

ICORVALD

WIRE & CABLE ACCESSORIES

AS 9100:2004
ISO 9001:2000
REGISTERED

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GROMSTRIP

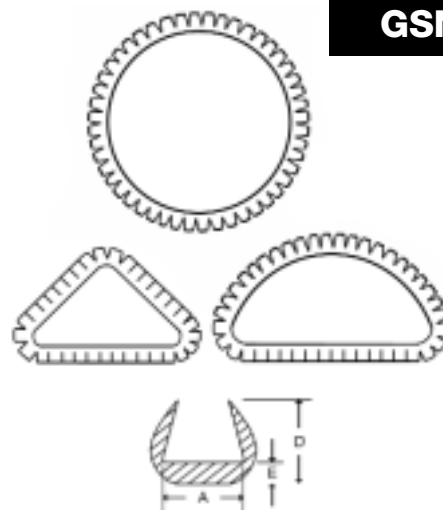
**GSP GSN
GSPC
GSNC**

Gromstrip is a continuous length of extruded U-channel for use as a protective covering on sharp edges. It can be cut to desired length and inserted into any hole, regardless of configuration. Gromstrip requires minimum space, grips surfaces snugly, and won't jar loose. Wherever wires pass through a metal piece, Gromstrip used on the sharp edges will protect against fraying and cut-through of the wires. Gromstrip is also available with continuous serrations for use in acute angles or other difficult applications. (On angles less than 90°, miter the two outside edges for a better fit.)

Polyethylene - used for general application.

Nylon - used where an abrasion-resistant material is desired; it has a higher operating temperature, and better dielectric constant than polyethylene.

Standard color for both Polyethylene and Nylon is natural.



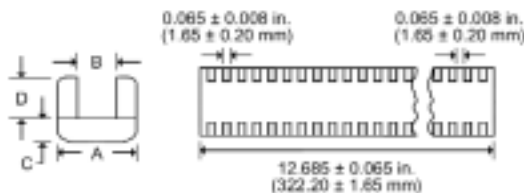
Polyethylene Catalog Number Size	Serrated Polyethylene Catalog Number Size	Dimensions*						Panel Thickness		Standard Package ft / pkg
		A		D		E		inches	mm	
		inches	mm	inches	mm	inches	mm			
GSP-1	GSPC-1	0.031	0.79	0.125	3.18	0.031	0.79	To 0.036	To 0.91	50, 100
GSP-2	GSPC-2	0.109	2.77	0.172	4.37	0.031	0.79	0.037-0.071	0.94-1.80	50, 100
GSP-3	GSPC-3	0.156	3.96	0.188	4.78	0.047	1.19	0.106-0.164	2.69-4.17	50, 100
GSP-4	GSPC-4	0.188	4.78	0.188	4.78	0.047	1.19	0.165-0.187	4.19-4.75	50, 100
GSP-5	GSPC-5	0.250	6.35	0.188	4.78	0.047	1.19	0.188-0.250	4.78-6.35	25, 100

Nylon Catalog Number Size	Serrated Nylon Catalog Number Size	Dimensions*						Panel Thickness		Standard Package ft / pkg
		A		D		E		inches	mm	
		inches	mm	inches	mm	inches	mm			
GSN-1	GSNC-1	0.031	0.79	0.125	3.18	0.031	0.79	To 0.036	To 0.91	50, 100
GSN-2	GSNC-2	0.109	2.77	0.172	4.37	0.109	2.77	0.037-0.071	0.94-1.80	50, 100
GSN-3	GSNC-3	0.156	3.96	0.188	4.78	0.156	3.96	0.106-0.164	2.69-4.17	50, 100
GSN-4	GSNC-4	0.188	4.78	0.188	4.78	0.188	4.78	0.165-0.187	4.19-4.75	50, 100
GSN-5	GSNC-5	0.250	6.35	0.188	4.78	0.250	6.35	0.188-0.250	4.78-6.35	25, 100

*Tolerance: 0.010 in. (0.25 mm)

MIL-SPEC 21266 GROMSTRIP

GSNCM



Nylon Catalog Number Size	Dimensions								Panel Thickness		Standard Package pcs / pkg
	A		B		C		D		inches	mm	
	inches	mm	inches	mm	inches	mm	inches	mm			
GSNCM-1	0.150	3.81	0.056	1.42	0.055	1.40	0.10	2.54	0.015-0.052	0.38-1.32	50, 100
GSNCM-2	0.175	4.45	0.090	2.29	0.055	1.40	0.10	2.54	0.052-0.085	1.32-2.16	50, 100
GSNCM-3	0.220	5.59	0.131	3.33	0.055	1.40	0.10	2.54	0.085-0.128	2.16-3.25	50, 100
GSNCM-4	0.325	8.26	0.195	4.95	0.070	1.78	0.16	4.06	0.128-0.192	3.25-4.88	50, 100
GSNCM-5	0.385	9.78	0.260	6.60	0.070	1.78	0.17	4.32	0.192-0.255	4.88-6.48	50, 100
GSNCM-6	0.445	11.30	0.320	8.13	0.075	1.91	0.18	4.57	0.255-0.318	6.48-8.08	50, 100

LACING TAPE & CORD

LTN LTD
LTT
LCN LCL



Materials

Nylon A synthetic fiber resistant to fungus and most acids, with excellent tensile strength and abrasion resistance.

Dacron Has the characteristics of nylon, as well as better acid resistance, less elongation, and less susceptibility to discoloration.

Linen Available in cord only, linen has less stretch than nylon or dacron and is excellent for serving heavy cable and ropes. It is also used for lacing wire bundles where a stiffer tie is required, as in switchboards, motors, etc.

Teflon Coated Fiberglass A specially developed flatbraid of Teflon-coated fiberglass designed for high temperature applications up to 260°C/500°F. The Teflon coating over the fiberglass prevents the tape from fraying.

Finishes

The function of the finish is to permit easier handling of the material, reduce fraying, and improve knot retention.

A - Non-Waxed - Untreated

B - ICO Standard MW Finish - A micro-crystalline wax finish with a melting point above 55°C/130°F and good resistance to flaking. It is compounded, promoting knot retention without a waxy feel.

C - Special SR Finish - A special coating of non-corrosive fungistatic synthetic rubber is applied. It has the best knot characteristics of all materials, along with good non-dusting or non-flaking properties. Soft and pliable, it will not injure user's hands.

E - Special PVA Finish - A copolymer vinyl chloride acetate finish with a melting point above 175°C/350°F. Ideal for use where a wax-free type or higher operating temperature is required.

LACING TAPE & CORD

**LTN LTD
LTT
LCN LCL**

LTN, LTD, LTT - LACING TAPE

Catalog Number Size	Material	Width		Tensile Test		Finishes Available*		Colors	Standard Package Yards / Spool	Conforms to:
		inches	mm	lbs	kg	Standard	Special			
LTN-0	Nylon	0.220	5.72	135	61.2	B	A, C, E	Blk. / Nat.	250	MIL-T-43435A Size 1, Type 1 A52080B
LTN-1	Nylon	0.121	3.18	80	36.3	B	A, C, E	Blk. / Nat.	250	MIL-T-43435A Size 2, Type 1 A52080B
LTN-2	Nylon	0.090	2.29	50	22.7	B	A, C, E	Blk. / Nat.	500	MIL-T-43435A Size 3, Type 1 A52080B
LTN-3	Nylon	0.062	1.57	25	11.3	B	A, C, E	Blk. / Nat.	500	MIL-T-43435A Size 4, Type 1 A52080B
LTN-4	Nylon	0.050	1.27	15	6.8	B	A, C, E	Blk. / Nat.	500	MIL-T-43435A Size 5, Type 1 A52080B
LTD-2	Dacron	0.090	2.29	50	22.7	B	A, C, E	Blk. / Nat.	500	MIL-T-43435A Size 3, Type 2 A52081B
LTT-2	Teflon-coated Fiberglass	0.090	2.29	75	34.0	-	C**	Blk. / Nat.	500	MIL-T-43435A Size 3, Type 4 A52083B

* To specify a finish, add the appropriate letter after the catalog number - example: LTN-2-E-White.

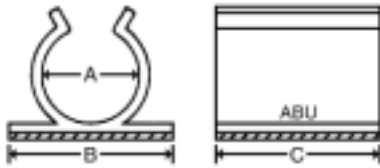
** Where improved knot retention is important.

LCN, LCL - LACING CORD

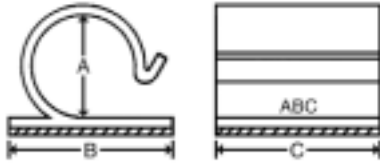
Catalog Number Size	Material	Diameter		Tensile Test		Standard Finish	Colors	Standard Package yards / spool	Conforms to:
		inches	mm	lbs	kg				
LCN-1	Nylon	0.050	1.27	70	31.8	B	Blk. / Wh.	550	MIL-T713E Type P, Class 1
LCN-2	Nylon	0.035	0.89	48	21.8	B	Blk. / Wh.	750	MIL-T713E Type P, Class 2
LCN-3	Nylon	0.030	0.76	32	14.5	B	Blk. / Wh.	1100	MIL-T713E Type P, Class 3
LCL-2	Linen	0.035	0.89	48	21.8	B	Blk. / Nat.	450	MIL-T713E Type N, Class 2

**ABU ABC
ABL ABF**

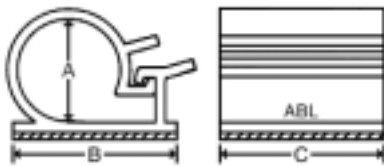
ADHESIVE-BACK CLIPS



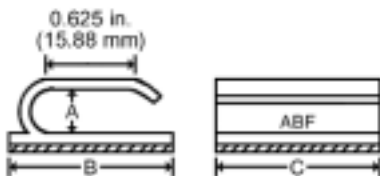
U-CLIP



C-CLIP



L-CLIP (locking)



F-CLIP

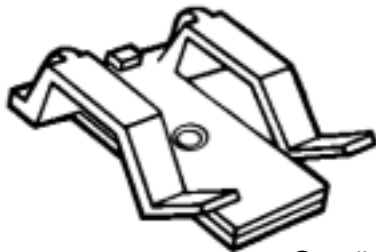
Strip off the protective backing and press these clips into place for permanent mounting. They are made of resilient PVC plastic, elastic enough to receive cable, tubing, pipe or rod up to 1/2" diameter. The standard color is gray.

Catalog Number Size	Dimensions*					
	A		B		C	
	inches	mm	inches	mm	inches	mm
ABU-1/8	0.125	3.18	0.750	19.05	0.750	19.05
ABU-1/4	0.250	6.35	0.750	19.05	0.750	19.05
ABU-3/8	0.375	9.53	0.750	19.05	0.750	19.05
ABU-1/2	0.500	12.70	1.000	25.40	1.000	25.40
ABU-3/4	0.750	19.05	1.000	25.40	1.000	25.40
ABC-1/8	0.125	3.18	0.750	19.05	0.750	19.05
ABC-1/4	0.250	6.35	0.750	19.05	0.750	19.05
ABC-5/16	0.313	7.94	0.750	19.05	0.750	19.05
ABC-3/8	0.375	9.53	0.750	19.05	0.750	19.05
ABC-1/2	0.500	12.70	1.000	25.40	1.000	25.40
ABC-3/4	0.750	19.05	1.000	25.40	1.000	25.40
ABL-1/4	0.250	6.35	0.750	19.05	0.750	19.05
ABL-1/2	0.500	12.70	1.000	25.40	1.000	25.40
ABL-3/4	0.750	19.05	1.000	25.40	1.000	25.40
ABF*	0.250	6.35	0.750	19.05	0.750	19.05

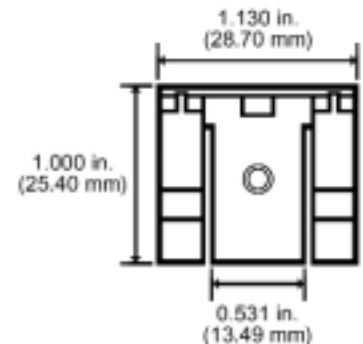
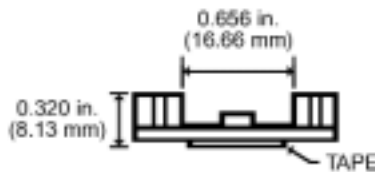
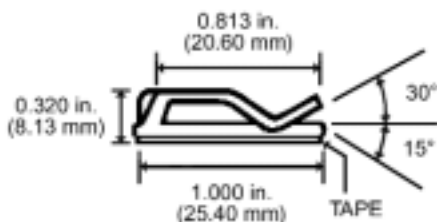
*Made especially to hold 3 wire leads, e.g., air conditioner leads.

FRC

FLAT RIBBON CLIP



Cat #
FRC-1



FRC-1 is a versatile clip with many electrical and non-electrical uses. It accommodates various widths and thicknesses of flat/ribbon cable, providing a quick and secure mounting system.

Adhesive mounts adhere to flat, clean, dry surfaces within the temperature range of 40°F (4°C) to 150°F (66°C).

The standard color is natural.

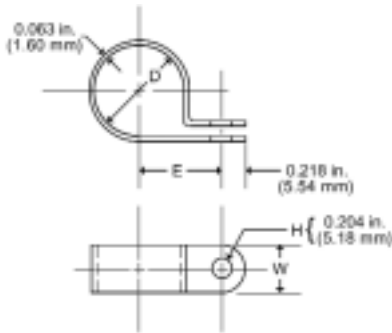
CABLE CLAMPS

**CLE
CLN**

ETHYL CELLULOSE CLAMPS (CLE)

A low cost clamp with excellent shock resistance in a temperature range from -40°F (-40°C) to 185°F (85°C).

Standard Color: Amber



Catalog Number Size	Dimensions						Standard Package pcs / pkg
	D		E		W		
	inches	mm	inches	mm	inches	mm	
CLE-1/8	0.125	3.18	0.328	8.33	0.500	12.70	100, 1000
CLE-3/16	0.188	4.78	0.390	9.91	0.500	12.70	100, 1000
CLE-1/4	0.250	6.35	0.422	10.72	0.500	12.70	100, 1000
CLE-5/16	0.313	7.95	0.453	11.51	0.500	12.70	100, 1000
CLE-3/8	0.375	9.53	0.484	12.29	0.500	12.70	100, 1000
CLE-7/16	0.438	11.13	0.531	13.49	0.500	12.70	100, 1000
CLE-1/2	0.500	12.70	0.563	14.30	0.500	12.70	100, 1000
CLE-9/16	0.563	14.30	0.594	15.09	0.500	12.70	100, 500
CLE-5/8	0.625	15.88	0.625	15.88	0.500	12.70	100, 500
CLE-11/16	0.688	17.48	0.656	16.66	0.500	12.70	100, 500
CLE-3/4	0.750	19.05	0.766	19.46	0.500	12.70	100, 500
CLE-7/8	0.875	22.23	0.813	20.65	0.500	12.70	100, 500
CLE-1	1.000	25.40	0.906	23.01	0.500	12.70	100, 500

NYLON CLAMPS (CLN)

These clamps are more durable, resist acids better, and have a higher operating temperature (275°F (135°C)) than ethyl cellulose.

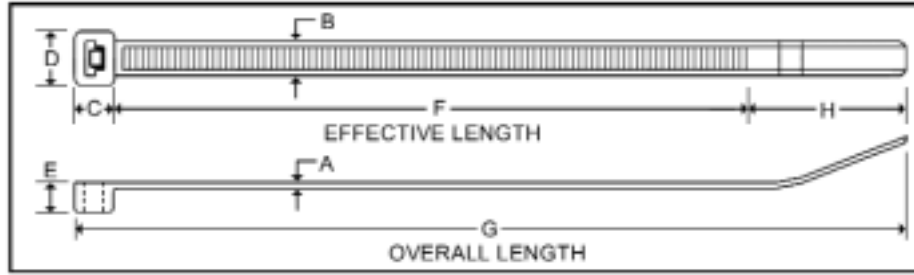
Standard Colors: Natural or Black

Catalog Number Size	Dimensions						Standard Package pcs / pkg
	D		E		W		
	inches	mm	inches	mm	inches	mm	
CLN-1/8	0.125	3.18	0.328	8.33	0.375	9.53	100, 1000
CLN-3/16	0.188	4.78	0.390	9.91	0.375	9.53	100, 1000
CLN-1/4	0.250	6.35	0.422	10.72	0.375	9.53	100, 1000
CLN-5/16	0.313	7.95	0.453	11.51	0.375	9.53	100, 1000
CLN-3/8	0.375	9.53	0.484	12.29	0.375	9.53	100, 1000
CLN-7/16	0.438	11.13	0.531	13.49	0.375	9.53	100, 1000
CLN-1/2	0.500	12.70	0.563	14.30	0.375	9.53	100, 1000
CLN-9/16	0.563	14.30	0.594	15.09	0.500	12.70	100, 500
CLN-5/8	0.625	15.88	0.625	15.88	0.500	12.70	100, 500
CLN-11/16	0.688	17.48	0.656	16.66	0.500	12.70	100, 500
CLN-3/4	0.750	19.05	0.766	19.46	0.500	12.70	100, 500
CLN-7/8	0.875	22.23	0.813	20.65	0.500	12.70	100, 500
CLN-1	1.000	25.40	0.906	23.01	0.500	12.70	100, 500
CLN-1-1/8	1.125	28.58	0.969	24.61	0.500	12.70	100, 500
CLN-1-3/16	1.188	30.18	1.000	25.40	0.500	12.70	100, 500
CLN-1-1/4	1.250	31.75	1.000	25.40	0.500	12.70	100, 500
CLN-1-3/8	1.375	34.93	1.125	28.58	0.500	12.70	100, 500
CLN-1-1/2	1.500	38.10	1.125	28.58	0.500	12.70	100, 500

CABLE CLAMP SPECIFICATION CHART - TYPICAL PROPERTIES

Characteristics (units)	#CLE Ethyl Cellulose	#CLN Nylon	ASTM Test Method
Tensile Strength (PSI)	2,000-8,000	7,000-14,000	D-638
Flexural Strength (PSI)	4,000-12,000	13,800	D-695
Resistance to heat (° F (° C))	185 (85)	275 (135)	
Low operating temperature (° F (° C))	-40 (-40)	-60 (-51)	D-648
Dielectric Strength, short time (Volts / mil)	350-500	385	D-149

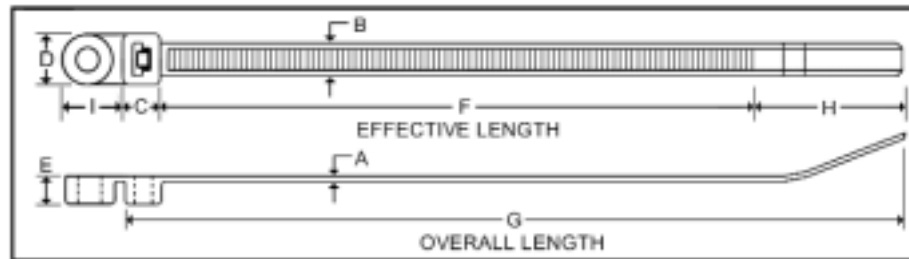
NYLON WIRE TIES



STANDARD - Self-Locking

Catalog Number Size	Minimum Tensile Strength		Bundle Diameter		Thick-ness A inches	Width B inches	Head Length C inches	Head Width D inches	Head Height E inches	Usable Length F inches	Overall Length G inches	Tip Length H inches	Conforms to:
	lbs	kg	min	max									
WRN-3-1/2	18	8.2	1/16	3/4	0.045	0.085	0.163	0.160	0.120	2-11/16	3-3/4	15/16	MS-3367-4
WRN-4	30	13.6	1/16	1	0.045	0.115	0.190	0.253	0.150	3-11/16	5-1/8	1-3/16	N/A
WRN-5-1/2	40	18.1	1/16	1-1/4	0.050	0.135	0.210	0.258	0.150	4-3/4	6-1/8	1-1/4	MS-3367-5
WRN-6-3/4	50	22.7	1/16	1-3/4	0.055	0.190	0.275	0.316	0.187	6	7-1/2	1-3/8	MS-3367-1
WRN-8	40	18.1	1/16	2	0.050	0.115	0.190	0.253	0.150	6-3/4	8	2-3/4	N/A
WRN-11	50	22.7	1/16	3	0.055	0.190	0.275	0.316	0.187	10-1/8	11-3/8	1-3/16	MS-3367-7
WRN-14	50	22.7	1/16	4	0.055	0.190	0.275	0.316	0.187	13-1/8	14-3/8	1-3/16	MS-3367-2
WRN-14HD*	120	54.4	3/16	4	0.083	0.310	0.350	0.505	0.295	14-1/4	14-5/8	1	MS-3367-3
WRN-21HD*	120	54.4	3/16	6	0.083	0.310	0.360	0.505	0.295	20-1/4	21-1/2	1	N/A
WRN-28HD*	120	54.4	3/16	8	0.083	0.310	0.360	0.505	0.295	27-1/8	28-1/4	1	MS-3367-6

*Not available w/ bent tip.
Please specify natural or black when ordering.



SCREWDOWN - Self-Locking

Catalog Number Size	Minimum Tensile Strength		Bundle Diameter		Thick-ness A inches	Width B inches	Head Length C inches	Head Width D inches	Head Height E inches	Usable Length F inches	Overall Length G inches	Tip Length H inches	Mtg Head Length I inches	Screw Size
	lbs	kg	min	max										
WRN-S-4	30	8.2	1/16	1	0.045	0.115	0.190	0.253	0.150	3-11/16	5-1/8	1-3/16	3/8	#4
WRN-S-5-1/2	40	13.6	1/16	1-1/4	0.045	0.135	0.210	0.258	0.150	4-3/4	6-1/8	1-1/4	15/32	#8
WRN-S-6-3/4	50	22.7	1/16	1-3/4	0.050	0.190	0.275	0.316	0.187	6	7-1/2	1-3/8	7/16	#10
WRN-S-11	50	22.7	1/16	3	0.055	0.190	0.275	0.316	0.187	10-1/8	11-3/8	1-3/16	7/16	#10
WRN-S-14	50	22.7	1/16	4	0.055	0.190	0.275	0.316	0.187	13-1/8	14-3/8	1-3/16	7/16	#10
WRN-S-14HD*	120	54.4	3/16	4	0.083	0.310	0.360	0.505	0.295	14-1/4	14-5/8	1	5/8	1/4"
WRN-S-21HD*	120	54.4	3/16	6	0.083	0.310	0.360	0.505	0.295	20-1/4	21-1/2	1	5/8	1/4"
WRN-S-28HD*	120	54.4	3/16	8	0.083	0.310	0.360	0.505	0.295	27-1/8	28-1/4	1	5/8	1/4"

*Not available w/ bent tip.
Please specify natural or black when ordering.

NYLON IDENTIFICATION WIRE TIES

WTCA



WTCA-ID-7-3/4



WTCA-ID-3-3/4

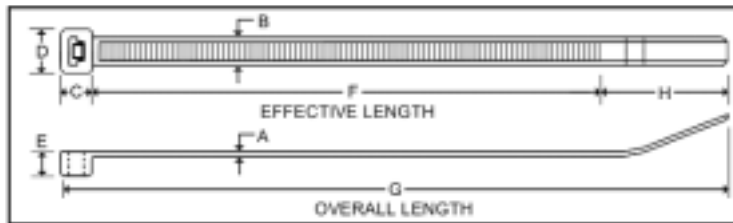
Catalog Number Size	Minimum Tensile Strength lbs	Bundle Diameter inches	Width inches	Thick-ness inches	Length inches	Marking Pad Size inches	Conforms to:	Standard Package pcs / pkg
WTCA-ID-3-3/4	18	3/4	0.100	0.045	3-3/4	5/16 x 1-1/8	MS-3368-5-9E	100
WTCA-ID-7-3/4	50	1-3/4	0.187	0.055	8	1/2 x 1-1/8	MS-3368-1-9A	100

Standard Color: Natural

TEFZEL® WIRE TIES

WRN-T

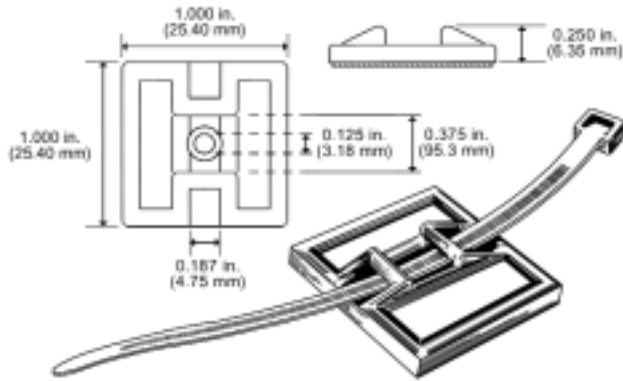
WRN-T are wire ties with excellent resistance to chemicals, solvents, oils, and radiation in the temperature range from -148°F (-100°C) to 302°F (150°C). Tefzel® Wire Ties are suitable for bundling wires and cables in plenum areas. Standard color is aqua.



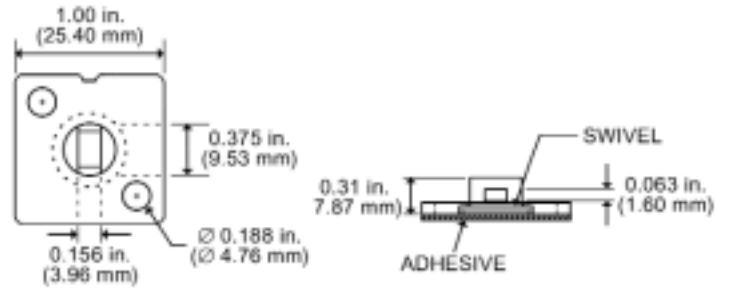
Catalog Number Size	Minimum Tensile Strength lbs	Bundle Diameter min max	Thick-ness A inches	Width B inches	Head Length C inches	Head Width D inches	Head Height E inches	Usable Length F inches	Overall Length G inches	Tip Length H inches
WRN-T-3-1/2	12	1/16 5/8	0.045	0.085	0.163	0.160	0.120	2-11/16	3-3/4	15/16
WRN-T-6-3/4	50	1/16 1-3/4	0.055	0.190	0.300	0.316	0.187	6	7-1/2	1-3/8
WRN-T-14	50	1/16 4	0.055	0.190	0.300	0.316	0.187	13-1/8	14-3/8	1-3/16
WRN-T-14-HD	120	3/16 4	0.083	0.310	0.395	0.505	0.295	14-1/4	14-5/8	1

Standard - Self-Locking

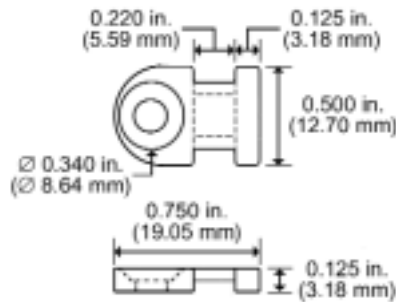
WTCM-1
1 WAY - Adhesive Back



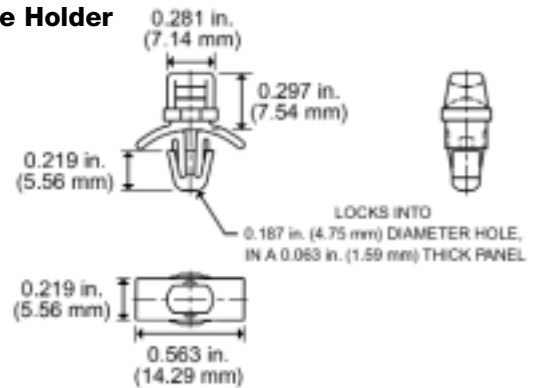
WTCM-2
SWIVEL TYPE - Adhesive Back



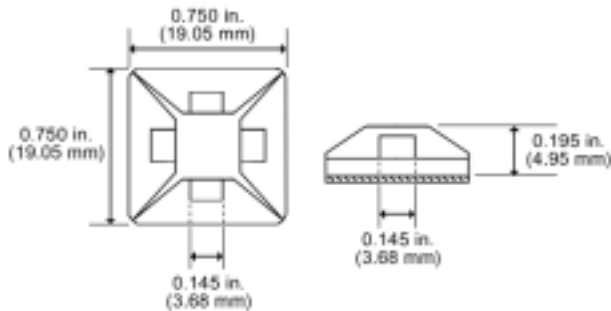
WTCM-3
Flat Tie Holder



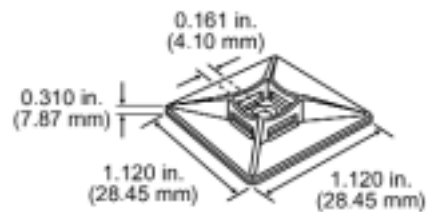
WTCM-4
Flat Tie Holder



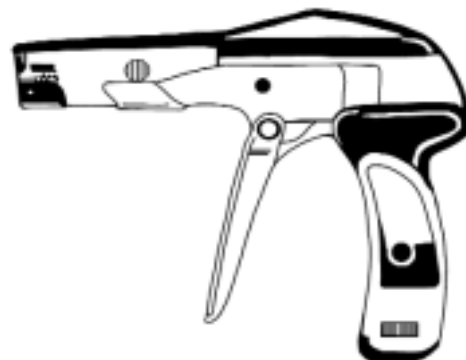
WTCM-7
2 WAY - Adhesive Back



WTCM-8
2 WAY - Adhesive Back w/ Screw Mount



WTT-1
TENSIONING TOOL
designed for use on
18 to 50 lbs. tensile
strength ties



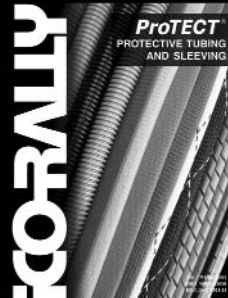
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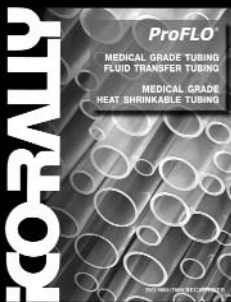
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