

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. In tests conducted to date, all have shown no significant signs of degradation.

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 Which Affect the Life of a Cable Tie

FACTORS	DECREASED LIFE
Chemicals	Applications which have chemicals present can reduce the life. This is the most detrimental factor to the life of a tie.
Bundle Diameter	As the bundle diameter is reduced, the tie has more bending stress. A thick strap on small 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 the cable tie.
Moisture	Dry environments cause nylon 6.6 ties to become more brittle. High humidity plus high temperatures can result in degradation due to hydrolysis in nylon.
Galvanized Metals	Acid rain and acid moisture acting on galvanized metals release chemicals known to attack nylon 6.6.

WEATHERING LIFE EXPECTANCY	
Materials (P/N Suffix)	Years*
Natural Polypropylene (-109)	1
Natural Nylon 6.6	1-2
Flame Retardant Black Nylon 6.6 (-60)	1-2
Flame Retardant Nylon 6.6 (-69)	1-2
Heat Stabilized Nylon 6.6 (-30)	4-5
Heat Stabilized Natural Nylon 6.6 (-39)	1-2
Weather Resistant Nylon 6.6 (-0 & -00)	7-9
Heat Stabilized Weather Resistant Nylon 6.6 (-300)	7-9
Weather Resistant Polypropylene (-100)	7-9
Weather Resistant Nylon 12 (-120)	12-15
TEFZEL** (-76)	>15
HALAR* (-702)	>15
Acetal	>20
Stainless Steel (MLT prefix)	>30

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

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

**TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

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 flame is removed and the duration of flaming is recorded. If the flame extinguishes, the specimen is immediately subjected to a second 10 second ignition period. Duration of flaming is again 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

Materials classed 94V-0 shall:

- Not have any specimens which burn with flaming combustion for more than 10 seconds after either application of the test flame
- Not have a total flaming combustion time exceeding 50 seconds for the 10 flame applications for each set of five specimens
- Not have any specimens which burn with flaming or glowing combustion up to the holding clamp
- Not have any specimens which drip flaming particles that ignite the dry absorbent surgical cotton located 12" (305mm) below the test specimen
- Not have any specimens with glowing combustion which persists for more than 30 seconds after the second removal of the test flame

Materials Classed 94V-1

Materials classed 94V-1 shall:

- Not have any specimens which burn with flaming combustion for more than 30 seconds after either application of the test flame
- Not have a total flaming combustion time exceeding 250 seconds for the 10 flame applications for each set of five specimens
- Not have any specimens which burn with flaming or glowing combustion up to the holding clamp
- Not have any specimens which drip flaming particles that ignite the dry absorbent surgical cotton located 12" (305mm) below the test specimen
- Not have any specimens with glowing combustion which persists for more than 60 seconds after the second removal of the test flame

Materials Classed 94V-2

- Not have any specimens which burn with flaming combustion for more than 30 seconds after either application of the test flame
- Not have a total flaming combustion time exceeding 250 seconds for the 10 flame applications for each set of five specimens
- Not have any specimens which burn with flaming or glowing combustion up to the holding clamp
- Be permitted to have specimens that drip flaming particles which burn only briefly, some of which ignite the dry absorbent surgical cotton placed 12" (305mm) below the test specimen
- Not have any specimens with glowing combustion which persists for more than 60 seconds after the second removal of the test flame

ASTM D 635

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

- 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 ten samples or no more than one of twenty specimens have burned to the 100mm mark
- Average Time of Burning (ATB):
- Average Extent of Burning (AEB):

$$ATB_s = \frac{\sum_0^{10} (t - 30s)}{\text{Number of Specimens}}$$

Rounded to the nearest 5 sec.

$$AEB_{mm} = \frac{\sum_0^{10} (100 - \text{unburned length})}{\text{Number of Specimens}}$$

Rounded to the nearest 5mm

Flammability Ratings

Materials	UL94	ASTM D635
Natural Nylon 6.6	94V-2 (1/16")	AEB = 20mm ATB = 5 seconds
Weather Resistant Nylon 6.6 (-00)	94V-2 (1/16")	AEB = 20mm ATB = 5 seconds
Weather Resistant Nylon 6.6 (-0)	94V-2 (1/16")	AEB = 20mm ATB = 5 seconds
Heat Stabilized Nylon 6.6 (-30)	94V-2 (1/16")	AEB = 20mm ATB = 5 seconds
Heat Stabilized Natural Nylon 6.6 (-39)	94V-2 (1/16")	AEB = 20mm ATB = 5 seconds
Heat Stabilized Weather Resistant Nylon 6.6 (-300)	94V-2 (1/16")	AEB = 20mm ATB = 5 seconds
Flame Retardant Black Nylon 6.6 (-60)	94V-0 (1/64")	AEB = 15mm ATB < 5 seconds
Flame Retardant Nylon 6.6 (-69)	94V-0 (1/64")	AEB = 15mm ATB < 5 seconds
Weather Resistant Nylon 12 (-120)	Not Recognized	Ave. Burning Rate 1.6cm/min.
Natural Polypropylene (-109)	Not Recognized	Ave. Burning Rate 2 cm/min.
Weather Resistant Polypropylene (-100)	94 HB (.94mm)	Ave. Burning Rate 2 cm/min.
TEFZEL** (-76)	94V-0(1/16")	AEB < 15mm ATB < 5 seconds
HALAR* (-702)	94V-0(1/16")	AEB = 15 min. ATB < 5 seconds*
Weather Resistant ACETAL (DT Series)	94 HB (1.5mm)	Ave. Burning Rate 2.8 cm/min.
Stainless (MLT prefix)	Not Applicable	Not Applicable

Rating based on 1/8" thick test samples

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

**TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

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® mainly to determine the acceptability for use in various areas of nuclear power plants (accumulated over 40 year life). See Table B (page 69) for radiation resistance rating.



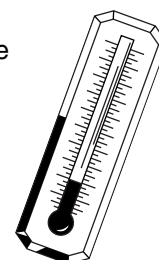
Moisture

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 B (page 69) for moisture absorption.



Temperature

Plastic materials normally undergo property loss during exposure to high temperature due to oxidation. 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 materials 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 B (see page 69).

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 B (see page 69).

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 cross section cable tie (Miniature-M, Intermediate-I, Standard-S, Heavy-H and Extra Heavy-EH) 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 (Fig.1). 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 B (page 69).

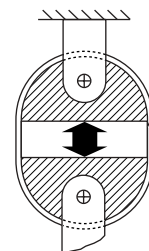


Fig. 1

TABLE B

Design Criteria		Natural 6.6 Nylon	Weather Resistant 6.6 Nylon	Heat Stabilized Black 6.6 Nylon	Heat Stabilized Natural 6.6 Nylon	Heat Stabilized Weather Resistant 6.6 Nylon	Flame Retardant Black 6.6 Nylon	Flame Retardant 6.6 Nylon	Weather Resistant Nylon 12	Natural Polypropylene	Weather Resistant Polypropylene	TEFZEL **	HALAR*	Weather Resistant Acetal	Stainless Steel
Part Number Suffix/ Material Designation		None	-0 and -00	-30	-39	-300	-60	-69	-120	-109	-100	-76	-702	N/A	N/A
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)	90,000 (Note 3)
Color		Natural	Black	Black	Natural	Black	Black	Ivory	Black	Green	Black	Aqua	Maroon	Black	Stain- less
UL Flammability		See Page 66													
Oxygen Index		28	28	26	26	26	34	34	NA	NA	NA	30	60	NA	NA
Radiation Resistance		1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	3.5 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	2 x 10 ⁵ Rads	2 x 10 ⁵ Rads	6 x 10 ⁵ Rads	2 x 10 ⁵ 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%	None
Ultraviolet Light Resistance		Poor	Good	Fair	Poor	Good	Poor	Poor	Good	Poor	Good	Very Good	Very Good	Excellent	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	238°F 115°C	238°F 115°C	338°F 170°C	302°F 150°C	185°F 85°C	1000 °F 537°C (Note 6)
Min. Continuous Use Temperature (Note 7)		-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-40 °F -40 °C	-50 °F -46 °C	-50 °F -46 °C	-40 °F -40 °C	-112 °F -80 °C
Minimum Loop Tensile Strength @ 120 °F 20% RH	Submin. Min. Int.	12 lb. 18 lb. 40 lb.	12 lb. 18 lb. 40 lb.	N/A 18 lb. 40 lb.	N/A 18 lb. 40 lb.	N/A 18 lb. 30 lb.	N/A 18 lb. 30 lb.	N/A 18 lb. 40 lb.	N/A N/A 25 lb.	N/A 12 lb. N/A	N/A 12 lb. N/A	N/A 18 lb. 25 lb.	N/A 18 lb. N/A	N/A N/A N/A	N/A N/A N/A
	Std. Hvy.-Std. Hvy.	50 lb. 85 lb. 120/ 175 lb.	50 lb. 85 lb. 120/ 175 lb.	50 lb. N/A 120/ 175 lb.	50 lb. N/A 120/ 175 lb.	50 lb. N/A 120 lb.	50 lb. N/A 120 lb.	50 lb. N/A 120 lb.	40 lb. N/A 90 lb.	30 lb. N/A 50 lb.	30 lb. N/A 50 lb.	50 lb. N/A 120 lb.	50 lb. N/A N/A	N/A N/A N/A	100 lb. N/A 250 lb.
	EH DH	250 lb.	250 lb.	250 lb.	250 lb.	N/A	N/A	N/A	N/A	90 lb.	90 lb.	N/A	N/A	250 lb.	N/A 600 lb.
Tool Installed		GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 ST2EH STHV PTS PPTS PPTEH	GTS GTH GS4H GS4EH STS2 STH2 STHV PTS PPTS	GTS GTH GS4H GS4EH STS2 STH2 PTS PPTS	GTS GTH GS4H GS4EH STS2 STH2 PTS PPTS	GTS GTH GS4H GS4EH STS2 STH2 PTS PPTS	GTS GTH GS4H GS4EH STS2 STH2 PTS PPTS	GTH GS4H GS4EH ST2EH	GS4MT ST2MT PPTMT HTMT

NOTE 1: ASTM D638
NOTE 2: Telcordia TR-TSY-000789
NOTE 3: ASTM E8
NOTE 4: See page 68 — Temperature
NOTE 5: Estimated
NOTE 6: (-321) goes to 1700° (923°C)
NOTE 7: After installation

TABLE C Chemical Resistance

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 things as chemical concentrations, temperature, stress and ultraviolet light. Table C is an excellent guideline for the selection of the best cable tie material. It should be noted that the exposure temperature for this chemical resistance chart is 70°F.



Resistance of **PANDUIT®** Cable Tie Materials to Chemical Attack at 70°F

— = Not Tested
E = Excellent
S = Satisfactory
B = Slight Attack
U = Attacked

¹ (NOTE 1) = Pitting occurs under some conditions
² (NOTE 2) = Attack may occur if sulfuric acid present
Aq. = Aqueous
C.S. = Cold Saturated

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

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

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

***TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

Table C — (cont.)

Resistance of PANDUIT® Cable Tie Materials to Chemical Attack at 70°F

Agent	Percent Concentration	* Nylon 6.6	Nylon 12	Polypropylene	TEFZEL***	HALAR**	304 Stainless Steel	316 Stainless Steel
Calcium Hydroxide	50	—	—	E	E	E	E	E
Calcium Hypochlorite	2	U	—	E	E	E	E¹	E¹
Calcium Nitrate	50	—	E	E	E	E	—	—
Calcium Sulfate	2	B	—	E	E	E	E	E
Carbon Tetrachloride	100	E	E	U	E	E	E	E
Carbon Tetrachloride	Aq. 10	—	—	—	—	E	B¹	E¹
Chlorine	Dry	—	U	U	E	E	B	B
Chlorine	Wet	—	U	B	E	E	U	U
Chloroacetic Acid	10 to 50	U	—	E	E	E	U	B
Chlorobenzene	100	—	B	E	E	E	—	—
Chloroform	100	E	B	B	E	E	E	E
Chlorosulphonic Acid	10 to 100	U	U	U	S	E	U	U
Chromic Acid	10 to 50	U	U	E	E	E	B	B
Citric Acid	10 to 50	S	S	E	—	E	E	E
Copper Chloride	1 to 10	U	—	E	E	E	E¹ to U	E¹ to B¹
Copper Cyanide	Aq. C.S.	—	—	E	E	E	E	E
Copper Nitrate	50	—	—	E	E	E	E	E
Cresol	100	U	U	—	E	E	E	E
Crotonaldehyde	100	—	—	E	E	E	—	—
Cyclohexane	100	—	E	B	E	E	E	—
Cyclohexanol	100	—	E	E	E	E	E	—
Cyclohexanone	100	—	E	B	E	E	E	—
Dibutyl Phthalate	100	—	—	E	E	E	—	—
Dichloroethane	100	—	—	E	—	E	E	E
Dichloroethylene	100	—	—	B	E	E	—	—
Diesel Fuel	100	—	E	B	E	E	E	E
Diethyl Ether	100	—	E	E	E	E	E	E
Diglycolic Acid	Aq.C.S.	—	—	E	E	E	—	—
Disobutyl Ketone	100	—	—	E	E	E	—	—
Dimethyl Amine	100	—	—	E	E	E	—	—
Dimethyl Formamide	100	—	E	E	E	E	E	—
Dimethyl Sulfate	100	—	—	B	E	E	—	—
Diethyl Phthalate	100	—	—	E	E	E	E	—
1, 4-Dioxane	100	—	S	B	E	E	E	—
Ethyl Acetate	100	E	E	S	E	E	E	E
Ethyl Alcohol	100	E	E	E	E	E	E	E
Ethyl Chloride	100	—	—	B	E	E	E	E
Ethylene Chloride	100	E	B	B	E	E	E	E
Ethylene Glycol	100	E	E	E	E	E	E	E
Ethylene Oxide	100	—	—	B	E	E	—	—
Fatty Acids	100	—	—	E	E	E	—	—
Ferric Chloride	50	U	—	E	E	E	U	U
Ferric Hydroxide	All	—	—	E	E	E	E	E
Ferric Nitrate	All	—	—	E	E	E	E	E
Ferrous Chloride	Aq. C.S.	U	—	E	E	E	U	B
Ferrous Sulfate	10	—	—	E	E	E	E¹	E
Fluorine (Dry)	100	—	—	U	E	—	U	U
Formaldehyde	40	E	S	E	E	E	E¹	E
Formic Acid	All	U	U	E	E	E	E	E
Freons	100	E	—	—	E	E	—	—
Fuel Oil	100	—	E	—	E	E	E	E
Furfural	100	E	—	—	E	E	E	E
Gallic Acid	Aq. C.S.	—	—	—	E	E	E	E
Gasoline	100	E	—	B	E	E	E	E
Glycerin	100	—	E	E	—	E	E	E

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

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***TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

Table C — (cont.)

Resistance of **PANDUIT®** Cable Tie Materials to Chemical Attack at 70°F

Agent	Percent Concentration	* Nylon 6.6	Nylon 12	Polypropylene	TEFZEL***	HALAR**	304 Stainless Steel	316 Stainless Steel
Glycolic Acidb	40	U	—	E	E	E	—	—
Heptane	100	—	E	E	E	E	E	E
Hexane	100	—	E	E	E	E	E	E
Hydrobromic Acid	All	U	U	E	E	E	U	U
Hydrochloric Acid	All	U	U	E	E	E	U	U
Hydrocyanic Acid	All	—	U	E	E	E	B	B
Hydrofluoric Acid	All	U	U	E	E	E	U	U
Hydrofluorosilicic Acid	30	—	U	E	E	E	U	U
Hydrogen Peroxide	30	U	S	S	E	E	S	E
Hydrogen Sulfide	Dry	—	—	E	E	E	E	E
Hydrogen Sulfide	Wet	U	—	E	E	E	B ²	E ²
Hydroquinone	100	—	—	E	E	E	—	—
Iodine	100	—	—	E	E	E	U	U
Iodoform	100	—	—	—	E	E	E	E
Isopropyl Alcohol	100	E	E	E	E	E	E	E
Jet Fuel	100	E	—	E	E	E	E	E
Lactic Acid	10	E	S	E	E	E	E	E
Lanolin	10	E	E	E	E	E	E	E
Lead Acetate	Aq. C.S.	—	—	E	E	E	E	E
Linseed Oil	100	E	E	E	E	E	E	E
Magnesium Carbonate	Aq. C.S.	—	E	E	E	E	E	E
Magnesium Chloride	Aq. C.S.	B	E	E	E	E	E ¹	E ¹
Magnesium Nitrate	Aq. C.S.	—	E	E	E	E	E	E
Maleic Acid	100	—	—	E	E	E	—	—
Malic Acid	Aq. C.S.	—	—	E	E	E	E	E
Mercuric Chloride	Dilute	—	E	E	E	E	U	U
Mercury	100	—	E	E	E	E	E	E
Methyl Alcohol	100	E	E	E	E	E	E	E
Methyl Bromide	100	—	—	U	E	E	—	—
Methyl Chloride	100	—	—	B	E	E	—	E
Methyl Chloroform	100	E	—	B	E	E	—	—
Methyl Ethyl Ketone	100	—	E	B	E	E	E	E
Methyl Isobutyl Ketone	100	E	—	B	E	E	E	E
Methylene Chloride	100	B	U	B	E	E	E	E
Naptha	100	—	—	E	E	E	E	E
Naphthalene	100	—	S	E	E	E	E	E
Nickel Chloride	Aq. C.S.	—	E	E	E	E	E ¹	E ¹
Nickel Sulfate	Aq. C.S.	—	E	E	E	E	E ¹	E ¹
Nitric Acid	10 to 30	U	U	E	E	E	E	E
Nitric Acid	30 to 68	U	U	U	S	E	E	E
Nitro Benzene	100	—	B	B	E	E	E	E
Nitro Methane	100	E	—	—	E	E	—	—
Nitrous Acid	5	—	—	—	E	E	E	E
Oleic Acid	100	—	B	E	E	E	E	E
Oxalic Acid	10	—	B	E	E	E	E	E
Oxygen	All	—	—	E	E	E	—	—
Paraffin	100	E	E	E	E	E	E	E
Perchlorethylene	100	—	—	B	E	E	E	E
Petroleum Ether	100	—	E	E	E	E	E	E
Phenol	90	U	U	E	E	E	E	E
Phosphoric Acid	10	U	U	E	E	E	E	E
Phosphorus Pentoxide	100	—	U	E	E	E	—	—
Phosphorus Trichloride	100	—	U	B	E	E	E	E
Phthalic Acid	50	—	—	B	E	E	E	E
Pictic Acid	1	—	—	E	E	E	E	E

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

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

***TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

Table C — (cont.)

Resistance of PANDUIT® Cable Tie Materials to Chemical Attack at 70°F

Agent	Percent Concentration	* Nylon 6.6	Nylon 12	Polypropylene	TEFZEL ***	HALAR**	304 Stainless Steel	316 Stainless Steel
Potassium Borate	1	—	—	E	E	E	—	—
Potassium Bromide	Aq. C.S.	—	—	E	E	E	E ¹	E ¹
Potassium Carbonate	Aq. C.S.	—	B	E	E	E	E	E
Potassium Chlorate	Aq. C.S.	—	S	E	E	E	E	E
Potassium Chloride	5	—	E	E	E	E	E ¹	E ¹
Potassium Dichromate	Aq. C.S.	—	U	E	E	E	E	E
Potassium Ferrocyanide	25	—	—	E	E	E	E	E
Potassium Hydroxide	30	B	—	E	E	E	B	B
Potassium Iodide	Aq. C.S.	—	E	E	—	E	E	E
Potassium Nitrate	Aq. C.S.	—	E	E	E	E	E	E
Potassium Perchlorate	1	—	—	E	E	E	—	—
Potassium Permanganate	5	U	U	E	E	E	E	E
Potassium Persulfate	All	—	—	E	E	E	—	—
Potassium Sulfate	Aq. C.S.	—	E	E	E	E	E	E
Potassium Sulfide	Aq. C.S.	—	—	E	E	E	E	E
Propionic Acid	50	—	—	E	E	E	—	—
Propyl Alcohol	100	E	—	E	E	E	E	E
Pyridine	100	—	E	B	E	E	B	B
Sea Water	100	—	E	E	E	E	E ¹	E
Silver Chloride	Aq. C.S.	—	E	E	E	E	U	U
Silver Nitrate	10	—	E	E	E	E	E	E
Sodium Acetate	Aq. C.S.	E	—	E	E	E	E ¹	E
Sodium Benzoate	Aq. C.S.	—	—	E	E	E	—	—
Sodium Bicarbonate	Aq. C. S.	E	E	E	E	E	E	E
Sodium Bisulfate	10	—	—	E	E	E	E	E
Sodium Bisulfite	Aq. C.S.	—	S	E	E	E	E	E
Sodium Borate	Aq. C.S.	—	—	E	E	E	E	E
Sodium Carbonate	2	E	E	E	E	E	E	E
Sodium Chlorate	25	—	B	E	E	E	E	E
Sodium Chloride	10	E	E	E	E	E	E ¹	E ¹
Sodium Chromate	Aq. C.S.	U	—	E	E	E	E	E
Sodium Fluoride	5	—	—	E	E	E	E ¹	E ¹
Sodium Hydroxide	10	E	E	E	E	E	E	E
Sodium Hypochlorite	5	S	B	E	E	E	B ¹	E ¹
Sodium Hyposulfite	Aq. C.S.	—	—	—	E	E	E	E
Sodium Nitrate	5	E	E	E	E	E	E	E
Sodium Nitrite	Aq. C.S.	—	B	E	E	E	E	E
Sodium Perborate	Aq. C.S.	—	S	E	E	E	—	B
Sodium Perchlorate	10	—	—	—	E	E	E	E
Sodium Phosphate	5	—	E	E	E	E	E	E
Sodium Sulfate	5	—	E	E	E	E	E	E
Sodium Sulfide	5	—	E	E	E	E	E ¹	E
Sodium Thiosulfate	25	—	E	E	E	E	E ²	E ²
Stannic Chloride	Aq. C.S.	U	—	E	E	E	U	B
Stannous Chloride	Aq. C.S.	—	E	E	E	E	B	S
Stearic Acid	100	—	B	E	E	E	E	E
Succinic Acid	100	—	S	E	E	E	—	—
Sulfur	100	—	E	E	E	E	S	B
Sulfur Dioxide	All	U	—	B	E	E	E	E
Sulfuric Acid	5	U	B	E	E	E	B	E
Sulfuric Acid	50	U	U	E	E	E	U	B
Sulfuric Acid	Concentrate	U	U	B	E	E	B	B

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

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***TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

Table C — (cont.)

Resistance of *PANDUIT*® Cable Tie Materials to Chemical Attack at 70°F

Agent	Percent Concentration	* Nylon 6.6	Nylon 12	Polypropylene	TEFZEL ***	HALAR**	304 Stainless Steel	316 Stainless Steel
Sulfurous Acid	10	E	—	E	E	E	B ¹	E ¹
Tannic Acid	10	—	E	E	E	E	E	E
Tartaric Acid	50	—	S	E	E	E	E	E
Tetrahydrofuran	100	—	B	B	E	E	E	E
Toluene	100	E	E	B	E	E	E	E
Trichloroacetic Acid	10	U	—	S	E	E	U	U
Trichloroethylene	100	—	U	B	E	E	E ¹	E ¹
Turpentine	100	—	S	U	E	E	E	E
Urea	50	—	E	E	E	E	—	—
Vinyl Acetate	100	—	—	E	E	E	—	—
Xylene	100	E	—	U	E	E	E	E
Zinc Chloride	70	U	E	E	E	E	E	E
Zinc Nitrate	Aq. C.S.	—	E	E	E	E	E	E
Zinc Sulfate	Aq. C.S.	—	E	E	E	E	E	E

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

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The owner-operator concept makes employees responsible for their areas of the manufacturing process.



Operator inspection is an important *PANDUIT®* TQA procedure.



Members of ETQ Teams search for ways to improve product quality.

PANDUIT® Total Quality Assurance (TQA) initiative spans more than two decades. During that time we have furnished quality training to all levels of our employees, enabling them to participate in our Excellence Through Quality (ETQ) program of continuous quality improvement.

Our quality policies and major improvement projects are chosen and monitored by the Corporate Process Improvement Committee. This group is comprised of the top management representatives from each of *PANDUIT®* business segments.

PANDUIT® Engineering and Manufacturing groups work together to design quality into the products and the production processes. Service quality is equally important and our customer service group takes the lead in assuring superior performance from the supporting departments.

Our high degree of product and service quality is due in part to heavy investment in technology by *PANDUIT®*. However, people are really the foundation for our quality achievements. We believe in Quality at the Source.

By introducing Quality at the Source throughout the company, we have provided the training, supplied the necessary equipment and moved the responsibility for performance to the employees doing the work. Their pride in product and service is demonstrated every day in how we serve our customers.

PANDUIT® ISO 9001 and QS-9000 registrations serve notice to our customers that we support their business through our reliable quality systems. When necessary to meet the needs of specific industries, we incorporate additional quality requirements in our systems.

At *PANDUIT®*, our commitment is Total Quality Assurance.



***PANDUIT®* Products are on Display at Your
Local *PANDUIT®* Distributor**



Your local *PANDUIT®* Distributor carries top quality *PANDUIT®* products and offers many advantages and services to help lower your transaction costs:

- Local stock for fast delivery and “Just-In-Time” requirements. Reduces your inventory costs.
- One stop for all your electrical needs because he stocks products from many manufacturers. One purchase order, less administrative and freight costs.
- Well trained personnel to answer any questions and to make sure you have the right product for the right job.

PANDUIT® Stainless Steel Cable Ties and Accessories

PAN-STEEL® Self-Locking Stainless Steel Ties



Ties — Standard Sizes



Standard,
Light Heavy
and Heavy

PANDUIT® *No-SLIP*™ line of Stainless Steel Self-Locking Ties have a unique low-insertion force head design that keeps the tie locked, before or after tightening, regardless of its orientation or how tightly it is installed. With features like high strength, corrosion resistance, extreme temperature tolerance, fully rounded edges and special styles, these stainless steel ties are an excellent choice for a wide variety of applications and are designed to install easily for long service life under adverse conditions. All ties can be installed using PANDUIT® standard installation tools, or simply installed by hand.



- Fully rounded edge design eliminates sharp edges for added protection and safety
- Available in a loop tensile strength of 200 lbs. for standard cross-section ties, 250 lbs. for light heavy cross section ties and 450 lbs. for heavy cross section ties
- Superior strength for most bundling applications
- Available in type 304 and 316 stainless steel which provides excellent resistance to temperature extremes, corrosion, weather and UV radiation

Part Number	Max. Bundle Dia. In. (mm)	Length In. (mm)	Width In. (mm)	Min. Loop Tensile Strength Lbs. (N)	Std. Pkg. Qty.*	Std. Ctn. Qty.
MLT1S-CP	1.00 (25)	5.0 (127)	.18 (4.6)	200 (890)	100	500
MLT2S-CP	2.00 (51)	7.9 (201)			100	500
MLT2.7S-CP	2.70 (69)	10.2 (259)			100	500
MLT4S-CP	4.00 (102)	14.3 (362)			100	500
MLT6S-CP	6.00 (152)	20.5 (521)			100	500
MLT8S-CP	8.00 (203)	26.8 (679)	.25 (6.4)	250 (1112)	50	250
MLT2LH-LP	2.00 (51)	7.9 (201)			50	250
MLT4LH-LP	4.00 (102)	14.3 (362)			50	250
MLT6LH-LP	6.00 (152)	20.5 (521)			50	250
MLT8LH-LP	8.00 (203)	26.8 (679)			50	250
MLT2H-LP	2.00 (51)	7.9 (201)	.31 (7.9)	450 (2000)	50	250
MLT4H-LP	4.00 (102)	14.3 (362)			50	250
MLT6H-LP	6.00 (152)	20.5 (521)			50	250
MLT8H-LP	8.00 (203)	26.8 (679)			50	250
MLT10H-LP	10.00 (254)	33.0 (838)			50	250
MLT12H-Q	12.00 (305)	42.0 (1067)			25	125

Banding System



- For applications that require bundling various bundle diameters
- Provides versatility on job sites for any diameter with minimum inventory
- 304 Stainless Steel (316 available)

CUSTOM LENGTH BANDING SYSTEM

MBS-TLR	Any	250' (76m)	.18 (4.6)	100 (445)	1	n/a
MBS-MR		1000' (305m)		100 (445)	1	n/a
MBH-TLR	Any	250' (76m)	.31 (7.9)	250 (1112)	1	n/a
MBH-MR		1000' (305m)		250 (1112)	1	n/a

BANDING HEADS

MTHS-C	n/a	n/a	.18 (4.6)	100 (445)	100	1000
MTHH-C	n/a	n/a	.31 (7.9)	250 (1112)	100	1000

*Order the number of reels required in multiples of standard package quantities.

WAVE-TY™ Superior Grip Steel Ties

- Loop tensile strength of 450 lbs. Provides superior strength for increased performance and reliability
- Available in 304 and 316 stainless steel
- The unique wave-form spring maintains a high tension grip on non-resilient objects; provides the strength of steel and the high tension of a steel spring



WAVE-TY™

MLT2.7WH-LP	2.70 (69)	10.2 (259)	.31 (7.9)	450 (2000)	50	250
MLT4WH-LP	4.00 (102)	14.2 (360)			50	250
MLT6WH-LP	6.00 (152)	20.4 (520)			50	250
MLT8WH-LP	8.00 (203)	26.8 (679)			50	250
MLT10WH-LP	10.00 (254)	33.0 (838)			50	250

*Order the number of ties required in multiples of standard package quantities.

Coated Stainless Steel Ties



- For communication and electrical cable
- The strength of steel, the protection of nylon; the nylon coating provides fully rounded plastic edges to protect cables
- Available with a loop tensile strength of 250 lbs.
- Base metal is 316 grade stainless steel for excellent resistance to temperature extremes, corrosion, weather, chemicals, salt sprays and UV radiation

NYLON 11 COATED 316 STAINLESS STEEL

MLTC2H-LP316	2.00 (50)	7.9 (201)	.31 (7.9)	250 (1112)	50	250
MLTC4H-LP316	4.00 (102)	14.2 (360)			50	250
MLTC6H-LP316	6.00 (152)	20.4 (520)			50	250
MLTC8H-LP316	8.00 (203)	26.8 (679)			50	250
MLTC10H-LP316	10.00 (254)	33.0 (838)			50	250

PANDUIT® Stainless Steel Mounts and Marking Products

Installation Tools



- Complete line of manual and pneumatic installation tools speeds installation
- Side-entry of cable ties into the tools, makes for quick and easy installation
- Automatic tension and cut-off capabilities available on select models
- High reliability, low maintenance, long life

Part Number	Description	Std. Pkg. Qty.*
PPTMT	Pneumatic-operated, tool controlled tension and cut-off for production applications.	1
GS4MT	MIL approved. Hand-operated, tool controlled tension and cut-off.	1
K4M-BLD	Replacement cutter blade for GS4MT.	1
K4MTG	Replacement tension gripper for GS4MT.	1
ST2MT	Hand-operated, installer controlled tension and cut-off.	1
KT2MG	Replacement tension gripper for ST2MT.	1
HTMT	Used to tension and coil the tail of tie.	1

*Order the number of tools required in multiples of standard package quantities.

PAN-STEEL® Accessories



Cushion Sleeve

- Makes rigid bundles resilient, provides tighter tensioning
- Non-conductive insulator between clamp and bundle
- Material: black, neoprene

Part Number	For Clamp Width In. mm	Sleeve Width In. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
PCSS-B-CR	.18 (4.6)	.33 (8.4)	1	—
PCSH-B-CR	.31 (7.9)	.47 (12)	1	—

Bulk Pkg. -CR = 100' reel

*Order the number of reels required in multiples of standard package quantities.

Stainless Steel Mounts



Stainless Mount
MTM1H-C

Mount

- Low profile
- Utilizes only one hole for mounting
- Material: 304 Stainless Steel

Part Number	For MLT Tie Width In. (mm)	Mounting Method	Hole Diameter In. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
MTM1H-C	.18 (4.6)	#8 (4) Screw	.18 (4.6)	100	1000
MTM1H10-C	thru .31 (7.9)	#10 (5) Screw	.21 (5.4)	100	1000
MTM1H25-C	.31 (7.9)	1/4" (6) Screw	.28 (7.1)	100	1000



Push-Wing Mount
MPWM-H56-Q



Push-Button Mount
MBM-H25-Q

Part Number	For MLT Tie Width In. (mm)	Mounting Method In. (mm)	Panel Thickness In. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
MPWM-H56	.18 (4.6) thru .31 (7.9)	Inserted into pre-drilled hole 5/16 (8)	.031 (.8)-.094 (2.4)	25	250
MBM-H25-Q	.18 (4.6)	Inserted into pre-drilled hole .250 (6.4)	.031 (.8)-.125 (3.2)	25	250
MTM2H-Q	.18 (4.6) thru .31 (7.9)	#8 (4) Screw	—	25	250
MTMBH-Q	.18 (4.6) thru .31 (7.9)	Pre-drill hole size Max. size .625 (15.9)	Up to .500 max. (12.7)	25	250

Material: 304 Stainless Steel

*Order the number of pieces required in multiples of standard package quantities.



Two-Way Mount
MTM2H-Q



Bulkhead Mount
MTMBH-Q

Stainless Steel Marking Products

Use **PAN-STEEL®** Ties or Stainless Steel Strapping to provide identification in harsh environments. The ties and strapping can be stamped with available tooling or custom stamped upon request. Marker plates and metal embossed tape are also available.

Marker Plates and Tags



- Attached with **PAN-STEEL®** Ties
- 304, 316 stainless steel, brass and aluminum available
- Can be used as a flag or wrap
- Various sizes and shapes available; round, square, rectangular, etc. Part numbers available upon request
- Can be custom marked by **PANDUIT®**. See page 79 for details

Part Number	Used with Clamp/Tie Width In. (mm)	Size - In. (mm)		Std. Pkg. Qty.*	Std. Ctn. Qty.
		Width	Length		
MMP350-C	.18 (4.6)	.75 (19)	3.50 (89)	100	1000
MMP350W38-C	.18 (4.6)	.38 (10)	3.50 (89)	100	1000
MMP350H-C	.18 (4.6) thru .31 (7.9)	.75 (19)	3.50 (89)	100	1000

*Order the number of pieces required in multiples of standard package quantities.

PANDUIT® Stainless Steel Marking Products

Metal Embossed Tape System



- Hand operated embosser with 3/16" height characters (approx. 6 characters/inch)
- Hole punch (3/16" dia.) allows tape to be used as a wrap or flag marker, held on with *PAN-STEEL*® Ties

Characters include:

A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2	3	4	5	6	7	8	9	.	/	-		

3/8" height (approx. 6 characters per inch).

Part Number	Description	Std. Pkg. Qty.*	Std. Ctn. Qty.
MEHT	Embosser, carrying case, (1) roll each of META and METS4 tape.	1	—

TAPE

META-X	1/2" x 16' roll Aluminum tape.	10	50
METS3-X	1/2" x 21' roll Stainless Steel (316 Grade).	10	50
METS4-X	1/2" x 21' roll Stainless Steel (304 Grade).	10	50

*Order the number of pieces required in multiples of standard package quantities.

Indenter Press



- For medium volume marking of ties, strapping or plates
- Manual operation with automatic indexing
- Interchangeable character wheel makes the press versatile and economical
- Press includes fixturing device to provide high quality marking

Characters include:

A	B	C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z		
&	1	2	3	4	5	6	7	8	9	0	.	/	-

Part Number	Description	Std. Pkg. Qty.*
IMP094	Press with 3/32" character wheel.	1
IMP125	Press with 1/8" character wheel.	1
IMP187	Press with 3/16" character wheel.	1
MWK094	3/32" character wheel kit.	1
MWK125	1/8" character wheel kit.	1
MWK187	3/16" character wheel kit.	1
IMP-FIX	Interchangeable fixture for MMP172 series. MT series and the aluminum marker plates.	1

*Order the number of pieces required in multiples of standard package quantities.

Custom Marking Capabilities on *PANDUIT*® *PAN-STEEL*® Stainless Steel Cable Ties, Strapping, Metal Marker Plates/Tags Anodized Aluminum Locks.*



PANDUIT® stainless steel cable ties, strapping, stainless steel, brass and aluminum marker plates/tags and anodized aluminum locks can be custom marked for identification of equipment, cables, hoses, pipes, conduit, etc. in petrochemical plants, power plants, pulp and paper mills, breweries, and many other applications. *PANDUIT*® in-house computer controlled custom marking systems provide sharp, crisp, high quality legends. Sequential numbering for serialization is available.

*Anodized aluminum locks can only be marked by the laser system.



Laser Marking System:

- Used on all stainless steel cable ties, strapping, metal marker plates/tags and anodized aluminum locks
- Graphics capability and **BOLD** block letters
- Upper and lower case character capability
- Alphanumeric and sequential numbering ability

Character Sizes ** Available:

- 1/8" (3.18mm)
- 1/4" (6.35mm)
- 3/16" (4.77mm)
- 5/16" (7.94mm)
- 1/2" (12.7mm)

Embossing System:

- Used on metal marker plates and tags which are a maximum of .020" (0.5mm) thick
- Excellent for applications that are exposed to occasional painting and excessive dirt
- Upper case "raised" character capability only
- Alphanumeric and sequential numbering ability

Character Sizes ** Available:

- 1/8" (3.18mm)
- 3/16" (4.77mm)

**Other character sizes available. For complete product information, specification or character information, contact 866-405-6659.

For more complete information on Stainless Steel Products, see *PANDUIT*® Brochure SA-SSCB01.

PANDUIT® Stainless Steel Strapping System

Stainless Steel Strapping



- Reduces installation time and leaves no sharp edges
- Burr-free sides
- 304 Stainless Steel
- Designed for use in critical applications where radiation, weathering, corrosion and temperature extremes are a concern
- Temperature range: -112°F (-80°C) to 1000°F (538°C)
- Fast and reliable alternative to wing seals

Part Number	Thickness in. (mm)	Width in. (mm)	Min. Loop Tensile Strength lbs. (N)	Max. Bundle Dia. in. (mm)	Length in. (mm)	Recommended PANDUIT® Installation Tool Part No.	Std. Pkg. Qty.*	Std. Ctn. Qty.
MS2W38T15-L4	.015 (.38)	.38 (9.5)	500 (2225)	2.00 (51)	11.8 (300)	BT1HT or BT2MS75	50	250
MS4W38T15-L4				4.00 (102)	18.0 (457)		50	250
MS6W38T15-L4				6.00 (152)	24.4 (620)		50	250
MS8W38T15-L4				8.00 (203)	30.7 (780)		50	250
MS10W38T15-L4				10.00 (254)	37.0 (940)		50	250
MS4W50T15-L4	.015 (.38)	.50 (12.7)	700 (3115)	4.00 (102)	18.0 (457)	BT1HT or BT2MS75	50	250
MS6W50T15-L4				6.00 (152)	24.4 (620)		50	250
MS8W50T15-L4				8.00 (203)	30.7 (780)		50	250
MS10W50T15-L4				10.00 (254)	37.0 (940)		50	250
MS4W63T15-L4	.015 (.38)	.63 (15.9)	800 (3560)	4.00 (102)	18.0 (457)	BT1HT or BT2MS75	50	250
MS6W63T15-L4				6.00 (152)	24.4 (620)		50	250
MS8W63T15-L4				8.00 (203)	30.7 (780)		50	250
MS10W63T15-L4				10.00 (254)	37.0 (940)		50	250

*Order the number of strapping, and buckles required in multiples of standard package quantities.

The PANDUIT® Method Reduces Installation Time:



1. Place strap around the material, insert tail of strap through buckle. Pull strapping tight and bend up to hold in place. Insert tail of strapping into tool nose section. Squeeze handles to tension.



2. Once proper tension is reached, maintain tension and raise tool 90°-120° over buckle and pull down on cutter lever, cutting strap.



3. Remove tool, press cut end down and toward retaining tab.



4. Using the closure level on the handle of the tool, bend retaining tab down and over cut end. Provides finished, safe, low profile closure.

Custom Length Strapping System



- Provides job-site versatility with minimum inventory
- Gives custom capability on larger diameters
- 304 stainless steel
- Buckle is easy to install—just slip onto strapping and turn strapping back on bundle

Part Number	Thickness In. (mm)	Approx. Width In. (mm)	Used With Buckle	Std. Pkg. Qty.*	Std. Ctn. Qty.
STRAPPING					
MSW38T15-CR4	.015 (.38)	.38 (9.5)	MSBW38-C4	1*	—
MSW50T15-CR4	.015 (.38)	.50 (12.7)	MSBW50-C4	1*	—
MSW63T15-CR4	.015 (.38)	.63 (15.9)	MSBW63-C4	1*	—
BUCKLES					
MSBW38-C4	Used with .38" width strapping.			100	1000
MSBW50-C4	Used with .50" width strapping.			100	1000
MSBW63-C4	Used with .63" width strapping.			100	1000

*Order the number of strapping, and buckles required in multiples of standard package quantities.

Installation Tools



Hand operated tool. Adjustable tension control and lever actuated cut-off.

Part Number	Description	Std. Pkg. Qty.*
BT1HT	Installation tool. Used for all widths of PANDUIT® PAN-STEEL® strapping. Tensions, cuts strapping, and secures the buckle tab. Ratchet-type tool provides mechanical advantage for tensioning. Easy to operate.	1

*Order the number of pieces required in multiples of standard package quantities.

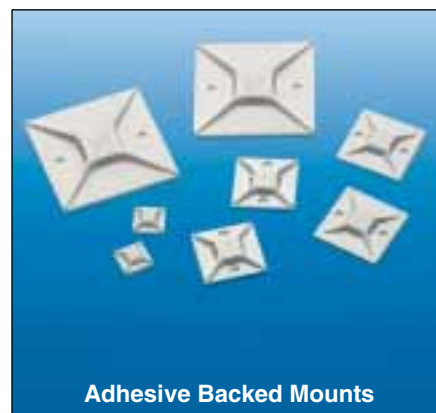
Wiring Accessories



Wire Management



Communication Cable Management



Adhesive Backed Mounts



Push Mounts



Cord Clips



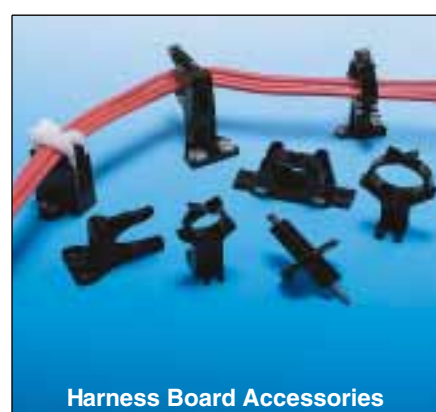
Abrasion Protection Products



Snap-In Clips



Heat Shrink



Harness Board Accessories

Smart Ways to Lower Your Installed Cost

PANDUIT® Wiring Accessories offer you a broad range of products designed to speed installation and lower your installed costs—whatever your requirements. Plus, **PANDUIT®** provides experienced technical support to assure you get not only the best product for your application, but maximum benefit from its use.

For more information, in the U.S.A. call toll-free:

Technical Support: 866-405-6657 or Customer Service: 800-777-3300

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Wiring Accessories are an integral part of *PANDUIT®* comprehensive selection of wire management products. These accessories help provide the lowest installed solution to routing, mounting, protecting wire, cable and optical fiber. These products are manufactured in an environment committed to design innovation, high quality and knowledgeable service to our customers. The key benefits of this commitment are:

- The highest quality manufacturing environment, including statistical process control to meet applicable international and domestic standards
- *PANDUIT®* teams up with a global network of Distributors to provide you with Just In Time shipping to eliminate your need for large inventories
- Fully staffed engineering and tool and die departments to assist in designing solutions to specific industry applications
- Continuous research on materials, adhesives and new technologies to provide you the latest product innovations



Selection of Styles



Cable Tie Accessories

These products are used with *PANDUIT®* Cable Ties to speed and simplify the mounting of wires, cables and tubing. Installation methods include adhesive-backed, user applied adhesive, screws, rivets or through-panel mount designs.



Wiring Accessories

These products, including fixed and adjustable diameter accessories, are used without cable ties. Mounting methods include adhesive-backed, user applied adhesive, screws, rivets or through-panel designs.



Harness Board Accessories

PANDUIT® unique selection of harness board accessories speeds the routing and forming of wire in harness fabrication. They hold wires at a uniform height above the board and are ideal for use with *PANDUIT®* manual and automatic cable tie tooling.



Abrasion Protection Products

PANDUIT® offers a wide variety of abrasion protection products to protect wires, cables, hoses and tubing from abrasion. Heat shrink tubing, non-shrink PVC tubing, spiral wrap, grommet edging, corrugated loom tubing and braided expandable sleeving are available in a variety of sizes and materials to meet a broad range of indoor and outdoor applications.

PANDUIT® Wiring Accessories Part Number System and Technical Data

Part Number System Example

Part Description	Package Quantity	Color/Material
For Part Description and Mounting Method, refer to specific product tables in catalog.	X = 10 Q = 25 L = 50 C = 100 T = 200 D = 500 M = 1000	Blank = Natural 0 = Weather Resistant Black 8 = Gray 15 = Ivory 20 = Pigmented Black 30 = Heat Stabilized Nylon (Black) 69 = Flame Retardant Nylon (Natural) 76 = TEFZEL* (Blue) 100 = Polypropylene Weather Resistant (Black) 109 = Polypropylene (Green) 120 = Weather Resistant Nylon 12 (Black) 630 = Heat Stabilized Nylon 6 (Black) 639 = Heat Stabilized Nylon 6 (Natural) 702 = HALAR** (Maroon)

Physical Properties and Colors of Wiring Accessory Materials

Design Criteria	General Purpose Nylon 6.6		Weather Resistant Nylon 6.6	Impact Modified Weather Resistant Nylon 6.6	Heat Stabilized Nylon 6.6	Flame Retardant Nylon 6.6		Glass Filled Flame Retardant Nylon 6.6
Color	Natural	Black	Black	Black	Black	Black	Natural	Black
Part Number Suffix	None	20	0	0	30	60	69	None
UL Flammability — UL94	V-2	V-2	V-2	HB	V-2	V-0	V-0	V-0
Gamma Radiation Resistance	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	N/A	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	N/A
Water Absorption	1.2% (24 hrs)	1.2% (24 hrs)	1.2% (24 hrs)	1.2% (24 hrs)	1.2% (24 hrs)	1.1% (24hrs)	1.1% (24hrs)	0.7% (24hrs)
UV Resistance	Poor	Fair	Good	Good	Good	Poor	Poor	Poor
Maximum Continuous Use Temperature	185°F (85°C)	185°F (85°C)	185°F (85°C)	185°F (85°C)	257°F (125°C)	230°F (110°C)	230°F (110°C)	230°F (110°C)
Minimum Continuous Use Temperature	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)

Physical Properties and Colors of Wiring Accessory Materials

Design Criteria	Heat Stabilized Nylon 6.6		TEFZEL*	General Purpose Polypropylene	Weather Resistant Polypropylene	Polypropylene (Green)	HALAR**	General Purpose ABS		Weather Resistant ABS	Flame Retardant Polycarbonate	Acetal	PVC
Color	Black	Natural	Blue	White	Black	Green	Maroon	White	Black	Black	Black	Black	Gray, White
Part Number Suffix	630	639	76	None	100	109	702	None	20	0	None	None	8, 10
UL Flammability — UL94	HB	HB	V-0	HB	HB	HB	V-0	HB	HB	HB	V-0	HB	V-0
Gamma Radiation Resistance	N/A	N/A	2 x 10 ⁵ Rads	1 x 10 ⁵ Rads	1 x 10 ⁵ Rads	N/A	2 x 10 ⁵ Rads	N/A	N/A	N/A	N/A	N/A	N/A
Water Absorption (24 hours)	1.5% (24 hrs)	1.5% (24hrs)	<0.03% (24hrs)	0.1% (24 hrs)	0.1% (24hrs)	0.1% (24hrs)	<0.05% (24hrs)	0.3% (24hrs)	0.3% (24hrs)	0.3% (24hrs)	0.15% (24hrs)	0.43% (24 hrs)	0.3% (30 days)
UV Resistance	Fair	Poor	Excellent	Poor	Good	Poor	Excellent	Poor	Fair	Good	Good	Fair	Poor
Maximum Continuous Use Temperature	250°F (121°C)	250°F (121°C)	302°F (150°C)	221°F (105°C)	221°F (105°C)	221°F (105°C)	284°F (140°C)	150°F (65°C)	150°F (65°C)	150°F (65°C)	257°F (125°C)	194°F (90°C)	122°F (50°C)
Minimum Continuous Use Temperature	-40°F (-40°C)	-40°F (-40°C)	-50°F (-46°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-50°F (-46°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)	-40°F (-40°C)

Based on assumption of minimal loading, chemical attack and impact free conditions.

*TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

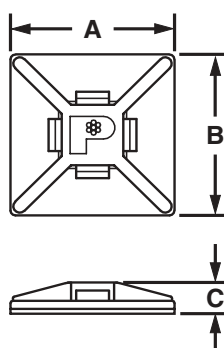
**HALAR is a registered trademark of Solvay Solexis, Inc.

4-Way Adhesive Backed Mounts

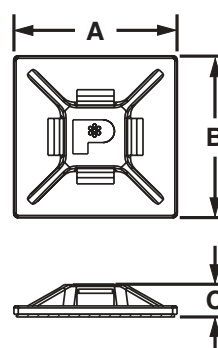


Lower your installed costs with fast, easy-to-install **PANDUIT®** adhesive-backed cable tie mounts. Four-way tie entry for easy orientation of wires or cables. **PANDUIT®** mounts are produced 2-up, 4-up, and with tear tabs for fast and easy liner removal to speed installation. For additional holding strength use #6 (M3) screws in the mounting hole(s). For specific information on adhesive properties and technical data on mount selection, see page 134-136.

ABM1M



ABMM



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Adhesive Type/Static Load lbs. (g)	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
ABM1M-A-C	M	.50 (12.7)	.50 (12.7)	.16 (4.0)	Nylon 6.6	White	Indoors	Rubber .13 (59)	100	500	1000	5000
ABM1M-AT-C	M	.50 (12.7)	.50 (12.7)	.16 (4.0)	Nylon 6.6	White	Indoors/ High Temp.	Acrylic .13 (59)	100	500	1000	5000
ABMM-A-C	M, I	.75 (19.1)	.75 (19.1)	.18 (4.6)	ABS	White	Indoors	Rubber .30 (136)	100	500	500	5000
ABMM-A-C20	M, I	.75 (19.1)	.75 (19.1)	.18 (4.6)	ABS	Black	Indoors	Rubber .30 (136)	100	500	—	—
ABMM-AT-C	M, I	.75 (19.1)	.75 (19.1)	.18 (4.6)	ABS	White	Indoors/ High Temp.	Acrylic .30 (136)	100	500	500	5000
ABMM-AT-C0	M, I	.75 (19.1)	.75 (19.1)	.18 (4.6)	ABS	Black	Outdoors/ High Temp.	Acrylic .30 (136)	100	500	500	5000

*Parts shown for Std. Pkg. Qty. Order number of mounts required in multiples of package quantities.

‡Part Numbers listed are for Standard Materials in Standard Package Quantity.

For Bulk package part numbers, see page 137-138.

Cable tie cross section sizes: M = Miniature and I = Intermediate.

4-Way Adhesive Backed Mounts



ABM2S



ABM3H/ABM4H



ABM100



ABM112



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Adhesive Type/Static Load lbs. (g)	Packaging*				
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.	
ABM2S-A-C	M, I, S	1.00 (25.4)	1.00 (25.4)	.16 (4.2)	ABS	White	Indoors	Rubber .50 (227)	100	500	500	5000	
ABM2S-AT-C						Indoors/ High Temp.	Acrylic .50 (227)	100	500	500	5000		
ABM2S-AT-C0						Outdoors/ High Temp.		100	500	500	5000		
ABM100-A-C					Nylon 6.6	White	Indoors	Rubber .50 (227)	100	500	500	5000	
ABM100-AT-C										100	500	500	5000
ABM100-AT-C0							Weather Resistant Nylon 6.6	Black	Outdoors/ High Temp.	Acrylic .50 (227)	100	500	500
ABM112-A-C			1.12 (28.6)	1.12 (28.6)	.14 (4.1)	Nylon 6.6	White	Indoors	Rubber .63 (286)	100	500	500	5000
ABM112-AT-C								Indoors/ High Temp.	Acrylic .63 (286)	100	1000	500	5000
ABM112-AT-C0								Black		Outdoors/ High Temp.	100	1000	500
ABM3H-A-L	M, I, S, HS, LH, H, HLM ■	1.50 (38.1)	1.50 (38.1)	.25 (6.4)	Nylon 6.6		White	Indoors	Rubber 1.12 (513)	50	500	200	1000
ABM3H-AT-L									Indoors High Temp.	Acrylic 1.12 (513)	50	500	200
ABM4H-A-L		2.00 (50.8)	2.00 (50.8)						Indoors	Rubber 2.0 (907)	50	500	200
ABM4H-AT-L								Indoors/ High Temp.	Acrylic 2.0 (907)	50	500	200	1000

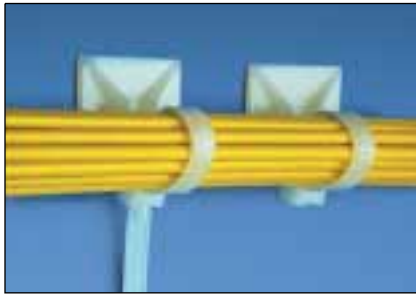
4-WAY MOUNTS WITHOUT ADHESIVE

Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Adhesive Type/Static Load lbs. (g)	Packaging*				
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.	
ABMM-D	M, I	.75 (19.1)	.75 (19.1)	.14 (3.6)	ABS	White	Indoors	User supplied adhesive	—	—	500	5000	
ABM2S-S6-D	M,I,S	1.00 (25.4)	1.00 (25.4)	.16 (4.2)				Nylon 6.6	User supplied adhesive and/or (2) #6 (M3) Screws	—	—	500	5000
ABM100-S6-C				Flame Retard. Nylon 6.6						Natural	User supplied adhesive and/or #6 (M3) Screw	100	1000
ABM100-S6-C69					Nylon 6.6	White		User supplied adhesive and/or #6 (M3) Screw	100		1000	500	5000
ABM112-S6-C		1.12 (28.6)	1.12 (28.6)	.14 (4.1)				Flame Retard. Nylon 6.6	Natural	Indoors	User supplied adhesive and/or (2) #6 (M3) Screws	100	1000
ABM112-S6-C69	100						500					500	5000
ABM3H-S6-T	M, I, S, HS, LH, H, HLM ■	1.50 (38.1)	1.50 (38.1)	.21 (5.2)	Nylon 6.6	White	—	—	200			1000	
ABM4H-S6-T		2.00 (50.8)	2.00 (50.8)				—	—	200			1000	

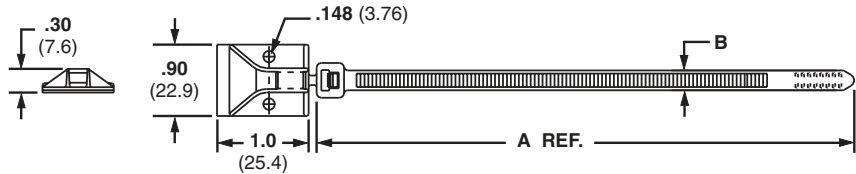
■Used with PANDUIT® HLM series Hook & Loop Cable Ties found on page 40.

PANDUIT® Adhesive Backed Cable Tie Mounts

Combination Adhesive Mount/Cable Tie



Adhesive mount and cable tie molded as one piece help reduce inventory costs. Mount portion features ramp to guide tip into tie head and holes to install two (2) optional #6 screws for added mounting strength. Available with locking or releasable tie. Extended adhesive liner release tab on mount for fast liner removal.

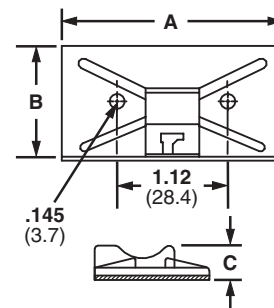


Part Number†	Cable Tie Specifications				Recommended PANDUIT® Installation Tool	Material	Color	Adhesive Type/Static Load lbs. (g)	Packaging*			
	Length A in. (mm)	Width B in. (mm)	Max. Bundle Dia. in. (mm)	Min. Loop Tensile Strength Lbs. (N)					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
Locking PLA2S-A-Q	7.4 (188)	.19 (4.8)	1.85 (47)	50 (222)	GTS, GS2B, PPTS, PTS, STS2 or STH2	Nylon 6.6	White	Rubber .45 (204)	25	250	100	1000
Releasable PRA2S-A-Q					Hand Installed Only				25	250	100	1000

Snap-In Cable Tie Mounts



Integral retaining notch holds cable tie head in place below bundle; eliminates protruding tie head and facilitates one hand tie threading.



Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.*	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
ADHESIVE BACKED												
SMS-A-C	S	2.00 (50.8)	1.00 (25.4)	.31 (7.9)	ABS	White	Indoors	Rubber Adhesive Static Load 1.0 lbs. (454g)	100	500	500	5000
SCREW MOUNT												
SMS-S6-D	S	2.00 (50.8)	1.00 (25.4)	.31 (7.9)	ABS	White	Indoors	(2) #6 (M3) Screws	—	—	500	5000

*Order the number of mounts required in multiples of package quantities.

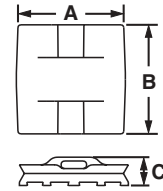
†Part Numbers listed are for Standard Materials in Standard Package Quantity. For Bulk package part numbers, see page 137-138.

**Recommended cable ties: PLT1S, PLT1.5S, PLT2S, PRT1.5S, PRT2S. Cable Tie Cross Section: S = Standard.

Epoxy Applied Mounts



These mounts are designed for application with **PANDUIT® EMA Epoxy**. Provides a fast, strong, economical method to secure wire or cable to steel, aluminum, glass, wood and most other surfaces. Especially well suited to construction and maintenance applications. Eliminates the need to drill holes.



Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)●	Packaging*			
		A	B	C						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
EMS-A-C	M, I, S	.98 (24.9)	.98 (24.9)	.26 (6.6)	Nylon 6.6	Natural	Indoors	EMA Epoxy	10 (4540)	100	500	500	1000
EMS-A-C0					Weather Resistant Nylon 6.6	Black	Outdoors			100	500	500	5000

Epoxy Applied Swivel Mounts

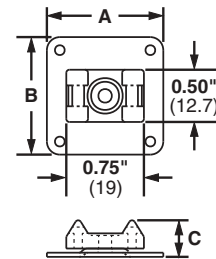


Mount swivels 360° to assure proper orientation with harness. Four inspection holes to check adhesive coverage.

Material:

Base and Rivet: Aluminum

Mount: Natural Nylon 6.6 — Indoors

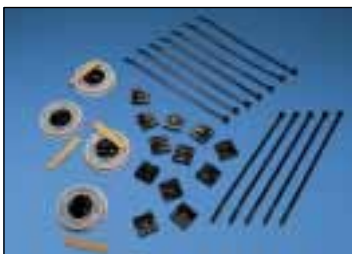


Part Number†	Used With Cable Ties	Dimensions in. (mm)			Where Used	Mounting Method	Max. Static Load lbs. (g)●	Packaging*			
		A	B	C				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
ASMS-A-X	M, I, S	1.125 (28.6)	1.125 (28.6)	.35 (8.9)	Indoors	EMA Epoxy	10 (4540)	10	50	200	1000

Epoxy Adhesive and Mount Kits



EMSK3-1-X0 Epoxy Kit with mounts.
Packed in sturdy foil pouch



EMSK12-4-12-X0 Epoxy Kit with mounts and cable ties

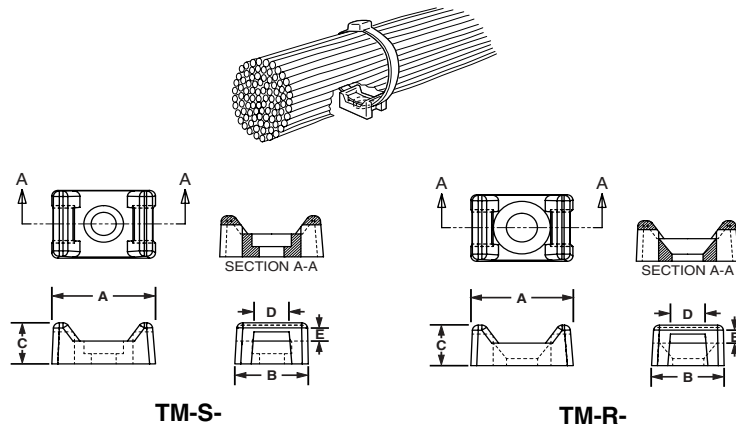
EMA Epoxy supplied in convenient two-compartment mixer cup with a mixer stick for each cup. Each cup contains adhesive for three (3) EMS or ASMS mounts. Epoxy hardens in about five (5) minutes. Supports about 5 lbs. after first 15 minutes. After full 24-hour curing time, bonding strength will exceed 50 lbs. on clean, grease-free surface. Note: Not recommended for polyethylene and polypropylene.



Part Number†	Used With Cable Ties**	Where Used	Contents of Each Kit				Packaging*	
			Epoxy Cups	Mixer Sticks	EMS Mounts	Cable Ties	Std. Pkg. Qty.	Bulk Pkg. Qty.
EPOXY ADHESIVE ONLY								
EMA-X	—	Indoor/ Outdoor	10	10	None	None	10 Kits	—
EPOXY MOUNTING KIT WITH EMS MOUNTS								
EMSK3-1-X0	M, I, S	Indoor/ Outdoor	1	1	3	None	10 Kits	100 Kits
EPOXY MOUNTING KIT WITH EMS MOUNTS AND CABLE TIES								
EMSK3-1-3-0	M, I, S	Indoor/ Outdoor	1	1	3	3 ea. PLT2S-0	1 Kit	10 Kits
EMSK12-4-12-X0	M, I, S		4	4	12	12 ea. PLT2S-0	10 Kits	100 Kits

Tie Mounts — Mechanically Applied

Unique cradle design provides maximum stability and rigidity to the wire bundle. Screw or rivet installed.



UL
Except
TM1S4-M69
TM2S8-C100
TM3S8-C69
TM3S8-C100

Part Number†	Used With Cable Ties**	Dimensions in. (mm)					Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D	E					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TM1S4-C	M	.513 (13.0)	.316 (8.0)	.230 (5.8)	.130 (3.3)	.067 (1.7)	Nylon 6.6	Natural	Indoors	#4 (M2.5) Screw or Tapered Rivet	100	500	1000	5000
TM1S6-C										#6 (M3) Screw or Tapered Rivet	100	500	1000	5000
TM2S6-C										#8 (M4) Screw or Tapered Rivet	100	500	1000	5000
TM2S8-C	M, I, S	.630 (16.0)	.425 (10.8)	.275 (7.0)	.215 (5.5)	.060 (1.5)	Nylon 6.6	Natural	Indoors	#6 (M3) Screw or Countersunk Rivet	100	500	1000	5000
TM2R6-C														
TM3S8-C	M, I, S, HS, LH						Nylon 6.6	Natural	Indoors	#8 (M4) Screw or Tapered Rivet	100	500	1000	5000
TM3S10-C										#10 (M5) Screw or Tapered Rivet	100	500	1000	5000
TM3S25-C		.858 (21.8)	.610 (15.5)	.375 (9.5)	.320 (8.1)	.080 (2.0)				1/4 (M6) Screw or Tapered Rivet	100	500	1000	5000
TM3R6-C										#6 (M3) Screw or Countersunk Rivet	100	500	1000	5000

Hole Diameter — in. (mm)		
Part Number	Hole Dia.	Counterbore Dia.
TM1S4	.120 (3.0)	.230 (5.8)
TM1S6	.150 (3.8)	.280 (7.1)
TM2S6	.150 (3.8)	.280 (7.1)
TM2S8	.180 (4.6)	.320 (8.1)
TM2R6	.190 (4.8)	Countersunk
TM3S8	.180 (4.6)	.320 (8.1)
TM3S10	.200 (5.1)	.390 (9.9)
TM3S25	.260 (6.6)	.510 (12.9)
TM3R6	.190 (4.8)	Countersunk

Additional Tie Mount Part Numbers Available in specified materials. All are available as standard PANDUIT® parts				
Heat Stabilized Nylon	Flame Retardant Nylon	Weather Resistant Nylon	Weather Resistant Polypropylene	TEFZEL***
TM1S4-M30 TM1S6-M30 TM2R6-M30 TM2S6-M30 TM2S8-M30 TM2S8-M69 TM3S8-M30 TM3S10-M30 TM3S25-M30	TM1S4-M69 TM1S6-M69 TM2S6-M69 TM2S8-M69 TM3S8-C69 TM3S10-M69	TM1S6-M0 TM2R6-M0 TM2S6-M0 TM2S8-M0 TM3R6-M0 TM3S10-Q0 TM3S10-M0 TM3S25-M0	TM2S8-C100 TM3S8-C100 TM3S8-M100	TM3S10-C76 TM3S8-C76 TM2S8-C76

***TEFZEL is a registered trademark of E. I. DuPont de Nemours Co.

*Order the number of mounts required in multiples of package quantities.

†Part Numbers listed are for Standard Materials in Standard Package Quantity.

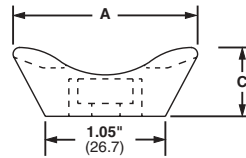
For Bulk package part numbers, see page 137-138.

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

Extra-Heavy Tie Mounts



Mounts designed especially for use with *PANDUIT®* Extra-Heavy cross-section ties for mounting cable, large wire bundles or tubular shapes.



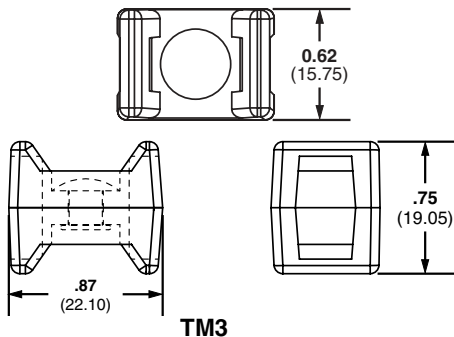
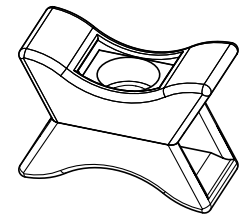
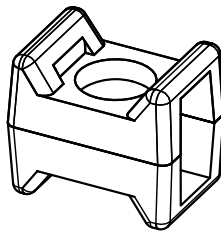
Part Number	Hole Diameter	Counterbore Diameter
TMEHS8	.18" (4.3 mm)	.51" (13.0)
TMEHS10	.20" (5.1 mm)	.51" (13.0)
TMEH25	.26" (6.6 mm)	.51" (13.0)

Except
TMEH-S10-C100
TMEH-S10-C109

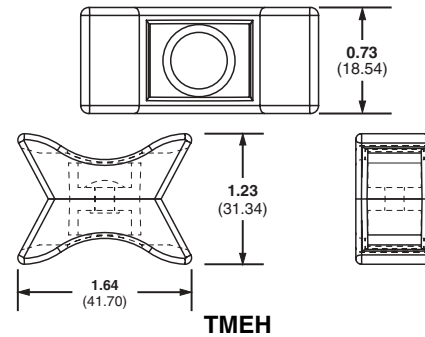
Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TMEH-S8-Q0	M, I, S, HS, LH, EH, HLM ■	1.65 (42)	.74 (19)	.61 (15.5)	Weather Resistant Nylon 6.6	Black	Outdoors	#8 (M4) Screw	25	250	100	500
TMEH-S10-Q0					#10 (M5) Screw			25	250	100	500	
TMEH-S25-Q0					1/4 (M6) Screw			25	250	100	500	
TMEH-S10-C100					Weather Resistant Polypropylene	#10 (M5) Screw	—	—	100	500		
TMEH-S10-C109					Polypropylene		Green	Indoors	—	—	100	500

Swivel Cable Tie Mounts

The two TM style mounts are securely fastened together with a rivet that allow both mounts to swivel. The Swivel Mount can join bundles of cable, tubing or hoses that may need to move or are not parallel. This mount is also a great way to separate bundles to avoid abrasion.



TM3



TMEH

Part Number	Used With Cable Ties**	Dimensions in. (mm)	Pull Apart Force	Material	Color	Where Used	Packaging*	
							Std. Pkg. Qty.	Std. Ctn. Qty.
TM3-X2-C0	M, I, S, HS, LH	See Drawing	120 lbs.	Weather Resistant Nylon 6.6	Black	Outdoors/ Indoors	100	1000
TMEH-X2-L0	M, I, S, HS, LH, EH, HLM ■		250 lbs.				50	500

Stud Tie Mounts

Easily applied to bolts or studs with a light hammer blow or turning of the mount. The mounts are designed for use with cable ties to mount wire bundles, air, water and hydraulic lines.



TMSTLHS Type



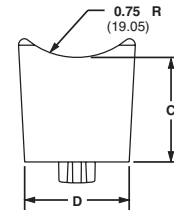
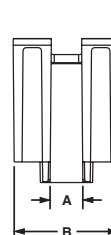
TMSTHS Type

Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TMSTLHS5-M0	M, I, S, HS, LH	1.25 (31.8)	.48 (12.2)	.95 (24.1)	Impact Modified Weather Resistant Nylon 6.6	Black	Outdoors	#12 Stud Dia. (5 mm)	100	1000	1000	5000
TMSTLHS6-M0								1/4" Stud Dia. (6 mm)	100	1000	1000	5000
TMSTLHS8-M0								5/16" Stud Dia. (8 mm)	100	1000	1000	5000
TMSTHS10-D0	M, I, S, HS, LH, H	1.99 (50.6)	1.01 (25.6)	1.10 (27.9)				3/8" Stud Dia. (10 mm)	100	1000	500	500
TMSTHS13-D0								1/2" Stud Dia. (13 mm)	100	1000	500	500
TMSTHS16-D0								5/8" Stud Dia. (16 mm)	100	1000	500	500
TMSTHS19-D0								3/4" Stud. Dia. (19 mm)	100	1000	500	500

Spacer Mount



Maintain a standoff from the frame rail in Chassis Tie applications. Ideal for applications where bundles must be secured away from the frame to avoid abrasion.



Part Number‡	Used With Cable Ties	Dimensions in. (mm)					Material	Color	Minimum Panel Thickness	Packaging*			
		A Cable Tie Channel in. (mm)	B Width in. (mm)	C Standoff Height in. (mm)	D Base Depth in. (mm)	E Recommended Panel Hole Dia. in. (mm)				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TMSH50-T300	SSPM2.5H-L300 SSPM4H-L300	.310 (7.875)	1.00 (25.4)	1.00 (25.4)	1.00 (25.4)	.50 (12.7)	Weather Resistant Heat Stabilized Nylon 6.6	Black	0.188 (4.78)	100	1000	200	1000

*Order the number of mounts required in multiples of package quantities.

‡Part Numbers listed are for Standard Materials in Standard Package Quantity. For Bulk package part numbers, see page 137-138.

**Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard, LH = Light-Heavy and H = Heavy.

Tie Mounts — Applied with User Supplied Adhesives

Apply cyanoacrylic or another type adhesive to mount surface. Any adhesive selected should be user-tested to assure suitability for the actual application. Mounts should be installed on a clean, dry and grease-free surface. Bond strength depends on adhesive used.

Low Profile Mount — AM2

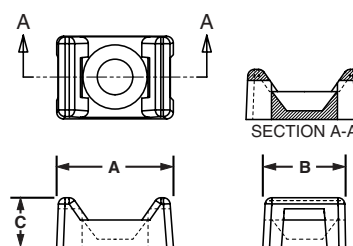
Low profile design keeps bundle close to mounting surface where overhead space is limited.



Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
AM2-C	M, I, S	1.22 (31.2)	1.22 (31.2)	.125 (3.2)	Nylon 6.6	Natural	Indoors	User Supplied Adhesive	100	500	1000	5000

TM1A, TM2A, TM3A

Solid flat bottom surface provides maximum adhesive area.

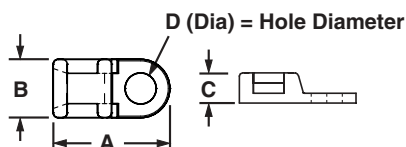
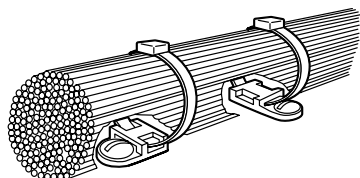


Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TM1A-C	M	.513 (13.0)	.316 (8.0)	.230 (5.8)	Nylon 6.6	Natural	Indoors	User Supplied Adhesive	100	1000	1000	10000
TM2A-C	M, I, S	.630 (16.0)	.425 (10.8)	.275 (7.0)					100	500	1000	5000
TM3A-C	M, I, S, HS, LH	.875 (22.2)	.620 (15.8)	.375 (9.5)					100	500	1000	5000

Screw Applied Tie Anchor Mounts

Low profile and versatile, these screw-installed mounts can be ideal for applications where space is limited. Designed for four-way cable tie insertion, this mount can be mounted in-line or perpendicular to the wire bundle.

TA1 Anchor

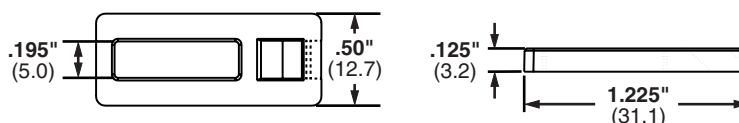
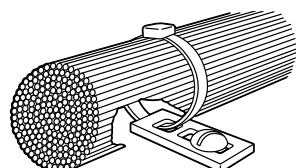


CAI US
Except
TA1S8-M69

Part Number†	Used With Cable Ties**	Dimensions in. (mm)				Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TA1S8-C	M, I, S	.75 (19.0)	.38 (9.5)	.20 (5.1)	.17 (4.3)	Nylon 6.6	Natural	Indoors	#8 (M4) Screw	100	500	1000	5000
TA1S8-M0						Weather Resistant Nylon 6.6	Black			—	—	1000	5000
TA1S8-M30						Heat Stabilized Nylon	Black			—	—	1000	5000
TA1S8-M69						Flame Retardant Nylon 6.6	Natural			—	—	1000	5000
TA1S10-C					.20 (5.1)	Nylon 6.6	Natural		#10 (M5) Screw	100	500	1000	5000
TA1S10-M0						Weather Resistant Nylon 6.6	Black			—	—	1000	5000

TA2 Anchor

This mount is installed perpendicular to the wire bundle. Elongated slot permits installing the screw and adjusting mount position with the bundle attached.



CAI US

Part Number†	Used With Cable Ties**	Dimensions in. (mm)	Material	Color	Where Used	Mounting Method	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TA2-C	M, I, S	See Drawing	Nylon 6.6	Natural	Indoors	#10 (M5) Screw	100	500	1000	5000

*Order the number of mounts required in multiples of package quantities.

†Part Numbers listed are for Standard Materials in Standard Package Quantity.

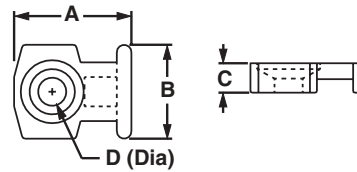
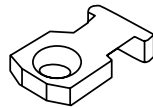
For Bulk package part numbers, see page 137-138.

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

PANDUIT® Cable Tie Mounts

Screw Applied Low Profile Mounts

Designed to secure wire bundles where space is limited.



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)				Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
LPMM-S2-C	M	.40 (10.2)	.32 (8.1)	.10 (2.5)	.095 ¹ (2.4)	Nylon 6.6	Natural	Indoors	#2 (M2) Flathead Screw	100	1000	1000	10,000
LPMM-S5-C	M	.40 (10.2)	.32 (8.1)	.10 (2.5)	.130 ² (3.3)			Indoors	#5 (M3) Flathead Screw	100	1000	1000	10,000
LPMS-S8-C	M, I, S	.75 (19.1)	.50 (12.7)	.12 (3.0)	.170 ² (4.3)			Indoors	#8 (M4) Flathead Screw	100	1000	1000	5000

NOTE 1: Combination Counterbore and Countersunk Hole (.088" (2.2) Dia. rivet can also be used).
NOTE 2: Countersunk Hole

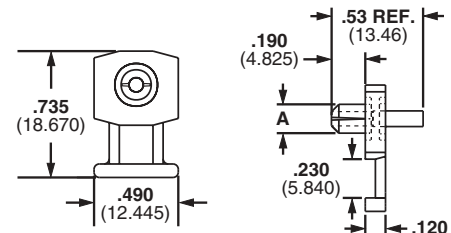
Knock-In Low Profile Mounts

Secures wires to any pre-drilled panel. Can be installed in any panel thickness. Eliminates screws.



Easy to Install:

1. Push rivet in pre-drilled panel hole.
2. Use **PANDUIT®** Rivet Installation Tool (TNR) or hammer to drive the pin flush to the base. This drives the rivet into the hole and secures the mount.
3. Attach wires to the mount with cable tie.



Part Number‡	Used With Cable Ties**	A	Dimensions in. (mm)	Hole Size	Material	Color	Where Used	Mounting Method	Packaging*			
									Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
KIMS-H366-C2	M, I, S	.155 (3.9)	See Drawing	.144 (3.7)	Nylon 6.6	Red	Indoors	Integral Push Rivet	100	500	1000	5000
KIMS-H430-C6	M, I, S	.180 (4.6)	See Drawing	.169 (4.3)	Nylon 6.6	Blue		Integral Push Rivet	100	1000	1000	5000
KIMS-H500-C4	M, I, S	.202 (5.1)	See Drawing	.196 (5.0)	Nylon 6.6	Yellow		Integral Push Rivet	100	500	1000	5000

Tie Plates



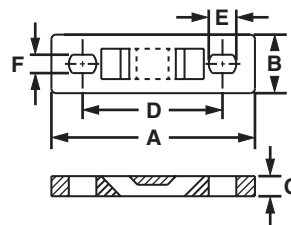
Screw applied. Each tie plate has a slotted mounting hole to accommodate various fastener spacings.



Part Number†	Used With Cable Ties**	Dimensions in. (mm)							Color & Material	Where Used	Mounting Method • Screw Size	Packaging*			
		A	B	C	D	E	F	G				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TP2-C	M, I, S, HS	1.98 (50.3)	.50 (12.7)	.125 (3.2)	.200 (5.1)	.40 (10.2)	.200 (5.1)	1.60 (40.6)	Natural Nylon 6.6	Indoors	#10 (M5)	100	1000	1000	5000
TP4H-C		3.08 (78.2)	.62 (15.7)	.203 (5.2)	.270 (6.9)	.31 (7.9)	.270 (6.9)	2.50 (63.5)			1/4 (M6)	100	1000	500	2500

Multiple Tie Plates

Screw applied. Used to secure closely spaced wire bundles.



Part Number†	No. of Bdl's.	Used With Cable Ties**	Dimensions in. (mm)						Material & Where Used	Mil. Std. Part No.	Mounting Method • Screw Size	Packaging*			
			A	B	C	D	E	F				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MTP1S-E6-C MTP1S-E10-C	1	M, I, S	1.75 (44.5)	.50 (12.7)	.125 (3.2)	1.25 (31.8)	.220 (5.58) .330 (7.62)	.147 (3.73) .200 (5.08)	Natural Nylon 6.6, Indoors	MS3339-1	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP1H-E6-C MTP1H-E10-C	1	M, I, S, HS, LH, H	2.09 (53.1)	.62 (15.7)	.203 (5.2)	1.50 (38.1)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-6	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP2S-E6-C MTP2S-E10-C	2	M, I, S	3.00 (76.2)	.50 (12.7)	.125 (3.2)	1.25 (31.8)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-2	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP2H-E6-C MTP2H-E10-C	2	M, I, S, HS, LH, H	3.59 (91.2)	.62 (15.7)	.203 (5.2)	1.50 (38.1)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-7	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP3S-E6-C MTP3S-E10-C	3	M, I, S	4.25 (108.0)	.50 (12.7)	.125 (3.2)	1.25 (31.8)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-3	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP3H-E6-C MTP3H-E10-C	3	M, I, S, HS, LH, H	5.09 (129.3)	.62 (15.7)	.203 (5.2)	1.50 (38.1)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-8	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP4S-E6-C MTP4S-E10-C	4	M, I, S	5.50 (139.7)	.50 (12.7)	.125 (3.2)	1.25 (31.8)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-4	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP4H-E6-C MTP4H-E10-C	4	M, I, S, HS, LH, H	6.59 (167.4)	.62 (15.7)	.203 (5.2)	1.50 (38.1)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-9	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP5S-E6-C MTP5S-E10-C	5	M, I, S	6.75 (171.5)	.50 (12.7)	.125 (3.2)	1.25 (31.8)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-5	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP5H-E6-C MTP5H-E10-C	5	M, I, S, HS, LH, H	8.09 (205.5)	.62 (15.7)	.203 (5.2)	1.50 (38.1)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-10	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000
MTP6H-E6-C MTP6H-E10-C	6	M, I, S, HS, LH, H	9.59 (243.6)	.62 (15.7)	.203 (5.2)	1.50 (38.1)	.220 (5.58) .300 (7.62)	.147 (3.73) .200 (5.08)		MS3339-11	#6 (M3)	—	—	100	1000
										—	#10 (M5)	—	—	100	1000

*Order the number of mounts required in multiples of package quantities.

†Part Numbers listed are for Standard Materials in Standard Package Quantity. For Bulk package part numbers, see page 137-138.

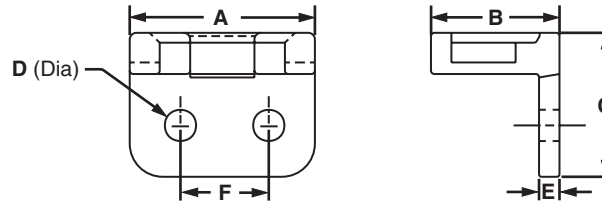
**Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard, LH = Light-Heavy and H = Heavy.

• For use with most common screw types except flat head.

Right Angle Mounts



Secure wire bundles that run through bulkheads or cabinet holes, holding them away from sharp edges. Can also be used to mount wire bundles adjacent to any surface. Screw or rivet applied.

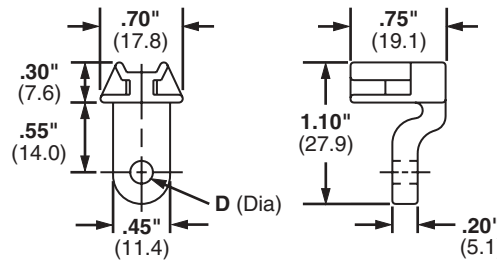


Part Number	Used With Cable Ties**	Dimensions in. (mm)						Color, Material & Where Used	Mil. Std. Part No.	Mounting Method in. (mm)	Packaging*			
		A	B	C	D	E	F				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
RAMS-S3-M	M, I, S	.56 (14.2)	.39 (9.9)	.44 (11.2)	.095 (2.4)	.06 (1.5)	.281 (7.1)	Natural Nylon 6.6, Indoors	MS3341-2	#3 (M2.5) Screw or 3/32 (2.4) Round Head Rivet	—	—	1000	5000
RAMH-S6-D	M, I, S, HS, LH and H	1.00 (25.4)	.75 (19.1)	1.00 (25.4)	.125 (3.2)	.18 (4.6)	.500 (12.7)		MS3341-1	#6 (M3) Screw or 1/8 (3.2) Round Head Rivet	—	—	500	5000
RAMH-S10-D					.200 (5.1)				—	#10 (M5) Screw or 3/16 (4.7) Round Head Rivet	—	—	500	5000

Lightening Hole Mounts



Used to secure wire bundles which run through bulkhead lightening holes (.87" (22.1mm) diameter or larger) and keep bundles away from sharp edges. Only one screw or rivet needed.



Part Number	Used With Cable Ties**	Dimensions in. (mm)	Color, Material & Where Used	Mil. Std. Part No.	Mounting Method in. (mm)	Packaging*			
		D				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.*	Bulk Ctn. Qty.
LHMS-S5-D	M, I, S	.127 (3.2)	Natural Nylon 6.6, Indoors	—	#5 (M3) Screw or 1/8 (3.2) Rivet	—	—	500	2500
LHMS-S6-D		.145 (3.7)		MS3340-1	#6 (M3) Screw or 9/64 (3.5) Rivet	—	—	500	2500
LHMS-S10-D		.192 (4.9)		—	#10 (M5) Screw or 3/16 (4.7) Rivet	—	—	500	2500

Metal Clip-On Mounts



The mount clips on sheet metal edges for fast mounting of harnesses with cable ties. Ties may be inserted from any of the four sides for easy harness orientation.



Part Number	Used With Cable Ties**	Dimensions in. (mm)			Max. Panel Thickness	Material	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MCMS12-P-C	M, I, S	.88 (22.4)	.56 (14.2)	.31 (8.0)	.13 (3.2)	Zinc Plated Steel	Indoors or Outdoors	Clip-On	—	—	100	500
MCMS25-P-C				.46 (11.5)	.24 (6.1)				—	—	100	500
MCMS30-P-C				.55 (14.0)	.27 (6.9)				—	—	100	500

Metal Mount



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



- NOTE: Mount can also be installed with a user supplied adhesive



Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Material	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MBMS-S10-C	M, I, S	1.00 (25.4)	.50 (12.7)	.14 (3.6)	Aluminum (Chromate Coated) MIL C. 5541 D Class 3 Coating	Indoors or Outdoors	#10 (M5) Screw	10 (4540)	100	1000	1000	10000

*Order the number of mounts required in multiples of packaging quantities.

†Part Numbers listed are for Standard Materials in Standard Package Quantity.

For Bulk package part numbers, see page 137-138.

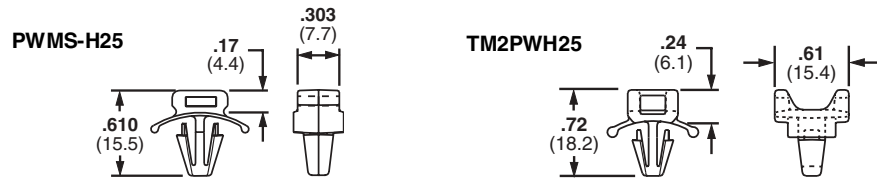
**Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate and S = Standard.

PANDUIT® Cable Tie Mounts

Push Mounts — Winged Push Mounts



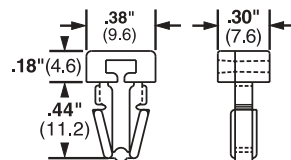
Push mounts require no adhesive or additional mounting hardware. They are inserted into pre-drilled holes. The winged base applies pressure on the panel wall to provide a more secure mount in high vibration applications. Can be used where only one side of the panel is accessible.



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)	Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
			Thickness Max.	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
PWMS-H25-C	M, I, S	See Drawing	.105 (2.7)	.250 (6.4)	Nylon 6.6	Natural	Indoors	Inserted into Pre-Drilled Hole	100	1000	1000	5000
PWMS-H25-M0					Weather Resistant Nylon 6.6	Black	Outdoors		—	—	1000	5000
TM2PWH25-C			.094 (2.3)		Nylon 6.6	Natural	Indoors		100	500	1000	5000

Part number shown for PWMS-H25-C and TM2PWH25-C is standard package quantity.

Push Mounts



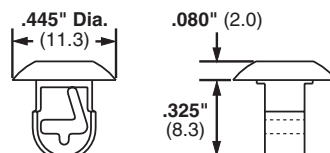
This part is a version of the mount shown above, but without tensioning wings.



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)	Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
			Thickness Max.	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
PM2H25-C	M, I, S	See Drawing	.125 (3.2)	.250 (6.4)	Nylon 6.6	Natural	Indoors	Inserted into Pre-Drilled Hole	100	500	1000	5000
PM2H25-M0					Weather Resistant Nylon 6.6	Black	Outdoors		—	—	1000	5000
PM2H25-M30					Heat Stabilized Nylon 6.6		Indoors		—	—	1000	5000

Part number shown for PM2H25-C is standard package quantity.

Push Button Mounts



Designed for use where both sides of the panel are accessible.

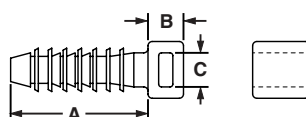


Part Number‡	Used With Cable Ties**	Dimensions in. (mm)	Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
			Thickness Max.	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
PBMS-H25-C	M, I, S	See Drawing	.125 (3.2)	.25 (6.4)	Nylon 6.6	Natural	Indoors	Inserted into Pre-Drilled Hole	100	500	1000	5000
PBMS-H25-C14						Gray			100	500	1000	5000
PBMS-H25-M0					Weather Resistant Nylon 6.6	Black	Outdoors		—	—	1000	5000
PBMS-H25-M30					Heat Stabilized Nylon 6.6		Indoors		—	—	1000	5000

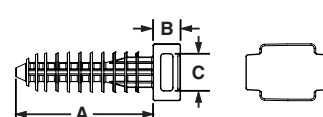
Part number shown for PBMS-H25-C and PBMS-H25-C14 is Standard Package Quantity.

Masonry Push Mounts

Used to secure wire, cable or tubing to masonry surfaces. Installed quickly into pre-drilled holes. Holds bundle securely.



MPMS19-C0
MPMS25-C0
MPMH38-L0



MPMWH32-L0



1. Drill hole using correct size bit.



2. Hammer mount into hole.



3. Place cable tie through mount.

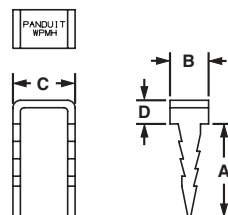


4. Install wires or cable.

Part Number†	Used With Cable Ties**	Dimensions in. (mm)			Hole Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	Drill Depth	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MPMS19-C0	M, I, S	.97 (24.6)	.25 (6.4)	.22 (5.6)	1.25 (31.8)	.188 (5)	Impact Modified Weather-Resistant Nylon 6.6	Black	Outdoors or Indoors	Inserted into Pre-Drilled Hole	100	500	1000	5000
MPMS25-C0						.25 (6)					100	500	1000	5000
MPMH38-L0	M, I, S, HS, LH, H, and HLM ■	1.25 (31.8)	.30 (7.5)	.38 (9.6)	1.50 (38.1)	.375 (10)					50	500	500	5000
MPMWH32-L0		1.41 (35.8)	.28 (7.1)		1.75 (44.5)	.313 (8)					50	500	500	5000

Wood Push Mount

Used to secure wire, cable, or tubing to wood surfaces. Driven into wood with hammer, barbed design holds mount in place — rated for 60 lb. pullout.



Part Number	Used With Cable Ties**	Dimensions in. (mm)				Material	Where Used	Mounting Method	Packaging*			
		A	B	C	D				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
WPMH-C	M, I, S, HS, LH, H, and HLM ■	.75 (19.1)	.31 (7.9)	.50 (12.7)	.19 (4.8)	16 gauge steel zinc plated	Outdoors or Indoors	Hammer into Wood	100	500	—	—

*Order the number of mounts required in multiples of package quantities.

†Part Numbers listed are for Standard Materials in Standard Package Quantity. For Bulk package part numbers, see page 137-138.

■Used with PANDUIT® HLM series Hook & Loop Cable Ties found on page 40.

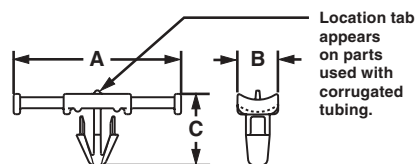
**Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard, LH = Light-Heavy and H = Heavy.

PANDUIT® Tie Harness Mounts used with Corrugated Loom Tubing

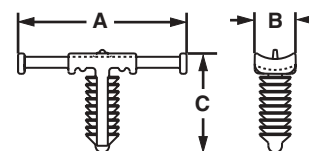
Tie Harness Mounts



Tie Harness Mounts are designed to be attached to the wire harness during assembly with 2 cable ties. Ties can be installed by hand or, more efficiently, with *PANDUIT® PAT Automatic Cable Tie Tooling* (see page 60). Use with Harness Board Standoff Post (page 129). Available with or without corrugated loom tubing location tab.



THMSP — Push Barb Style



THMSC — Tree Barb Style



FOR CORRUGATED TUBING — A specially designed location tab on the mount shelf aligns with grooves in corrugated tubing ensuring proper mount location during assembly.

Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	Thickness Max.	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
THMSP20-C	M, I, S	1.54 (39.1)	.37 (9.5)	.47 (11.9)	.16 (4.1)	.244-.283 (6.2-7.2)	Nylon 6.6	Natural	Indoors	Push Barb	100	1000	—	—
THMSP20-C30							Heat Stabilized Nylon 6.6	Black	Indoors/ High Temp.		100	1000	—	—
THMSP25-C				Nylon 6.6	Natural		Indoors	100	1000		1000	5000		
THMSP25-C30								Heat Stabilized Nylon 6.6	Black		Indoors/ High Temp.	100	1000	1000
THMSC35-C639				.46 (11.7)	.25 (6.4)	.244-.268 (6.2-6.8)	Heat Stabilized Nylon 6	Natural	Indoors/ High Temp.	Tree Barb	100	1000	1000	5000
THMSC35-C630								Black			100	1000	1000	5000

FOR DISCRETE WIRING — There is no location tab for applications not requiring the use of corrugated tubing.

Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	Thickness Max.	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
THMSP20F-C	M, I, S	1.54 (39.1)	.37 (9.5)	.47 (11.9)	.16 (4.1)	.244- .283 (6.2-7.2)	Nylon 6.6	Natural	Indoors	Push Barb	100	1000	—	—
THMSP20F-C30							Heat Stabilized Nylon 6.6	Black	Indoors/ High Temp.		100	1000	—	—
THMSP25F-C				Nylon 6.6	Natural		Indoors	100	1000		—	—		
THMSP25F-C30					Heat Stabilized Nylon 6.6		Black	Indoors/ High Temp.	100		1000	1000	5000	
THMSC35F-C639				.46 (11.7)	.25 (6.4)	.244- .268 (6.2-6.8)	Heat Stabilized Nylon 6	Natural	Indoors/ High Temp.	Tree Barb	100	1000	1000	5000
THMSC35F-C630								Black						

*Order the number of pieces required in multiples of package quantities.

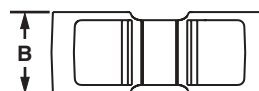
‡Part numbers listed are for standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

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

THM1SC Tie Harness Mount for Single Cable Tie — Unique Mount is Attached to Harness Automatically as Tie is Installed



- Secured with only 1 cable tie
- Can be used with auto-fed or loose piece cable ties
- Cable ties can be installed by hand with *PANDUIT®* Automatic Cable Tie Tooling Installation Systems (see page 60) or pneumatic tool (page 58) or hand operated cable tie tools (page 56)
- Winged design prevents vibration
- Barb design is easy to insert into pre-drilled hole
- 50 lb. vertical extraction force from .250" hole



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)			Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	Thickness Max.	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
THM1SC-C	M, I, S	.98 (24.8)	.38 (9.5)	.75 (19.1)	.187 (4.7)	.250 (6.5)	Nylon 6.6	Natural	Indoors	Tree Barb	100	1000	1000	5000
THM1SC-C30							Heat Stabilized Nylon 6.6	Black	Indoors/High Temp.		100	1000	1000	5000

*Order the number of pieces required in multiples of package quantities.

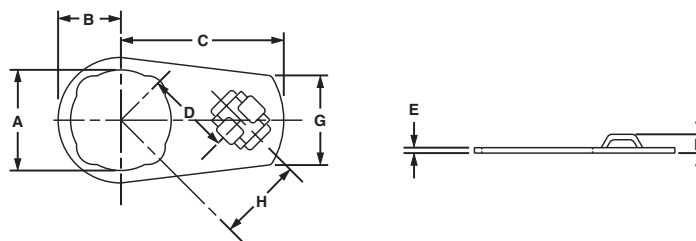
‡Part Numbers listed are for Standard Materials in Standard Package Quantity. For Bulk package part numbers, see page 137-138.

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

Control Panel Mount



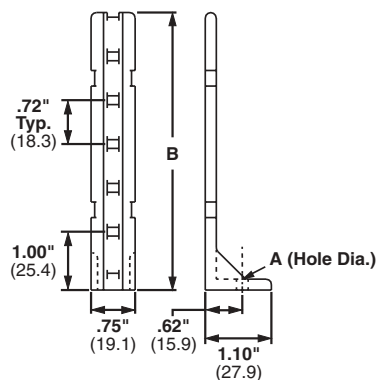
Installed behind control panel switch. Ideal for high strain areas where cable is routed from panel door to panel. Compatible with most control panel switch designs.



Part Number	Used With Cable Ties**	Dimensions in. (mm)								Material	Mounting Method	Packaging*			
		A	B	C	D	E	F	G	H			Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CPM87S-C	M, I, S	.89 (22.6)	.57 (14.5)	1.44 (36.6)	.75 (19.1)	.048 (1.2)	.17 (4.3)	.76 (19.3)	.75 (19.1)	Zinc Plated Steel	Control Panel Switch	—	—	100	1000
CPM122S-C		1.22 (31.0)	.75 (19.1)	2.07 (52.6)	1.12 (28.4)			.82 (20.8)	1.12 (28.4)			—	—	100	1000

PAN-POST™ Standoff

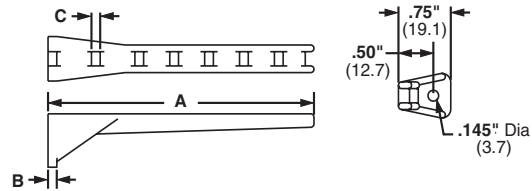
Supports wire bundles above or away from surface.



Part Number‡	Used With Cable Ties**	Dimensions in. (mm)		Color & Material	Mounting Method	Packaging*			
		A	B			Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
PP1S-S10-X	M, I, S	.200 (5.1)	2.00 (50.8)	Natural Nylon 6.6	#10 (M5) Screw	10	50	100	1000
PP1S-S12-X		.228 (5.8)			#12 (M5.5) Screw	10	50	100	1000
PP2S-S10-X		.200 (5.1)	4.60 (116.8)		#10 (M5) Screw	10	50	100	1000
PP2S-S12-X		.228 (5.8)			#12 (M5.5) Screw	10	50	100	1000

Right Angle Base RAFCB

For use in perpendicular applications. Supports cable above the mount surface.



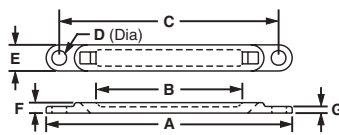
Part Number†	For Flat Cable Widths (Up to)	A in. (mm)	B in. (mm)	C in. (mm)	Color & Material	Where Used	Mounting Method	Packaging*			
								Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
RAFCB11-S6-C20	1.00 (25.4)	1.75 (44.4)	.125 (3.2)	.125 (3.2)	Black Nylon 6.6	Indoors	#6 (M3) Screw	100	500	1000	5000
RAFCB12-S6-C20	2.00 (50.8)	2.78 (70.6)						100	500	1000	4000
RAFCB13-S6-C20	3.00 (76.2)	3.81 (96.8)						100	500	1000	4000

Flat Cable Mounting System

Secures stacked cables, folds and breakouts as well as laminated and molded bus bars.



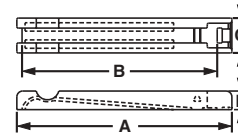
Base FCB



Mounting Application

Use one base, one corresponding size plate and one intermediate cable tie.

Plate FCP



Bundling Application

Use two plates (same size) and one intermediate cable tie.



Part Number†	For Flat Cable Widths (Up to)	Dimensions in. (mm)							Color & Material	Where Used	Mounting Method	Packaging*			
		A	B	C	D	E	F	G				Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
FCB11-S10-C20	1.00 (25.4)	3.29 (83.5)	1.04 (26.4)	2.08 (52.8)	.150 (3.8)	.375 (9.5)	.200 (5.1)	.095 (2.4)	Black Nylon 6.6	Indoors	#10 (M5) Screw	100	1000	1000	5000
FCB12-S10-C20	2.00 (50.8)	3.50 (88.9)	2.04 (51.8)	3.10 (78.7)	.150 (3.8)	.375 (9.5)	.200 (5.1)	.095 (2.4)			#10 (M5) Screw	100	1000	1000	5000
FCB13-S10-C20	3.00 (76.2)	4.52 (114.8)	3.04 (77.2)	4.12 (104.6)	.150 (3.8)	.375 (9.5)	.200 (5.1)	.095 (2.4)			#10 (M5) Screw	100	1000	1000	5000
FCB11-A-C20	1.00 (25.4)	3.29 (83.5)	1.04 (26.4)	2.08 (52.8)	.150 (3.8)	.375 (9.5)	.200 (5.1)	.095 (2.4)	Black Nylon 6.6	Indoors	Adhesive Backed	100	1000	1000	5000
FCB12-A-C20	2.00 (50.8)	3.50 (88.9)	2.04 (51.8)	3.10 (78.7)	.150 (3.8)	.375 (9.5)	.200 (5.1)	.095 (2.4)			Adhesive Backed	100	1000	1000	5000
FCB13-A-C20	3.00 (76.2)	4.52 (114.8)	3.04 (77.2)	4.12 (104.6)	.150 (3.8)	.375 (9.5)	.200 (5.1)	.095 (2.4)			Adhesive Backed	100	1000	1000	5000
FCP11-C20	1.00 (25.4)	1.29 (32.8)	1.04 (26.4)	.375 (9.5)	—	—	.200 (5.1)	—	Black Nylon 6.6	Indoors	Cable Ties	100	1000	1000	5000
FCP12-C20	2.00 (50.8)	2.31 (58.7)	2.04 (51.8)	.375 (9.5)	—	—	.200 (5.1)	—			Cable Ties	100	1000	1000	5000
FCP13-C20	3.00 (76.2)	3.32 (84.3)	3.04 (77.2)	.375 (9.5)	—	—	.200 (5.1)	—			Cable Ties	100	1000	1000	5000

*Order the number of mounts required in multiples of package quantities.

†Part Numbers listed are for Standard Materials in Standard Package Quantity. For Bulk package part numbers, see page 137-138.

PANDUIT® Cable Tie Mounts — Connector Rings

Closed Connector Rings

Connect multiple wire bundles or hang bundles from conduit, eliminating the need for saddle clamps.



Part Number	Used With Cable Ties**	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CR2-M	M, I, S	.33 (8.4)	.24 (6.1)	.20 (5.1)	Nylon 6.6	Natural	Indoors	Cable Ties	—	—	1000	10000
CR4H-M	M, I, S, HS, LH	.57 (14.5)	.36 (9.1)	.30 (7.6)	Weather Resistant Nylon 6.6	Black	Indoors/Outdoors	Cable Ties	—	—	1000	10000
CR4H-M0									—	—	1000	10000

Open Connector Ring

Designed to “add on” wire bundles without changing cable ties.



Part Number	Used With Cable Ties**	Dimensions in. (mm)	Material	Color	Where Used	Mounting Method	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CROS-M	M, I, S	See Drawing	Nylon 6.6	Natural	Indoors	Connects to M, I, S Cable Ties	—	—	1000	5000

Cable Spacers

Used to separate and/or hang wires, cable and hoses.



Part Number	Used With Cable Ties**	Dimensions in. (mm)	Material	Color	Where Used	Mounting Method	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CSH-D20	M, I, S, HS, LH, H	See Drawing	Nylon 6.6	Black	Indoors	Cable Ties	—	—	500	2500
CSH-D0			Weather Resistant Nylon 6.6		Outdoors or Indoors		—	—	500	2500

Cable Spacer — Cross

Connects two bundles at 90°. Provides .19" (4.8mm) space between bundles. Dual cradle design. Recommended max. bundle diameter (each) is .625" (15.9mm).



Part Number	Used With Cable Ties**	Dimensions in. (mm)	Material	Color	Where Used	Mounting Method	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CSCS-M	M, I, S	See Drawing	Nylon 6.6	Natural	Indoors	Cable Ties	—	—	1000	10000

Marking Pens

Provide fast drying, permanent, legible identification on nylon — where ordinary marking pens will not work.

PX-0
PX-2



PX-10



PFX-0
PFX-2



Part Number	Tip	Color	Description	Std. Pkg. Qty.*	Std. Ctn. Qty.
PX-0	Regular	Black	Color of ink is color of pen. Reversible tip to extend life of pen.	12	144
PX-2	Regular	Red		12	144
PX-10	Regular	White	For marking black or other dark-colored parts. Color of tip denotes color.	12	300
PFX-0	Fine	Black	For detailed marking on nylon surfaces. Color of cap and tip is color of ink.	12	144
PFX-2	Fine	Red		12	144

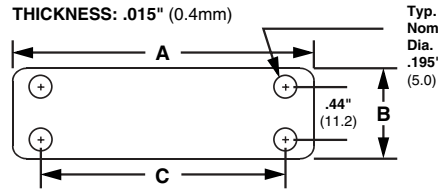
*Order the number of pieces required in multiples of packaging quantities.

**Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard, LH = Light-Heavy and H = Heavy.

Marker Plates

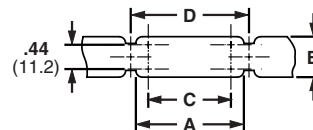


PANDUIT® Marker Plates can be mounted in any direction, either vertically or horizontally as flags, tags, or wrap-around identification plates. They can be marked with nylon marking pens or hot stamped. **See page 105** for marker pen information.



Part Number‡	Used With Cable Ties	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MP150-C	M, I, S	1.50 (38.1)	.75 (19.0)	1.03 (26.2)	Nylon 6.6	White	Indoors	Cable Ties	100	500	1000	5000
MP175-C		1.75 (44.5)	.75 (19.0)	1.28 (32.5)					100	500	1000	5000
MP200-C		2.00 (50.8)	.75 (19.0)	1.53 (38.4)					100	500	1000	5000
MP250-C		2.50 (63.5)	.75 (19.0)	2.03 (51.6)					100	500	1000	5000
MP350-C		3.50 (88.9)	.75 (19.0)	3.03 (77.0)					100	500	1000	5000
MP250W175-C		2.50 (63.5)	1.75 (44.5)	2.03 (51.6)					100	500	1000	5000
MP150-C0	M, I, S	1.50 (38.1)	.75 (19.0)	1.03 (26.2)	Weather Resistant Nylon 6.6	Black	Outdoors	Weather Resistant Cable Ties	100	500	1000	5000
MP175-C0		1.75 (44.5)	.75 (19.0)	1.28 (32.5)					100	500	1000	5000
MP200-C0		2.00 (50.8)	.75 (19.0)	1.53 (38.4)					100	500	1000	5000
MP250-C0		2.50 (63.5)	.75 (19.0)	2.03 (51.6)					100	500	1000	5000
MP350-C0		3.50 (88.9)	.75 (19.0)	3.03 (77.0)					100	500	1000	5000

Marker Plates on Rolls



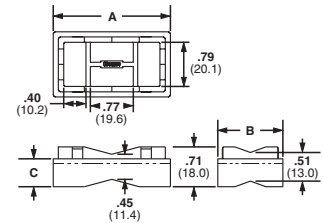
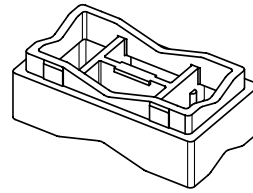
Part Number	Used With Cable Ties	Dimensions in. (mm)				Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MP150-R	M, I, S	1.50 (38.1)	.75 (19.0)	1.03 (26.2)	1.69 (42.9)	Nylon 6.6	White	Indoors	Cable Ties	—	—	1000	5000
MP175-R		1.75 (44.5)	.75 (19.0)	1.28 (32.5)	1.94 (49.3)					—	—	1000	5000
MP200-R		2.00 (50.8)	.75 (19.0)	1.53 (38.9)	2.19 (55.6)					—	—	1000	5000
MP250-R		2.50 (63.5)	.75 (19.0)	2.03 (51.6)	2.69 (68.3)					—	—	1000	5000

Marker Plate Kits

Part Number	Description	Std. Pkg. Qty.*
MP150KIT-Q	Kit contains 25 MP150 marker plates, 1 PFX-0 marking pen.	1
MP250KIT-Q	Kit contains 25 MP250 marker plates, 1 PFX-0 marking pen.	1
MP350KIT-Q	Kit contains 25 MP350 marker plates, 1 PFX-0 marking pen.	1

Stackable Cable Spacer

Just one part to inventory. Each spacer snaps by hand into another— increases spacer height by 1/2" increments. Because there is only one part, on-site sorting is eliminated. Can be used with up to 3/4" width lashed cable supports in parallel or perpendicular applications.



Used perpendicular to strand and cable



Used parallel to strand and cable



Underground application

Part Number	Used With Cable Ties	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
SACS50-T100	See Footnote	2.08 (52.8)	1.16 (29.5)	.50 (12.7)	Weather Resistant Polypropylene	Black	Outdoors	Cable Ties	—	—	200	2000

Stackable Spacers may be installed using Weather-Resistant Lashing Ties (see page 15). Weather-Resistant Extra-Heavy and Light-Heavy Cable Ties (see page 15), and Stainless Steel Ties (see page 77).

Weather Resistant Polypropylene Aerial Support Tie — With integral 1/2" (12.7mm) spacer

Designed to attach coax or telephone cable to the support strand 1/4" (6.4mm) or 5/16" (7.9mm) to form the expansion loop and keep equipment and cables clear of pole hardware. One-piece construction with integral spacer reduces inventory costs of separate spacer and bands and installs faster to lower the installed cost. Releasable and reusable.



Part Number	Length A in. (mm)	Width B in. (mm)	Thickness C in. (mm)	Head Width D in. (mm)	Max. Bundle Dia. in. (mm)	Min. Loop Tensile Strength lbs. (N)	Recommended PANDUIT® Installation Tool Part Number	Packaging*	
AST10-5-C100	5.6 (142)	.448 (11.4)	.055 (1.4)	1.16 (29.5)	1.0 (25)	75 (334)	Hand Installed Only	Std. Pkg. Qty.	Std. Ctn. Qty.
AST15-5-C100	6.9 (175)				1.5 (38)			100	1000
AST20-5-C100	8.4 (214)				2.0 (51)			100	1000
AST25-5-C100	10.0 (254)				2.5 (64)			100	1000



*Order the number of pieces required in multiples of package quantities.

Cable and Wire Mounting Devices (used without cable ties)



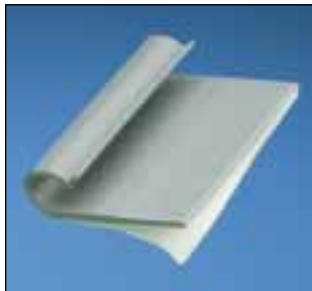
Wiring Accessories are an integral part of the *PANDUIT®* comprehensive selection of wire management products.

These accessories are one piece solutions that help provide the lowest installed cost for controlling, mounting and protecting wire and cable.

Mounting methods include:

- Adhesive-Backed
- Screw applied
- Rivet applied
- Push Mounts

Adhesive Backed Mounting Devices



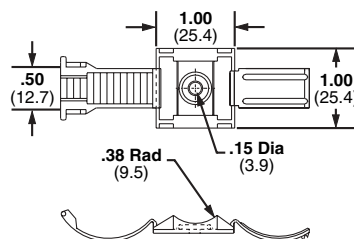
Faster Liner Removal Speeds Installation and Lowers Installed Cost

- The adhesive backed mounts are offered either as one or two mounts per liner
- The two-up mounts are easily removed by bending the mounts away from the liner
- The individual mounts have a convenient tear tab for quick removal

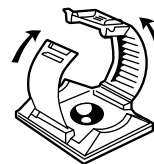
CLINCHER™ Adjustable Releasable Clamp



This clamp provides a fast and convenient method of securing bundles from .19" (4.8mm) up to .69" (17.5mm) diameter. It is available with adhesive backing or screw applied with one #6 (M3) screw.



The *CLINCHER™* clamp is fast and easy to use. . .



Lift tab to release



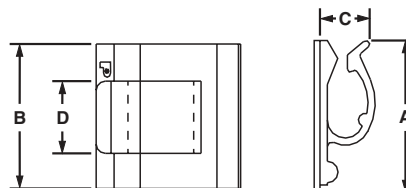
Part Number‡	Bundle Dia. in. (mm)	Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
ARC.68-A-Q	.19-.69 (4.8-17.5)	Polypropylene	White	Indoors	Rubber Adhesive	.50 (227)	25	250	100	1000
ARC.68-A-Q14			Gray				25	250	100	1000
ARC.68-S6-Q			White		#6 (M3) Pan Head Screw	—	25	250	100	1000
ARC.68-S6-Q14			Gray				25	250	100	1000



Adhesive Backed Cord Clips — ACC Type



Three sizes of clips to hold cords, tubing, cable, or wire bundles up to .62" (15.7mm) diameter. Bundles are easily snapped into or out of the clips.



Part Number†	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)				Material	Color	Where Used	Adhesive Type	Max. Static Load lbs. (g)	Packaging*			
		A	B	C	D						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
ACC19-A-C	.19 (4.8)	.62 (15.9)	.76 (19.3)	.25 (6.5)	.39 (9.9)	Nylon 6.6	Natural	Indoors	Rubber	.20 (91)	100	500	1000	5000
ACC19-AT-C						Nylon 6.6	Natural	Indoors/ High Temp.	Acrylic		100	500	1000	5000
ACC19-A-C20						Nylon 6.6	Black	Indoors	Rubber		100	500	1000	5000
ACC19-AT-C0						Weather Resistant Nylon 6.6	Black	Outdoors/ High Temp.	Acrylic		100	500	1000	5000
ACC38-A-C	.38 (9.6)	1.00 (25.4)	1.00 (25.4)	.27 (6.9)	.49 (12.4)	Nylon 6.6	Natural	Indoors	Rubber	.50 (227)	100	500	1000	5000
ACC38-AT-C						Nylon 6.6	Natural	Indoors/ High Temp.	Acrylic		100	500	1000	5000
ACC38-A-C20						Nylon 6.6	Black	Indoors	Rubber		100	500	1000	5000
ACC38-AT-C0						Weather Resistant Nylon 6.6	Black	Outdoors/ High Temp.	Acrylic		100	500	1000	5000
ACC62-A-C	.62 (15.7)	1.24 (31.4)	1.12 (28.6)	.63 (16.1)	.74 (18.8)	Nylon 6.6	Natural	Indoors	Rubber	.70 (318)	100	500	500	5000
ACC62-AT-C						Nylon 6.6	Natural	Indoors/ High Temp.	Acrylic		100	500	500	5000
ACC62-A-C20						Nylon 6.6	Black	Indoors	Rubber		100	500	500	5000
ACC62-AT-C0						Weather Resistant Nylon 6.6	Black	Outdoors/ High Temp.	Acrylic		100	500	500	5000

Push Mount Cord Clip



Mounts snap easily into pre-drilled holes. Integral mounting device eliminates the need for additional mounting hardware. The winged design holds mount in place in applications where vibration is present.



Part Number	Max. Bundle Dia. in. (mm)	Dimensions	Material	Color	Where Used	Panel Dimensions in. (mm)		Mounting Method	Packaging*			
						Max. Thickness	Hole Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
PMCC38H25-C	.38 (9.6)	See drawing	Nylon	Natural	Indoors	.105 (2.7)	.250 (6.4)	Inserted into a Pre-Drilled Hole	100	1000	1000	5000
PMCC38H25-M0			Weather Resistant Nylon 6.6	Black	Outdoors				—	—	1000	5000

*Order the number of mounts required in multiples of packaging quantities.
†Part Numbers listed are for Standard Materials in Standard Package Quantity.
For Bulk package part numbers, see page 137-138.

PANDUIT® Cable and Wire Mounting Devices

AJC Type

These low profile “J” clips retain cords, wires, or tubing and are available in four sizes. Their flexible design allows for easy cord insertion yet holds bundles tightly.



Part Number	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)					Color & Material	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C	D	E					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
AJC19-A-C	.19 (4.8)	.89 (22.6)	1.25 (31.8)	.30 (7.6)	.19 (4.8)	.77 (19.6)	Gray, PVC	Indoors	Rubber Adhesive	.50 (227)	—	—	100	1000
AJC25-A-C	.25 (6.4)	.92 (23.4)	1.50 (38.1)	.34 (8.6)	.25 (5.8)	.77 (19.6)				.60 (272)	—	—	100	1000
AJC31-A-C	.31 (7.9)	1.23 (31.2)	1.75 (44.5)	.44 (11.2)	.31 (7.9)	1.03 (26.2)				.90 (408)	—	—	100	1000
AJC38-A-C	.38 (9.6)	1.28 (32.5)	2.00 (50.8)	.53 (13.5)	.38 (10.2)	1.03 (26.2)				1.0 (454)	—	—	100	1000

A1C Type

Holds cords, cables and tubing. Single adhesive pad for confined areas.



Part Number	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
A1C12-A-C8	.12 (3.0)	.77 (19.6)	.63 (16)	.23 (5.8)	PVC	Gray	Indoors	Rubber Adhesive	.14 (64)	—	—	100	1000
A1C25-A-C8	.25 (6.4)	.91 (23.1)	.63 (16)	.38 (9.7)						—	—	100	1000
A1C38-A-C8	.38 (9.5)	1.04 (26.4)	.63 (16)	.51 (13)						—	—	100	1000
A1C50-A-C8	.50 (12.7)	1.17 (29.7)	.63 (16)	.64 (16.3)						—	—	100	1000

A2C Type

Holds cords, cables and tubing. Two adhesive pads for added strength.



Part Number	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
A2C12-A-C8	.12 (3.0)	1.30 (33)	.63 (16)	.23 (5.8)	PVC	Gray	Indoors	Rubber Adhesive	.37 (169)	—	—	100	1000
A2C25-A-C8	.25 (6.4)	1.43 (36.3)	.63 (16)	.36 (9.1)						—	—	100	1000
A2C38-A-C8	.38 (9.5)	1.56 (39.6)	.63 (16)	.49 (12.4)						—	—	100	1000
A2C50-A-C8	.50 (12.7)	1.72 (43.7)	.63 (16)	.61 (15.5)						—	—	100	1000

MACC Type



Metal adhesive backed cord clip can be opened and closed without damage to the clip, to remove or add wires quickly and easily.

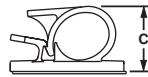
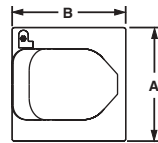


Part Number	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
MACC25-A-C	.25 (6.4)	.53 (13.5)	.79 (20)	.28 (7.1)	Zinc Plated Steel	—	Indoors	Rubber Adhesive	.21 (95)	100	1000	—	—
MACC62-A-C	.62 (15.7)	.75 (19.1)	1.18 (30)	.28 (7.1)					.44 (200)	100	1000	—	—

LWC Type



Holds wires, cable and tubing and is available in 6 sizes, with releasable latch. Adhesive backed and push mount styles available. Large mounting base for high bonding strength.



Adhesive Version



Push Mount Version



Part Number†	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Panel Thickness in. (mm)		Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C				Max. Thickness	Hole Diameter			Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
LWC19-A-C LWC19-A-C14 LWC19-A-C20	.19 (4.8)	.61 (15.5)	.85 (21.6)	.39 (9.9)	Nylon 6.6	Natural Gray Black	Indoors	—	—	Rubber Adhesive	.25 (113)	100 100 100	1000 1000 1000	— 500 —	— 5000 —
LWC25-A-C LWC25-A-C14 LWC25-A-C20	.25 (6.4)	1.0 (25.4)	.88 (22.2)	.45 (11.4)		Natural Gray Black					.45 (204)	100 100 100	1000 1000 1000	500 500 —	5000 5000 —
LWC38-A-C LWC38-A-C14 LWC38-A-C20	.37 (9.5)	1.0 (25.4)	1.0 (25.4)	.56 (14.2)		Natural Gray Black					.50 (227)	100 100 100	1000 1000 1000	500 500 —	5000 5000 —
LWC50-A-L LWC50-A-L14 LWC50-A-L20	.50 (12.7)	1.0 (25.4)	1.26 (32.0)	.67 (17.0)		Natural Gray Black					.63 (284)	50 50 50	500 500 500	200 200 —	2000 2000 —
LWC75-A-L LWC75-A-L14 LWC75-A-L20	.75 (19.1)	1.24 (31.5)	1.48 (37.6)	.90 (22.9)		Natural Gray Black					.94 (425)	50 50 50	500 500 500	100 100 —	1000 1000 —
LWC100-A-L LWC100-A-L14 LWC100-A-L20	1.0 (25.4)	1.97 (50.0)	2.21 (56.1)	1.26 (32.0)		Natural Gray Black					2.25 (1020)	50 50 50	500 500 500	100 100 —	1000 1000 —
LWC19-H25-C LWC19-H25-C14 LWC19-H25-C20	.19 (4.8)	.51 (12.8)	.85 (21.6)	.41 (10.4)	Nylon 6.6	Natural Gray Black	Indoors	.102 (2.6)	.220 (5.6)	Inserted into Pre-Drilled Hole	—	100 100 100	1000 1000 1000	500 500 500	5000 5000 5000
LWC25-H25-C LWC25-H25-C14 LWC25-H25-C20	.25 (6.4)	.58 (14.7)	.86 (21.8)	.47 (11.9)		Natural Gray Black					—	100 100 100	1000 1000 1000	500 500 —	5000 5000 —
LWC38-H25-C LWC38-H25-C14 LWC38-H25-C20	.37 (9.5)	.58 (14.7)	.94 (23.9)	.57 (14.5)		Natural Gray Black					—	100 100 100	1000 1000 1000	500 500 —	5000 5000 —
LWC50-H25-L LWC50-H25-L14 LWC50-H25-L20	.50 (12.7)	.76 (19.3)	1.25 (31.8)	.78 (19.8)		Natural Gray Black					—	50 50 50	500 500 500	200 200 —	2000 2000 —
LWC75-H25-L LWC75-H25-L14 LWC75-H25-L20	.75 (19.1)	.87 (22.1)	1.45 (36.8)	.97 (24.7)		Natural Gray Black					—	50 50 50	500 500 500	100 100 —	1000 1000 —
LWC100-H25-L LWC100-H25-L14 LWC100-H25-L20	1.0 (25.4)	.99 (25.1)	1.89 (47.9)	1.30 (33.0)		Natural Gray Black					—	50 50 50	500 500 500	100 100 —	1000 1000 —

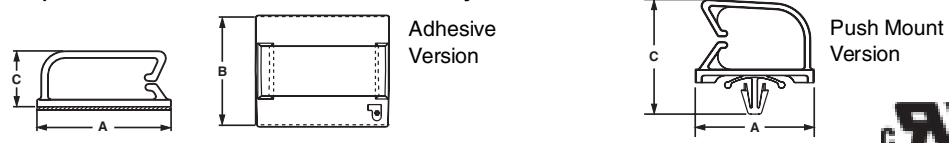
*Order the number of mounts required in multiples of package quantities.

†Part numbers listed are for standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

BEC Type



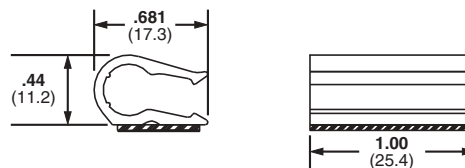
Bevel Entry Clips are available in 3 sizes to hold tubing, cable or wire bundles. The beveled entry makes it easy to snap in the bundle. The clips are available in push barb or adhesive backed styles.



Part Number‡	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Panel Dimensions in. (mm)		Mounting Method in. (mm)	Max. Static Load lbs. (g)	Packaging*			
		A	B	C				Max. Thickness	Hole Diameter			Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
BEC38-A-L					Nylon 6.6	Natural	Indoors	—	—	Rubber Adhesive		50	500	200	1000
BEC38-A-L20	.38 (9.6)	1.46 (37.1)	1.24 (31.5)	.52 (13.2)	Nylon 6.6	Black	Indoors	—	—	Rubber Adhesive	.91 (411)	50	500	200	1000
BEC38-AT-L0					Weather Resist. Nylon 6.6	Black	Outdoors	—	—	Acrylic Adhesive		50	500	200	1000
BEC62-A-L					Nylon 6.6	Natural	Indoors	—	—	Rubber Adhesive		50	500	200	1000
BEC62-A-L20	.62 (15.7)	1.46 (37.1)	1.24 (31.5)	.79 (20.1)	Nylon 6.6	Black	Indoors	—	—	Rubber Adhesive	.91 (411)	50	500	200	1000
BEC62-AT-L0					Weather Resist. Nylon 6.6	Black	Outdoors	—	—	Acrylic Adhesive		50	500	200	1000
BEC75-A-L					Nylon 6.6	Natural	Indoors	—	—	Rubber Adhesive		50	500	200	1000
BEC75-A-L20	.75 (19)	1.46 (37.1)	1.49 (37.8)	.89 (22.6)	Nylon 6.6	Black	Indoors	—	—	Rubber Adhesive	1.09 (493)	50	500	200	1000
BEC75-AT-L0					Weather Resist. Nylon 6.6	Black	Outdoors	—	—	Acrylic Adhesive		50	500	200	1000
BECP38H25-L	.38 (9.6)	1.46 (37.1)	.73 (18.5)	1.0 (25.4)	Nylon 6.6	Natural	Indoors	.08 (1.9)	.250 (6.4)	Inserted into Pre-Drilled Hole	—	50	500	200	1000
BECP38H25-L20						Black					—	50	500	200	1000
BECP75H25-L	.75 (19)	1.47 (37.3)	.73 (18.5)	1.35 (34.3)		Natural					—	50	500	200	1000
BECP75H25-L20						Black					—	50	500	200	1000

ADCC Type

Holds two cables in high temperature applications both indoors and outdoors.

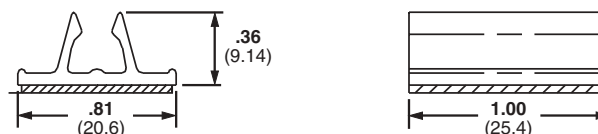


Part Number‡	Max. Bundle Dia. in. (mm)	Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*	
							Std. Pkg. Qty.	Std. Ctn. Qty.
ADCC31-AT-C10	2 bundles .20-.31 (5.1-7.9)	NORYL*	White	Indoors/Outdoors	Acrylic Adhesive	.25 (113)	100	500

*NORYL is a registered trademark of General Electric Company.

AMC Type

Holds a single cable and can be mounted on any flat smooth surface both indoors and outdoors.



Part Number	Max. Bundle Dia. in. (mm)	Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
AMC25-AT-C10	.22-.28 (6-7)	PVC	White	Indoors/Outdoors	Acrylic Adhesive	.40 (182)	—	—	1000	1000

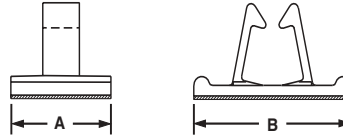
*Order the number of mounts required in multiples of package quantities.

‡Part numbers listed are for standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

VCC Type



Funnel entry design of this vertical cord clip allows for easy insertion of wires, cables and cords. Top loading for fast production operations.

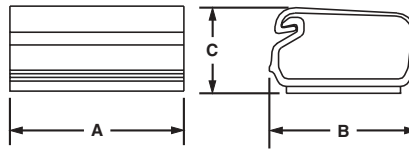


Part Number†	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
VCC25-A-C	.25	.50	1.00	Nylon 6.6	Natural	Indoors	Rubber Adhesive	.25	100	500	1000	5000
VCC25-A-C20	(6.4)	(12.7)	(25.4)		Black			100	500	1000	5000	
VCC50-A-C	.50	1.00	1.56		Natural			.78	100	500	200	1000
	(12.7)	(25.4)	(39.7)					(113)				
								(354)				

Latching Clip



This versatile clip retains and supports wire for a variety of applications. Provides a quickly installed mount with a locked cover which withstands vibration yet allows easy access.

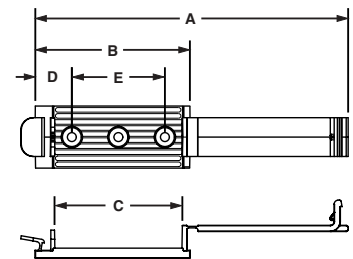


Part Number	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*			
		A	B	C						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
LC3-A-C8	.20 (5.0)	.75 (19)	.78 (19.8)	.47 (11.9)	PVC	Gray	Indoors	Rubber Adhesive	.22 (100)	—	—	100	1000
LC5-A-C8	.36 (9.1)	1.00 (25.4)	1.01 (25.7)	.61 (15.5)					.44 (200)	—	—	100	1000
LC10-A-L8	.93 (23.6)	1.00 (25.4)	1.51 (38.4)	.84 (21.3)					.60 (272)	—	—	50	500

Cable Holder



Holds wires, cables and tubing and has a releasable latch. Adhesive backed and screw mount styles available. Large mounting base for high bonding strength.



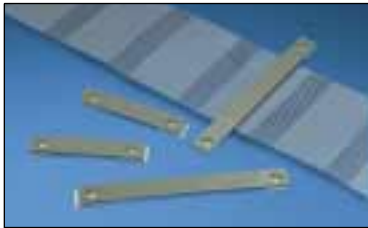
Part Number	Cable Width in. (mm)	Dimensions in. (mm)					Material	Color	Where Used	Mounting Method	Max. Static Load lbs. (g)	Packaging*	
		A	B	C	D	E						Std. Pkg. Qty.	Std. Ctn. Qty.
CH105-A-C14	2.00 (50.8)	5.04 (128.0)	2.48 (63.0)	2.06 (52.3)	.59 (15.0)	1.50 (38.1)	Nylon 6.6	Gray	Indoors	Rubber Adhesive	1.28 (582)	100	200
CH105-S6-C14										(2) #6 (M3) Screws	—		

*Order the number of mounts required in multiples of package quantities.

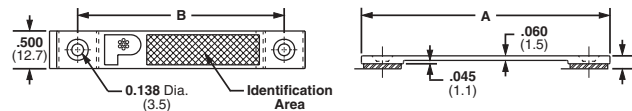
†Part numbers listed are standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

PANDUIT® Cable and Wire Mounting Devices

Adhesive Backed Flat Cable Mounts LPFCM Type — Low Profile



This low profile mount is available in 3 sizes and provides cost effective cable containment and identification for stack heights up to .105" (2.67mm). It features a matte, textured surface for either hand written identification or application of computer labels.

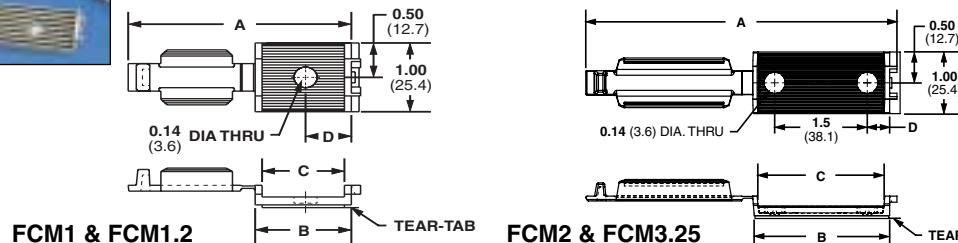


Part Number‡	Cable Width in. (mm)	Dimensions in. (mm)				Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
LPFCM14-A-C14	1.44 (37)	2.56 (65)	2.00 (50.8)	.134 (3.4)	2.00 (50.8)	Nylon 6.6	Gray	Indoors	Rubber Adhesive/ Static Load .25 lbs (113g) or (2) #6 (M3) Screws	100	500	500	5000
LPFCM22-A-C14	2.19 (56)	3.31 (84)	2.75 (69.9)		2.75 (69.9)					100	500	500	5000
LPFCM34-A-C14	3.44 (87)	4.56 (115.8)	4.00 (101.6)		4.00 (101.6)					100	500	500	5000

Adhesive Backed Flat Cable Mounts — FCM Type



The FCM will hold flat cable securely without damaging the cable's jacket or conductors. The four available sizes will accommodate cable up to 3.25" wide and allow cable stacking up to .17" (4.3mm). All sizes are available with or without adhesive backing.



Part Number‡	Cable Width in. (mm)	Dimensions in. (mm)				Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
FCM1-A-C14	1.00 (25.4)	2.90 (73.7)	1.21 (30.7)	1.05 (26.7)	.61 (15.5)	Nylon 6.6	Gray	Indoors	Rubber Adhesive/Static Load .5 lbs. (227g)	100	500	200	1000
FCM1.2-A-C14	1.20 (30.5)	3.16 (80.3)	1.37 (34.8)	1.20 (30.5)	.69 (17.5)				Rubber Adhesive/Static Load .62 lbs. (281g)	100	500	200	1000
FCM2-A-C14	2.00 (50.8)	5.06 (128.5)	2.22 (56.4)	2.05 (52.1)	.37 (9.4)				Rubber Adhesive/Static Load 1.0 lbs. (454g)	100	500	200	1000
FCM3.25-A-L14	3.25 (82.5)	7.30 (185.4)	3.38 (85.9)	3.23 (82.0)	.94 (23.9)				Rubber Adhesive/Static Load 1.5 lbs. (681g)	50	500	200	1000

SCREW MOUNTED

FCM1-S6-C14	1.00 (25.4)	2.90 (73.7)	1.21 (30.7)	1.05 (26.7)	.61 (15.5)	Nylon 6.6	Gray	Indoors	#6 (M3) Screw	100	500	200	1000
FCM1.2-S6-C14	1.20 (30.5)	3.16 (80.3)	1.37 (34.8)	1.20 (30.5)	.69 (17.5)					100	500	200	1000
FCM2-S6-C14	2.00 (50.8)	5.06 (128.5)	2.22 (56.4)	2.05 (52.1)	.37 (9.4)				(2) #6 (M3) Screws	100	500	200	1000
FCM3.25-S6-L14	3.25 (82.5)	7.30 (185.4)	3.38 (85.9)	3.23 (82.0)	.94 (23.9)					50	500	200	1000

Adhesive Backed Flat Cable Mounts — FCH Type



The FCH part is designed for flat cable up to a stack height of .25" (6.3mm) or discrete wire. It is available with adhesive backing or can be screw applied.



Part Number‡	Cable Width in. (mm)	Dimensions in. (mm)					Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C	D	E					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
FCH2-A-C14	2.00 (50.8)	5.00 (128.1)	2.50 (63.0)	2.10 (52.2)	.59 (15.0)	1.50 (38.1)	Nylon 6.6	Gray	Indoors	Rubber Adhesive/Static Load 1.0 lbs. (454g)	100	500	200	1000
FCH2-S6-C14										(2) #6 (M3) Screws	100	500	—	—

Adhesive Backed Flat Cable Mounts — FCC Type



Used with any width flat cable for a maximum stack height of .17" (4.3mm).



Part Number‡	Cable Width in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Mounting Method	Packaging*			
		A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
FCC5-A-C8	Any width flat cable	1.00 (25.4)	.56 (14.1)	.29 (7.4)	PVC	Gray	Indoors	Rubber Adhesive/Static Load .25 lbs. (113g)	100	1000	500	5000
FCC-A-C8		1.00 (25.4)	1.09 (27.7)	.38 (9.7)				Rubber Adhesive/Static Load .50 lbs. (227g)	100	1000	500	5000

*Order the number of pieces required in multiples of package quantities.

‡Part numbers listed are for standard materials in standard package quantities. For Bulk package part numbers, see page 137-138.

PAN-CLAMP™
Heavy Duty Fixed
Diameter Clamp with
Integrated Fastener

PANDUIT® PAN-CLAMP™ Heavy Duty Fixed Diameter Clamps offer easy installation and economical assembly for a wide variety of applications.

- Integrated fastener replaces up to a five piece assembly
- Anchors with 70 lbs. (31.8kg) of pull out force and supports 125 lbs. (56.7kg) of shear



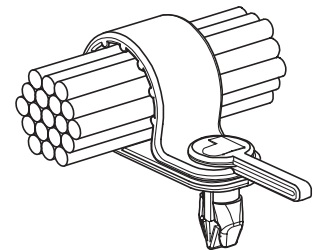
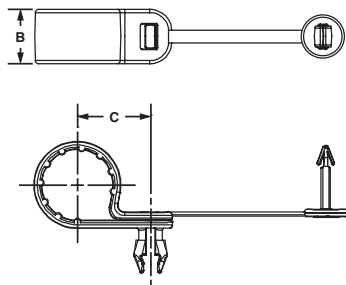
1. Install into 1/8" (3.2mm) thick panel or bracket with a hole diameter of 0.281" (7.1mm) typical clearance hole for 1/4" (6mm) bolts.



2. Molded barbs keep the clamp secured in the hole during assembly.



3. Rivet installs easily by hand. No special tools required.



Part Number‡	Dimensions in. (mm)			Material	Color	Panel Hole Size in. (mm)	Panel Thickness in. (mm)	Packaging*			
	A	B	C					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
PC038-H25D-C0	3/8 (9.5)	.62 (15.7)	.65 (16.5)	Impact Modified Weather Resistant Nylon 6.6	Black	.275 (7.0)	.126 (3.2)	100	500	500	1000
PC050-H25D-C0	1/2 (12.7)		.71 (18.0)					100	500	500	1000
PC062-H25D-C0	5/8 (15.8)		.77 (19.6)					100	1000	500	1000
PC075-H25D-C0	3/4 (19.1)		.84 (21.3)					100	1000	500	1000
PC087-H25D-C0	7/8 (22.1)		.90 (22.9)					100	1000	500	1000
PC100-H25D-C0	1 (25.4)		.96 (24.3)					100	1000	200	1000
PC112-H25D-C0	1 1/8 (28.5)		1.02 (25.9)					100	1000	200	1000
PC125-H25D-C0	1 1/4 (31.8)		1.08 (27.4)					100	1000	200	1000

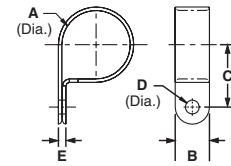
*Order the number of pieces required in multiples of package quantities.

‡Part numbers listed are for standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

Fixed Diameter Cable Clamps



Durable nylon cable clamps are available in two widths: 3/8" wide for standard use and 1/2" wide for heavy duty use.



NOTE: All parts listed also available in black weather resistant material (-0). Bulk package only.



Part Number†	Type of Application	Dimensions in. (mm)					Material	Color	Where Used	Mounting Method	Packaging*						
		A	B	C	D	E					Std. Pkg. Qty	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.			
CCS12-S8-C	Standard	.13 (3.1)	.38 (9.5)	.33 (8.4)	.17 (4.2)		Nylon 6.6	Natural	Indoors	#8 (M4) Screw	100	500	1000	5000			
CCS19-S8-C		.19 (4.8)		.43 (10.9)	.17 (4.2)						100	500	1000	5000			
CCS25-S8-C		.25 (6.4)		.41 (10.4)	.17 (4.2)						100	500	1000	5000			
CCS25-S10-C		.25 (6.4)		.41 (10.4)	.20 (5.1)					#10 (M5) Screw	100	500	1000	5000			
CCS31-S8-C		.31 (7.9)		.49 (12.4)	.17 (4.2)					#8 (M4) Screw	100	500	1000	5000			
CCS38-S8-C		.38 (9.5)		.57 (14.5)	.17 (4.2)						100	500	1000	5000			
CCS44-S8-C		.44 (11.1)		.59 (15.0)	.17 (4.2)						100	500	1000	5000			
CCS50-S8-C		.50 (12.7)		.60 (15.2)	.17 (4.2)						100	500	1000	5000			
CCH12-S10-C	Heavy Duty	.13 (3.1)	.50 (12.7)	.36 (9.1)	.20 (5.1)	.11 (2.6)				CCH100-S10-C	Natural	Indoors	#10 (M5) Screw	100	500	1000	5000
CCH19-S10-C		.19 (4.8)		.43 (10.8)										100	500	1000	5000
CCH25-S10-C		.25 (6.4)		.46 (11.7)										100	500	1000	5000
CCH31-S10-C		.31 (7.9)		.50 (12.7)										100	500	1000	5000
CCH38-S10-C		.38 (9.5)		.53 (13.5)										100	500	1000	5000
CCH44-S10-C		.44 (11.1)		.56 (14.2)										100	500	1000	5000
CCH50-S10-C		.50 (12.7)		.60 (15.1)										100	500	1000	5000
CCH56-S10-C		.56 (14.3)		.63 (15.9)										100	500	1000	5000
CCH62-S10-C		.63 (15.9)		.66 (16.8)										100	500	1000	5000
CCH69-S10-C		.69 (17.5)		.76 (19.2)										100	500	500	5000
CCH75-S10-C		.75 (19.1)		.79 (19.9)										100	500	500	5000
CCH81-S10-C		.81 (20.7)		.81 (20.7)										100	500	500	5000
CCH87-S10-C		.87 (22.2)		.85 (21.5)										100	500	500	5000
CCH100-S10-C		1.00 (25.4)		.91 (23.1)										100	500	500	5000
CCH112-S10-C		1.13 (28.6)		.97 (24.6)										—	—	100	500
CCH119-S10-C		1.19 (30.2)		1.00 (25.4)										—	—	100	500
CCH125-S10-C		1.25 (31.8)		1.06 (26.9)										—	—	100	500
CCH138-S10-C		1.38 (34.9)		1.13 (28.6)										—	—	100	500
CCH150-S10-C		1.50 (38.1)		1.19 (30.2)										—	—	100	500

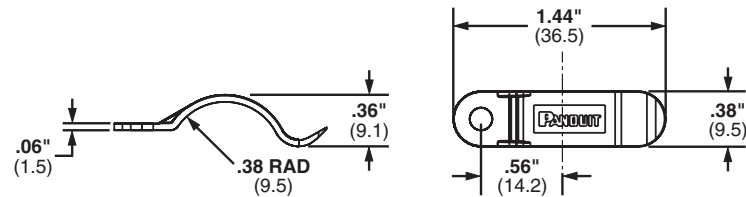
*Order the number of pieces required in multiples of package quantities.

†Part numbers listed are for standard materials in standard package quantity (except CCH112 through CCH150).

For Bulk package part numbers, see page 137-138.

Tension Wire Retainers

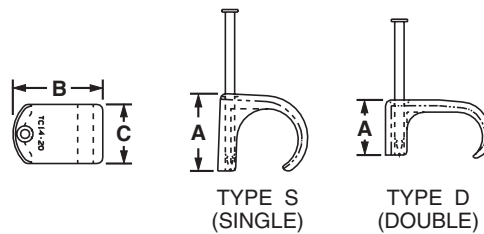
Wires slide into the clip and are held in place by tension.



Part Number†	Bundle Diameter in. (mm)	Dimensions in. (mm)	Material	Color	Where Used	Mounting Method	Packaging*			
							Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TWR-C	.38 (9.5)	See Drawing	Nylon 6.6	Natural	Indoors	#6 (M3) Screw	100	1000	1000	5000
TWR-C0			Weather Resistant Nylon 6.6	Black	Indoors/Outdoors		100	1000	—	—

Tack Clips

Used for securing wire, cable and tubing to nailable surfaces. The clips are furnished with a single integral zinc plated, hardened steel nail to help speed installation.



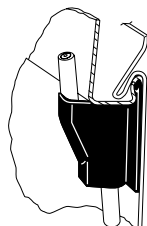
Part Number	Type	Bundle Capacity in. (mm)	Dimensions in. (mm)			Coaxial Cross RG#	Material	Color	Where Used	Mounting Method	Packaging*			
			A	B	C						Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
TC3-5-C100	S	.13 dia. (3.5)	.20 (5.1)	.29 (7.4)	.23 (5.8)	187	Weather Resistant Polypropylene	Black	Indoors/Outdoors	Nail is hammered into a nailable surface such as wood or mortar joints. Do not use on concrete or brick.	—	—	100	1000
TC5-7-C100	S	.21 dia. (5)	.31 (7.9)	.39 (9.9)	.23 (5.8)	58					—	—	100	1000
TC7-10-C100	S	.26 dia. (6.5)	.38 (9.7)	.49 (12.5)	.35 (8.9)	59					—	—	100	1000
TC10-14-C100	S	.36 dia. (9.2)	.51 (13)	.59 (14.9)	.45 (11.4)	6A					—	—	100	1000
TC14-20-C100	S	.49 dia. (12)	.67 (17)	.79 (20.6)	.54 (13.7)	8A, 9B, 11					—	—	100	1000
TC5x8-C100	D	.20 x .30 (5 x 8)	.30 (8.8)	.54 (13.7)	.27 (6.8)	—					—	—	100	1000
TC6x10-C100	D	.23 x .37 (6 x 9.5)	.34 (8.6)	.62 (15.7)	.34 (8.6)	—					—	—	100	1000
TC7x14-C100	D	.26 x .46 (7 x 12)	.36 (9.1)	.70 (17.8)	.43 (10.9)	—					—	—	100	1000
TC9x18-C100	D	.38 x .65 (10 x 17)	.50 (12.7)	.89 (22.6)	.52 (13.2)	—					—	—	100	1000

Siding Clips

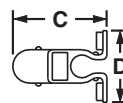
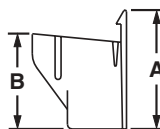
Attaches coax cable to buildings having “Pittsburgh Interlok” type aluminum or steel siding. Will not corrode or stain siding. Low profile, installs without drilling or nailing.



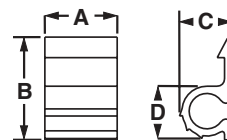
Horizontal Siding Clip



Vertical Siding Clip



VSC Vertical Clip



HSC Horizontal Clip

Part Number‡	Max. Cable Dia. in. (mm)	Dimensions in. (mm)				Material	Color	Mounting Method	Packaging*	
		A	B	C	D				Std. Pkg. Qty.	Std. Ctn. Qty.
HSC.25-L	.25 (6.4)	.50 (12.7)	.71 (18.0)	.34 (8.6)	.37 (9.4)	Nylon 6.6	White	Attach to Siding	50	500
HSC.25-L100						Weather Resistant Polypropylene	Black		50	500
VSC.25-L		1.26 (31.8)	.98 (25.0)	1.00 (25.4)	.70 (17.8)	Nylon 6.6	White		50	500
VSC.25-L100						Weather Resistant Polypropylene	Black		50	500

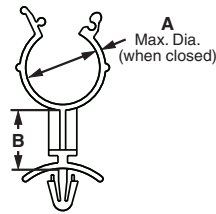
*Order the number of pieces required in multiples of package quantities.

‡Part numbers listed are for standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

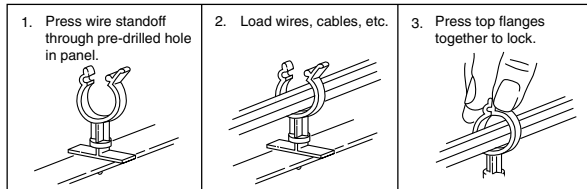
Wire Standoffs



For retaining wires, cable, components or tubing away from panel or conductive chassis. Finger grip flanges can be easily locked or unlocked for revisions. Hand installed in pre-drilled hole.



Easy to install and use.

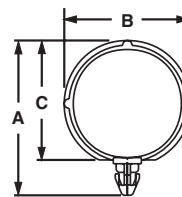


Part Number‡	Dimensions in. (mm)		Panel Dimensions in. (mm)		Material	Color	Where Used	Mounting Method	Packaging*			
	A	B	Panel Thickness	Hole Diameter					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
WS25-25-C	.25 (6.4)	.25 (6.4)	.03 to .08 (0.7 to 2.0)	.19 to .20 (4.7 to 4.9)	Nylon 6.6	Natural	Indoors	Inserted into Pre-Drilled Hole	100	1000	—	—
WS25-50-C	.25 (6.4)	.50 (12.7)							100	1000	—	—
WS25-75-C	.25 (6.4)	.75 (19.1)							100	1000	—	—
WS35-25-C	.35 (8.9)	.25 (6.4)							100	1000	—	—
WS35-50-C	.35 (8.9)	.50 (12.7)							100	1000	—	—
WS35-75-C	.35 (8.9)	.75 (19.1)							100	1000	—	—
WS50-25-C	.47 (11.9)	.25 (6.4)							100	1000	—	—
WS50-50-C	.47 (11.9)	.49 (12.7)							100	1000	—	—
WS50-75-C	.47 (11.9)	.75 (19.1)							100	1000	—	—
WS75-25-C	.78 (19.8)	.25 (6.4)							100	1000	1000	5000
WS75-50-C	.78 (19.8)	.50 (12.7)							100	1000	1000	5000
WS75-75-C	.78 (19.8)	.75 (19.1)							100	1000	1000	5000

Snap-In Clips



The clips hold wire bundles securely. Clips are placed on the bundle then attached to the panel. Designed for pre-drilled holes.



Part Number‡	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Panel Dimensions in. (mm)		Mounting Method	Packaging*			
		A	B	C				Maximum Thickness	Hole Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
SICH25-C	.25 (6.4)	.82 (20.9)	.34 (8.6)	.40 (10.2)	Nylon 6.6	Natural	Indoors	.10 (2.5)	.25 (6.4)	Inserted into Pre-Drilled Hole	100	1000	1000	5000
SICH38-C	.38 (9.6)	.98 (24.6)	.50 (12.8)	.54 (13.7)							100	1000	1000	5000
SICH50-C	.50 (12.7)	1.11 (26.2)	.62 (15.7)	.67 (17.0)							100	1000	1000	5000
SICH75-C	.75 (19)	1.40 (35.6)	1.0 (25.4)	.96 (24.4)							100	1000	1000	5000
SICH100-C	1.00 (25.4)	1.65 (41.9)	1.25 (31.8)	1.21 (30.7)							100	1000	—	—
SICH150-C	1.5 (38)	2.15 (54.6)	1.75 (44.5)	1.71 (43.4)							100	1000	—	—

Wire Saddles



Funnel entry design for fast insertion of wires and cables. Used in pre-drilled holes.



VWS
Vertical



HWS
Horizontal



Part Number‡	Max. Bundle Capacity in. (mm)	Dimensions in. (mm)		Material	Color	Where Used	Panel Dimensions in. (mm)		Mounting Method	Packaging*			
		A	B				Panel Thickness	Hole Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
VWS4218-C	.18 x .42 (5 x 11)	.58 (14.7)	.60 (15.2)	Nylon 6.6	Natural	Indoors	.03-.08 (.79 - 2.0)	.19 (4.7)	Inserted into Pre-Drilled Hole	100	500	1000	5000
VWS4238-C	.40 x .42 (10 x 11)	.78 (19.8)	.60 (15.2)							100	500	1000	5000
VWS4274-C	.74 x .42 (19 x 11)	1.14 (29.0)	.60 (15.2)							100	500	1000	5000
VWS42105-C	1.05 x .42 (27 x 11)	1.45 (36.8)	.60 (15.2)							100	500	1000	5000
HWS2819-C	.19 x .28 (5 x 7)	.42 (10.7)	.44 (11.2)							100	500	1000	5000

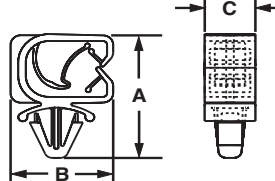
Harness Clips



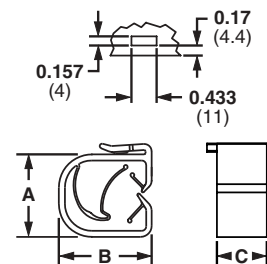
Integral “spring” holds wire bundles tightly. Used in pre-drilled holes. Vertical, horizontal, and edge mount versions available.



Vertical
HCMP06B12



Horizontal
HCMP06C12



Edge Mount
HCME06A12

Part Number‡	Max. Bundle Dia. Range in. (mm)	Dimensions in. (mm)			Material	Color	Where Used	Panel Dimensions in. (mm)		Mounting Method in. (mm)	Packaging*			
		A	B	C				Maximum Thickness	Hole Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
HCMP06B12-C20	.24-.47 (5.9-2.5)	1.25 (31.8)	.74 (18.8)	.39 (10)	Nylon 6.6	Black	Indoors	.11 (2.7)	.25 (6.4)	Inserted into Pre-Drilled Hole	100	500	1000	5000
HCMP06C12-C20		1.10 (27.9)	.80 (20.2)								100	500	1000	5000
HCME06A12-C130		.59 (15.0)	.74 (18.7)	.39 (9.9)	Acetal			—	—	See Drawing	100	500	5000	10000

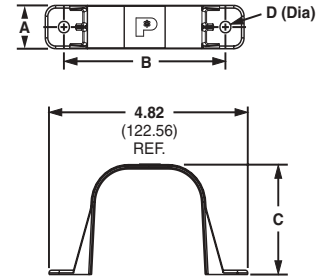
*Order the number of pieces required in multiples of package quantities.

‡Part numbers listed are for standard materials in standard package quantity. For Bulk package part numbers, see page 137-138.

Wire Bundle Strap



Wire Bundle Strap provides a quick, durable and inexpensive way to contain wire, cable and tubing. It can be installed on wood, plywood, masonry and other surfaces using standard fasteners.

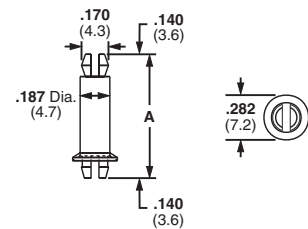


Part Number	Bundle Retaining Area in²	Material	Color	Dimensions in. (mm)				Mounting Method	Std. Pkg. Qty.*	Std. Ctn. Qty.
				A	B	C	D			
WBS6-Q	6	ABS	Natural	1.00 (25.4)	3.92 (99.6)	2.54 (64.5)	.25 (6.35)	1/4 (M6) Screw	25	125

Circuit Board Posts



For board-to-board or board-to-chassis mounting. Posts snap into pre-drilled holes. Bell flange on bottom end provides greater stability.

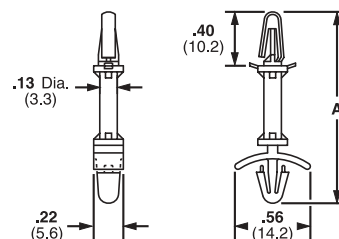


Part Number†	Dimensions in. (mm)		Material	Color	Where Used	Mounting Method in. (mm)	Packaging*			
	Standoff Height	A					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CBP12-C	.125 (3.2)	.405 (10.3)	Nylon 6.6	Natural	Indoors	For Circuit Boards or Chassis: .062 (1.5) thick with .158 (4.0) diameter mounting holes	100	1000	1000	5000
CBP25-C	.250 (6.4)	.530 (13.5)					100	1000	1000	5000
CBP31-C	.312 (7.9)	.592 (15.0)					100	1000	1000	5000
CBP37-C	.375 (9.5)	.655 (16.6)					100	1000	1000	5000
CBP50-C	.500 (12.7)	.780 (19.8)					100	1000	1000	5000
CBP62-C	.625 (15.9)	.905 (23.0)					100	1000	1000	5000
CBP75-C	.750 (19.1)	1.030 (26.2)					100	1000	1000	5000
CBP87-C	.875 (22.2)	1.155 (29.3)					100	1000	1000	5000
CBP100-C	1.00 (25.4)	1.280 (32.5)					100	1000	1000	5000

Circuit Board Locking Supports



For board-to-chassis support. Snap-in design for fast assembly. Wing design on chassis mounting provides constant tension and stability.



Part Number‡	Dimensions in. (mm)		Material	Color	Where Used	Mounting Method in. (mm)	Packaging*			
	Standoff Height	A					Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
CBLS18-C	.187 (4.7)	.92 (23.4)	Nylon 6.6	Natural	Indoors	For Circuit Boards: .062 (1.5) thick with .158 (4.0) diameter mounting holes For Chassis: .03 (.79) to .08 (2.0) thick with .185 (4.7) to .193 (4.9) diameter mounting holes	100	500	1000	5000
CBLS25-C	.250 (6.4)	.98 (24.9)					100	1000	1000	5000
CBLS37-C	.375 (9.5)	1.11 (28.2)					100	1000	1000	5000
CBLS50-C	.500 (12.7)	1.23 (31.2)					100	1000	1000	5000
CBLS62-C	.625 (15.9)	1.35 (34.3)					100	1000	1000	5000
CBLS75-C	.750 (19.1)	1.48 (37.5)					100	1000	1000	5000

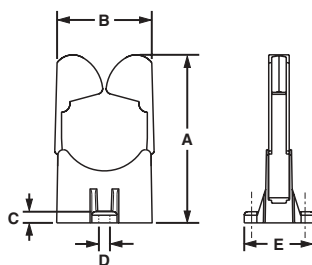
Harness Board Accessories

PANDUIT® harness board accessories provide fast routing and forming of wires in harness fabrication. They hold the wires off the harness board at a uniform height for easy application of cable ties. The accessories are designed for use with various PANDUIT® cable tie installation tools. The Low accessories are used with hand-operated tools. The High accessories are used with the automatic tools. To maintain the harness at a uniform height of approx. 1.33" (33.8mm) (at the center of the harness) above the board, use RER Elastic Retainers, BR.75-E6 (or BR.5-E6), CPH.75-S8, TJF and SHH1-S8 or SHH3-S8 harness board accessories. This height is suitable for use with the PAT1M Fully Automatic Cable Tie Installation system (page 60).



Wire Retainers — RER Type Replaceable Elastic Retainers

As wires are individually inserted, the bundle is formed. When harness is complete, it can be easily snapped out. Three sizes available for 1/2" (12.7mm), 3/4" (19.0mm) and 2 1/4" (31.8mm) bundles.



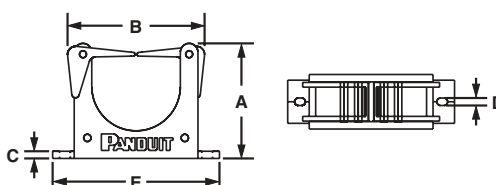
Replacement Elastic
For economy, the elastic band can be replaced in the RER Elastic Retainers without removing the RER base.

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

Part Number	Max. Dia. in. (mm)	Dimensions in. (mm)					Color & Material	Mounting Method	Std. Pkg. Qty.*	Std. Ctn. Qty.
		A	B	C	D	E				
RER.5-S6-X	.50 (12.7)	1.89 (48.0)	.84 (21.3)	.18 (4.7)	.14 (3.6)	1.18 (30.0)	Black Nylon 6.6 and White Acetal	#6 (M3) Screw	10	50
RER.75-S6-X	.75 (19.0)	2.21 (56.1)	1.12 (28.4)		.14 (3.6)				10	50
RER1.25-S6-X	1.25 (31.8)	2.86 (72.6)	1.64 (41.7)		.14 (3.6)				10	50

ER Type Elastic Retainers

ER Type retainers form wire bundles as wires are inserted. Completed bundles then snap out. Two sizes available for 1/2" (12.7) and 1 1/4" (31.7) bundles.

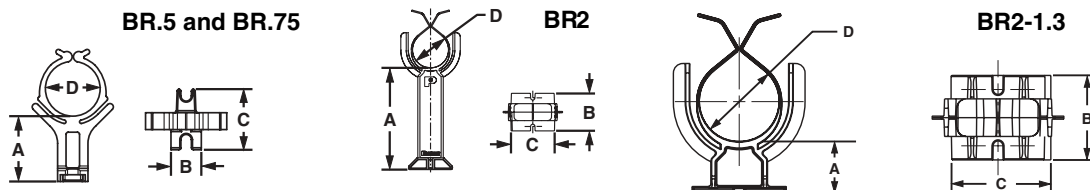


Part Number	Max. Dia. in. (mm)	Dimensions in. (mm)					Color & Material	Mounting Method	Std. Pkg. Qty.*	Std. Ctn. Qty.
		A	B	C	D	E				
ER.5-E4-X	.50 (12.7)	1.00 (25.4)	1.00 (25.4)	.13 (3.2)	.12 (3.0)	1.96 (49.8)	Black Nylon 6.6 and ABS	#4 (M2.5) Screws	10	100
ER1.25-E4-X	1.25 (31.8)	2.00 (50.8)	2.40 (61.0)			2.90 (73.7)			10	100

Bundle Retainers



Spring fingers with large lead in facilitate fast routing of wires and easy removal of completed harness. Overlapping feet on the BR.5 and BR.75 allow the retainers to be butted together for wire breakouts. Three sizes available for 1/2" (12.7mm), 3/4" (19.0mm) and 2.00" (50.8mm) bundles.



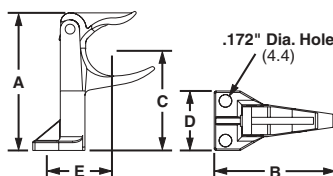
Part Number	Max. Dia. in. (mm)	Dimensions in. (mm)				Color & Material	Mounting Method	Packaging*			
		A	B	C	D			Std. Pkg. Qty	Std. Ctn Qty.		
BR.5-E6-C	.50 (12.7)	1.07 (27.2)	.44 (11.2)	.78 (19.8)	.55 (14.0)	Black Acetal	(2) #6 (M3) Screws	100	500		
BR.75-E6-C	.75 (19.0)	.95 (24.1)			.76 (19.4)			100	500		
BR2-1.3-X	2.00 (50.8)	1.32 (33.5)	2.25 (57.2)	2.50 (63.5)	2.12 (54.0)		(2) 1/4 (M6) Screws	10	100		
BR2-1.3-A-X							Rubber Adhesive 2.0 lbs (907g) Static Load	10	100		
BR2-1.5-X		1.59 (40.4)	2.18 (55.4)	2.56 (65.0)			(2) 1/4 (M6) Screws	10	100		
BR2-4-X		4.00 (101.6)						10	100		
BR2-6-X		6.00 (152.4)						10	100		

Corner Posts

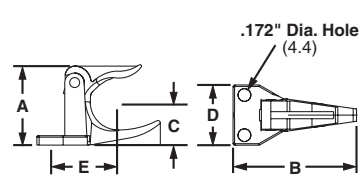


Designed to pre-form tight bundles at harness corners and breakouts. The top arm pivots for easy removal of completed harness.

CPH Corner Post, High



CPL Corner Post, Low



Part Number	Max. Dia. in. (mm)	Dimensions in. (mm)					Color & Material	Mounting Method	Packaging*	
		A	B	C	D	E			Std. Pkg. Qty.*	Std. Ctn. Qty.
CPH.75-S8-X	.75 (19.0)	1.88 (47.8)	1.60 (40.8)	1.35 (34.4)	.90 (22.9)	1.18 (30.0)	Black Nylon 6.6	(2) #8 (M4) Screws	10	100
CPL.75-S8-X		1.08 (27.4)	1.52 (38.6)	.56 (14.2)	.88 (22.4)	1.11 (28.2)			10	100

T-Junction Fixture

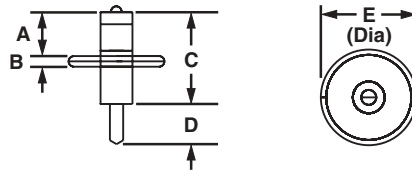


In the "up" position to form harness.



In the "down" position to tie and remove harness.

Using an integrated harness board nail, the T-Junction Fixture moves to form harnesses. When the harness is complete, the fixture can be pushed down for easy harness removal.

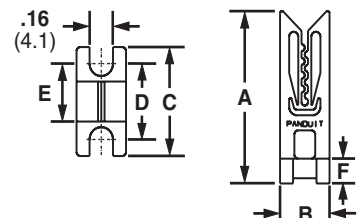


Part Number	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)					Color & Material	Mounting Method	Std. Pkg. Qty.*	Std. Ctn. Qty.
		A	B	C	D	E				
TJF-X	1.34 (34.0)	.75 (19.0)	.12 (3.0)	1.39 (35.1)	.70 (17.8)	1.12 (28.4)	Black Nylon 6.6 and Nickel Plated Steel	Integral Nail	10	100

Wire End Holder



Secures wire ends with or without terminations while harness is being fabricated. Wires can be easily added or removed from the top, but will hold the wire from axial movement. Used with #28 through #16 AWG wires.

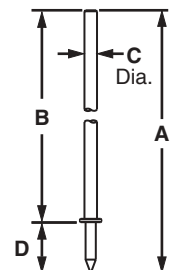


Part Number	Dimensions in. (mm)						Color & Material	Mounting Method	Std. Pkg. Qty.*	Std. Ctn. Qty.
	A	B	C	D	E	F				
WEH-E8-C	1.22 (31.0)	.37 (9.4)	.77 (20.0)	.53 (13.5)	.29 (7.4)	.18 (4.6)	Black Acetal	(2) #8 (M4) Screws	100	1000

Harness Board Nails



Speeds routing of wires. All of the nails have a uniform driving depth insured by a collar stop. Smooth finish on the nails, will not abrade wire jackets.



Part Number	Dimensions in. (mm)				Material	Mounting Method	Std. Pkg. Qty.*	Std. Ctn. Qty.
	A	B	C	D				
HBN.75-T	1.40 (35.6)	.75 (19.0)	.075 (1.9)	.62 (15.8)	Nickel Plated Steel	Hammered into harness board	200	1000
HBN1-T	1.65 (41.9)	1.00 (25.4)	.075 (1.9)				200	1000
HBN1.5-T	2.15 (54.6)	1.50 (38.1)	.084 (2.1)				200	1000
HBN2-T	2.65 (67.3)	2.00 (50.8)	.093 (2.4)				200	1000
HBN2.5-T	3.17 (80.5)	2.50 (63.5)	.107 (2.7)				200	1000
HBN3-T	3.67 (93.2)	3.00 (76.2)	.122 (3.1)				200	1000
HBN4-T	4.67 (118.6)	4.00 (101.6)	.142 (3.6)				200	1000

Fanning Strip System

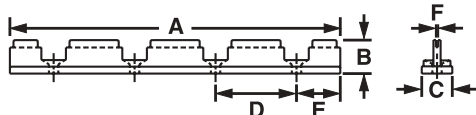
Assures that wires are held in a particular orientation in sophisticated wiring harnesses. Consists of fanning strip and fanning strip holder.



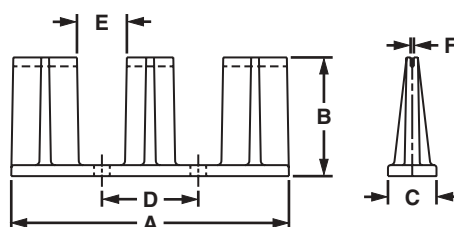
Contains evenly spaced “snap slots” to hold wires in place. No sharp edges to damage wire insulation. Becomes part of the wiring harness. Will accept wires up to 18 AWG. Used with FSH40 or FSHH holders.

Fanning Strip Holders

Low Holder (FSH40-X)



High Holder (FSHH-X)



Used in conjunction with RER.75-S6, BR.75-E6 (BR.5-E6) and CPH.75-S8. Ideal for use with PAT cable tie tool.

Part Number	Dimensions in. (mm)						Color & Material	Mounting Method	Std. Pkg. Qty.*
	A	B	C	D	E	F			
FS156-C	12.1 (307.3)	.31 (7.9)	.04 (1.0)	.12 (3.0)	.156 (4.0)	.06 (1.5)	Natural Nylon 6.6	Fanning Strip Holder	100
FSH40-X	6.0 (152.4)	.62 (15.7)	.56 (14.2)	1.50 (38.1)	.75 (19.0)	.04 (1.0)	Black ABS	#8 (M4) Screws	10
FSHH-X	3.2 (81.3)	1.4 (36.0)	.60 (15.2)	1.10 (28.0)	.53 (13.5)	.04 (1.0)			10

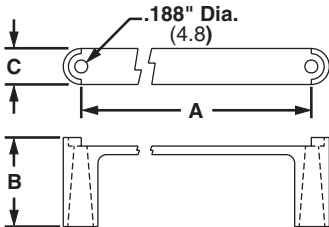
Spring Wire
Breakout System

Separates and holds wires in a harness while the rest of the harness is being formed. The wires simply pull out from the spring when the harness is complete.

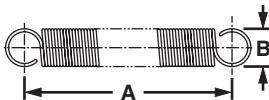


SHH Spring Holder

Each SHH Spring Holder is supplied with (1) rigid wire piece to hold the spring laterally and two #8 (M4) 2" (50.8) hex head wood screws. Two sizes available for use with PBSC1 and PBSC6.



**PBSC Spring
Wire Breakout**



Part Number	Dimensions in. (mm)			Material in. (mm)	Color	Mounting Method	Packaging*	
	A	B	C				Std. Pkg. Qty.	Std. Ctn. Qty.
PBSC1-X	1.00 (25.4)	.44 (11.2)	—	.035 (.9) Thick Steel	—	Used with SHH1 Spring Holder	10	100
PBSC3-X	3.00 (76.2)					(2) #8 (M4) Screws	10	100
PBSC6-X	6.00 (152.4)					Used with SHH3 Spring Holder	10	100
PBSC12-X	12.00 (304.8)					(2) #8 (M4) Screws	10	100
SHH1-S8-X	1.85 (47.0)	1.30 (33)	.53 (13.4)	Nylon 6.6	Black	(2) #8 (M4) Screws used with PBSC1	10	100
SHH3-S8-X	6.85 (174.0)					(2) #8 (M4) Screws used with PBSC3 or PBSC6	10	100

Harness Board Standoff Posts



Used to hold a push mount accessories or a push mount cable tie at a specific location on a harness board. The Standoff Post is placed over a hole in the harness board, a bolt is then threaded into the bottom of the standoff from the backside of the board and tightened. Push mount accessories are inserted into the top of the Standoff Post prior to assembly. When the assembly is complete, the harness and the attached push mount are removed from the Standoff Post.

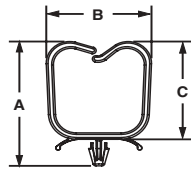


Part Number	Dimensions in. (mm)			Used With Part Numbers	Material	Mounting Method	Packaging*		
	A	B	C				Std. Pkg. Qty.	Std. Ctn. Qty.	
HB2SP19-X	2.00 (50.8)	.50 (12.7)	.20 (5.2)	PLWP, PRWP, WS, VWS, HWS, TPM	Aluminum	1/4 (M6) Screw	10	100	
HB4SP19-X	4.00 (101.6)						10	100	
HB6SP19-X	6.00 (152.4)						10	100	
HB2SP25-X	2.00 (51)		.295 (7.5)	PLWP, PRWP, PLP, THMS, HCMP, PMCC			10	100	
HB4SP25-X	4.00 (101.6)						10	100	

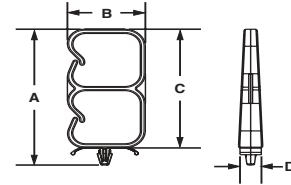
Optical Fiber Network Saddles



The product is designed with rounded edges for routing fiber optic cables. This feature provides a very smooth surface to eliminate the potential for snagging and putting stress on the fiber optic cable.



VWS Push Mount Type



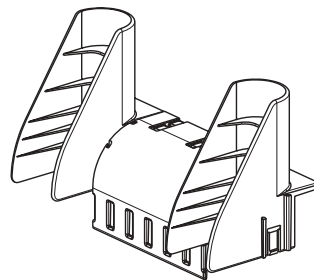
VWSDC Dual Capacity Type

Part Number‡	Max. Bundle Dia. in. (mm)	Dimensions in. (mm)				Material	Color	Where Used	Panel Dimensions in. (mm)		Mounting Method in. (mm)	Packaging*			
		A	B	C	D				Maximum Thickness	Hole Diameter		Std. Pkg. Qty.	Std. Ctn. Qty.	Bulk Pkg. Qty.	Bulk Ctn. Qty.
VWS106-C	1.06 (26.9)	1.65 (41.7)	1.18 (29.9)	1.30 (31.8)	.34 (8.6)	Nylon 6.6	Natural	Indoors	.09 (2.3)	.187 (4.7)	Inserted into Pre-Drilled Hole	100	500	1000	5000
VWS106-C20		2.64 (66.8)	1.26 (32.0)	2.36 (59.9)	.39 (9.9)		Black					100	500	1000	5000
VWSDC-C							Natural					100	1000	500	2500

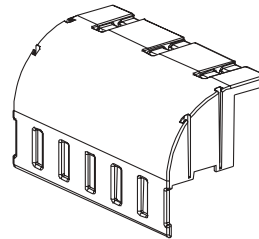
Waterfall Accessories



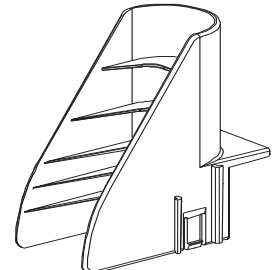
PANDUIT® Waterfall Accessory provides bend radius control in both vertical and horizontal directions when transferring cables from standard ladder rack. Installs easily to the rung or a stringer of the ladder rack with **PANDUIT® PLT series cable ties**, provided in every package. **PANDUIT® Waterfall Accessories** are part of a complete cable management system.



CMW-Kit



CMWB-Waterfall Base



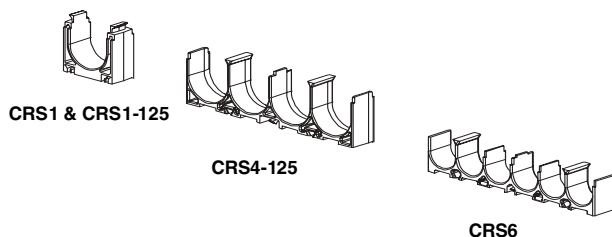
CMWW-Waterfall Wing

Part Number	Bend Radius Limit in. (mm)	Material	Color	Width in. (mm)	Height in. (mm)	Included in Package	Packaging*	
							Std. Pkg. Qty.*	Std. Ctn. Qty.
CMW-KIT	—	Glass Filled Flame Retardant Nylon 6.6	Black	9.60	6.07	One Base, Two Wings, and Three Cable Ties.	1	10
CMW-KIT10			White	(243.8)	(154.18)			
CMWB	Black		5.24	3.07	One Base and Three Cable Ties.			
CMWB10	White		(133.1)	(77.98)				
CMWW	Black		2.00	4.87	One Bend Radius Control Wing.			
CMWW10	White		(50.6)	(123.7)				

Stackable Cable Rack Spacers



PANDUIT® Stackable Cable Rack Spacers separate and support cable on standard ladder racks. This product prevents pinch points between the bottom row of cable and the ladder rack rung as a result of the weight of multiple cable layers applied on top of each other. Maximize rack space by stacking products for maximum cable capacity.

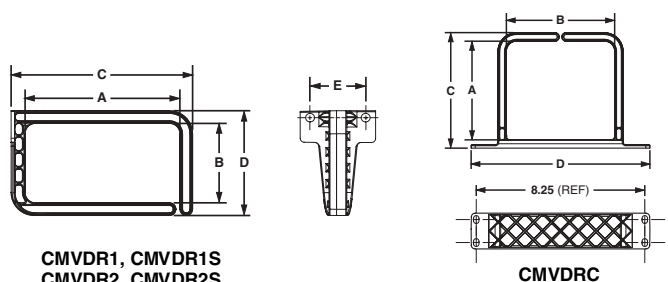


Part Number	Cable Bundles	Bundle Diameter in. (mm)	Material	Color	Mounting Method	Width in. (mm)	Stack Height in. (mm)	Packaging*	
								Std. Pkg. Qty.	Std. Ctn. Qty.
CRS4-125-X	4	1.25 (31.75)	Glass Filled Flame Retardant Nylon 6.6	Black	Standard Cross Section Cable Ties	5.24 (133.1)	1.42 (36.07)	10	100
CRS1-125-X	1					1.55 (39.4)			
CRS6-X	6	0.8 (20.32)	Polycarbonate/ABS Blend			5.25 (133.35)	1.00 (25.4)		
CRS1-X	1					1.13 (28.58)			

Vertical D-Rings



The *PANDUIT®* Vertical D-Ring provides open access cable management. The front arm of the D-Ring rotates 90° to allow entire cable bundles to be inserted. Screw holes are spaced according to EIA standards and allow for installation on standard equipment racks.



CMVDR1, CMVDR1S
CMVDR2, CMVDR2S

CMVDRC



Part Number	Dimensions in. (mm)					Material	Color	Mounting Method	Packaging*	
	A	B	C	D	E				Std. Pkg. Qty.	Std. Ctn. Qty.
CMVDR1	4.80 (121.9)	1.18 (30.0)	5.72 (145.2)	2.05 (52.07)	1.75 (44.45)	Flame Retardant Polycarbonate	Black	(2) 1/4 (M6) Screws	1	10
CMVDR1S	2.4 (60.9)		3.26 (82.8)							
CMVDR2	4.80 (121.9)	2.40 (60.9)	5.72 (145.2)	3.30 (83.82)						
CMVDR2S	2.40 (60.9)		3.26 (82.8)							
CMVDRC	4.72 (119.88)	5.09 (129.29)	5.66 (143.64)	8.75 (222.25)	1.12 (28.58)					

*Order the number of pieces required in multiples of package quantities.

Threaded Rod Cover



PANDUIT® Threaded Rod Cover protects cables from abrasion caused by contact with threaded rod.

- Manufactured from material that meets UL94V-0 specifications
- Soft material for easy installation
- Available in 18" lengths

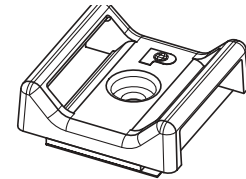
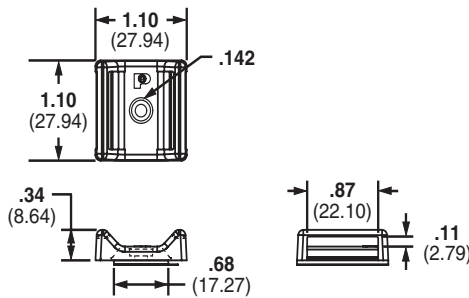
Part Number	For Threaded Rod Size in. (mm)	Material	Color	Packaging*	
				Std. Pkg. Qty.	Std. Ctn. Qty.
TRC18FR-X8	1/2 to 5/8 (12.7) to (15.88)	Flame Retardant Polyethylene	Gray	10	100

TAK-TY® Hook & Loop Cable Tie Mounts



Mounting base for use with 3/4" TAK-TY® Hook & Loop Cable Ties

- For indoor use only



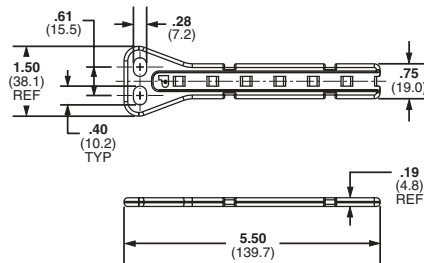
Part Number‡	Used with Cable Ties	Mounting Method	Maximum Static Load lbs. (g)	Material	Color	Packaging*	
						Std. Pkg. Qty.	Std. Ctn. Qty.
ABMT-A-C	TAK-TY® ■ Hook & Loop Cable Ties	Rubber Adhesive	.38 (172)	Nylon 6.6	Natural	100	1000
ABMT-A-C20			Black				
ABMT-S6-C		#6 (M3) Screw	—		Natural		
ABMT-S6-C20					Black		
ABMT-S6-C60				Flame Retardant Nylon 6.6	Black		
ABMT-S6-C69				Natural			

■ Used with all PANDUIT® HLC/HLT/HLS and HLM TAK-TY® options found on [page 40](#).

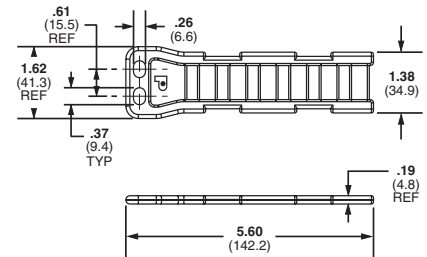
Flat *PAN-POST*™ Standoff



Used to secure cable in vertical or horizontal configurations. Mounting hole configuration meets EIA/TIA specifications for use on racks or in enclosures.



PPF2S



PPF2SV

Part Number	Used With Cable Ties**	Dimensions in. (mm)	Color & Material	Mounting Method	Packaging*	
					Std. Pkg. Qty.	Std. Ctn. Qty.
PPF2S-S25-V	M, I, S	See Drawing	Natural Nylon 6.6	(2) 1/4 (M6) Screws	5	50
PPF2S-S25-V69			Natural Flame Retardant Nylon 6.6		5	50
PPF2SV-S25-V	M, I, S, HS, LH, H, HLM■		Natural Nylon 6.6		5	50
PPF2SV-S25-V69			Natural Flame Retardant Nylon 6.6		5	50

■ Used with all PANDUIT® Hook & Loop Cable Ties found on [page 40](#).

Communication Cable Management Kit for Cabinets

Kit of wire management accessories specifically designed for use in a network cabinet or enclosure.



Kit includes the following:

- *TAK-TY*® Hook & Loop cable tie (HLM-15R0)/1 roll
- Nylon Cable tie (ILT3S)/24 pieces
- Adhesive backed mounts (ABM3H-A and ABM112-A) 6 pieces each
- Flat Post Standoff (PPF2S-S25)/8 pieces
- Push mount (PWMS-H25)/6 pieces
- Vertical wire saddle (VWS106)/4 pieces

Part Number	Packaging*	
	Std. Pkg. Qty.	Std. Ctn. Qty.
CCMKIT1	1	100

*Order the number of pieces required in multiples of package quantities.

†Part numbers listed are for standard materials in standard package quantities. For Bulk package part numbers, see [page 137-138](#).

**Cable Tie Cross Section Sizes: M = Miniature, I = Intermediate, S = Standard, HS = Heavy Standard, LH = Light-Heavy and H = Heavy.

General Introduction

PANDUIT® adhesive mounts provide a quick, economical and dependable method of supporting, routing and protecting wires or cables. Some are used with *PANDUIT*® cable ties and others can be used without cable ties. Adhesive backed mounts adhere to a variety of surfaces. This alternative to mechanical fasteners offers the advantage of lower installed cost with safe, easy to use, quality products.

Applications

- To route wires in control panels and switchboards
- To support bundles of wires away from moving mechanical devices
- Routing and harnessing cables, both indoors and out, to prevent safety hazards
- To organize flat cables in many locations with low profile construction
- Ideal for supporting wire bundles where holes cannot be put into the substrate
- To separate groups of wires for identification



Markets

- Original Equipment Manufacturers (OEM)
- Construction Industry
- Telecommunication Systems
- CATV
- Aerospace Industry
- Utilities
- Electronic Components
- Transportation Industry
- Appliance Manufacturers
- Maintenance and Repair Operations (MRO)



General Mount Guidelines

PANDUIT® pressure sensitive adhesive (foam tape) mounts are intended to secure wire bundles or other light objects to smooth surfaces. These mounts are not designed to support excessive loads and should not be used when the maximum expected load exceeds the rated capacity of the mount.

Choosing the Right Adhesive

PANDUIT® offers two standard pressure sensitive foam tapes which are available on most adhesive backed wiring accessories products. The general purpose tape is produced with a rubber based adhesive and is identified by an “-A” in the part number. This tape develops its strength extremely fast and can be used in environments with temperatures ranging from -20°F to +120°F. It is recommended that rubber based adhesive mounts dwell 2 hours after installation, prior to loading. Rubber based adhesive tape is the best choice for most adhesive mount applications, including powder coated surfaces.

Acrylic based adhesive tape is also available and is identified by an “-AT” in the part number. This tape is for use in environments where continuous exposure to temperatures as high as 180°F is possible. Acrylic based adhesive develops its maximum strength over a longer period of time than rubber based adhesive. It is recommended that acrylic adhesive mounts dwell 8 hours after installation, prior to loading. Acrylic based adhesive tape is a good choice for environments with prolonged exposure to UV rays or temperatures above 120°F.

PANDUIT® also offers a two-part epoxy for use in applications where excessive loading is required, or where the surface to which the mount must be applied is porous rather than smooth. This adhesive is formulated specifically for use on *PANDUIT*® mounts, and is packaged in pre-measured cups to insure the proper ratio of resin and hardener are mixed, eliminating wasted epoxy.

Application Chart

Since *PANDUIT*® manufactures adhesive backed mounts with a variety of adhesive types, this chart should be used as a guideline for choosing the best adhesive for often-encountered conditions. Each type of adhesive is rated good, fair or poor for some specific mounting surfaces and/or chemical environments.

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

1. Not recommended for use on copper or brass.

2. Mounts manufactured from outdoor material only. For specific applications, individual testing prior to extensive use is suggested.

3. Depends on concentration, exposure time and chemical composition.

Mount Spacing

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

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

For specific applications we recommend individual testing prior to production use.

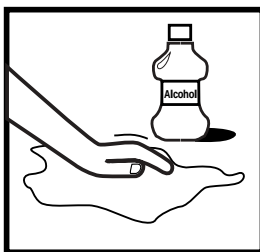
Surface Preparation

For best results, *PANDUIT*® adhesive mounts should be applied to clean, dry, grease-free surfaces. We recommend that the surface be cleaned prior to mount installation. For rubber and acrylic based foam tape adhesives, a blend of isopropyl alcohol and water 50/50 may be used to clean most surfaces.

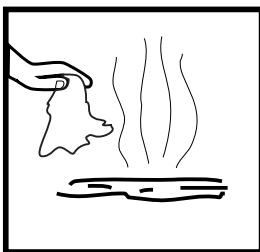
For epoxy type adhesives, especially masonry surfaces, be sure to clean all loose particles away before mount installation. Some surface abrasion is recommended to achieve maximum strength. A light rubbing with medium grit emery cloth or sandpaper is best. Wash after abrading.

Proper Installation Techniques For Pressure Sensitive Adhesive Mounts

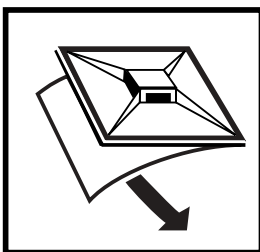
For proper installation of adhesive mounts with foam tape, simply remove the release liner and place the mount in the desired location. Avoid touching the adhesive prior to positioning the mount. Apply firm pressure to the mount for 5 seconds to insure proper adhesion.



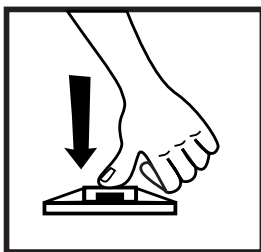
Clean surface with a clean cloth and isopropyl alcohol.



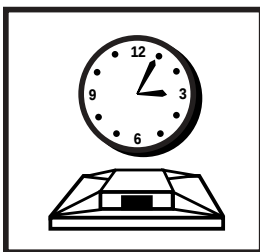
Allow surface to air dry.



Remove the release liner, being careful not to touch the adhesive.



Apply full thumb pressure for at least 5 seconds.



Allow mount to properly dwell.

Epoxy Adhesive Mounts

PANDUIT® EMA adhesive is a two-part epoxy cement which is packaged in convenient mixer cups containing an equal amount of resin and hardener. Peel the protective covering off and pop the center of the cup in to form a mixing bowl. Each cup is supplied with a mixer stick and contains enough epoxy to properly apply three EMS mounts. The resin and hardener should be thoroughly mixed together until the epoxy is a consistent and uniform color. The mixer stick can then be used to apply the adhesive to the mount. The epoxy should be forced into the grooves on the bottom of the mount to obtain optimum bond performance. The mount should be applied to the surface with light pressure and a back-and-forth twisting motion. Hardening of the epoxy begins five minutes after mixing at room temperature.

Proper Storage Conditions

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

1. For rubber and acrylic based foam tape adhesives, store in temperatures of 70°F (21°C) and 45% Relative Humidity (R.H.).
2. For epoxy type adhesives, store in temperatures of 40°F (4°C) to 75°F (25°C) and relative humidity not in excess of 45%. Storage in opened containers is not recommended. Using the guidelines above, the shelf life of foam tape is 3 years. Shelf life of epoxy is 1 year. Deviation from the recommended storage conditions may reduce the shelf life or adhesive strength. In any case, adhesive products should never be stored near heating vents or other heat sources, and storage in lower temperatures than those recommended may increase the shelf life.

Stock Rotation

Adhesive mount inventory should be rotated in order to insure the quality of the adhesive foam tape. Each package of *PANDUIT*® adhesive backed mounts has a Quality Control Number and a best-if-used-by date on the package label. The best-if-used-by date provides the customer with an accurate way to control the rotation of inventory, and, as is the case with all *PANDUIT*® products, the Quality Control Number provides complete traceability for all components that go into a specific production run of product.



Mount Removal

There is no simple or easy method for removing *PANDUIT*® adhesives. A thin wire or razor blade can be moved in between the surfaces when removing foam tape mounts; however, the adhesive residue will remain on the surface. Epoxy adhesives may be removed with a commercial paint stripping solution.

Bulk Package Part Numbers

The following is an alpha-numeric cross reference of Standard Package Wiring Accessories parts with the corresponding Bulk Package part numbers.

Standard Part No.	Bulk Part No.
A	
ABMM-A-C	ABMM-A-D
ABMM-AT-C	ABMM-AT-D
ABMM-AT-C0	ABMM-AT-D0
ABMS-A-C	ABMS-A-D
ABM1M-A-C	ABM1M-A-M
ABM1M-AT-C	ABM1M-AT-M
ABM100-A-C	ABM100-A-D
ABM100-AT-C	ABM100-AT-D
ABM100-AT-C0	ABM100-AT-D0
ABM100-S6-C	ABM100-S6-D
ABM100-S6-C69	ABM100-S6-D69
ABM112-A-C	ABM112-A-D
ABM112-AT-C	ABM112-AT-D
ABM112-AT-C0	ABM112-AT-D0
ABM112-S6-C	ABM112-S6-D
ABM112-S6-C69	ABM112-S6-D69
ABM2S-A-C	ABM2S-A-D
ABM2S-AT-C	ABM2S-AT-D
ABM2S-AT-C0	ABM2S-AT-D0
ABM3H-A-L	ABM3H-A-T
ABM3H-AT-L	ABM3H-AT-T
ABM4H-A-L	ABM4H-A-T
ABM4H-AT-L	ABM4H-AT-T
ACC19-A-C	ACC19-A-M
ACC19-A-C20	ACC19-A-M20
ACC19-AT-C	ACC19-AT-M
ACC19-AT-C0	ACC19-AT-M0
ACC38-A-C	ACC38-A-M
ACC38-A-C20	ACC38-A-M20
ACC38-AT-C	ACC38-AT-M
ACC38-AT-C0	ACC38-AT-M0
ACC62-A-C	ACC62-A-M
ACC62-A-C0	ACC62-A-M0
ACC62-A-C20	ACC62-A-D20
ACC62-AT-C0	ACC62-AT-M0
AM2-C	AM2-M
ARC.68-A-Q	ARC.68-A-C
ARC.68-A-Q14	ARC.68-A-C14
ARC.68-S6-Q	ARC.68-S6-C
ARC.68-S6-Q14	ARC.68-S6-C14
ASMS-A-X	ASMS-A-T
ASMS-A-X0	ASMS-A-T0
B	
BCS-L100	BCS-D100
BCS-C115	BCS-D115
BEC38-A-L	BEC38-A-T
BEC38-A-L20	BEC38-A-T20
BEC38-A-L0	BEC38-A-T0
BEC62-A-L	BEC62-A-T
BEC62-A-L20	BEC62-A-T20
BEC62-A-L0	BEC62-A-T0
BEC75-A-L	BEC75-A-T
BEC75-A-L20	BEC75-A-T20
BEC75-A-L0	BEC75-A-T0
BECP38H25-L	BECP38H25-T
BECP38H25-L20	BECP38H25-T20
BECP75H25-L	BECP75H25-T
BECP75H25-L20	BECP75H25-T20

Standard Part No.	Bulk Part No.
C	
CBLS18-C	CBLS18-M
CBLS25-C	CBLS25-M
CBLS37-C	CBLS37-M
CBLS50-C	CBLS50-M
CBLS62-C	CBLS62-M
CBLS75-C	CBLS75-M
CBP12-C	CBP12-M
CBP25-C	CBP25-M
CBP31-C	CBP31-M
CBP37-C	CBP37-M
CBP50-C	CBP50-M
CBP62-C	CBP62-M
CBP75-C	CBP75-M
CBP87-C	CBP87-M
CBP100-C	CBP100-M
CCS12-S8-C	CCS12-S8-M
CCS12-S8-C0	CCS12-S8-M0
CCS19-S8-C	CCS19-S8-M
CCS19-S8-C0	CCS19-S8-M0
CCS25-S8-C	CCS25-S8-M
CCS25-S8-C0	CCS25-S8-M0
CCS25-S10-C	CCS25-S10-M
CCS25-S10-C0	CCS25-S10-M0
CCS31-S8-C	CCS31-S8-M
CCS31-S8-C0	CCS31-S8-M0
CCS38-S8-C	CCS38-S8-M
CCS38-S8-C0	CCS38-S8-M0
CCS44-S8-C	CCS44-S8-M
CCS44-S8-C0	CCS44-S8-M0
CCS50-S8-C	CCS50-S8-M
CCS50-S8-C0	CCS50-S8-M0
CCH12-S10-C	CCH12-S10-M
CCH12-S10-C0	CCH12-S10-M0
CCH19-S10-C	CCH19-S10-M
CCH19-S10-C0	CCH19-S10-M0
CCH25-S10-C	CCH25-S10-M
CCH25-S10-C0	CCH25-S10-M0
CCH31-S10-C	CCH31-S10-M
CCH31-S10-C0	CCH31-S10-M0
CCH38-S10-C	CCH38-S10-M
CCH38-S10-C0	CCH38-S10-M0
CCH44-S10-C	CCH44-S10-M
CCH44-S10-C0	CCH44-S10-M0
CCH50-S10-C	CCH50-S10-M
CCH50-S10-C0	CCH50-S10-M0
CCH56-S10-C	CCH56-S10-M
CCH56-S10-C0	CCH56-S10-M0
CCH62-S10-C	CCH62-S10-M
CCH62-S10-C0	CCH62-S10-M0
CCH69-S10-C	CCH69-S10-M
CCH69-S10-C0	CCH69-S10-M0
CCH75-S10-C	CCH75-S10-M
CCH75-S10-C0	CCH75-S10-M0
CCH81-S10-C	CCH81-S10-M
CCH81-S10-C0	CCH81-S10-M0
CCH87-S10-C	CCH87-S10-M
CCH87-S10-C0	CCH87-S10-M0
CCH100-S10-C	CCH100-S10-M
CCH100-S10-C0	CCH100-S10-M0

Standard Part No.	Bulk Part No.
E	
EMA-X	STD. ONLY
EMS-A-C	EMS-A-D
EMS-A-C0	EMS-A-D0
EMSK3-1-3-0	EMSK3-1-3-X
EMSK3-1-X0	EMSK3-1-C0
EMSK12-4-12-X0	EMSK12-4-12-C0
F	
FCBI1-S10-C20	FCBI1-S10-M20
FCBI2-S10-C20	FCBI2-S10-M20
FCBI3-S10-C20	FCBI3-S10-M20
FCC5-A-C8	FCC5-A-D8
FCC-A-C8	FCC-A-D8
FCH2-A-C14	FCH2-A-T14
FCM1-A-C14	FCM1-A-T14
FCM1-S6-C14	FCM1-S6-T14
FCM2-A-C14	FCM2-A-T14
FCM2-S6-C14	FCM2-S6-T14
FCM1.2-A-C14	FCM1.2-A-T14
FCM1.2-S6-C14	FCM1.2-S6-T14
FCM3.25-A-L14	FCM3.25-A-T14
FCM3.25-S6-L14	FCM3.25-S6-T14
FCPI1-C20	FCPI1-M20
FCPI2-C20	FCPI2-M20
FCPI3-C20	FCPI3-M20
H	
HCME06A12-C130	HCME06A12-M130
HCMP06B12-C20	HCMP06B12-M20
HCMP06C12-C20	HCMP06C12-M20
HWS2819-C	HWS2819-M
K	
KIMS-H366-C2	KIMS-H366-M2
KIMS-H430-C6	KIMS-H430-M6
KIMS-H500-C4	KIMS-H500-M4
L	
LPFCM14-A-C14	LPFCM14-A-D14
LPFCM22-A-C14	LPFCM22-A-D14
LPFCM34-A-C14	LPFCM34-A-D14
LPMM-S2-C	LPMM-S2-M
LPMM-S5-C	LPMM-S5-M
LPMS-S8-C	LPMS-S8-M
LWC19-A-C	LWC19-A-M
LWC19-A-C14	LWC19-A-M14
LWC19-H25-C	LWC19-H25-M
LWC19-H25-C14	LWC19-H25-M14
LWC25-A-C	LWC25-A-D
LWC25-A-C14	LWC25-A-D14
LWC25-H25-C	LWC25-H25-D
LWC25-H25-C14	LWC25-H25-D14
LWC38-A-C	LWC38-A-D
LWC38-A-C14	LWC38-A-D14
LWC38-H25-C	LWC38-H25-D
LWC38-H25-C14	LWC38-H25-D14
LWC50-A-L	LWC50-A-T
LWC50-A-L14	LWC50-A-T14
LWC50-H25-L	LWC50-H25-T
LWC50-H25-L14	LWC50-H25-T14
LWC75-A-L	LWC75-A-C
LWC75-A-L14	LWC75-A-C14

Bulk Package Part Numbers (continued)

The following is an alpha-numeric cross reference of Standard Package Wiring Accessories parts with the corresponding Bulk Package part numbers.

Standard Part No.	Bulk Part No.
LWC75-H25-L	LWC75-H25-C
LWC75-H25-L14	LWC75-H25-C14
LWC100-A-L	LWC100-A-C
LWC100-A-L14	LWC100-A-C14
LWC100-H25-L	LWC100-H25-C
LWC100-H25-L14	LWC100-H25-C14
M	
MBMS-S10-C	MBMS-S10-M
MMS8	STD. ONLY
MP150-C	MP150-M
THRU	THRU
MP350-C	MP350-M
MP150-C0	MP150-M0
THRU	THRU
MP350-C0	MP350-M0
BULK ONLY	MP150R
	THRU
	MP250R
MPMS19-C0	MPMS19-M0
MPMH38-L0	MPMH38-D0
MPMS25-C0	MPMS25-M0
MPMWH32-L0	MPMWH32-D0
P	
PBMS-H25-C	PBMS-H25-M
PBMS-H25-C14	PBMS-H25-M14
PC038-H25D-C0	PC038-H25D-D0
PC050-H25D-C0	PC050-H25D-D0
PC062-H25D-C0	PC062-H25D-D0
PC075-H25D-C0	PC075-H25D-D0
PC087-H25D-C0	PC087-H25D-D0
PC100-H25D-C0	PC100-H25D-T0
PC112-H25D-C0	PC112-H25D-T0
PC125-H25D-C0	PC125-H25D-T0
PLA2S-A-Q	PLA2S-A-C
PMCC38H25-C	PMCC38H25-M
PM2H25-C	PM2H25-M
PP1S-S10-X	PP1S-S10-C
PP2S-S10-X	PP2S-S10-C
PP2S-S12-X	PP2S-S12-C
PRA2S-A-Q	PRA2S-A-C
PWMS-H25-C	PWMS-H25-M
R	
RAFCBI1-S6-C20	RAFCBI1-S6-M20
RAFCBI2-S6-C20	RAFCBI2-S6-M20
RAFCBI3-S6-C20	RAFCBI3-S6-M20
S	
SICH25-C	SICH25-M
SICH38-C	SICH38-M
SICH50-C	SICH50-M
SICH75-C	SICH75-M
SMS-A-C	SMS-A-D

Standard Part No.	Bulk Part No.
T	
TA1S8-C	TA1S8-M
TA1S10-C	TA1S10-M
TA2-C	TA2-M
THASS8-C	THASS8-M
THASS8-C30	THASS-M30
THASS10-C	THASS10-M
THASS10F-C30	THASS10F-M30
THASS25-C	THASS25-M
THASS25-C30	THASS25-M30
THASS8F-C	THASS8F-M
THASS8F-C30	THASS8F-M30
THASS10F-C	THASS10F-M
THASS10F-C30	THASS10F-M30
THASS25F-C	THASS25F-M
THASS25F-C30	THASS25F-M30
THAUF4-X	THAUF4-C
THM1SC-C	THM1SC-M
THM1SC-C30	THM1SC-M30
THMSC35-C30	THMSC35-M30
THMSC35-C639	THMSC35-M639
THMSC35-C630	THMSC35-M630
THMSC35F-C630	THMSC35F-M630
THMSC35F-C39	THMSC35-M39
THMSC35F-C639	THMSC35-M639
THMSC60-C30	THMSC60-M30
THMSC60-C39	THMSC60-M39
THMSC60F-C30	THMSC60F-M30
THMSC60F-C39	THMSC60F-M39
THMSC85-C30	THMSC85-M30
THMSC85-C39	THMSC85-M39
THMSP25-C	THMSP25-M
THMSP25-C30	THMSP25-M30
THMSP25F-C30	THMSP25F-M30
TMEH-S8-Q0	TMEH-S8-C0
TMEH-S10-Q0	TMEH-S10-C0
TMEH-S25-Q0	TMEH-S25-C0
TMSH50-C300	TMSH50-T300
TMSTHS10-C0	TMSTHS10-D0
TMSTHS13-C0	TMSTHS13-D0
TMSTHS16-C0	TMSTHS16-D0
TMSTHS19-C0	TMSTHS16-D0
TMSTLHS5-C0	TMSTLHS5-M0
TMSTLHS6-C0	TMSTLHS6-M0
TMSTLHS8-C0	TMSTLHS8-M0
TM1A-C	TM1A-M
TM1S4-C	TM1S4-M
TM1S6-C	TM1S6-M
TM2A-C	TM2A-M
TM2PWH25-C	TM2PWH25-M
TM2R6-C	TM2R6-M
TM2S6-C	TM2S6-M

Standard Part No.	Bulk Part No.
TM2S8-C	TM2S8-M
TM2S8-C100	TM2S8-M100
TM3A-C	TM3A-M
TM3R6-C	TM3R6-M
TM3S10-C	TM3S10-M
TM3S25-C	TM3S25-M
TM3S8-C	TM3S8-M
TM3S8-C100	TM3S8-M100
TP2-C	TP2-M
TP4H-C	TP4H-D
TWR-C	TWR-M
V	
VCC25-A-C	VCC25-A-M
VCC50-A-C	VCC50-A-T
VCS-25-L	VCS-25-D
VCS-25-L100	VCS-25-D100
VWS106-C	VWS106-M
VWS106-C20	VWS106-M20
VWS4218-C	VWS4218-M
VWS4238-C	VWS4238-M
VWS4274-C	VWS4274-M
VWS42105-C	VWS42105-M
VWSDC-C	VWSDC-D
W	
WS75-25-C	WS75-25-M
WS75-50-C	WS75-50-M
WS75-75-C	WS75-75-M

Heat Shrink



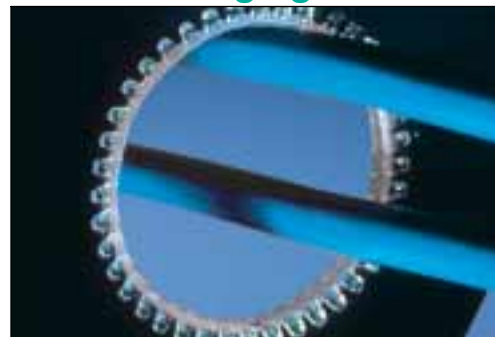
PVC Non-Shrink Tubing



Spiral Wrap



Grommet Edging



Corrugated Loom Tubing



Braided Sleeving



Split Harness Wrap



Abrasion Protection for Wire, Cable, Hydraulic and Pneumatic Tubing

PANDUIT® Heat Shrink Tubing — Heat Shrink Tubing Quick Selection Guide

Quick reference for PANDUIT® Heat Shrinking for specific location applications

	DRY SHRINK® HEAT SHRINK				DAMP SHRINK® HEAT SHRINK			WET SHRINK® HEAT SHRINK		
	HSTT	HSTTV	HSTTN	HSTTK	HSTTT	HSTTP	HSTTVA	HSTTRA	HSTTA	HST
CHARACTERISTICS										
U.L. Listed										X
UL Recognized	X†	X			X		X			
CSA Certified	X†✓	X✓					X✓			X**
VW-1 Rated		X		X		X				
Very Flexible		X	X							
Flexible	X						X	X		X
Semi-Rigid				X	X				X	X
Thin Wall	X	X	X	X	X	X	X	X	X	X
Thick Wall										X
Cross-Linked Material	X	X	X	X			X	X	X	X
Colors Available	X	X								X*
High Shrink Ratio								2.5:1	3:1	3:1
Flame Retardant	X†	X	X	X	X	X	X	X	X	X
Adhesive Lined (Dual Wall)							X	X	X	X
Meets Military Specification	X	X	X	X	X		X	X	X	X
Below Ground Application										X
High Temp Applications(>250°F)				X	X					
Highly Chemical Resistant				X	X					
Low Coefficient of Friction					X					
Custom Cut Lengths	X	X	X	X	X	X	X	X	X	X
Standard 6" pieces	X	X					X		X	
Standard 4' lengths	X	X		X	X		X	X	X	X
Small 25' Reels	X	X	X				X			
Large Reels	X	X	X				X			
IP Rating	62	62	62	62	—	62	66	66	66	68
Found on Page...	141-144	145-146	148	150	149	147	151	153	152	154

*Black/Red

**Except red

†Except clear

✓Except sizes over 1"

See page 160 for IP Technical information.

Thin Wall Heat Shrink Part Number System

HSTT 12 - 48 - Q 10

Type

HSTT = Thin Wall
HSTTV = Thin Wall VW-1
HSTTN = Thin Wall Neoprene
HSTTK = Thin Wall KYNAR▲
HSTTT = Thin Wall TFE TEFLON■
HSTTP = Thin Wall PVC
HSTTVA = Flexible Adhesive Lined
HSTTRA = Semi-Rigid Adhesive Lined
HSTTA = Thin Wall Adhesive Lined

Expanded Diameter

05 = 3/64" (1.2mm)
06 = 1/16" (1.6mm)
09 = 3/32" (2.4mm)
12 = 1/8" (3.2mm)
19 = 3/16" (4.8mm)
25 = 1/4" (6.4mm)
38 = 3/8" (9.5mm)
50 = 1/2" (12.7mm)
75 = 3/4" (19.0mm)
100 = 1" (25.4mm)
150 = 1-1/2" (38.1mm)
200 = 2" (50.5mm)
300 = 3" (76.2mm)
400 = 4" (101.6mm)

Tube Length

48" = (1.2m)
NONE = Reel

Package Quantity

(If Tube Length Specified)
2 = 2 Pcs. CQ = 125 Pcs.
5 = 5 Pcs. T = 200 Pcs.
Q = 25 Pcs. TL = 250 Pcs.
LQ = 75 Pcs. Y = 6" Pcs.

Reels (If No Tube Length Specified)

Q = 25' (7.6m)
L = 50' (15.2m)
C = 100' (30.5m)
T = 200' (61.0m)
D = 500' (152.4m)
M = 1000' (304.8m)

Color

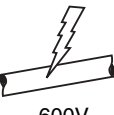
NONE = Black
C = Clear
2 = Red
4 = Yellow
5 = Green
6 = Blue
10 = White
45 = Yellow/Green

PANDUIT® Flexible Polyolefin **DRY-SHRINK™** Heat Shrink Tubing

HSTT Heat Shrink in 4' (1.2m) Pieces and Reels

- General purpose heat shrink tubing for dry locations
- Applications include insulating, protecting, harnessing and identifying wires



Type	Materials			
HSTT	Polyolefin Cross-Linked			
 600V	 -67°F to 275°F (-55°C to 135°C‡)	 AMS-DTL-23053/5 Class 1 or Class 2	 (Except Clear)	
 Flexible	 Shrink Ratio: ▲ 2:1	 Flame Retardant (Except Clear)	 Variety of Colors	

‡Maximum UL temperature range is 125°C

HSTT in Bulk Packages — Large Reels and 4' (1.2m) Pcs. (3/64" to 3/16" Expanded I.D.)

Part Number (Black✓)	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Bulk Pkg. Qty.*	Bulk Ctn. Qty.
HSTT05-48-Q HSTT05-48-TL HSTT05-C HSTT05-M	3/64	.046 (1.2)	.023 (0.6)	.016 (0.4)	4 (1.2) 4 (1.2) 100 (30.5) 1000 (304.8)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT06-48-Q HSTT06-48-TL HSTT06-C HSTT06-M	1/16	.063 (1.6)	.031 (0.8)	.017 (0.4)	4 (1.2) 4 (1.2) 100 (30.5) 1000 (304.8)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT09-48-Q HSTT09-48-TL HSTT09-C HSTT09-M	3/32	.093 (2.4)	.046 (1.2)	.020 (0.5)	4 (1.2) 4 (1.2) 100 (30.5) 1000 (304.8)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT12-48-Q HSTT12-48-TL HSTT12-C HSTT12-M	1/8	.125 (3.2)	.062 (1.6)	.020 (0.5)	4 (1.2) 4 (1.2) 100 (30.5) 1000 (304.8)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT19-48-Q HSTT19-48-TL HSTT19-C HSTT19-M	3/16	.187 (4.8)	.093 (2.4)	.020 (0.5)	4 (1.2) 4 (1.2) 100 (30.5) 1000 (304.8)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels

*Order in multiples of bulk pkg. qty.

See page 160 for IP Technical Information.

✓For additional color information, contact PANDUIT® Technical Assistance 866-405-6657.

▲Shrink ratios are approximations; please refer to above ordering information for the exact min. Expanded and max. recovered I.D.'s.

Most commonly used parts appear in **BOLD**

PANDUIT® Flexible Polyolefin **DRY-SHRINK™** Heat Shrink Tubing

HSTT in Bulk Packages (cont.) — Large Reels and 4'(1.2m) Pcs. (1/4" to 3/4" Expanded I.D.)

Part Number (Black✓)	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Bulk Pkg. Qty.*	Bulk Ctn. Qty.
HSTT25-48-Q HSTT25-48-TL HSTT25-C HSTT25-D	1/4	.250 (6.4)	.125 (3.2)	.025 (0.6)	4 (1.2) 4 (1.2) 100 (30.5) 500 (152.4)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT38-48-Q HSTT38-48-TL HSTT38-C HSTT38-T	3/8	.375 (9.5)	.187 (4.8)	.025 (0.6)	4 (1.2) 4 (1.2) 100 (30.5) 200 (61.0)	25 Pcs. 250 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT50-48-Q HSTT50-48-T HSTT50-C HSTT50-T	1/2	.500 (12.7)	.250 (6.4)	.025 (0.6)	4 (1.2) 4 (1.2) 100 (30.5) 200 (61.0)	25 Pcs. 200 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels
HSTT75-48-5 HSTT75-48-CQ HSTT75-C HSTT75-T	3/4	.750 (19.0)	.375 (9.5)	.030 (0.8)	4 (1.2) 4 (1.2) 100 (30.5) 200 (61.0)	5 Pcs. 125 Pcs. 1 Reel 1 Reel	— — 10 Reels 2 Reels



HSTT in Bulk Packages — Large Reels and 4' (1.2m) Pcs. (1" to 4" Expanded I.D.)

Part Number (Black✓)	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Bulk Pkg. Qty.*	Bulk Ctn. Qty.
HSTT100-48-5 HSTT100-48-LQ HSTT100-C	1	1.00 (25.4)	.500 (12.7)	.035 (0.9)	4 (1.2) 4 (1.2) 100 (30.5)	5 Pcs. 75 Pcs. 1 Reel	— — 2 Reels
HSTT150-48-5 HSTT150-C	1 1/2	1.50 (38.1)	.750 (19.0)	.040 (1.0)	4 (1.2) 100 (30.5)	5 Pcs. 1 Reel	— 2 Reels
HSTT200-48-5 HSTT200-L	2	2.00 (50.8)	1.00 (25.4)	.045 (1.1)	4 (1.2) 50 (15.2)	5 Pcs. 1 Reel	— 2 Reels
HSTT300-48-2 HSTT300-L	3	3.00 (76.2)	1.50 (38.1)	.050 (1.3)	4 (1.2) 50 (15.2)	2 Pcs. 1 Reel	— —
HSTT400-48-2 HSTT400-L	4	4.00 (101.6)	2.00 (50.8)	.055 (1.4)	4 (1.2) 50 (15.2)	2 Pcs. 1 Reel	— —

HSTT Heat Shrink on 25' (7.6m) Reels

- General purpose heat shrink tubing for dry locations
- Featuring unique self dispensing Q-Box 25' (7.5m)

HSTT in Standard Packages

Part Number (Black✓)	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTT05-Q	3/64	.046 (1.2)	0.23 (0.6)	.016 (0.4)	25 (7.6)	1 Reel	10 Reels
HSTT06-Q	1/16	.063 (1.6)	.031 (0.8)	.017 (0.4)	25 (7.6)	1 Reel	10 Reels
HSTT09-Q	3/32	.093 (2.4)	.046 (1.2)	.020 (0.5)	25 (7.6)	1 Reel	10 Reels
HSTT12-Q	1/8	.125 (3.2)	.062 (1.6)	.020 (0.5)	25 (7.6)	1 Reel	10 Reels
HSTT19-Q	3/16	.187 (4.8)	.093 (2.4)	.020 (0.5)	25 (7.6)	1 Reel	10 Reels
HSTT25-Q	1/4	.250 (6.4)	.125 (3.2)	.025 (0.6)	25 (7.6)	1 Reel	10 Reels
HSTT38-Q	3/8	.375 (9.5)	.187 (4.8)	.025 (0.6)	25 (7.6)	1 Reel	10 Reels
HSTT50-Q	1/2	.500 (12.7)	.250 (6.4)	.025 (0.6)	25 (7.6)	1 Reel	10 Reels
HSTT75-Q	3/4	.750 (19.0)	.375 (9.5)	.030 (0.8)	25 (7.6)	1 Reel	10 Reels

HSTT Heat Shrink Standard Packs of Heat Shrink — 6" (152.4mm) Pieces



Small package holds unused tube and fits easily in a tool box

- General purpose heat shrink tubing for dry locations
- Applications include insulating, protecting, harnessing and identifying wires



IP62

HSTT in Standard Packages

Part Number (Black✓)	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length in. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTT06-Y	1/16	.063 (1.6)	.031 (0.8)	.017 (0.4)	6 (152.4)	26 pcs.	10 Pkgs.
HSTT09-Y	3/32	.093 (2.4)	.046 (1.2)	.020 (0.5)	6 (152.4)	24 pcs.	10 Pkgs.
HSTT12-Y	1/8	.125 (3.2)	.062 (1.6)	.020 (0.5)	6 (152.4)	20 pcs.	10 Pkgs.
HSTT19-Y	3/16	.187 (4.8)	.093 (2.4)	.020 (0.5)	6 (152.4)	18 pcs.	10 Pkgs.
HSTT25-Y	1/4	.250 (6.4)	.125 (3.2)	.025 (0.6)	6 (152.4)	14 pcs.	10 Pkgs.
HSTT38-Y	3/8	.375 (9.5)	.187 (4.8)	.025 (0.6)	6 (152.4)	12 pcs.	10 Pkgs.
HSTT50-Y	1/2	.500 (12.7)	.250 (6.4)	.025 (0.6)	6 (152.4)	10 pcs.	10 Pkgs.
HSTT75-Y	3/4	.750 (19.0)	.375 (9.5)	.030 (0.8)	6 (152.4)	8 pcs.	10 Pkgs.
HSTT100-Y	1	1.00 (25.4)	.500 (12.7)	.035 (0.9)	6 (152.4)	6 pcs.	10 Pkgs.

*Order in multiples of std. pkg. qty.

✓For additional color information, contact PANDUIT® Technical Assistance 866-405-6657.

▲Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.

PANDUIT® Flexible Polyolefin **DRY-SHRINK™** Heat Shrink Tubing

Standard Packs of Heat Shrink — 6" (152.4mm) Pieces

Small package holds unused tube and fits easily in a tool box

- Assorted colors and diameters available



HSTT — Combination: Black and Colors — Single Diameter

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Black No. Pcs.	Each Color No. Pcs.	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTT06-YK1	1/16	.063 (1.6)	.031 (0.8)	8	3	26 pcs.	10 Pkgs.
HSTT09-YK1	3/32	.093 (2.4)	.046 (1.2)	6	3	24 pcs.	10 Pkgs.
HSTT12-YK1	1/8	.125 (3.2)	.062 (1.6)	2	3	20 pcs.	10 Pkgs.
HSTT19-YK1	3/16	.187 (4.8)	.093 (2.4)	6	2	18 pcs.	10 Pkgs.
HSTT25-YK1	1/4	.250 (6.4)	.125 (3.2)	2	2	14 pcs.	10 Pkgs.
HSTT38-YK1	3/8	.375 (9.5)	.187 (4.8)	6	1	12 pcs.	10 Pkgs.
HSTT50-YK1	1/2	.500 (12.7)	.250 (6.4)	4	1	10 pcs.	10 Pkgs.
HSTT75-YK1	3/4	.750 (19.0)	.375 (9.5)	2	1	8 pcs.	10 Pkgs.
HSTT100-YK1	1	1.00 (25.4)	.500 (12.7)	1	1	7 pcs.	10 Pkgs.

NOTE: Colors include clear, red, yellow, green, blue and white. For additional color information, contact PANDUIT® Technical Assistance 866-405-6657.

HSTT — Black Only — Multiple Diameters

Part Number	Nominal Diameter	Black Number of Pieces by Diameter	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTT-YK1	Various; Smaller Range	(2) pcs. each 1/8", 1/16", 3/16", 3/32", 1/4", 1/2", 3/8"	14 pcs.	10 Pkgs.
HSTT-YK2	Various; Larger Range	(2) pcs. each 3/8", 1/2", 3/4", 1"	8 pcs.	10 Pkgs.



HSTT — Yellow/Green Stripe — Multiple Diameters

Part Number	Nominal Diameter	Number of Pieces by Diameter	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTT-YK1-45	Various; Smaller Range	(2) pcs. each 1/8", 3/16", 1/4", 3/8"	8 pcs.	10 Pkgs.
HSTT-YK2-45	Various; Larger Range	(2) pcs. each 3/8", 1/2", 3/4"	6 pcs.	10 Pkgs.



PANDUIT® Flexible Polyolefin VW-1 **DRY-SHRINK™** Heat Shrink Tubing

HSTTV Heat Shrink in Small Reels and 4' (1.2m) Pieces

- For dry locations
- Highly flame retardant
- Meets UL VW-1 rating
- Fast Shrink Time



IP62

Type	Materials		
HSTTV	Polyolefin Cross-Linked		
 600V	 -67°F to 257°F (-55°C to 125°C‡)	 AMS-DTL-23053/5 Class 3	 VW-1 OFT
 Flexible	 Shrink Ratio:▲ 2:1	 Highly Flame Retardant VW-1	

‡Maximum UL temperature range is 125° C.



HSTTV in Bulk Packages — Small Reels & 4' (1.2m) Pcs.

Part Number (Black✓)	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Bulk Pkg. Qty.*	Bulk Ctn. Qty.
HSTTV05-48-Q HSTTV05-48-TL HSTTV05-C	3/64	.046 (1.2)	.023 (0.6)	.016 (0.4)	4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV06-48-Q HSTTV06-48-TL HSTTV06-C	1/16	.063 (1.6)	.031 (0.8)	.017 (0.4)	4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV09-48-Q HSTTV09-48-TL HSTTV09-C	3/32	.093 (2.4)	.046 (1.2)	.020 (0.5)	4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV12-48-Q HSTTV12-48-TL HSTTV12-C	1/8	.125 (3.2)	.062 (1.6)		4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV19-48-Q HSTTV19-48-TL HSTTV19-C	3/16	.187 (4.8)	.093 (2.4)		4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV25-48-Q HSTTV25-48-TL HSTTV25-C	1/4	.250 (6.4)	.125 (3.2)	.025 (0.6)	4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV38-48-Q HSTTV38-48-TL HSTTV38-C	3/8	.375 (9.5)	.187 (4.8)	.025 (0.6)	4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 250 Pcs. 1 Reel	— — 10 Reels
HSTTV50-48-Q HSTTV50-48-T HSTTV50-C	1/2	.500 (12.7)	.250 (6.4)	.025 (0.6)	4 (1.2) 4 (1.2) 100 (30.5)	25 Pcs. 200 Pcs. 1 Reel	— — 10 Reels
HSTTV75-48-5 HSTTV75-48-CQ HSTTV75-C	3/4	.750 (19.0)	.375 (9.5)	.030 (0.8)	4 (1.2) 4 (1.2) 100 (30.5)	5 Pcs. 125 Pcs. 1 Reel	— — 10 Reels
HSTTV100-48-5 HSTTV100-48-LQ HSTTV100-C	1	1.00 (25.4)	.500 (12.7)	.035 (0.9)	4 (1.2) 4 (1.2) 100 (30.5)	5 Pcs. 75 Pcs. 1 Reel	— — 2 Reels
HSTTV150-48-5 HSTTV150-C	1 1/2	1.50 (38.1)	.750 (19.0)	.040 (1.0)	4 (1.2) 100 (30.5)	5 Pcs. 1 Reel	— 2 Reels

*Order in multiples of bulk pkg. qty.

✓ For additional color information, contact PANDUIT® Technical Assistance 866-405-6657.

▲ Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.

Most commonly used parts appear in **BOLD**

PANDUIT® Flexible Polyolefin VW-1 **DRY-SHRINK™** Heat Shrink Tubing

HSTTV Heat Shrink in 1000' (304.8m), 500' (152.4m) and 200' (61.0m) Reels

HSTTV in Bulk Packages — Large Reels

Nominal Diameter in.	Length Feet (m)	Part Number				Bulk Pkg. Qty.*	Bulk Ctn. Qty.
		Black	Red	Yellow	Blue		
3/64	1000 (304.8)	HSTTV05-M	HSTTV05-M2	HSTTV05-M4	HSTTV05-M6	1 Reel	2 Reels
1/16	1000 (304.8)	HSTTV06-M	HSTTV06-M2	HSTTV06-M4	HSTTV06-M6	1 Reel	2 Reels
3/32	1000 (304.8)	HSTTV09-M	HSTTV09-M2	HSTTV09-M4	HSTTV09-M6	1 Reel	2 Reels
1/8	1000 (304.8)	HSTTV12-M	HSTTV12-M2	HSTTV12-M4	HSTTV12-M6	1 Reel	2 Reels
3/16	1000 (304.8)	HSTTV19-M	HSTTV19-M2	HSTTV19-M4	HSTTV19-M6	1 Reel	2 Reels
1/4	500 (152.4)	HSTTV25-D	HSTTV25-D2	HSTTV25-D4	HSTTV25-D6	1 Reel	2 Reels
3/8	200 (61.0)	HSTTV38-T	HSTTV38-T2	HSTTV38-T4	HSTTV38-T6	1 Reel	2 Reels
1/2	200 (61.0)	HSTTV50-T	HSTTV50-T2	HSTTV50-T4	HSTTV50-T6	1 Reel	2 Reels
3/4	200 (61.0)	HSTTV75-T	HSTTV75-T2	HSTTV75-T4	HSTTV75-T6	1 Reel	2 Reels

* Order in multiples of bulk pkg. qty.

HSTTV Heat Shrink in 25' (7.5m) Reels



HSTTV in Standard Packages of 25' (7.5m) Reels — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTTV05-Q	3/64	.046 (1.2)	.023 (0.6)	.020 (0.5)	25 (7.5)	1 Reel	10 Reels
HSTTV06-Q	1/16	.063 (1.6)	.031 (0.8)	.020 (0.5)	25 (7.5)	1 Reel	10 Reels
HSTTV09-Q	3/32	.093 (2.4)	.046 (1.2)	.020 (0.5)	25 (7.5)	1 Reel	10 Reels
HSTTV12-Q	1/8	.125 (3.2)	.062 (1.6)	.020 (0.5)	25 (7.5)	1 Reel	10 Reels
HSTTV19-Q	3/16	.187 (4.8)	.093 (2.4)	.020 (0.5)	25 (7.5)	1 Reel	10 Reels
HSTTV25-Q	1/4	.250 (6.4)	.125 (3.2)	.025 (0.6)	25 (7.5)	1 Reel	10 Reels
HSTTV38-Q	3/8	.375 (9.5)	.187 (4.8)	.025 (0.6)	25 (7.5)	1 Reel	10 Reels
HSTTV50-Q	1/2	.500 (12.7)	.250 (6.4)	.025 (0.6)	25 (7.5)	1 Reel	10 Reels
HSTTV75-Q	3/4	.750 (19.0)	.375 (9.5)	.030 (0.8)	25 (7.5)	1 Reel	10 Reels
HSTTV100-Q	1	1.00 (25.4)	.500 (12.7)	.035 (0.9)	25 (7.5)	1 Reel	2 Reels

* Order in multiples of std. pkg. qty.

Standard Packs of Heat Shrink — 6" (152.4mm) Pieces



HSTTV — Single Diameter — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTTV05-Y	3/64	.046 (1.2)	.023 (0.6)	26 pcs.	10 Pkgs.
HSTTV06-Y	1/16	.063 (1.6)	.031 (0.8)	26 pcs.	10 Pkgs.
HSTTV09-Y	3/32	.093 (2.4)	.046 (1.2)	24 pcs.	10 Pkgs.
HSTTV12-Y	1/8	.125 (3.2)	.062 (1.6)	20 pcs.	10 Pkgs.
HSTTV19-Y	3/16	.187 (4.8)	.093 (2.4)	18 pcs.	10 Pkgs.
HSTTV25-Y	1/4	.250 (6.4)	.125 (3.2)	14 pcs.	10 Pkgs.
HSTTV38-Y	3/8	.375 (9.5)	.187 (4.8)	12 pcs.	10 Pkgs.
HSTTV50-Y	1/2	.500 (12.7)	.250 (6.4)	10 pcs.	10 Pkgs.
HSTTV75-Y	3/4	.750 (19.0)	.375 (9.5)	8 pcs.	10 Pkgs.
HSTTV100-Y	1	1.00 (25.4)	.500 (12.7)	6 pcs.	10 Pkgs.

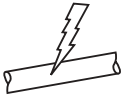
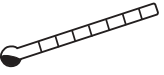
* Order in multiples of std. pkg. qty.

HSTTP Heat Shrink

- For dry locations
- Flexible, highly flame retardant tubing
- Good resistance to most fuels and oils
- Good cut through and solder resistance
- Material is UV Resistant



IP62

Type	Materials	
HSTTP	 Polyvinyl Chloride Cross-Linked	
 600V	 -4°F to 221°F (-20°C to 105°C)	
 Flexible	 Shrink Ratio:▲ 2:1	 Highly Flame Retardant VW-1



HSTTP in Standard Packages — Reels — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTTP05-Q HSTTP05-C HSTTP05-M	3/64	.046 (1.2)	.023 (0.6)	.020 (0.5)	25 (7.5) 100 (30.5) 1000 (304.8)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP06-Q HSTTP06-C HSTTP06-M	1/16	.063 (1.6)	.031 (0.8)	.020 (0.5)	25 (7.5) 100 (30.5) 1000 (304.8)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP09-Q HSTTP09-C HSTTP09-M	3/32	.093 (2.4)	.046 (1.2)	.025 (0.6)	25 (7.5) 100 (30.5) 1000 (304.8)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP12-Q HSTTP12-C HSTTP12-M	1/8	.125 (3.2)	.062 (1.6)	.025 (0.6)	25 (7.5) 100 (30.5) 1000 (304.8)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP19-Q HSTTP19-C HSTTP19-M	3/16	.187 (4.8)	.093 (2.4)	.025 (0.6)	25 (7.5) 100 (30.5) 1000 (304.8)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP25-Q HSTTP25-C HSTTP25-D	1/4	.250 (6.4)	.125 (3.2)	.025 (0.6)	25 (7.5) 100 (30.5) 500 (152.4)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP38-Q HSTTP38-C HSTTP38-T	3/8	.375 (9.5)	.187 (4.8)	.030 (0.8)	25 (7.5) 100 (30.5) 200 (61.0)	1 Reel 1 Reel 1 Reel	10 Reels 2 Reels 2 Reels
HSTTP50-Q HSTTP50-C	1/2	.500 (12.7)	.250 (6.4)	.030 (0.8)	25 (7.5) 100 (30.5)	1 Reel 1 Reel	10 Reels 2 Reels
HSTTP75-Q HSTTP75-C	3/4	.750 (19.0)	.375 (9.5)	.035 (0.9)	25 (7.5) 100 (30.5)	1 Reel 1 Reel	10 Reels 2 Reels
HSTTP100-Q HSTTP100-C	1	1.00 (25.4)	.500 (12.7)	.040 (1.0)	25 (7.5) 100 (30.5)	1 Reel 1 Reel	2 Reels 2 Reels
HSTTP150-Q HSTTP150-C	1 1/2	1.50 (38.1)	.750 (19.0)	.045 (1.1)	25 (7.5) 100 (30.5)	1 Reel 1 Reel	2 Reels 2 Reels
HSTTP200-Q	2	2.00 (50.8)	1.00 (25.4)	.050 (1.3)	25 (7.5)	1 Reel	2 Reels

*Order in multiples of std. pkg. qty.

▲Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.

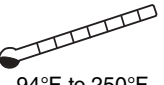
PANDUIT® Neoprene **DRY-SHRINK™** Heat Shrink Tubing

HSTTN Heat Shrink

- For dry locations
- Highly flexible tubing
- Offers excellent chemical resistance, especially to fuels and oils
- Highly flame retardant



IP62

Type	Materials	
HSTTN	 Elastomer Neoprene Cross-Linked	
 600V	 -94°F to 250°F (-70°C to 121°C)	 AMS-DTL-23053/1 Class 2
 Highly Flexible	 Shrink Ratio:▲ 2:1	 Highly Flame Retardant



HSTTN in Standard Packages — 25' (7.5m) and 100' (30.5m) Reels — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTTN25-C	1/4	.250 (6.4)	.143 (3.6)	.035 (0.9)	100 (30.5)	1 Reel	2 Reels
HSTTN38-C	3/8	.375 (9.5)	.211 (5.4)	.040 (1.0)	100 (30.5)	1 Reel	2 Reels
HSTTN50-C	1/2	.500 (12.7)	.286 (7.3)	.048 (1.2)	100 (30.5)	1 Reel	2 Reels
HSTTN63-C	5/8	.625 (15.9)	.357 (9.1)	.052 (1.3)	100 (30.5)	1 Reel	2 Reels
HSTTN75-C	3/4	.750 (19.0)	.428 (10.9)	.057 (1.5)	100 (30.5)	1 Reel	2 Reels
HSTTN88-C	7/8	.875 (22.2)	.500 (12.7)	.065 (1.7)	100 (30.5)	1 Reel	2 Reels
HSTTN100-C	1	1.00 (25.4)	.570 (14.5)	.070 (1.8)	100 (30.5)	1 Reel	2 Reels
HSTTN125-C	1 1/4	1.25 (31.8)	.714 (18.1)	.087 (2.2)	100 (30.5)	1 Reel	2 Reels
HSTTN150-C	1 1/2	1.50 (38.1)	.857 (21.8)	.095 (2.4)	100 (30.5)	1 Reel	2 Reels
HSTTN175-C	1 3/4	1.75 (44.5)	1.00 (25.4)	.107 (2.7)	100 (30.5)	1 Reel	2 Reels
HSTTN200-Q	2	2.00 (50.8)	1.140 (29.0)	.110 (2.8)	25 (7.5)	1 Reel	2 Reels
HSTTN300-Q	3	3.00 (76.2)	1.710 (43.4)	.125 (3.8)	25 (7.5)	1 Reel	2 Reels

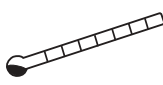
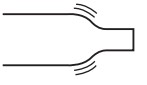
PANDUIT® TFE TEFLON‡ DRY-SHRINK™ Heat Shrink Tubing

HSTTT (TFE) Heat Shrink



- For dry locations
- Semi-rigid, highly heat resistant
- Offers the widest temperature range of any plastic material
- Color is milky clear

NOTE: Special instructions on **page 158**.

Type	Materials	
HSTTT	 Polytetrafluoroethylene	
 600V	 -88°F to 482°F (-67°C to 250°C)	 AMS-DTL-23053/ 12, Class 3
 Semi-Rigid	 Shrink Ratio:▲ 2:1	 Non-Flammable



2:1 Shrink Ratio (Class 3) — HSTTT in Standard Packages — 4' (1.2m) Pcs.

Part Number	Nominal Diameter	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*
HSTTT03-48-Q	30 AWG	.034 (0.9)	.015 (0.4)	.009 (0.2)	4 (1.2)	25 Pcs.
HSTTT04-48-Q	28 AWG	.038 (1.0)	.018 (0.5)	.009 (0.2)	4 (1.2)	25 Pcs.
HSTTT046-48-Q	26 AWG	.046 (1.2)	.022 (0.5)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTT05-48-Q	24 AWG	.050 (1.3)	.027 (0.7)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTT055-48-Q	22 AWG	.055 (1.4)	.032 (0.8)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT06-48-Q	20 AWG	.060 (1.5)	.039 (1.0)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT08-48-Q	18 AWG	.076 (1.9)	.049 (1.2)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT09-48-Q	16 AWG	.093 (2.3)	.061 (1.6)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT12-48-Q	14 AWG	.120 (3.0)	.072 (1.8)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT15-48-Q	12 AWG	.150 (3.8)	.089 (2.3)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT19-48-Q	10 AWG	.191 (4.9)	.112 (2.8)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTT24-48-Q	8 AWG	.240 (6.0)	.141 (3.6)	.015 (0.4)	4 (1.2)	25 Pcs.
HSTTT30-48-Q	6 AWG	.302 (7.7)	.178 (4.5)	.015 (0.4)	4 (1.2)	25 Pcs.
HSTTT37-48-Q	4 AWG	.370 (9.4)	.224 (5.7)	.015 (0.4)	4 (1.2)	25 Pcs.
HSTTT43-48-Q	2 AWG	.430 (10.9)	.278 (7.0)	.015 (0.4)	4 (1.2)	25 Pcs.
HSTTT47-48-Q	0 AWG	.470 (11.9)	.347 (8.8)	.015 (0.4)	4 (1.2)	25 Pcs.
HSTTT56-48-5	9/16	.560 (14.2)	.399 (10.1)	.015 (0.4)	4 (1.2)	5 Pcs.
HSTTT66-48-5	5/8	.655 (16.6)	.462 (11.7)	.018 (0.5)	4 (1.2)	5 Pcs.
HSTTT75-48-5	3/4	.750 (19.0)	.524 (13.3)	.018 (0.5)	4 (1.2)	5 Pcs.
HSTTT93-48-5	15/16	.930 (23.6)	.655 (16.6)	.020 (0.5)	4 (1.2)	5 Pcs.
HSTTT112-48-5	1 1/8	1.125 (28.6)	.786 (20.0)	.025 (0.6)	4 (1.2)	5 Pcs.
HSTTT131-48-2	1 5/16	1.310 (33.3)	.911 (23.1)	.030 (0.8)	4 (1.2)	2 Pcs.
HSTTT150-48-2	1 1/2	1.500 (38.1)	1.036 (26.3)	.030 (0.8)	4 (1.2)	2 Pcs.

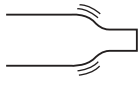
*Order in multiples of std. pkg. qty.
▲Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.
‡TEFLON is a registered trademark of E.I. DuPont de Nemours Co.

HSTTK KYNAR® Heat Shrink

- For dry locations
- Semi-rigid, highly heat resistant
- Offers excellent chemical and abrasion resistance
- Use in high temperature or solvent rich environment
- Color is milky clear



IP62

Type	Material		
HSTTK	 Polyvinylidene Fluoride		
 600V	 -67°F to 347°F (-55°C to 175°C)	 AMS-DTL-23053/8	 VW-1
 Semi-Rigid	 Shrink Ratio:▲ 2:1	 Highly Flame Retardant VW-1	



HSTTK in Standard Packages — 4' (1.2m) Pieces

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*
HSTTK05-48-Q	3/64	.046 (1.2)	.023 (0.6)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTK06-48-Q	1/16	.063 (1.6)	.031 (0.8)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTK09-48-Q	3/32	.093 (2.4)	.046 (1.2)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTK12-48-Q	1/8	.125 (3.2)	.062 (1.6)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTK19-48-Q	3/16	.187 (4.8)	.093 (2.4)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTK25-48-Q	1/4	.250 (6.4)	.125 (3.2)	.010 (0.3)	4 (1.2)	25 Pcs.
HSTTK38-48-Q	3/8	.375 (9.5)	.187 (4.8)	.012 (0.3)	4 (1.2)	25 Pcs.
HSTTK50-48-5	1/2	.500 (12.7)	.250 (6.4)	.012 (0.3)	4 (1.2)	5 Pcs.
HSTTK75-48-5	3/4	.750 (19.0)	.375 (9.5)	.017 (0.4)	4 (1.2)	5 Pcs.
HSTTK100-48-5	1	1.00 (25.4)	.500 (12.7)	.019 (0.5)	4 (1.2)	5 Pcs.

HSTTVA Heat Shrink

- For damp locations
- Flexible tubing with an adhesive inner wall which seals and protects components from moisture and corrosion



Type	Materials	
HSTTVA	Polyolefin Cross-Linked with Adhesive	
600V	-67°F to 230°F (-55°C to 110°C)	AMS-DTL-23053/4 Class 2
Flexible	Shrink Ratio:▲ 2:1	Outer Wall Flame Retardant



HSTTVA in Standard Packages — 4' (1.2m) Pieces — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*
HSTTVA12-48-Q	1/8	.125 (3.2)	.062 (1.6)	.020 (0.5)	4 (1.2)	25 Pcs.
HSTTVA19-48-Q	3/16	.187 (4.8)	.093 (2.4)	.022 (0.6)	4 (1.2)	25 Pcs.
HSTTVA25-48-Q	1/4	.250 (6.4)	.125 (3.2)	.030 (0.8)	4 (1.2)	25 Pcs.
HSTTVA38-48-Q	3/8	.375 (9.5)	.187 (4.8)	.031 (0.8)	4 (1.2)	25 Pcs.
HSTTVA50-48-5	1/2	.500 (12.7)	.250 (6.4)	.032 (0.8)	4 (1.2)	5 Pcs.
HSTTVA75-48-5	3/4	.750 (19.0)	.375 (9.5)	.037 (0.9)	4 (1.2)	5 Pcs.
HSTTVA100-48-5	1	1.00 (25.4)	.500 (12.7)	.046 (1.2)	4 (1.2)	5 Pcs.
HSTTVA150-48-5	1 1/2	1.50 (38.1)	.750 (19.0)	.049 (1.2)	4 (1.2)	5 Pcs.

Standard Packs of HSTTVA Heat Shrink — 6" (152.4mm) Pieces

HSTTVA — Black Only — Single Diameter

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTTVA12-Y	1/8	.125 (3.2)	.062 (1.6)	7 pcs.	10 Pkgs.
HSTTVA19-Y	3/16	.187 (4.8)	.093 (2.4)	7 pcs.	10 Pkgs.
HSTTVA25-Y	1/4	.250 (6.4)	.125 (3.2)	5 pcs.	10 Pkgs.
HSTTVA38-Y	3/8	.375 (9.5)	.187 (4.8)	4 pcs.	10 Pkgs.
HSTTVA50-Y	1/2	.500 (12.7)	.250 (6.4)	4 pcs.	10 Pkgs.
HSTTVA75-Y	3/4	.750 (19.0)	.375 (9.5)	3 pcs.	10 Pkgs.
HSTTVA100-Y	1	1.00 (25.4)	.500 (12.7)	2 pcs.	10 Pkgs.



*Order in multiples of std. pkg. qty.

▲ Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.

PANDUIT® Dual Wall Polyolefin **DAMP-SHRINK™** Heat Shrink Tubing

HSTTA Heat Shrink

- For damp locations
- Flexible tubing with adhesive inner wall, seals and protects components from moisture and corrosion
- The 3:1 shrink ratio is a benefit when working with connector to cable transitions



Type	Materials	
HSTTA	Polyolefin Cross-Linked with Adhesive	
 600V	 -67°F to 230°F (-55°C to 110°C)	 AMS-DTL-23053/4 Class 3
 Flexible	 Shrink Ratio: ▲ 3:1	 Outer Wall Flame Retardant



HSTTA in Standard and Bulk Packages — 4' (1.2m) Pieces — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*
HSTTA19-48-Q	3/16	.187 (4.8)	.062 (1.6)	.040 (1.0)	4 (1.2)	25 Pcs.
HSTTA25-48-Q	1/4	.250 (6.4)	.080 (2.0)	.040 (1.0)	4 (1.2)	25 Pcs.
HSTTA25-48-TL	1/4	.250 (6.4)	.080 (2.0)	.040 (1.0)	4 (1.2)	250 Pcs.
HSTTA38-48-Q	3/8	.375 (9.5)	.120 (3.0)	.055 (1.4)	4 (1.2)	25 Pcs.
HSTTA38-48-TL	3/8	.375 (9.5)	.120 (3.0)	.055 (1.4)	4 (1.2)	250 Pcs.
HSTTA50-48-5	1/2	.500 (12.7)	.160 (4.1)	.070 (1.8)	4 (1.2)	5 Pcs.
HSTTA50-48-T	1/2	.500 (12.7)	.160 (4.1)	.070 (1.8)	4 (1.2)	200 Pcs.
HSTTA75-48-5	3/4	.750 (19.0)	.250 (6.4)	.085 (2.2)	4 (1.2)	5 Pcs.
HSTTA75-48-C	3/4	.750 (19.0)	.250 (6.4)	.085 (2.2)	4 (1.2)	100 Pcs.
HSTTA100-48-5	1	1.00 (25.4)	.320 (8.1)	.100 (2.5)	4 (1.2)	5 Pcs.
HSTTA100-48-L	1	1.00 (25.4)	.320 (8.1)	.100 (2.5)	4 (1.2)	50 Pcs.
HSTTA150-48-5	1 1/2	1.50 (38.1)	.510 (12.9)	.100 (2.5)	4 (1.2)	5 Pcs.
HSTTA150-48-Q	1 1/2	1.50 (38.1)	.510 (12.9)	.100 (2.5)	4 (1.2)	25 Pcs.

Standard Packs of HSTTA Heat Shrink — 6" (152.4mm) Pieces

HSTTA — Black Only — Single Diameter

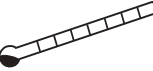
Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSTTA19-Y	3/16	.187 (4.8)	.062 (1.6)	6 pcs.	10 Pkgs.
HSTTA25-Y	1/4	.250 (6.4)	.080 (2.0)	4 pcs.	10 Pkgs.
HSTTA38-Y	3/8	.375 (9.5)	.120 (3.0)	3 pcs.	10 Pkgs.
HSTTA50-Y	1/2	.500 (12.7)	.160 (4.1)	3 pcs.	10 Pkgs.
HSTTA75-Y	3/4	.750 (19.0)	.250 (6.4)	2 pcs.	10 Pkgs.
HSTTA100-Y	1	1.00 (25.4)	.320 (8.1)	2 pcs.	10 Pkgs.
HSTTA150-Y	1 1/2	1.50 (38.1)	.510 (12.9)	1 pcs.	10 Pkgs.



HSTTRA Heat Shrink

- For damp locations
- Semi-rigid tubing
- Adhesive inner wall which seals and protects components from moisture and corrosion
- Provides a rugged seal from the elements



Type	Materials	
HSTTRA	 Polyolefin Cross-Linked with Adhesive	
 600V	 -67°F to 230°F (-55°C to 110°C)	 AMS-DTL-23053/4 Class 1
 Semi-Rigid	 Shrink Ratio:▲ 2.5:1	



HSTTRA in Standard Packages — 4' (1.2m) Pieces — Black Only

Part Number	Nominal Diameter in.	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Length Feet (m)	Std. Pkg. Qty.*
HSTTRA12-48-Q	1/8	.125 (3.2)	.023 (0.6)	.038 (1.0)	4 (1.2)	25 Pcs.
HSTTRA19-48-Q	3/16	.187 (4.8)	.060 (1.5)	.043 (1.1)	4 (1.2)	25 Pcs.
HSTTRA25-48-Q	1/4	.250 (6.4)	.080 (2.0)	.047 (1.2)	4 (1.2)	25 Pcs.
HSTTRA38-48-Q	3/8	.375 (9.5)	.135 (3.4)	.050 (1.3)	4 (1.2)	25 Pcs.
HSTTRA50-48-5	1/2	.500 (12.7)	.195 (5.0)	.059 (1.5)	4 (1.2)	5 Pcs.
HSTTRA75-48-5	3/4	.750 (19.0)	.313 (8.0)	.065 (1.7)	4 (1.2)	5 Pcs.
HSTTRA100-48-5	1	1.00 (25.4)	.400 (10.6)	.075 (1.9)	4 (1.2)	5 Pcs.

*Order in multiples of std. pkg. qty.

▲Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.

PANDUIT® Thick Wall Polyolefin **WET-SHRINK™** Heat Shrink Tubing

HST Thick Wall Heat Shrink

- Suitable for wet locations and direct burial according to UL 486D
- Provides excellent protection above or below ground level
- Adhesive lined inner wall seals and protects against moisture



Type	Material		
HST	Polyolefin Cross-Linked with Adhesive		
 600V	 -85°F to 230°F (-65°C to 110°C)	 AMS-DTL-23053/15 (HST only)	
 Rigid	 Shrink Ratio:▲ 3:1	 Flame Retardant	

(Black Only)
Including HST3.0

Listed 6R72
(except HST3.0)



Thick Wall Heat Shrink Part Number System

HST 0.4 - 3 - Q 2				
Type	Expanded Diameter	Tube Length	Package Quantity	Color
HST	0.4 = .40" (10.2mm) 0.8 = .80" (20.3mm) 1.1 = 1.10" (27.9mm) 1.5 = 1.50" (38.1mm) 2.0 = 2.00" (50.8mm) 3.0 = 3.00" (76.2mm)	3 = 3" (76.2mm) 6 = 6" (152.4mm) 9 = 9" (228.6mm) 12 = 12" (304.8mm) 48 = 4' (1.2m)	1 = 1 Pc. 2 = 2 Pcs. 3 = 3 Pcs. 5 = 5 Pcs. X = 10 Pcs. Q = 25 Pcs.	None = Black 2 = Red

HST in Standard Packages

Part Number (Black)	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Conductor Size Range AWG/kcmil (mm²)	Minimum Cable O.D. in. (mm)	Maximum Connector O.D. in. (mm)	Tube Length in. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HST0.4-3-Q‡ HST0.4-6-3 HST0.4-6-X‡ HST0.4-48-5‡	.40 (10.1)	.15 (3.8)	.09 (2.3)	#12-#6 (4-16)	.170 (4.3)	.350 (8.9)	3 (76.2) 6 (152.4) 6 (152.4) 4' (1.2M)	25 Pcs. 3 Pcs. 10 Pcs. 5 Pcs.	4 Pkgs. 10 Pkgs. 10 Pkgs. 4 Pkgs.
HST0.8-6-3 HST0.8-6-X‡ HST0.8-9-X‡ HST0.8-12-5‡ HST0.8-48-5‡	.80 (20.3)	.25 (6.4)	.11 (2.8)	#8-#1/0 (10-55)	.240 (6.1)	.650 (16.5)	6 (152.4) 6 (152.4) 9 (228.6) 12 (304.8) 4' (1.2M)	3 Pcs. 10 Pcs. 10 Pcs. 5 Pcs. 5 Pcs.	10 Pkgs. 10 Pkgs. 10 Pkgs. 10 Pkgs. 4 Pkgs.
HST1.1-6-3 HST1.1-6-X‡ HST1.1-9-2 HST1.1-9-X‡ HST1.1-12-5‡ HST1.1-48-5‡	1.10 (27.9)	.37 (9.4)	.12 (3.0)	#2-#4/0 (35-120)	.400 (10.1)	.875 (22.2)	6 (152.4) 6 (152.4) 9 (228.6) 9 (228.6) 12 (304.8) 4' (1.2M)	3 Pcs. 10 Pcs. 2 Pcs. 10 Pcs. 5 Pcs. 5 Pcs.	10 Pkgs. 10 Pkgs. 10 Pkgs. 10 Pkgs. 10 Pkgs. 4 Pkgs.
HST1.5-9-X HST1.5-12-1 HST1.5-12-5 HST1.5-48-5	1.50 (38.1)	.50 (12.7)	.17 (4.3)	#3/0-400 kcmil (95-185)	.600 (15.2)	1.190 (30.2)	9 (228.6) 12 (304.8) 12 (304.8) 4' (1.2M)	10 Pcs. 1 Pc. 5 Pcs. 5 Pcs.	10 Pkgs. 10 Pkgs. 10 Pkgs. 4 Pkgs.
HST2.0-9-5 HST2.0-12-2 HST2.0-48-2	2.00 (50.8)	.67 (16.9)	.17 (4.3)	250-600 kcmil (125-300)	.750 (19.1)	1.600 (40.6)	9 (228.6) 12 (304.8) 4' (1.2M)	5 Pcs. 2 Pcs. 2 Pcs.	10 Pkgs. 10 Pkgs. 4 Pkgs.
HST3.0-12-2 HST3.0-48-2	3.00(76.2)	1.00 (25.4)	.17 (4.3)	600-1250 kcmil (300-625)	1.20 (30.5)	2.250 (57.2)	12 (304.8) 4' (1.2M)	2 Pcs. 2 Pcs.	10 Pkgs. 4 Pkgs.

HSEC Thick Wall End Caps

- For wet locations
- Provides excellent protection for sealing ends of wire or cable
- Adhesive lined inner wall seals and protects against moisture



Type	Materials
HSEC	 Polyolefin Cross-Linked with Adhesive
 600V	 -67°F to 221°F (-55°C to 105°C)
 Rigid	 Shrink Ratio:▲ 3:1



Thick Wall End Caps Part Number System



Thick Wall End Caps in Standard Packages — Black Only

Part Number	Minimum Expanded I.D. in. (mm)	Maximum Recovered I.D. in. (mm)	Nominal Recovered Wall Thickness in. (mm)	Conductor Size	Cap Length in. (mm)	Std. Pkg. Qty.*	Std. Ctn. Qty.
HSEC0.5-X	.47 (11.9)	.18 (4.6)	.10 (2.5)	#8 TO #4 AWG (10 TO 25mm ²)	1.38 (35.1)	10 Pcs.	10 Pkgs.
HSEC0.8-X	.79 (20.1)	.30 (7.6)	.10 (2.5)	#4 TO 3/0 AWG (25 TO 95mm ²)	2.13 (54.1)	10 Pcs.	10 Pkgs.
HSEC1.0-X	1.02 (25.9)	.45 (11.4)	.10 (2.5)	#2 TO 4/0 AWG (35 TO 95mm ²)	3.23 (82.0)	10 Pcs.	10 Pkgs.
HSEC1.5-5	1.58 (40.1)	.68 (17.3)	.11 (2.8)	250 TO 500 kcmil (120 TO 240mm ²)	3.86 (98.0)	5 Pcs.	10 Pkgs.
HSEC2.0-5	2.25 (57.2)	.87 (22.1)	.15 (3.8)	600 TO 1000 kcmil (300 TO 500mm ²)	5.52 (140.2)	5 Pcs.	10 Pkgs.
HSEC4.0-2	4.14 (105.2)	1.78 (45.2)	.15 (3.8)	1500 TO 2000 kcmil (720 TO 1000mm ²)	6.90 (175.3)	2 Pcs.	5 Pkgs.

*Order in multiples of std. pkg. qty.

▲Shrink ratios are approximations; please refer to above ordering information for the exact min. expanded and max. recovered I.D.'s.

Plastic Kit Boxes

- Provides organized storage for a wide variety of parts in one convenient location
- Informative label eliminates guess work:
 - Specifies correct heat shrink usage based on wire range and connector size
 - Provides reorder part number information
- Once top is closed, loose pieces remain in their 6 compartments
- Available with non-adhesive or adhesive lined heat shrink tubing for dry and damp locations



KP-HSTT1 Contents		For Dry Locations	
BLACK POLYOLEFIN <i>DRY-SHRINK™</i> HEAT SHRINK TUBING (TYPE HSTT) IN 6" (152.4mm) LENGTHS 2:1 SHRINK RATIO			
		 	
		AMS-DTL-23053/5 CLASS 1	
35 EACH HSTT09 3/32" (2.4mm) I.D. HSTT12 1/8" (3.2mm) I.D.	21 EACH HSTT19 3/16" (4.8mm) I.D. HSTT25 1/4" (6.4mm) I.D.	7 EACH HSTT38 3/8" (9.5mm) I.D. HSTT50 1/2" (12.7mm) I.D.	



KP-HSTT2 Contents		For Dry Locations	
MULTIPLE COLOR POLYOLEFIN <i>DRY-SHRINK™</i> HEAT SHRINK TUBING (TYPE HSTT) IN 6" (152.4mm) LENGTHS 2:1 SHRINK RATIO			
 (Except Clear)		 (Except Clear)  (Except Clear) AMS-DTL-23053/5 CLASS 1 & 2	
35 EACH HSTT09 3/32" (2.4mm) I.D. - 7 COLORS HSTT12 1/8" (3.2mm) I.D. - 7 COLORS	21 EACH HSTT19 3/16" (4.8mm) I.D. - 7 COLORS HSTT25 1/4" (6.4mm) I.D. - 7 COLORS	7 EACH HSTT38 3/8" (9.5mm) I.D. - 7 COLORS HSTT50 1/2" (12.7mm) I.D. - 7 COLORS	

Note: Colors include: Red, Yellow, Green, Blue, White, Clear and Black.



KP-HSTTA Contents		For Damp Locations	
ADHESIVE LINED BLACK POLYOLEFIN <i>DAMP-SHRINK™</i> HEAT SHRINK TUBING (TYPE HSTTA) IN 6" (152.4mm) LENGTHS 3:1 SHRINK RATIO			
		AMS-DTL-23053/4 CLASS 3	
14 EACH HSTTA19 3/16" (4.8mm) I.D.	10 EACH HSTTA38 3/8" (9.5mm) I.D.	3 EACH HSTTA75 3/4" (19.0mm) I.D.	
12 EACH HSTTA25 1/4" (6.4mm) I.D.	6 EACH HSTTA50 1/2" (12.7mm) I.D.	2 EACH HSTTA100 1" (25.4mm) I.D.	

Order number of kits required.



Mica insulation in the heat element provides extended life to HSG Heat Tools.



HSG Heat tool with stand



Heat Reflector Accessory slips onto heat tools



Heat Concentrator Accessory directs heat to reduce shrink time



DCT — Cutting Tool



Carrying Case

Heat Tools

Part Number	Listed 826N (Heat Tools only)	(Heat Tools only)	Std. Pkg. Qty
HSG-115V-650	Description - High temperature tool — For use on <i>PANDUIT</i>® HSTT, HSTTA, HSTTF, HSTTR, HSTTK, HSTTRA, HST and HSEC - Air intake regulator varies temperature from 650°F (344°C) to 900°F (482°C) 115 Volt, 10 AMP - Neoprene jacketed cord with molded strain relief - Adjustable stand included - Replaceable bearings, brushes and heating elements		1

Accessories

Part Number	Description	Std. Pkg. Qty
HSG-A1	- Shrink tube reflector for tubing up to 3/4" inside diameter - Directs heat around the tubing to reduce shrink time	1
HSG-A2	- Shrink tube reflector for tubing up to 1 1/2" inside diameter - Directs heat around the tubing to reduce shrink time	1
HSG-A3	- Shrink tube concentrator - Directs heat toward tubing and away from heat sensitive items	1
HSG-A4	- Black polyethylene carrying case - Stores heat tool, stand and all three accessories	1
DCT	Cutting tool for use with HST Thick Wall Heat Shrink Tubing only	1

Replacement Parts

Part Number	Description	Std. Pkg. Qty
HSG-P1	• Brush/Spring Kit	1
HSG-P2	• Switch 20 Amp	1
HSG-P3	• Bearing Kit	1
HSG-P7	• Heat Element 650°F	1

Order number of heat tools, accessories and replacement parts required.

Heat Shrink Installation Instructions

General Instructions

Position heat shrink over the object to be covered. Using a heat gun, soft yellow flame torch, infrared heat source or oven, evenly heat the tubing until it has fully recovered and conforms to the object. Use caution not to char or burn the tubing.

Special Instructions for HSTTT

TFE tubing is the most difficult to shrink due to its high shrink temperature. TFE shrink tubing must be heated to the gel state 621°F (327°C) to completely recover. This can be recognized when the tubing changes from milky white to clear color. It can be shrunk with a heat gun or torch, however, it is very difficult to use these methods since they have a tendency to overheat the tube in one area while other areas remain too cool. The most reliable way to shrink TFE is in an oven. Position the heat shrink over the object to be covered and place it in an oven set at 800°F (427°C) until the tubing turns clear. Once clear, remove assembly from oven to prevent over heating and allow it to cool at room temperature. Do not quench in cold air or water. Large objects, particularly metal tubing or rods, must be preheated to get a uniform shrink.

Size Selection for Heat Shrink Tubing

Generally, the largest tube that shrinks down tightly onto an object should be chosen. This allows the heat shrink tubing maximum stress relief and this will yield the longest service life.

Example:

A multi-conductor cable needs to be covered with HSTT Type *DRY-SHRINK™* Heat Shrink. The area to be covered has a measured outside diameter of .700" (17.8mm). The two possibilities are HSTT75-48-5 and HSTT100-48-5.

Part Number	Expanded I.D. in. (mm)	Recovered I.D. in. (mm)
HSTT75-48-5	.750 (19.0)	.375 (9.5)
HSTT100-48-5	1.00 (25.4)	.500 (12.7)

The proper choice is HSTT100-48-5 since the tube will recover more than HSTT75-48-5. The HSTT75-48-5 will fit over the .700" (17.8mm) outside diameter; however, this is not the proper choice since it is smaller than the HSTT100-48-5. In general, heat shrink should recover at least 10-20% to reduce stress and yield

Recommended Tubing Size for Common Wire Types Based on Location

For Insulated Wire, Non-insulated Wire and Insulated Wire With Copper Connectors

Instructions for tube selection:

1) Determine Location Type.

LOCATION:

DRY — IP62: A location not normally subject to dampness or wetness. A location classified as dry may be temporarily subject to dampness or wetness, as in the case of a building under construction.

DAMP — IP66: Partially protected locations under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns and some cold-storage warehouses.

WET — IP68: Installations underground or in concrete slabs or masonry in direct contact with the earth, and locations subject to saturation with water or other liquids, such as vehicle washing areas, and locations exposed to weather and unprotected.

2) Match wire size to location type under required application — insulated wire, non-insulated wire, or insulated wire with copper connectors.

3) Read corresponding part number.

4) Part numbers with “-Y” are packages containing 6” pieces. Part numbers with “-48” are 48” pieces.

5) Part numbers shown below are for black heat shrink. Consult relevant catalog section for color options.

Wire Size	Insulated Wire			Uninsulated Wire			Insulated Wire with Copper Connector		
	DRY-SHRINK™	DAMP-SHRINK™	WET-SHRINK™	DRY-SHRINK™	DAMP-SHRINK™	WET-SHRINK™	DRY-SHRINK™	DAMP-SHRINK™	WET-SHRINK™
24	HSTT12-Y	HSTTA19-Y	—	—	—	—	HSTT12-Y	—	—
22	HSTT12-Y	HSTTA19-Y	—	—	—	—	HSTT12-Y	—	—
20	HSTT12-Y	HSTTA19-Y	—	HSTT06-Y	—	—	HSTT19-Y	HSTTA19-Y	—
18	HSTT19-Y	HSTTA19-Y	—	HSTT06-Y	—	—	HSTT19-Y	HSTTA19-Y	—
16	HSTT19-Y	HSTTA25-Y	—	HSTT06-Y	—	—	HSTT19-Y	HSTTA25-Y	—
14	HSTT19-Y	HSTTA25-Y	—	HSTT12-Y	HSTTA19-Y	—	HSTT19-Y	HSTTA25-Y	—
12	HSTT25-Y	HSTTA38-Y	HST0.4-48-5	HSTT12-Y	HSTTA19-Y	—	HSTT25-Y	HSTTA38-Y	HST0.4-48-5
10	HSTT25-Y	HSTTA38-Y	HST0.4-48-5	HSTT19-Y	HSTTA25-Y	—	HSTT25-Y	HSTTA38-Y	HST0.4-48-5
8	HSTT38-Y	HSTTA50-Y	HST0.4-48-5	HSTT25-Y	HSTTA25-Y	—	HSTT38-Y	HSTTA50-Y	HST0.4-48-5
6	HSTT50-Y	HSTTA50-Y	HST0.8-48-5	HSTT25-Y	HSTTA38-Y	HST0.4-48-5	HSTT50-Y	HSTTA50-Y	HST0.8-48-5
4	HSTT50-Y	HSTTA75-Y	HST0.8-48-5	HSTT38-Y	HSTTA38-Y	HST0.4-48-5	HSTT50-Y	HSTTA75-Y	HST0.8-48-5
3	HSTT50-Y	HSTTA75-Y	HST0.8-48-5	HSTT38-Y	HSTTA50-Y	HST0.4-48-5	HSTT50-Y	HSTTA75-Y	HST0.8-48-5
2	HSTT75-Y	HSTTA100-Y	HST0.8-48-5	HSTT50-Y	HSTTA50-Y	HST0.8-48-5	HSTT75-Y	HSTTA100-Y	HST0.8-48-5
1	HSTT75-Y	HSTTA100-Y	HST0.8-48-5	HSTT50-Y	HSTTA50-Y	HST0.8-48-5	HSTT75-Y	HSTTA100-Y	HST1.1-48-5
1/0	HSTT75-Y	HSTTA100-Y	HST1.1-48-5	HSTT50-Y	HSTTA75-Y	HST0.8-48-5	HSTT75-Y	HSTTA100-Y	HST1.1-48-5
2/0	HSTT100-Y	HSTTA100-Y	HST1.1-48-5	HSTT50-Y	HSTTA75-Y	HST0.8-48-5	HSTT100-Y	HSTTA100-Y	HST1.1-48-5
3/0	HSTT100-Y	HSTTA150-Y	HST1.1-48-5	HSTT75-Y	HSTTA100-Y	HST0.8-48-5	HSTT100-Y	HSTTA150-Y	HST1.5-48-5
4/0	HSTT100-Y	HSTTA150-Y	HST1.5-48-5	HSTT75-Y	HSTTA100-Y	HST1.1-48-5	HSTT100-Y	HSTTA150-Y	HST1.5-48-5
250	HSTT100-Y	HSTTA150-Y	HST1.5-48-5	HSTT100-Y	HSTTA100-Y	HST1.1-48-5	HSTT100-Y	HSTTA150-Y	HST1.5-48-5
300	HSTT150-48-5	HSTTA150-Y	HST1.5-48-5	HSTT100-Y	HSTTA100-Y	HST1.1-48-5	HSTT150-Y	HSTTA150-Y	HST1.5-48-5
350	HSTT150-48-5	HSTTA150-Y	HST1.5-48-5	HSTT100-Y	HSTTA150-Y	HST1.5-48-5	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2
400	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT100-Y	HSTTA150-Y	HST1.5-48-5	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2
500	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT100-Y	HSTTA150-Y	HST1.5-48-5	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2
600	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2
700	HSTT200-48-5	HSTTA150-Y	HST2.0-48-2	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT200-48-5	—	HST2.0-48-2
750	HSTT200-48-5	HSTTA150-Y	HST3.0-48-2	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT200-48-5	—	HST3.0-48-2
800	HSTT200-48-5	—	HST3.0-48-2	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT200-48-5	—	HST3.0-48-2
900	HSTT200-48-5	—	HST3.0-48-2	HSTT150-48-5	HSTTA150-Y	HST2.0-48-2	HSTT200-48-5	—	HST3.0-48-2
1000	HSTT200-48-5	—	HST3.0-48-2	HSTT200-48-5	HSTTA150-Y	HST2.0-48-2	HSTT200-48-5	—	HST3.0-48-2
1250	HSTT300-48-2	—	HST3.0-48-2	HSTT200-48-5	HSTTA150-Y	HST2.0-48-2	—	—	HST3.0-48-2
1500	HSTT300-48-2	—	HST3.0-48-2	HSTT200-48-5	—	HST3.0-48-2	—	—	—
1750	HSTT300-48-2	—	HST3.0-48-2	HSTT200-48-5	—	HST3.0-48-2	—	—	—
2000	HSTT300-48-2	—	HST3.0-48-2	HSTT200-48-5	—	HST3.0-48-2	—	—	—

Sizing information is based on the following wire types: MTW, THHN, THWN, TFN, THW, TW, TF, RHW, RH, RHH AND UL1015.

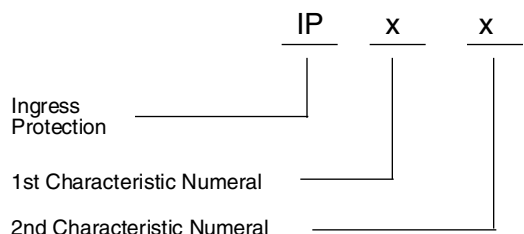
THHN is the most common wire type.

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PANDUIT® IP (Ingress Protection) as defined by the International Standard IEC 529

The IEC 529 international standard describes a system for classifying the degrees of protection provided by the enclosures of electrical equipment and is a recognized standard around the world. An independent test laboratory has tested *PANDUIT®* Heat Shrink Tubing to the IEC 529 standard. The following information exhibits the IP ratings for *PANDUIT®* Heat Shrink tubing and how each of the IP ratings relates to the USA.



The first characteristic numeral indicates the level of protection against the ingress of solid foreign objects.

The second characteristic numeral indicates the level of protection against the ingress of water.

1st Characteristic Numeral			2nd Characteristic Numeral		
<i>PANDUIT®</i> Heat Shrink	Ingress Protection (IP)	Meaning for Protection	<i>PANDUIT®</i> Heat Shrink	Ingress Protection (IP)	Meaning for Protection
	Against ingress of solid object			Against ingress of water	
	0	Non-Protected		0	Non-Protected
	1	50mm diameter		1	Vertically Dripping
	2	12.5mm diameter	<i>DRY-SHRINK™</i> Heat Shrink Tubing	2	Dripping (15° tilted)
	3	2.5mm diameter		3	Spraying
	4	1.0mm diameter		4	Splashing
	5	Dust Protected		5	Jetting
<i>DRY-SHRINK™</i> , <i>DAMP-SHRINK™</i> and <i>WET-SHRINK™</i>	6	Dust Tight	<i>DAMP-SHRINK™</i> Heat Shrink Tubing	6	Powerful Jetting
				7	Temporary Immersion
			<i>WET-SHRINK™</i> Heat Shrink Tubing	8	Continuous Immersion

	Intended Application Location:	Ingress Protection Rating:	Description:
	DRY Locations not normally subject to moisture	IP62	Protected against the ingress of dust but not protected against the ingress of water.
	DAMP Locations subjected to moderate degrees of water and moisture	IP66	Protected against the ingress of dust and protected against the ingress of a power jet of water.
	WET Locations are defined as underground burial or immersion in water	IP68	Protected against the ingress of dust and protected against the ingress of water to a depth of 10 meters.

Does not include *PANDUIT® DRY-SHRINK™* HSTTT (TEFLON —TFE)

DRY-SHRINK™ Heat Shrink has been tested in accordance with EN 60529 paragraph 13.4 thereby providing *PANDUIT® DRY-SHRINK™* Heat Shrink with an ingress protection rating of IP62.

DAMP-SHRINK™ Heat Shrink has been tested in accordance with EN 60529 paragraph 13.4 and with paragraph 14.2.6 thereby providing *PANDUIT® DAMP-SHRINK™* with an ingress protection rating of IP66.

WET-SHRINK™ Heat Shrink has been tested in accordance with EN 60529 paragraph 13.4, paragraph 14.2.6 and with paragraph 14.2.7 thereby providing *WET-SHRINK™* Heat Shrink with an ingress protection rating of IP68. *PANDUIT® WET-SHRINK™* Heat Shrink has passed EN 60529 paragraph 14.2.7 at depth of 10 meters.

Technical Data

General Information

Product Type	Typical Applications	Specific Gravity	Flammability	Water Absorption	Dielectric Strength	Page No.
HSTT	Economical and easy way to insulate, protect, harness and identify electrical and electronic components in a wide variety of applications. Black is U.V. Resistant.	Class 1, 1.35 Class 2, 1.0 ASTM D792	Class 1 Self Extinguishing Class 2 N/A ASTM D2671 Procedure B	0.5% MAX. ASTM D570	500 V/MIL. (19.7 Kv/mm) min. ASTM D2671	141-144
HSTTV	Use where UL recognition with VW-1 rating is required. Use where the wire component cannot tolerate higher shrink temperatures, reduces application time to insulate, protect, identify, etc. Black is U.V. Resistant.	1.50 ASTM D792	Self Extinguishing ASTM D2671 Procedure C	0.5% MAX. ASTM D570	500 V/MIL. (19.7 Kv/mm) min. ASTM D2671	145-146
HSTTVA	Seals and protects components from moisture and corrosion. Use where a flexible tubing is needed. Suitable for damp locations.	N/A	Self Extinguishing ASTM D2671 Procedure B	0.5% MAX. ASTM D570	500 V/MIL. (19.7 Kv/mm) min. ASTM D2671	151
HSTTRA	Environmentally seals and protects components forming a rugged and heavy duty covering. The 2.5:1 shrink ratio is a benefit when working with connector to cable transitions. Suitable for damp locations.	N/A	N/A	0.5% MAX. ASTM D570	500 V/MIL. (19.7 Kv/mm) min. ASTM D2671	153
HSTTA	Environmentally seals and protects components. The 3:1 shrink ratio is a benefit when working with connector to cable transitions. Suitable for damp locations.	N/A	Self Extinguishing ASTM D2671 Procedure B	1.0% MAX. ASTM D570	300 V/MIL. (11.8 Kv/mm) min. ASTM D2671	152
HST	Seals and protects electrical connections and splices above or below ground, 3:1 shrink ratio. Suitable for outdoor and wet locations.	1.2 MAX.	Self Extinguishing ASTM D2671 Procedure C	0.5% MAX. ASTM D570	200 V/MIL. (7.9 Kv/mm) min. ASTM D2671	154
HSTTP	Ripple free conformance around sharp bends as in appliance handles and bus bars. Good cut through and solder-iron resistance. Black is U.V. Resistant.	1.35 MAX.	Self Extinguishing ASTM D876	1.0% MAX. ASTM D570	400 V/MIL. (15.8 Kv/mm) min. ASTM D2671	147
HSTTN	Insulation and abrasion resistance, extensive military uses on vehicles and ship-board. Excellent chemical resistance especially to fuels and oils. Black is U.V. Resistant.	1.30 ASTM D792	Self Extinguishing ASTM D876	1.0% MAX. ASTM D570	300V/MIL. (11.8 Kv/mm) min. ASTM D2671	148
HSTTK	Protection and strain relief for wires or connectors in a high temperature or solvent rich environment. Insulation of heater leads.	1.8 MAX. ASTM D792	Pass MIL-DTL-23053/8B 4.6.15.3	0.5% MAX. ASTM D570	Size to .500" (12.7mm) 800V/MIL. (31.5 Kv/mm) min. Over .500" (12.7mm) 600 V/MIL (23.6 Kv/mm) min. ASTM D2671	150
HSTTT	High insulation and abrasion resistance. High temperature, strain relief, resists corrosive atmospheres, self lubrication and non-wetting. Can be used with fiber optics and as a strain relief for high density connectors. It is U.V. Resistant	2.2 MAX. ASTM D792	N/A Non-flammable	0.01% MAX. ASTM D570	800 V/MIL. (31.5 Kv/mm) min. ASTM D2671	149

Non-Shrink PVC Tubing

- Provides insulation and protection for lead wires, wire harness assemblies, soldered joints and components in electrical and electronic equipment
- Material: Polyvinyl chloride (PVC)
- Voltage Rating: 300V and 600V
- All purpose, flexible, non-shrinkable
- Resistant to heat and moisture
- Applicable Specifications:
UL224 VW-1
CSA C22.2 No. 198.1 (OFT)
ASTM D-922, Grade CFR
MIL-I-631, Type F, Form U, Grade C
Class 1, Category 1



The Functional Part Number System Makes Ordering Easy

Non-Shrink PVC Tubing Part Number System

TV105 - 19 M

Type	Nominal Size		Package Quantity
Polyvinyl Chloride Tubing	22 = 22 AWG	4 = 4 AWG	L = 50' (15.2m)
	20 = 20 AWG	3 = 3 AWG	C = 100' (30.5m)
	19 = 19 AWG	2 = 2 AWG	TL = 250' (76.2m)
	18 = 18 AWG	1 = 1 AWG	D = 500' (152.4m)
	16 = 16 AWG	0 = 0 AWG	M = 1000' (304.8m)
	15 = 15 AWG	.25 = 1/4"	2.5M = 2500' (762m)
	14 = 14 AWG	.31 = 5/16"	
	12 = 12 AWG	.38 = 3/8"	
	10 = 10 AWG	.44 = 6/16"	
	9 = 9 AWG	.50 = 1/2"	
	8 = 8 AWG	.56 = 9/16"	
	7 = 7 AWG	.63 = 5/8"	
	6 = 6 AWG	.75 = 3/4"	
	5 = 5 AWG	1.0 = 1"	

Non-Shrink PVC Tubing



Type	Materials	
TV105	 Polyvinyl Chloride	
 300V/600V**	 -4°F to 221°F (-20°C to 105°C)	 MIL-I-631, Type F, Form U Grade C Class 1, Cat 1
 Highly Flexible	 Oil Resistant	 Highly Flame Retardant VW-1

Part Number Clear	Part Number Black	Nominal Size/ Trade Name	Inside Diameter — in. (mm)		Wall Thickness in. (mm)	Max. Volt Rating**	Std. Pkg. Qty.*	Std. Ctn. Qty.
			Maximum	Minimum				
TV105-242.5M	TV105-242.5M20	24 AWG	.027 (0.68)	.020 (0.51)	.012 (.30)	300V	2500 (762m)	2 Reels
TV105-222.5M	TV105-222.5M20	22 AWG	.032 (0.81)	.025 (0.69)			2500 (762m)	2 Reels
TV105-20M	TV105-20M20	20 AWG	.039 (0.99)	.032 (0.81)	1000 (304.8m)		2 Reels	
TV105-19M	TV105-19M20	19 AWG	.042 (1.06)	.036 (0.91)	1000 (304.8m)		2 Reels	
TV105-18M	TV105-18M20	18 AWG	.049 (1.24)	.040 (1.02)	1000 (304.8m)		2 Reels	
TV105-17M	TV105-17M20	17 AWG	.053 (1.34)	.045 (1.14)	1000 (304.8m)		2 Reels	
TV105-16M	TV105-16M20	16 AWG	.061 (1.54)	.051 (1.30)	1000 (304.8m)		2 Reels	
TV105-15M	TV105-15M20	15 AWG	.066 (1.67)	.057 (1.45)	1000 (304.8m)		2 Reels	
TV105-14M	TV105-14M20	14 AWG	.072 (1.82)	.064 (1.63)	1000 (304.8m)		2 Reels	
TV105-13M	TV105-13M20	13 AWG	.080 (2.03)	.072 (1.83)	1000 (304.8m)		2 Reels	
TV105-12D	TV105-12D20	12 AWG	.089 (2.26)	.081 (2.06)	500 (152.4m)		2 Reels	
TV105-11D	TV105-11D20	11 AWG	.101 (2.56)	.091 (2.31)	500 (152.4m)		2 Reels	
TV105-10D	TV105-10D20	10 AWG	.112 (2.84)	.102 (2.59)	500 (152.4m)		2 Reels	
TV105-9D	TV105-9D20	9 AWG	.124 (3.14)	.114 (2.90)	500 (152.4m)		2 Reels	
TV105-8D	TV105-8D20	8 AWG	.141 (3.58)	.129 (3.28)	500 (152.4m)		2 Reels	
TV105-7D	TV105-7D20	7 AWG	.158 (4.01)	.144 (3.66)	500 (152.4m)		2 Reels	
TV105-6TL	TV105-6TL20	6 AWG	.178 (4.52)	.162 (4.11)	250 (76.2m)		2 Reels	
TV105-5TL	TV105-5TL20	5 AWG	.198 (5.02)	.182 (4.62)	250 (76.2m)		2 Reels	
TV105-4TL	TV105-4TL20	4 AWG	.224 (5.68)	.204 (5.18)	250 (76.2m)		2 Reels	
TV105-3TL	TV105-3TL20	3 AWG	.249 (6.32)	.229 (5.82)	250 (76.2m)		2 Reels	
TV105-2TL	TV105-2TL20	2 AWG	.278 (7.06)	.258 (6.55)	250 (76.2m)		2 Reels	
TV105-1TL	TV105-1TL20	1 AWG	.311 (7.89)	.289 (7.34)	250 (76.2m)		2 Reels	
TV105-0TL	TV105-0TL20	0 AWG	.347 (8.81)	.325 (8.26)	250 (76.2m)		2 Reels	
TV105-.25TL	TV105-.25TL20	1/4	.265 (6.73)	.245 (6.22)	250 (76.2m)	2 Reels		
TV105-.31TL	TV105-.31TL20	5/16	.334 (8.48)	.313 (7.95)	.025 (.64)	600V	250 (76.2m)	2 Reels
TV105-.38TL	TV105-.38TL20	3/8	.399 (10.13)	.375 (9.53)			250 (76.2m)	2 Reels
TV105-.44TL	TV105-.44TL20	7/16	.462 (11.73)	.438 (11.13)			250 (76.2m)	2 Reels
TV105-.50TL	TV105-.50TL20	1/2	.524 (13.30)	.500 (12.70)	250 (76.2m)		2 Reels	
TV105-.56C	TV105-.56C20	9/16	.585 (14.85)	.563 (14.30)	.030 (.76)		100 (30.5m)	2 Reels
TV105-.63C	TV105-.63C20	5/8	.655 (16.63)	.625 (15.88)			100 (30.5m)	2 Reels
TV105-.75C	TV105-.75C20	3/4	.786 (19.96)	.750 (19.05)	.035 (.89)		100 (30.5m)	2 Reels
TV105-.88C	TV105-.88C20	7/8	.911 (23.13)	.875 (22.23)			100 (30.5m)	2 Reels
TV105-1.0L	TV105-1.0L20	1	1.036 (26.31)	1.000 (25.40)			50 (15.2m)	2 Reels
TV105-1.25L	TV105-1.25L20	1 1/4	1.290 (32.76)	1.250 (31.75)	.040 (1.02)		50 (15.2m)	2 Reels
TV105-1.50L	TV105-1.50L20	1 1/2	1.550 (39.37)	1.500 (38.10)	.045 (1.14)		50 (15.2m)	2 Reels

*Order in multiples of std. pkg. qty.

**UL voltage rating is a function of wall thickness.

Spiral Wrap



U.L. Recognized



- Large variety of colors, materials and sizes
- Available in seven different materials and twelve different colors
- Can be used to color code wire bundles
- Flexible, neat, fast
- Allows breakouts of single/multiple wires and rerouting of replacement wires
- Harness multiple cables into a single manageable bundle
- Abrasion protection for wires, cables, hoses and tubing
- Reusable
- Tool supplied in each package

Suggested Applications



- Organize wires for communication and computer equipment where access to the wires is required
- In OEM applications for protecting tubes and harnesses
- Abrasion protection for control panel wiring
- Personal computer and printer wire organization
- Protect glass tubes from abrasion and breakage
- Kink-proofing for all kinds of tubing... ideal for laboratories
- Eliminates lacing cord and tie-offs
- Use orange or yellow spiral wrap for protecting and identifying fiber optic cables

The Functional Part Number System Makes Ordering Easy

Spiral Wrap Part Number Description



Material Availability								
Color	Color Suffix*	Polyethylene	Weather Resistant Polyethylene	Fire Resistant Polyethylene	Flame Retardant Polyethylene	Nylon	Weather Resistant Nylon	TEFLON‡
Natural (Opaque to Translucent)	No Suffix will be listed	✓		✓ (Natural color is white)	✓ (Natural color is white)	✓		✓
Weather Resistant Black	0		✓				✓	
Brown	1	✓						
Red	2	✓						
Orange	3	✓						
Yellow	4	✓						
Green	5	✓						
Blue	6	✓						
Purple	7	✓						
Gray	8	✓						
White	10	✓						
Pink	16	✓						
Black	20			✓	✓			

Blank = Not applicable

*Colors are stocked for 1/4" and 1/2" polyethylene. Other sizes available, contact PANDUIT® Technical Assistance 866-405-6657.

‡TEFLON or equivalent fluorocarbon PTFE material is used. TEFLON is a registered trademark of E.I. DuPont de Nemours Co.



Part Number	Material	Color	A Outside Dia. in. (mm)	B in. (mm)	T in. (mm)	Bundle Size in. (mm)	Std. Pkg. Qty.* Ft. (m)	
T12F-C	Polyethylene	Natural	.125 (3.2)	.218 (5.5)	.03 (.76)	.064 (1.6) – .50 (12.7)	100 (30.5)	
T19F-C			.188 (4.8)	.250 (6.4)	.035 (.89)	.125 (3.2) – 1.00 (25.4)		
T25F-X				.25 (6.4)	.375 (9.5)	.04 (1.02)	.188 (4.8) – 2.00 (50.8)	10 (3.0)
T25F-C		100 (30.5)						
T25F-C1								
T25F-C10								
T25F-C16								
T25F-C2								
T25F-C3								
T25F-C4								
T25F-C5								
T25F-C6								
T25F-C7								
T25F-C8								
T38F-C		Natural	.375 (9.5)	.437 (11.1)	.055 (1.4)	.316 (7.9) – 3.00 (76.2)	10 (3.0)	
T50F-X				.50 (12.7)	.50 (12.7)	.06 (1.5)		.38 (9.5) – 4.00 (101.6)
T50F-C		100 (30.5)						
T50F-C1								
T50F-C10								
T50F-C16								
T50F-C2								
T50F-C3								
T50F-C4								
T50F-C5								
T50F-C6								
T50F-C7								
T50F-C8								
T62F-C		Natural	.625 (15.9)	.625 (15.9)	.062 (1.57)	.50 (12.7) – 4.50 (114.3)		
T75F-C			.75 (19.1)	.875 (22.2)	.065 (1.65)	.625 (15.9) – 5.00 (127.0)		
T100F-C			1 (25.4)	1.125 (28.6)	.07 (1.78)	.875 (22.2) – 6.00 (152.4)		
T12F-C0		Weather Resistant Polyethylene	Black	.125 (3.2)	.218 (5.5)	.03 (.760)	.064 (1.6) – .50 (12.7)	
T19F-C0				.188 (4.8)	.250 (6.4)	.035 (0.89)	.125 (3.2) – 1.00 (25.4)	
T25F-X0	.25 (6.4)			.375 (9.5)	.04 (1.02)	.188 (4.8) – 2.00 (50.8)	10 (3.0)	
T25F-C0	.375 (9.5)			.437 (11.1)	.055 (1.4)	.316 (7.9) – 3.00 (76.2)	100 (30.5)	
T38F-C0	.5 (12.7)			.5 (12.7)	.06 (1.5)	.375 (9.5) – 4.00 (101.6)	10 (3.0)	
T50F-X0	100 (30.5)							
T50F-C0								
T62F-C0								
T75F-C0								
T100F-C0	1 (25.4)			1.125 (28.6)	.07 (1.78)	.875 (22.2) – 6.00 (152.4)		



Part Number	Material	Color	A Outside Dia. in. (mm)	B in. (mm)	T in. (mm)	Bundle Size in. (mm)	Std. Pkg. Qty.* Ft. (m)
T12R-C	Fire Resistant Polyethylene UL94V-2	Natural	.125 (3.2)	.218 (5.5)	.03 (.76)	.064 (1.6) – .50 (12.7)	100 (30.5)
T19R-C		Natural	.188 (4.8)	.250 (6.4)	.035 (.89)	.125 (3.2) – 1.00 (25.4)	100 (30.5)
T25R-C		Natural	.25 (6.4)	.375 (9.5)	.04 (1.02)	.188 (4.8) – 2.00 (50.8)	100 (30.5)
T25R-C20		Black	.25 (6.4)	.375 (9.5)	.04 (1.02)	.188 (4.8) – 2.00 (50.8)	100 (30.5)
T38R-C		Natural	.375 (9.5)	.437 (11.1)	.055 (1.4)	.316 (7.9) – 3.00 (76.2)	100 (30.5)
T50R-C		Natural	.50 (12.7)	.50 (12.7)	.06 (1.5)	.375 (9.5) – 4.00 (101.6)	100 (30.5)
T62R-C		Natural	.625 (15.9)	.625 (15.9)	.062 (1.57)	.50 (12.7) – 4.50 (114.3)	100 (30.5)
T75R-C		Natural	.75 (19.1)	.875 (22.2)	.065 (1.65)	.625 (15.9) – 5.00 (127.0)	100 (30.5)
T100R-C		Natural	1.00 (25.4)	1.125 (28.6)	.07 (1.78)	.875 (22.2) – 6.00 (152.4)	100 (30.5)
T12FR-C	Flame Retardant Polyethylene UL94V-0	Natural	.125 (3.2)	.218 (5.5)	.03 (.76)	.064 (1.6) – .50 (12.7)	100 (30.5)
T12FR-C20		Black	.125 (3.2)	.218 (5.5)	.03 (.76)	.064 (1.6) – .50 (12.7)	100 (30.5)
T19FR-C		Natural	.188 (4.8)	.250 (6.4)	.032 (.81)	.125 (3.2) – 1.00 (25.4)	100 (30.5)
T19FR-C20		Black	.188 (4.8)	.250 (6.4)	.032 (.81)	.125 (3.2) – 1.00 (25.4)	100 (30.5)
T25FR-C		Natural	.25 (6.4)	.375 (9.5)	.04 (1.02)	.188 (4.8) – 2.00 (50.8)	100 (30.5)
T25FR-C20		Black	.25 (6.4)	.375 (9.5)	.04 (1.02)	.188 (4.8) – 2.00 (50.8)	100 (30.5)
T38FR-C		Natural	.375 (9.5)	.437 (11.1)	.055 (1.4)	.316 (7.9) – 3.00 (76.2)	100 (30.5)
T38FR-C20		Black	.375 (9.5)	.437 (11.1)	.055 (1.4)	.316 (7.9) – 3.00 (76.2)	100 (30.5)
T50FR-C		Natural	.50 (12.7)	.50 (12.7)	.06 (1.5)	.375 (9.5) – 4.00 (101.6)	100 (30.5)
T50FR-C20		Black	.50 (12.7)	.50 (12.7)	.06 (1.5)	.375 (9.5) – 4.00 (101.6)	100 (30.5)
T62FR-C		Natural	.625 (15.9)	.625 (15.9)	.062 (1.57)	.50 (12.7) – 4.50 (114.3)	100 (30.5)
T62FR-C20		Black	.625 (15.9)	.625 (15.9)	.062 (1.57)	.50 (12.7) – 4.50 (114.3)	100 (30.5)
T75FR-C		Natural	.75 (19.1)	.875 (22.2)	.065 (1.65)	.625 (15.9) – 5.00 (127.0)	100 (30.5)
T75FR-C20		Black	.75 (19.1)	.875 (22.2)	.065 (1.65)	.625 (15.9) – 5.00 (127.0)	100 (30.5)
T100FR-C		Natural	1.00 (25.4)	1.125 (28.6)	.07 (1.78)	.875 (22.2) – 6.00 (152.4)	100 (30.5)
T100FR-C20		Black	1.00 (25.4)	1.125 (28.6)	.07 (1.78)	.875 (22.2) – 6.00 (152.4)	100 (30.5)
T12N-C	Nylon (Black is Weather Resistant Nylon)	Natural	.125 (3.2)	.218 (5.5)	.015 (.38)	.064 (1.6) – .50 (12.7)	100 (30.5)
T12N-C0		Black	.125 (3.2)	.218 (5.5)	.015 (.38)	.064 (1.6) – .50 (12.7)	100 (30.5)
T19N-C		Natural	.188 (4.8)	.250 (6.4)	.020 (.51)	.125 (3.2) – 1.00 (25.4)	100 (30.5)
T19N-C0		Black	.188 (4.8)	.250 (6.4)	.020 (.51)	.125 (3.2) – 1.00 (25.4)	100 (30.5)
T25N-C		Natural	.25 (6.4)	.375 (9.5)	.023 (.58)	.188 (4.8) – 2.00 (50.8)	100 (30.5)
T25N-C0		Black	.25 (6.4)	.375 (9.5)	.023 (.58)	.188 (4.8) – 2.00 (50.8)	100 (30.5)
T38N-C		Natural	.375 (9.5)	.437 (11.1)	.03 (.76)	.316 (7.9) – 3.00 (76.2)	100 (30.5)
T38N-C0		Black	.375 (9.5)	.437 (11.1)	.03 (.76)	.316 (7.9) – 3.00 (76.2)	100 (30.5)
T50N-C		Natural	.50 (12.7)	.50 (12.7)	.032 (.81)	.375 (9.5) – 4.00 (101.6)	100 (30.5)
T50N-C0		Black	.50 (12.7)	.50 (12.7)	.032 (.81)	.375 (9.5) – 4.00 (101.6)	100 (30.5)
T62N-C		Natural	.625 (15.9)	.625 (15.9)	.035 (.89)	.50 (12.7) – 4.50 (114.3)	100 (30.5)
T62N-C0		Black	.625 (15.9)	.625 (15.9)	.03 (.89)	.50 (12.7) – 4.50 (114.3)	100 (30.5)
T75N-C		Natural	.75 (19.1)	.875 (22.2)	.04 (1.02)	.625 (15.9) – 5.00 (127.0)	100 (30.5)
T75N-C0		Black	.75 (19.1)	.875 (22.2)	.04 (1.02)	.625 (15.9) – 5.00 (127.0)	100 (30.5)
T100N-C		Natural	1.00 (25.4)	1.125 (28.6)	.045 (1.1)	.875 (22.2) – 6.00 (152.4)	100 (30.5)
T100N-C0		Black	1.00 (25.4)	1.125 (28.6)	.045 (1.1)	.875 (22.2) – 6.00 (152.4)	100 (30.5)
T12T-C	TEFLON‡	Natural	.125 (3.2)	.218 (5.5)	.02 (.5)	.064 (1.6) – .50 (12.7)	100 (30.5)
T19T-C		Natural	.188 (4.8)	.250 (6.4)	.03 (.76)	.125 (3.2) – 1.00 (25.4)	100 (30.5)
T25T-L		Natural	.25 (6.4)	.375 (9.5)	.03 (.76)	.188 (4.8) – 2.00 (50.8)	50 (15.2)
T50T-Q		Natural	.50 (12.7)	.50 (12.7)	.03 (.76)	.375 (9.5) – 4.00 (101.6)	25 (7.6)
T62T-Q		Natural	.625 (15.9)	.625 (15.9)	.03 (.76)	.50 (12.7) – 4.50 (114.3)	25 (7.6)
T75T-X		Natural	.75 (19.1)	.875 (22.2)	.03 (.76)	.625 (15.9) – 5.00 (127.0)	10 (3.0)
T100T-X		Natural	1.00 (25.4)	1.125 (28.6)	.04 (1.02)	.875 (22.2) – 6.00 (152.4)	10 (3.0)

*Order in multiples of std. pkg. qty.

‡TEFLON or equivalent fluorocarbon PTFE material is used. TEFLON is a registered trademark of E.I. DuPont de Nemours Co.
Note: Custom cut-to-length sizes are available upon request. Contact PANDUIT® Technical Assistance 866-405-6657 for details.

Most commonly used parts appear in **BOLD**

PANDUIT® Split Harness Wrap

PAN-WRAP™ Split Harness Wrap



PAN-WRAP™ Split Harness Wrap is an innovative addition to the *PANDUIT®* Abrasion Protection Line. Engineered for wire harness protection, *PAN-WRAP™* bundles and protects wire, cable and hoses. The *PAN-WRAP™* design provides full 360° coverage with pre-cut slots for break-outs to maximize reliability and reduce installation time. *PAN-WRAP™* tools are available for easy installation.

Features and Benefits

- Slotted walls allow wire break-outs to speed installation
- Flexible design allows maneuverability and protects wire and cables during movement
- New installation tool reduces installation time and lowers installed cost
- 360° abrasion protection improves product reliability

Applications

- Wire Harness Assemblers
- Transportation
- Commercial Appliances
- Industrial Robotics



Open *PAN-WRAP™* Tool to enable the wire bundle to be inserted inside the tool.



Insert wire bundle inside tool. Close tool to secure the wire bundle and prepare to insert bundle into the *PAN-WRAP™* Split Harness Wrap.



Insert end of tool into the end of Split Harness Wrap. Begin pulling the tool making certain that the Split Harness Wrap is feeding over the wire bundle.



Hold end of Split Harness Wrap and wire bundle while continuing to pull the tool, inserting the wire bundle into the length of the Split Harness Wrap.

Split Harness Wrap

Part Number	Size I.D. In. (mm)	Maximum Bundle Diameter In. (mm)	Material	Color	Length Ft. (M)	Std. Pkg. Qty.*
PW50F-T	.50 (12.7)	.55 (13.97)	Polyethylene	Natural	200 (61.05)	1
PW75F-C	.75 (19.05)	.80 (20.32)	Polyethylene	Natural	100 (30.48)	1
PW50F-T20	.50 (12.7)	.55 (13.97)	Polyethylene	Black	200 (61.05)	1
PW75F-C20	.75 (19.05)	.80 (20.32)	Polyethylene	Black	100 (30.48)	1

Tool

Part Number	Material	Color	Size	Std. Pkg. Qty.*
PWT50	ABS	White	.50"	1
PWT75	ABS	White	.75"	1

Features:



- Nylon grommet edging strips conform to the Military Standard MS21266
- Slotted or solid wall construction
- Available with pressure sensitive adhesive
- No liner to remove from adhesive

Suggested Applications:



- Use the solid wall product on straight edges
- Use to prevent abrasion against the sharp edges of panel walls and knockouts

The Functional Part Number System Makes Ordering Easy

Grommet Edging Part Number Description

Example: **GEE 36 F-A-C 0**

Part Description	Max. Panel Thickness	Material	Adhesive	Package Size	Color Suffix
Grommet Edging Strips = GE	36 = .036" thickness	F = Polyethylene	A = Adhesive	Q = 25'	0 = Weather Resistant Black
Slotted Grommet Edging = GEE	62 = .062" thickness	N = Nylon 6.6	Lined	L = 50'	Leave Blank = Natural
	99 = .099" thickness	FR = Flame Retardant Polyethylene	Leave Blank = Non-Adhesive	C = 100'	
Solid Grommet Edging = GES	144 = .144" thickness				
	189 = .189" thickness				

Protects wires and cables from sharp edges

Choose from five materials:



Nylon 6.6

- Self extinguishing
- For indoor use up to 149°F (65°C)
- Available with slotted wall only



Polyethylene

- General purpose material for indoor use up to 122°F (50°C)
- Style GEE and GES provided in .030" (0.8mm) thick material, makes them highly flexible
- Available with slotted or solid wall construction



Weather Resistant Polyethylene

- For outdoor use up to 122°F (50°C)
- Excellent resistance to ultra-violet light



Flame Retardant Polyethylene

- Will not support a flame
- Available with slotted or solid wall construction

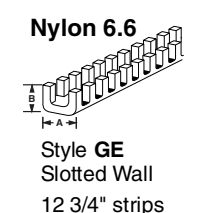
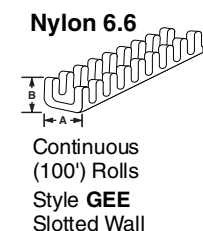
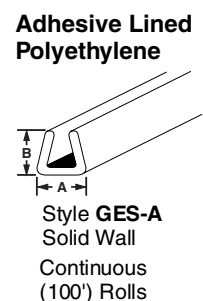
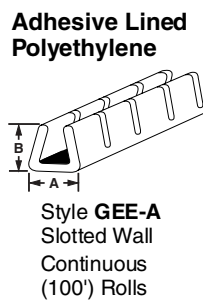
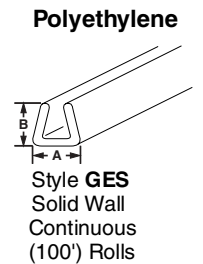
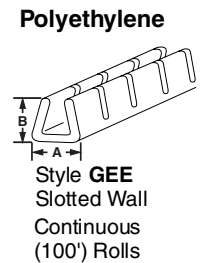


Adhesive Lined Polyethylene

- Base is lined with a pressure sensitive adhesive
- Available in natural and weather resistant
- Adhesive ensures that the product will stay where it is installed

Adhesive Lined

Part Number	Material	Color	Panel Thickness in. (mm)	Dimensions—in. (mm)		Ft. (m) Per Roll	Std. Pkg. Qty.*
				A	B		
GEE36F-C	Continuous Polyethylene (Slotted Wall)	Natural	.026 (.7) – .036 (.9)	.106 (2.7)	.117 (3.0)	100 (30.5)	1 Roll
GEE36F-C0		Black	.026 (.7) – .036 (.9)	.106 (2.7)	.117 (3.0)	100 (30.5)	1 Roll
GEE62F-C		Natural	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GEE62F-C0		Black	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GEE99F-C		Natural	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GEE99F-C0		Black	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GEE144F-C		Natural	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GEE144F-C0		Black	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GES36F-C	Continuous Polyethylene (Solid Wall)	Natural	.026 (.7) – .036 (.9)	.106 (2.7)	.117 (3.0)	100 (30.5)	1 Roll
GES36F-C0		Black	.026 (.7) – .036 (.9)	.106 (2.7)	.117 (3.0)	100 (30.5)	1 Roll
GES62F-C		Natural	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GES62F-C0		Black	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GES99F-C		Natural	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GES99F-C0		Black	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GES144F-C		Natural	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GES144F-C0		Black	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GES189F-C0		Natural	.144 (3.7) – .189 (4.8)	.297 (7.6)	.301 (7.7)	100 (30.5)	1 Roll
		Black	.144 (3.7) – .189 (4.8)	.297 (7.6)	.301 (7.7)	100 (30.5)	1 Roll
GEE62F-A-C	Continuous Polyethylene With Adhesive (Slotted Wall)	Natural	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GEE62F-A-C0		Black	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GEE99F-A-C		Natural	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GEE99F-A-C0		Black	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GEE144F-A-C		Natural	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GEE144F-A-C0		Black	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GES62F-A-C	Continuous Polyethylene With Adhesive (Solid Wall)	Natural	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GES62F-A-C0		Black	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GES99F-A-C		Natural	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GES99F-A-C0		Black	.062 (1.6) – .099 (2.5)	.169 (4.3)	.186 (4.7)	100 (30.5)	1 Roll
GES144F-A-C		Natural	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GES144F-A-C0		Black	.099 (2.5) – .144 (3.7)	.213 (5.4)	.222 (5.6)	100 (30.5)	1 Roll
GEE36FR-C	Flame Retardant Polyethylene (Slotted Wall)	Natural	.026 (.7) – .036 (.9)	.106 (2.7)	.117 (3.0)	100 (30.5)	1 Roll
GEE62FR-C		Natural	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GEE99FR-C		Natural	.062 (1.6) – .099 (2.5)	.169 (4.3)	.155 (3.9)	100 (30.5)	1 Roll
GEE144FR-C		Natural	.099 (2.5) – .144 (3.7)	.213 (5.4)	.232 (5.9)	100 (30.5)	1 Roll
GES36FR-C	Flame Retardant Polyethylene (Solid Wall)	Natural	.026 (.7) – .036 (.9)	.106 (2.7)	.117 (3.0)	100 (30.5)	1 Roll
GES62FR-C		Natural	.036 (.9) – .062 (1.6)	.131 (3.3)	.160 (4.1)	100 (30.5)	1 Roll
GES99FR-C		Natural	.062 (1.6) – .099 (2.5)	.169 (4.3)	.155 (3.9)	100 (30.5)	1 Roll
GES144FR-C		Natural	.099 (2.5) – .144 (3.7)	.213 (5.4)	.232 (5.9)	100 (30.5)	1 Roll
GEE47N-C	Continuous Nylon 6.6 (Slotted Wall)	Natural	.039 (1.0) – .055 (1.4)	.130 (3.3)	.140 (3.5)	100 (30.5)	1 Roll
GEE55N-C		Natural	.047 (1.2) – .063 (1.6)	.133 (3.4)	.140 (3.5)	100 (30.5)	1 Roll
GEE71N-C		Natural	.063 (1.6) – .079 (2.0)	.150 (3.8)	.140 (3.5)	100 (30.5)	1 Roll
GEE98N-C		Natural	.091 (2.3) – .106 (2.7)	.180 (4.6)	.140 (3.5)	100 (30.5)	1 Roll
GEE134N-C		Natural	.126 (3.2) – .142 (3.6)	.210 (5.3)	.140 (3.5)	100 (30.5)	1 Roll



*Order the number of reels required in multiples of standard package quantities.

Part Number	Material	Color	Panel Thickness in. (mm)	Dimensions—in. (mm)		Pieces Per Pkg.	Std. Pkg. Qty.*
				A	B		
GE52-C	Military Standard MS21266 12.75 (323.85mm)	Natural	.015 (.4) – .052 (1.3)	.150 (3.8)	.155 (3.9)	100	Strips
GE52-C69▲		Natural	.015 (.4) – .052 (1.3)	.150 (3.8)	.155 (3.9)	100	Strips
GE85-C		Natural	.052 (1.3) – .085 (2.2)	.175 (4.5)	.155 (3.9)	100	Strips
GE85-C69▲		Natural	.05 (1.3) – .085 (2.2)	.175 (4.5)	.155 (3.9)	100	Strips
GE128-C		Natural	.085 (2.2) – .128 (3.3)	.220 (5.6)	.155 (3.9)	100	Strips
GE128-C69▲	Nylon 6.6 Strips -69 designates Flame Retardant)	Natural	.085 (2.2) – .128 (3.3)	.220 (5.6)	.155 (3.9)	100	Strips
GE192-L		Natural	.128 (3.3) – .192 (4.9)	.325 (8.3)	.230 (5.8)	50	Strips
GE192-L69▲		Natural	.128 (3.3) – .192 (4.9)	.325 (8.3)	.230 (5.8)	50	Strips
GE255-L		Natural	.192 (4.9) – .255 (6.5)	.385 (9.8)	.240 (6.1)	50	Strips
GE318-L		Natural	.255 (6.5) – .318 (8.1)	.455 (11.3)	.255 (6.5)	50	Strips
GE380-Q		Natural	.318 (8.1) – .380 (9.7)	.515 (13.1)	.255 (6.5)	25	Strips
GE510-Q		Natural	.380 (9.7) – .510 (13.0)	.640 (16.3)	.255 (6.5)	25	Strips

*Order the number of pieces required in multiples of standard package quantities.

This material is not listed under military standard MS21266.

Grommet edging is to be used for odd shaped holes in addition to circular panel holes. Circular hole installation cut lengths can be found by: cut lengths = (dia. of hole) x 3.14.

Most commonly used parts appear in **BOLD**

PANDUIT® Corrugated Loom Tubing

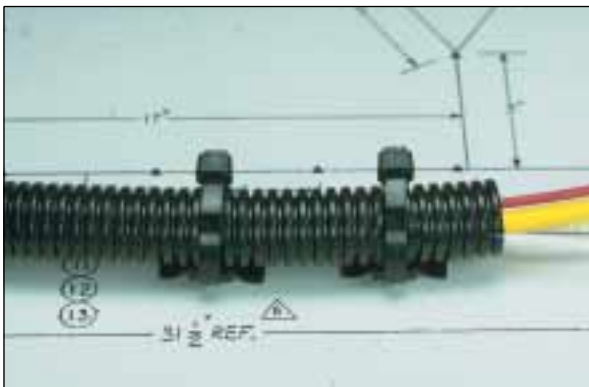


- *PANDUIT®* Corrugated Loom Tubing is offered for applications where spiral wrap or braided expandable sleeving may be difficult to install or where they do not offer the amount of protection required
- Available in Heat Stabilized Nylon or Polyethylene, this product features a lengthwise slit which makes it easy to install onto a bundle of wires or a pre-assembled harness assembly



Features and Benefits

- Protects and reduces the risk of damage to wiring
- Crush, impact and abrasion resistant
- Slit wall design for ease of installation
- Available in easy to handle 100' lengths
- Available in black, orange and yellow polyethylene and black heat stabilized nylon
- Secure with push type cable ties, adhesive or push type mounts



Suggested Applications

- Bundle wires in control panels
- Contain and organize loose and bundled wiring harnesses
- Route wires in automotive, truck, trailer, bus, conversion van, emergency service and recreational vehicle applications
- Protect wires in off road/mobile equipment
- Use in mining equipment
- Marine applications for protecting wires on boats and ships



Wiring Accessories for Corrugated Loom Tubing

- Tie Harness Mounts have a specially designed location tab on the mount that aligns with grooves in corrugated loom tubing to ensure proper mount location during assembly

The Functional Part Number System Makes Ordering Easy

Corrugated Loom Tubing Part Number Description

Example: **CLT 100 N-C 630**

Part Description
Corrugated Loom
Tubing
CLT= Slit Wall
CLTS= Solid Wall

Bundle Diameter
25 = 1/4"
35 = 5/16"
38 = 3/8"
50 = 1/2"
62 = 5/8"
75 = 3/4"
100 = 1"
125 = 1 1/4"
150 = 1 1/2"
188 = 1 7/8"

Material
N = Heat Stabilized Nylon
F = Polyethylene

Package Size
X = 10'
L = 50'
C = 100'
T = 200'
D = 500'
6C = 600'

Color Suffix
630 = Heat Stabilized
Black Nylon 6
20 = Black Polyethylene
3= Orange
4= Yellow

Part Number		Material	Color	Inside Diameter in. (mm)	Outside Diameter in. (mm)	Length Ft. (m)	Std. Pkg. Qty.*
Slit	Solid						
CLT25F-C20	CLTS25F-C	Polyethylene	Black	.265 (6.7)	.390 (9.9)	100 (30.5)	1 Roll
CLT35F-C20	CLTS35F-C			.350 (8.9)	.500 (12.7)	100 (30.5)	
CLT38F-C20	CLTS38F-C			.414 (10.5)	.556 (14.1)	100 (30.5)	
CLT50F-C20	CLTS50F-C			.505 (12.8)	.670 (17.0)	100 (30.5)	
CLT62F-C20	CLTS62F-C			.665 (16.9)	.830 (21.1)	100 (30.5)	
CLT75F-C20	CLTS75F-C			.760 (19.3)	.935 (23.7)	100 (30.5)	
CLT100F-C20	CLTS100F-C			.915 (23.2)	1.090 (27.7)	100 (30.5)	
CLT125F-L20	CLTS125F-L			1.290 (32.8)	1.500 (38.1)	50 (15.2)	
CLT150F-X20	**			1.550 (39.1)	1.860 (47.2)	10 (3.0)	
CLT150F-T20	**			1.550 (39.1)	1.860 (47.2)	200 (61.0)	
CLT150F-D20	CLTS150F-D			1.550 (39.1)	1.860 (47.2)	500 (152.4)	
CLT188F-X20	**			1.881 (47.8)	2.169 (55.1)	10 (3.0)	
CLT188F-C20	**			1.881 (47.8)	2.169 (55.1)	100 (30.5)	
CLT188F-6C20	**			1.881 (47.8)	2.169 (55.1)	600 (182.9)	
CLT25F-C3	CLTS25F-C3	Polyethylene	Orange	.265 (6.7)	.390 (9.9)	100 (30.5)	1 Roll
CLT35F-C3	CLTS35F-C3			.350 (8.9)	.500 (12.7)	100 (30.5)	
CLT38F-C3	CLTS38F-C3			.414 (10.5)	.556 (14.1)	100 (30.5)	
CLT50F-C3	CLTS50F-C3			.505 (12.8)	.670 (17.0)	100 (30.5)	
CLT62F-C3	CLTS62F-C3			.665 (16.9)	.830 (21.1)	100 (30.5)	
CLT75F-C3	CLTS75F-C3			.760 (19.3)	.935 (23.7)	100 (30.5)	
CLT100F-C3	CLTS100F-C3			.915 (23.2)	1.090 (27.7)	100 (30.5)	
CLT125F-L3	CLTS125F-L3			1.290 (32.8)	1.500 (38.1)	50 (15.2)	
CLT150F-X3	**			1.550 (39.1)	1.860 (47.2)	10 (3.0)	
CLT150F-D3	CLTS150F-D3			1.550 (39.1)	1.860 (47.2)	500 (152.4)	
CLT188F-X3	**	Polyethylene	Yellow	1.881 (47.8)	2.169 (55.1)	10 (3.0)	1 Roll
CLT188F-C3	**			1.881 (47.8)	2.169 (55.1)	100 (30.5)	
CLT150F-X4	**			1.550 (39.1)	1.860 (47.2)	10 (3.0)	
CLT150F-D4	**			1.550 (39.1)	1.860 (47.2)	500 (152.4)	
CLT188F-X4	**	Heat Stabilized Black Nylon 6	Black	1.881 (47.8)	2.169 (55.1)	10 (3.0)	1 Roll
CLT188F-C4	**			1.881 (47.8)	2.169 (55.1)	100 (30.5)	
CLT25N-C630	CLTS25N-C			.265 (6.7)	.390 (9.9)	100 (30.5)	
CLT35N-C630	CLTS35N-C			.350 (8.9)	.500 (12.7)	100 (30.5)	
CLT38N-C630	CLTS38N-C			.414 (10.5)	.556 (14.1)	100 (30.5)	
CLT50N-C630	CLTS50N-C			.505 (12.8)	.670 (17.0)	100 (30.5)	
CLT62N-C630	CLTS62N-C			.665 (16.9)	.830 (21.1)	100 (30.5)	
CLT75N-C630	CLTS75N-C			.760 (19.3)	.935 (23.7)	100 (30.5)	
CLT100N-C630	CLTS100N-C			.915 (23.2)	1.090 (27.7)	100 (30.5)	
CLT125N-L630	CLTS125N-L			1.290 (32.8)	1.500 (38.1)	50 (15.2)	
CLT150N-D630	**			1.550 (39.1)	1.860 (47.2)	500 (152.4)	
CLT188N-6C630	**			1.881 (47.8)	2.169 (55.1)	600 (182.9)	

*Order number of rolls required.

**Contact PANDUIT® Technical Assistance 866-405-6657 for additional sizes, materials, colors, and bulk packaging.

NOTE: Custom cut-to-length sizes are available upon request. Contact PANDUIT® Technical Assistance 866-405-6657 for details.

WITH
PANDUIT Fittings



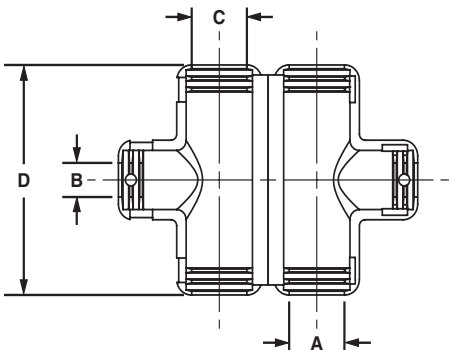
WITHOUT
PANDUIT Fittings



Features:

- Fast assembly Reduces production time
- Virtually eliminates taping Improves system appearance
- Easy to assemble Reduces operator fatigue
- Locking latch design Secures fittings firmly in place
- Durable polyethylene shell. Protects wires
- Works with most popular sizes Provides easy selection of fittings for application needs

Benefits:



Part Number	Dimensions in. (mm)				Material	Color	Packaging*	
	A	B	C	D			Std. Pkg Qty.	Std. Ctn. Qty.
CF382538F-Q	.38 (9.53)	.25 (6.35)	.38 (9.53)	2.06 (52.32)	Polyethylene	Black	25	100
CF502550F-Q	.50 (12.70)		.50 (12.70)	2.30 (58.42)				
CF503850F-Q								
CF752575F-Q	.75 (19.05)	.25 (6.35)	.75 (19.05)	3.06 (77.72)				
CF753875F-Q		.38 (9.53)						

Braided Expandable Sleeving — Polyethylene Terephthalate — PET



- Provides continuous abrasion resistance for wires, cables and tubing
- Lightweight, durable protection
- Highly flexible open weave will not trap heat or humidity
- Rated for use up to 257°F (125°C)
- Allows for use with irregular shapes
- Stock colors: Black, gray and white
- See [page 176](#) for cutting tools



The Functional Part Number System Makes Ordering Easy

Braided Expandable Sleeving Part Number Description

Example: **SE 25 PFR-M R 0**

Part Description	Nom. I.D. Size	Material	Package Size	R = Reel	Color Suffix
SE = Sleeving Expandable	12 = 1/8" (3.2) 25 = 1/4" (6.4) 38 = 3/8" (9.5) 50 = 1/2" (12.7) 75 = 3/4" (19.1) 125 = 1 1/4" (31.8) 150 = 1 1/2" (38.1) 175 = 1 3/4" (44.5)	P = Polyethylene Terephthalate (PET) PFR = Polyethylene Terephthalate (PET) Flame Retardant	L = 50' (15.2m) C = 100' (30.5m) T = 200' (61.0m) D = 500' (152.4m) M = 1000' (304.8m)		0 = Black 8 = Gray 10 = White

Part Number Black	Part Number Gray	Part Number White	Nominal I.D. in.	Nominal Diameter Range in. (mm)	Std. Pkg. Qty.* Feet (m)	Std. Ctn. Qty.
SE12P-TR0 SE12P-MR0	SE12P-TR8 SE12P-MR8	— SE12P-MR10	1/8	.094 to .250 (2.4) to (6.4)	200 (61.0) 1000 (304.8)	4 Reels 2 Reels
SE25P-TR0 SE25P-MR0	SE25P-TR8 SE25P-MR8	— SE25P-MR10	1/4	.125 to .375 (3.2) to (9.5)	200 (61.0) 1000 (304.8)	4 Reels 2 Reels
SE38P-TR0 SE38P-MR0	SE38P-TR8 SE38P-MR8	— SE38P-MR10	3/8	.188 to .562 (4.7) to (14.3)	200 (61.0) 1000 (304.8)	4 Reels 2 Reels
SE50P-CR0 SE50P-DR0	SE50P-CR8 SE50P-DR8	— SE50P-DR10	1/2	.250 to .750 (6.4) to (19.1)	100 (30.5) 500 (152.4)	4 Reels 2 Reels
SE75P-CR0 SE75P-DR0	SE75P-CR8 SE75P-DR8	— SE75P-DR10	3/4	.500 to 1.25 (12.7) to (31.8)	100 (30.5) 500 (152.4)	4 Reels 2 Reels
SE125P-LR0 SE125P-TR0	SE125P-LR8 SE125P-TR8	— SE125P-TR10	1 1/4	.750 to 1.50 (19.1) to (38.1)	50 (15.2) 200 (61.0)	4 Reels 2 Reels
SE150P-LR0 SE150P-TR0	SE150P-LR8 SE150P-TR8	— SE150P-TR10	1 1/2	1.00 to 2.25 (25.4) to (57.2)	50 (15.2) 200 (61.0)	4 Reels 2 Reels
SE175P-TR0	—	—	1 3/4	1.25 to 2.75 (31.8) to (69.8)	200 (61.0)	2 Reels

*Order number of reels required.

PANDUIT® Flame Retardant Braided Expandable Sleeving

Braided Expandable Sleeving — Flame Retardant Polyethylene Terephthalate — PET



- Provides continuous abrasion resistance for wires, cables and tubing
- Lightweight, durable protection
- Highly flexible open weave will not trap heat or humidity
- Rated for use up to 257°F (125°C)
- Allows for use with irregular shapes
- Self extinguishing, meets UL VW-1
- Stock colors: Black or gray with white tracer, or in white with black tracer to identify flame retardant material
- See bottom of this page for cutting tools



Flame Retardant

Part Number Black	Part Number Gray	Part Number White	Nominal I.D. in. (mm)	Nominal Diameter Range in. (mm)	Std. Pkg. Qty. Feet (m)	Std. Ctn. Qty.
SE12PFR-TR0 SE12PFR-MR0	SE12PFR-TR8 SE12PFR-MR8	— SE12PFR-MR10	1/8	.094 to .250 (2.4) to (6.4)	200 (61.0) 1000 (304.8)	4 Reels 2 Reels
SE25PFR-TR0 SE25PFR-MR0	SE25PFR-TR8 SE25PFR-MR8	— SE25PFR-MR10	1/4	.125 to .375 (3.2) to (9.5)	200 (61.0) 1000 (304.8)	4 Reels 2 Reels
SE38PFR-TR0 SE38PFR-MR0	SE38PFR-TR8 SE38PFR-MR8	— SE38PFR-MR10	3/8	.188 to .625 (4.7) to (15.9)	200 (61.0) 1000 (304.8)	4 Reels 2 Reels
SE50PFR-CR0 SE50PFR-DR0	SE50PFR-CR8 SE50PFR-DR8	— SE50PFR-DR10	1/2	.250 to .750 (6.4) to (19.1)	100 (30.5) 500 (152.4)	4 Reels 2 Reels
SE75PFR-CR0 SE75PFR-DR0	SE75PFR-CR8 SE75PFR-DR8	— SE75PFR-DR10	3/4	.500 to 1.25 (12.7) to (31.8)	100 (30.5) 500 (152.4)	4 Reels 2 Reels
SE125PFR-LR0 SE125PFR-TR0	SE125PFR-LR8 SE125PFR-TR8	— SE125PFR-TR10	1 1/4	.750 to 1.50 (19.1) to (38.1)	50 (15.2) 200 (61.0)	4 Reels 2 Reels
SE150PFR-LR0 SE150PFR-TR0	SE150PFR-LR8 SE150PFR-TR8	— SE150PFR-TR10	1 1/2	1.00 to 2.25 (25.4) to (57.2)	50 (15.2) 200 (61.0)	4 Reels 2 Reels
SE175PFR-TR0	—	—	1 3/4	1.25 to 2.75 (31.8) to (69.8)	200 (61.0)	2 Reels

*Order number of reels required.

Tooling Head (HKBS)

Sleeving Cutter/End Sealer Blade —

Used with popular soldering guns to cut and seal sleeving.



Part Number	Description	Std. Pkg. Qty*
HKBS	For dual straight shank soldering guns with .500" spacing Typical Guns: WELLER straight shank Model 8200; WEN Model 199 or 100	1

*Order number of blades required.

Bench Mount Cutter/ End Sealer

Available Directly from
Manufacturer



Pearson Industries
P.O. Box 36
Prattville, AL 36067
(334) 365-5416

Abrasion Protection Products Flammability Tests and Classifications



- A number of test procedures have been developed which can be used for the evaluation and comparison of various materials to support combustion
- Review the following classifications to find which category is designed to suit your abrasion and protection applications

UL94 VERTICAL BURNING TEST

Test samples of material, with dimension $125 \pm 5\text{mm}$ by $13.0 \pm 5\text{mm}$ and provided in the minimum and maximum thickness of the intended end use product, are tested in an unconditioned (as manufactured) state and in a conditioned state (7 days at 168F° , 75°C). The test requires the placement of a precisely controlled flame under a vertically supported specimen for a 10 second period. The flame is removed and the duration of flaming is recorded. If the flame extinguishes, the specimen is immediately subjected to a second 10 second ignition period. Duration of flaming is again recorded. A piece of 100% cotton is placed under the specimen. Also observed and documented is if the sample drips flaming particles that ignite the cotton indicator below.

Materials Classification

Criteria Conditions	V-0	V-1	V-2
Afterflame time for each individual specimen t_1 or t_2	$\leq 10\text{s}$	$\leq 30\text{s}$	$\leq 30\text{s}$
Total afterflame time for any condition set (t_1 plus t_2 for the 5 specimens)	$\leq 50\text{s}$	$\leq 250\text{s}$	$\leq 250\text{s}$
Afterflame plus afterglow time for each individual specimen after the second flame application (t_2+t_3)	$\leq 30\text{s}$	$\leq 60\text{s}$	$\leq 60\text{s}$
Afterflame or afterglow of any specimen up to the holding clamp	No	No	No
Cotton indicator ignited by flaming particles or drops	No	No	Yes

t_1	Afterflame time after first flame application
t_2	Afterflame time after flame application
t_3	Afterglow time after second flame application

MATERIALS CLASSIFIED UL-94 HB

- Specimens shall have a maximum burn rate of $<1.5"/\text{min}$ over 3" of thickness of 0.120" to 0.5"
- Specimens shall have a maximum burn rate of $<3.0"/\text{min}$ over 3" for a thickness less than 0.120"

UL224 VERTICAL WIRE FLAME TEST

Samples of fully recovered tubing are placed over a length of fine spring steel music wire. The test requires the precise placement of a controlled flame that contacts the heat shrink tubing. The flame is applied in five fifteen second intervals with a time period between applications. If the flame extinguishes immediately after the first flame removal, subsequent flame applications are made to the tubing. Duration of specimen flaming is noted. A piece of surgical cotton is placed under the specimen. If a flaming or glowing piece of tubing drips and ignites the cotton, this is also noted.

MATERIALS CLASSIFIED AS VW-1 SHALL:

- Not flame or glow longer than 60 seconds following any of the five applications of the flame
- Not ignite or damage more than 25% of kraft paper flag that is placed around the top of the tubing
- Not have any specimens which drip flaming particles and ignite the surgical cotton located 9 1/2" below the test specimen.

Abrasion Protection Materials Technical Data

		Ratings and Approvals			Physical Properties				Chemical Resistance			
		UL Temperature Index	Flammability (UL94)	Melting Temperature	Abrasion Resistance (lower number is better)	Specific Gravity (D792)	Minimum Tensile @ 23°C (psi)	Water Absorption (Max. 24 hrs.)	Organic Solvents	Alkalies	Acids	Petro-Chemicals
SPIRAL WRAP	Natural Polyethylene Lowest cost material for indoor use up to 122°F. Natural is available in all sizes. Colors are available in 1/4" and 1/2".	-40°F (-40°C) to 122°F (50°C)	HB	239°F (115°C)	22 mg	.91-.93	1400 (D638)	.01%	Resistant below 140°F (60°C) except to chlorinated solvents	Resistant	Resistant except to oxidizing acids	Some Discoloration
	Weather Resistant Polyethylene This material has the same properties as natural polyethylene, and also has additives which allow it to resist the effects of ultraviolet light and acid rain in an outdoor environment. This product is available in black only.	-40°F (-40°C) to 122°F (50°C)	HB	239°F (115°C)	20 mg	.93-1.09	2000 (D638)	.03%	Resistant below 140°F (60°C) except to chlorinated solvents	Resistant	Resistant except to oxidizing acids	No Discoloration
	Fire Resistant Polyethylene UL94-V2 Rating This material is self extinguishing and passes the UL94 flame retardant test with a V2 rating.	-40°F (-40°C) to 122°F (50°C)	V-2	239°F (115°C)	27 mg	1.00-1.30	1400 (D638)	.02%	Resistant below 140°F (60°C) except to chlorinated solvents	Resistant	Resistant except to oxidizing acids	Some Discoloration
	Flame Retardant Polyethylene UL94-V0 Rating This material is self extinguishing and passes the UL94 flame retardant test with a V0 rating.	-40°F (-40°C) to 194°F (90°C)	UL94 V-0	270°F (132°C)	22 mg	1.15	1,500 (D638)	.02%	Resistant except to halogenated hydrocarbons	Resistant	Resistant	Resistant Some Discoloration
	Nylon 6.6 Nylon is strong, durable, self-extinguishing material for indoor use up to 149°F. It offers a combination of lightweight, wide temperature range, and high abrasion resistance. This material is suitable for applications where heavy vibration or stress exists on the wiring or tubing.	-40°F (-40°C) to 149°F (65°C)	UL94 V-2	505°F (263°C)	7 mg	1.13-1.15	12,400 (D638)	1.2%	Resistant except to halogenated hydrocarbons	Resistant	Not recommended	Resistant No Discoloration
	Weather Resistant Nylon This material has the same properties as natural Nylon and also has additives which allow it to resist the effects of ultraviolet light in an outdoor environment. This product is available in black only.	-40°F (-40°C) to 149°F (65°C)	UL94 V-2	505°F (263°C)	7 mg	1.13-1.15	12,000 (D638)	1.2%	Resistant except to halogenated hydrocarbons	Resistant	Not recommended	Resistant No Discoloration
BRAIDED EXPANDABLE SLEEVING	TEFLON† This material is a non-flammable, fluorocarbon resin material. Suitable for use in any application (including nuclear containment). It is rated up to 356°F. Color: Opaque to Translucent	-400°F (-240°C) to 500°F (260°C)	UL94 V-0	648°F (342°C)	7 mg	2.13-2.22	3000 (D876)	.01%	Resistant	Resistant	Resistant	Resistant No Discoloration
	Polyethylene Terephthalate (PET) This material is a thermoplastic polyester material designed for indoor applications. It is rated for use up to 257°F and will tolerate short-term exposure up to 446°F. Colors: Black, White and Gray	-94°F (-70°C) to 257°F (125°C)	UL94 HB	500°F (260°C)	—	1.31	100,000 (D876)	.08%	Resistant to some solvents	Resistant to most weak bases	Resistant	Resistant No Discoloration
	Flame Ret. Polyethylene Terephthalate (PET) This material is a self-extinguishing thermoplastic polyester that can be used indoors. It is also rated for use up to 257°F and will tolerate short-term exposure up to 446°F. It is provided with tracers to identify the flame retardant material.	-94°F (-70°C) to 257°F (125°C)	UL 224 VW-1	608°F (320°C)	—	1.39	100,000 (D876)	.08%	Resistant to some solvents	Resistant to most weak bases	Resistant	Resistant No Discoloration

NOTE: Typical operating temperature ranges are extended based on end use application and specific environmental tests.

†TEFLON or equivalent fluorocarbon PTFE is used. Teflon is the registered trademark of E. I. DuPont de Nemours Co.

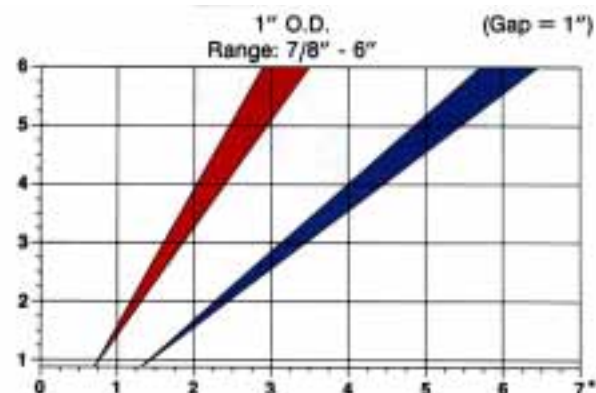
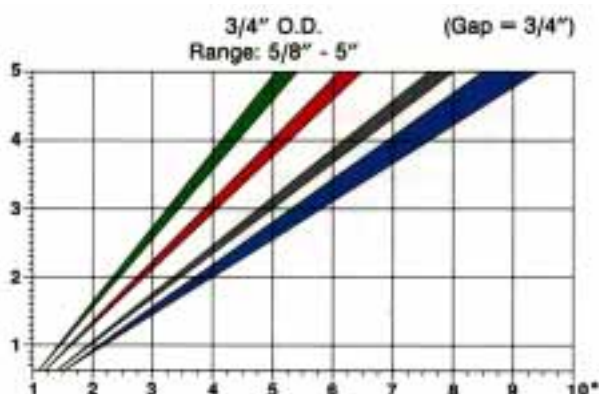
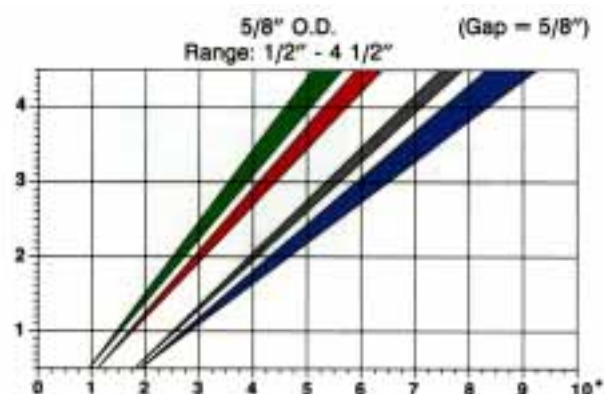
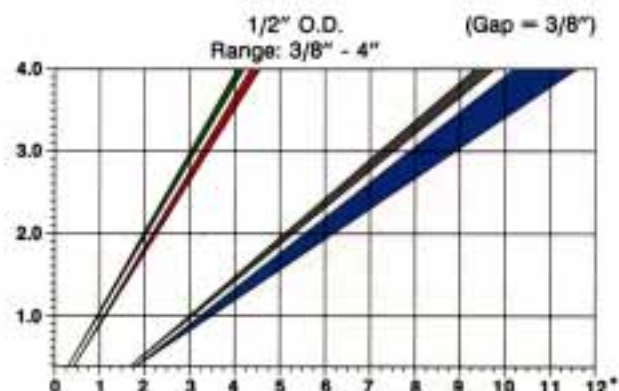
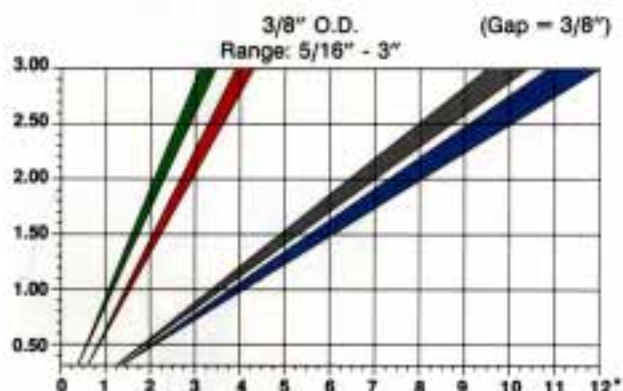
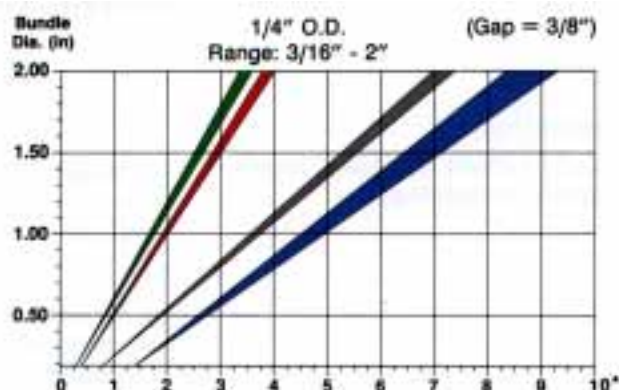
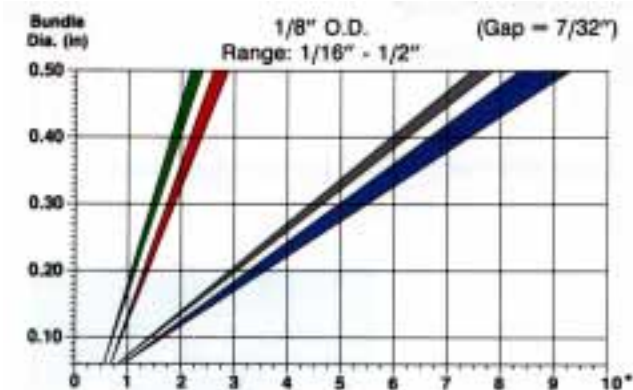
Abrasion Protection Materials Technical Data

		Ratings and Approvals			Physical Properties				Chemical Resistance			
		UL Temperature Index	Flammability (UL94)	Melting Temperature	Abrasion Resistance (Lower number is better)	Specific Gravity (D792)	Minimum Tensile @ 23°C (psi)	Water Absorption (Max. 24 hrs.)	Organic Solvents	Alkalies	Acids	Petro-Chemicals
CORRUGATED LOOM TUBING	Black Polyethylene Lowest cost material is for use up to 122°F. Other colors may be available.	-40°F (-40°C) to 122°F (50°C)	UL94 HB	—	—	.926-.940	1500 (D638)	—	Resistant except to halogenated hydrocarbons	Resistant	Resistant	Resistant No Discoloration
	Nylon 6 Nylon is a strong, impact modified, heat stabilized, durable high abrasion resistant material.	-40°F (-40°C) to 230°F (110°C)	UL94 HB	410°F (211°C)	—	1.06-1.16	8000 (D638)	1.3%	Resistant except to halogenated hydrocarbons	Resistant	Not recommended	Resistant No Discoloration
PVC TUBING	PVC Non-Shrink Tubing This material provides insulation and protection for continuous use at temperatures -4°F (-20°C) to 221°F (105°C).	-4°F (-20°C) to 221°F (105°C)	UL 224 VW-1	—	—	1.35	2500 (D876)	—	Resistant except to aromatic hydrocarbons, ketones and esters	Resistant	Resistant	Resistant No Discoloration
GROMMET EDGING	Natural Polyethylene Lowest cost material for indoor use up to 122°F. Natural is available in all sizes.	-40°F (-40°C) to 122°F (50°C)	HB	239°F (115°C)	22 mg	.91-.93	1400 (D638)	.01%	Resistant below 140°F (60°C) except to chlorinated solvents	Resistant	Resistant except to oxidizing acids	Some Discoloration
	Weather Resistant Polyethylene This material has the same properties as natural polyethylene, and also has additives which allow it to resist the effects of ultraviolet light and acid rain in an outdoor environment. This product is available in black only.	-40°F (-40°C) to 122°F (50°C)	HB	239°F (115°C)	20 mg	.93-1.09	2000 (D638)	.03%	Resistant below 140°F (60°C) except to chlorinated solvents	Resistant	Resistant except to oxidizing acids	No Discoloration
	Flame Retardant Polyethylene UL94-V0 Rating This material is self extinguishing and passes the UL94 flame retardant test with a V0 rating	-40°F (-40°C) to 140°F (60°C)	V-0	270°F (132°C)	22 mg	1.38	1200	.02%	Resistant below 140°F (60°C) except to chlorinated solvents	Resistant	Resistant except to oxidizing acids	Some Discoloration
	Nylon Nylon is strong, durable, self-extinguishing material for indoor use up to 149°F. It offers a combination of lightweight, wide temperature range, and high abrasion resistance. This material is suitable for applications where heavy vibration or stress exists on the wiring or tubing.	-40°F (-40°C) to 149°F (65°C)	V-2	491°F (255°C)	7 mg	1.03-1.15	12,400 (D638)	1.5%	Resistant except to phenols and formic acid	Resistant	Resistant to most weak acids	No Discoloration

NOTE: Typical operating temperature ranges are extended based on end use application and specific environmental tests.

PANDUIT® Abrasion Protection Products Technical Data

The approximate required length of spiral wrap based on the bundle diameter can be determined by using the graphs below; they show length required (in feet) per foot of bundle:



* Length of spiral wrapping (feet) per foot of bundle

• TEFLON is a registered trademark of E.I. DuPont Co.

Bulk Package Part Numbers

The following is an alpha-numeric cross reference of Standard Package Wiring Abrasion Protection parts with the corresponding Bulk Package part numbers:

Standard Part No.	Bulk Part No.
C	
CLT25N-C630	CLT25N-10M630
CLT35F-2C0	CLT35F-7M20
CLT38F-C20	CLT38F-5M20
CLT38N-C630	CLT38N-5M630
CLT50F-C20	CLT50F-4M20
CLT50N-C630	CLT50N-4M630
CLT62F-C20	CLT62F-2.5M20
CLT62N-C630	CLT62N-2.5M630
CLT75F-C20	CLT75F-2M20
CLT75N-C630	CLT75N-2M630
CLT100F-C20	CLT100F-125M20
CLT100N-C630	CLT100N-125M630
CLT125F-L20	CLT125F-.75M20
CLT125N-L630	CLT125N-.75M630
T	
T12F-C	T12F-D
T12N-C	T12N-D
T19N-C	T19N-M
T25F-C	T25F-M
T25F-C0	T25F-M0
T25FR-C	T25FR-M
T25FR-C20	T25FR-M20
T25N-C	T25N-M
T25N-C0	T25N-M0
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PAN-TERM® Terminals, Disconnects and Splices



Designed and manufactured for fast assembly, long, reliable performance...

- Funnel entry available on vinyl and nylon insulated terminals and disconnects
- Made of electrolytically refined copper to provide optimum combination of crimp forming properties and low resistance, high conductivity terminations
- Offered in various types including rings, forks, locking forks and short locking forks
- Available sizes from 26 to 2 AWG and stud diameters from #2 to 1/2"
- Disconnects are available in many styles including fully insulated. Splices and wire joints provide permanent, reliable connections
- Wide assortment of manual, controlled cycle, battery operated and pneumatic crimping tools which give you reliable connections at a lower installed cost

**Ask for PAN-TERM® Terminal, Disconnects and Splices/
REEL SMART™ Termination Catalog — SA-TM09CB01A**

REEL SMART™ Continuously Molded Reel-Fed Terminals, Disconnects and Splices



“Reel” productivity assures high volume production at significant savings...

- ONE TECHNOLOGY, one solution for continuously molded Terminals, Butt Splices and Disconnects, including Fully Insulated Right Angle Female Disconnects and Pre-Assembled Locking Disconnects
- The REEL SMART™ Termination System for installing PANDUIT® continuously molded products provides the best solution for quality, reliable, high volume terminations
- This patented system offers an array of technical enhancements designed to dramatically reduce set-up time and the amount of downtime traditionally incurred with alternate systems
- Single, patented application terminates entire product line
- Applicators compatible with automatic wire processing machines and other manufacturer's presses

**Ask for PAN-TERM® Terminal, Disconnects and Splices/
REEL SMART™ Termination Catalog — SA-TM09CB01A**

Identification and Labeling Solutions



PANDUIT® offers a complete line of industrial Identification Solutions...

- **Computer Printable Labels**
Thermal transfer, laser, ink jet and dot-matrix labels available in a wide variety of sizes and industrial materials
- **Printers**
Versatile hand-held printers for on-site labeling and desktop thermal transfer printers for medium to high volume applications
- **Labeling Software**
Labeling programs available for wire marking, component identification and safety markers and tags
- **Preprinted Markers**
Available in books, cards, tape, slip-on and clip-on formats for fast, convenient identification of wires, cables and other industrial applications
- **Lockout/Tagout and Safety**
Lockout devices, training materials, tags and safety markers for OSHA safety standard compliance

*Ask for Identification Solutions Catalog **SA101N315C-ID***

Network Connectivity Systems



The unique *PAN-NET®* Network Connectivity System provides high performance solutions with *FUTURE READY* features for system upgradability. Lowest installed cost solutions are available for both the enterprise and service provider markets...

- **Breadth of Product Offering**
PANDUIT® supplies copper and fiber optic connectivity for reliable data, video and voice transmissions, end-to-end cable management for maximum protection and system integrity as well as standards compliance pathway and outlet products for maximum performance
- **Modular**
All *PANDUIT® MINI-COM®* copper and fiber optic modules snap in and out of all *MINI-COM®* faceplates, surface mount boxes, patch panels and multimedia adapter panels

*Ask for Network Connectivity Catalog **SA-NC10CB01A***

PAN-WAY® Surface Raceway System



The superior **PAN-WAY®** Surface Raceway System offers the flexibility of accepting **PANDUIT®** communication and power devices in addition to devices offered from a wide range of manufacturers. The **PAN-WAY®** system has become the preferred routing system for communication and electrical specifiers and contractors...

- **Advanced Designs**

Among other features, all **PANDUIT®** cable routing pathways are designed to maintain the proper bend radius control for high performance copper and fiber optic cabling

- **Aesthetics**

Unlike raceway systems of the past, **PANDUIT®** perimeter raceway has been designed with as much regard to form as function

- **Superior Termination Solutions**

PANDUIT® cable routing solutions provide you freedom of choice when selecting your data and electrical outlets. Most **PANDUIT®** raceway systems accept both NEMA Standard "Screw-On" faceplates as well as superior **PANDUIT®** Snap-On faceplates for **PANDUIT®** Connectivity

- **Complete Systems**

All **PANDUIT®** systems include a full complement of fittings and accessories that allow a complete installation of a single system or allow different **PANDUIT®** raceway systems to be used together

Ask for **PAN-WAY®** Surface Raceway Catalog **SA101N60B-LP**

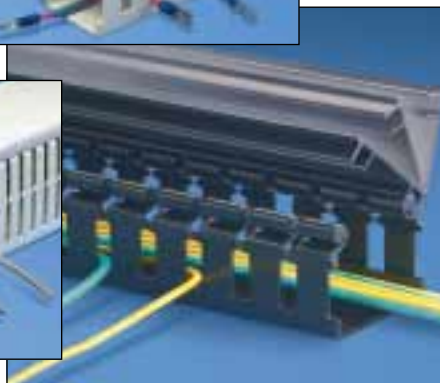
PANDUCT® Wiring Duct — The Original Wiring Duct



PANDUIT® offers the most comprehensive and complete line of wiring duct for use in control panels and other OEM and MRO applications. **PANDUIT®** provides a large selection of sizes, colors, styles and materials so our customers can meet their specific application requirements...

- **PANDUIT®** Exclusive rounded edges will not cut installers' hands or wiring insulation
- Non-slip cover will not slip when installed on duct base
- Flush cover design holds 10–12% more wires than traditional duct designs
- Double scoreline saves installation time and ultimately lowers installed cost
- Restricted slot design retains wire in slot for fast, easy wire installation or removal

Ask for **PANDUCT®** Wiring Duct Catalog **SA-WDCB05**



Power Connectors



For applications in sizes #14 AWG through 1000 kcmil...

- **Compression Connectors**
Provide reliable permanently crimped connections in sizes matched for each conductor size. They are easy to install and provide a simplified means of inspection of a proper crimp
- **Custom Lugs**
PANDUIT® offers a wide variety of dimensional choices for #8 AWG to 250 kcmil copper compression lugs
- **Mechanical Connectors**
Economical, reusable connectors in many styles in both copper and dual rated aluminum types
- **Power Connector Tooling**
Includes hand operated controlled-cycle, mechanical and hydraulic crimping tools. Also available are the *UNI-DIE™* CT-980 dieless tool and revolutionary CT-2001 battery operated crimping tool



Ask for the *Termination Solutions Catalog SA-TMCB02*

PANDUIT® offers a variety of custom programs designed to permanently identify PANDUIT® products for your specific application...



- **Custom Marking**

All PANDUIT® stainless steel and brass products (ties, strapping, marker plates and tags) can be custom marked by one of two precise computer controlled systems (Laser or Embosser). These systems provide sharp, crisp, high quality legends. A variety of marking device accessories is also available for permanent identification of PANDUIT® stainless steel and brass products.

For more information call 866-405-6659

- **Hot Stamping**

PANDUIT® nylon cable ties, marker ties and marker plates can be custom identified to meet your specific requirements, including sequential numbering and specialized company logos (see page 52).

For more information call 866-405-6660



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		TA1S10-M0	93	WS35-25-C, WS35-50-CFB, WS35-75-C,	
		TA2-C	93	WS50-25-C, WS50-50-C, WS50-75-C,	
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		THM1SC-C	101		
		THM1SC-C30	101		
		THMSC35-C630	100		
		THMSC35-C639	100		
		THMSC35F-C630	100		
		THMSC35F-C639	100		
		THMSP20-C	100		
		THMSP20F-C	100		
		THMSP20F-C30	100		
		THMSP25-C	100		
		THMSP25F-C	100		