E2.
Labels

To lock selector knob and tension level.

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification



To lock fine adjustment.

E5.
Lockout/
Tagout
& Safety
Solutions

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ST2MT Installation Tool

- Cable tie side entry for immediate positioning of tie and tool
- One hand operation – lightweight
- Easy removal of excess tie
- Tool tension is controlled by installer – twist action cut-off
- Rugged, lightweight, easy-to-operate pliers-type tool provides mechanical advantage



Part Number	Part Description	Std. Pkg. Qty.
ST2MT	Used with standard, light-heavy, heavy and extra-heavy cross section Pan-Steel® type MLT ties, type MLTC/MLTFC coated ties, and type MLTDH double wrapped ties.	1

RT2HT and RT2HTN Installation Tools

- Cable tie side entry for immediate positioning of tie and tool to speed installation
- Multi-position rear handle provides flexibility for a one or two hand installation
- Narrow nose tool design option available for applications requiring installations in tight confined spaces
- Replacement cutter blade and handle available for RT2HT



RT2HT



RT2HTN

Part Number	Part Description	Std. Pkg. Qty.
RT2HT	Used with extra-heavy, extra-heavy 15, and super-heavy cross section Pan-Steel® type MLT and MLTFC ties. Width of tool nose 2.60" (66.0mm).	1
RT2HTN	Narrow nose installation tool for use with extra-heavy, extra-heavy 15, and super-heavy cross section Pan-Steel® type MLT and MLTFC ties. Width of tool nose 1.06" (27.0mm).	1

HTMT Installation Tool

- Economical
- Coiled tie end remaining after tensioning assures a safe end
- Manual tension, no cut-off
- Installs ties parallel to the bundle



Part Number	Part Description	Std. Pkg. Qty.
HTMT	Used with standard, light-heavy, and heavy cross section Pan-Steel® type MLT ties, type MLTC/MLTFC coated ties, and type MLTDH double wrapped ties.	1

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B3.
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Wiring
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A. System Overview

PPTMT Pneumatic Installation Tool

B1. Cable Ties

- Power assisted tool for fast and effortless installation
- Cable tie side entry for immediate positioning of tie and tool
- Controlled tension, fully adjustable
- Automatic cut-off
- One hand operation – lightweight
- Easy removal of excess tie
- Operates 85 PSI (586 KPA Bar) non-lubricated air and requires no special maintenance

B2. Cable Accessories

B3. Stainless Steel Ties



PPTMT

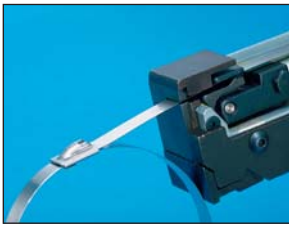
Part Number	Part Description	Std. Pkg. Qty.
PPTMT	Pneumatic hand tool used with Pan-Steel® type MLT ties, type MLTC/MLTFC coated ties, and type MLTDH double wrapped ties. Automatically tensions and cuts off tie when predetermined tension is reached, providing more reliable and consistent installations. Ideal for high production applications. Installs standard .18" (4.6mm), light-heavy .25" (6.4mm), and heavy .31" (7.9mm) cross section ties.	1
PPH10	10.0' (3m) hose assembly (regulator to tool); includes a .13" (3.3mm) NPT male connector (to regulator) and .13" (3.3mm) female quick disconnect (to tool).	1
PL289N1	Filter/regulator .5 micron element, regulated range 3 – 100 psig, features .13" (3.3mm) NPT female output port (to hose PPH10) and .25" (6.4mm) male quick disconnect to source air line.	1
KPPTMTG	Replacement gripper kit for PPTMT.	1
KPPTMTB	Replacement blade kit for PPTMT.	1

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management



Side Entry

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

NEW! PBTMT Battery Powered Installation Tool

- Lithium-Ion battery optimizes performance by installing more cable ties per charge
- Ergonomic tool design provides a compact lightweight body, reducing operator fatigue
- Automatic flush cut off enhances productivity with easy one hand installation
- Cable tie side entry allows quick side entry of tie into tool to speed installation
- 360° rotating head allows access to confined spaces
- Controlled tension mechanism provides consistent installations every time
- Battery indicator improves productivity with quick visual identification of battery life
- Variable speed trigger provides increased operator control, for easy installation



PBTMT

Part Number	Part Description	Std. Pkg. Qty.
PBTMT	Battery powered installation tool, for use with Pan-Steel® heavy, extra-heavy, and super-heavy cross section MLT style ties, and MLTD double wrapped style ties, 2 – 12 volt Lithium-Ion batteries and 115 volt, 60 Hz charger included.	1



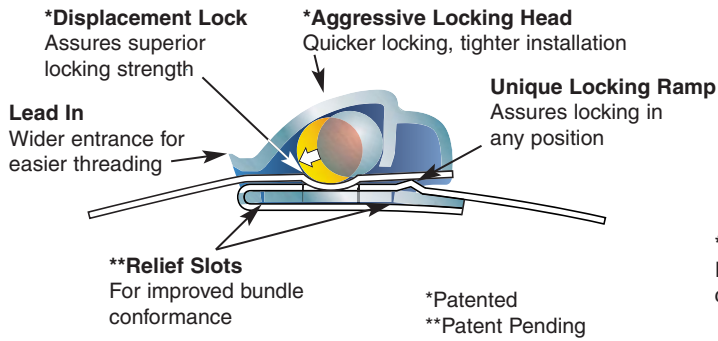
360° Rotating Head

Features and Benefits – Pan-Steel® Retained Tension Ties – MRT/MRS Series

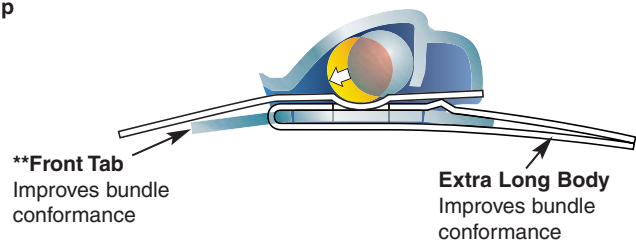
Panduit® Pan-Steel® Retained Tension Ties are engineered for safety, productivity, and durability by providing round edges and smooth surfaces, easy threading, high loop tensile strength and tight clamping.

Panduit Retained Tension Tie Technology

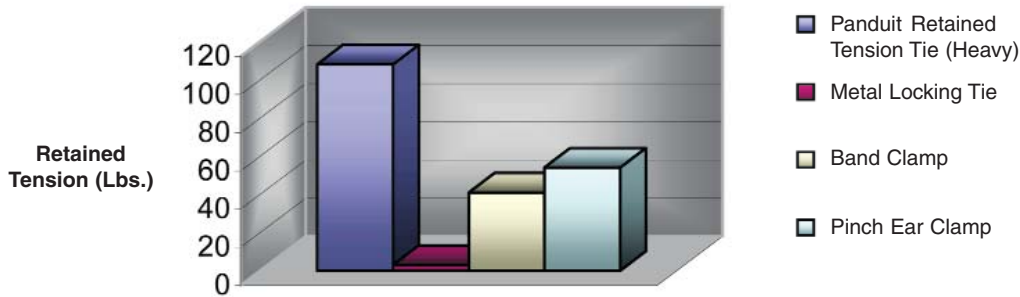
Features of Retained Tension Ties (MRT and MRS Series)



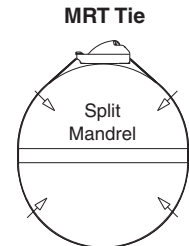
Additional Features of 360° Radial Seal Retained Tension Ties (MRS Series Only)



Retained Tension Performance Comparison**



**Representative sample, actual results may vary.



Retained Tension
Split mandrel test fixture measures retained tension of installed tie

- A. System Overview
- B1. Cable Ties
- B2. Cable Accessories
- B3. Stainless Steel Ties
- C1. Wiring Duct
- C2. Surface Raceway
- C3. Abrasion Protection
- C4. Cable Management
- D1. Terminals
- D2. Power Connectors
- D3. Grounding Connectors
- E1. Labeling Systems
- E2. Labels
- E3. Pre-Printed & Write-On Markers
- E4. Permanent Identification
- E5. Lockout/Tagout & Safety Solutions
- F. Index

A. System Overview

Part Number System for Pan-Steel® Retained Tension Ties – MRT Series

B1. Cable Ties

MRT

Type

MRT = Metal Retained Tension Tie

6

Bundle Diameter Reference (In.)

S

Cross Section

S = Standard
LH = Light-Heavy
H = Heavy

—

C

Package Qty.

L = 50
C = 100

4

Material

4 = 304

B2. Cable Accessories

B3. Stainless Steel Ties



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)



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

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	In.	mm	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		100	500
MRT4S-C4	4.0	102	18.5	470	180	800	0.75	19.1	0.18	4.4		100	500
MRT6S-C4	6.0	152	24.8	630	180	800	0.75	19.1	0.18	4.4		100	500

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		50	250
MRT4LH-L4	4.0	102	18.5	470	225	1000	1.00	25.4	0.25	6.4		50	250
MRT6LH-L4	6.0	152	24.8	630	225	1000	1.00	25.4	0.25	6.4		50	250

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		50	250
MRT4H-L4	4.0	102	18.5	470	400	1780	1.00	25.4	0.31	7.9		50	250
MRT6H-L4	6.0	152	24.8	630	400	1780	1.00	25.4	0.31	7.9		50	250

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		100	500

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		50	250

***For information on installation tools, refer to page B3.20.

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

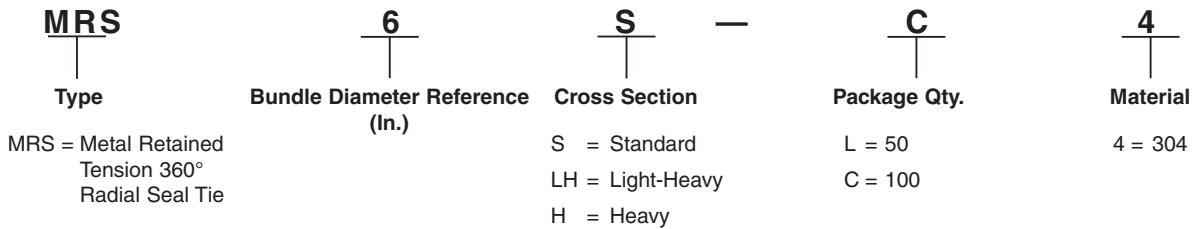
E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

Part Number System for Pan-Steel® 360° Radial Seal Retained Tension Ties – MRS Series



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	In.	mm	Lbs.	N	In.	mm	In.	mm			

AISI 304 Stainless Steel – For General Purpose

Standard Cross Section

MRS1S-C4	1.0	25	9.0	229	180	800	0.75	19.1	0.18	4.4	MTRTLS	100	500
MRS2S-C4	2.0	51	12.2	310	180	800	0.75	19.1	0.18	4.4		100	500
MRS4S-C4	4.0	102	18.5	470	180	800	0.75	19.1	0.18	4.4		100	500
MRS6S-C4	6.0	152	24.8	630	180	800	0.75	19.1	0.18	4.4		100	500

Light-Heavy Cross Section

MRS1.5LH-L4	1.5	38	10.6	269	225	1000	1.00	25.4	0.25	6.4	MTRTLS	50	250
MRS2LH-L4	2.0	51	12.2	310	225	1000	1.00	25.4	0.25	6.4		50	250
MRS4LH-L4	4.0	102	18.5	470	225	1000	1.00	25.4	0.25	6.4		50	250
MRS6LH-L4	6.0	152	24.8	630	225	1000	1.00	25.4	0.25	6.4		50	250

Heavy Cross Section

MRS1.5H-L4	1.5	38	10.6	269	400	1780	1.00	25.4	0.31	7.9	MTRTH	50	250
MRS2H-L4	2.0	51	12.2	310	400	1780	1.00	25.4	0.31	7.9		50	250
MRS4H-L4	4.0	102	18.5	470	400	1780	1.00	25.4	0.31	7.9		50	250
MRS6H-L4	6.0	152	24.8	630	400	1780	1.00	25.4	0.31	7.9		50	250

***For information on installation tools, refer to page B3.20.

A.
System
Overview

B1.
Cable
Ties

B2.
Cable
Accessories

B3.
Stainless
Steel
Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
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E1.
Labeling
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E2.
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E3.
Pre-Printed
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E4.
Permanent
Identification

E5.
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A.
System
Overview

MTRT Retained Tension Manual Installation Tools

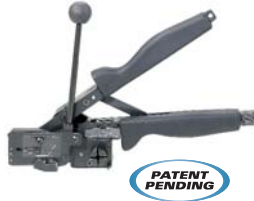
B1.
Cable Ties

- Adjustable detent mechanism provides user pre-set controlled tension for repeatable installations and maximum reliability
- Smooth cable tie cut-off eliminates burrs or sharp edges after installation to deliver added bundle protection and job site safety

- Tie tensioning mechanism provides improved durability compared to conventional gripper style tools
- Change over kits available to allow for installation of all tie cross sections with one tool

B2.
Cable
Accessories

B3.
Stainless
Steel Ties



Part Number	Part Description	Std. Pkg. Qty.
MTRTH	Retained tension installation tool for use with Pan-Steel® heavy cross section MRT and MRS style ties and MRT double wrapped style ties.	1
MTRTLS	Retained tension installation tool for use with Pan-Steel® light-heavy and standard cross section MRT and MRS style ties and MRT double wrapped style ties.	1
KMTRTH	Change over kits allow for installation of heavy cross section MRT and MRS style ties, and MRT double wrapped style ties in MTRTH tools.	1
KMTRTLS	Change over kits allow for installation of light-heavy and standard cross section MRT and MRS style ties, and MRT double wrapped style ties in MTRTLS tools.	1

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
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E4.
Permanent
Identification

E5.
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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 -112°F (-80°C) to 1000°F (538°C).

Unique Locking Methods Pan-Steel® Stainless Steel Strapping

***Hooked Clamping Tab**

Bends strap body within retention area of buckle for increased loop tensile strength and full coverage of cut end of strap

***Cross Rib Support**

Enhanced rigidity for higher loop tensile strength

Buckle Design

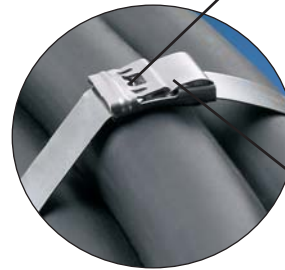
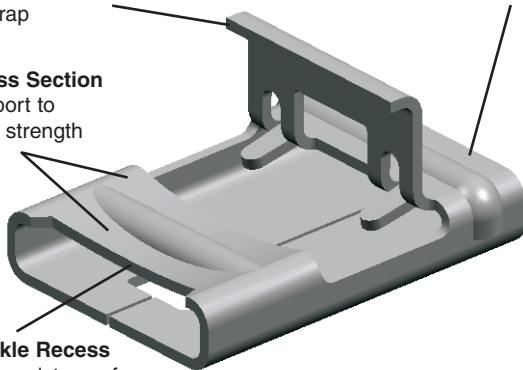
Provides a low finished profile

***Concave Cross Section**

Enhanced support to improve tensile strength

***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

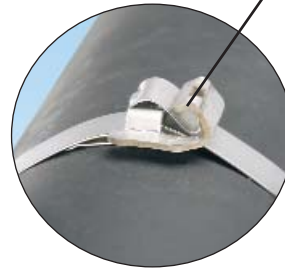
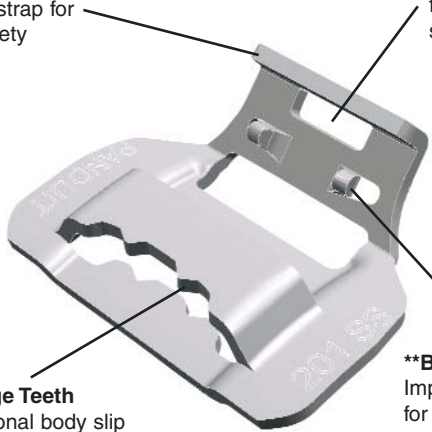
Provides full coverage of cut end of strap for enhanced safety

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
**Patents Pending



Hand operated installation tools used with Panduit® Pan-Steel® Strapping. Tensions, cuts strapping, and secures the buckle tab. Easy to operate. See page B3.26.



Custom length strapping available for applications that require various bundle diameters, to provide job safety and versatility with minimum inventory. See page B3.25.

A. System Overview

The Panduit Method Reduces Installation Time

Pan-Steel® Stainless Steel Strapping

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties



1) Place strap around the material, 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. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection



4) Using the closure lever on the handle of the tool, bend retaining tab down and over cut end.



Provides finished, safe, and secure closure.

C4. Cable Management

Pan-Steel® Stainless Steel MS75 Strapping

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors



1) Place strap around the material, 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.

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers



4) Remove tool, press cut end down toward retaining tab.



5) Using flathead screwdriver, bend retaining tab down and over cut end.



Provides finished, safe, and secure closure.

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

Part Number System for Discrete Length Strapping

MS

4

W

38

T

15

L

4

Type

Bundle Diameter (In.)

Width

Inches

Thickness

15 = 0.015"

Standard Package Size

Material

MS = Metal Strap
MSC = Metal Strap Coated

38 = 3/8
50 = 1/2
63 = 5/8
75 = 3/4

30 = 0.030"

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				
AISI 201 Stainless Steel																
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		25	25	
MS8W75T30-Q2	8.0	203	32.7	831	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76		25	25	
MS10W75T30-Q2	10.0	254	39.0	991	2400	10656	1.00	25.4	0.75	19.1	0.030	0.76		25	25	
AISI 304 Stainless Steel																
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		50	250	
MS6W38T15-L4	6.0	152	24.4	620	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250	
MS8W38T15-L4	8.0	203	30.7	780	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250	
MS10W38T15-L4	10.0	254	37.0	940	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250	
MS4W50T15-L4	4.0	102	18.0	457	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250	
MS6W50T15-L4	6.0	152	24.4	620	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250	
MS8W50T15-L4	8.0	203	30.7	780	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250	
MS10W50T15-L4	10.0	254	37.0	940	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250	
MS4W63T15-L4	4.0	102	18.0	457	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250	
MS6W63T15-L4	6.0	152	24.4	620	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250	
MS8W63T15-L4	8.0	203	30.7	780	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250	
MS10W63T15-L4	10.0	254	37.0	940	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250	
AISI 316 Stainless Steel																
MS2W38T15-L6	2.0	51	11.8	300	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		BT2HT	50	250
MS4W38T15-L6	4.0	102	18.0	457	502	2229	1.00	25.4	0.38	9.5	0.015	0.38			50	250
MS6W38T15-L6	6.0	152	24.4	620	502	2229	1.00	25.4	0.38	9.5	0.015	0.38	50		250	
MS8W38T15-L6	8.0	203	30.7	780	502	2229	1.00	25.4	0.38	9.5	0.015	0.38	50		250	
MS10W38T15-L6	10.0	254	37.0	940	502	2229	1.00	25.4	0.38	9.5	0.015	0.38	50		250	
MS4W50T15-L6	4.0	102	18.0	457	671	2979	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MS6W50T15-L6	6.0	152	24.4	620	671	2979	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MS8W50T15-L6	8.0	203	30.7	780	671	2979	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MS10W50T15-L6	10.0	254	37.0	940	671	2979	1.00	25.4	0.50	12.7	0.015	0.38	50		250	
MS4W63T15-L6	4.0	102	18.0	457	839	3725	1.00	25.4	0.63	15.9	0.015	0.38	50		250	
MS6W63T15-L6	6.0	152	24.4	620	839	3725	1.00	25.4	0.63	15.9	0.015	0.38	50		250	
MS8W63T15-L6	8.0	203	30.7	780	839	3725	1.00	25.4	0.63	15.9	0.015	0.38	50		250	
MS10W63T15-L6	10.0	254	37.0	940	839	3725	1.00	25.4	0.63	15.9	0.015	0.38	50		250	

*Other lengths available, contact Panduit Customer Service.

***For information on installation tool, refer to page B3.26.

A.
System
Overview

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

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A.
System
Overview

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)

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties



C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
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E1.
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E2.
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Tagout
& Safety
Solutions

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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			
MSC2W38T15-L6	2.0	51	11.8	300	502	2229	1.00	25.4	0.38	9.5	0.015	0.38	BT2HT	50	250
MSC4W38T15-L6	4.0	102	18.0	457	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250
MSC6W38T15-L6	6.0	152	24.4	620	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250
MSC8W38T15-L6	8.0	203	30.7	780	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250
MSC10W38T15-L6	10.0	254	37.0	940	502	2229	1.00	25.4	0.38	9.5	0.015	0.38		50	250
MSC4W50T15-L6	4.0	102	18.0	457	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250
MSC6W50T15-L6	6.0	152	24.4	620	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250
MSC8W50T15-L6	8.0	203	30.7	780	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250
MSC10W50T15-L6	10.0	254	37.0	940	671	2979	1.00	25.4	0.50	12.7	0.015	0.38		50	250
MSC4W63T15-L6	4.0	102	18.0	457	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250
MSC6W63T15-L6	6.0	152	24.4	620	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250
MSC8W63T15-L6	8.0	203	30.7	780	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250
MSC10W63T15-L6	10.0	254	37.0	940	839	3725	1.00	25.4	0.63	15.9	0.015	0.38		50	250

*Other lengths available, contact Panduit Customer Service.

***For information on installation tools, refer to page B3.26.

^Base material less coating.

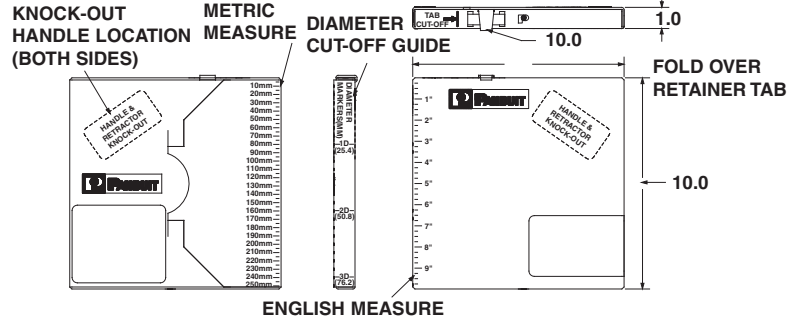
Pan-Steel® Custom Length Strapping

- 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 [^]		Used with Buckle	Recommended Installation Tool***	Std. Pkg. Qty.†
	Ft.	m	Lbs.	N	In.	mm	In.	mm			
304 Stainless Steel											
MSW75T30-CR2	100	30.5	2400	10656	0.75	19.1	0.030	0.80	MSBW75-C2	BT75SDT	1
304 Stainless Steel											
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		1
MSW63T15-CR4	100	30.5	839	3725	0.63	15.9	0.015	0.38	MSBW63-C4		1
316 Stainless Steel											
MSW38T15-CR6	100	30.5	502	2229	0.38	9.5	0.015	0.38	MSBW38-C6	BT2HT	1
MSW50T15-CR6	100	30.5	671	2979	0.50	12.7	0.015	0.38	MSBW50-C6		1
MSW63T15-CR6	100	30.5	839	3725	0.63	15.9	0.015	0.38	MSBW63-C6		1
Nylon Coated Custom Length Strapping											
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		1
MSCNW63T15-QR6	82.5	25.0	839	3725	0.63	15.9	0.015	0.38	MSBW63-C6		1

*Other lengths available, contact Panduit Customer Service. ^Base metal less coating. †Order in number of reels required. ***For information on installation tools, refer to page B3.26.

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

- Buckle design provides a low finished profile
- After tensioning cut end is locked inside buckle – no sharp edges



Part Number	Material	Width		Part Description	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm			
AISI 201 Stainless Steel						
MSBW75-C2	201	0.75	19.1	Individual low profile buckles used with metal strapping.	100	—
AISI 304 Stainless Steel						
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		100	1000
MSBW63-C4	304	0.63	15.9		100	1000
AISI 316 Stainless Steel						
MSBW38-C6	316	0.38	9.5	Individual low profile buckles used with custom length strapping.	100	1000
MSBW50-C6	316	0.50	12.7		100	1000
MSBW63-C6	316	0.63	15.9		100	1000



A.
System
Overview

BT2HT Hand Operated Installation Tool for Strapping

B1.
Cable
Ties

- Strap side entry
- Multi-position rear handle provides flexibility for a one or two hand installation
- Adjustable tension control
- Easy removal of excess strap
- Installs (3) sizes: 0.38 inch (9.5mm), 0.50 inch (12.7mm), and 0.63 inch (15.9mm)
- Replacement cutter blade and handle available

B2.
Cable
Accessories



B3.
Stainless
Steel Ties

Part Number	Part Description	Std. Pkg. Qty.
BT2HT	Installation tool for use with 0.38" (9.5mm), 0.50" (12.7mm), and 0.63" (15.9mm) widths of Panduit® Pan-Steel® Strapping. Tensions, cuts strapping, and secures the buckle tab. Lever cut off.	1
KRT2BLD	Replacement cutter blade for RT2HT and BT2HT.	1
KRT2HNDL	Replacement cutter handle for RT2HT and BT2HT.	1

C1.
Wiring
Duct

C2.
Surface
Raceway

NEW! BT75SDT Hand Operated Installation Tool for MS75 Strapping

C3.
Abrasion
Protection

- Screw drive tension mechanism provides high tension with minimal effort, reducing operator fatigue
- Heavy duty construction offers a longer service life
- Strapping side entry allows quick side entry of the strap into tool to speed installation

C4.
Cable
Management



D1.
Terminals

Part Number	Part Description	Std. Pkg. Qty.
BT75SDT	Installation tool for use with 0.75" (19.1mm) width strapping only. Tensions and cuts strapping. Screwdriver required for buckle closure (not included).	1

D2.
Power
Connectors

D3.
Grounding
Connectors

PCS Cushion Sleeve

E1.
Labeling
Systems

- Black neoprene 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)

E2.
Labels



E3.
Pre-Printed
& Write-On
Markers

Part Number	Used with Pan-Steel® Ties/Strapping	Width		Length		Std. Pkg. Qty.‡
		In.	mm	Ft.	m	
PCSS-B-CR	MLT/S	.33	8.4	100	30.5	1
PCSH-B-CR	MLT/LH/H	.47	11.9	100	30.5	1
PCSSH-B-CR*	MLT/EH/SH and MS Straps	.91	23.1	100	30.5	1

E4.
Permanent
Identification



E5.
Lockout/
Tagout
& Safety
Solutions

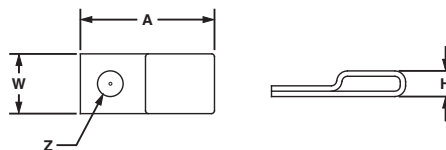
F.
Index

*Meets MIL-R-6855
‡Order in number of reels required.
Pkg. -CR = 100 ft. (30.5m) reel.

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 .38 inch (9.5mm) wide strapping
- 304 Stainless Steel



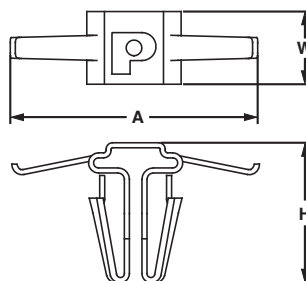
Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method*	Length A		Width W		Height H		Hole Diameter Z		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm		
MTM1H-C	MLTS/LH/H, MLTC/H, MLTFC/S/LH/H or MSW38	#8 (4mm) screw	.90	22.6	.40	10.2	.17	4.4	.17	4.4	100	1000
MTM1H10-C		#10 (5mm) screw	.90	22.6	.40	10.2	.17	4.4	.21	5.4	100	1000
MTM1H25-C		1/4" (6mm) screw	.90	22.6	.40	10.2	.17	4.4	.28	7.1	100	1000

*Stainless steel screws are recommended for fastening to avoid corrosion problems associated with dissimilar metals.

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)	.84	21.3	.29	7.3	.56	14.2	.03 – .09	.8 – 2.4	25	250

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel Ties

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power Connectors

D3. Grounding Connectors

E1. Labeling Systems

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview

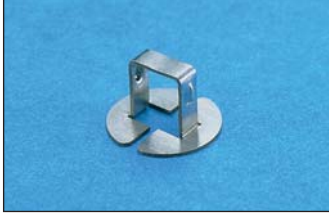
Stainless Steel Push Button Mount

B1. Cable Ties

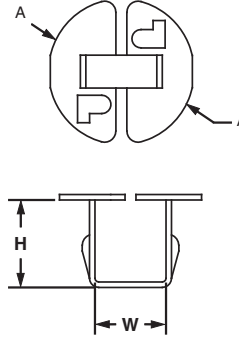
- Low profile
- No tapping required
- Designed for use only where both sides of the panel are accessible

- For use with standard cross section Pan-Steel® Ties
- 304 Stainless Steel

B2. Cable Accessories



B3. Stainless Steel Ties



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

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 .25" (6.4mm)	.40	10.0	.20	5.0	.26	6.5	.03 – .12	.8 – 3.0	25	250

C4. Cable Management

D1. Terminals

Stainless Steel 2-Way Tie Mount

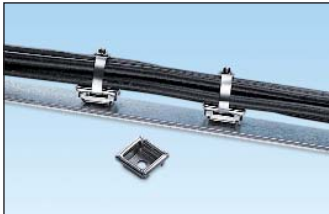
D2. Power Connectors

- 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 .09 inches (2.3mm)

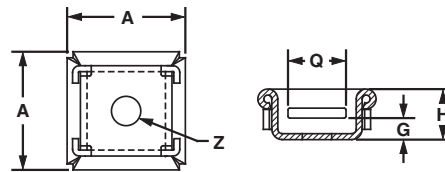
- For use with standard, light-heavy, and heavy cross section Pan-Steel® Ties
- 304 Stainless Steel

D3. Grounding Connectors

E1. Labeling Systems



E2. Labels



E3. Pre-Printed & Write-On Markers

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	In.	mm	In.	mm	In.	mm		
MTM2H-Q	MLTS/LH/H, MLTC/H or MLTFC/S/LH/H	#8 (4mm) screw	.71	18.0	.30	8.0	.09	2.3	.35	9.0	.17	4.5	25	250

E4. Permanent Identification

E5. Lockout/Tagout & Safety Solutions

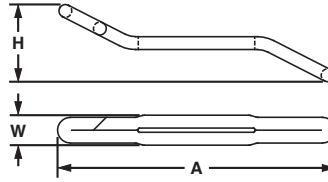
*Stainless steel screws are recommended for fastening to avoid corrosion problems associated with dissimilar metals.

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Stainless Steel Bulkhead Mount

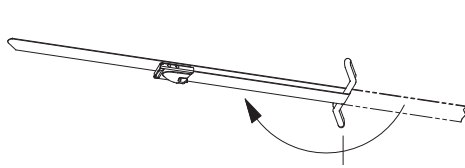
- Zero profile
- Mounts directly to surface
- Used where only one side of the panel is accessible

- Permanent, secure application
- Used with standard, light-heavy, and heavy cross section Pan-Steel® Ties
- 304 Stainless Steel

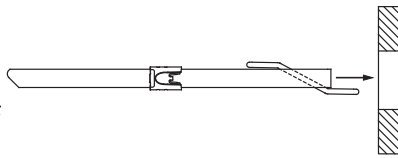


Part Number	Used with Pan-Steel® Ties/Strapping	Mounting Method	Length A		Width W		Height H		Max. Panel Thickness		Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm	In.	mm		
MTMBH-Q	MLTS/LH/H/EH/SH, MLTC/H, or MLTFC/S/LH/H/EH/SH	Pre-drill hole size standard and light-heavy cross section MLT-S/LH .38" (9.5mm) – .50" (12.7mm). Heavy cross section MLT-H .50" (12.7mm) – .63" (15.9mm).	1.92	48.5	.21	5.3	.54	13.7	.50	12.7	25	250

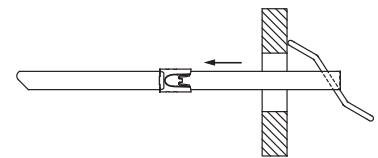
To Install Bulkhead Mount:



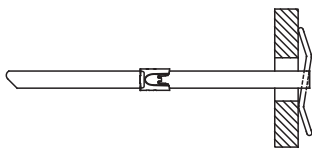
- 1) Insert cable tie through mount slot and fold cable tie.



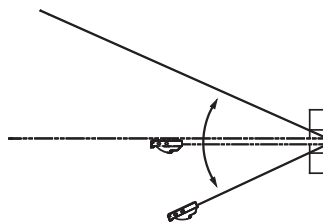
- 2) Insert cable tie and mount through panel/framework hole.



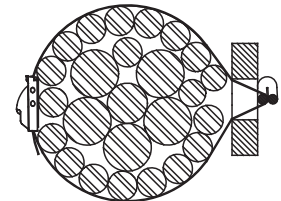
- 3) Pull cable tie back to secure the mount in the panel/framework.



- 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.

A.
System
Overview

Stainless Steel Technical Information Physical Characteristics of Stainless Steel and Aluminum

B1.
Cable Ties

B2.
Cable
Accessories

B3.
Stainless
Steel Ties

	Pan-Steel® Stainless Steel MS Strapping and Buckles	Pan-Steel® Stainless Steel Marker Plates, Tags, and Cable Ties	Pan-Alum™ Aluminum Marker Plates and Cable Ties
Material:	201 Grade Stainless Steel	304 and 316 Grade Stainless Steel	Aluminum – Natural and Anodized
Maximum temperature rating:	538°C	538°C	100°C
Minimum temperature rating:	-80°C	-80°C	-80°C
RoHS:	Compliant	Compliant	Compliant
Flammability:	Non-Flammable	Non-Flammable	Non-Flammable
Ultraviolet light resistance:	Excellent	Excellent	Good



C1.
Wiring
Duct

Panduit Stainless Steel Cable Tie and Strapping Approvals

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

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E4.
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E5.
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Solutions

F.
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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. MSCW38T15, MSCW50T15, MSCW63T15, MSCNW38T15, MLTFC3, 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 EN50146	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. #03-HS373867-PDA, 04-HS476898-PDA, 05-HS118592C/1-PDA, 06-HS152579-PDA, 05-HS118592A/2-PDA	Mechanical	All MLT ties and MS straps.
	Bureau Veritas	Cert. #04048/D2 BV	Material specification, dimensional, visual	All uncoated MLT ties in 304 and 316 material.
	Det Norske Veritas	Cert. # E-6540 E-6539	Salt mist test, tensile test, accelerated aging, vibration tests	All uncoated MLTS, MLTH, MLTE15, MLTDEH15, MLTSH, and MS strap coated and uncoated 316 material.
	Germanischer Lloyd	Cert. # 32666-83HH 51796-89HH	Mechanical	All uncoated stainless steel MLT ties and all MS straps.
	Lloyd's Register of Shipping	Cert. # 89/60123	Material specification, tensile test, vibration tests	All uncoated stainless steel MLT ties and all MS straps.
	RINA	Cert. # ELE71502CS	Material specification	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 306 material.
	US Coast Guard	File No.16703/46	Mechanical	MLT-H series cable ties.
	US Military	MIL-T-81306A/ MS90387-3	Mechanical	GS4MT installation tools.

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		E	Ethyl Glycol	100	E	Nitrous Acid	5	E	Sodium Fluoride	5	F
Ammonium Sulfate	10	S	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	Furfural	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%	—	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	Iodoform	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 Tetrachloride	—	—	Jet Fuel	100	E	Potassium Iodide	All	E	Tannic Acid	10	E
Chlorine (Wet)	—	F	Lactic Acid	100	E	Potassium Nitrate	50	E	Tartaric Acid	50	E
Chlorine (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	F	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.

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A.
System
Overview

Rigorous Tests and Physical Properties of Stainless Steel

B1.
Cable Ties

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 through B3.25.

B2.
Cable
Accessories

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.



B3.
Stainless
Steel Ties

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 8 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.

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.

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.

OUTDOOR EXPOSURE: Panduit® Pan-Steel® Stainless Steel Ties and Straps have been exposed outdoors at New Lenox, Illinois USA since 1985. At the printing of this catalog, there has been no sign of corrosion or loss of performance.

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 AS23190, the parts were then subjected to and passed the minimum loop tensile test.

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 2x10⁸ rads.

C1.
Wiring
Duct

C2.
Surface
Raceway

C3.
Abrasion
Protection

C4.
Cable
Management

D1.
Terminals

D2.
Power
Connectors

D3.
Grounding
Connectors

E1.
Labeling
Systems

E2.
Labels

E3.
Pre-Printed
& Write-On
Markers

E4.
Permanent
Identification

E5.
Lockout/
Tagout
& Safety
Solutions

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Military Cross Reference (AS23190)

Military Standard Part Number	Panduit Part Number
AS23190/3-1	MLT2S-CP
AS23190/3-1	MLT2S-CP316
AS23190/3-2	MLT4S-CP
AS23190/3-2	MLT4S-CP316
AS23190/3-3	MLT6S-CP
AS23190/3-3	MLT6S-CP316
AS23190/3-4	MLT8S-CP
AS23190/3-4	MLT8S-CP316
AS23190/3-5	MLT2H-LP
AS23190/3-5	MLT2H-LP316
AS23190/3-6	MLT4H-LP
AS23190/3-6	MLT4H-LP316
AS23190/3-7	MLT6H-LP
AS23190/3-7	MLT6H-LP316
AS23190/3-8	MLT8H-LP
AS23190/3-8	MLT8H-LP316
AS23190/3-9	MLT10H-LP
AS23190/3-9	MLT10H-LP316