

# HellermannTyton

A SPIRENT Company

## HellermannTyton Corporate Headquarters North America

7930 N. Faulkner Rd, PO Box 245017  
Milwaukee, WI 53224  
Phone: (414) 355-1130, (800) 537-1512  
Fax: (414) 355-7341, (800) 848-9866  
<http://www.hellermann-tyton.com>  
email: [corp@htamericas.com](mailto:corp@htamericas.com)  
**A QS9000 Certified Company**

## HellermannTyton Canada

Beaver Creek Business Park  
Unit #1, 160 West Beaver Creek  
Richmond Hill, Ontario L4B 1B4 Canada  
Phone: (905) 882-8024, (800) 661-2461  
Fax: (905) 882-1624, (800) 390-3904  
email: [sales@hellermanntyton.ca](mailto:sales@hellermanntyton.ca)

## HellermannTyton Mexico

Rio Conchos 1757  
Colonia Industrial El Rosario  
Guadalajara, Jalisco, Mexico 44890  
Phone: (3) 659-7020, 011-52-3-659-7020 (From U.S.)  
Fax: (3) 659-6939  
email: [info@hellermanntyton.com.mx](mailto:info@hellermanntyton.com.mx)



Heavy Duty Equipment and Transportation Components





## Heavy Duty Equipment and Transportation Components



HellermannTyton is a world leader in developing fastening solutions for the automotive, transportation, and heavy duty equipment industries. We pride ourselves in conceptualizing, engineering, and manufacturing products which create innovative and productive alternatives in the routing, bundling, and clipping of harnesses, hoses, and cables.

HellermannTyton's goal is to engineer solutions which make companies more profitable. We do this by manufacturing products that promote cost reductions through labor savings, part number reductions, part standardizations, vehicle weight reductions and reduced warranty claims.

From initial concept to implementation and follow-up, experienced teams from HellermannTyton work closely with our customers' design and production engineers to develop products that meet cost savings goals and enhance the overall quality of the vehicle or piece of equipment. Many of the products included in this catalog were developed to meet specific requirements but are used universally for many applications within the automotive, transportation, and heavy duty equipment industries.



Contact us for information on how we can work with you to increase efficiencies, quality, and profitability at your manufacturing facility.

**Phone:** 414-355-1130  
**Fax:** 414-355-7341  
**Email:** corp@htamericas.com  
**Web site:** www.hellermann.tyton.com



*"HellermannTyton was able to take an idea or review our installations and provide a product that saved production time as well as reduce the number of inventoried parts."*

**— Project Engineer, Peterbilt**



*"HellermannTyton provides both technical and service support for design assistance and information processing. Standardization is the key to new designs. HellermannTyton understands this and makes it possible."*

**— Chief Engineer, Chassis Group-  
Concurrent Engineering,  
International Truck and Engine**



### **Bus Manufacturer Benefits from HellermannTyton's "Investigative Team"**

Not only is HellermannTyton a global manufacturer of wire and cable fastening solutions, the company can boast of an excellent investigative team. A major bus manufacturer pulled a chassis off the line and asked HellermannTyton to evaluate all the routing and clipping of harnesses and hoses. HellermannTyton's team brought the company's standard and specialty fasteners and mounts with them to the manufacturer and spent over two days reassembling the harnesses and hoses on the

chassis. They took off all the p-clamps and fasteners on the chassis and replaced them with HellermannTyton components. The bus manufacturer used every suggestion and component from HellermannTyton and replaced over 20 part numbers with seven HellermannTyton components. The result? The bus manufacturer is enjoying greater efficiencies, saving approximately \$250,000 per year, due to part standardization and labor savings - while reducing vehicle weight.

**HellermannTyton routinely partners with transportation and heavy equipment manufacturers to achieve cost savings and process improvements. Contact us with your requirements.**

# Heavy Duty Equipment and Transportation Components

Material Information and Specifications.	4-5
--	-----

## Mounts

Weld Stud Mounts	6
Universal Mounts	6
Dual Swivel Saddle Mounts	7
Saddle Mounts for Button Head Ties	8
Heavy Duty Mounts	9
Two Way Saddle Mounts	10
Fir Tree Saddle Mounts	10
Isolator Mounts	11
Axial Oval Mounts	11
Mounting Cradles	12
Cable Harness Mounts	12
Fir Tree Mounts	12

## Fasteners

Button Head Ties	13
Dual Clamp Ties	14
Double Head Ties	14
Fir Tree Push Mount Ties	15
Wing Push Mount Ties	15
Domed Fir Tree Mount Ties	15
Domed Push Mount Ties	16
Flexible Head Stud Mount Ties	16
Stud Mount Ties	16
Clamp Ties	17
Edge-Clip Cable Ties	17
Parallel Entry Ties	18
Outside Serrated Ties	18
El-Ty (Extended Length Ties)	19
Kabelrap Bundling System	19
Standard Cable Ties	20
Heavy Duty Lashing Ties	21
Stainless Steel Ties	22
Cable Tie Mounting Bases	23
Cable Tie Mounts	23

## Cable Tie Tools

Manual	24
Power Assisted	25
Automatic	25-26

## Clamps

Snapper Hose Clamps	27-29
Series 12 Cable Clamps	30
RB Cable Clips	30
Series 52 Cable Clamps	30

## Wire Management

Grommet	31
Convolute Tubing	32

## MATERIALS

HellermannTyton has worked very closely with its material suppliers to develop resins that are specifically formulated for fastener production. Superior quality materials are essential for superior quality fasteners. HellermannTyton has spearheaded material advancements in component manufacturing to assure its customers of the finest quality products. Environmental factors can have an adverse effect on fasteners. **It is very important to use the most suitable material for each application.** HellermannTyton fasteners are available in a variety of materials ranging from polyamides (nylon 6/6) to fluoropolymers

### Nylon 6/6 – General Purpose

General purpose nylon 6/6 features light weight, high strength and a wide temperature range. It is halogen free so it does not release dangerous gases, such as chlorine, bromine, fluorine and iodine when burned. Nylon 6/6 is hygroscopic, and therefore, absorbs or releases moisture depending on its environment. Thus, the moisture level of the material will affect tensile strength, stiffness and elongation of the product.

### Nylon 6/6 – Heat Stabilized

With similar properties and benefits as nylon 6/6, products manufactured with heat stabilized nylon 6/6 material have a chemical stabilizer added for higher continuous temperature applications.

### Nylon 6/6 – UV Resistant

Chemical inhibitors are used to give nylon 6/6 material added properties to fight against premature aging of products due to the effects of ultraviolet rays.

### Nylon 6/6 – UV Resistant

#### (2% Carbon for Military Specification)

The physical properties of this material include carbon, which acts as a UV stabilizer, prolonging the life of the product under ultraviolet conditions. It also allows HellermannTyton's black cable ties to meet the particular military specification for cable ties.

### Nylon 6/6 – V0 Flame Retardant

This material meets UL 94V-0 flammability requirements. Flame retardant additives generally reduce tensile strength when compared to general-purpose nylon 6/6, but this resin has been formulated to minimize such effects.

### Nylon 6/6 – Impact Modified Heat and UV Resistant

Impact modified offers the increased flexibility, heat resistance and the UV resistance as the high impact material with greater coverage for mobile applications.

### Nylon 6/6 – High Impact

Impact modifiers are added to increase flexibility. High impact nylon 6/6 has stable tensile strength due to its reduced influence from moisture. It is excellent for high vibration applications, as within the aircraft and automobile industries and performs better than nylon 6/6 against ultraviolet rays. Good for outdoor use.

• Tefzel is a registered trademark of E.I. DuPont Corporation.

### Nylon 4/6

Nylon 4/6, like nylon 6/6, offers light weight and high strength benefits, but offers an even wider temperature range. This material can be used at a higher continuous operating temperature than nylon 6/6 - heat stabilized. In addition to having excellent heat resistance, nylon 4/6 has low creep effects and retention of stiffness at elevated temperatures.

### Polypropylene

Polypropylene is used in environments where chemical effects on nylon are a concern. It is not affected by inorganic acids (hydrochloric), polyhydric alcohols (ethyleneglycol), neutral salts (sodium chloride) and basic salts (sodium bicarbonate). Polypropylene also resists a number of other chemicals with good results, although it has lower tensile strength than nylon 6/6 (about half). Polypropylene has good UV resistance.

### Nylon 12

Although not as strong as nylon 6/6 (about half), nylon 12 is extremely flexible, absorbs little moisture, ages better and has better chemical and UV resistance than general purpose nylon 6/6. Nylon 12 is good for applications where products are exposed to metal oxides.

### Tefzel

Although about two-thirds the strength of nylon 6/6, Tefzel is resistant to a wide range of chemicals, such as concentrated hydrofluoric and sulfuric acids. It is also a low water absorbing material, therefore, is not adversely affected by water. Tefzel is radiation resistant up to 100 megarads and meets the fire and smoke requirements of IEEE 383. Tefzel also withstands high temperatures and ultraviolet light exposure. Products made from Tefzel material also have non-outgassing properties for zero gravity applications.

### Acetal Homopolymer

Acetal homopolymer has excellent dielectric properties, UV and chemical resistance, and a UL94-HB flame rating. It has been tested for excellent weatherability against moisture, sunlight, and other environmental conditions.

### Thermoplastic Vulcanizate (TPV)

TPV is a durable rubber material that is chemical and abrasion resistant that remains flexible in low temperatures.

## Heavy Duty Equipment and Transportation Components

## Material Specifications

Material	Continuous Operating Temperature		Tensile Strength at 73°F Dry as Molded ASTM D-638 (PSI)	UL Flame Rating	Oxygen Index %	Gamma Radiation Resistance	UV Resistance	Military, Federal, ASTM and FDA Specifications
	Max.	Min.						
Nylon 6/6-General Purpose	185°F 85°C	-40°F -40°C	12,000	94V-2	28	1 x 10 <sup>5</sup> Rads	Poor	ASTM D-4066PA0111 FDA CFR177.1500
Nylon 6/6-Heat Stabilized (HS)	220°F 105°C	-40°F -40°C	12,000	94V-2	26	1 x 10 <sup>5</sup> Rads	Poor	ASTM D-4066PA0121
Nylon 6/6-UV resistant (UV)	185°F 85°C	-40°F -40°C	12,000	94V-2	26	1 x 10 <sup>5</sup> Rads	Good	ASTM D-4066PA0191
Nylon 6/6-2% Carbon UV resistant (0UV)	185°F 85°C	-40°F -40°C	12,000	94V-2	26	1 x 10 <sup>5</sup> Rads	Good	ASTM D-4066PA0181 MS3367/8
Nylon 6/6-Flame Retardant (V0)	185°F 85°C	-40°F -40°C	10,800	94V-0	34	1 x 10 <sup>5</sup> Rads	Poor	ASTM D-4066PA0110
Nylon 6/6-Impact Modified (IMHSUV)	230°F 110°C	-65°F -54°C	9,500	94-HB	N/A	N/A	Very Good	ASTM D-4066PA0150
Nylon 6/6-High Impact (HIR)	185°F 85°C	-40°F -40°C	8,800	94-HB	19	1 x 10 <sup>5</sup> Rads	Good	ASTM D-4066PA0150
Nylon 4/6-Heat Stabilized (STNL)	275°F 135°C	-40°F -40°C	14,400	94V-2	27	9 x 10 <sup>6</sup> Rads	Poor	ASTM D-4066PA0922
Polypropylene-Chemical Resistant (PP)	185°F 85°C	-40°F -40°C	3,400	94-HB	N/A	1 x 10 <sup>5</sup> Rads	Good	ASTM D-4101PP0320 FDA CFR177.1520
Nylon 12-UV resistant (UV)	176°F 80°C	-40°F -40°C	5,800	94-HB	N/A	1 x 10 <sup>5</sup> Rads	Good	ASTM D-4066PA411
Tefzel® (TZ)	302°F 150°C	-50°F -46°C	5,800	94V-0	30	2 x 10 <sup>8</sup> Rads	Excellent	UL2043 ASTM D-3159 Type 1 Grade 1
Thermoplastic Vulcanizate (TPV))	392°F 200°C	-50°F -45°C	239,000	94-HB	N/A	N/A	Excellent	-
Acetal homopolymer	185°F 85°C	-40°F -40°C	6,500	94-HB	N/A	N/A	Excellent	TR-TSY-000789

## Material Performance Guide

Selection	Nylon 6/6 General Purpose	Nylon 6/6 Heat Stab.	Nylon 6/6 UV Resistant	Nylon 6/6 2%Carbon UV Resistant	Nylon 6/6 Flame Ret. V0	Nylon 6/6 Impact Modified Heat and UV Resistant	Nylon 6/6 High Impact	Nylon 4/6 Heat Stab.	Polypropylene	Nylon 12 UV Resistant	Tefzel®	TPV	Acetal homopolymer
Tensile Strength	8	8	8	9	7	7	8	10	2	4	5	18	5
High Temp.	2	3	2	2	2	3	2	9	2	1	10	10	3
Flammability	5	5	5	5	10	2	2	5	2	2	10	2	2
UV Resistance	1	1	5	8	1	8	2	1	5	3	10	1	10
Radiation	3	3	3	3	3	3	3	3	6	3	10	-	3
Chemical Resistance	6	6	6	6	6	6	6	6	8	8	10	-	-
-Hydrocarbons	8	8	8	8	8	8	8	8	6	8	10	4	8
-Chlorinated Hydrocarbons	6	6	6	6	6	6	6	6	3	8	10	4	5
-Acids	2	2	2	2	2	2	2	2	8	5	10	8	8
-Bases	8	6	6	6	6	6	6	6	8	6	10	8	8
-Salts	3	3	3	3	3	3	3	3	10	8	10	8	8
Relative Cost	Low	Low	Med.	Med.	Med.	Med.	Med.	Med.	Med.	Med.	High	Med.	Med.

10 = Most Recommended 1= Least Recommended



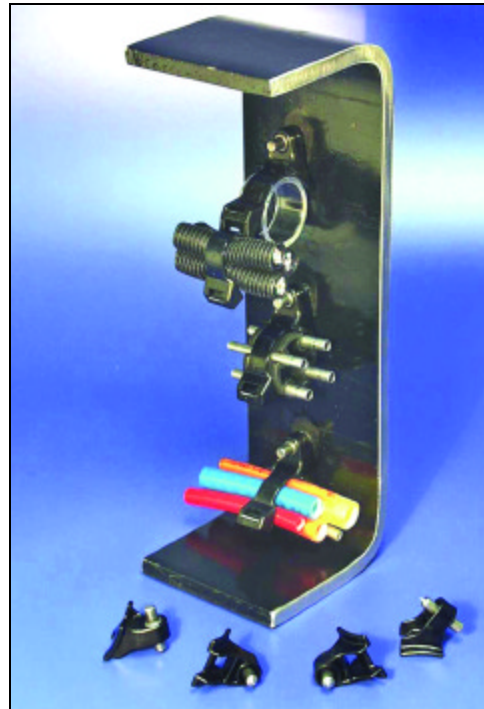
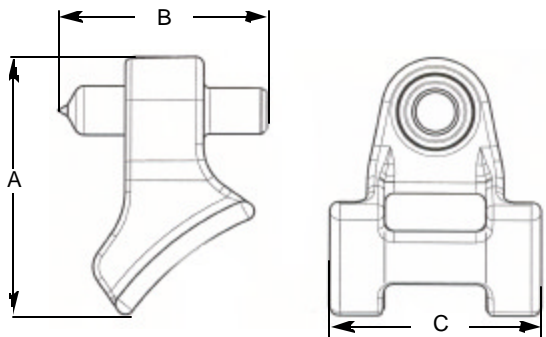
## MOUNTS

### Weld Stud Mount

Used in conjunction with a cable tie, the weld stud mount eliminates all sizes of p-clamps, nuts and bolts with just two components. Designed to save time and labor, the weld studs can be welded onto a painted frame rail without having to grind the surface in preparation.

Standard color: black

Standard material: impact modified, heat stabilized, uv resistant - nylon 6/6



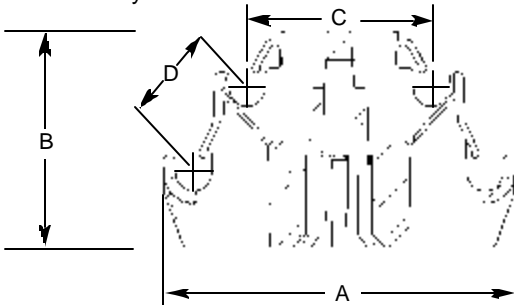
Hellermann Tyton Part No.	Cable Tie Series	Maximum Bundle Dia. In. (mm)	Stud Dia. In. (mm)	Dimensions In. (mm)			Pkg. Qty.
				A	B	C	
WSM60IMHSUVH1	T50 - T250	6" (152.4)	.24" (6)	1.30" (33)	1.06" (27)	.81" (20.5)	500

### Universal Mount

The versatile universal mount can accommodate up to three cable ties and four 1/4" diameter tubes. It is designed to be attached to 4 different sized huck bolts.

Standard color: black

Standard material: impact modified, heat stabilized, uv resistant - nylon 6/6



Hellermann Tyton Part No.	Diameter of Stud Mount	Cable Tie Series	Max Tubing Size In. (mm)	Dimensions In. (mm)				Pkg. Qty.
				A	B	C	D	
UM380IMHSUVH1	3/8 "	T50 thru T120	.25" (6.35)	2.498" (63.46)	1.502" (38.16)	1.307" (33.20)	.709" (18.00)	500
UM500IMHSUVH1	1/2"							500
UM580IMHSUVH1	5/8"							500
UM340IMHSUVH1	3/4"							500

## Dual Swivel Saddle Mounts

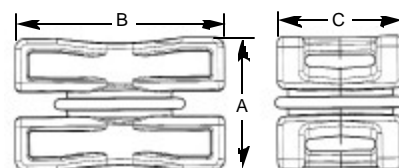
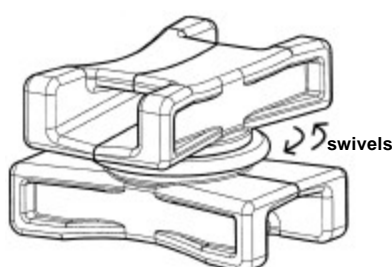
This saddle mount is installed between two bundles (such as wires, cables, hoses, tubing, conduit, etc.) to separate them and prevent chafing and wear. The mount can be rotated by hand, allowing the bundles to be crossed and rotated at any angle the application requires. Cable ties, which secure the bundles, are used with the mount. The dual swivel saddle mount accommodates cable ties up to 1/2" wide.

Standard color: black

Standard material: heat stabilized nylon 6/6



*Patents Pending*



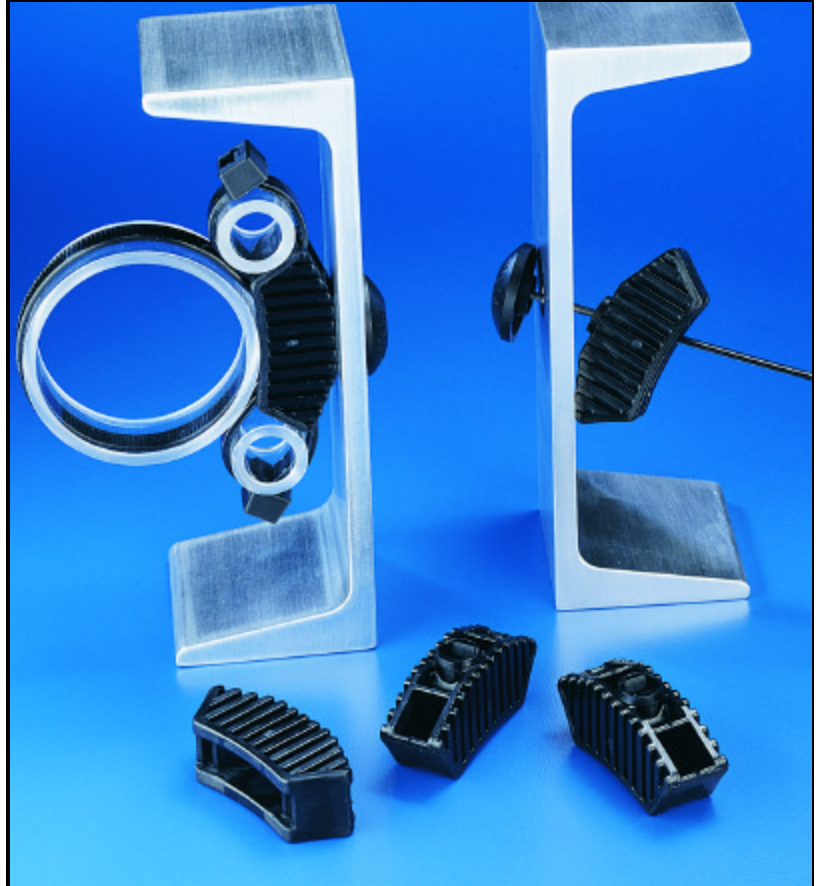
Hellermann Tyton Part No.	Cable Tie Series	Maximum Bundle Dia. In. (mm)	Minimum Pull-Apart Strength	Dimensions In. (mm)			Pkg. Qty.
				A	B	C	
DSWS50C2	T50 thru T250	6.0" (152.4)	250 lbs.	.93" (23.6)	1.6" (40.6)	1.0" (25.4)	100

### Saddle Mounts for Button Head Ties

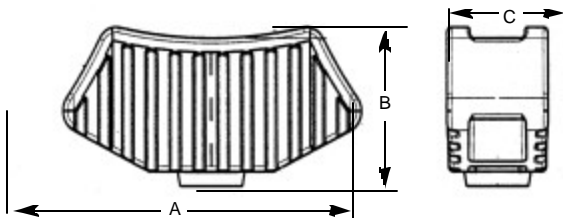
Designed to be used with HellermannTyton's BT120LD and BT120LLD button head ties, the saddle mount stands off bundles from frame rails, providing clearance from bolts and other protrusions for protection against abrasion. This mount also allows flow-through of salt, dirt and other impurities from the road, preventing unwanted build-up on hoses and harnesses. The tie is snapped into the mount which allows the strap and tie assembly to be pre-installed on the frame rail or panel. The mount can secure three separate bundles, providing parallel spacing between the frame rail and adjacent bundles. The saddle mount is manufactured with a pilot bushing which prevents the cable tie from chafing against the burr edge of the mounting hole.

Standard color: black

Standard material: impact modified, heat stabilized, uv resistant - nylon 6/6



*Patents Pending*



HellermannTyton Part No.	Mounting Hole In. (mm)	Panel Thickness In. (mm)	Standoff Height In. (mm)	Dimensions In. (mm)			Max. Bundle Dia. In. (mm)		Pkg. Qty.
				A	B	C	Center	Sides	
MSBT1200HIRHSC2	.440" (11.18) to .820" (20.83)	.160" (4.06) to .75" (19.05)	.875" (22.23)	1.90" (48.3)	.81" (20.6)	.65" (16.5)	6.0" (152.4)	1.0" (25.4) (dependent upon size of center bundle)	100



## Heavy Duty Equipment and Transportation Components

## Heavy Duty Mounts

HellermannTyton heavy duty mounts are designed for use with the T250 and T255 series cable ties to harness wires and hoses. These mounts contain a small tab inside the mounting hole to temporarily engage threads, which allows assemblers to pre-install the mount on a stud before securing with a washer and nut. The heavy duty mounts accept all standard HellermannTyton cable ties up to 1/2" wide.

Standard color: black

Standard material: impact modified, heat stabilized, UV resistant, nylon 6/6 (IMHSUV)

## High Torque - Heavy Duty Mounts

HellermannTyton's high torque - heavy duty mounts are designed for use with pneumatic impact wrenches. These mounts are molded with a metal bushing to withstand high torque forces required for tightening grade 8 bolts. The arched, "H" shaped saddle surface provides broad surface contact with the bundle, minimizing pinching and crushing of the bundles and adjusts to a wide variety of bundle diameters. The heavy duty mounts accept all standard HellermannTyton cable ties up to 1/2" wide.

Standard color: black

Standard material: impact modified, heat stabilized, UV resistant, nylon 6/6 (IMHSUV)

## Medium Torque - Heavy Duty Mounts

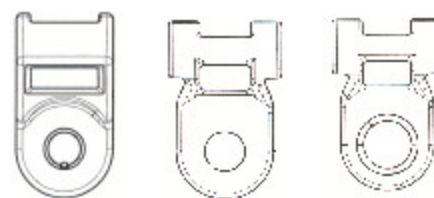
HellermannTyton's medium torque - Heavy duty mounts are the same mounts as above, molded without the metal bushings.

Standard color: black

Standard material: impact modified, heat stabilized, UV resistant, nylon 6/6 (IMHSUV)



U.S. Patent Number 5,820,083



Heavy Duty Mount

Medium Torque Heavy Duty Mount

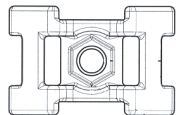
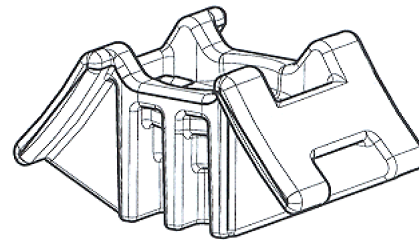
High Torque Heavy Duty Mount

HellermannTyton Part No.	Mounting	Max. Torque	Max. Dia. for Washer/Socket In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.
<b>Heavy Duty Mounts</b>						
HDM190HIRC2 HDM190HIRH4	#10	115 lb. - in. (12.93 Nm)	.73" (18.54)	1.43" (36.32)	.76" (19.30)	100 500
HDM250HIRC2 HDM250HIRH4	1/4"	115 lb. - in. (12.93 Nm)	.73" (18.54)	1.43" (36.32)	.76" (19.30)	100 500
HDM3120HIRC2 HDM3120HIRH4	5/16"	115 lb. - in. (12.93 Nm)	.73" (18.54)	1.43" (36.32)	.76" (19.30)	100 500
<b>Medium Torque Heavy Duty Mounts</b>						
HDM321HIHSUVC2 HDM321HIHSUVH4	5-16" (8mm)	40 lb. - ft. (54 Nm)	.90" (23)	1.82" (46.2)	.96" (19.30)	100 500
HDM401HIHSUVC2 HDM401HIHSUVH4	3/8" (10mm)	40 lb. - ft. (54 Nm)	.90" (23)	1.82" (46.2)	.96" (19.30)	100 500
HDM501HIHSUVC2 HDM501HIHSUVH4	1/2" (12mm)	40 lb. - ft. (54 Nm)	.90" (23)	1.82" (46.2)	.96" (19.30)	100 500
<b>High Torque Heavy Duty Mounts</b>						
HDM320HIRC2 HDM320HIRH4	5/16" (8mm)	114 lb. - ft. (155 Nm)	.90" (23)	1.85" (48.5)	.99" (25.3)	100 500
HDM400HIRC2 HDM400HIRH4	3/8" (10mm)	114 lb. - ft. (155 Nm)	1.26" (32)	1.85" (48.5)	.99" (25.3)	100 500
HDM500HIRC2 HDM500HIRH4	1/2" (12mm)	114 lb. - ft. (155 Nm)	1.26" (32)	1.85" (48.5)	.99" (25.3)	100 500



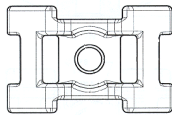
## Two Way Saddle Mounts

This saddle mount is installed between two bundles (such as wires, cables, hoses, tubing, conduit, etc.) to separate them and prevent chafing and wear. Fastened to a frame rail or mounting bracket, the "H" profile on the saddle mount provides tight circumferential loop on large and small bundles. Cable ties, which secure the bundles, are used with the mount. The two way saddle mount accommodates cable ties up to 1/2" wide. Standard color: black (S2HM25) and gray (S2CM25)  
Standard material: impact modified, heat stabilized, UV resistant nylon 6/6



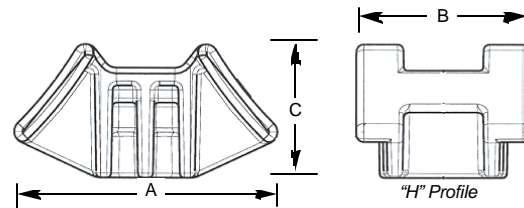
S2HM25

The hexagonal retention feature captures bolt or nut requiring tool access from back side only.



S2CM25

Socket counterbore allows securing with a socket wrench from the top side for use with a weld stud.



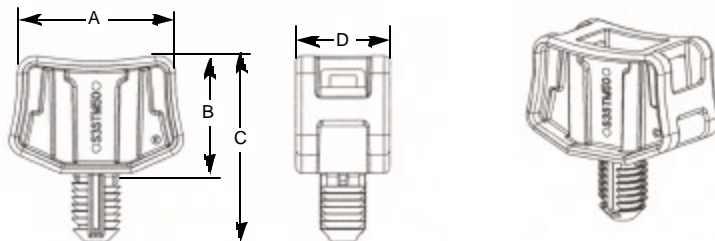
Hellermann Tyton Part No.	Cable Tie Series	Maximum Bundle Dia. In. (mm)	Minimum Pull-Apart Strength	Dimensions In. (mm)			Pkg. Qty.
				A	B	C	
S2HM25	T50 thru T250	3.00"	250 lbs.	1.76" (44.8)	1.17" (29.7)	.90" (22.9)	100
S2CM25	T50 thru T250	3.00"	250 lbs.	1.76" (44.8)	1.17" (29.7)	.90" (22.9)	100

## Fir Tree Saddle Mounts

The fir tree saddle mount is designed for use with HellermannTyton cable ties from T250/T255 series down to the T50 series. This saddle mount acts as a standoff – elevating bundles above bolt protrusions commonly found in frame rails and panels. A tension tab on the mount allows cable ties to be pre-assembled in a ready position prior to bundles being brought to the mount. The mount can secure up to 4 separate bundles, providing parallel spacing between the frame rail and adjacent bundles.

Standard color: black

Standard material: impact modified, heat stabilized, UV resistant nylon 6/6



Patents Pending

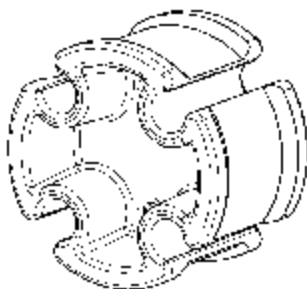
Hellermann Tyton Part No.	Mounting Hole In. (mm)	Panel Thickness In. (mm)	Pull Force	Dimensions In. (mm)				Max. Bundle Dia. In. (mm)		Pkg. Qty.
				A	B	C	D	Center	Sides	
S3STM500HIRHSC2	.50" (12.70)	.075" - .515" (1.91 - 13.08)	>200 lb.	1.98" (50.29)	1.36" (34.54)	2.16" (54.86)	.86" (21.84)	5" (127.00)	.50" to 1.5" (12.7 to 38.10) (dependent upon size of center bundle)	100

## Isolator

HellermannTyton's isolator mount is used to align and separate 1/4" tubing or brake lines. Easy to assemble, the isolator dampens vibrations and can be used with up to four brake lines. Mounting the isolator can be accomplished with HellermannTyton's standard cable ties, button head ties and any of HellermannTyton's heavy equipment mounts. Mounting is optional, but recommended when long runs occur. The isolator is durable, chemical and abrasion resistant, and remains flexible in low temperatures.

Standard color: black

Standard material: thermoplastic vulcanized (TPV) rubber



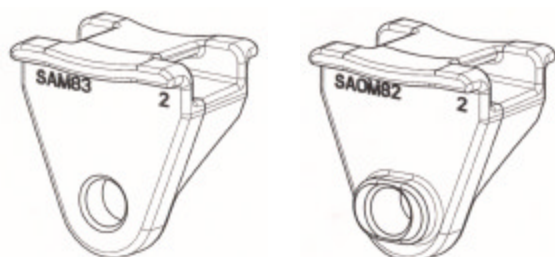
Hellermann Tyton Part No.	Cable Tie Series	Bundle Dia. In. (mm)	Mounting Dia. In. (mm)	Overall Dia. In. (mm)	Spacing between Clips In. (mm)	Width In. (mm)	Pkg. Qty.
ISO4X25	T50 thru T250	.25" (6.4)	1.34" (34)	1.44" (36.6)	.51" (13)	.92" (23.4)	100

## Axial Oval Mount

HellermannTyton's axial oval mount stands off bundles from frame rails and cross members to prevent them from rubbing and chafing. The axial oval mount accommodates cable ties up to .5" wide.

Standard color: gray (SAM83), black (SAOM82)

Standard material: high impact, heat stabilized nylon 6/6

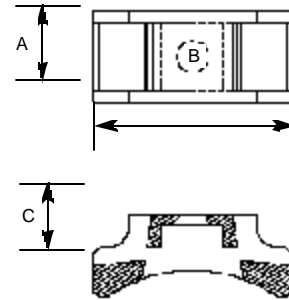


Hellermann Tyton Part No.	Cable Tie Series	Bolt Hold Dia. In. (mm)	Offset Distance from Mounting Slot In. (mm)	Dimensions In. (mm)			Pkg. Qty.
				L	W	H	
SAM83 SAOM82	T50 thru T250	5/16" (8)	.78" (19.8)	1.35" (34.3)	1.02" (25.9)	1.39" (35.3)	100

### Mounting Cradle

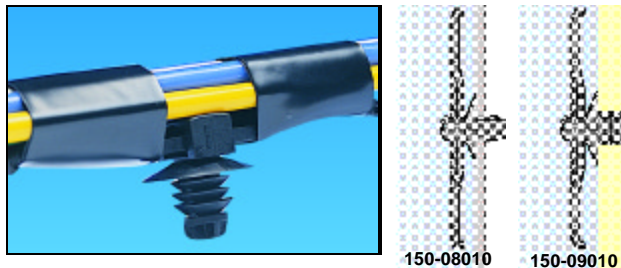
The mounting cradle holds cables and harnesses secure yet clear of the panel surface. This cradle is assembled with HellermannTyton cable ties. Standard color: black and natural. Standard material: nylon 6/6.

Hellermann Tyton Part No.	Cable Tie Series	Maximum Bundle Dia. In. (mm)	Dimensions In. (mm)			Pkg. Qty.
			A	B	C	
LKCSF1	T50 thru T250	3.0" (76.2)	.75" (19)	1.6" (40)	.66" (16.8)	100



### Cable Harness Mounts

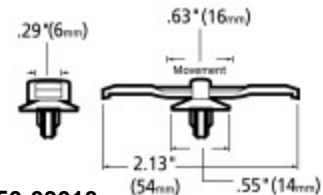
Either tape or a cable tie can be used to mount onto harness, then push into a hole in the panel. The cable harness mounts allow for .31" (8mm) of movement either side of center to allow for alignment. Standard color: black. Standard material: nylon 6/6.



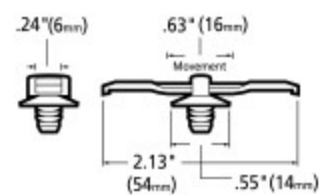
Part No. 150-09010 is designed to mount into a solid panel such as sheet metal or wood.

HellermannTyton Part No.	Mounting Hole In. (mm)	Panel Thickness In. (mm)	Pkg. Qty.
150-08010	.248" - .276" (6.3 - 7.0)	.019"-.062" (0.5 - 1.6)	500
150-09010	.256"-.276" (6.5 - 7.0)	>.019" (> 0.5 )	500

#### 150-08010

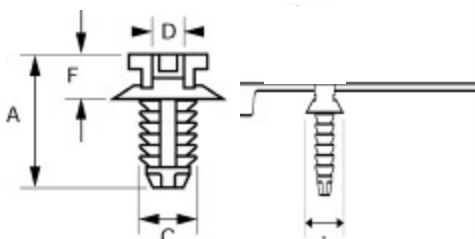


#### 150-09010

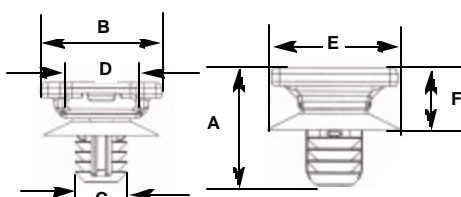


### Fir Tree Mounts

Fir tree mounts are assembled with HellermannTyton cable ties. Standard color: black. Standard material: nylon 6/6.



FT5 - FT10 Fir Tree Mounts — Cable ties are ordered separately.



FT9A and FT9B Fir Tree Mounts Cable ties are ordered separately.

Hellermann Tyton Part No.	Cable Tie Series	Mounting Hole In. (mm)	Panel Thickness In. (mm)	A Height In. (mm)	B Width In. (mm)	C In. (mm)	D In. (mm)	E In. (mm)	F In. (mm)	Pkg. Qty.
FT5	T18-T50	.181"-.193" (4.6-4.9)	.028"-.118" (0.7 - 3.0)	.52" (13.2)	.63" (16)	.23" (5.9)	.20" (5)	.46" (11.6)	.27" (6.9)	500
FT6	T18-T50	.256"-.276" (6.5-7.0)	.028"-.118" (0.7 - 3.0)	.53" (13.5)	.63" (16)	.31" (7.9)	.20" (5)	.46" (11.6)	.28" (7.2)	500
FT7	T18-T50	.256"-.276" (6.5-7.0)	.031"-.276" (0.8 - 7.0)	.75" (19.0)	.63" (16)	.35" (9.0)	.20" (5)	.46" (11.6)	.25" (6.3)	500
FT9	T50	.346"-.370" (8.8-9.4)	.079"-.316" (2-8)	1.06" (27)	.79" (20)	.44" (11.2)	.31" (8)	.59" (15)	.32" (8.2)	500
FT9A	T250	.38" (9.7)	.031"-.25" (2- 6.35)	.75" (19.1)	.89" (22.6)	.38" (9.7)	.51" (13.0)	.85" (21.6)	.40" (10.1)	500
FT9B	T250	.38" (9.7)	.031"-.63" (2-16)	1.12" (28.4)	.89" (22.6)	.38" (9.7)	.51" (13.0)	.85" (21.6)	.40" (10.1)	500
FT10	T50	.394" (10)	.031"-.236" (0.8 - 6.0)	.75" (18.6)	.71" (18)	.43" (11.0)	.20" (5)	.46" (11.6)	.26" (6.50)	500

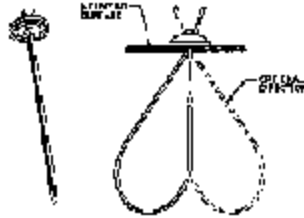
## FASTENERS

### Button Head Ties

The button head tie is a two piece tie providing for parallel entry and exit through the head. The strap contains serrations on both sides and the head has two opposed pawls covered by a spherical dome top. This design allows the strap to be directed clockwise or counter-clockwise prior to insertion into the head, enabling bi-directional looping. The BT120 ties are manufactured with a pilot bushing which prevents chafing of the tie.

Standard color: black

Standard material: impact modified, heat stabilized, UV resistant nylon 6/6



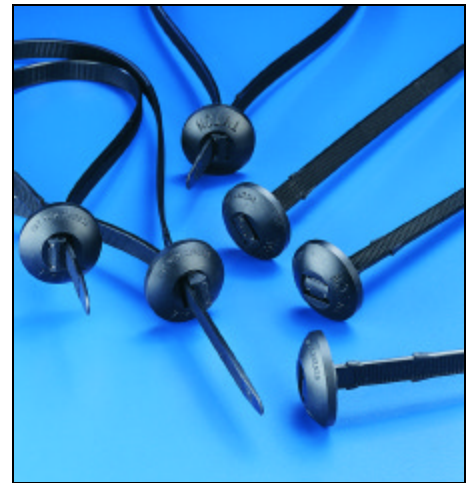
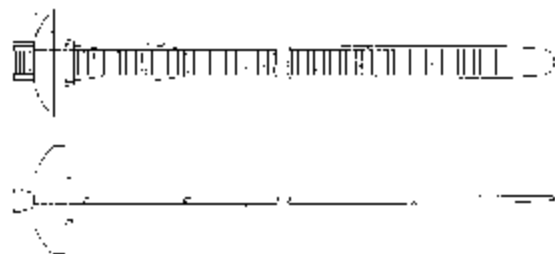
*U.S. Patent Number 4,557,023*

HellermannTyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
BT1000HIRC2	100	2-5/8" (66.67)	9-5/8" (244.47)	.22" (5.58)	100	TWT2, T150, MK9
BT100L0HIRK2	100	4-5/16" (109.53)	15" (381.0)	.22" (5.58)	50	
BT120L0HIRK2	120	4-11/32" (110.49)	15" (381.0)	.30" (7.62)	50	
BT120R0HIRK2	120	2-29/32" (73.66)	10-1/2" (266.0)	.30" (7.62)	50	

### Button Head Ties with Retainers

Similar to standard button head ties, these ties feature retainer arrows for use with HellermannTyton's MSBT120 saddle mounts (*page 8*). However, these ties can also be used independently of the mounts. These button head ties are manufactured with a pilot bushing which, when used with the saddle mounts, prevents chafing of the tie. The saddle mount is snapped onto the tie, and the mount and tie assembly can be pre-installed onto a frame or panel.

Standard material: impact modified, heat stabilized, UV resistant nylon 6/6



HellermannTyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
BT120LD0HIRK2	120	4-5/16" (110.5)	15" (381.0)	.30" (7.6)	50	TWT2, T150, MK9
BT120LLD0HIRK2	120	5-7/8" (146.9)	20" (508.0)	.30" (7.6)	50	



## Dual Clamp Ties

HellermannTyton's dual clamp ties are designed to provide parallel spacing between hoses, wires, cables and tubing, protecting them from abrasion. These ties have an optional mounting hole for securing bundles along the chassis of trucks, trailers, and automobiles. The unique, one-piece design features the dual head centered on the strap.

Standard color: Black

Standard material: high impact, heat stabilized, UV resistant nylon 6/6 (IMHSUV)



U.S. Patent Number 5,966,781

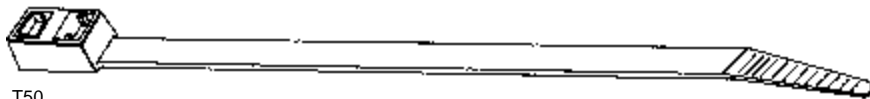
HellermannTyton Part No.	Recommended Stud Size In. (mm)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
DCT90HIRK2 DCT90HIRC2	1/4" (6.35)	150	1.3" each side (33.02)	12.9" (327.66)	.50" (12.7)	50 100	MK9 or T250
DCT110HIRK2 DCT110HIRC2	1/4" (6.35)	150	2.3" each side (58.42)	19.2" (487.68)	.50" (12.7)	50 100	

## Double Head Ties

Designed to harness two cables simultaneously. The second loop may also serve as a positioning device for a single cable.

Standard color: black

Standard material: nylon 6/6



T50



T120RDH

U.S. Patent Numbers 3,127,648 - 3,486,201



HellermannTyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Diameter In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T50RDH0C2 T50RDH0M4	50 lbs. 1st loop 40 lbs. 2nd loop	Two loops up to 3/4" (19.0) diameter each	8-1/4" (209.5)	.18" (4.6)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
T50IDH0C2 T50IDH0M4	50 lbs. 1st loop 40 lbs. 2nd loop	Two loops up to 1-1/2" (38.1) diameter each	12" (304.8)	.18" (4.6)	100 1000	
T50LDH0C2 T50LDH0M4	50 lbs. 1st loop 40 lbs. 2nd loop	Two loops up to 2" (50.8) diameter each	15-1/2" (393.7)	.18" (4.6)	100 1000	
T120RDH0C2 T120RDH0M4	120 lbs. 1st loop 120 lbs. 2nd loop	Two loops up to 2" (50.8) diameter each	15-1/2" (393.7)	.30" (7.5)	100 1000	

Ties listed above are black. Natural colored cable ties are also available in nearly every size. Contact HellermannTyton for more information.

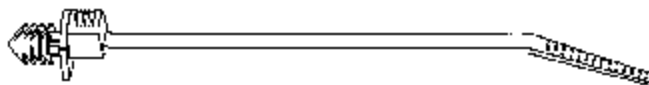
## Heavy Duty Equipment and Transportation Components

## Fir Tree Push Mount Ties

Fir tree design grips to the inside of a hole. They can be used on sheet metal, wood, and cast iron.

Standard color: black

Standard material: heat stabilized nylon 6/6



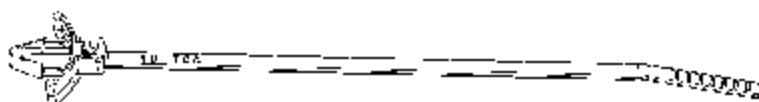
HellermannTyton Part No.	Mounting Hole Diameter In. (mm)	Panel Thickness In. (mm)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
<b>T50RTM250HSM4</b>	.246" (6.25) min. to .276" (7.0) max.	.052" (1.32) to .25" (6.35)	50	2" (50.8)	8.39" (213.1)	.18" (4.6)	1000	TWT1, MK3P, MK7, MK7P, MK9

## Wing Push Mount Ties

Wing design grips to the inside of a hole. They can be used on sheet metal, wood, and cast iron.

Standard color: natural

Standard material: heat stabilized nylon 6/6



HellermannTyton Part No.	Mounting Hole Dia. In. (mm)	Panel Thickness In. (mm)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
<b>T18RWPM9C2</b> <b>T18RWPM9M4</b>	.187" (4.76) min. to .220" (5.56) max.	.060" (1.5) to .125" (3.2)	18	.875" (22.2)	4.5" (111.5)	.098" (2.5)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
<b>111-85469</b>	.240" (6.1) min. to .256" (6.5) max.	.032" (.8) to .098" (2.5)	50	1.34" (34)	6.5" (165)	.181" (4.6)	1000	
<b>T50SL7.NN6P</b>	.240" (6.1) min. to .256" (6.5) max.	.032" (.8) to .118" (3.0)	50	1.97" (50)	8.03" (204)	.181" (4.6)	1000	

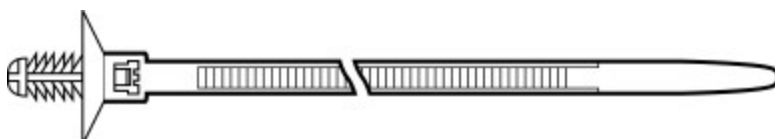
*Ties listed above are natural. Black colored cable ties are also available in nearly every size. Contact HellermannTyton for more information.*

## Domed Fir Tree Mount Ties

Domed head tie provides a tight, rattle-free installation. The dome also acts as a seal to keep out dust and liquid.

Standard color: black

Standard material: heat stabilized nylon 6/6



HellermannTyton Part No.	Mounting Hole Dia. In. (mm)	Panel Thickness In. (mm)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
<b>T50SDP6</b>	1/4" (6.35)	.260" (6.5) min. to .276" (7.0) max.	50	1-1/4" (31)	6-1/2" (165)	.20" (5.0)	500	TWT1, MK3P, MK7, MK7P, MK9

## Domed Push Mount Ties

Domed head tie provides a tight, rattle-free installation.

Standard color: black

Standard material: heat stabilized nylon 6/6



Standard color is black .  
Contact HellermannTyton for other colors

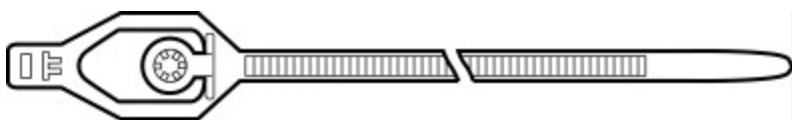
HellermannTyton Part No.	Mounting Hole Dia. In. (mm)	Max Panel Thickness In. (mm)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T50SD6	.25" (6.3) to .30" (7.5)	.070" (1.8)	50	1-1/4" (31)	6-1/4" (160)	.20" (5.0)	500	TWT1, MK3P, MK7, MK7P, MK9

## Flexible Head Stud Mount Ties

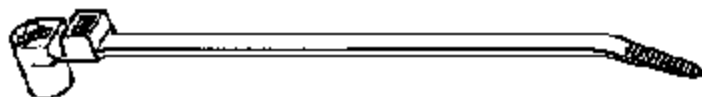
Flexible head wraps around cable bundle for easy installation. Tie mounts onto #10-24" (5mm) stud.

Standard color: black

Standard material: heat stabilized nylon 6/6



HellermannTyton Part No.	Recommended Stud Size In. (mm)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T50RS5.9B3P	#10-24" (5.0)	50	1-1/2" (40)	7-1/2" (190)	.18" (4.6)	100	N/A



## Stud Mount Ties

Bundling and mounting are accomplished in one unit with the stud mount tie which is designed for use on the 1/4"-20 UNC thread of a stud or the exposed threads of a machine screw.

Standard color: black

Standard material: impact modified, heat stabilized, UV resistant nylon 6/6 (IMHSUV)



HellermannTyton Part No.	Recommended Stud Size	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T120RSM0HIRK2	1/4" - 20 UNC	120	4" (101.6)	16" (406.4)	.30" (7.6)	50	TWT2, MK9

## Clamp Ties

The clamp tie has curved triangular shaped tabs extending beneath the head, allowing for optimal surface contact and complete circumferential compression to 360 degrees. The clamps are recommended for soft rubber hose applications, as well as for fuel, water, and air vacuum lines. Standard color: black  
Standard material: impact modified, heat stabilized, UV resistant nylon 6/6



Hellermann Tyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	Hellermann Tyton Installation Tools
CTT20R9C2 CTT20R9M4	20	7/8" (22.2)	4" (101.6)	.09" (2.2)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
CTT60R9C2 CTT60R9M4	60	1-3/4" (44.4)	8" (203.2)	.18" (4.6)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
CTT60L9C2 CTT60L9M4	60	4" (101.6)	15" (381.0)	.18" (4.6)	100 1000	

Ties listed above are natural. Contact HellermannTyton for heat stabilized, high impact, black nylon 6/6 information.



## Edge-Clip Cable Ties

Designed to clip on to any metal rail or substrate, the edge-clip cable ties eliminate the need to drill holes. No tools are necessary, and they also eliminate the need to use screws and p-clamps. The edge-clip is a four-way mount, offered in a version that runs perpendicular to the substrate and one that runs parallel to the substrate.

There are two types of edge-clips — the edge-clip 4 and the edge-clip 5. Both use HellermannTyton's outside serrated T50 cable ties, however, the edge-clip 4 allows a cable bundle to attach above an edge, while the edge-clip 5 can attach a cable bundle along the side of an edge.

Standard color: black

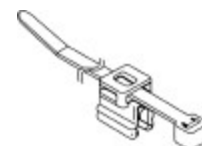
Standard material: nylon 6/6



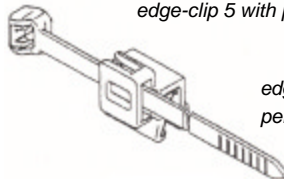
edge-clip 4 with parallel clip



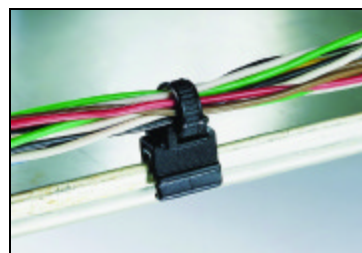
edge-clip 5 with parallel clip



edge-clip 4 with perpendicular clip



edge-clip 5 with perpendicular clip



Orientation A - parallel edge-clip 4



Orientation B - perpendicular edge-clip 4

HellermannTyton Part No.	Description	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.
15076099	Edge-Clip 4 with parallel clip	50	1.25" (31.75)	6.5" (165)	.18" (4.6)	500
15076079	Edge-Clip 4 with perpendicular clip	50	1.25" (31.75)	6.5" (165)	.18" (4.6)	500
15040591	Edge-Clip 5 with parallel clip	50	1.25" (31.75)	6.5" (165)	.18" (4.6)	500
15040581	Edge-Clip 5 with perpendicular clip	50	1.25" (31.75)	6.5" (165)	.18" (4.6)	500

edge-clips include cable ties



## Parallel Entry Ties

The parallel entry tie features a very low profile head, which enables the installed tie to lie flat on the bundle. Its sleek design enhances safety and fulfills the requirements of many diverse applications. The parallel entry tie features outside serrations to allow the smooth side of the tie to rest on a bundle, reducing any potential of wear due to abrasion from vibrations or movement.

The retainers also contain the tail of the tie eliminating the need to cut excess material. This feature eliminates the potential for sharp edges. Only a smooth surface is evident. The "PER" designation in the part number indicates the retainer feature.

Standard color: black

Standard material: nylon 6/6 UV



Retainer



No Retainer

HellermannTyton Part No. *	Description	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
PE130R0UVC2	No Retainer	130	4.875" (123.83)	16.25" (412.75)	.358" (9.09)	100	TWT2, T150, T250, MK9
PER130R0UVC2	Retainer	130	4.875" (123.83)	16.25" (412.75)	.358" (9.09)	100	
PE130I0UVC2	No Retainer	130	6.25" (158.75)	21" (533.40)	.358" (9.09)	100	

Standard color is black, contact HellermannTyton for more information.

## Outside Serrated Ties

The outside serrated cable ties offer a wide variety of tensile strength options and are developed for specific applications where thin walled or soft insulation is used (such as in aircraft, trains etc.) and for applications that are very sensitive to the amount of force applied to the cable.

Standard colors: black and natural

Standard material: heat stabilized nylon 6/6



Hellermann Tyton Part No.*	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	Hellermann Tyton Installation Tools
LK0XHS	18	5/8" (16)	4" (100)	.09" (2.3)	200	TWT1, MK3P, MK7, MK7P, MK9
LK0BHS	30	1-3/4" (45)	7-7/8" (200)	.14" (3.5)	100	
LK2CHS	50	2" (50)	7-7/8" (200)	.18" (4.6)	100	
LK2MHS	50	2" (50)	10-1/4" (260)	.18" (4.6)	100	
LK4HS	120	4-1/4" (108)	15-3/4" (390)	.30" (7.6)	100	TWT2, MK9



\* Other colors available. Subject to minimums, custom terms, and lead times. Contact HellermannTyton for more information.

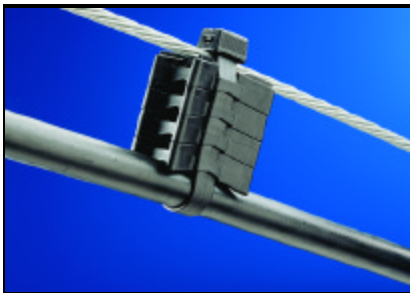
## El-Ty (Extended Length Ties)

HellermannTyton's El-Ty is a high strength strapping system used for supporting, securing, fastening, and spacing cable, as well as a variety of other applications requiring extra-long, extremely durable strapping.

The El-Ty consists of a smooth strap and a separate, compact plastic head which encloses a stainless steel gripper. The stackable spacer accepts cable ties up to 1/2" wide for a versatile, easy to install spacing system. It has a minimum loop tensile strength of 250 pounds and has a continuous operating temperature range of -40°F to 185°F (-40°C to 85°C). The El-Ty complies with Bellcore Specification Reference TR-TSY-00789.

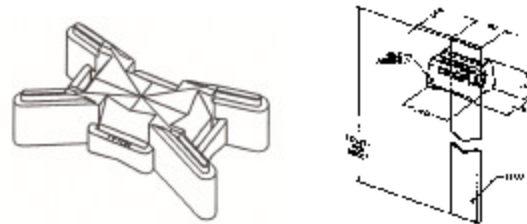
Standard color: black

Standard material: acetal homopolymer



U.S. Patent Numbers 4,993,669 and 5,102,075

Hellermann Tyton Part No.	Description	Pkg. Qty.
<b>TELS-1</b>	50 ft. of strap on reel dispenser and 30 heads	1 kit
<b>TELS-H</b>	25 double entry, double locking heads	25 heads
<b>TELS-13</b>	10 - 13.5 inches of cable strap with 10 double locking heads	10 straps/heads
<b>TELS-27</b>	10 - 27.5 inches of cable strap with 10 double locking heads	10 straps/heads
<b>TELS-5K</b>	Kit of 5 reels and 150 heads. Each reel dispenser contains 50 ft.	1 kit
<b>TELS-10K</b>	Kit of 10 reels and 300 heads. Each reel dispenser contains 50 ft.	1 kit
<b>TELS-SPK</b>	Spacer designed for use with the El-Ty	50 pcs.
<b>TELS-SPOOL</b>	50 ft. of strap on reel	1 reel



Spacer, Part Number: TELS-SPK

## Kabelrap Bundling System

The Kabelrap Bundling system offers a very high bundling strength and is particularly resistant to salt water, oils, greases, and hydraulic fluids. They are made of weather resistant nylon 6/6, available in black and natural. Special, **required** hand tool shown to the right -Part No. 121-00680

Standard color: black

Standard material: nylon 6/6



HellermannTyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	Required Installation Tool
<b>121-61860</b>	110	1-1/2" (39)	7-1/4" (183)	.24" (6.0)	50	121-00680
<b>121-63560</b>	110	3-3/4" (93)	14" (356)	.25" (6.4)	50	
<b>121-82160</b>	175	1-3/4" (47)	8-1/4" (210)	.31" (8.0)	50	
<b>121-83360</b>	175	3-3/8" (86)	13-1/4" (337)	.31" (8.0)	50	



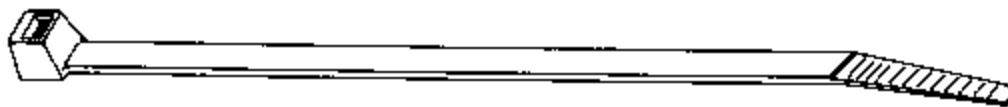
Required Tool –  
121-00680



Kabelrap  
Application

Black is standard color. Natural is available based upon minimums, custom terms, and lead times.

## Standard Cable Ties



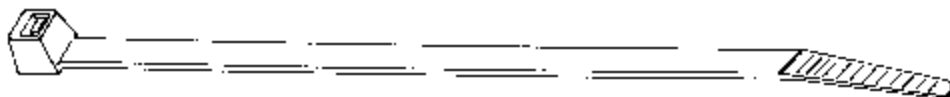
U.S. Patent Numbers 3,127,648 – 3,486,201

HellermannTyton Part No.	Gov. Designation	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T18S9C2* T18S9M4*	MS3367-4	18	5/8" (15.9)	3-3/8" (85.7)	.08" (2.0)	100 1000	TWT1, MK3P, MK7, MK7P
T18R9C2* T18R9M4*	MS3367-4	18	3/4" (19.0)	4" (101.6)	.10" (2.5)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
T18I9C2** T18I9M4**	MS3367-4	18	1-1/4" (31.8)	5-2/3" (143.9)	.10" (2.5)	100 1000	
T18L9C2** T18L9M4**	MS3367-4	18	2" (50.8)	8" (203.2)	.10" (2.5)	100 1000	
T30R9C2* T30R9M4*	MS3367-5	30	1-1/4" (31.8)	6" (152.4)	.14" (3.6)	100 1000	
T30M9C2 T30M9M4		30	2" (50.8)	8" (203.2)	.14" (3.6)	100 1000	
T30I9C2 T30I9M4		30	3" (76.2)	11-1/4" (285.8)	.15" (3.8)	100 1000	
T30L9C2 T30L9M4		30	4" (101.6)	14-1/4" (362)	.14" (3.6)	100 1000	
T40R9C2* T40R9M4*	MS3367-1	40	2" (50.8)	8-1/2" (215.9)	.15" (3.8)	100 1000	
T40I9C2* T40I9M4*	MS3367-7	40	3" (76.2)	11-1/2" (292.1)	.15" (3.8)	100 1000	
T40L9C2* T40L9M4*	MS3367-2	40	4" (101.6)	14-1/2" (368.3)	.15" (3.8)	100 1000	
T50S9C2 T50S9M4		50	1-1/4" (31.8)	6-1/2" (165.1)	.18" (4.6)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
T50R9C2* T50R9M4*	MS3367-1	50	1-3/4" (44.5)	8" (203.2)	.18" (4.6)	100 100	
T50I9C2* T50I9M4*	MS3367-7	50	3" (76.2)	11-3/4" (298.5)	.18" (4.6)	100 100	
T50L9C2* T50L9M4*	MS3367-2	50	4" (101.6)	15-1/2" (393.7)	.18" (4.6)	100 1000	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Example: T50R0C2 is a black T50R cable tie in a 100 pack. Other colors may be available. Colored cable ties may be subject to minimums, custom terms, and lead times. \* AS23190E (formerly MIL-S-23190E) (Type I Class 1) \*\*HellermannTyton QPL23190 listed as exceeding the tensile strength or length and meeting MS3367 (Type I Class 2)

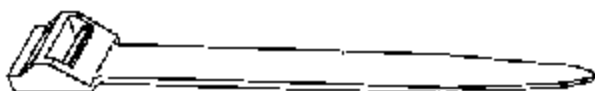
## Heavy Duty Equipment and Transportation Components

## Heavy Duty Lashing Ties



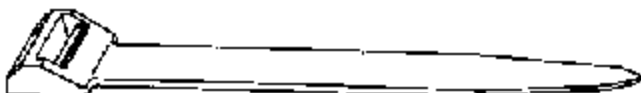
HellermannTyton Part No.	Gov. Designation	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T120S9K2 T120S9H4		120	2" (50.8)	8-7/8" (225.4)	.30" (7.6)	50 500	TWT2, MK9
T120I9K2 T120I9H4		120	3" (76.2)	11-7/8" (301.6)	.30" (7.6)	50 500	
T120R9K2* T120R9H4*	MS3367-3	120	4" (101.6)	15-1/4" (387.4)	.30" (7.6)	50 500	
T120L9K2*	MS3367-6	120	8-3/4" (222.3)	29-3/4" (755.7)	.30" (7.6)	50	
T150R9X2**	MS3367-3	175	4" (101.6)	15" (381.0)	.35" (8.9)	25	TWT2, T150, T250, MK9
T150M9X2**	MS3367-3	175	6" (152.4)	21" (533.4)	.35" (8.9)	25	
T150L9X2**	MS3367-6	175	9" (228.6)	32" (812.8)	.35" (8.9)	25	
T150LL9X2		175	11" (279.4)	36" (914.4)	.35" (8.9)	25	
T150XL9X2		175	13" (330.2)	43" (1092.2)	.35" (8.9)	25	
T150XLL9X2		175	14" (355.6)	52" (1320.8)	.35" (8.9)	25	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available. T150 Series available as releasable ties. When ordering, use HellermannTyton Part No. RT150. \*AS23190E (formerly MIL-S-23190E) (Type I Class 1) \*\*HellermannTyton QPL23190 listed as exceeding the tensile strength or length and meeting MS3367 (Type I Class 2)



HellermannTyton Part No.*	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T250S9X2	250	2" (50.8)	9" (228.6)	.50" (12.7)	25	MK9, T250
T250R9X2	250	5" (127.0)	20" (508.0)	.50" (12.7)	25	
T250M9X2	250	6" (152.4)	23" (584.2)	.50" (12.7)	25	
T250I9X2	250	8" (203.2)	29" (736.6)	.50" (12.7)	25	
T250L9X2	250	10" (254.0)	35" (889.0)	.50" (12.7)	25	
T250XL9X2	250	12" (304.8)	40" (1016.0)	.50" (12.7)	25	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available. \*T250 Series available as releasable ties. When ordering, use HellermannTyton Part No. RT250.



HellermannTyton's T255 series heavy duty cable ties are the perfect tie for use with the Heavy Duty Mounts (see page 7). Available in both releasable and standard versions, this adjustable tie can eliminate the need for various sizes of metal P-clamps when used with the Heavy Duty Mounts. T255 ties are similar to the T250 series, but with the buckle mount feature eliminated. Standard color: black. Standard material: high impact nylon 6/6.

HellermannTyton Part No.	Minimum Tensile Strength (lbs.)	Max. Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T255S0HIRX2	250	2" (50.8)	8.747" (222.17)	.492" (12.50)	25	MK9, T250
T255R0HIRX2	250	5" (127.0)	20.030" (508.77)	.492" (12.50)	25	
T255M0HIRX2	250	6" (152.4)	22.114" (561.70)	.492" (12.50)	25	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available. T255 Series available as releasable ties. When ordering, use HellermannTyton Part No. RT255.

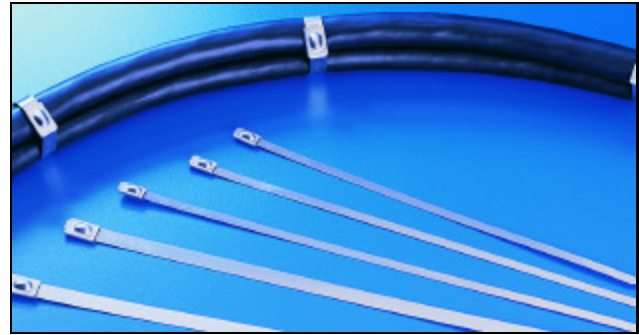


## Stainless Steel Ties

HellermannTyton's stainless steel ties are designed to secure hoses, cables, poles, pipes, and more when harsh environmental conditions may adversely affect the bundling application. Used where corrosion, vibration, weathering, radiation, and temperature extremes are a concern, HellermannTyton's stainless steel ties can be used in virtually any indoor, outdoor, and underground application.

### Stainless Steel Tie Features

- Smooth, rounded edges help ensure safe, efficient handling.
- Low profile enclosed bearing head with fully adjustable strap accommodates many bundle diameters per size.
- Available in 10 sizes in 304 steel and 11 sizes in 316 steel.
- Sizes feature tensile unlocking strengths of 100 lbs. and 250 lbs. for 304 steel and 150 lbs. and 250 lbs. for 316 steel.
- Ergonomically designed installation tool consistently tensions and cuts off ties leaving flush edges.
- Temperature range for materials 304 and 316: -112°F (-80°C) to 1000°F (538°C). Can be used in environments that are subjected to extremes of temperature.
- Flame retardant and non-toxic for applications where safety from fire is critical.
- A complete stainless steel marking system is also available.



### (304 Material)

Grade 304 material is commonly used for stainless steel bundling applications and suits most general purpose requirements. It features the ability to withstand most environmental conditions, particularly in applications where vibration, general weathering, radiation and temperature extremes are a concern.

### (316 Material)

Grade 316 material is highly resistant to corrosion and widely used in marine environments where chemicals, salts, acids, and temperature extremes may affect the bundling application.

### MBT Coated Stainless Steel Cable Ties

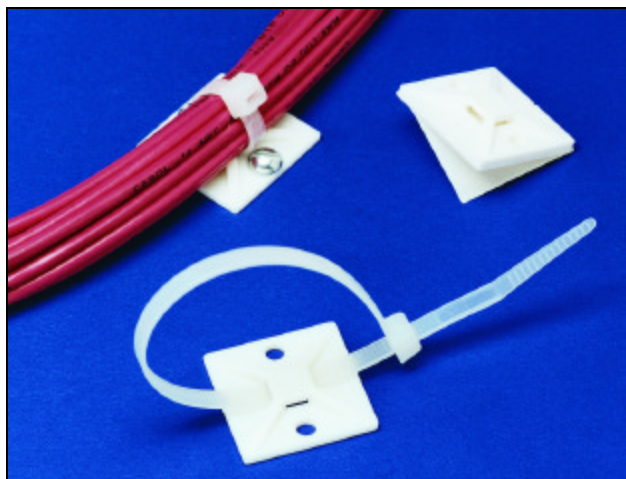
MBT stainless steel ties in 316 steel material are available with a nylon II protective coating. This coating creates a barrier and protectant from chemical reactions of dissimilar metals.

HellermannTyton Part No.	Cross Reference to Former HellermannTyton Part No.	Material	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Head Width In. (mm)	Strap Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tool
MBT5S-S	None	304 Steel	150	1" (25.4)	5.0" (127)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT5S	None	316 Steel							
MBT8S-S	SST100S-304C2	304 Steel	150	2" (50.8)	7.9" (201)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT8S	None	316 Steel							
MBT14S-S	SST100R-304C2	304 Steel	150	4" (102)	14.3" (363)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT14S	None	316 Steel							
MBT20S-S	SST100M-304C2	304 Steel	150	6" (152)	20.5" (521)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT20S	None	316 Steel							
MBT27S-S	SST100L-304C2	304 Steel	150	8" (203)	26.8" (681)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT27S	None	316 Steel							
MBT33S-S	None	304 Steel	150	10" (254)	33.0" (201)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT33S	None	316 Steel							
MBT8H-S	SST250S-304K2	304 Steel	250	2" (50.8)	7.9" (201)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT8H	None	316 Steel							
MBT14H-S	SST250R-304K2	304 Steel	250	4" (102)	14.3" (362)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT14H	None	316 Steel							
MBT20H-S	SST250M-304K2	304 Steel	250	6" (152)	20.5" (521)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT20H	None	316 Steel							
MBT27H-S	SST250L-304K2	304 Steel	250	8" (203)	26.8" (681)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT27H	None	316 Steel							
MBT33H-S	SST250L-304K2	304 Steel	250	10" (254)	33" (838)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT33H	None	316 Steel							

*HellermannTyton's stainless steel ties and materials should be tested thoroughly under end use conditions to determine suitability for the application.*

## Heavy Duty Equipment and Transportation Components

## Cable Tie Mounting Bases

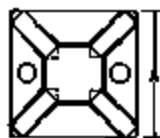


4-Way Mounting Bases

HellermannTyton's 4-way mounting bases are available in four sizes to accommodate T18 through T150 series cable ties. Insertion of ties can be made from all four sides. Each mount may be secured with two screws, with adhesive backing, or both, for ease of application and stability. Standard color: white.

For applications where higher temperatures, certain chemicals, or UV radiation are a concern and an adhesive is the preferred method for securing, the acrylic adhesive 4-way mounting bases are recommended.

The 2-way mounting bases may be secured with one screw, with adhesive backing, or both, and allow ties to be inserted from two sides. Standard color: white.

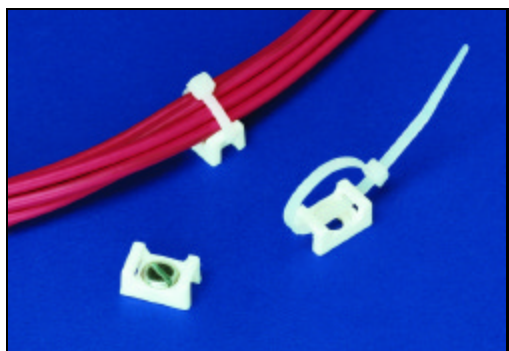


Hellermann Tyton Part No.	Cable Tie Series	Mounting	Dimensions -In.(mm)			Pkg. Qty.
			A	B	C	
4-Way Screw Mount and Rubber-Based Adhesive						
MB2.510C2 MB2.510M4	T18	#3 screw	.625" (15.88)	.625" (15.88)	.130" (3.30)	100 1000
MB2.5A10C2 MB2.5A10M4	T18	Adhesive	.625" (15.88)	.625" (15.88)	.130" (3.30)	100 1000
MB310C2 MB310M4	T18, T30	#4 screw	.750" (19.05)	.750" (19.05)	.150" (3.81)	100 1000
MB3A10C2 MB3A10M4	T18, T30	Adhesive	.750" (19.05)	.750" (19.05)	.150" (3.81)	100 1000
MB410C2 MB410H4	T18 thru T50	#8 screw	1.125" (28.58)	1.125" (28.58)	.190" (4.83)	100 500
MB4A10C2 MB4A10H4	T18 thru T50	Adhesive	1.125" (28.58)	1.125" (28.58)	.190" (4.83)	100 500
MB510C2 MB510F4	T18 thru T150	#8 screw	1.500" (38.10)	1.500" (38.10)	.250" (6.35)	100 250
MB5A10C2 MB5A10F4	T18 thru T150	Adhesive	1.500" (38.10)	1.500" (38.10)	.250" (6.35)	100 250
4-Way Acrylic Adhesive						
MB3A10A2C2 MB3A10A2H4	T18, T30	Adhesive	.750" (19.05)	.750" (19.05)	.150" (3.81)	100 500
MB4A10A2C2 MB4A10A2H4	T18 thru T50	Adhesive	1.125" (28.58)	1.125" (28.58)	.190" (4.83)	100 500
MB5A10A2C2 MB5A10A2F4	T18 thru T150	Adhesive	1.500" (38.10)	1.500" (38.10)	.250" (6.35)	100 250
2-Way Screw Mount and Rubber-Based Adhesive						
MB4SH10C2 MB4SH10H4	T18 thru T50	#6 screw	1.125" (28.58)	1.125" (28.58)	.210" (5.33)	100 500
MB3SHA10C2 MB4SHA10H4	T18 thru T50	Adhesive	1.125" (28.58)	1.125" (28.58)	.210" (5.33)	100 500

All mounts listed above are white. Black mounts are also available. Insert "0" instead of "10" in the part number. Example: MB30C2 is a black screw mount.

## Cable Tie Mounts

The CTM series is designed to provide stability to wire bundles. These mounts can accommodate miniature, intermediate, or standard cross-section cable ties. Each mount is secured with a single screw. Standard color: white.



Hellermann Tyton Part No.	Cable Tie Series	Mounting	Dimensions - In. (mm)			Pkg. Qty.
			A	B	C	
CTM010C2 CTM010M4	T18 thru T50	#6 screw	.380" (9.65)	.600" (15.24)	.265" (6.73)	100 1000
CTM110C2 CTM110M4	T18 thru T50	#8 screw	.380" (9.65)	.600" (15.24)	.265" (6.73)	100 1000
CTM210C2 CTM210M4	T18 thru T120	#8 screw	.620" (15.75)	.875" (22.23)	.375" (9.53)	100 1000
CTM310C2 CTM310M4	T18 thru T120	#10 screw	.620" (15.75)	.875" (22.23)	.375" (9.53)	100 1000
CTM410C2 CTM410M4	T18 thru T120	.250" screw	.620" (15.75)	.875" (22.23)	.375" (9.53)	100 1000

## CABLE TIE TOOLS

Ergonomics and the prevention of repetitive motion injuries, coupled with the need to continually improve assembly efficiencies and procedures, are a major concern with most cable tie users. HellermannTyton cable tie tools effectively address both issues.

HellermannTyton has focused upon making world class cable tie tools to complement its line of high quality cable ties. Rather than treat the tools as secondary, accessory items, HellermannTyton develops and manufactures cable tie tools which are truly state-of-the-art in both design and performance.

Available in mechanical, power assisted, and automatic versions, HellermannTyton tools make it easier for operators to install cable ties, while maintaining correct tension and flush cut-off. Worker safety is further enhanced as the tools can eliminate the sharp edges of a cut-off cable tie. HellermannTyton tools can be used for varying volume requirements and applications.



## Mechanical Hand Tools

HellermannTyton Part No.	Description	HellermannTyton Cable Tie Series	Pkg. Qty.
<b>TWT1**</b>	TytonTwyster: Lightweight and economical twist tool. Offers speed and efficiency. Fits into a pocket. (Color Orange)	T18 thru T50 Series CTT20 thru CTT60 Series	1
<b>TWT2**</b>	TytonTwyster: Lightweight and economical twist tool. Offers speed and efficiency. Fits into a pocket. (Color Blue)	T120 thru T150 Series CTT175 Series	1
<b>T150</b>	T150 Tool: Heavy duty installer controlled tool for use in the field. Pliers action provides mechanical advantage. Padded foam grip handles provide comfort and control.	T150 Series CTT175 Series	1
<b>T250</b>	T250 Tool: Same design features as the T150 Tool, but can tension and cut-off a wider tie.	T150 thru T250 Series CTT175 Series	1
<b>MK7</b> U.S. Patent 4,793,385 DES. 306,390 Mil. Spec. MS90387-1	MK7: Durable and lightweight, this tool is user friendly and adjustable, with top-of-the-line design features. Comes standard with padded foam grip handles for comfort and control and a hook for hanging on a belt or tether.	T18 thru T50 Series CTT20 thru CTT60 Series	1
<b>MK7HT</b> U.S. Patent 4,997,011 DES. 306,390	MK7HT: With the same design features as the MK7, this tool offers an increased tension range. Comes standard with padded foam grip handles for comfort and control and a hook for hanging on a belt or tether.	T30 thru T50 Series CTT20 thru CTT60 Series	1
<b>MK9</b> U.S. Patent 5,492,156 Mil. Spec. MS90387-2	MK9: The MK9 has the same design features as the MK7 series tools. The MK9 accommodates T18* thru T250 series ties. Comes standard with padded foam grip handles for comfort and control and a hook for hanging on a belt or tether.  * With the exception of T18S series ties .08" wide.	T18 thru T250 Series* CTT20 thru CTT175 Series EL-TY Series	1
<b>MK9HT</b> U.S. Patent 5,492,156	MK9HT: The MK9HT has the same design features as the MK9, but offers an increased tension range. Comes standard with padded foam grip handles for comfort and control and a hook for hanging on a belt or tether.	T30 thru T250 Series CTT20 thru CTT175 Series EL-TY Series	1
<b>MK9SST</b> U.S. Patent 5,921,290	MK9SST: Adapted for use with stainless steel ties, the MK9SST retains the same design features as the MK9 series. The MK9SST accommodates all HellermannTyton stainless steel ties. Comes standard with padded foam grips for comfort and control and a hook for hanging on a belt or tether.	All MBT Series for both 304 and 316 materials	1

\*\* TWT1 and TWT2 can come in a plastic pouch, if desired. Please request on order.

## POWER ASSISTED CABLE TIE TOOLS

HellermannTyton's power assisted cable tie tools easily tension and cut-off cable ties once the tie has been applied to the bundle. Used with pneumatic power, cable ties can be installed with reduced hand effort.

### Mark 7 Pneumatic

HellermannTyton's Mark 7 Pneumatic (MK7P) tool combines the ergonomic design of the MK7 series of hand tools with the time/labor savings and ease of use benefits from pneumatic power. This pneumatically driven tool features a non slip, comfortable grip, soft touch trigger, and one touch tensioning /cut-off capability with properly installed cable ties. The MK7P is very lightweight, making it easy for the operator to install cable ties.

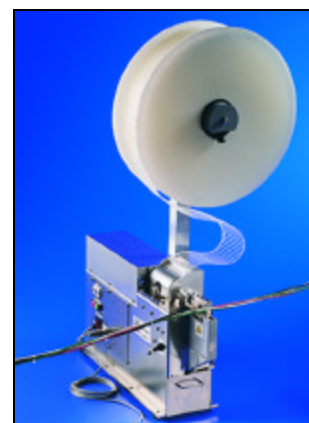


HellermannTyton Part No.	Description	HellermannTyton Cable Tie Series	Pkg. Qty.
<b>MK7P</b>	Mark 7 Pneumatic Tool: Includes tool and quick connect fittings.	T18 thru T50 Series	1
<b>MK7P-342</b>	Replacement Blade	CTT20 thru CTT60 Series	1

## AUTOMATIC CABLE TIE TOOLS

### Quick Tool

HellermannTyton's Quick Tool is an automatic bench mount system ideally suited for high volume cable tie applications. This air powered tool accommodates a reel of 5,000 ties and can be used with conveyor or assembly line applications. The Quick Tool can be operated with a foot pedal or modified for an automated environment.



Hellermann Tyton Part No.	Quick Tool Description	Pkg. Qty.
<b>QS101</b>	<p><b>Bundle Diameter:</b> .028"-.630" (.7-16.0 mm)</p> <p><b>Dimensions of Machine</b>  Length: 24.5" (622 mm)  Height: 14.5" (368 mm)  Width Without Reel: 7.0" (178 mm)  Height With Reel: 39.5" (1003 mm)  Reel Diameter: 18.0" (457 mm)</p> <p><b>Cycle Time:</b> 1.2 seconds</p> <p><b>Tensioning Force:</b>  9.92lb. - 19.84lb. (4.5kg-9.0kg) - Adjustable</p> <p><b>Electric Source:</b> 110 VAC, 50/60 cycle</p> <p><b>Electric Consumption:</b> 70W</p> <p><b>Air Source Pressure:</b> 90-110 psi</p> <p><b>Air Supply Nozzle Diameter:</b> PT 1/4</p> <p><b>Weight:</b> 44 lb. (20 kg.)</p> <p><b>Type:</b> Bench Top</p> <p><b>Noise:</b> 80dB (at 90 psi)</p>	1

Hellermann Tyton Part No.	Material/ Color	Min. Tensile Unlocking Strength (lbs.)	Max. Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.
<b>QTTIE9</b>	Nylon 6/6 natural	18	3/4" (19.0)	4.0" (101.6)	.10" (2.5)	1 reel of 5000 ties
<b>QTTIE0HS</b>	Heat stabilized, weather resistant, black	18	3/4" (19.0)	4.0" (101.6)	.10" (2.5)	1 reel of 5000 ties

#### Operating Temperature Range:

Natural: -40°F to 185°F (-40°C to 85°C)  
Heat stabilized, weather resistant black: -40°F to 221°F (-40°C to 105°C)

#### Reel Dimension:

Diameter: 18.0" (457mm)  
Width: 5.20" (132mm)  
Weight: 4.8 lbs. (2.18kg)



## AT2000

### Auto Tool 2000

HellermannTyton's AT2000 automatic cable tie tool delivers the solution for fast, reliable, and versatile wiring harness and cable bundling requirements. Globally developed with HellermannTyton's sister companies, the AT2000 incorporates the finest ideas in cable tie automation to make wire harnessing easy and efficient.

### AT2000 Features

#### Fast

Cable ties are installed in less than one second with one easy trigger depression, increasing productivity while decreasing labor.

#### Reliable

The AT2000 has been tested to perform consistently without interruption to work flow and with very little maintenance.

#### Ergonomic

The ergonomic design of the AT2000 features a comfortable grip, low weight, and easy trigger depression to reduce installer effort and strain while installing cable ties. In development of the AT2000, many advancements have been made toward enhancing installer comfort and ease of use.

#### Easy to Use

Equipped with a self-diagnostic LED information panel, the AT2000 easily guides the user through the cycles of automatic cable tie installations.

#### Versatile

The AT2000 can be used as a hand held or bench mount system. Powered by a standard 110VAC electrical outlet or battery pack, both power systems offer the installer the mobility needed to tackle different harnessing requirements.

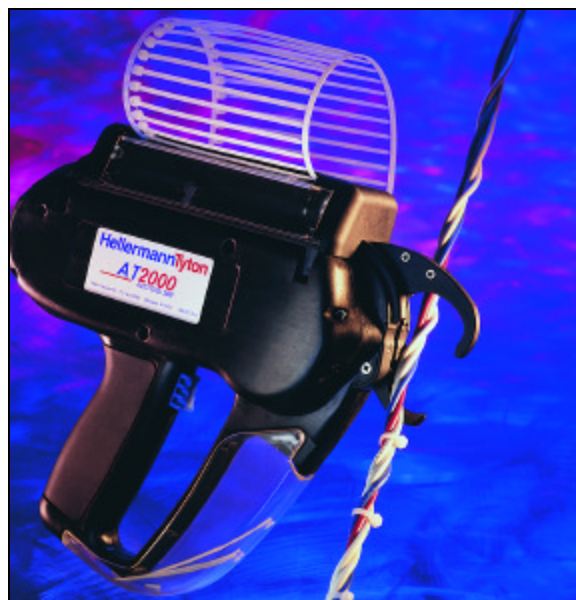
Cable ties are offered in strips of 50 or a reel of 5,000, facilitating different workplaces and applications. Natural and black are standard cable tie colors with other colors available depending upon volume requirements.

#### Uniform Fastening Quality

The AT2000 features adjustable tension control while delivering consistent levels of cable tie fastening.

#### Superior Support

Committed to its ongoing program of superior technical support of its cable tie tool systems, HellermannTyton's dedicated, knowledgeable team of professionals is equipped to service and maximize the productivity of the AT2000.



Operation and maintenance of the tool are enhanced by the AT2000's self-diagnostic LED panel. Guiding the user through the different cycles of automatic cable tie installations, the LED panel alerts the operator to the current working status of the tool.

Hellermann Tyton Part No.	Description	Pkg. Qty.
AT2000	AT2000 system. Includes AT2000 tool, power supply, power cord, tool cord, and maintenance and operation manual and video.	1

### AT2000 Ties

#### Operating Temperature Range:

Natural: -40°F to 185°F (-40°C to 85°C)  
Heat stabilized, weather resistant black: -40°F to 221°F  
(-40°C to 105°C)

#### Reel Dimension:

Diameter: 18.0" (457mm)  
Width: 5.20" (132mm)  
Weight: 4.8 lbs. (2.18kg)

Hellermann Tyton Part No.	Material/ Color	Min. Tensile Unlocking Strength (lbs.)	Max. Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.
T18RA50	Nylon 6/6, natural	18	3/4" (19.0)	4.0" (101.6)	.10" (2.5)	500— 50 per bandolier
T18RA50HSW	Heat stabilized, weather-resistant, black	18	3/4" (19.0)	4.0" (101.6)	.10" (2.5)	500— 50 per bandolier
T18RA5000	Nylon 6/6, natural	18	3/4" (19.0)	4.0" (101.6)	.10" (2.5)	1 reel of 5000 ties
T18RA5000HSW	Heat stabilized, weather-resistant, black	18	3/4" (19.0)	4.0" (101.6)	.10" (2.5)	1 reel of 5000 ties

\* Contact HellermannTyton for more information on the AT2060 Automatic Cable Tie tool which accommodates bundles up to 1.25 inches in diameter.

## CLAMPS

### Snapper Hose Clamps

HellermannTyton's Snapper is a lightweight, corrosion resistant hose clamp manufactured from high performance, thermoplastic materials selected to work well in a variety of diverse environments.

A quick, ratchet closure provides for reduced assembly line time and allows for application after connection of the hose. Release is achieved by initiating opposed lateral movement of the ratchet ends.

Heat stabilized materials are available for high temperature, motor and under-hood applications. Snappers are also stable in a wide variety of chemicals including salts, bases, alcohols, ethers, detergents, gasoline, lubricating oils, and greases.

The Snapper is available in 32 standard sizes ranging from 1/4" to 4-1/2" ID. Snappers are manufactured in white and black. Custom designed and different colored or shaped Snappers are available based upon applications and volume requirements.



### Snapper Clamp Materials

- Acetal.
- Heat and UV resistant, glass filled impact modified, nylon 6/6.
- Cannot rust or corrode.
- Installation and removal can be five times faster than conventional clamps.
- Completely reusable.
- Safety engineered – no protruding band or cluster.
- Can be installed with hose in place.
- Will not damage hose.
- One hand installation for tight places.

### Features

**Compression Limit**  
prevents hose damage due to excessive clamping. Hose is clamped, not crushed.

**Solid Body Design**  
prevents hose extrusion found with gear type clamps.

**Concentric Tightening**  
exerts equal pressure when tightened. Does not distort hose.

**Ratchet Teeth**  
for fast installation using conventional tools.

**Slim Profile**  
for use in tight spaces.

**Clamp Locator Ring**  
prevents clamp from vibrating over the hose surface.

### Snapper Clamps Applications

Snapper hose clamps are used in a variety of markets and diverse applications.

- Automotive
- Marine
- Truck
- Heavy Equipment
- Many more hose and tubing applications
- Air Lines
- Drain Lines
- Water Lines
- Sprinkler Systems
- Pumps
- Sprayers
- Fuel Lines
- Garden Hoses

Double Braid Utility Hoses		Clear Vinyl Tubing		Neoprene Hoses		Fuel Line Hoses	
Dia.	Product	(I.D.) - (O.D.)	Product	Dia.	Product	Dia.	Product
1/4"	Snapper 8	3/16"-5/16"	Snapper 1.5	1/8"	Snapper 1.5	1/4"	Snapper 6
3/8"	Snapper 12	1/4"-3/8"	Snapper 4	3/16"	Snapper 2	5/16"	Snapper 8
1/2"	Snapper 19	5/16"-7/16"	Snapper 6	9/32"	Snapper 8	3/8"	Snapper 12
5/8"	Snapper 22	3/8"-1/2"	Snapper 8	3/8"	Snapper 12		
3/4"	Snapper 28	1/2"-5/8"	Snapper 12	<b>Garden Hoses</b>		<b>Heater Hoses</b>	
1"	Snapper 33/34	5/8"-7/8"	Snapper 19	1/2"	Snapper 14	1/2"	Snapper 18
1-1/4"	Snapper 38	3/4"-1.0"	Snapper 24	5/8"	Snapper 18	5/8"	Snapper 19
1-1/2"	Snapper 50	1.0"-1-1/4"	Snapper 32	3/4"	Snapper 32	3/8"	Snapper 24



Snapper clamp sizes will vary with hose thickness and fitting sizes. End use testing is recommended to determine the actual size needed for each application.

## Snapper Material Specifications

Material: Acetal		Standard Color: White*	
Property	ASTM Method	English Units	Value
<b>Specific Gravity</b>	D-792		1.41
<b>Tensile Strength</b>	D-638	psi	
-40°F			13,700
73°F			8,800
160°F			4,600
<b>Elongation at Break</b>	D-638	%	
-40°F			20
73°F			60
160°F			250
<b>Shear Strength</b>	D-732	psi	
73°F			7,700
120°F			6,700
160°F			5,700
<b>Flexural Modulus</b>	D-790	psi	
<b>Compression Strength</b>	D-695	psi	
1% Deflection			4,500
10% Deflection			16,000
<b>Deflection Temperature</b>	D-648	°F	
264 psi			230
<b>Izod Impact Strength</b>	D-256	ft. lb./in.	
1/8" bar, -40°F			1.0
1/8" bar, 73°F			1.3
<b>Melting Point</b>		°F	331
<b>Coefficient of Linear Thermal Expansion</b>	D-696	in./in./°F	$5.9 \times 10^{-5}$
<b>Water Absorption</b>	D-570	%	
73°F/24 Hours Immersion			0.22
<b>Rockwell Hardness</b>	D-785	M scale	80

Maximum continuous use 200°F (93°C)

Maximum intermittent temperature range 220°F (104°C)

\*Acetal black is available based upon minimum volume requirements.

End use testing recommended.

<b>Standard color: Black</b>			
<b>Standard material: Impact Modified, Heat Stabilized, UV resistant, Glass Filled Nylon 6/6</b>			
Property	ASTM Method	English Units	Value
<b>Specific Gravity</b>	D-792		1.17
<b>Tensile Strength</b>	D-638	psi	
-40°F Dry			19,000
50% RH			18,500
73°F Dry			13,000
50% RH			8,000
250°F Dry			4,500
50% RH			4,500
<b>Elongation at Break</b>	D-638	%	
-40°F Dry			4.0
50% RH			4.5
73°F Dry			1.0
50% RH			8.1
<b>Shear Strength, Dry</b>	D-732	psi	25,000
<b>Flexural Modulus</b>	D-790	psi	
120°F Dry			530,000
50% RH			275,000
<b>Compression Strength, Dry</b>	D-695	psi	25,000
<b>Deformation Under Load</b> (4,000 psi, 122°F)	D-621	%	1.1
<b>Deflection Temperature</b>	D-648	°F	440
264 psi (4)			
<b>Izod Impact Strength, Dry</b>	D-256	ft. lb./in.	
1/4" bar, 73°F			0.9
1/8" bar, 73°F			0.7
Untouched 1/8" bar, 73°F			5.0
<b>Melting Point</b>	D-789	°F	500
<b>Coefficient of Linear Thermal Expansion</b>	D-696	in./in./°F	$1.5 \times 10^{-5}$
<b>Water Absorption</b>	D-570	%	
73°F/24 Hours Saturation			1.0
			7.1
<b>Rockwell Hardness</b>	D-785	M scale	
M, Dry			117
M, 50% RH			110

Maximum continuous use 300°F (148°C)

Maximum intermittent temperature range 350°F (176°C)

End use testing recommended.

Snapper performance will vary depending upon the durometer, temperature, and pressure of the hose, as well as the type of connector used with the hose, the amount of pressure on the clamp, the temperature of the environment, as well as any chemicals or solvents that could affect the plastic in the environment. With almost infinite variables in each application, testing is highly recommended.

## Snapper Tools

Snapper installation tools can be custom designed to meet specific requirements. Pneumatic tools are available on a lease basis only. Service kits are also available.



Hellermann Tyton Part No.	Tool Description			Snapper Range
	Type	Use	Stroke	
PHSNP2-36	Pneumatic	Production	Horizontal	2-36
PHSNP38-100				38-100
PSNP2-22			Scissors	2-22
PSNP24-70				24-70
ASNP2-22	Mechanical	Production	Scissors	2-22
ASNP24-70				24-70
MSNP1-70*		Maintenance	Scissors	1-70

\*Used to assemble and disassemble.

## Snapper Dimensional Chart

Dimensions shown in acetal material.

"A" Snapper completely closed, excluding rib.

Average of the three angles. "B" same as "A" except with two teeth engaged.



## Part Number Information

Not every size of Snapper hose clamp is available in every material and size option. However, for part number clarification, here is a legend of the materials and packaging codes with examples of complete Snapper part numbers.

### Part Number Example

Example of Acetal White Snapper 22: 1000/bag  
SNP2210M4

SIZE: SNP22      COLOR: 10      PACKAGE: M4

## Snapper Hose Clamp Part Numbers

Hellermann Tyton Part No.*	A Min. Dia. In. (mm)	B Max. Dia. In. (mm)	C In. (mm)	D In. (mm)	E In. (mm)	F In. (mm)	G Number of Teeth	Pkg. Qty.
SNP1_C2	.228"	.256"	.148"	.040"	.451"	.320"	12	100
SNP1_M4	(5.8)	(6.5)	(3.8)	(1.0)	(11.5)	(8.1)		1000
SNP1.25_C2	.269"	.291"	.149"	.042"	.486"	.404"	8	100
SNP1.25_M4	(6.8)	(7.4)	(3.8)	(1.1)	(12.3)	(10.3)		1000
SNP1.5_C2	.307"	.342"	.146"	.054"	.587"	.410"	12	100
SNP1.5_M4	(7.8)	(8.7)	(3.7)	(1.4)	(14.9)	(10.4)		1000
SNP2_C2	.351"	.394"	.231"	.067"	.672"	.472"	12	100
SNP2_M4	(8.9)	(10.0)	(5.9)	(1.7)	(17.1)	(12.0)		1000
SNP3_C2	.387"	.440"	.232"	.069"	.797"	.561"	16	100
SNP3_M4	(9.8)	(11.2)	(5.9)	(1.8)	(20.2)	(14.2)		1000
SNP4_C2	.404"	.452"	.233"	.066"	.749"	.524"	12	100
SNP4_M4	(10.3)	(11.5)	(5.9)	(1.7)	(19.0)	(13.3)		1000
SNP6_C2	.449"	.511"	.233"	.069"	.838"	.572"	14	100
SNP6_M4	(11.4)	(13.0)	(5.9)	(1.8)	(21.3)	(14.5)		1000
SNP7_C2	.453"	.546"	.233"	.069"	1.112"	.722"	18	100
SNP7_M4	(11.5)	(13.9)	(5.9)	(1.7)	(28.2)	(18.3)		1000
SNP8_C2	.513"	.586"	.231"	.069"	.971"	.647"	16	100
SNP8_M4	(13.0)	(14.9)	(5.9)	(1.8)	(24.7)	(16.4)		1000
SNP10_C2	.569"	.650"	.233"	.068"	1.028"	.675"	16	100
SNP10_M4	(14.5)	(16.5)	(5.9)	(1.7)	(26.1)	(17.2)		1000
SNP12_C2	.616"	.707"	.234"	.070"	1.062"	.689"	18	100
SNP12_M4	(15.7)	(18.0)	(5.9)	(1.8)	(27.0)	(17.5)		1000
SNP14_C2	.702"	.801"	.233"	.067"	1.156"	.744"	18	100
SNP14_M4	(17.8)	(20.4)	(5.9)	(1.7)	(29.4)	(18.9)		1000
SNP16_C2	.759"	.848"	.232"	.067"	1.21"	.787"	18	100
SNP16_M4	(19.31)	(21.5)	(5.9)	(1.7)	(30.9)	(20.0)		1000
SNP18_C2	.779"	.899"	.237"	.069"	1.337"	.857"	22	100
SNP18_M4	(19.8)	(22.8)	(6.0)	(1.8)	(34.0)	(21.8)		1000
SNP19_C2	.859"	.989"	.232"	.070"	1.409"	.899"	22	100
SNP19_M4	(21.8)	(25.1)	(5.9)	(1.8)	(35.8)	(22.8)		1000
SNP22_C2	.928"	1.072"	.234"	.070"	1.473"	.932"	22	100
SNP22_M4	(23.6)	(27.2)	(5.9)	(1.8)	(37.4)	(23.7)		1000
SNP24_C2	.985"	1.135"	.292"	.069"	1.523"	.963"	22	100
SNP24_M4	(25.0)	(28.8)	(7.4)	(1.8)	(38.7)	(24.5)		1000
SNP28_C2	1.123"	1.296"	.288"	.068"	1.631"	1.008"	26	100
SNP28_H4	(28.5)	(32.9)	(7.3)	(1.7)	(41.4)	(25.6)		500
SNP32_K2	1.218"	1.405"	.287"	.068"	1.724"	1.064"	26	50
SNP32_H4	(30.9)	(35.7)	(7.3)	(1.7)	(43.8)	(27.0)		500
SNP33_K2	1.283"	1.595"	.290"	.067"	2.517"	1.564"	44	50
SNP33_H4	(32.6)	(40.5)	(7.4)	(1.7)	(63.9)	(9.7)		500
SNP34_K2	1.338"	1.566"	.292"	.068"	1.966"	1.186"	34	50
SNP34_H4	(34.0)	(39.8)	(7.4)	(1.7)	(49.9)	(30.1)		500
SNP36_K2	1.472"	1.724"	.287"	.067"	2.092"	1.261"	34	50
SNP36_H4	(37.4)	(43.8)	(7.3)	(1.7)	(53.1)	(32.0)		500
SNP38_K2	1.594"	1.862"	.291"	.068"	2.239"	1.349"	34	50
SNP38_H4	(40.5)	(47.3)	(7.4)	(1.7)	(56.9)	(34.3)		500
SNP42_K2	1.730"	2.010"	.354"	.068"	2.302"	1.369"	26	50
SNP42_C2	(43.9)	(51.1)	(9.0)	(1.7)	(58.5)	(34.8)		100
SNP50_C2	1.999"	2.277"	.291"	.067"	2.341"	1.411"	30	100
	(50.8)	(57.8)	(7.4)	(1.7)	(59.5)	(35.8)		
SNP60_C2	2.259"	2.582"	.290"	.067"	2.559"	1.449"	40	100
	(57.4)	(65.6)	(7.4)	(1.7)	(65.0)	(38.1)		
SNP70_C2	2.507"	2.897"	.370"	.077"	2.99"	1.816"	28	100
	(63.7)	(73.6)	(9.4)	(2.0)	(75.9)	(46.1)		
SNP76_C2	2.839"	3.206"	.387"	.066"	2.834"	1.687"	36	100
	(72.1)	(81.4)	(9.8)	(1.7)	(72.0)	(42.9)		
SNP80_C2	3.155"	3.523"	.449"	.100"	3.140"	1.894"	28	100
	(80.1)	(89.5)	(11.4)	(2.5)	(79.8)	(48.1)		
SNP90_C2	3.506"	3.922"	.385"	.067"	3.204"	1.917"	34	100
	(89.10)	(99.6)	(9.8)	(1.7)	(81.4)	(48.7)		
SNP100_X2	3.871"	4.395"	.394"	.098"	3.508"	2.048"	50	25
	(98.3)	(111.6)	(10.0)	(2.4)	(89.1)	(52.0)		
SNP101_X2	4.033"	4.617"	.442"	.098"	4.219"	2.402"	56	25
	(102.4)	(117.3)	(11.2)	(2.5)	(107.2)	(61.0)		

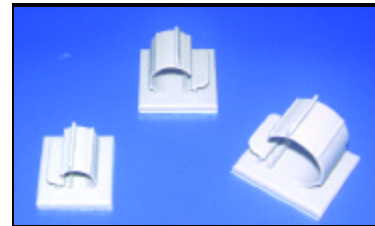
\* Part number does not designate color, material, and each packaging option for Snapper hose clamps, although main packaging options for each size are listed. For more specific information and complete part numbers, contact HellermannTyton.



## ADHESIVE CABLE CLAMPS

### Series 12 Adhesive Cable Clamp

HellermannTyton's Series 12 cable clamps feature an exclusive quick lock/release and an adhesive backing. Recommended operating temperatures are -40°F to 150°F (-40°C to 65°C)  
Standard color: gray Standard material: nylon 6/6

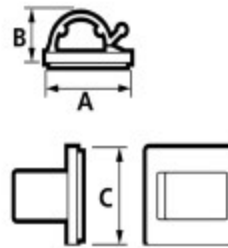


Hellermann Tyton Part No.	Dimensions In. (mm)					Maximum Bundle Diameter	Rated Static Load
	A	B	C	D	E		
12-0188	.735 (18.67)	.620 (15.75)	.080 (2.03)	.340 (8.64)	.390 (9.91)	.188 (4.78)	1/2 lb.
12-0250	1.000 (25.4)	.855 (21.72)	.100 (2.54)	.415 (10.54)	.620 (15.75)	.250 (6.35)	3/4 lb.
12-0375	1.000 (25.4)	.980 (24.89)	.090 (2.29)	.545 (13.84)	.625 (15.88)	.375 (9.53)	1 lb.
12-0500	.990 (25.15)	1.215 (30.86)	.110 (2.79)	.671 (17.04)	.630 (16.00)	.500 (12.70)	1- 1/2 lb.
12-0750	1.165 (29.59)	1.468 (37.29)	.125 (3.18)	.985 (25.02)	.750 (19.10)	.750 (19.10)	1- 3/4 lb.

Series 12 clamps replace HellermannTyton's RAC Clamps. If you need cross reference assistance, contact HellermannTyton.

### RB Clips

RB self-adhesive clips are ideal for cable and pipe bundles. Bundles are easily snapped into or out of clips. The RB clips suit diameters of 1/8", 5/16", and 1/2".  
Standard color: natural  
Standard material: nylon 6/6

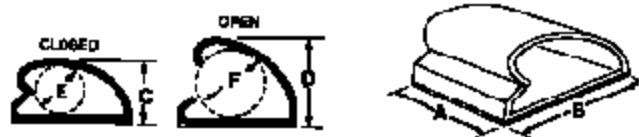


Hellermann Tyton Part No.	Dimensions In. (mm)			Pkg. Qty.
	A	B	C	
RB5H4	.75" (19.0)	.24" (6.0)	.75" (19.0)	500
RB8L4	1.00" (25.0)	.45" (11.5)	1.00" (25.0)	200
RB14L4	1.3" (33.4)	.63" (16.0)	1.08" (27.5)	200

Samples from HellermannTyton come in units of one clip each. Actual clips from stock come in pairs connected together on adhesive liner.

### Series 52 Clamps

Series 52 clamps are extruded and feature an adhesive backing. Recommended operating temperatures are -40°F to 150°F (-40°C to 65°C). Standard color: natural  
Standard material: flame resistant PVC



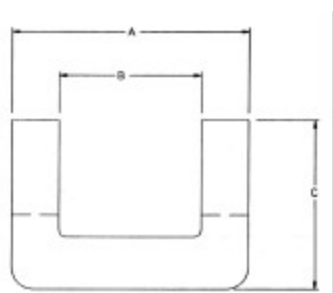
HellermannTyton Part No.	Dimensions In. (mm)				Maximum Bundle Dia. In. (mm)		Rated Static Load	Pkg. Qty.
	A	B	C	D	E to F			
52-0250C2 52-0250M4	.500" (12.70)	.500" (12.70)	.208" (5.28)	.450" (11.43)	.125" (3.18)	.250" (6.35)	1/8 lb.	100 1000
52-0500C2 52-0500M4	.750" (19.10)	.750" (19.10)	.400" (10.20)	.750" (19.10)	.250" (6.35)	.500" (12.70)	1/4 lb.	100 1000
52-0750K2 52-0750H4	1.000" (25.40)	1.130" (28.70)	.580" (14.73)	1.050" (26.70)	.500" (12.70)	.750" (19.10)	1/2 lb.	50 500
52-1000H4	1.250" (31.80)	1.500" (38.10)	.750" (19.10)	1.350" (34.30)	.750" (19.10)	1.000" (25.40)	7/8 lb	500

## WIRE MANAGEMENT

### Grommet

HellermannTyton's Flexiform grommet is a unique, continuous wire protection product which fits easily in all shapes and sizes of holes without the aid of tools or adhesives. Since Flexiform can be cut to the right length with scissors, it eliminates waste, helping keep grommet stock to a minimum. HellermannTyton's Flexiform grommet can be used on any type of material including wood, steel, aluminum, plexiglass, and glass. It is available in 9 sizes for thicknesses from .016" to .512". Standard color: natural.

Standard materials: polyethylene, nylon, and P.T.F.E. (Teflon®).



Part Number Examples

FP AA

Material Type Size

When ordering, add size to the material reference. For example, FPAA equals size AA in polyethylene material.

Standard Dimensions – In. (mm)				
Size	Width A	Channel Width B	Height C	Range of Thickness
AA	.087 (2.21)	.037 (.94)	.094 (2.39)	.016-.035 (.41-.89)
A	.150 (38.10)	.055 (1.40)	.157 (4.00)	.016-.051 (.41-1.30)
B	.177 (4.50)	.091 (2.31)	.157 (4.00)	.051-.083 (1.30-2.11)
C	.220 (5.59)	.130 (3.30)	.157 (4.00)	.083-.130 (2.11-3.30)
D	.327 (8.31)	.197 (5.00)	.228 (5.79)	.130-.189 (3.30-4.80)
E	.386 (9.80)	.260 (6.60)	.240 (6.10)	.189-.256 (4.80-6.50)
F	.445 (11.30)	.319 (8.10)	.256 (6.50)	.256-.319 (6.50-8.10)
G	.512 (13.00)	.394 (10.01)	.256 (6.50)	.319-.382 (8.10-9.70)
H	.638 (16.21)	.512 (13.00)	.256 (6.50)	.382-.508 (9.70-12.90)

All dimensions are subject to technical modification.

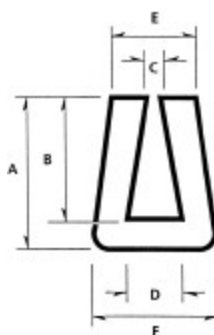
Size AA is available in polyethylene only.

Nylon is available in sizes A through E only.

HellermannTyton's Flexiform grommet is also manufactured from a self-extinguishing UL 94 V-0 rated flexible PVC compound which ensures flexibility and ease of application.

Standard color: black

Standard material: PVC



Standard Dimensions – In. (mm)					
A	B	C	D	E	F
.252 (6.40)	.196 (1.98)	.040 (1.02)	.072 (1.83)	.168 (4.27)	.200 (5.08)

HellermannTyton Part No.	Panel Thickness Range – In. (mm)	Operating Temperature	Flammability	Pkg. Qty.
SM1BK30MT	.040"-.072" (1.02)-(1.83)	-149°F to 221 °F (-65°C to 105°C)	Self-extinguishing UL 94 V-0 266°F (130°C) Intermittent	One 98.5 foot (30 meter) reel

## Convuluted Tubing

Convuluted tubing provides an efficient method of routing and protecting wire harness assemblies, while reducing the chance of installation damage. It also can serve to protect valuable wiring circuits.

HellermannTyton's convuluted tubing offers excellent protection against automotive fluids, vibration wear, water, snow, ice, and the effects of heat, cold, and sunlight on cables and wires.

### Ideal Uses:

- Control Panel Wire Harnesses
- Auto, Truck, and Bus Industry Applications
- Trailer & R.V. Manufacturing
- Snowmobiles and Watercraft
- Agricultural and Construction Machinery
- Electronic Equipment Wire Management



### Convuluted Tubing Dimensions

Size	I.D. – In. A	O.D. – In. B	Wall Thickness Min.
1/4"	.236/.264	.376/.400	.004
3/8"	.344/.374	.489/.519	.006
1/2"	.479/.509	.660/.690	.007
5/8"	.603/.633	.805/.840	.007
3/4"	.720/.755	.953/.988	.007
1"	1.008/1.048	1.288/1.328	.009
1-1/4"	1.245/1.295	1.414/1.465	.009
1-1/2"	1.555/1.605	1.853/1.903	.009
2"	1.980/2.035	2.343/2.409	.009

### Convuluted Tubing Materials

Material	Color	Operating Range
Polyethylene	Black	-40°F Min. 200°F Max.
Nylon	Black with Gray Stripe	-40°F Min. 300°F Max.
Flame Retardant Polyethylene*	Gray	-40°F Min. 200°F Max.
Flame Retardant Polypropylene*	Blue/Green Black with Gray stripe	-40°F Min. 275°F Max.
Heat Stabilized Polypropylene*	Black with Green Stripe	-40°F Min. 275°F Max.

\* Available upon request. Custom terms apply.



Hellermann Tyton Part No.	Description	Pkg. Qty.
<b>Polyethylene</b>		
CTP140STD CTP140	1/4" Black Polyethylene-Standard Carton 1/4" Black Polyethylene-Bulk Carton	3,200' 25,000'
CTP380STD CTP380	3/8" Black Polyethylene-Standard Carton 3/8" Black Polyethylene-Bulk Carton	2,000' 15,000'
CTP120STD CTP120	1/2" Black Polyethylene-Standard Carton 1/2" Black Polyethylene-Bulk Carton	1,200' 8,500'
CTP580STD CTP580	5/8" Black Polyethylene-Standard Carton 5/8" Black Polyethylene-Bulk Carton	900' 5,500'
CTP340STD CTP340	3/4" Black Polyethylene-Standard Carton 3/4" Black Polyethylene-Bulk Carton	600' 4,200'
CTP10STD CTP10	1" Black Polyethylene-Standard Carton 1" Black Polyethylene-Bulk Carton	350' 2,250'
CTP1140STD CTP1140	1-1/4" Black Polyethylene-Standard Carton 1-1/4" Black Polyethylene-Bulk Carton	300' 1,800'
CTP1120STD CTP1120	1-1/2" Black Polyethylene-Standard Carton 1-1/2" Black Polyethylene-Bulk Carton	150' 1,000'
CTP20STD CTP20	2" Black Polyethylene-Standard Carton 2" Black Polyethylene-Bulk Carton	100' 700'
<b>Nylon</b>		
CTN140STD CTN140	1/4" Black Nylon-w/ Gray Stripe-Standard Carton 1/4" Black Nylon-w/ Gray Stripe-Bulk Carton	3,200' 28,000'
CTN380STD CTN380	3/8" Black Nylon-w/ Gray Stripe-Standard Carton 3/8" Black Nylon-w/ Gray Stripe-Bulk Carton	2,000' 15,000'
CTN120STD CTN120	1/2" Black Nylon-w/ Gray Stripe-Standard Carton 1/2" Black Nylon-w/ Gray Stripe-Bulk Carton	1,200' 8,500'
CTN580STD CTN580	5/8" Black Nylon-w/ Gray Stripe-Standard Carton 5/8" Black Nylon-w/ Gray Stripe-Bulk Carton	900' 5,500'
CTN340STD CTN340	3/4" Black Nylon-w/ Gray Stripe-Standard Carton 3/4" Black Nylon-w/ Gray Stripe-Bulk Carton	600' 4,200'
CTN10STD CTN10	1" Black Nylon-w/ Gray Stripe-Standard Carton 1" Black Nylon-w/ Gray Stripe-Bulk Carton	350' 2,250'
CTN1140STD CTN1140	1-1/4" Black Nylon-w/ Gray Stripe-Standard Carton 1-1/4" Black Nylon-w/ Gray Stripe-Bulk Carton	300' 1,800'
CTN1120STD CTN1120	1-1/2" Black Nylon-w/ Gray Stripe-Standard Carton 1-1/2" Black Nylon-w/ Gray Stripe-Bulk Carton	150' 1,000'
CTN20STD CTN20	2" Black Nylon-w/ Gray Stripe-Standard Carton 2" Black Nylon-w/ Gray Stripe-Bulk Carton	100' 700'

Standard tubing is slit. Unslit is available upon request.

Please contact HellermannTyton for pre-cut length requirements.

Colors are available dependent upon volume requirements.