

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index



## 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 – from high-speed automatic systems to hand operated tools; all with consistent, 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.



## Selecting the Proper Cable Tie

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

Cable Tie Function		Design Criteria		Cable Tie Family		
1) Select the main function of the cable tie you need: Bundle = Standard Cable Ties Reusable = Nylon Releasable Ties and Hook & Loop Ties Identify = Marker and Flag Ties Mount = Clamp Ties, Push Mount and Stud Mount Ties		2) Determine the design criteria for your application		3) Select the cable tie family that meets your overall needs		
Design Criteria	Cable Tie Function	Bundle, Reusable, Identify, Mount	Bundle, Reusable, Identify, Mount	Bundle, Mount	Bundle	Bundle
	Material	Nylon 6.6	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	Natural	Black
	Part Number Suffix (Material Designation)	None	0	30	39	300
	Weathering Life Expectancy (Years)	1-2	7-9	4-5	1-2	7-9
	Tensile Strength 73°F (psi)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)
	UL 94 Flammability (Note 3)	V-2	V-2	V-2	V-2	V-0
	Oxygen Index	28	28	26	26	34
	Radiation Resistance	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads
	Water Absorption (24 hours)	1.2%	1.2%	1.2%	1.2%	1.1%
Cable Tie	Maximum Continuous Use Temperature (Note 4)	185°F 85°C	185°F 85°C	239°F 115°C	239°F 115°C	212°F 100°C (Note 5)
	Minimum Continuous Use Temperature (Note 6)	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C
	Overall Chemical Resistance (10 = Best)	6	6	6	6	6
	-Hydrocarbons	9	9	9	9	9
	-Chlorinated Hydrocarbons	7	7	7	7	7
	-Acids	2	2	2	2	2
	-Bases	7	7	7	7	7
	-Salts	3	3	3	3	3
	Relative Price	Low	Low	Low	Low	Medium
	PAN-Ty® Cable Ties (Catalog Page)	Page B1.7	Page B1.7 (Note 7)	Page B1.7	Page B1.7	Page B1.7
Cable Tie	SUPER-GRIP™ Cable Ties (Catalog Page)	Page B1.37	Page B1.37	Page B1.37		
	DOME-TOP® Barb Ty Cable Ties (Catalog Page)	Page B1.41	Page B1.41	Page B1.41	Page B1.41	
	DURA-TY™ Cable Ties (Catalog Page)					
	Parallel-Entry Cable Ties (Catalog Page)	Page B1.54	Page B1.54		Page B1.54	
	Hook & Loop Cable Ties (Catalog Page)					
Cable Tie	STA-STRAP® Cable Ties (Catalog Page)	Page B1.69	Page B1.69	Page B1.69		
	Specialty Cable Ties (Catalog Page)	Page B1.76	Page B1.76	Page B1.76	Page B1.76	

Note 1 ASTM D638

Note 4 See "Temperature", page B1.111

Note 7 Also available in 00 material

Note 2 Telcordia TR-TSY-000789

Note 5 Estimated

(meets Mil Spec)

Note 3 See Table B, page B1.110

Note 6 After Installation

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

▲HALAR is a registered trademark of Solvay Solexis, Inc.

## Selecting the Proper Cable Tie (continued)

Bundle	Bundle	Bundle	Bundle	Bundle	Bundle	Bundle	Bundle, Reusable, Mount
Flame Retardant Nylon 6.6	Weather Resistant Nylon 12	Polypropylene	Weather Resistant Polypropylene	TEFZEL■	HALAR▲	Weather Resistant Acetal	Hook & Loop
Ivory	Black	Green	Black	Aqua	Maroon	Black	Various
69	120	109	100	76	702Y	N/A	N/A
1-2	12-15	1	7-9	>15	>15	>20	1-2
12,000 (Note 1)	8,100 (Note 1)	4,100 (Note 1)	4,100 (Note 1)	7,500 (Note 1)	7,000 (Note 1)	6,500 (Note 2)	12,000 (Note 1)
V-0	Not Recognized	Not Recognized	HB	V-0	V-0	HB	V-2 (Plenum-rated)
34	N/A	N/A	N/A	30	60	N/A	N/A
$1 \times 10^5$ Rads	$3.5 \times 10^6$ Rads	$1 \times 10^6$ Rads	$1 \times 10^6$ Rads	$2 \times 10^8$ Rads	$2 \times 10^8$ Rads	$6 \times 10^5$ Rads	N/A
1.1%	0.3%	0.1%	0.1%	<0.03%	<0.05%	<0.45%	N/A
212°F 100°C	194°F 90°C	239°F 115°C	239°F 115°C	338°F 170°C	302°F 150°C	185°F 85°C	220°F 104°C (Note 8)
-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	0°F -18°C (Note 8)
6	8	8	8	10	10	5	6
9	9	6	6	10	10	9	6
7	8	5	5	10	10	8	5
2	6	9	9	10	10	2	2
7	7	9	9	10	10	2	7
3	8	10	10	10	10	4	3
Medium	Medium	Medium	Medium	High	High	Medium	Medium
Page B1.7	Page B1.7	Page B1.7	Page B1.7	Page B1.7	Page B1.7		
						Page B1.41	
Page B1.54							Page B1.62

**Note 8** Temperature Range: Hook & Loop Ties:

TAK-Ty® Cable Ties (HLT, HLS, HLC, HLM) shown on page B1.64 as stated in table.

TAK-Ty® Cable Ties (HLTP, HLSP) shown on page B1.65: 0°F to 122°F (-18°C to 50°C)

TAK-TAPE™ Hook & Loop Strips (TTS) shown on page B1.65: -22°F to 194°F (-30°C to 90°C)

ULTRA-CINCH™ Hook & Loop Ties (UCT, UGCTC, UGCTE) shown on page B1.66: Data not available

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

A. System Overview



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

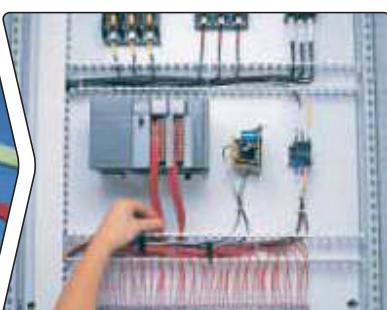
E3. Pre-Printed & Write-On Markers

E4. Lockout/ Tagout & Safety Solutions

F. Index

## Cable Tie Styles Overview

### PAN-TY® Cable Ties



**Pages B1.6 – B1.35**

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

### SUPER-GRIP™ Cable Ties



**Pages B1.36 – B1.39**

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

### DOME-TOP® Barb Ty Cable Ties



**Pages B1.40 – B1.52**

- 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

### Parallel-Entry Cable Ties



**Pages B1.53 – B1.61**

- Designed for use in the OEM and Transportation Markets
- All parallel-entry ties provide 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

## Cable Tie Styles Overview (continued)

### Hook & Loop Cable Ties



**Pages B1.62 – B1.67**

- Ideal for the Telecommunications, Financial, Education, and Government Markets
- Adjustable, releasable and reusable
- No risk of over-tensioning or damaging high performance network cables
- Variety of styles, sizes and colors

### STA-STRAP® Cable Ties



**Pages B1.68 – B1.75**

- 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

### Manual Cable Tie Installation Tools



**Pages B1.89 – B1.93**

- 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 B1.95 – B1.100**

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

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

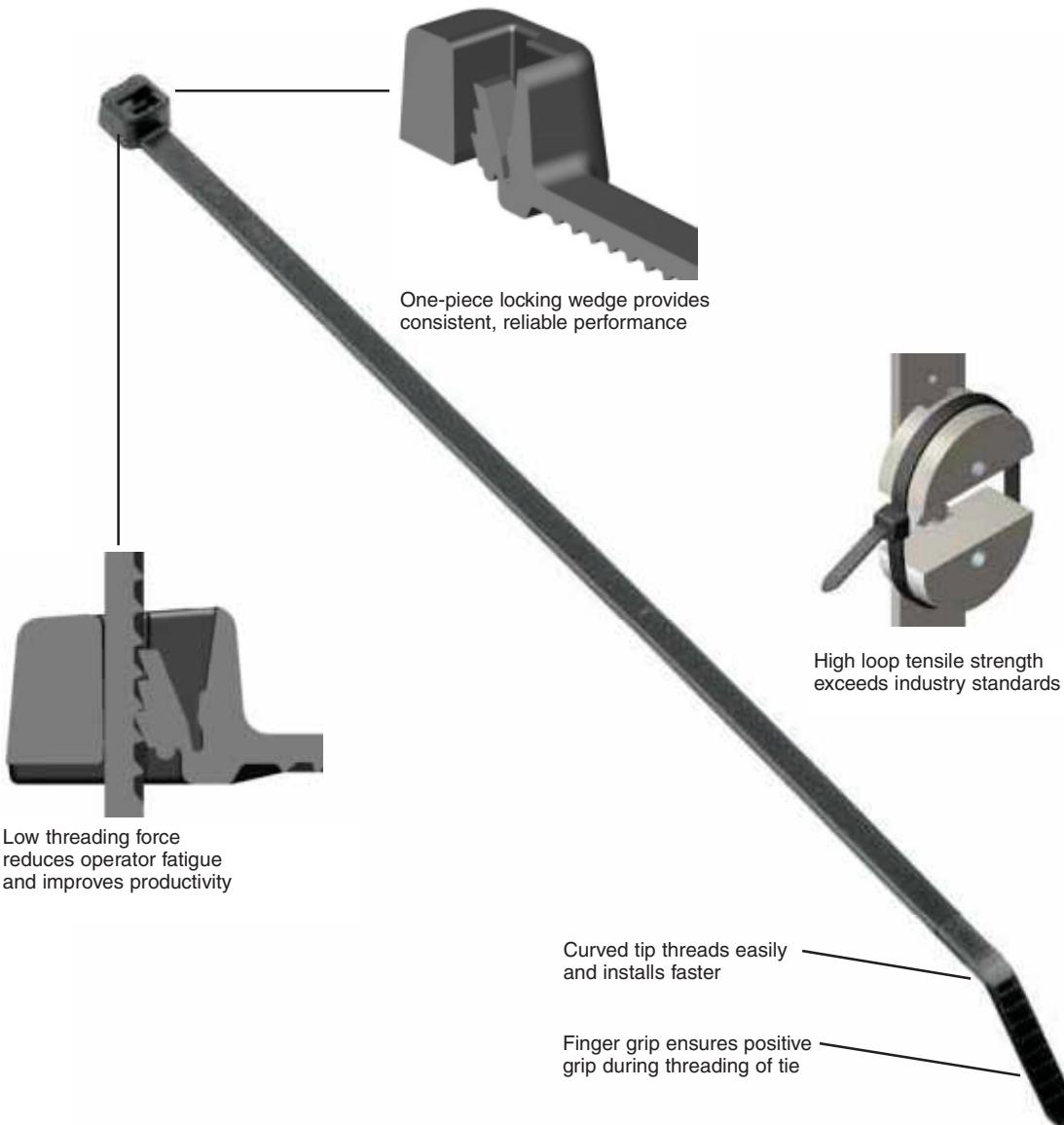
E4.Lockout/ Tagout & Safety Solutions

F.Index

## Features and Benefits – *PAN-Ty®* Cable Ties

One-piece design for consistent performance and reliability.

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



Cable tie tools speed installation and reduce total installed cost.

See [pages B1.89 – B1.93](#).



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

See [pages B2.1 – B2.24](#).

## 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 / Reusable	PRT	B1.20
	Clamp Ties / Mount	PLC	B1.24
	Push Mount Ties / Mount	PLWP, PRWP, PLUP, PLP	B1.26,28,30,31
	Marker Ties / Identify	PLF, PLM	B1.32
Weather Resistant Nylon 6.6, Black (0)	Locking Ties / Bundle	PLT	B1.10,11
	Releasable Ties / Reusable	PRT	B1.21,22
	Clamp Ties / Mount	PLC	B1.25
	Push Mount Ties / Mount	PLWP, PRWP, PLUP, PLP	B1.27,28,30,31
	Marker Ties / Identify	PLF, PLM	B1.32
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties / Bundle	PLT	B1.12
	Releasable Ties / Reusable	PRT	B1.21
	Clamp Ties / Mount / Identify	PLC	B1.25
	Push Mount Ties / Mount	PLWP, PRLWP, PRWP, PLUP, PLP	B1.27-.31
Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	Locking Ties / Bundle	PLT	B1.13
Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties / Bundle	PLT	B1.12
Flame Retardant Nylon 6.6, Black (60)	Locking Ties / Bundle	PLT	B1.14
Flame Retardant Nylon 6.6, Ivory (69)	Locking Ties / Bundle	PLT	B1.14
	Marker Ties / Identify	PLF, PLM	B1.32
Weather Resistant Nylon 12, Black (120)	Locking Ties / Bundle	PLT	B1.15
Natural Polypropylene, Green (109)	Locking Ties / Bundle	PLT	B1.16
Weather Resistant Polypropylene, Black (100)	Locking Ties / Bundle	PLT	B1.17
	Releasable Ties / Reusable	PRT	B1.23
HALAR▲, Maroon (702)	Locking Ties / Bundle	PLT	B1.18,19
TEFZEL■, Aqua Blue (76)			

▲ HALAR is a registered trademark of Solvay Solexis, 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	—	Color / Material See Page B1.33
Type	Size	Cross Section	Screw Hole Size	Package Size		
PLT = Locking Tie	Approx.	SM = Subminiature	(Clamp Ties Only)	Q = 25		
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						

For service and technical support, call 800-777-3300 or visit [www.panduit.com](http://www.panduit.com).

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

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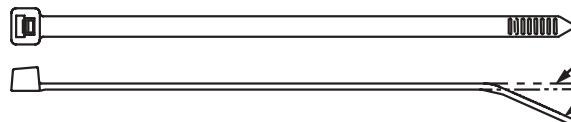
F.Index

A. System Overview

B1. Cable Ties


**PAN-TY® Cable Ties – Nylon 6.6**

- For indoor use
- Versatile cable ties can be used in countless applications
- One-piece construction for consistent performance and reliability
- Lowest threading force of any one-piece cable tie in the industry



Straight Tip

Curved Tip



B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

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D1. Terminals

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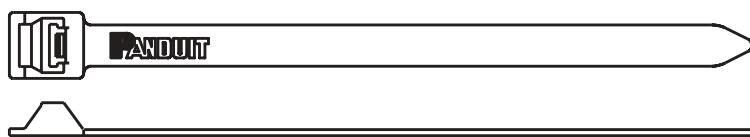
F. Index

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			
<b>Subminiature Cross Section</b>													
<b>PLT.6SM-C</b>	2.8	71	.070	1.8	.030	.8	.60	15	8	36	GTS, GTSL, PTS	100	1000
<b>Miniature Cross Section</b>													
<b>PLT.7M-C</b>	3.1	79	.090	2.3	.032	.8	.68	17	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
<b>PLT1M-C</b>	3.9	99	.098	2.5	.043	1.1	.87	22	18	80		100	1000
<b>PLT1.5M-C</b>	5.6	142	.098	2.5	.043	1.1	1.25	32	18	80		100	1000
<b>PLT2M-C</b>	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		100	1000
<b>Intermediate Cross Section</b>													
<b>PLT1.5I-C</b>	5.6	142	.142	3.6	.045	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
<b>PLT2I-C</b>	8.0	203	.142	3.6	.045	1.1	2.00	51	40	178		100	1000
<b>PLT2.5I-C</b>	9.7	246	.145	3.7	.052	1.3	2.50	64	40	178		100	1000
<b>PLT3I-C</b>	11.4	290	.145	3.7	.052	1.3	3.00	76	40	178		100	1000
<b>PLT4I-C</b>	14.5	368	.145	3.7	.052	1.3	4.00	102	40	178		100	1000
<b>Standard Cross Section</b>													
<b>PLT1S-C</b>	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
<b>PLT1.5S-C</b>	6.2	157	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
<b>PLT2S-C</b>	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
<b>PLT2.5S-C</b>	9.8	249	.190	4.8	.052	1.3	2.50	64	50	222		100	1000
<b>PLT3S-C</b>	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
<b>PLT4S-C</b>	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000
<b>PLT4.5S-C</b>	15.5	394	.190	4.8	.052	1.3	4.50	114	50	222		100	1000
<b>PLT5S-C</b>	17.5	445	.190	4.8	.052	1.3	5.00	127	50	222		100	500
<b>Light-Heavy Cross Section (Straight Tip)</b>													
<b>PLT2H-L</b>	8.1	206	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500
<b>PLT2.5H-L</b>	9.8	251	.300	7.6	.075	1.9	2.50	64	120	534		50	500
<b>PLT3H-L</b>	11.4	290	.300	7.6	.075	1.9	3.00	76	120	534		50	500
<b>PLT4H-L</b>	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		50	500
<b>PLT6LH-L</b>	21.9	556	.300	7.6	.075	1.9	6.00	152	120	534		50	500
<b>PLT7LH-L</b>	24.7	627	.300	7.6	.075	1.9	7.00	178	120	534		50	500
<b>PLT8LH-L</b>	27.6	701	.300	7.6	.075	1.9	8.00	203	120	534		50	500
<b>PLT9LH-L‡</b>	30.5	775	.300	7.6	.075	1.9	9.00	229	120	534		50	500
<b>PLT10LH-L‡</b>	34.3	871	.300	7.6	.075	1.9	10.31	262	120	534		50	1000
<b>Heavy Cross Section (Straight Tip)</b>													
<b>PLT5H-L‡</b>	17.7	450	.350	8.9	.078	2.0	5.00	127	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500
<b>PLT6H-L‡</b>	20.9	530	.350	8.9	.078	2.0	6.00	152	175	778		50	500
<b>PLT8H-L‡</b>	30.6	779	.350	8.9	.078	2.0	9.00	229	175	778		50	500
<b>PLT13H-Q‡</b>	43.3	1100	.350	8.9	.078	2.0	13.00	330	175	778		25	500
‡UL Listed – meets the requirements of UL181B-C, for use with UL non-metallic air ducts and air connectors. Note: UL Listed for use in plenum or air handling spaces per NEC except PLT.6SM and PLT.5H/6H/8H/13H.													

## 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 B1.22](#)



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
<b>PLT2EH-C</b>	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	GS4EH, ST2EH	100	1000
<b>PLT5EH-Q</b>	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
<b>PLT6EH-Q</b>	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
<b>PLT8EH-C</b>	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		100	1000
<b>PLT10EH-C</b>	34.2	869	.500	12.7	.085	2.2	10.00	254	250	1112		100	500
<b>PLT12EH-C</b>	40.1	1019	.500	12.7	.085	2.2	12.00	305	250	1112		100	500

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

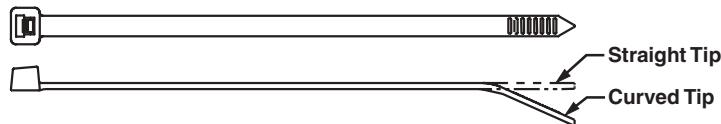
E4.Lockout/ Tagout & Safety Solutions

F.Index


**PAN-Ty® Cable Ties – Weather Resistant Nylon 6.6**

- 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



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>PLT.6SM-C0</b>	2.8	71	.070	1.8	.030	.8	.60	15	8	36	GTS, GTSL, PTS	100	1000
<b>PLT.7M-M0</b>	3.1	79	.090	2.3	.032	.8	.68	17	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>PLT1M-C0</b>	3.9	99	.098	2.5	.043	1.1	.87	22	18	80		100	1000
<b>PLT1.5M-C0</b>	5.6	142	.098	2.5	.043	1.1	1.25	32	18	80		100	1000
<b>PLT2M-C0</b>	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		100	1000

**Intermediate Cross Section**

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

**Standard Cross Section**

<b>PLT1S-C0</b>	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
<b>PLT1.5S-C0</b>	6.2	157	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
<b>PLT2S-C0</b>	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
<b>PLT2.5S-C0</b>	9.8	249	.190	4.8	.052	1.3	2.50	64	50	222		100	1000
<b>PLT3S-C0</b>	11.5	292	.190	4.8	.052	1.3	3.00	76	50	222		100	1000
<b>PLT4S-C0</b>	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000
<b>PLT4.5S-C0</b>	15.5	394	.190	4.8	.052	1.3	4.50	114	50	222		100	1000
<b>PLT5S-C0</b>	17.5	445	.190	4.8	.052	1.3	5.00	127	50	222		100	500

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

<b>PLT2H-L0</b>	8.1	206	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500
<b>PLT2.5H-L0</b>	9.8	251	.300	7.6	.075	1.9	2.50	64	120	534		50	500
<b>PLT3H-L0</b>	11.4	290	.300	7.6	.075	1.9	3.00	76	120	534		50	500
<b>PLT4H-L0</b>	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		50	500
<b>PLT6LH-L0</b>	21.9	556	.300	7.6	.075	1.9	6.00	152	120	534		50	500
<b>PLT7LH-L0</b>	24.7	627	.300	7.6	.075	1.9	7.00	178	120	534		50	500
<b>PLT8LH-L0</b>	27.6	701	.300	7.6	.075	1.9	8.00	203	120	534		50	500
<b>PLT9LH-L0</b>	30.5	775	.300	7.6	.075	1.9	9.00	229	120	534		50	500

**Heavy Cross Section (Straight Tip)**

<b>PLT5H-L0</b>	17.7	450	.350	8.9	.078	2.0	5.00	127	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500
<b>PLT6H-L0</b>	20.9	530	.350	8.9	.078	2.0	6.00	152	175	778		50	500
<b>PLT8H-L0</b>	30.6	779	.350	8.9	.078	2.0	9.00	229	175	778		50	500
<b>PLT13H-Q0</b>	43.3	1100	.350	8.9	.078	2.0	13.00	330	175	778		25	500

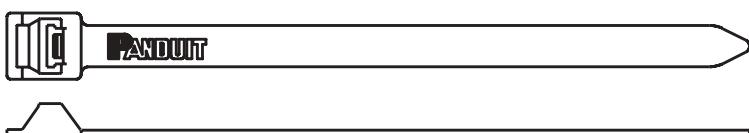
Note: UL Listed and UL Recognized except PLT.6SM and PLT2H/2.5H/3H/4H/5H/6H/8H/13H; CSA Certified except LH & H cross sections.

## PAN-TY® Lashing Ties – Weather Resistant Nylon 6.6

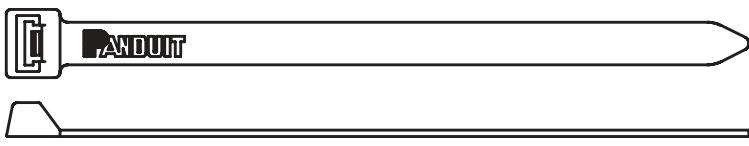
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Strongest PAN-TY® Cable Tie available
- Typically used for heavy duty applications
- Can be used with MCEH mounting clip, see page B1.22



Lashing Tie



No Buckle Design



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
<b>PLT2EH-Q0</b>	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	GS4EH, ST2EH	25	250
<b>PLT5EH-Q0</b>	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
<b>PLT6EH-Q0</b>	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
<b>PLT8EH-Q0</b>	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		25	250
<b>PLT10EH-Q0</b>	34.2	869	.500	12.7	.085	2.2	10.00	254	250	1112		25	250
<b>PLT12EH-Q0</b>	40.1	1019	.500	12.7	.085	2.2	12.00	305	250	1112		25	250
<b>Extra-Heavy Cross Section (No Buckle Design)</b>													
<b>PLT3EH-NB-C0</b>	12.2	310	.500	12.7	.075	1.9	3.30	84	250	1112	GS4EH, ST2EH	100	1000
<b>PLT5EH-NB-C0</b>	19.8	503	.500	12.7	.075	1.9	5.00	127	250	1112		100	1000
<b>PLT6EH-NB-C0</b>	21.8	554	.500	12.7	.075	1.9	6.00	152	250	1112		100	1000

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

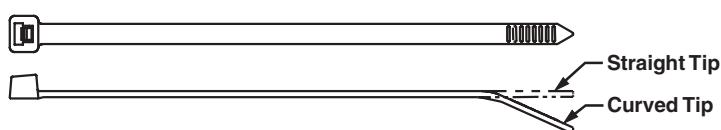
A. System Overview

B1. Cable Ties

**PAN-TY® Cable Ties – Heat Stabilized Nylon 6.6**

- For high temperature applications – 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



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			
<b>Subminiature Cross Section</b>													
<b>PLT.6SM-M30</b>	2.8	71	.070	1.8	.030	.8	.60	15	8	36	GTS, GTSL, PTS	1000	50000

**Miniature Cross Section**

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

**Intermediate Cross Section**

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

**Standard Cross Section**

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

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

<b>PLT2H-TL30</b>	8.1	206	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
<b>PLT3H-TL30</b>	11.4	290	.300	7.6	.075	1.9	3.00	76	120	534		250	2500
<b>PLT4H-TL30</b>	14.5	368	.300	7.6	.075	1.9	4.00	102	120	534		250	2500
<b>PLT7LH-C30</b>	24.7	627	.300	7.6	.075	1.9	7.00	178	120	534		100	2000
<b>PLT9LH-C30</b>	30.5	775	.300	7.6	.075	1.9	9.00	229	120	534		100	1000

**Heavy Cross Section (Straight Tip)**

<b>PLT5H-C30</b>	17.7	450	.350	8.9	.078	2.0	5.00	127	175	778	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	100	2000
<b>PLT6H-C30</b>	20.9	530	.350	8.9	.078	2.0	6.00	152	175	778		100	2000
<b>PLT8H-C30</b>	30.6	779	.350	8.9	.078	2.0	9.00	229	175	778		100	1500

‡PLT2S-M39 is a Natural Heat Stabilized material.  
Note: UL Listed except PLT.6SM and PLT5H/6H/8H.

E4. Lockout/Tagout &amp; Safety Solutions

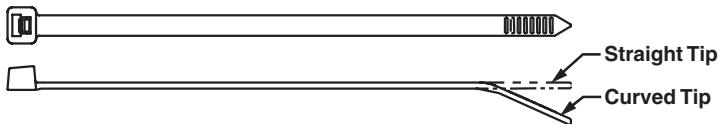
F. Index



## PAN-TY® Cable Ties – Heat Stabilized Weather Resistant Nylon 6.6

- Greater resistance to damage caused by ultraviolet light and for high temperature applications – 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			
<b>Miniature Cross Section</b>													
PLT1M-M300	3.9	99	.098	2.5	.035	.9	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>Intermediate Cross Section</b>													
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
<b>PLT2I-M300</b>	8.0	203	.142	3.6	.045	1.1	2.00	51	40	178		1000	25000
<b>Standard Cross Section</b>													
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
<b>PLT2S-M300</b>	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
<b>Light-Heavy Cross Section (Straight Tip)</b>													
PLT2H-TL300	8.4	213	.300	7.6	.075	1.9	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
<b>PLT4H-TL300</b>	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

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

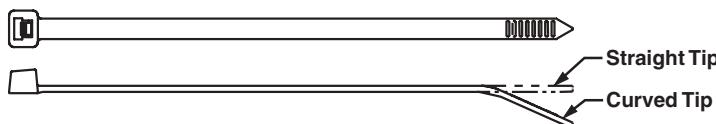
E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

**PAN-TY® Cable Ties – Flame Retardant Nylon 6.6**

- Flammability rating of UL94V-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
- Complementary flame retardant mounts available, see pages **B2.3** and **B2.7**

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
<b>PLT1M-M60‡</b>	4.0	102	.098	2.5	.043	1.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>PLT1M-M69</b>	4.0	102	.098	2.5	.043	1.1	.87	22	18	80		1000	25000
<b>PLT2M-M69</b>	8.0	203	.098	2.5	.043	1.1	2.00	51	18	80		1000	25000
<b>Intermediate Cross Section</b>													
<b>PLT1.5I-M69</b>	5.6	142	.142	3.6	.044	1.1	1.38	35	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>PLT2I-M69</b>	8.0	203	.142	3.6	.044	1.1	2.00	51	40	178		1000	25000
<b>Standard Cross Section</b>													
<b>PLT2S-M60‡</b>	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
<b>PLT2S-M69</b>	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		1000	10000
<b>PLT4S-M69</b>	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000
<b>Light-Heavy Cross Section (Straight Tip)</b>													
<b>PLT4H-TL69</b>	14.6	371	.300	7.6	.075	1.9	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500

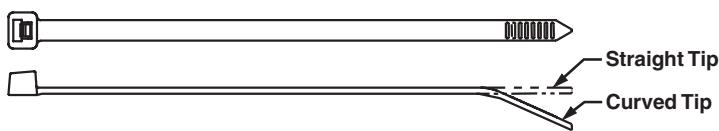
‡PLT1M-M60 and PLT2S-M60 are Black Flame Retardant material.

Note: UL Recognized and CSA Certified except 60 material.

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

- For high moisture, corrosive (zinc chloride and dilute acids) and low temperature indoor or outdoor 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



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
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### 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, ST2EH	250	2500
PLT8LH-C120	27.6	701	.300	7.6	.075	1.9	8.00	203	90	400		100	2000

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

A. System Overview



B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

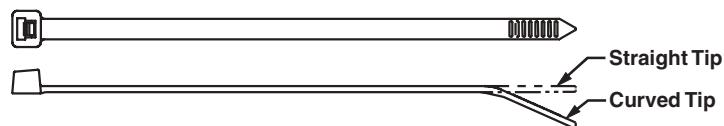
E4. Lockout/Tagout &amp; Safety Solutions

F. Index

**PAN-TY® Cable Ties – Polypropylene – Distinctive Green Color**

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

- 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

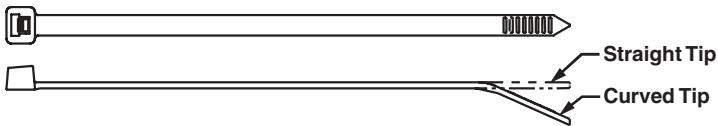


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
PLT1M-M109	3.9	99	.098	2.5	.043	1.1	.87	22	11	49	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>Intermediate Cross Section</b>													
PLT1.5I-M109	5.6	142	.142	3.6	.045	1.1	1.38	35	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section</b>													
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	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
<b>Light-Heavy Cross Section (Straight Tip)</b>													
PLT2H-TL109	8.1	206	.300	7.6	.075	1.9	2.00	51	50	222	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
PLT3H-TL109	11.4	290	.300	7.6	.075	1.9	3.00	76	50	222		250	2500
PLT4H-TL109	14.5	368	.300	7.6	.075	1.9	4.00	102	50	222		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 package label)

- 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			
<b>Miniature Cross Section</b>													
<b>PLT1M-M100</b>	3.9	99	.098	2.5	.043	1.1	.87	22	11	49	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>Intermediate Cross Section</b>													
<b>PLT1.5I-M100</b>	5.6	142	.142	3.6	.045	1.1	1.38	35	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section</b>													
<b>PLT2S-M100</b>	7.4	188	.190	4.8	.052	1.3	1.88	48	30	133	GTS, GTSL, GS2B, GTH, GS4H, PTS, PPTS, STS2, STH2	1000	10000
<b>PLT3S-M100</b>	11.5	292	.190	4.8	.052	1.3	3.00	76	30	133		1000	10000
<b>PLT4S-M100</b>	14.5	368	.190	4.8	.052	1.3	4.00	102	30	133		1000	5000
<b>Light-Heavy Cross Section (Straight Tip)</b>													
<b>PLT2H-TL100</b>	8.1	206	.300	7.6	.075	1.9	2.00	51	50	222	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
<b>PLT3H-TL100</b>	11.4	290	.300	7.6	.075	1.9	3.00	76	50	222		250	2500
<b>PLT4H-TL100</b>	14.5	368	.300	7.6	.075	1.9	4.00	102	50	222		250	2500

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

A. System Overview

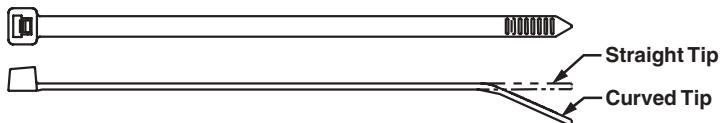


B1. Cable Ties



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

- UL Listed for use in plenum or air handling spaces per NEC, Section 300-22 (C) and (D)
- Low smoke density and excellent flammability rating of UL94V-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



B2. Cable Accessories



B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

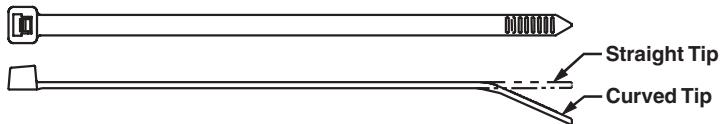
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
<b>PLT1M-C702Y</b>	4.0	102	.098	2.5	.043	1.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
<b>Standard Cross Section</b>													
<b>PLT2S-C702Y</b>	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
<b>PLT3S-C702Y</b>	11.6	295	.190	4.8	.055	1.4	3.00	76	50	222		100	1000

▲HALAR is a registered trademark of Solvay Solexis, Inc.



## 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 temperatures
- Ideal for use in nuclear power facilities and chemical processing plants



- Low smoke density and excellent flammability rating of UL94V-0
- TEFZEL cable tie mounts also available, see [page B2.7](#)
- For indoor or outdoor use

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
<b>PLT1M-C76</b>	4.0	102	.098	2.5	.043	1.1	.87	22	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000

### Intermediate Cross Section

<b>PLT2I-C76</b>	8.0	203	.135	3.4	.045	1.1	2.00	51	25	111	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
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### Standard Cross Section

<b>PLT2S-C76</b>	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
<b>PLT3S-C76</b>	11.6	295	.190	4.8	.059	1.5	3.00	76	50	222		100	1000
<b>PLT4S-C76</b>	14.6	371	.190	4.8	.059	1.5	4.00	102	50	222		100	1000

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

<b>PLT3H-L76</b>	11.5	292	.300	7.6	.075	1.9	3.00	78	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500
<b>PLT4H-L76</b>	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.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

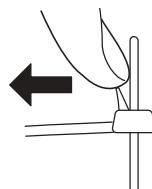
E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

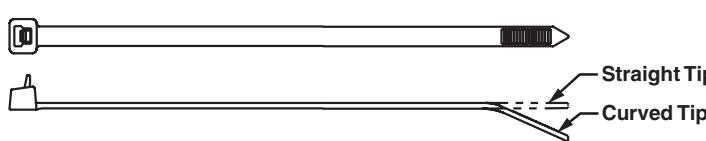
F.Index

**PAN-TY® Releasable Cable Ties – Nylon 6.6**

- For indoor use
- Extended release tab permits easy release and re-use where changes are anticipated during development, production or servicing in the field



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



- 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		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**

PRT1S-C	4.8	122	.190	4.8	.052	1.3	1.00	25	50	222	Hand Installed 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
<b>PRT4S-C</b>	14.5	368	.190	4.8	.052	1.3	4.00	102	50	222		100	1000

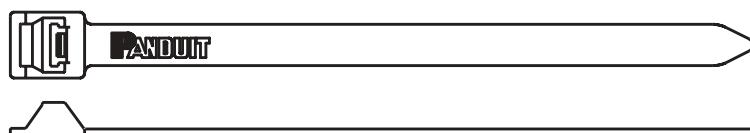
**Light-Heavy Cross Section (Straight Tip)**

PRT2H-L	8.4	213	.300	7.6	.075	1.9	2.00	51	80	356	Hand Installed 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

Note: UL Listed for use in plenum or air handling spaces per NEC except PRT2H/3H/4H.

**PAN-TY® Releasable Lashing Ties – Nylon 6.6**

- For indoor use
- Release tab permits easy release and re-use where changes are anticipated during development, production or servicing in the field
- Typically used for heavy duty applications
- Strongest PAN-TY® Cable Tie available
- Can be used with MCEH mounting clip, see [page B1.22](#)



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

**Extra-Heavy Cross Section**

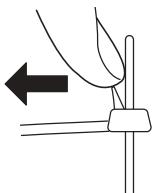
PRT2EH-C	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	Hand Installed Only	100	1000
PRT5EH-Q	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
PRT6EH-Q	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
PRT8EH-C	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		100	1000
PRT10EH-C	34.2	869	.500	12.7	.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



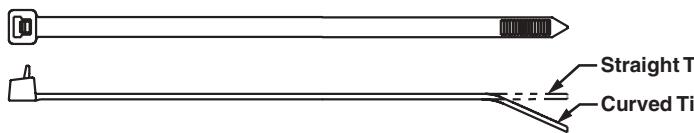
## PAN-Ty® Releasable Cable Ties – Weather Resistant & Heat Stabilized Nylon 6.6

- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – 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 Installed Only	100	1000
PRT1.5S-C0	6.3	160	.190	4.8	.052	1.3	1.50	38	50	222		100	1000
<b>PRT2S-C0</b>	7.4	188	.190	4.8	.052	1.3	1.88	48	50	222		100	1000
<b>PRT3S-C0</b>	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 Installed Only	50	500
<b>PRT3H-L0</b>	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 Installed 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

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

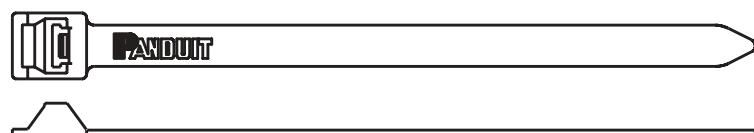
E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

**PAN-TY® Releasable Lashing Ties – Weather Resistant Nylon 6.6**

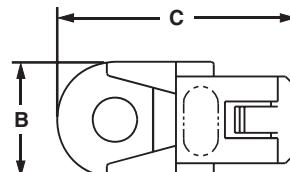
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Release tab permits easy release and re-use where changes are anticipated during development, production or servicing in the field
- Typically used for heavy duty applications
- Strongest PAN-TY® Cable Tie available
- Can be used with MCEH mounting clip shown below



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
<b>PRT2EH-Q0</b>	9.0	229	.500	12.7	.075	1.9	2.00	51	250	1112	Hand Installed Only	25	250
<b>PRT5EH-Q0</b>	20.1	511	.500	12.7	.075	1.9	5.00	127	250	1112		25	250
<b>PRT6EH-Q0</b>	22.2	564	.500	12.7	.075	1.9	6.00	152	250	1112		25	250
<b>PRT8EH-Q0</b>	28.3	719	.500	12.7	.085	2.2	8.00	203	250	1112		25	250
<b>PRT10EH-Q0</b>	34.2	869	.500	12.7	.085	2.2	10.00	254	250	1112		25	250
<b>PRT12EH-Q0</b>	40.1	1019	.500	12.7	.085	2.2	12.00	305	250	1112		25	250

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

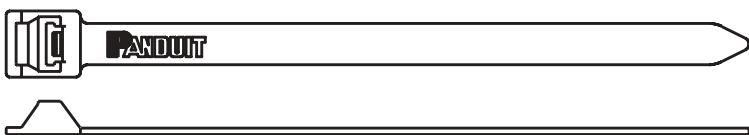
- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Converts PAN-DUTY Lashing Ties into clamps
- Easily snaps in place for a secure clamp
- Use with Lashing Ties shown above and on [pages B1.9, B1.11, B1.20 and B1.23](#)



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

## 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



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
PRT2EH-C100	9.0	229	.500	12.7	.075	1.9	2.00	51	90	400	Hand Installed 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

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

A. System Overview



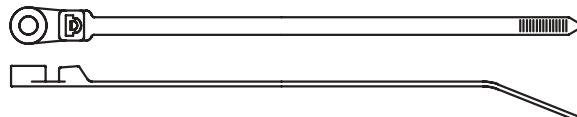
B1. Cable Ties



## PAN-TY® Clamp Ties – Nylon 6.6

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

- One-piece construction for consistent performance and reliability
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Screw Size	Metric Screw Size	Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm			In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>																	
<b>PLC1M-S4-C</b>	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

Part Number	Intermediate Cross Section												GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000		
	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.						
<b>PLC1.5I-S8-C</b>	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

Part Number	Standard Cross Section												GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2	100	1000		
	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.						
<b>PLC2S-S6-C</b>	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
<b>PLC2S-S10-C</b>	7.9	201	.190	4.8	.047	1.2	.200	5.1	#10	M5	1.84	47	50	222		100	1000
<b>PLC3S-S10-C</b>	12.0	305	.190	4.8	.047	1.2	.200	5.1	#10	M5	3.00	76	50	222		100	1000
<b>PLC4S-S10-C</b>	15.0	381	.190	4.8	.052	1.3	.200	5.1	#10	M5	4.00	102	50	222		100	1000

Part Number	Light-Heavy Cross Section												GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500		
	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.						
<b>PLC2H-S25-L</b>	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, ST2EH	50	500
<b>PLC4H-S25-L</b>	15.1	384	.300	7.6	.075	1.9	.260	6.6	1/4	M6	4.00	102	120	534		50	500

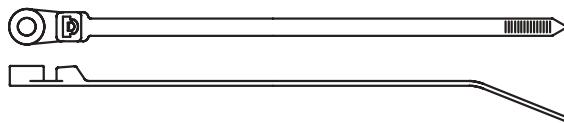


## PAN-Ty® Clamp Ties – Weather Resistant & Heat Stabilized Nylon 6.6

- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – 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.			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
<b>PLC2S-S10-C0</b>	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, ST2EH	250	2500
<b>PLC4H-S25-L0</b>	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
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#### Standard Cross Section

<b>PLC2S-S10-M30</b>	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
<b>PLC4S-S10-M30</b>	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, ST2EH	250	2500
<b>PLC4H-S25-TL30</b>	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

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index



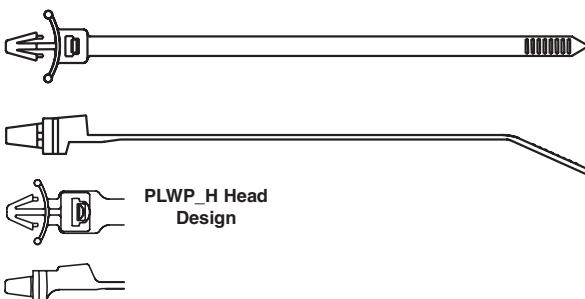


## PAN-Ty® Wing Push Mount Ties – Weather Resistant & Heat Stabilized Nylon 6.6



- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – indoor use
- Combines 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
- 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	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
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#### 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, ST2EH	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, ST2EH	250	2500
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Note: UL Recognized and CSA Certified except PLWP2H/3H.

For service and technical support, call 800-777-3300 or visit [www.panduit.com](http://www.panduit.com).

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

B1.27

**PAN-TY® Releasable Wing Push Mount Ties**

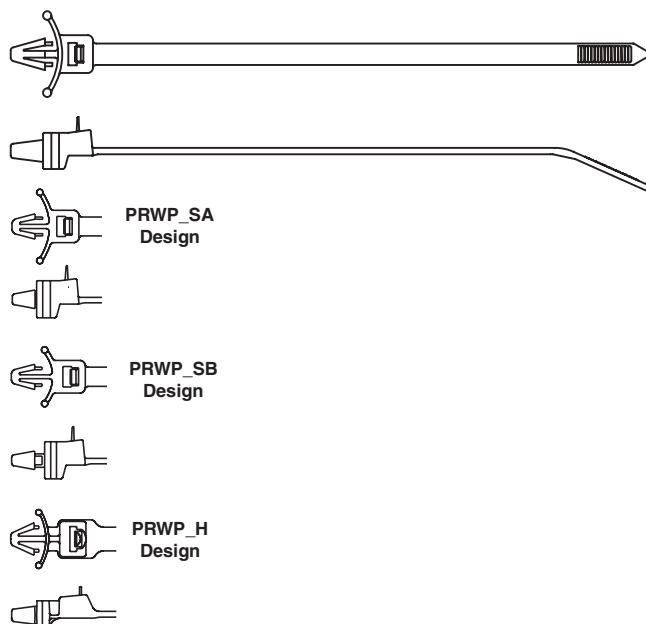
- Natural Nylon material for indoor use
- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – indoor use
- Combines cable tie, mount and fastener into a single part
- Used to attach bundles to another surface such as a flat panel



PRWP2S-D



PRWP2S-D0



Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N				
<b>Nylon 6.6</b>																		
<b>Standard Cross Section</b>																		
PRWP1S-C	5.2	132	.190	4.8	.052	1.3	.250	6.4	.105	2.7	1.00	25	50	222	Hand Installed 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	
<b>Light-Heavy Cross Section</b>																		
PRWP2H-TL	8.9	226	.300	7.6	.075	1.9	.266	6.8	.105	2.7	2.00	51	120	534	Hand Installed 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 Installed 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 Installed Only	500	5000
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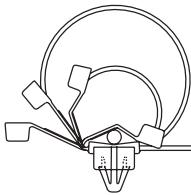
Note: UL Recognized and CSA Certified except PRWP2H.



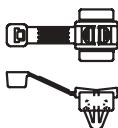
## PAN-TY® Center Mounted Wing Push Mount Ties – Heat Stabilized Nylon 6.6

- For high temperature applications – indoor use
- Used to center the bundle over the mount on all bundle diameters
- Combines cable tie, mount and fastener into a single part
- Anchor is easily pressed into a pre-formed hole and locks in place

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



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



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



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



**PLWP-SE** – Designed for corrugated loom tubing, see [pages C3.30, C3.31](#). Bump prevents lateral movement.

Part Number	Length		Width		Thickness		Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N	
<b>Standard Cross Section</b>																	
<b>PLWP30SC-D30</b>	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, PPPTS, STS2, STH2	500	5000
<b>PLWP40SC-D30</b>	7.0	178	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.58	40	50	222		500	5000
<b>PLWP40SD-D30</b>	7.0	178	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.58	40	50	222		500	5000
<b>PLWP50SC-D30</b>	8.2	208	.190	4.8	.050	1.3	.266	6.8	.118	3.0	1.97	50	50	222		500	5000
<b>PLWP50SE-D30</b>	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

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index

A. System Overview



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

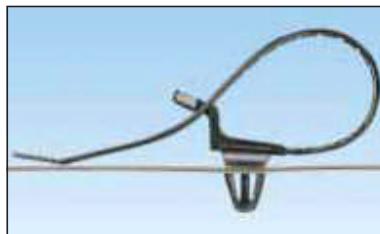
E4. Lockout/Tagout & Safety Solutions

F. Index

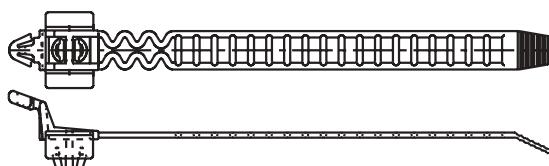


### PAN-TY® Ladder Style Releasable Wing Push Mount Ties – Heat Stabilized Nylon 6.6

- For high temperature applications – indoor use
- Unique releasable ladder design eliminates the need for multiple clamp sizes
- Combines 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
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



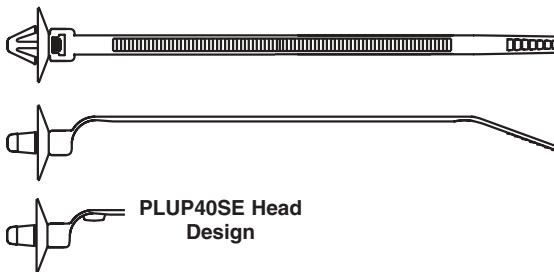
Part Number	Length		Width		Thickness		Nominal Hole Dia.	Max. Panel Thickness	Max. Bundle Dia.	Min. Loop Tensile Str.	Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	In.	mm	In.	mm	In.	mm								
<b>Standard Cross Section</b>														
PRLWP30S-D30	4.7	119	.380	9.7	.050	1.3	.266	6.8	.118	3.0	1.43	36	35	156
PRLWP50S-D30	7.1	180	.380	9.7	.050	1.3	.266	6.8	.118	3.0	2.18	55	35	156
													Hand Installed Only	500 5000
														500 5000

### PAN-TY® Umbrella Wing Push Mount Ties – Nylon & Heat Stabilized Nylon 6.6

- Natural Nylon material for indoor use
- Heat Stabilized material for high temperature applications – 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
- Forms a dust-tight and semi-liquid tight seal to the panel surface
- PLUP40SE style is for use with Corrugated Loom Tubing, see pages C3.30, C3.31
- 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								
<b>Standard Cross Section</b>														
PLUP40S-D30‡	7.0	177	.190	4.8	.047	1.2	.266	6.8	.050	1.3	1.57	40	50	222
PLUP40SE-D	7.0	177	.190	4.8	.047	1.2	.266	6.8	.050	1.3	1.57	40	50	222
PLUP40SE-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
														500 5000
														500 5000

‡Suffix 30 denotes Heat Stabilized material.



## PAN-TY® Push Mount Ties

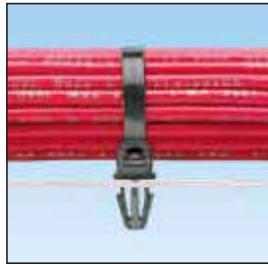
- Natural Nylon material for indoor use
- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – indoor use
- Wingless design allows tie to be used in confined spaces



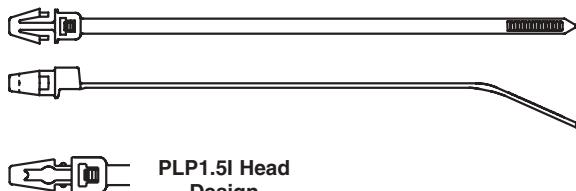
PLP2S-C



PLP2S-M0



- Combines cable tie, mount and fastener into 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



PLP1.5I Head Design

Part Number					Nominal Hole Dia.		Max. Panel Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.	
	Length		Width		Thickness		In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N
<b>Nylon 6.6</b>																

### Intermediate Cross Section

<b>PLP1.5I-C</b>	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

<b>PLP1S-M</b>	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
<b>PLP1.5S-M</b>	6.7	170	.180	4.6	.050	1.3	.250	6.4	.125	3.2	1.50	38	50	222		1000	10000
<b>PLP2S-C</b>	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

<b>PLP1.5I-M0</b>	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

<b>PLP1S-M0</b>	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
<b>PLP2S-M0</b>	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

<b>PLP1.5I-M30</b>	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

<b>PLP1S-M30</b>	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
<b>PLP2S-M30</b>	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

C1.Wiring Duct

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

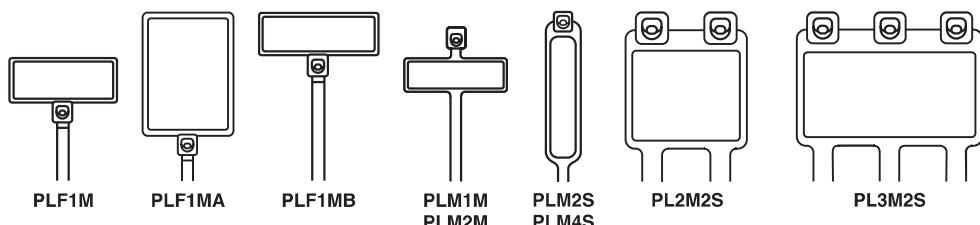
F.Index



## PAN-TY® Marker & 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 UL94V-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 B1.48](#) or Computer Printable Labels
- Custom imprinting with text, symbols or trademarks available using *PANDUIT* Custom Hot Stamping Service, see [page B1.103](#)
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



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

<b>PLF1M-C</b>	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
<b>PLF1MA-C</b>	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
<b>PLF1MB-C</b>	Flag	4.0	101	.098	2.5	.045	1.1	.31 x .92	7.9 x 23.4	.75	19	18	80		100	1000
<b>PLM1M-C</b>	Wrap	3.9	99	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	.75	19	18	80		100	1000
<b>PLM2M-C</b>	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

<b>PLM2S-C</b>	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	100	1000
<b>PLM4S-C</b>	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
<b>PL2M2S-L</b>	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
<b>PL3M2S-L</b>	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

<b>PLF1M-C0</b>	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
<b>PLF1MA-M0</b>	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
<b>PLM1M-C0</b>	Wrap	3.9	99	.098	2.5	.035	.9	.26 x .95	6.6 x 24.1	.75	19	18	80		100	1000
<b>PLM2M-M0</b>	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

<b>PLM2S-C0</b>	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	100	1000
<b>PLM4S-D0</b>	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
<b>PL2M2S-L0</b>	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
<b>PL3M2S-D0</b>	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

<b>PLF1M-M69</b>	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
<b>PLM1M-M69</b>	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 (WR) Nylon 6.6	Black	0
Weather Resistant (WR) 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

✓ Denotes PANDUIT Natural Nylon 6.6 (no suffix required).  
 ■ TEFZEL is a registered trademark of E.I. du Pont de Nemours and Company.  
 ▲ HALAR is the registered trademark of Solvay Solexis, Inc.

Material	Color	PANDUIT Suffix
Heat Stabilized Nylon 6.6	Black	30
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
TEFZEL■	Aqua Blue	76
Weather Resistant Polypropylene	Black	100
Polypropylene	Green	109
Nylon 12	Black	120
Heat Stabilized Weather Resistant Nylon 6.6	Black	300
HALAR▲	Maroon	702Y

### Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Color / Material Suffix	Part Number	Natural Nylon 6.6	Color / Material 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	3	0,20,30
PLC3S-S10-C	✓	0	PLC3S-S10-M	3	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	✓	
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 B1.34

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

**PAN-Ty® Cable Ties (continued)**

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Color / Material Suffix	Part Number	Natural Nylon 6.6	Color / Material 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,5,6,7,8,10,14,30,76,702Y	PLT1M-M	✓	0,00,1,2,3,4Y,5,6,7,8,10,14,20,30,53,54,55,59,60,69,76,100,109,120,300,702Y
			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	PLT2I-M	✓	0,1,2,3,4Y,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,5,6,7,8,10,20,30,76,702Y	PLT2S-M	✓	0,00,1,2,3,4Y,5,6,7,8,10,20,30,38,39,53,54,55,59,56,59,60,69,76,100,109,120,300,702Y
			PLT2S-VMR	✓	0,30
PLT2.5S-C	✓	0	PLT2.5S-M	✓	0,30
PLT3S-C	✓	0,00,2,20,30,76,702Y	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,5,6,8,10,20,30,76	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	PLT3H-TL	✓	0,30,76,100,109
PLT4H-L	✓	0,00,76	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-Q	0		PLT8H-C	✓	0,00,30
PLT8H-L	✓	0			
PLT13H-Q	✓	0	PLT13H-C	✓	0,3

## PAN-TY® Cable Ties (continued)

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

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

## Features and Benefits – SUPER-GRIP™ Cable Ties **NEW!**

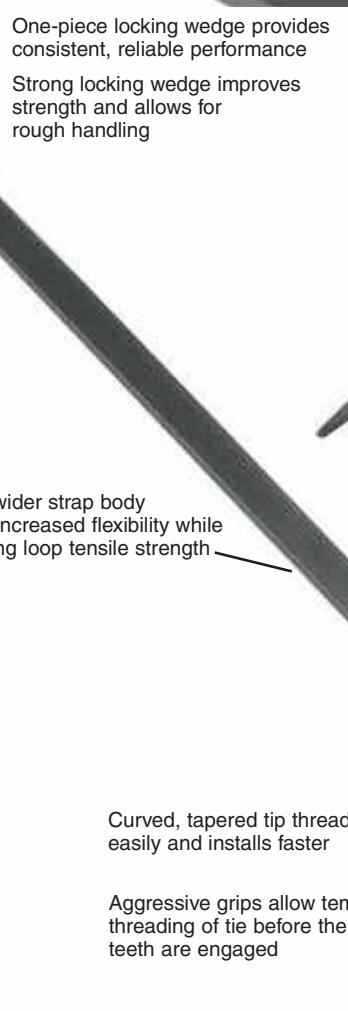
One-piece design with a thin, wide strap body for improved flexibility.

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



One-piece locking wedge provides consistent, reliable performance

Strong locking wedge improves strength and allows for rough handling



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

Thinner, wider strap body provides increased flexibility while maintaining loop tensile strength

High loop tensile strength exceeds industry standards



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 B1.89 – B1.93](#).

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

See [pages B2.1 – B2.24](#).

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

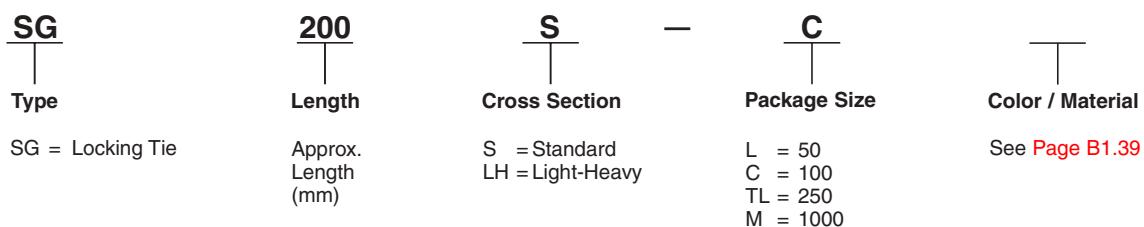
F.Index

## Selection Guide – *SUPER-GRIP™* Cable Ties **NEW!**



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

### Part Number System for *SUPER-GRIP™* Cable Ties



A. System Overview



B1. Cable Ties

**NEW!**  SUPER-GRIP™ Cable Ties

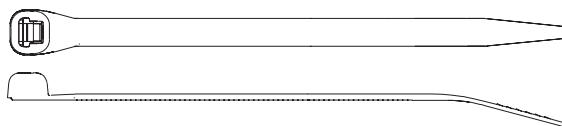
- Natural Nylon material for indoor use
- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – indoor use
- Resists lateral movement on the bundle – tie is designed to grip the bundle when tightly applied



SG200S-C



SG200S-C0



- 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

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

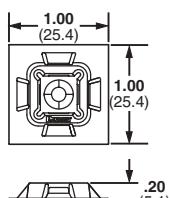
E4. Lockout/Tagout &amp; Safety Solutions

F. Index

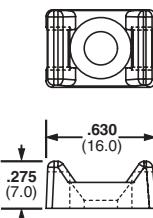
### SUPER-GRIP™ Cable Tie Mounts



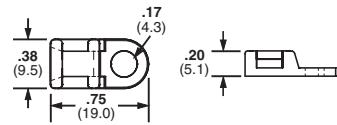
- Low profile design keeps bundle close to mounting surface
- Small overall size allows use where space is limited



SGABM25



SGTM2S8



SGTA1S8

Part Number	Material	Used With Cable Ties	Length		Width		Height		Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
			In.	mm	In.	mm	In.	mm			
SGABM25-A-C	Nylon 6.6	SG200S SG250S SG300S	1.00	25.4	1.00	25.4	.20	5.1	Rubber Based Adhesive or #6 (M3) Screw	100	1000
SGABM25-AT-C0	Weather Resistant Nylon 6.6		1.00	25.4	1.00	25.4	.20	5.1	Acrylic Based Adhesive or #6 (M3) Screw	100	1000
SGABM25-S6-C	Nylon 6.6		1.00	25.4	1.00	25.4	.20	5.1	#6 (M3) Screw	100	1000
SGTM2S8-C	Nylon 6.6		.63	16.0	.43	10.8	.28	7.0	#8 (M4) Screw	100	500
SGTA1S8-C	Nylon 6.6		.38	9.5	.75	19.0	.20	5.1	#8 (M4) Screw	100	500

### SUPER-GRIP™ Cable Ties & Mounts

#### Material and Color Chart

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

✓ Denotes PANDUIT Natural Nylon 6.6 (no suffix).

#### Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Color/Material Suffix	Part Number	Natural Nylon 6.6	Color/Material Suffix
SG200S-C	✓	0	SG200S-M	✓	0, 30
SG250S-C	✓	0	SG250S-M	✓	0, 30
SG300S-C	✓	0			
SG350LH-L	✓	0	SG350LH-TL	✓	0, 30
SGABM25-A-C	✓				
SGABM25-AT-C		0			
SGABM25-S6-C	✓				
SGTM2S8-C	✓				
SGTA1S8-C	✓				

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

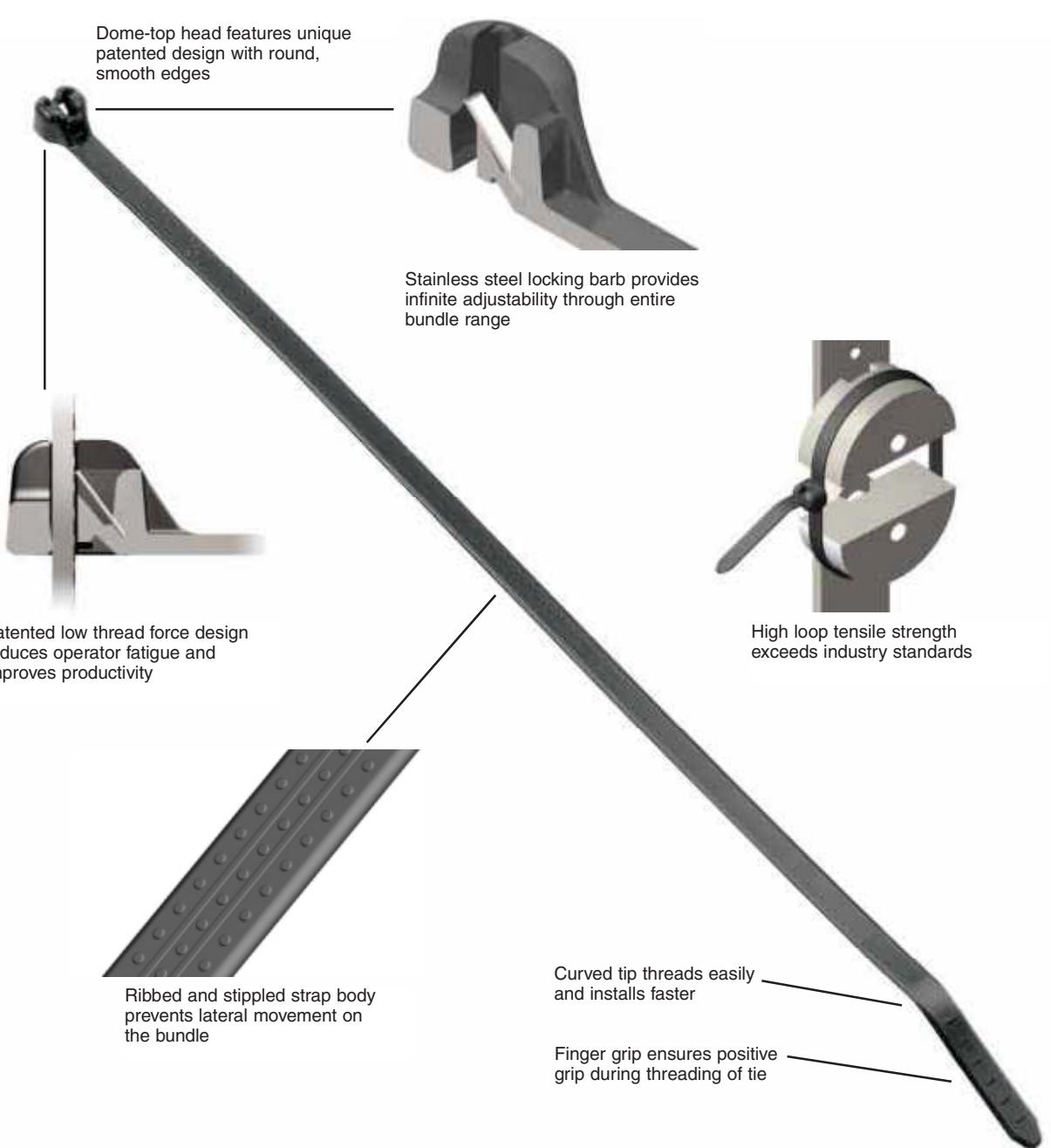
E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

## Features and Benefits – *DOME-TOP®* Barb Ty Cable Ties

Two-piece design incorporates a 316 stainless steel locking barb in a nylon cable tie.



Cable tie tools speed installation and reduce total installed cost.

See [pages B1.89 – B1.93](#).



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

See [pages B2.1 – B2.24](#).

## Selection Guide – *DOME-TOP®* Barb Ty & *DURA-TY™* Cable Ties



Material, Color (Suffix)	Style / Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties / Bundle	BT	B1.42
	Clamp Ties / Mount	BC	B1.45
	Push Mount Ties / Mount	BW	B1.47
	Marker Ties / Identify	BF, BM	B1.49
Weather Resistant Nylon 6.6, Black (0)	Locking Ties / Bundle	BT	B1.43
	Clamp Ties / Mount	BC	B1.46
	Push Mount Ties / Mount	BW, BP	B1.47, 48
	Marker Ties / Identify	BF, BM	B1.49
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties / Bundle	BT	B1.44
	Clamp Ties / Mount	BC	B1.46
Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties / Bundle	BT	B1.44
<i>DOME-TOP®</i> Barb Ty Cable Ties	Weather Resistant Acetal, Black	Locking Ties / Bundle	DT
			B1.50
<i>DURA-TY™</i> Cable Ties			

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

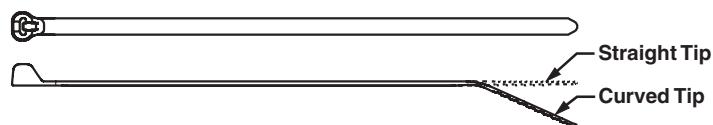
F.Index

### Part Number System for *DOME-TOP®* Barb Ty & *DURA-TY™* Cable Ties

BT	2	S		C	
Type	Size	Cross Section	Screw Hole Size	Package Size	Color / Material
BT = Locking Tie	Approx. Maximum Bundle Dia. (In.)	M = Miniature I = Intermediate S = Standard LH = Light-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 B1.51
BC = Clamp Tie					
BF = Flag Tie					
BM = Marker Tie					
BP = Push Mount Tie					
BW = Wing Push Mount Tie					
DT = Locking Tie					

**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

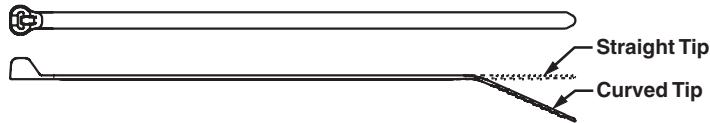


Part Number	Length		Width		Thickness		Max. Bundle Dia.	Min. Loop Tensile Str.	Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm					
<b>Miniature Cross Section</b>											
<b>BT1M-C</b>	4.0	102	.095	2.4	.036	.9	.90	23	18	80	
BT1.5M-C	6.3	160	.095	2.4	.046	1.2	1.50	38	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2
<b>BT2M-C</b>	7.9	201	.095	2.4	.046	1.2	2.00	51	18	80	
BT4M-C	14.2	361	.095	2.4	.046	1.2	4.00	102	18	80	
<b>Intermediate Cross Section</b>											
<b>BT1.5I-C</b>	6.1	155	.141	3.6	.041	1.0	1.50	38	40	178	
<b>BT2I-C</b>	8.0	203	.141	3.6	.041	1.0	2.00	51	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2
<b>BT3I-C</b>	11.3	287	.141	3.6	.049	1.2	3.00	76	40	178	
<b>BT4I-C</b>	14.3	363	.141	3.6	.049	1.2	4.00	102	40	178	
<b>Standard Cross Section</b>											
<b>BT2S-C</b>	8.0	203	.185	4.7	.045	1.1	2.00	51	50	222	GTS, GTSL, GS2B, GTH, GS4H, PTS, PTH, PPTS, STS2, STH2
<b>BT3S-C</b>	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222	
<b>BT4S-C</b>	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222	
<b>Light-Heavy Cross Section (Straight Tip)</b>											
BT2LH-L	8.7	221	.275	7.0	.065	1.7	2.00	51	120	534	
BT3LH-L	11.8	300	.275	7.0	.065	1.7	3.00	76	120	534	
<b>BT4LH-L</b>	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH
<b>BT5LH-L</b>	18.1	460	.275	7.0	.065	1.7	5.00	127	120	534	
BT6LH-L	21.2	538	.275	7.0	.065	1.7	6.00	152	120	534	
BT7LH-L	24.4	620	.275	7.0	.065	1.7	7.00	178	120	534	
BT8LH-L	27.5	699	.275	7.0	.065	1.7	8.00	203	120	534	
<b>BT9LH-L</b>	30.7	780	.275	7.0	.065	1.7	9.00	229	120	534	



### DOME-TOP® Barb Ty Cable Ties – Weather Resistant Nylon 6.6

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



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

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

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

#### Intermediate Cross Section

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

#### Standard Cross Section

<b>BT2S-C0</b>	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
<b>BT3S-C0</b>	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		100	1000
<b>BT4S-C0</b>	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		100	1000

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

<b>BT2LH-L0</b>	8.7	221	.275	7.0	.065	1.7	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	500
<b>BT3LH-L0</b>	11.8	300	.275	7.0	.065	1.7	3.00	76	120	534		50	500
<b>BT4LH-L0</b>	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534		50	500
<b>BT5LH-L0</b>	18.1	460	.275	7.0	.065	1.7	5.00	127	120	534		50	500
<b>BT6LH-L0</b>	21.2	538	.275	7.0	.065	1.7	6.00	152	120	534		50	500
<b>BT7LH-L0</b>	24.4	620	.275	7.0	.065	1.7	7.00	178	120	534		50	500
<b>BT8LH-L0</b>	27.5	699	.275	7.0	.065	1.7	8.00	203	120	534		50	500
<b>BT9LH-L0</b>	30.7	780	.275	7.0	.065	1.7	9.00	229	120	534		50	500

Note: UL Listed for use in plenum or air handling spaces per NEC except LH cross section; UL Recognized and CSA Certified except LH cross section.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

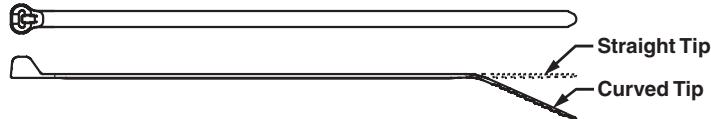
F.Index


**DOME-TOP® Barb Ty Cable Ties – Heat Stabilized Nylon 6.6**

- For high temperature applications – 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-M39**

**BT2S-M30**


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>BT1M-C30</b>	4.0	102	.095	2.4	.036	.9	.90	23	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
<b>BT1.5M-M30</b>	6.3	160	.095	2.4	.046	1.2	1.50	38	18	80		1000	50000
<b>BT2M-M30</b>	7.9	201	.095	2.4	.046	1.2	2.00	51	18	80		1000	25000

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

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

**Intermediate Cross Section**

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

**Standard Cross Section**

<b>BT2S-M30</b>	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
<b>BT3S-M30</b>	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		1000	10000
<b>BT4S-M30</b>	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		1000	5000

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

<b>BT4LH-TL30</b>	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
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**Heat Stabilized Nylon 6.6 – Natural**
**Miniature Cross Section**

<b>BT1M-M39</b>	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**

<b>BT1.5I-M39</b>	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**

<b>BT2S-M39</b>	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
<b>BT3S-M39</b>	12.0	305	.185	4.7	.052	1.3	3.00	76	50	222		1000	10000
<b>BT4S-M39</b>	15.1	384	.185	4.7	.052	1.3	4.00	102	50	222		1000	5000

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

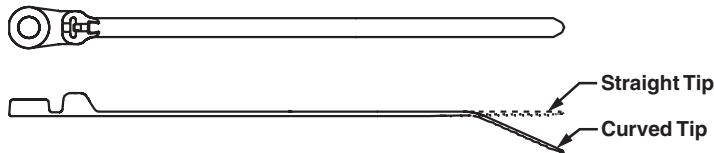
<b>BT4LH-TL39</b>	14.9	378	.275	7.0	.065	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
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## DOME-TOP® Barb Ty Clamp Ties – Nylon 6.6

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

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



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	Lbs.	N			

### Miniature Cross Section

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

### Intermediate Cross Section

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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### Standard Cross Section

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

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

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, ST2EH	50	500
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A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

A. System Overview

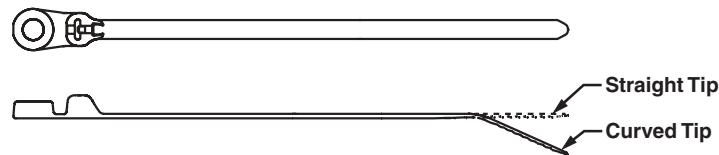


B1. Cable Ties



### DOME-TOP® Barb Ty Clamp Ties – Weather Resistant & 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 – indoor use
- Used to secure a cable bundle to another surface such as a control panel, communication rack, wall or ceiling



B2. Cable Accessories

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

- 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, ST2EH	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.



### DOME-TOP® Barb Ty Wing Push Mount Ties – Nylon & Weather Resistant Nylon 6.6

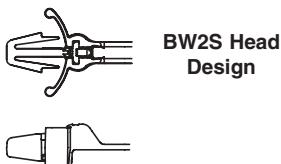
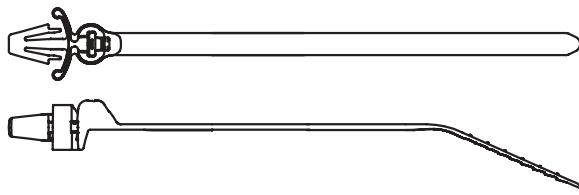
- Natural Nylon material for indoor use
- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Combines cable tie, mount and fastener into a single part
- Used to attach bundles to another surface such as a flat panel
- Anchor is easily pressed into a pre-formed hole and locks in place



BW2S-D



BW2S-D0



BW2S Head  
Design

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E3.Pre-Printed & Write-On Markers

E4.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.							

#### 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

A. System Overview

**NEW!****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
- Combines cable tie, mount and fastener into 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

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power &amp; Grounding Connectors

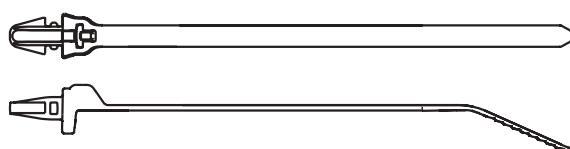
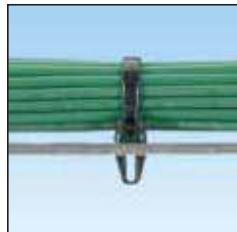
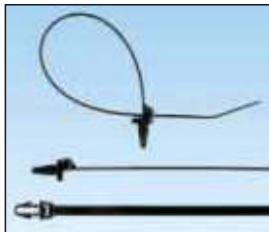
E1.Labeling System

E2.Labels

E3.Pre-Printed &amp; Write-On Markers

E4.Lockout/ Tagout &amp; 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	In.	mm	Lbs.	N	
<b>BP2S-D0</b>	8.5	216	.185	4.7	.052	1.3	.255	6.5	.150	3.8	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 (see pages B1.32, B1.49 and B1.74), marker plates (see page B2.23) or Cable Marker Straps (see page B1.83)
- May be used with any label shown in the catalog when a printer is not available

PX-0  
PX-2PFX-0  
PFX-2

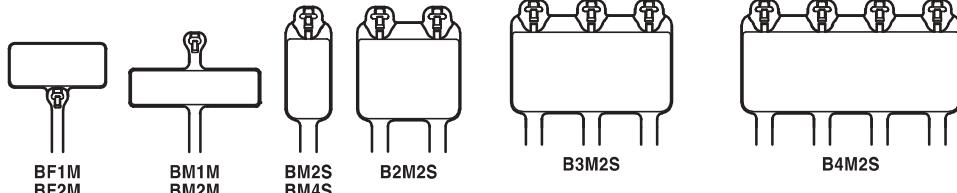
PX-10

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



## DOME-TOP® Barb Ty Marker & 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 [page B1.48](#) or Computer Printable Labels
- Custom imprinting with text, symbols or trademarks available using *PANDUIT* Custom Hot Stamping Service, see [page B1.103](#)
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

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

### Nylon 6.6

#### Miniature Cross Section

BF1M-C	Flag	4.6	117	.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

#### 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

### 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

#### 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

A. System Overview

B1.Cable Ties

B2.Cable Accessories  
B3.Stainless Steel  
C1.Wiring Duct

C2.Surface Raceway  
C3.Abrasion Protection  
C4.Cable Management

D1.Terminals  
D2.Power & Grounding Connectors

E1.Labeling System  
E2.Labels

E3.Pre-Printed & Write-On Markers  
E4.Lockout/Tagout & Safety Solutions

F.Index

A. System Overview



B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

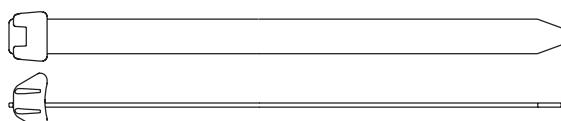
E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

## DURA-TY™ Cable Ties – Weather Resistant Acetal

- Excellent solution for outdoor applications requiring strength and durability
- Ideal for securing cables in outdoor messenger strand applications and vertical ladder racks
- Excellent ultraviolet light, chemical and moisture resistance
- Double stainless steel locking barbs
- High tensile strength and high impact resistance
- Meets Telcordia TR-TSY-000789
- May be used with Stackable Cable Spacer (SACS50-T100) shown below

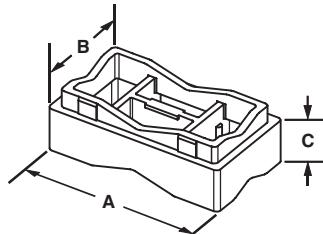


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
DT4EH-L0	13.5	343	.500	12.7	.059	1.5	3.88	98	250	1112	GTH, GS4EH, ST2EH	50	1000
DT8EH-Q0	27.0	686	.500	12.7	.059	1.5	8.00	203	250	1112		25	500

Part Number	Description	Length		Width		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
		ft	M	In.	mm	Lbs.	N			
<b>Strapping, Heads and Kit – allows user to customize strap length</b>										
DTREH-LR0	50' reel of strapping	50.0	15	.500	12.7	250	1112	GTH, GS4EH, ST2EH	1	20
DTHEH-Q0	Bag of 25 cable tie heads	—	—	—	—	—	—	—	25	500
DTKEH-0	Kit containing 50' reel of strapping and 25 cable tie heads	50.0	15	.500	12.7	250	1112	GTH, GS4EH, ST2EH	1	20

## Stackable Aerial Cable Spacer – Weather Resistant Polypropylene

- Greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Each spacer snaps into another to increase spacer heights by 1/2" increments
- Designed for use in parallel or perpendicular applications
- For use with DURA-TY™ Cable Ties shown above or PAN-STEEL® Metal Locking Ties, see [pages B3.3, B3.4, B3.5](#)



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	.71	18.0	LH, H, EH	200	2000

Cable Tie Cross Sections: LH = Light-Heavy, H = Heavy, EH = Extra-Heavy.

## DOME-TOP® Barb Ty and DURA-TY™ Cable Ties

### Material and Color Chart

Material	Color	PANDUIT Suffix
Nylon 6.6	Natural	✓
Weather Resistant (WR) 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

✓Denotes PANDUIT Natural Nylon 6.6 (no suffix required).

‡Denotes DURA-TY™ Weather Resistant Acetal material (no suffix required).

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
Weather Resistant Acetal	Black	‡

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

### Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Color / Material Suffix	Part Number	Natural Nylon 6.6	Color / Material Suffix
			AST10-5-C100		100
			AST15-5-C100		100
			AST20-5-C100		100
			AST25-5-C100		100
			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
BT1.5M-C	✓	0	BT1.5M-M	✓	0,30
BT2M-C	✓	0	BT2M-M	✓	0,2,3,4Y,5,6,8,30
BT4M-C	✓	0	BT4M-M	✓	0
BT1.5I-C	✓	0	BT1.5I-M	✓	0,1,2,3,4Y,5,6,7,8,10,30,39

A. System Overview

B1. Cable Ties

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Color / Material Suffix	Part Number	Natural Nylon 6.6	Color / Material Suffix
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
			B2M2S-D	✓	0
			B3M2S-TL	✓	0
			B4M2S-TL	✓	0

**DURA-Ty™ Weather Resistant Acetal Strap Body and Head**

DTHEH-Q0	*				
DTKEH-0	*				
DTREH-LR0	*				
DT4EH-L0	*				
DT8EH-Q0	*				

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

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/ Tagout &amp; Safety Solutions

F. Index

A. System Overview



B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

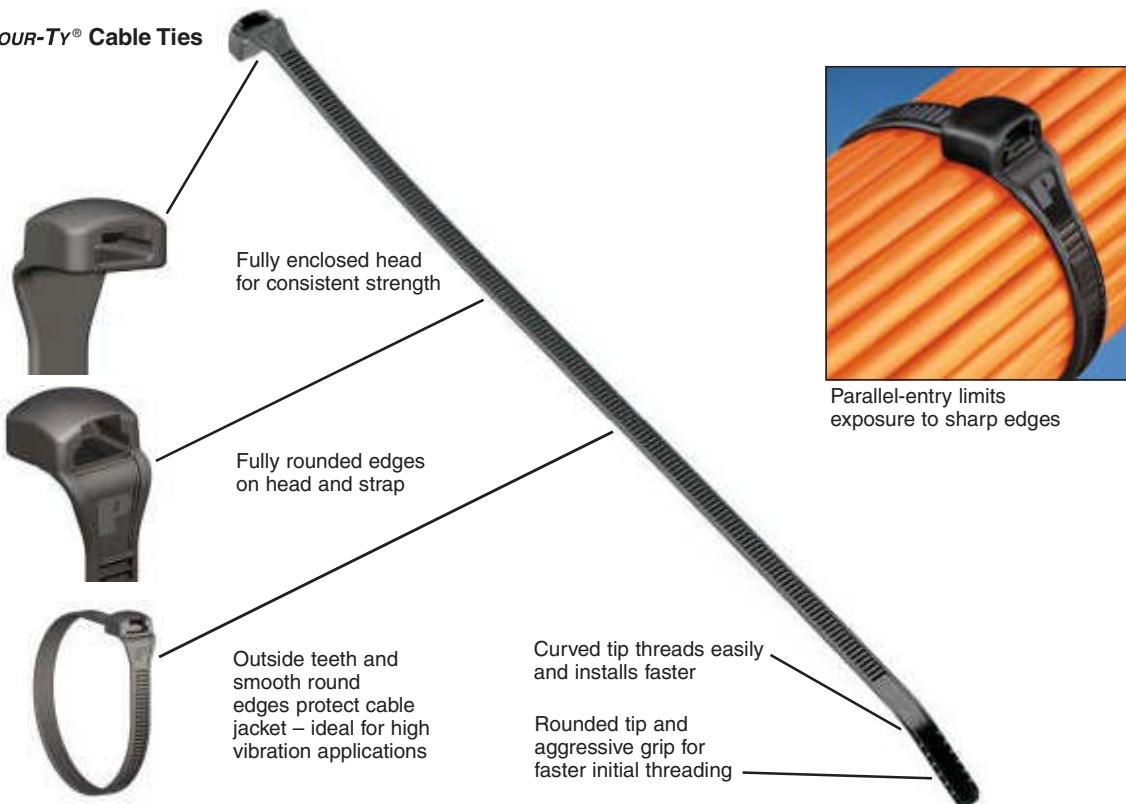
E4.Lockout/Tagout & Safety Solutions

F.Index

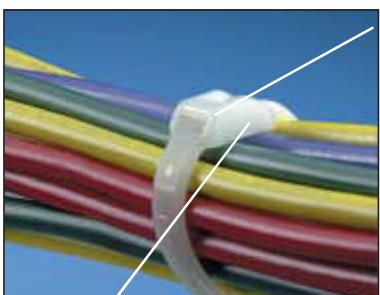
## Features and Benefits – Parallel-Entry Cable Ties

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.

**CONTOUR-TY®** Cable Ties



**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



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



Cable tie tools speed installation and reduce total installed cost.  
See pages B1.89 – B1.93.



Cable tie accessories are used to speed and simplify the mounting of wires, cables and tubing.  
See pages B2.1 – B2.24.

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

## Selection Guide – Parallel-Entry Cable Ties



Material, Color (Suffix)	Style / Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties / Bundle	CBR	B1.55
Weather Resistant Nylon 6.6, Black (0)	Locking Ties / Bundle	CBR	B1.56
Heat Stabilized Nylon 6.6, Natural (39)	Locking Ties / Bundle	CBR	B1.57
Flame Retardant Nylon 6.6, Ivory (69)	Locking Ties / Bundle	CBR	B1.57
<b>CONTOUR-TY® Cable Ties</b>			
<b>BELT-TY™ In-Line Cable Ties</b>	Nylon 6.6, Natural (No Suffix)	Locking Ties / Bundle	ILT
	Weather Resistant Nylon 6.6, Black (0)	Locking Ties / Bundle	ILT
<b>IN-LINE Cable Ties</b>	Weather Resistant Nylon 6.6, Black (0)	Locking Ties / Bundle	IT

### Part Number System for CONTOUR-TY® and BELT-TY™ Cable Ties

CBR	2	S	—	M	
Type	Size	Cross Section		Package Size	Color / Material
CBR = Locking Tie	Approx.	M = Miniature	C = 100	See page	
ILT = Locking Tie	Maximum Bundle Dia. (In.)	I = Intermediate	TL = 250	B1.61	
		S = Standard	D = 500		
		HS = Heavy-Standard	M = 1000		
		LH = Light-Heavy			

### Part Number System for IN-LINE Cable Ties

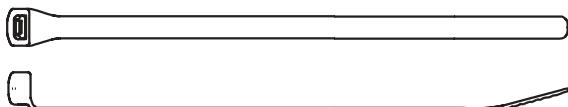
IT	9	100	—	C	
Type	Width	Size		Package Size	Color / Material
IT = Locking Tie	Approx. Width (mm)	Approx. Maximum Bundle Dia. (mm)	C = 100	See page	
				B1.61	



## CONTOUR-TY® Cable Ties – Nylon 6.6

- For indoor use
- Unique design prevents wire and cable damage
- Low profile head avoids snags and reduces overall bundle size
- Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications

- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Fully enclosed head for consistent strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



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-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
<b>CBR2M-M</b>	7.2	183	.098	2.5	.042	1.1	2.00	51	18	80		1000	25000

### Intermediate Cross Section

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

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

CBR2HS-D	8.0	203	.250	6.4	.058	1.4	2.00	51	85	378	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	500	5000
----------	-----	-----	------	-----	------	-----	------	----	----	-----	------------------------------------	-----	------

### Light-Heavy Cross Section

CBR4LH-TL	14.6	371	.300	7.6	.070	1.8	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
CBR6LH-C	20.9	531	.300	7.6	.070	1.8	6.00	152	120	534		100	2000

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

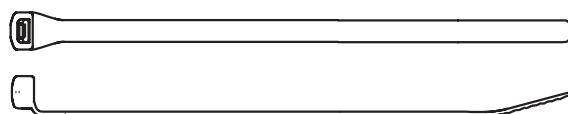
E4.Lockout/Tagout & Safety Solutions

F.Index



### CONTOUR-TY® Cable Ties – Weather Resistant Nylon 6.6

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



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
<b>CBR1M-M0</b>	4.1	104	.098	2.5	.038	1.0	1.00	25	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>CBR1.5M-M0</b>	5.6	142	.098	2.5	.042	1.1	1.50	38	18	80		1000	50000
<b>CBR2M-M0</b>	7.2	183	.098	2.5	.042	1.1	2.00	51	18	80		1000	25000
<b>Intermediate Cross Section</b>													
<b>CBR1.5I-M0</b>	5.9	150	.140	3.6	.040	1.0	1.50	38	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>CBR3I-M0</b>	10.4	264	.140	3.6	.052	1.3	3.00	76	40	178		1000	10000
<b>CBR4I-M0</b>	13.6	345	.140	3.6	.052	1.3	4.00	102	40	178		1000	10000
<b>Standard Cross Section</b>													
<b>CBR2S-M0</b>	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
<b>CBR3S-M0</b>	10.8	274	.190	4.8	.052	1.3	3.00	76	50	222		1000	5000
<b>CBR4S-M0</b>	14.0	356	.190	4.8	.052	1.3	4.00	102	50	222		1000	5000
<b>Heavy-Standard Cross Section</b>													
<b>CBR2HS-D0</b>	8.0	203	.250	6.4	.058	1.4	2.00	51	85	378	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	500	5000
<b>Light-Heavy Cross Section</b>													
<b>CBR4LH-TL0</b>	14.6	371	.300	7.6	.070	1.8	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
<b>CBR6LH-C0</b>	20.9	531	.300	7.6	.070	1.8	6.00	152	120	534		100	2000



## CONTOUR-TY® Cable Ties – Heat Stabilized & Flame Retardant Nylon 6.6

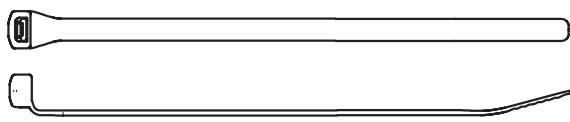
- Heat Stabilized material for high temperature applications – indoor use
- Flame Retardant material has a flammability rating of UL94V-0 – indoor use
- Unique design prevents wire and cable damage
- Low profile head avoids snags and reduces overall bundle size



CBR2S-M39



CBR3S-M69



- Outside teeth and smooth round edges protect cable jacket – ideal for high vibration applications
- Parallel-entry limits exposure to sharp edges and protects workers' arms/hands
- Fully enclosed head for consistent strength
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.			
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	Lbs.	N						
<b>Heat Stabilized Nylon 6.6</b>																
<b>Standard Cross Section</b>																
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			
<b>Flame Retardant Nylon 6.6</b>																
<b>Standard Cross Section</b>																
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 and UL Listed except CBR3S-M69.

### A. System Overview



### B1. Cable Ties

### B2. Cable Accessories

### B3. Stainless Steel

### C1. Wiring Duct

### C2. Surface Raceway

### C3. Abrasion Protection

### C4. Cable Management

### D1. Terminals

### D2. Power & Grounding Connectors

### E1. Labeling System

### E2. Labels

### E3. Pre-Printed & Write-On Markers

### E4. Lockout/Tagout & Safety Solutions

### F. Index

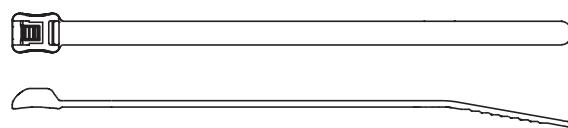


### BELT-TY™ In-Line Cable Ties – Nylon 6.6

- For indoor 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
- "Finger Grip" shaped head assures positive grip while threading tie
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

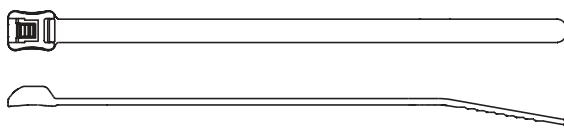


Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
ILT1M-M	4.8	122	.098	2.5	.044	1.1	1.10	28	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>Intermediate Cross Section</b>													
ILT1.5I-M	5.4	137	.142	3.6	.052	1.3	1.38	35	30	133	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section</b>													
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,	100	1000
<b>ILT3S-C</b>	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	STH2	100	1000
<b>Light-Heavy Cross Section</b>													
ILT4LH-TL	14.8	376	.300	7.6	.075	1.9	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
ILT6LH-C	21.2	538	.300	7.6	.075	1.9	6.00	152	120	534		100	2000



## BELT-TY™ 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)
- 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
- "Finger Grip" shaped head assures positive grip while threading tie
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
ILT1M-M0	4.8	122	.098	2.5	.044	1.1	1.10	28	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>Intermediate Cross Section</b>													
ILT1.5I-M0	5.4	137	.142	3.6	.052	1.3	1.38	35	30	133	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	25000
<b>Standard Cross Section</b>													
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
<b>Light-Heavy Cross Section</b>													
ILT4LH-TL0	14.8	376	.300	7.6	.075	1.9	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
ILT6LH-C0	21.2	538	.300	7.6	.075	1.9	6.00	152	120	534		100	2000

Note: UL Recognized, UL Listed and CSA Certified except ILT4LH/6LH.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

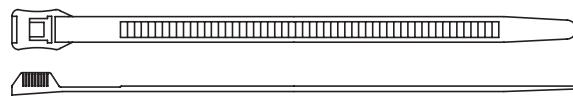
A. System Overview



B1. Cable Ties

### 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 B1.90
- Flexible – easy to handle and install



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty	Std. Ctn. Qty
	In	mm	In	mm	In	mm	In	mm	Lbs	N		
<b>IT940-C0</b>	6.8	173	.350	8.9	.065	1.7	1.57	40	124	552	100	1000
<b>IT965-C0</b>	10.1	257	.350	8.9	.065	1.7	2.56	65	124	552	100	1000
<b>IT9100-C0‡</b>	14.1	358	.350	8.9	.065	1.7	3.94	100	124	552	100	1000
<b>IT9115-C0‡</b>	15.3	389	.350	8.9	.065	1.7	4.53	115	124	552	100	1000
<b>IT9150-C0</b>	20.1	511	.350	8.9	.075	1.9	5.91	150	124	552	100	1000
<b>IT9250-C0</b>	33.0	838	.350	8.9	.075	1.9	9.84	250	124	552	100	1000

‡Available in 13 ultraviolet weather resistant colors for color coordination.

## Parallel-Entry Cable Ties

### Material and Color Chart

Material	Color	PANDUIT Suffix	Material	Color	PANDUIT Suffix
Nylon 6.6	Natural	✓	Nylon 6.6	Ultraviolet Hunter Green	UV5B
Weather Resistant (WR) Nylon 6.6	Black	0	Nylon 6.6	Ultraviolet Dark Blue	UV6
Heat Stabilized Nylon 6.6	Natural	39	Nylon 6.6	Ultraviolet Light Blue	UV6A
Flame Retardant Nylon 6.6	Natural (Ivory)	69	Nylon 6.6	Ultraviolet Cobalt Blue	UV6B
Nylon 6.6	Ultraviolet Red	UV2	Nylon 6.6	Ultraviolet Purple	UV7A
Nylon 6.6	Ultraviolet Bright Red	UV2A	Nylon 6.6	Ultraviolet Silver	UV8
Nylon 6.6	Ultraviolet Yellow	UV4Y	Nylon 6.6	Ultraviolet Teal	UV11
Nylon 6.6	Ultraviolet Butterscotch	UV4A	Nylon 6.6	Ultraviolet Pink	UV16B
Nylon 6.6	Ultraviolet Green	UV5A	Nylon 6.6	Ultraviolet Tan	UV18

✓ Denotes PANDUIT Natural Nylon 6.6 (no suffix required).

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

### Part Number Availability List

Standard Packaging			Bulk Packaging		
Part Number	Natural Nylon 6.6	Color/Material (Suffix)	Part Number	Natural Nylon 6.6	Color/Material (Suffix)
			CBR1M-M	✓	0
			CBR1.5M-M	✓	0
			CBR2M-M	✓	0
			CBR1.5I-M	✓	0
			CBR3I-M	✓	0
			CBR4I-M	✓	0
			CBR2S-M	✓	0,39
			CBR3S-M	✓	0,69
			CBR4S-M	✓	0
			CBR2HS-D	✓	0
			CBR4LH-TL	✓	0
			CBR6LH-C	✓	0
			ILT1M-M	✓	0
			ILT1.5I-M	✓	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
			IT9150-C		0
			IT9250-C		0

## Features and Benefits – Hook & Loop Cable Ties

Designed for use where frequent access to the bundle is required. The ties are adjustable, reusable and reusable.

### TAK-TY® Hook & Loop Cable Ties

Loop Style



Loop style allows for prewrapping of bundles

Strip Style



Available in continuous or perforated rolls

Plenum Style



Plenum-rated distinctive maroon color

### TAK-TAPE™ Hook & Loop Strips

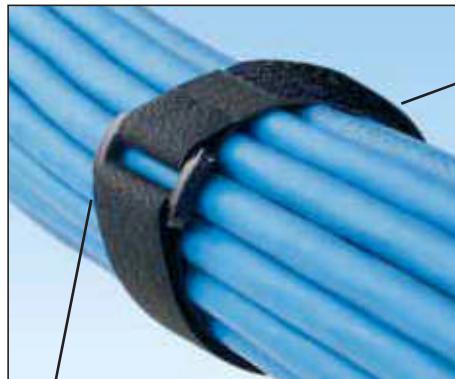


Thinnest hook and loop material available

Convenient packaging



### ULTRA-CINCH™ Hook & Loop Cable Ties



Low profile contoured cinch ring reduces overall bundle size

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

Available in 3 styles and 8 colors



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

See pages B2.2 – B2.24 and C4.1 – C4.8.



## Selection Guide – Hook & Loop Cable Ties



Product, Color (Suffix)	Style / Function	Part Number Prefix	Catalog Page
TAK-TY® Ties, Black (0)	Loop Ties / Reusable Strip Ties / Reusable 15' & 75' Rolls / Reusable Cinch Ties / Reusable	HLT HLS HLM, HLS HLC	B1.64 B1.64 B1.64 B1.64
TAK-TY® Plenum-Rated Ties, UL Listed Maroon (12)	Loop Ties / Reusable Strip Ties / Reusable	HLTP HLSP	B1.65 B1.65
TAK-TAPE™ Rolls, Black (0)	20' & 35' Rolls / Reusable	TTS	B1.65
ULTRA-CINCH™ Ties, Black (0)	Cinch Ties / Reusable Cinch Ties – Center Mount Grommet / Reusable Cinch Ties – End Mount Grommet / Reusable	UCT UGCTC UGCTE	B1.66 B1.66 B1.66

### Part Number System for Hook & Loop Ties

Type	Size	Cross Section	Package Size	Color
HL = Hook & Loop	Approx.	I = Intermediate	X = 10	See page B1.67
HLC = HL Cinch Tie	Maximum	S = Standard	15R = 15' Roll	
HLM = HL Miniature	Bundle		20R = 20' Roll	
HLT = HL Loop Tie	Dia. (In.)		75R = 75' Roll	
HLTP = HL Loop Tie Plenum-Rated			35RX = 35' Rolls (10)	
HLS = HL Strip Tie				
HLSP = HL Strip Tie Plenum-Rated				
TTS = TAK-TAPE™ Standard Strip				
UCT = ULTRA-CINCH™ Tie				
UGCTC = UCT Grommet Cinch Tie – Center Mount				
UGCTE = UCT Grommet Cinch Tie – End Mount				

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

**TAK-Ty® Hook & Loop Cable Ties**

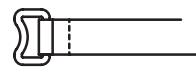
- Broadest selection of sizes, styles and colors to meet your application needs
- Adjustable, reusable and reusable hundreds of times – ideal for applications requiring frequent moves, adds or changes
- Hook and loop material maintains network data integrity by protecting against over-tensioning, unraveling and delamination

- Operating temperature range: 0°F to 220°F (-18°C to 104°C)
- Complementary mounts available, see [pages B2.8](#) and [C4.7](#)

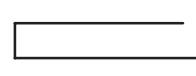
Note: Minimum 2" overlap required to achieve loop tensile rating



HLT



HLC



HLM / HLS

Part Number	Length		Width		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Loop Ties – Slot allows for pre-wrapping of bundles</b>										
<b>HLT2I-X0</b>	8.0	203	.500	12.7	1.91	49	40	178	10	100
<b>HLT3I-X0</b>	12.0	305	.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	.750	19.1	1.50	38	50	222	10	100
HLS3S-X0	12.0	305	.750	19.1	3.20	81	50	222	10	100
HLS5S-X0	18.0	457	.750	19.1	5.00	127	50	222	10	100

**Cinch Ties – Provide extra strength and bundle tightness**

HLC3S-X0	12.0	305	.750	19.1	3.00	76	50	222	10	100
HLC5S-X0	18.0	457	.750	19.1	5.00	127	50	222	10	100

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		
<b>15' &amp; 75' Continuous Rolls – Can be cut to desired length, eliminating waste</b>										
<b>HLM-15R0</b>	15.0	4.6	.330	8.4	Various	Various	18	80	1	10
<b>HLS-15R0</b>	15.0	4.6	.750	19.1	Various	Various	50	222	1	10
<b>HLS-75R0</b>	75.0	22.9	.750	19.1	Various	Various	50	222	1	10

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

Prime items appear in **BOLD**.

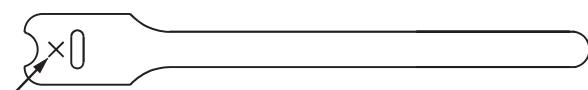


## TAK-TY® Hook & Loop Cable Ties – Plenum-Rated

- UL Listed for use in plenum or air handling spaces per NEC, Section 300-22 (C) and (D)
- Highest tensile strength of any plenum-rated Hook & Loop Ties in the industry
- Adjustable, releasable and reusable hundreds of times – ideal for applications requiring frequent moves, adds or changes



X-Out for #10  
Truss Head Screw



A. System Overview



B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

- Hook and loop material maintains network data integrity by protecting against over-tensioning, unraveling and delamination
- Operating temperature range: 0°F to 122°F (-18°C to 50°C)
- Flammability rating: UL94V-2

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



Part Number	Length		Width		Color	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

HLTP2I-X12	8.0	203	.500	12.7	Maroon	1.91	49	40	178	10	100
HLTP2I-X0	8.0	203	.500	12.7	Black	1.91	49	18	80	10	100
HLTP3I-X12	12.0	305	.500	12.7	Maroon	3.18	81	40	178	10	100
HLTP3I-X0	12.0	305	.500	12.7	Black	3.18	81	18	80	10	100

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

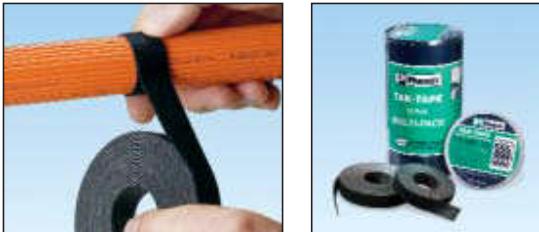
HLSP1.5S-X12	6.0	152	.750	19.1	Maroon	1.50	38	50	222	10	100
HLSP1.5S-X0	6.0	152	.750	19.1	Black	1.50	38	18	80	10	100
HLSP3S-X12	12.0	305	.750	19.1	Maroon	3.20	81	50	222	10	100
HLSP3S-X0	12.0	305	.750	19.1	Black	3.20	81	18	80	10	100
HLSP5S-X12	18.0	457	.750	19.1	Maroon	5.00	127	50	222	10	100
HLSP5S-X0	18.0	457	.750	19.1	Black	5.00	127	18	80	10	100

## TAK-TAPE™ Hook & Loop Strips

- Hook & Loop fastener for general purpose bundling
- Thin and flexible to quickly wrap around bundle
- Adjustable, releasable and reusable
- Large continuous roll you can cut to size – PANDUIT cutter included with TTS-35RX0

- Complementary mounts available, see page B2.8
- Handy, reusable plastic case with TTS-20R0, keeps material clean
- Operating temperature range: -22°F to 194°F (-30°C to 90°C)

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		
<b>TTS-20R0</b>	20	6.1	.750	19.1	Various	Various	40	178	1	10
<b>TTS-35RX0</b>	35	10.7	.750	19.1	Various	Various	40	178	1	10

Std. Pkg. Qty. of TTS-35RX0 denotes 1 package of ten 35' rolls.

For service and technical support, call 800-777-3300 or visit [www.panduit.com](http://www.panduit.com).

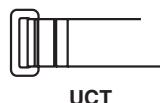
## ULTRA-CINCH™ Hook & Loop Ties

- Exclusive material with hooks and loops on same side allows user to secure a greater range of bundle diameters, including smaller bundles
- Improved low profile contoured cinch ring reduces overall bundle size
- Hook and loop material maintains network data integrity by protecting against over-tensioning, unraveling and delamination
- Adjustable, releasable and reusable hundreds of times – ideal for applications requiring frequent moves, adds or changes



- Tapered tip facilitates easy, snag-free threading to speed installation
- Brass grommet (on UGCTC and UGCTE styles) assures reliable installations with a strong metal grommet that resists pullout
- Use flat-head screws for grommet applications

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



Part Number	Length		Width		In.	mm	Max. Bundle Dia.	Min. Loop Tensile Str.	Lbs.	N	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm								
<b>Cinch Ties</b>												
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		
<b>Cinch Ties – Center Mount Grommet (Bundle is centered over mounting point)</b>												
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		
<b>Cinch Ties – End Mount Grommet (Bundle is offset from mounting point)</b>												
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.

**NEW!** Now Available in 8 Colors!



ULTRA-CINCH™ Tie Color Chart		
Color	Part No. Suffix	Example
Black	0	UCT3S-X0
Red	2	UCT3S-X2
Orange	3	UCT3S-X3
Yellow	4	UCT3S-X4
Green	5	UCT3S-X5
Blue	6	UCT3S-X6
Gray	8	UCT3S-X8
White	10	UCT3S-X10

## Hook & Loop Cable Ties

**Color Chart**

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

## Part Number Availability List

Standard Packaging	
Part Number	Color
HLC3S-X	0
HLC5S-X	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
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

A. System Overview

B1.Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1.Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

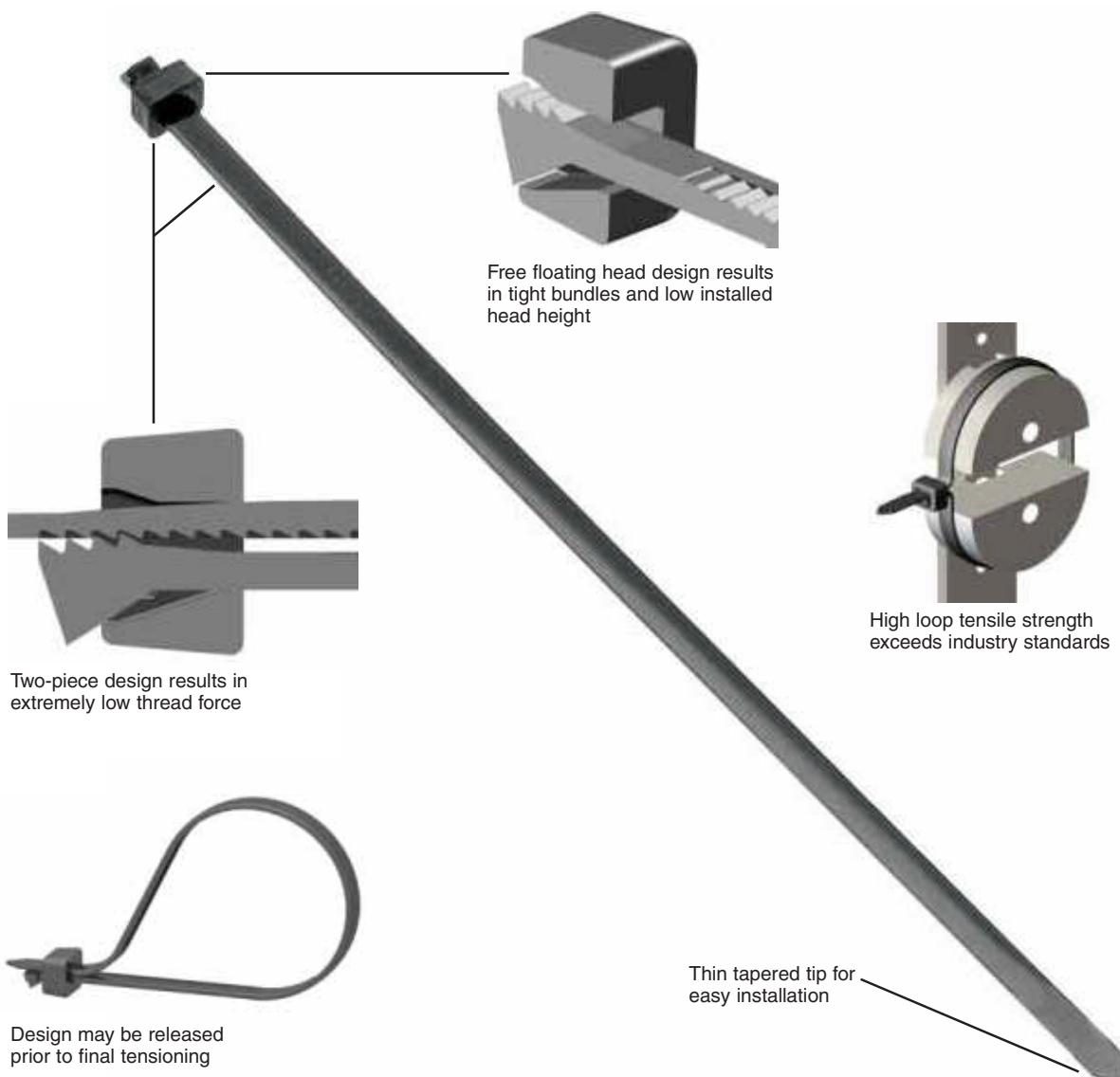
E3. Pre-Printed & Write-On Markers

E4. Lockout/ Tagout & Safety Solutions

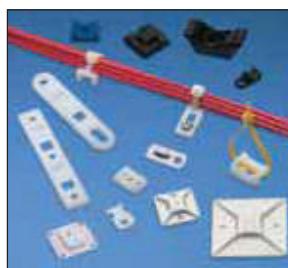
F. Index

## Features and Benefits – STA-STRAP® Cable Ties

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



Cable tie tools speed installation and reduce total installed cost.  
See [pages B1.89 – B1.93](#).



Cable tie accessories are used to speed and simplify the mounting of wires, cables and tubing.  
See [pages B2.1 – B2.24](#).

## Selection Guide – STA-STRAP® Cable Ties



Material, Color (Suffix)	Style / Function	Part Number Prefix	Catalog Page
Nylon 6.6, Natural (No Suffix)	Locking Ties / Bundle	SST	B1.70
	Clamp Ties / Mount	SSC	B1.73
	Marker Ties / Identify	SSM	B1.74
Weather Resistant Nylon 6.6, Black (0)	Locking Ties / Bundle	SST	B1.71
	Clamp Ties / Mount	SSC	B1.73
	Marker Ties / Identify	SSM	B1.74
Heat Stabilized Nylon 6.6, Black (30)	Locking Ties / Bundle	SST	B1.72
	Clamp Ties / Mount	SSC	B1.73

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

## Part Number System for STA-STRAP® Cable Ties

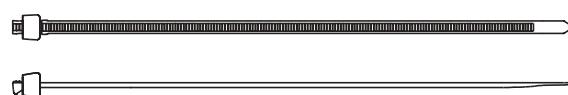
SST	1	M		C	
Type	Size	Cross Section	Screw Hole Size	Package Size	Color / Material
SST = Locking Tie	Approx.	M = Miniature	(Clamp Ties Only)	L = 50	See Page B1.75
SSC = Clamp Tie	Maximum	I = Intermediate	-S4 = #4 (M2.5)	C = 100	
SSM = Marker Tie	Bundle	S = Standard	-S6 = #6 (M3)	TL = 250	
	Dia. (In.)	H = Heavy	-S8 = #8 (M4)	D = 500	
		HH=Heavy Head	-S10 = #10 (M5)	M = 1000	
			-S25 = 1/4 (M6)		

**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 ties
- Releasable prior to final tensioning for bundle modifications



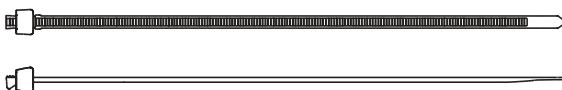
Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
<b>SST1M-C</b>	4.0	102	.095	2.4	.035	.9	.78	20	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
<b>SST1.5M-C</b>	5.5	140	.095	2.4	.037	.9	1.25	32	18	80		100	1000
<b>Intermediate Cross Section</b>													
<b>SST1.5I-C</b>	5.3	137	.135	3.4	.037	.9	1.25	32	40	178	GTS, GTSL, GS2B, PTS, PPTS, STS2	100	1000
<b>SST2I-C</b>	8.1	206	.135	3.4	.040	1.0	2.00	51	40	178		100	1000
<b>SST3I-C</b>	11.0	279	.135	3.4	.040	1.0	3.00	76	40	178		100	1000
<b>SST4I-C</b>	14.7	375	.135	3.4	.040	1.0	4.00	102	40	178		100	1000
<b>Standard Cross Section</b>													
<b>SST1.5S-M</b>	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
<b>SST2S-C</b>	6.7	172	.180	4.6	.045	1.2	1.75	45	50	222		100	1000
<b>SST3S-C</b>	11.0	279	.180	4.6	.048	1.2	3.00	76	50	222		100	1000
<b>SST4S-C</b>	15.0	381	.180	4.6	.048	1.2	4.00	102	50	222		100	1000
<b>Light-Heavy Cross Section</b>													
<b>SST2H-D</b>	8.0	203	.300	7.6	.062	1.6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	500	5000
<b>SST4H-L</b>	14.8	376	.300	7.6	.067	1.7	4.00	102	120	534		50	500
<b>SST8H-L</b>	27.5	699	.300	7.6	.067	1.7	8.00	203	120	534		50	500



## STA-STRAP® Cable Ties – Weather Resistant Nylon 6.6

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

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



Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
SST1M-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
<b>Intermediate Cross Section</b>													
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
<b>Standard Cross Section</b>													
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
<b>Light-Heavy Cross Section</b>													
SST2H-D0	8.0	203	.300	7.6	.062	1.6	2.00	51	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	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

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

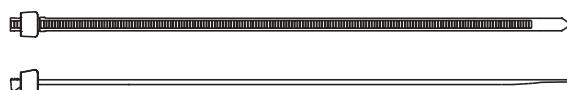
F.Index



## STA-STRAP® Cable Ties – Heat Stabilized Nylon 6.6

- For high temperature applications – 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"
- Small head height allows more efficient use of space in compact areas


**SST**

**SST4HH**


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

Part Number	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Miniature Cross Section</b>													
<b>SST1M-M30</b>	4.0	102	.095	2.4	.035	.9	.78	20	18	80	GTS, GTSL, GS2B, PTS, PPTS, STS2	1000	50000
<b>SST1.5M-M30</b>	5.5	140	.095	2.4	.037	.9	1.25	32	18	80		1000	50000
<b>Standard Cross Section</b>													
<b>SST2S-M30</b>	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
<b>SST3S-M30</b>	11.0	279	.180	4.6	.048	1.2	3.00	76	50	222		1000	10000
<b>SST4S-M30</b>	15.0	381	.180	4.6	.048	1.2	4.00	102	50	222		1000	5000
<b>Light-Heavy Cross Section</b>													
<b>SST4H-D30</b>	14.8	376	.300	7.6	.067	1.7	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	500	2500
<b>SST8H-D30</b>	27.5	699	.300	7.6	.067	1.7	8.00	203	120	534		500	2000
<b>Heavy Head Design</b>													
<b>Light-Heavy Cross Section</b>													
<b>SST4HH-D30</b>	14.8	376	.300	7.6	.062	1.6	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	500	2500



## 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 – indoor use
- Design allows for bundling before or after screwing clamp in place



SSC2S-S10-C



SSC2S-S10-M0



- 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

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
<b>SSC2S-S10-C</b>	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, ST2EH	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
<b>SSC2S-S10-M0</b>	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, ST2EH	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
---------------	-----	-----	------	-----	------	-----	------	-----	-----	----	------	----	----	-----	--	------	-------

#### 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, ST2EH	500	2500
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A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index



## STA-STRAP® Marker Ties – Nylon & 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

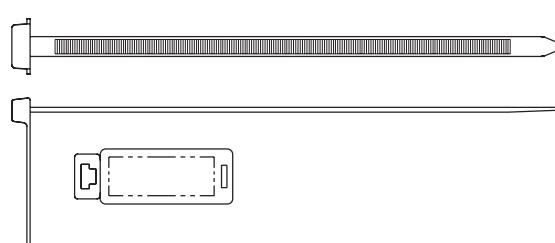
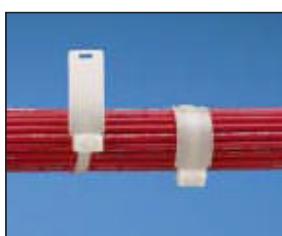
- Unique design allows tie to be used as a wrap-around or flag marker
- Can be marked with PANDUIT Marker Pens on [page B1.48](#) or Computer Printable Labels
- Custom imprinting with text, symbols or trademarks available using PANDUIT Custom Hot Stamping Service, see [page B1.103](#)



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			
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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## STA-STRAP® Cable Ties

### Material and Color Chart

Material	Color	PANDUIT Suffix
Nylon 6.6	Natural	✓
Weather Resistant (WR) 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 required).

### Part Number Availability List

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

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

## Selection Guide – Specialty Ties



Material, Color (Suffix)	Style / Function	Part Number Prefix	Catalog Page
<b>Stud Mounted Cable Ties</b>	Heat Stabilized Nylon 6.6, Black (30)	Locking Ties / Bundle Releasable / Reusable	PLST PRST <b>B1.77</b>
	Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	Locking / Bundle	PLST <b>B1.77</b>
<b>Ladder Style Stud Mount</b>	Heat Stabilized Nylon 6.6, Black (30)	Releasable / Reusable	PRST <b>B1.78</b>
<b>Double Loop Ties – 1-Piece</b>	Nylon 6.6, Natural (No Suffix) Weather Resistant Nylon 6.6, Black (0) Heat Stabilized Nylon 6.6, Black (30)	Locking / Bundle	PLB <b>B1.79</b>
<b>Double Loop Ties – 2-Piece</b>	Nylon 6.6, Natural (No Suffix) Heat Stabilized Weather Resistant Nylon 6.6, Black (0) Heat Stabilized Nylon 6.6, Black (30)	Locking / Bundle	SSB <b>B1.80</b>
<b>Triple Loop Cable Ties</b>	Weather Resistant Nylon 6.6, Black (0)	Locking / Bundle	PL3B <b>B1.81</b>
<b>Double Hose Clamp</b>	Weather Resistant Nylon 6.6, Black (0)	Locking / Bundle	DHC <b>B1.81</b>
<b>Chassis/Panel Mount Tie</b>	Heat Stabilized Weather Resistant Nylon 6.6, Black (300)	Locking / Bundle	SSPM <b>B1.82</b>
<b>Cable Marker Strap</b>	Polyethylene (No Suffix)	Releasable / Reusable	CM4S <b>B1.83</b>

## Part Number System for Specialty Cable Ties

<b>PLST</b>	<b>4</b>	<b>H</b>	<b>S25</b>	<b>TL</b>	<b>300</b>
Type	Size	Cross Section	Stud Size	Package Size	Color / Material
CM4S = Cable Marker Strap 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	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 B1.84



Cable tie tools speed installation and reduce total installed cost.

See pages B1.89 – B1.93.



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

See pages B2.1 – B2.24.

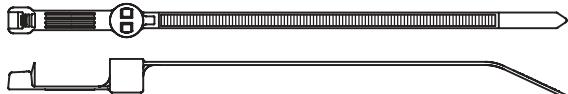


## PAN-Ty® Stud Mounted Cable Ties – Heat Stabilized & Heat Stabilized Weather Resistant Nylon 6.6

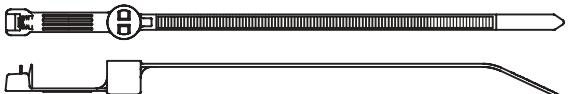
- Heat Stabilized material for high temperature applications – indoor use
- Heat Stabilized Weather Resistant material has greater resistance to damage caused by ultraviolet light and for high temperature applications – indoor or outdoor use
- Integral mount pushes onto a threaded stud and tie wraps around bundle



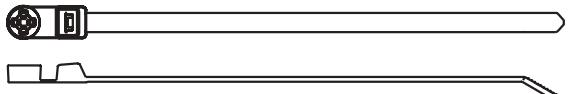
- Mid-mount style (PLST\_SC) centers the wire bundle over the stud
- Tie can be removed from the stud by turning counterclockwise
- Releasable style available (PRST)
- Curved tip is easy to pick up from flat surfaces and allows faster initial threading to speed installation



PLST30SC/50SC



PRST40SC



PLST4H

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			

### 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 Installed only	500	5000

### Heat Stabilized Weather Resistant Nylon 6.6

#### Light-Heavy Cross Section

PLST4HS25-TL300	15.3	389	7.6	7.6	.075	1.9	1/4-20	6.4	4.00	102	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500
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Note: UL Recognized and CSA Certified except PLST4H.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

A. System Overview



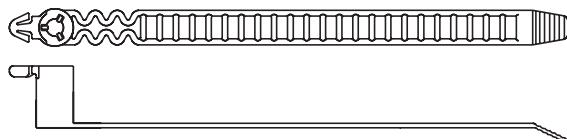
B1. Cable Ties

**PAN-TY® Ladder Style Stud Mounted Cable Tie – Heat Stabilized Nylon 6.6**

- For high temperature applications – 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 reusable
- Installed by hand – no tools required



C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

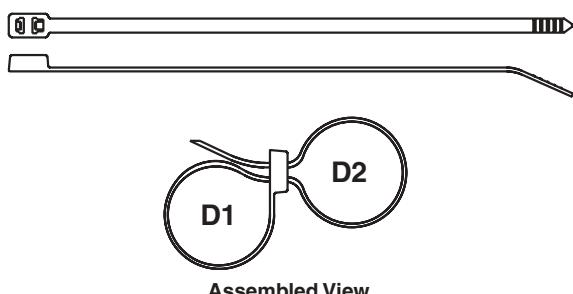
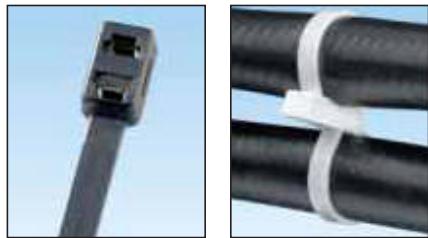
F. Index



### PAN-TY® Double Loop Cable Ties

- Natural Nylon material for indoor use
- Weather Resistant material has greater resistance to damage caused by ultraviolet light – indoor or outdoor use
- Heat Stabilized material for high temperature applications – 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



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						
<b>Nylon 6.6</b>																
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			
<b>Light-Heavy Cross Section</b>																
PLB4H-TL	3.60	91	14.7	373	.300	7.6	.075	1.9	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	250	2500			

### 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, ST2EH	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, ST2EH	250	2500
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Note: UL Recognized and CSA Certified except PLB4H-TL0.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index



## 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 – indoor use

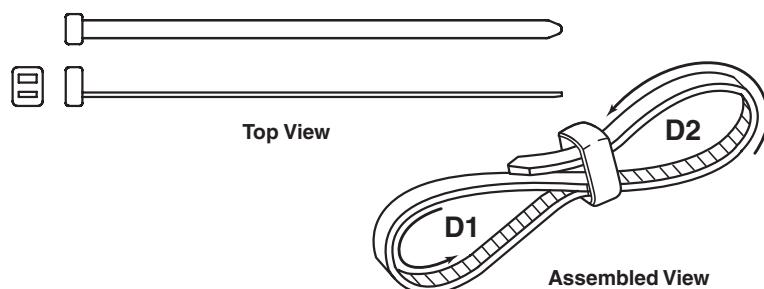
- A fast and economical method to secure and separate two bundles
- Exclusive two-piece design offers the lowest threading force in the industry
- First loop is releasable prior to final tensioning



SSB2S-C



SSB2S-M0



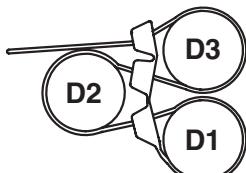
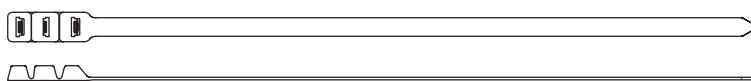
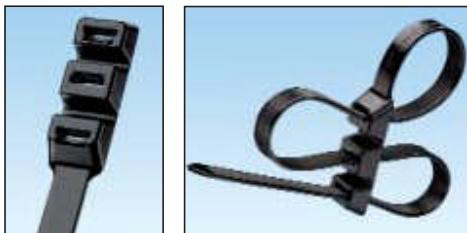
Part Number	Max. Combined Bundle Dia. D1 + D2		Length		Width		Thickness		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Nylon 6.6</b>													
<b>SSB2S-C</b>	1.25	32	6.8	172	.18	4.6	.045	1.1	30	133	Hand Installed Only	100	1000

<b>Weather Resistant Nylon 6.6</b>													
<b>SSB2S-M0</b>	1.25	32	6.8	172	.18	4.6	.045	1.1	30	133	Hand Installed Only	1000	10000

<b>Heat Stabilized Nylon 6.6</b>													
<b>SSB2S-M30</b>	1.25	32	6.8	172	.18	4.6	.045	1.1	30	133	Hand Installed Only	1000	10000

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

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

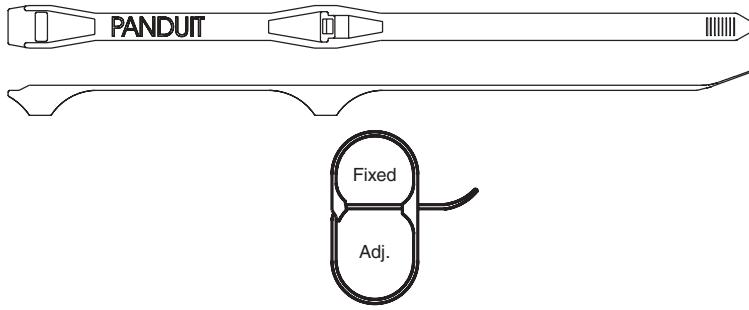


Assembled View

Part Number	Max. Combined Bundle Dia. D1 + D2 + D3		Length		Width		Thickness		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
<b>Extra-Heavy Cross Section</b>													
PL3B5EH-C0	5.00	127	20.0	508	.500	12.7	.075	1.9	125	556	GS4EH, ST2EH	100	1000

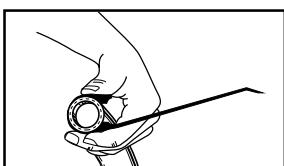
### Double Hose Clamp – Weather Resistant Nylon 6.6

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

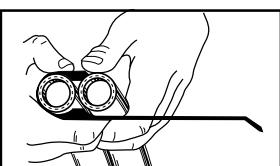


Assembled View

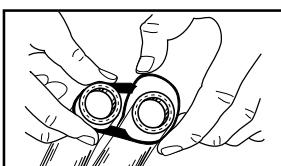
Part Number	Length		Width		Thickness		Fixed Loop Dia.		Adjustable Loop Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N			
DHC1.12X1.75-D0	11.0	279	.280	7.1	.050	1.3	1.12	28	1.00 – .75	25 – 44	100	445	GTH, GS4H, PTH, STH2, ST2EH	500	2500



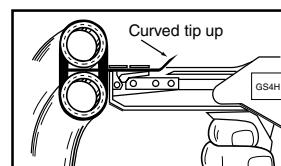
1) Wrap clamp around hose.



2) Position second hose in clamp.



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

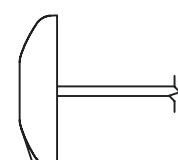
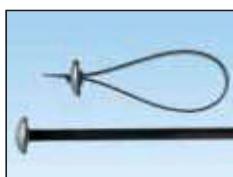


4) Tension and cut off with recommended tool.

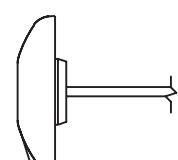


## STA-STRAP® Chassis/Panel Mount Tie – Heat Stabilized Weather Resistant Nylon 6.6

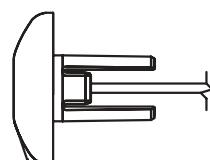
- Greater resistance to damage caused by ultraviolet light and for high temperature applications – indoor or outdoor use
- Unique design allows tie to secure a bundle directly to a chassis or panel without the need for separate fasteners or mounting devices
- Releasable prior to final tensioning for 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

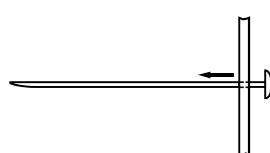


With Long Centering Pilot

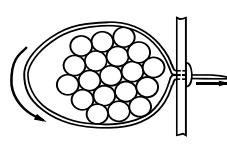
Part Number	Length		Width		Thickness		Hole Diameter Range		Max. Bundle Dia.		Min. Loop Tensile Str.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm			
<b>Without Centering Pilot</b>															
<b>SSPM2.5H-L300</b>	10.1	257	.300	7.6	.062	1.6	.316 – .820	8.0 – 21.0	2.76	70	120	534	GTH, GS4H, GS4EH, PTH, STH2, ST2EH	50	2500
<b>SSPM4H-L300</b>	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, ST2EH	50	2500
<b>With Centering Pilot</b>															
<b>SSPM2.5HP-L300</b>	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, ST2EH	50	2500
<b>SSPM4HP-L300</b>	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, ST2EH	50	2500
<b>With Long Centering Pilot</b>															
<b>SSPM4HLP-TL300</b>	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, ST2EH	250	2500

Note: CSA Certified except SSPM4HLP.

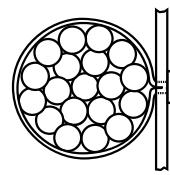
### Through-Panel Mount Installation in Three Easy Steps:



1) Insert tip of cable tie through the pre-drilled hole in the panel.



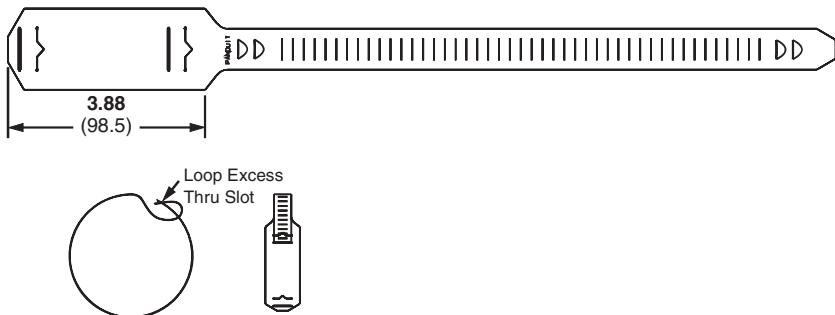
2) Wrap cable tie around the bundle and insert tip back through the hole and head of the cable tie.



3) Pull tip until cable tie is snug on bundle. Tension and cut off excess portion with installation tool.

## Cable Marker Strap – Polyethylene

- Identify and code telephone and fiber optic cable
- Replaces 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 on [page B1.48](#)
- Custom imprinting with text, symbols or trademarks available using PANDUIT Custom Hot Stamping Service, see [page B1.103](#)



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



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

Part Number	Length		Width		Thickness		Color	Marker Write-On Area		Max. Bundle Dia.		Recommended Installation Tool	Std. Pkg. Qty.	Std. Ctn. Qty.
	In.	mm	In.	mm	In.	mm		In.	mm	In.	mm			
<b>Standard Cross Section</b>														
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 Installed 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

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

## Specialty Cable Ties

### Material and Color Chart

Material	Color	PANDUIT Suffix
Nylon 6.6	Natural	✓
Weather Resistant (WR) 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 required).

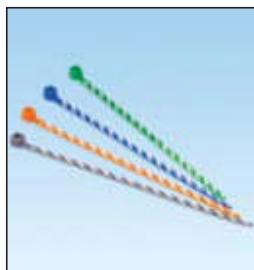
### Part Number Availability List

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

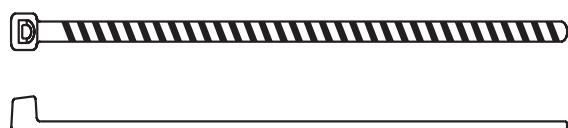


## PAN-TY® Striped Cable Ties – Nylon 6.6

- Nylon material for indoor use
- Striped PAN-TY® Cable Ties in 25 color combinations match the universally accepted Even-Count Color Code



- Solid color ties are available for identification of "Super Groups" in cable containing more than 600 pairs
- Each 50 piece package fits in the PAN-POUCH™ Kit or pocket pouch, see [page B1.86](#)



Part Number	Color	Length		Width		Thickness		Max. Bundle Dia.		Min. Loop Tensile Str.		Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	N		
<b>Miniature Cross Section</b>													
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.

A. System Overview



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

## Telephone Cable Identification Kits

- *PAN-POUCH™* Kit is made of 2-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 pc.) 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 Plastic Boxes and Bags



KP-506A



KP-506A-0



KP-509



KB-550



KB-551

Part Number	Part Description	Std. Pkg. Qty.
KP-506A	<b>Kit for Indoor Use</b> <i>PAN-TY®</i> Cable Ties and Mounts: <u>Natural Nylon 6.6</u> (100) PLT1M (100) PLT1.5I (100) PLT2S (50) ABM2S-A Mounts	1
KP-506A-0	<b>Kit for Outdoor Use</b> <i>PAN-TY®</i> 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	<b>Kit for Indoor Use</b> For prototyping and new product development – contains over 600 pcs. <i>PAN-TY®</i> Cable Ties in different styles, sizes and colors Huge assortment of cable tie mounts and wiring accessories	1
KB-550	<b>Assortment Pack for Indoor and Outdoor Use</b> <i>PAN-TY®</i> 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	<b>Assortment Pack for Indoor and Outdoor Use</b> <i>DOME-TOP® Barb Ty</i> 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

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index

## Cable Tie Kits in Steel Boxes

Part Number	Part Description	Std. Pkg. Qty.
K-205	<b>Kit for Indoor Use</b> <i>PAN-TY®</i> Cable Ties, Cable Tie Installation Tool, Terminals, Splices and Crimp Tool: (1) GTS Tool (1) CT-100 Crimp Tool <u>Natural Nylon 6.6 Cable Ties</u> (100) PLT1M (100) PLT1.5I (100) PLT2S <u>Terminals</u> (100) PV18-6LF (100) PV14-8LF (100) PV14-10LF (50) PV10-10LF <u>Splices</u> (50) BSV10X (100) BSV14X (100) BSV18X	1
K-504	<b>Kit for Indoor Use</b> <i>PAN-TY®</i> 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	<b>2-Drawer Slide Rack</b> Holds K-504 Cable Tie Kit or K-1000 Series Terminal Kit	1

## Selection Guide – Hand Tools, Accessories and Kits

### 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 B1.90					
	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

#### Installer Controlled Tension and Cut-Off

Recommended usage: under 10,000 ties/year

Typical Applications: MRO or Construction

Cross Section	Tool Part Number – Page B1.91			
	STS2	STH2	ST2EH	STHV
SM				
M	X			
I	X			
S	X	X		
HS		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

### Accessories/Kits

#### Manual



Part Number	For Tool	Page
KGTSTL	GTS, GTSL	B1.93
KGTHTL	GTH	B1.93
TTLK3	GS2B, GS4H	B1.93



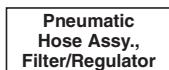
Part Number	For Tool	Page
KGTSBLD	GTS, GTSL	B1.93
KGTHBLD	GTH	B1.93
K2-BLD2	GS2B	B1.93
K4H-BLD	GS4H	B1.93
K4EH-BLD	GS4EH	B1.93



Part Number	For Tool	Page
KST2EHG	ST2EH	B1.93



Part Number	For Tool	Page
GHH	GTS, GTSL, GS2B, GTH, GS4H, GS4EH, ST2EH	B1.93



Part Number	For Tool	Page
PPH10	PTS, PPTS, PTH	B1.92
PL289N1	PTS, PPTS, PTH	B1.92

#### Pneumatic

Recommended usage: under 250,000 ties/year

Typical Applications: Medium to high volume tie usage in OEM

Cross Section	Tool Part Number – Page B1.92		
	PTS	PPTS	PTH
SM	X		
M	X	X	
I	X	X	
S	X	X	X
HS			X
LH			X
H			X
EH			

#### Pneumatic

Part Number	For Tool	Page
KPTSTL	PTS, PTH	B1.93
TTLK3	PPTS	B1.93

Part Number	For Tool	Page
KGTSBLD	PTS	B1.93
KPTHBLD	PTH	B1.93

Part Number	For Tool	Page
K2-BLD2	PPTS	B1.93

Part Number	For Tool	Page
KPTSG	PPTS	B1.93

Part Number	For Tool	Page
GHH	PTS, PPTS, PTH	B1.93

Part Number	For Tool	Page
PPH10	PTS, PPTS, PTH	B1.92
PL289N1	PTS, PPTS, PTH	B1.92

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C4.Cable Management

D1.Terminals

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/Tagout & Safety Solutions

F.Index

**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 B1.93](#)
- Requires no special maintenance



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	8.8	249	Ergonomic design with a plastic molded housing and a narrow nose which improves access to bundles in confined areas. Black handle and selector knob.	QPL per Mil. Std. MS90387-1 and Mil. Spec. MIL-T-81306A	1
GTSL	SM, M, I, S	8.8	249	Ergonomic design with a plastic molded housing, a narrow nose which improves access to bundles in confined areas, and a shorter handle reach for users with smaller hands. Maroon handle and selector knob.	QPL per Mil. Std. MS90387-1 and Mil. Spec. MIL-T-81306A	1
GS2B	M, I, S	11.5	327	Metal tool with a durable powder coat finish. Black handle and selector knob.	QPL per Mil. Std. MS90387-1 and Mil. Spec. MIL-T-81306A	1
GTH	S, HS, LH, H	11.2	318	Ergonomic design with a plastic molded housing. Red handle and selector knob.	—	1
GS4H	S, HS, LH, H	16.0	454	Metal tool with a durable powder coat finish. Red handle and selector knob.	QPL per Mil. Std. MS90387-2 and Mil. Spec. MIL-T-81306A	1
GS4EH	LH, H, EH	16.0	454	Metal tool with a durable powder coat finish. Blue handle and selector knob.	—	1

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

## Cable Tie Tools – Installer Controlled Tension and Cut-Off



**STS2**



**STS2**



**STH2**



**ST2EH**



**STHV**

- Economical series of tools for maintenance or construction applications
- Excellent tools for low volume applications

Part Number	Used With Cable Ties	Color	Weight		Part Features	Std. Pkg. Qty.
			oz.	g		
<b>STS2</b>	M, I, S	Black	2.5	71	Ergonomic handle design, short handle span and top loading feature for right or left handed users.	1
<b>STH2</b>	S, HS, LH, H	Red	2.5	71	Ergonomic handle design, short handle span and top loading feature for right or left handed users.	1
<b>ST2EH</b>	LH, H, EH	Black	16.0	454	Durable all steel construction and comfortable rubber handles.	1
<b>STHV</b>	LH, H	Yellow	12.0	341	Durable all steel construction and "travel stop" to prevent pinched fingers.	1

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

### Installation Procedure (STS2/STH2/ST2EH):

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.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

A. System Overview



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

## Pneumatic Hand Tools – Tool-Controlled Tension and Cut-Off



PTS

- 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



PTS



PPTS



PTH

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 plastic molded housing and black knob; replacement parts can be part of a scheduled maintenance program.	1
PPTS	M, I, S	15.0	427	Powder coat finish with black knob; replacement parts can be part of a scheduled maintenance program.	1
PTH	S, HS, LH, H	32.0	907	Ergonomic design with plastic molded 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 Sections: SM = Subminiature, M = Miniature, I = Intermediate, S = Standard, HS = Heavy-Standard, LH = Light-Heavy, H = Heavy, EH = Extra-Heavy

## Pneumatic Tool Accessories



PL289N1 / PPH10

Part Number	Used With Installation System	Part Description		Std. Pkg. Qty.
		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. Use with PTS and PTH.	1	
PPH10	PTS, PPTS, PTH	10 ft. (3m) Hose Assembly (regulator to tool); includes a 1/8" NPT male connector (to regulator) and 1/8" NPT female quick disconnect fitting to tool.	1	

## Tool Tension Locking Kits

- For applications requiring a locking device to prevent changing the tool tension



KGTHTL

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

## Blade Replacement Kits

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



KGTSBLD

Part Number	Used With Installation Tool	Contents	Std. Pkg. Qty.
<b>KGTSBLD</b>	GTS, GTSL, PTS	Threadlocker, screw, washer and replacement blade.	1
<b>KGTHBLD</b>	GTH	Threadlocker, screw, washer and replacement blade.	1
<b>K2-BLD2</b>	GS2B, PPTS	Threadlocker, screw and replacement blade.	1
<b>K4H-BLD</b>	GS4H	Threadlocker, screws and replacement blade.	1
<b>K4EH-BLD</b>	GS4EH	Hex wrench, threadlocker, screw, cutter cap and replacement blade.	1
<b>KPTHBLD</b>	PTH	Threadlocker, screw and replacement blade.	1

## Gripper Replacement Kits

- Gripper replacement kits can be part of a user's scheduled maintenance plan or when the tie begins slipping in tool



KPTSG

Part Number	Used With Installation Tool	Contents	Std. Pkg. Qty.
<b>KPTSG</b>	PPTS	Hex wrench, gripper pin, spring and tension gripper.	1
<b>KST2EHG</b>	ST2EH	Threadlocker, rivet and gripper assembly.	1

## Hand Tool Holster

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



GHH

Part Number	Used With Installation Tool	Color	Std. Pkg. Qty.
<b>GHH</b>	GTS, GTSL, GS2B, GTH, GS4H, GS4EH, PTS, PPTS, ST2EH	Black	1

A. System Overview



B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index

## Notes

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

## AUTOMATIC CABLE TIE INSTALLATION TOOLS



The complete line of *PANDUIT* automatic installation tools and reel-fed cable ties offers an efficient solution for high volume harnessing, assembly, fastening and packaging applications. Cycle times of less than one second are up to six times faster than a conventional manual cable tie installation. The microprocessor based controller monitors system performance with automatic error detection and reporting through the LCD display, for improved production and reliability.

### System Highlights

**Three systems built for speed:**

- Installs a cable tie in less than 1 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.

## Selection Guide – Automatic Installation Tools 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	B1.97
PAT1.5M	For miniature cable ties up to 1.31" (33mm) bundle diameter	B1.97

#### Dispenser

Part Number	Description	Page
PDM	Stationary Dispenser	B1.97

#### Transfer Hose

Part Number	Description	Page
PHM1	3.2 ft. (1M) Transfer Hose	B1.98
PHM2	6.5 ft. (2M) Transfer Hose	B1.98
PHM3	10.0 ft. (3M) Transfer Hose	B1.98

#### Optional System Accessories

Part Number	Description	Page
PDH10-37	Air Hose	B1.98
PL283N1	Filter/Regulator	B1.98
PATMBM	Bench Mount and Foot Pedal	B1.98

#### Reel-Fed Cable Ties – MINIATURE Cross Section

Part Number	Description	Color	Page
<b>Barbed Tie – Max. Bundle Dia.: .82" (21mm), 30 Lbs.</b>			
BT1M-XMR	Nylon 6.6	Natural	B1.100
BT1M-XMR0	Weather Resistant Nylon 6.6	Black	B1.100
BT1M-XMR30	Heat Stabilized Nylon 6.6	Black	B1.100
<b>Barbed Tie – Max. Bundle Dia.: 1.31" (33mm), 30 Lbs.</b>			
BT1.5M-XMR	Nylon 6.6	Natural	B1.100
BT1.5M-XMR0	Weather Resistant Nylon 6.6	Black	B1.100
BT1.5M-XMR30	Heat Stabilized Nylon 6.6	Black	B1.100
<b>PAN-Ty® Cable Tie – Max. Bundle Dia.: 82" (21mm), 18 Lbs.</b>			
PLT1M-XMR	Nylon 6.6	Natural	B1.100
PLT1M-XMR0	Weather Resistant Nylon 6.6	Black	B1.100
PLT1M-XMR30	Heat Stabilized Nylon 6.6	Black	B1.100
PLT1M-XMR00	Weather Resistant Nylon 6.6 (Meets Mil Spec)	Black	B1.100
<b>PAN-Ty® Cable Tie – Max. Bundle Dia.: 1.31" (33mm), 18 Lbs.</b>			
PLT1.5M-XMR	Nylon 6.6	Natural	B1.100
PLT1.5M-XMR0	Weather Resistant Nylon 6.6	Black	B1.100
PLT1.5M-XMR30	Heat Stabilized Nylon 6.6	Black	B1.100

### PAT2S System

#### Tool Head for use with STANDARD Cross Section

Part Number	Description	Page
PAT2S	For standard cross section up to 2.00" (51mm) bundle diameter	B1.97

#### Dispenser

Part Number	Description	Page
PDS	Stationary Dispenser	B1.97

#### Transfer Hose

Part Number	Description	Page
PHS2	6.5 ft. (2M) Transfer Hose	B1.98
PHS3	10.0 ft. (3M) Transfer Hose	B1.98

#### Dispenser Frame

Part Number	Description	Page
PDSF	Dispenser Frame	B1.98

#### Optional System Accessories

Part Number	Description	Page
PDH10-37	Air Hose	B1.98
PL283N1	Filter/Regulator	B1.98
PAT2SBM	Bench Mount and Foot Pedal	B1.98

#### Reel-Fed Cable Ties – STANDARD Cross Section

Part Number	Description	Color	Page
<b>PAN-Ty® Cable Tie – Max. Bundle Dia.: 2.00" (51mm), 50 Lbs.</b>			
PLT2S-VMR	Nylon 6.6	Natural	B1.100
PLT2S-VMR30	Heat Stabilized Nylon 6.6	Black	B1.100

## System Selection Guide

Maximum Bundle Dia.		Tool Head	Dispenser/Frame	Transfer Hose	Reel-Fed Cable Ties	
In.	mm					
.82	21	PAT1M	PDM	PHM1, PHM2, PHM3	BT1M-XMR, PLT1M-XMR	
1.31	33		PDM		BT1.5M-XMR, PLT1.5M-XMR	
2.00	51		PDS/PDSF		PLT2S-VMR	

## Tool Head – Three 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

Part Number	Max. Bundle Dia.	Max. Bundle Dia.	Used With Cable Ties	Std. Pkg. Qty.
	In.	mm		
PAT1M	.82	21	PLT1M-XMR, BT1M-XMR	1
PAT1.5M	1.31	33	PLT1.5M-XMR, BT1.5M-XMR	1
PAT2S	2.00	51	PLT2S-VMR	1

**NEW!**

## Dispenser

- Microprocessor based controller monitors system performance through LCD display; provides production data and reporting, including error detection and cycle count for improved reliability

- On-line HELP menu through LCD display in five languages (English, Spanish, German, Italian or French), is user-friendly for quick and simple training



PDM



PDS

Part Number	Used With Tool Head	Description	Std. Pkg. Qty.
PDM	PAT1M, PAT1.5M	Stationary dispenser with electronic display. Online help menu through LCD display; multi-language; alarm sounds if error occurs. The system operates on 65 psig. (minimum) non-lubricated, filtered air and 100-240 VAC/50 or 60 Hz – automatically adjusts within this range.	1
PDS	PAT2S		1

**NEW!**

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index



## Transfer Hose



PHM3

Part Number	Used With Tool Head	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	PAT1M, PAT1.5M		6.5	2	1
PHM3	PAT1M, PAT1.5M		10.0	3	1
PHS2	PAT2S		6.5	2	1
PHS3	PAT2S		10.0	3	1

## Dispenser Frame



PDSF

Part Number	Used With Dispenser	Description	Std. Pkg. Qty.	
			ft	M
PDSF	PDS (PAT2S)	Metal frame supports the PDS dispenser above the cable tie reel as ties are loaded into dispenser; can be used as a free-standing unit or permanently mounted to a bench or cart.	1	

## Optional System Accessories:

### Filter/Regulator and Air Supply Hose



PL283N1

PDH10-37

Part Number	Used With Dispenser	Description	Std. Pkg. Qty.	
			ft	M
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 ft. (3M) – includes standard air fittings.	1	

### Bench Mount



PATMBM

Part Number	Used With Tool Head	Description	Std. Pkg. Qty.	
			ft	M
PATMBM	PAT1M, PAT1.5M	Allows hands-free operation for high volume usage. Bench mount fixture assembly consists of (1) each bench mount fixture and foot pedal assembly.	1	
PAT2SBM	PAT2S			1

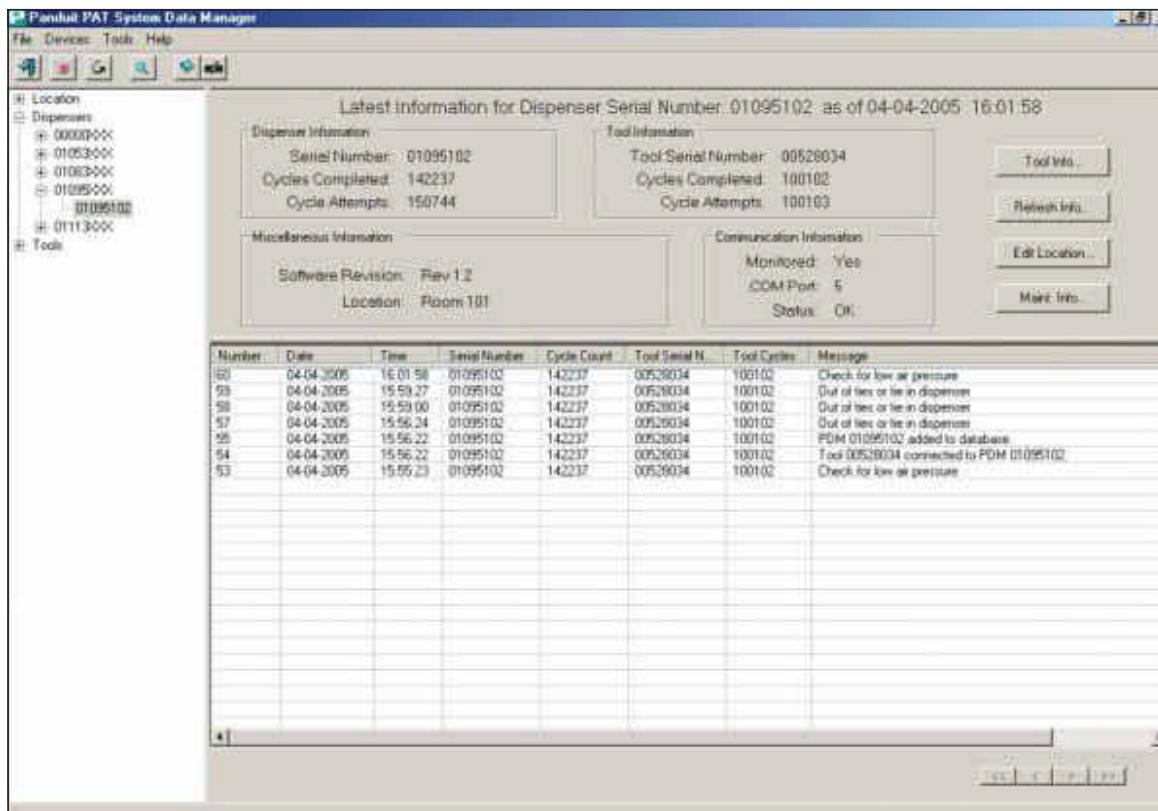
## Optional System Accessories (continued):

### Ethernet Enabled Dispenser and Data Interface Software

- Records production information, such as cycle counts and serial numbers; allows user to measure and track performance through an RJ45 connection
- Maintains and “exportable” electronic log of messages and maintenance; allows performance tracking and ensures proper maintenance has been completed to minimize downtime
- Provides email support with ability to send email notifications for specific messages (i.e. tool requires routine maintenance); proactive communication/increases productivity

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

### Screen Capture – Dispenser Information



A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power &amp; Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed &amp; Write-On Markers

E4.Lockout/Tagout &amp; Safety Solutions

F.Index



# ELECTRICAL SOLUTIONS

A. System Overview



B1. Cable Ties

**NEW!**

## BT-XMR Reel-Fed Cable Ties



- Continuously molded cable ties (5,000 ties/reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes

- Exclusive stainless steel locking barb with 30 lbs. loop tensile strength in Miniature cross section provides higher reliability for demanding applications

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

Part Number	Tie Style	Material	Color	Max. Bundle Dia.		Length		Width		Min. Loop Tensile Str.		Std. Ctn. Qty.
				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	10000
BT1M-XMR0		Weather Resistant Nylon 6.6	Black									10000
BT1M-XMR30		Heat Stabilized Nylon 6.6	Black									10000

### 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	10000
BT1.5M-XMR0		Weather Resistant Nylon 6.6	Black									10000
BT1.5M-XMR30		Heat Stabilized Nylon 6.6	Black									10000



## 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 locking ties with 18 lbs. loop tensile strength in Miniature cross section

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

### Reel-Fed Cable Ties for PAT1M System

PLT1M-XMR	One-piece	Nylon 6.6	Natural	.82	21	4.0	102	.100	2.5	18	80	10000
PLT1M-XMR0		Weather Resistant Nylon 6.6	Black									10000
PLT1M-XMR30		Heat Stabilized Nylon 6.6	Black									10000
PLT1M-XMR00‡		Weather Resistant Nylon 6.6	Black									10000

### Reel-Fed Cable Ties for PAT1.5M System

PLT1.5M-XMR	One-piece	Nylon 6.6	Natural	1.31	33	5.6	142	.100	2.5	18	80	10000
PLT1.5M-XMR0		Weather Resistant Nylon 6.6	Black									10000
PLT1.5M-XMR30		Heat Stabilized Nylon 6.6	Black									10000

‡Military grade Weather Resistant material.



## 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 locking ties with 50 lbs. loop tensile strength in Standard cross section for larger bundles up to 2" diameter

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

### Reel-Fed Cable Ties for PAT2S System

PLT2S-VMR	One-piece	Nylon 6.6	Natural	2.00	51	8.1	206	.190	4.8	50	222	5000
PLT2S-VMR30		Heat Stabilized Nylon 6.6	Black									5000

B1.100

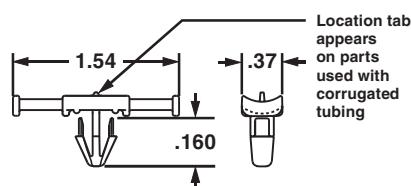
Order number of pieces required, in multiples of Standard Package Quantity.

Prime items appear in **BOLD**.

## cPUs Tie Harness Mounts – Nylon and Heat Stabilized Nylon 6.6

- 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, see [page B2.44](#)

- 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					
THMSP20-C	M, I, S	.160	4.1	.244 – .283	6.2 - 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP20-C30	M, I, S	.160	4.1	.244 – .283	6.2 - 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000
THMSP25-C	M, I, S	.230	5.8	.244 – .283	6.2 - 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP25-C30	M, I, S	.230	5.8	.244 – .283	6.2 - 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000

**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	.244 – .283	6.2 - 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP20-C30	M, I, S	.160	4.1	.244 – .283	6.2 - 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000
THMSP25-C	M, I, S	.230	5.8	.244 – .283	6.2 - 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP25-C30	M, I, S	.230	5.8	.244 – .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	.244 – .283	6.2 – 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP20F-C30	M, I, S	.160	4.1	.244 – .283	6.2 – 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000
THMSP25F-C	M, I, S	.230	5.8	.244 – .283	6.2 – 7.2	Nylon 6.6	Natural	Push Barb	100	1000
THMSP25F-C30	M, I, S	.230	5.8	.244 – .283	6.2 – 7.2	Heat Stabilized Nylon 6.6	Black	Push Barb	100	1000

Cable tie cross sections: M = Miniature, I = Intermediate and S = Standard.

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

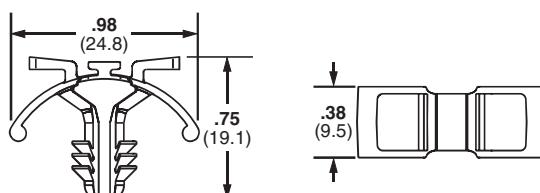
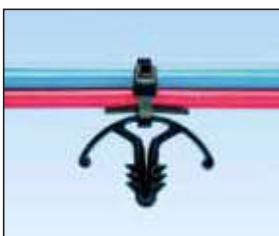
E4.Lockout/ Tagout & Safety Solutions

F.Index

## Tie Harness Mount for Single Cable Tie – Nylon and Heat Stabilized Nylon 6.6

- Secured with only one cable tie
- Cable ties can be installed by hand or with PANDUIT automatic cable tie tooling
- Wing design provides added stability

- Natural Nylon material for indoor use
- Heat Stabilized material for high temperature applications – indoor use



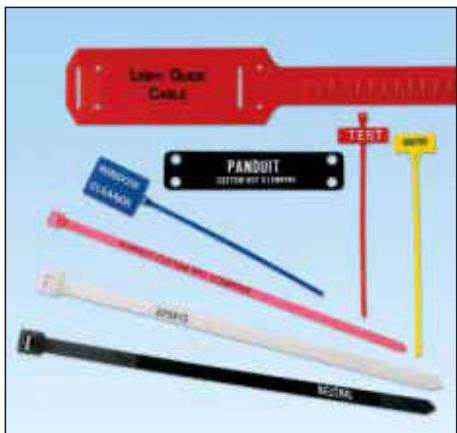
Part Number	Used With Cable Ties	Maximum Panel Thickness		Panel Hole Diameter		Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.
		In.	mm	In.	mm				
<b>Nylon 6.6</b>									
THM1SC-C	M, I, S	.135	3.4	.250	6.4	Natural	Tree Barb	100	1000

Heat Stabilized Nylon 6.6									
Part Number	Used With Cable Ties	Maximum Panel Thickness	Panel Hole Diameter	Color	Mounting Method	Std. Pkg. Qty.	Std. Ctn. Qty.		
THM1SC-C30	M, I, S	.135	3.4	.250	6.4	Black	Tree Barb	100	1000

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

## Hot Stamping Service

### Custom Printed Cable Ties



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

Hot stamped cable ties 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
- A variety of characters and fonts
- Sequential numbering
- Special customer logos and diagrams

#### FAST! TWO WEEK LEAD TIME

Minimum order: 5,000 pieces per part number and message  
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"
  - 1.75" x .75"
  - 2.00" x .75"
  - 2.50" x .75"
  - 3.50" 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"

A. System Overview

B1.Cable Ties

B2.Cable Accessories

B3.Stainless Steel

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index



# ELECTRICAL SOLUTIONS

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index



## 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 EN50146	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/CO BV 1178B/BVN/04	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
	Germanischer Lloyd	30562-83HH, 32666-83HH, 51796-89HH, 98731-96HH	Germanischer Lloyd Approval	PLT Series, BT Series
	Germany (VG) Military	K17/97165	VG 95 387 – 100 MS 3367F	PLT Series, BT Series, SST Series
	Korean Register of Shipping	NYK06431-EL001, EL002, EL003	Type Approval for the Rules for Classification of Steel Ships	PLT Series, BT Series, Mounts
	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
	Nippon Kaiji Kyokai	85VZ004B, 85BZ005B, 85VZ006B	Nippon Kaiji Kyokai Type Approval	PLT2H-12H, PLT2EH-12EH, PRT2EH-12EH, SST2H-8H
	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
	QS-9000	A2269	Quality system requirements to the automotive groups	All cable tie products
	US Military Aerospace Standard	QPL-AS23190-2	SAE spec AS23190	See Military Cross Reference Page B1.105

A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power & Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed & Write-On Markers

E4. Lockout/Tagout & Safety Solutions

F. Index

## Military Cross Reference

The **PANDUIT** Cable Ties and Marker Ties listed in the tables below 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).

### Color Chart

Color	Black‡	Brown	Red	Orange	Yellow	Green	Blue	Purple	Gray	Natural
* MS3367, MS3368, Color No.	0	1	2	3	4	5	6	7	8	9
** PANDUIT Color No.	00	1	2	3	4Y	5	6	7	8	None

‡Weather Resistant per ASTM D 4066-94B

## Cable Ties

Current Mil. Std. Part Number	PAN-TY® Cable Tie Part Number	DOME-TOP® Barb Ty Cable Tie Part Number	STA-STRAP® Cable Tie Part Number	BELT-TY™ In-Line Cable Tie Part Number
MS3367-1-*	PLT2S-**	BT2S-**	SST2S-**	—
MS3367-2-*	PLT4S-**	BT4S-**	SST4S-**	—
MS3367-3-*	PLT4H-**	BT4LH-**	SST4H-**	—
MS3367-4-*	PLT.7M-**	—	—	—
MS3367-4-*	PLT1M-**	BT1M-**	SST1M-**	—
MS3367-5-*	PLT1.5I-**	BT1.5I-**	SST1.5I-**	—
MS3367-6-*	PLT8LH-**	BT8LH-**	SST8H-**	—
MS3367-6-*	—	BT9LH-**	—	—
MS3367-7-*	PLT3S-**	BT3S-**	SST3S-**	—
MS3367-23-*	—	—	—	ILT2S-**
MS3367-24-*	—	—	—	ILT4S-**
MS3367-25-*	—	—	—	ILT4LH-**
MS3367-26-*	—	—	—	ILT1M-**
MS3367-27-*	—	—	—	ILT1.5I-**
MS3367-29-*	—	—	—	ILT3S-**

## Marker Ties

Current Mil. Std. Part Number	PAN-TY® Cable Tie Part Number	DOME-TOP® Barb Ty Cable Tie Part Number	STA-STRAP® Cable Tie Part Number
MS3368-1-*A	PLM2S-**	BM2S-**	—
MS3368-1-*B	—	—	SSM2S-**
MS3368-2-*A	PLM4S-**	BM4S-**	—
MS3368-2-*B	—	—	SSM4S-**
MS3368-3-*C	PL2M2S-**	B2M2S-**	—
MS3368-4-*D	PL3M2S-**	B3M2S-**	—
MS3368-5-*E	PLM1M-**	BM1M-**	—

The **PANDUIT** Installation Tools listed in the table below meet all the testing requirements of MIL-T-81306 and the dimensional requirements of MS90387.

## Installation Tools

Current Mil. Std. Part Number	Tool Part Number
MS90387-1	GTS, GS2B
MS90387-2	GS4H
MS90387-3	GS4MT

## Cable Tie Selection and Specification Guidelines

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

By using this information as a guide, the user will be better equipped to select the best suited cable tie and material to perform its intended function over a long period of time.

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.

To select the optimum cable tie for a specific application, the following table can be used as a quick 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 (10 = Most Suitable, 1 = Least Suitable). Next, review the other criteria by scanning in a vertical direction on the chart and then make your final selection.

Design Criteria	Nylon 6.6, Natural	Weather Resistant Nylon 6.6, Black	Heat Stabilized Nylon 6.6, Black	Heat Stabilized Nylon 6.6, Natural	Heat Stabilized Nylon 6.6, Black	Flame Retardant Nylon 6.6, Black	Flame Retardant Nylon 6.6, Ivory	Weather Resistant Nylon 12, Black	Polypropylene, Green	Weather Resistant Polypropylene, Black	TEFZEL ■, Aqua Blue	HALAR ▲, Maroon	Weather Resistant Acetal, Black	Stainless Steel ***
Part Number Suffix Material Designation	None	0	30	39	300	60	69	120	109	100	76	702Y	N/A	N/A
Loop Tensile Strength	7	7	7	7	7	7	7	6	5	5	7	5	9	10
Low Temperature Service	6	6	6	6	6	5	5	6	6	6	7	7	6	10
High Temperature Service	5	5	6	6	6	5	5	5	5	5	8	7	3	10
Flammability	6	6	6	6	6	8	8	3	2	2	9	9	2	10
Ultraviolet Resistance	1	6	4	1	6	1	1	7	1	6	9	9	9	10
Radiation Resistance	3	3	3	3	3	3	3	4	5	5	9	9	3	10
Overall Chemical Resistance – Hydrocarbons	6	6	6	6	6	6	6	8	8	8	10	10	5	9
– Chlorinated Hydrocarbons	9	9	9	9	9	9	9	9	6	6	10	10	9	10
– Acids	7	7	7	7	7	7	7	8	5	5	10	10	8	10
– Bases	2	2	2	2	2	2	2	6	9	9	10	10	2	10
– Salts	7	7	7	7	7	7	7	7	9	9	10	10	2	8
Relative Price	Low	Low	Low	Low	Med	Med	Med	Med	Med	Med	High	High	Med	High

#### Example No. 1

Application	Selection
The application requires high radiation ( $2 \times 10^8$ rads) resistance and excellent resistance to hydrocarbons.	The best choice is TEFZEL■, HALAR▲ or Stainless Steel***. The price is higher than other materials, but all have high ratings in resistance to radiation and hydrocarbons.

#### 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.

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

▲HALAR is a registered trademark of Solvay Solexis, Inc.

\*\*\*See page B3.26 for chemical resistance of 304 and 316 stainless steel.

## 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 and polypropylene 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 12 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.

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

▲HALAR is a registered trademark of Solvay Solexis, Inc.

## Weathering (continued)

### Material Failure Testing

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

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

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

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

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

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

Four cable tie materials (TEFZEL■, HALAR▲, Weather Resistant ACETAL and Stainless Steel) have superior ultraviolet light resistance.

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.

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

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

Weathering Life Expectancy	
Materials (P/N Suffix)	Years†
Polypropylene, Green (109)	1
Nylon 6.6, Natural	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
Weather Resistant Polypropylene, Black (100)	7-9
Heat Stabilized Nylon 6.6, Black (30)	4-5
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.

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

▲HALAR is a registered trademark of Solvay Solexis, 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.

### UL94 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 (7 days at 158°F, 70°C). The test requires the placement of a precisely controlled flame under a vertically supported specimen for a 10 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 10 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 10 seconds after either application of the controlled flame
- The total flaming combustion time will not exceed 50 seconds for the 10 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" (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 10 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" (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 10 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" (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

## 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	P/N Suffix	UL94	ASTM D 635
Nylon 6.6, Natural	None	94V-2 @ .71mm	AEB = 20mm ATB = 5 seconds
Weather Resistant Nylon 6.6, Black	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 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, Ivory	69	94V-0 @ .81mm	AEB = 15mm ATB = <5 seconds
Weather Resistant Nylon 12, Black	120	Not recognized	Avg. Burning Rate 1.6cm/min.
Polypropylene, Green	109	Not recognized	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	N/A	94 HB @ 1.5mm	Avg. Burning Rate 2.8cm/min
Stainless Steel	N/A	N/A	N/A

‡UL Recognized cable ties meet stated ratings.

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

▲HALAR is a registered trademark of Solvay Solexis, 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 Table C (page B1.112) 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▲ and ACETAL are low water absorbing materials and, as such, the effect of water is minimal. See Table C (page B1.112) for moisture absorption.

### Proper Storage

Nylon 6.6 is a hygroscopic material (affected by atmospheric moisture variations). The optimum storage requirement for nylon cable ties is 73°F ( $\pm 15^{\circ}\text{F}$ ) 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 accelerated 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, otherwise known as the Relative Thermal Index (mechanical without impact) is determined per UL746B. 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 Table C (page B1.112).

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 Continuous Use Temperatures for cable tie materials are listed in Table C (page B1.112).

### 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" (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 Table C (page B1.112).

▲HALAR is a registered trademark of Solvay Solexis, Inc.

■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

C1.Wiring Duct

C2.Surface Raceway

C3.Abrasion Protection

C4.Cable Management

D1.Terminals

D2.Power & Grounding Connectors

E1.Labeling System

E2.Labels

E3.Pre-Printed & Write-On Markers

E4.Lockout/ Tagout & Safety Solutions

F.Index

## Characteristics of Cable Tie Materials

**Table C – Physical Characteristics**

Design Criteria		Nylon 6.6	Weather Resistant Nylon 6.6	Heat Stabilized Nylon 6.6	Heat Stabilized Nylon 6.6	Heat Stabilized Weather Resistant Nylon 6.6	Flame Retardant Nylon 6.6	Flame Retardant Nylon 6.6	Weather Resistant Nylon 12	Polypropylene	Weather Resistant Polypropylene	TEFZEL ■	HALAR ▲	Weather Resistant Acetal
Part Number Suffix/ Material Designation	None	0	30	39	300	60	69	120	109	100	76	702	N/A	
Color	Natural	Black	Black	Natural	Black	Black	Ivory	Black	Green	Black	Aqua	Maroon	Black	
Tensile Strength 73°F (psi)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	12,000 (Note 1)	8,100 (Note 1)	4,100 (Note 1)	4,100 (Note 1)	7,500 (Note 1)	7,000 (Note 1)	6,500 (Note 2)	
UL 94 Flammability (Note 3)	V-2	V-2	V-2	V-2	V-0	V-0	Not Recognized	Not Recognized	HB	V-0	V-0	HB		
Oxygen Index	28	28	26	26	34	34	N/A	N/A	N/A	30	60	N/A		
Radiation Resistance	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	1 x 10 <sup>5</sup> Rads	3.5 x 10 <sup>6</sup> Rads	1 x 10 <sup>6</sup> Rads	1 x 10 <sup>6</sup> Rads	2 x 10 <sup>8</sup> Rads	2 x 10 <sup>8</sup> Rads	6 x 10 <sup>5</sup> Rads		
Water Absorption (24 hours)	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	0.3%	0.1%	0.1%	0.03%	0.05%	0.45%	
Ultraviolet Light Resistance	Poor	Good	Fair	Poor	Good	Poor	Poor	Good	Poor	Good	Very Good	Very Good	Excellent	
Max. Continuous Use Temperature (Note 4)	185°F 85°C	185°F 85°C	239°F 115°C	239°F 115°C	212°F 100°C (Note 5)	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	185°F 85°C	
Min. Continuous Use Temperature (Note 6)	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	-75°F -59°C	
Minimum Loop Tensile Strength @120°F 20% RH	SM M I  S HS LH/H  EH	8 Lbs. 18 Lbs. 40 Lbs.	8 Lbs. 18 Lbs. 40 Lbs.	8 Lbs. N/A 18 Lbs. 40 Lbs.	N/A 18 Lbs. 40 Lbs.	N/A 18 Lbs. N/A	N/A 18 Lbs. 40 Lbs.	N/A N/A 25 Lbs.	N/A N/A 11 Lbs. 18 Lbs.	N/A N/A 11 Lbs. 18 Lbs.	N/A N/A 18 Lbs. 25 Lbs.	N/A N/A N/A N/A	N/A N/A N/A N/A	

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

### NOTES

1. ASTM D 638
2. Telcordia TR-TSY-000789
3. See Table B, [page B1.110](#)
4. See [Page B1.111](#) – Temperature
5. Estimated
6. After Installation

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

▲HALAR is the registered trademark of Solvay Solexis, Inc.



## Table D – 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. 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

<sup>1</sup> = Pitting occurs under some conditions

B = Satisfactory

<sup>2</sup> = Attack may occur if sulfuric acid present

C = Slight Attack

Aq. = Aqueous

D = Attacked

C.S. = Cold Saturated

— = Not Tested

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

\*Includes all 6.6 Nylons (such as Weather Resistant, Heat Stabilized and Flame Retardant).

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A. System Overview

B1. Cable Ties

B2. Cable Accessories

B3. Stainless Steel

C1. Wiring Duct

C2. Surface Raceway

C3. Abrasion Protection

C4. Cable Management

D1. Terminals

D2. Power &amp; Grounding Connectors

E1. Labeling System

E2. Labels

E3. Pre-Printed &amp; Write-On Markers

E4. Lockout/Tagout &amp; Safety Solutions

F. Index

Table D – Chemical Resistance Table (continued)

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

\*Includes all 6.6 Nylons (such as Weather Resistant, Heat Stabilized and Flame Retardant).

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**Table D – Chemical Resistance Table (continued)**

Agent	Percent Concentration	Nylon 6.6*	Nylon 12	Polypropylene	TEFZEL■	HALAR▲	304 Stainless Steel	316 Stainless Steel
Hydrochloric Acid	All	D	D	A	A	A	D	D
Hydrocyanic Acid	All	—	D	A	A	A	C	C
Hydrofluoric Acid	All	D	D	A	A	A	D	D
Hydrofluorosilicic Acid	30	—	D	A	A	A	D	D
Hydrogen Peroxide	30	D	B	B	A	A	B	A
Hydrogen Sulfide	Dry	—	—	A	A	A	A	A
Hydrogen Sulfide	Wet	D	—	A	A	A	C <sup>2</sup>	A <sup>2</sup>
Hydroquinone	100	—	—	A	A	A	—	—
Iodine	100	—	—	A	A	A	D	D
Iodoform	100	—	—	—	A	A	A	A
Isopropyl Alcohol	100	A	A	A	A	A	A	A
Jet Fuel	100	A	—	A	A	A	A	A
Lactic Acid	10	A	B	A	A	A	A	A
Lanolin	10	A	A	A	A	A	A	A
Lead Acetate	Aq. C.S.	—	—	A	A	A	A	A
Linseed Oil	100	A	A	A	A	A	A	A
Magnesium Carbonate	Aq. C. S.	—	A	A	A	A	A	A
Magnesium Chloride	Aq. C.S.	C	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Magnesium Nitrate	Aq. C. S.	—	A	A	A	A	A	A
Maleic Acid	100	—	—	A	A	A	—	—
Malic Acid	Aq. C.S.	—	—	A	A	A	A	A
Mercuric Chloride	Dilute	—	A	A	A	A	D	D
Mercury	100	—	A	A	A	A	A	A
Methyl Alcohol	100	A	A	A	A	A	A	A
Methyl Bromide	100	—	—	D	A	A	—	—
Methyl Chloride	100	—	—	C	A	A	—	A
Methyl Chloroform	100	A	—	C	A	A	—	—
Methyl Ethyl Ketone	100	—	A	C	A	A	A	A
Methyl Isobutyl Ketone	100	A	—	C	A	A	A	A
Methylene Chloride	100	C	D	C	A	A	A	A
Naptha	100	—	—	A	A	A	A	A
Naphthalene	100	—	B	A	A	A	A	A
Nickel Chloride	Aq. C.S.	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Nickel Sulfate	Aq. C.S.	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Nitric Acid	10 to 30	D	D	A	A	A	A	A
Nitric Acid	30 to 68	D	D	D	B	A	A	A
Nitro Benzene	100	—	C	C	A	A	A	A
Nitro Methane	100	A	—	—	A	A	—	—
Nitrous Acid	5	—	—	—	A	A	A	A
Oleic Acid	100	—	C	A	A	A	A	A
Oxalic Acid	10	—	C	A	A	A	A	A
Oxygen	All	—	—	A	A	A	—	—
Paraffin	100	A	A	A	A	A	A	A
Perchlorethylene	100	—	—	C	A	A	A	A
Petroleum Ether	100	—	A	A	A	A	A	A
Phenol	90	D	D	A	A	A	A	A
Phosphoric Acid	10	D	D	A	A	A	A	A
Phosphorous Pentoxide	100	—	D	A	A	A	—	—
Phosphorous Trichloride	100	—	D	C	A	A	A	A
Phthalic Acid	50	—	—	C	A	A	A	A
Picric Acid	1	—	—	A	A	A	A	A
Potassium Borate	1	—	—	A	A	A	—	—
Potassium Bromide	Aq. C.S.	—	—	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Potassium Carbonate	Aq. C.S.	—	C	A	A	A	A	A
Potassium Chlorate	Aq. C. S.	—	B	A	A	A	A	A
Potassium Chloride	5	—	A	A	A	A	A <sup>1</sup>	A <sup>1</sup>
Potassium Dichromate	Aq. C.S.	—	D	A	A	A	A	A
Potassium Ferrocyanide	25	—	—	A	A	A	A	A
Potassium Hydroxide	30	C	—	A	A	A	C	C

\*Includes all 6.6 Nylons (such as Weather Resistant, Heat Stabilized and Flame Retardant).

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F.Index

Table D – Chemical Resistance Table (continued)

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

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