

CABLE MANAGEMENT AND IDENTIFICATION SOLUTIONS



HellermannTyton



onHellermannTytonHel

HellermannTyton

HellermannTyton is a leading, global manufacturer of systems and solutions which help world-class customers better manage and identify wire, cable, and components.

HellermannTyton is proud to manufacture products in Milwaukee, Wisconsin, our North American corporate headquarters and employ a growing number of workers in its offices and plants. With thanks to customers like you, we continue to expand our commitment to growing our manufacturing presence in the USA.



TABLE OF CONTENTS

	INTRODUCTION	3-4
	MATERIAL INFORMATION AND SPECIFICATIONS	5-7
	BUNDLING & SECURING	9-107
	Cable Ties	9-15
	Cable Ties - High Temperature	16-18
	Cable Ties - Special Material	19-27
	Cable Ties - Special Purpose	28-67
	Clips	68-72
	Grip Ties	73-75
	Cable Tie Tools	76-90
	Mounts	91-107
	ROUTING & PROTECTION	109-167
	Wiring Duct	109-132
	Helawrap	133-136
	Spiralwrap	137-139
	Convuluted Tubing	140-142
	Braided Sleeving	143-164
	Grommet	165-166
	Electrical Tape	167
	CLAMPING	169-181
	Snapper Hose Clamps	169-174
	Screw Mount Cable Clamps	175-177
	Adhesive Cable Clamps	178-179
	Flat Ribbon Cable Clamps	180
	Nail Clips	181
	IDENTIFICATION SYSTEMS	183-233
	TagPrint PRO 3.0 Software	183-187
	SwiftMark Automatic Label Printer and Applicator	188-191
	Workstation Printers	192-193
	Thermal Transfer Labels	194-201
	Nameplate Labels	202-203
	Continuous Vinyl Labels	204
	ShrinkTrak Heat Shrinkable Markers	205-208
	TipTag Cable Markers	209-210
	Laser Tag Labels	211-216
	Ink Jet Labels	217-221
	Spirit 2100 Portable Printing System	222-224
	Sport 1000 Handheld Printing System	225-227
	Pre-Printed Installation Labels	228-231
	Rite-On Markers	232
	Wire Marker Tape	233
	WIRE CONNECTORS	235-237
	HelaCon	235-237
	INDEX	238-253

Differentiated Solutions from HellermannTyton

Product Differentiation

At HellermannTyton, we use cutting-edge materials and distinctive designs to manufacture the products which improve performance, exceed safety guidelines, and deliver reliable implementation at the lowest cost. Our varied and ever-evolving collection of solutions offer the differentiated advantage that enables project wins and delivers a point of difference to end-users.

Product Depth

The breadth and depth of HellermannTyton's product line covers a range of highly engineered products from bundling and securing to routing, protection, insulation, network connectivity and identification solutions. We have all the major categories covered with our comprehensive line of products that offer a combination of flexibility, simplicity and value to an end-user customer. In this catalog, see what HellermannTyton offers in cable management and identification solutions. Check out our other catalogs or website for the full range of products.

Vertical Market Support

Through advanced product suites, market specific tools and resources, HellermannTyton holds leading industry positions in key markets.

OEM
MRO/Industrial
Industrial Automation
Renewable Energies
Wire Processing
Datacom

Let us know how we can lend our industry expertise and experience in these markets to your project.



Renewable Energy / Solar



Renewable Energy / Wind



OEM



MRO / Industrial



Wire Processing



Datacom



Industrial Automation

Quality Certifications, Specifications & Warranty

ISO 9001

ISO 9001:2000

The International Standards Organization (ISO) establishes worldwide standards for products and services in recognition of increasing globalization of markets. The ISO program determines the requirements for the quality assurance programs. HellermannTyton has achieved ISO 9001 certifications at all of its U.S. locations.



International Electro-Technical Commission (IEC)

Representatives from key industry suppliers participate in creating standards that provide continuous improvement for products and services. HellermannTyton chaired the committee that created standard 62275 (replaced 1565) for Wire Positioning Devices.

ISO/TS 16949

ISO/TS16949

ISO / TS16949 is a recognized quality supplier standard for manufacturers servicing the automotive industry. HellermannTyton has achieved and maintains registration to this standard.



RoHS / WEEE

The scope of the European Union's Restriction of Hazardous Substances (RoHS) and the Waste Electrical and Electronic Equipment (WEEE) directives covers all electrical and electronic equipment and their components sold into the European Union. Throughout this catalog, you will see designations where materials are RoHS compliant.

ISO 14001

ISO 14001

ISO 14001 is a voluntary standard for Environmental Management Systems established by the International Organization for Standardization. Its goal is to provide benchmarks for reviewing and improving environmental performance. HellermannTyton takes an active role in this process of continuous improvement.

Trade Level Affiliations

National Association of Electrical Distributors (NAED)



National Electrical Manufacturers Association (NEMA)



Building Consulting Services International



HellermannTyton has worked very closely with its material suppliers to develop resins that are specifically formulated for fastener and cable tie production. HellermannTyton has spearheaded material advancements in component manufacturing to assure customers the finest quality of 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) to fluoropolymers. **All materials listed below are RoHS compliant.**



Polyamide 6.6 – General Purpose

General purpose polyamide 6.6 features lightweight, high strength and a wide temperature range. Polyamide 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.

Polyamide 6.6 – Heat Stabilized

With similar properties and benefits as polyamide 6.6, products manufactured with heat stabilized polyamide 6.6 material have a chemical stabilizer added for higher continuous temperature applications.

*Polyamide 6.6 – UV Resistant

Chemical inhibitors are used to give polyamide 6.6 material added properties to fight against premature aging of products due to the effects of ultraviolet rays.

Polyamide 6.6 – UV Stabilized (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 black cable ties to meet the particular military specification for cable ties.

Polyamide 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 polyamide 6.6, but this resin has been formulated to minimize such effects.

*Polyamide 6.6 – Impact Modified, Heat Stabilized and UV Resistant

Impact modified polyamide 6.6 offers the increased flexibility, heat resistance and UV resistance of the high impact material with the added feature of greater resistance to vibration, heat and sunlight for mobile applications.

Polyamide 6.6 – Impact Modified, Heat Stabilized, UV Stabilized

This material has impact modifiers that increase flexibility, impact strength and improves resistance to moisture fluctuations. Heat stabilizers are added to increase heat resistance and UV stabilizers are added to increase UV resistance.

Polyamide 4.6

Polyamide 4.6, like polyamide 6.6, offers lightweight and high strength benefits, but offers an even wider temperature range. This material can be used at a higher continuous operating temperature than polyamide 6.6 - heat stabilized. In addition to having excellent heat resistance, polyamide 4.6 has low creep effects and retention of stiffness at elevated temperatures.

Polypropylene

Polypropylene is used in environments where chemical effects on polyamide 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 polyamide 6.6 (about half). Polypropylene has good UV resistance.

Polyamide 11

Polyamide 11 is a renewably sourced material which has excellent UV resistance and is resistant to many chemicals including metal oxides. Although it is not as strong as Polyamide 6.6 materials, it absorbs very little moisture which makes it ideal for outdoor applications.

Polyamide 12

Polyamide 12 possesses many of the same characteristics as Polyamide 11, however it absorbs slightly less moisture, making it ideal for outdoor applications.

Ethylentetrafluoroethylene - ETFE

ETFE is resistant to a wide range of chemicals, such as concentrated hydrofluoric and sulfuric acids, but it is not as strong as polyamide 6.6 materials. It is also a low water absorbing material, therefore, is not adversely affected by water. ETFE is radiation resistant up to 200 megarads and meets the fire and smoke requirements of IEEE 383. ETFE also withstands high temperatures and ultraviolet light exposure. Products made from ETFE material also have non-outgassing properties for zero gravity applications.

Polyacetal

Polyacetal 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.

Polyetheretherketone – PEEK

This material is an excellent choice for high temperature environments. It also has excellent chemical resistance and is resistant to abrasion. PEEK material has a relatively high tensile strength and it has the ability to retain its tensile strength when continuously conditioned in water at elevated temperatures and pressures.

Thermoplastic Vulcanizate (TPV)

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

For more information on RoHS/WEEE Compliance, go online to: <http://www.hellermann.tyton.com/rohs.asp>

* UV Resistant = Material contains less than 2% carbon or a UV additive to improve UV resistance.

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.						
Polyamide 6.6 - General Purpose (PA66)	185°F 85°C	-40°F -40°C	12,000	94V-2	28	1 x 10 ⁵ Rads	Poor	ASTM D-4066PA0111, FDA CFR177.1500
Polyamide 6.6 - Heat Stabilized (PA66HS)	221°F 105°C	-40°F -40°C	12,000	94V-2	26	1 x 10 ⁵ Rads	Poor	ASTM D-4066PA0121
*Polyamide 6.6 - UV resistant (PA66UV)	185°F 85°C	-40°F -40°C	12,000	94V-2	26	1 x 10 ⁵ Rads	Good	-
Polyamide 6.6 - 2% Carbon UV stabilized (OUV)	185°F 85°C	-40°F -40°C	12,000	94V-2	26	1 x 10 ⁵ Rads	Very Good	ASTM D-4066PA0181, MS3367/8
Polyamide 6.6 - Flame Retardant (PA66VO)	185°F 85°C	-40°F -40°C	10,800	94V-0	34	1 x 10 ⁵ Rads	Poor	ASTM D-4066PA0110
*Polyamide 6.6 - Impact Mod. Heat Stabilized, UV Resistant (PA66HIRHS)	230°F 110°C	-40°F -40°C	9,500	94-HB	N/A	N/A	Very Good	ASTM D-4066PA0161
*Polyamide 6.6 - Impact Mod. Heat Stabilized, UV Stabilized (PA66HIRHSUV)	230°F 110°C	-40°F -40°C	8,900	94-HB	19	1 x 10 ⁵ Rads	Very Good	ASTM D-4066PA0151
Polyamide 4.6 - Heat Stabilized (PA46)	275°F 135°C	-40°F -40°C	14,400	94V-2	27	9 x 10 ⁶ Rads	Poor	ASTM D-4066PA0922
Polypropylene - Chemical Resistant (PP)	239°F 115°C	-40°F -40°C	3,400	94-HB	N/A	1 x 10 ⁵ Rads	Good	ASTM D-4101PP0327
Polyamide 11 - UV Resistant (PA11)	203°F 95°C	-40°F -40°C	6,600	94-V2	N/A	1 x 10 ⁵ Rads	Excellent	ASTM D-4000PA0321
*Polyamide 12 - UV resistant (PA12)	203°F 95°C	-40°F -40°C	6,600	94-V2	N/A	1 x 10 ⁵ Rads	Excellent	ASTM D-4066PA411
Ethlenterafluorineethylene (ETFE)	302°F 150°C	-112°F -80°C	5,800	94V-0	30	2 x 10 ⁸ Rads	Oustanding	UL2043, ASTM D-3159 Type 1 Grade 1
Polyacetal (POM)	185°F 85°C	-40°F -40°C	6,500	94-HB	N/A	N/A	Excellent	-
Polyetheretherketone (PEEK)	500°F 260°C	-67°F -55°C	14,600	94V-0	24	1 x 10 ⁸ Rads	Poor	21CFR 177.2415, EEC 93/9/EEC 151G
Thermoplastic Vulcanizate (TPV)	392°F 200°C	-50°F -45°C	n/a	94V-0	N/A	N/A	Excellent	-

* UV Resistant = Material contains less than 2% carbon or a UV additive to improve UV resistance.

Material Performance Guide															
ATTRIBUTE	POLYAMIDE 6.6 GENERAL PURPOSE	POLYAMIDE 6.6 HEAT STABILIZED	POLYAMIDE 6.6 UV RESISTANT	POLYAMIDE 6.6 - 2% CARBON UV RESISTANT	POLYAMIDE 6.6 FLAME RETARDANT VO	POLYAMIDE 6.6 IMPACT MODIFIED, HEAT STABILIZED UV RESISTANT	POLYAMIDE 6.6 IMPACT MODIFIED, HEAT STABILIZED UV RESISTANT	POLYAMIDE 4.6 HEAT STABILIZED	POLYPROPYLENE	POLYAMIDE 11	POLYAMIDE 12 UV RESISTANT	ETHLENTERAFLUORINE-ETHYLENE — ETFE	POLYACETAL	PEEK	TPV
Tensile Strength	8	8	8	9	7	8	7	10	2	6	6	5	5	10	-
High Temperature	2	3	2	2	2	3	2	9	2	1	1	10	3	10	10
Flammability	5	5	5	5	10	2	2	5	2	2	2	10	2	10	2
UV Resistance	1	1	5	7	1	7	2	1	5	8	8	10	9	1	1
Radiation	3	3	3	3	3	3	3	6	3	3	3	8	3	10	-
Chemical Resistance	6	6	6	6	6	6	6	6	8	8	8	10	-	10	-
- Hydrocarbons	8	8	8	8	8	8	8	8	6	8	8	10	8	10	4
- Chlorinated Hydrocarbons	6	6	6	6	6	6	6	6	3	8	8	10	5	10	4
- Acids	2	2	2	2	2	2	2	2	8	5	5	10	8	5	8
- Bases	8	6	6	6	6	6	6	6	8	6	6	10	8	10	8
- Salts	3	3	3	3	3	3	3	3	10	8	8	10	8	10	8
Relative Cost	Low	Low	Med	Med	Med	Med	Med	Med	Med	Med	Med	High	Med	High	Med

10 = Most Recommended
1 = Least Recommended

Optimum storage conditions for cable ties made of polyamide (PA)

HellermannTyton cable ties and mounts are manufactured from high-quality polyamide (PA). This material is mainly processed using injection molding, but can also be extruded.

Polyamide is a hygroscopic material. This means that the material absorbs and loses moisture. For optimum handling of cable ties, it is important that the material is in a condition of equilibrium with a water content of approximately 2.5%.

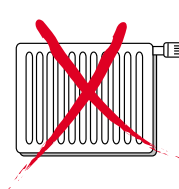
The packaging used by HellermannTyton ensures that the water content in the material remains constant. Therefore, it is important to store the products in their original packaging to preserve the quality of the ties and mounts.



Once opened you should use the ties as quickly as possible.

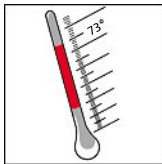


Do not expose the product to direct sunlight

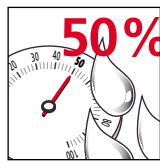


Store the product away from direct sources of heat

Ideal storage conditions:



73 °F



50%
relative
humidity



BUNDLING AND SECURING SOLUTIONS

Cable Ties	9-15
Cable Ties - High Temperature	16-18
Cable Ties - Special Material	19-27
Cable Ties - Special Purpose	28-67
Clips	68-72
Grip Ties	73-75
Cable Tie Tools	76-90
Mounts	91-107

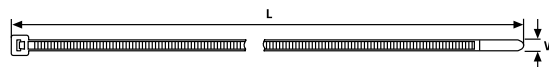


Standard Cable Ties

T18 - T30 Series - Natural and Black

Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



File# E64139

File# E64139

Product Selection

Product Selection													
Article No.	Part No.	Type	US Gov. Designation	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
				lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
T18S													
111-02805	T18S9C2	T18S	—	18 lbs	(80)	3.27"	(83)	.63"	(16)	.09"	(2.3)	Natural	100
111-02809	T18S9M4	T18S	—	18 lbs	(80)	3.27"	(83)	.63"	(16)	.09"	(2.3)		1000
111-02810	T18S0C2	T18S	—	18 lbs	(80)	3.27"	(83)	.63"	(16)	.09"	(2.3)	Black	100
111-02811	T18S0M4	T18S	—	18 lbs	(80)	3.27"	(83)	.63"	(16)	.09"	(2.3)		1000
T18R													
112-01819	T18R9C2	T18R	MS3367-4-9	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Natural	100
111-01872	T18R9M4	T18R	MS3367-4-9	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000
111-00405	T18R0C2	T18R	*	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Black	100
111-01841	T18R0M4	T18R	*	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000
T18I													
111-02311	T18I9C2	T18I	—	18 lbs	(80)	5.51"	(140)	1.38"	(35)	.10"	(2.5)	Natural	100
111-02322	T18I9M4	T18I	—	18 lbs	(80)	5.51"	(140)	1.38"	(35)	.10"	(2.5)		1000
111-02308	T18I0C2	T18I	—	18 lbs	(80)	5.51"	(140)	1.38"	(35)	.10"	(2.5)	Black	100
111-02315	T18I0M4	T18I	—	18 lbs	(80)	5.51"	(140)	1.38"	(35)	.10"	(2.5)		1000
T18L													
111-02189	T18L9C2	T18L	—	18 lbs	(80)	8.0"	(205)	2.17"	(55)	.10"	(2.5)	Natural	100
111-02026	T18L9M4	T18L	—	18 lbs	(80)	8.0"	(205)	2.17"	(55)	.10"	(2.5)		1000
111-00401	T18L0C2	T18L	—	18 lbs	(80)	8.0"	(205)	2.17"	(55)	.10"	(2.5)	Black	100
111-02015	T18L0M4	T18L	—	18 lbs	(80)	8.0"	(205)	2.17"	(55)	.10"	(2.5)		1000
T30R													
112-03019	T30R9C2	T30R	MS3367-5-9	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Natural	100
111-03047	T30R9M4	T30R	MS3367-5-9	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000
111-00438	T30R0C2	T30R	*	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Black	100
111-03034	T30R0M4	T30R	*	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000
T30L													
111-03325	T30L9C2	T30L	—	30 lbs	(135)	7.48"	(190)	1.97"	(50)	.14"	(3.5)	Natural	100
111-03327	T30L9M4	T30L	—	30 lbs	(135)	7.48"	(190)	1.97"	(50)	.14"	(3.5)		1000
111-03313	T30L0C2	T30L	—	30 lbs	(135)	7.48"	(190)	1.97"	(50)	.14"	(3.5)	Black	100
111-03315	T30L0M4	T30L	—	30 lbs	(135)	7.48"	(190)	1.97"	(50)	.14"	(3.5)		1000
T30LL													
111-03515	T30LL9C2	T30LL	—	30 lbs	(135)	11.42"	(290)	3.15"	(80)	.14"	(3.5)	Natural	100
111-03517	T30LL9M4	T30LL	—	30 lbs	(135)	11.42"	(290)	3.15"	(80)	.14"	(3.5)		1000
111-03501	T30LL0C2	T30LL	—	30 lbs	(135)	11.42"	(290)	3.15"	(80)	.14"	(3.5)	Black	100
111-03511	T30LL0M4	T30LL	—	30 lbs	(135)	11.42"	(290)	3.15"	(80)	.14"	(3.5)		1000
T30XL													
111-02900	T30XL9C2	T30XL	—	30 lbs	(135)	14.37"	(365)	4.13"	(105)	.14"	(3.5)	Natural	100
111-02907	T30XL9M4	T30XL	—	30 lbs	(135)	14.37"	(365)	4.13"	(105)	.14"	(3.5)		1000
111-02901	T30XL0C2	T30XL	—	30 lbs	(135)	14.37"	(365)	4.13"	(105)	.14"	(3.5)	Black	100
111-02903	T30XL0M4	T30XL	—	30 lbs	(135)	14.37"	(365)	4.13"	(105)	.14"	(3.5)		1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties.

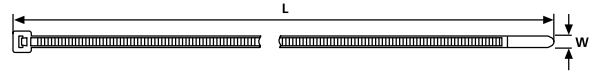
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

* Military black available. Contact HellermannTyton for more information.

Standard Cable Ties

T40 - T50 Series - Natural and Black

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



File# E64139

File# E64139

Product Selection											File# E64139	File# E64139
Article No.	Part No.	Type	US Gov. Designation	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)	Color	Pkg. Qty.
				lbs.	(N)	in.	(mm)	in.	(mm)	in.		
T40R												
112-04019	T40R9C2	T40R(U)	—	40 lbs	(178)	8.27"	(210)	2.16"	(55)	.16" (4.0)	Natural	100
111-04131	T40R9M4	T40R(U)	—	40 lbs	(178)	8.27"	(210)	2.16"	(55)	.16" (4.0)		1000
112-04060	T40R0C2	T40R(U)	—	40 lbs	(178)	8.27"	(210)	2.16"	(55)	.16" (4.0)	Black	100
111-04122	T40R0M4	T40R(U)	—	40 lbs	(178)	8.27"	(210)	2.16"	(55)	.16" (4.0)		1000
T40I												
111-04609	T40I9C2	T40I	—	40 lbs	(178)	11.42"	(290)	3.15"	(80)	.16" (4.0)	Natural	100
111-04612	T40I9M4	T40I	—	40 lbs	(178)	11.42"	(290)	3.15"	(80)	.16" (4.0)		1000
111-04600	T40I0C2	T40I	—	40 lbs	(178)	11.42"	(290)	3.15"	(80)	.16" (4.0)	Black	100
111-04604	T40I0M4	T40I	—	40 lbs	(178)	11.42"	(290)	3.15"	(80)	.16" (4.0)		1000
T40L												
111-04300	T40L9C2	T40L	—	40 lbs	(178)	14.4"	(365)	4.13"	(105)	.16" (4.0)	Natural	100
111-04311	T40L9M4	T40L	—	40 lbs	(178)	14.4"	(365)	4.13"	(105)	.16" (4.0)		1000
111-04301	T40L0C2	T40L	—	40 lbs	(178)	14.4"	(365)	4.13"	(105)	.16" (4.0)	Black	100
111-04305	T40L0M4	T40L	—	40 lbs	(178)	14.4"	(365)	4.13"	(105)	.16" (4.0)		1000
T50S												
111-05811	T50S9C2	T50S	—	50 lbs	(225)	5.9"	(150)	1.38"	(35)	.18" (4.6)	Natural	100
111-05813	T50S9M4	T50S	—	50 lbs	(225)	5.9"	(150)	1.38"	(35)	.18" (4.6)		1000
111-05806	T50S0C2	T50S	—	50 lbs	(225)	5.9"	(150)	1.38"	(35)	.18" (4.6)	Black	100
111-05808	T50S0M4	T50S	—	50 lbs	(225)	5.9"	(150)	1.38"	(35)	.18" (4.6)		1000
T50R												
112-05019	T50R9C2	T50R	MS3367-1-9	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18" (4.6)	Natural	100
111-04862	T50R9M4	T50R	MS3367-1-9	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18" (4.6)		1000
111-04878	T50R0C2	T50R	*	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18" (4.6)	Black	100
111-04846	T50R0M4	T50R	*	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18" (4.6)		1000
T50I												
112-05219	T50I9C2	T50I	MS3367-7-9	50 lbs	(225)	11.8"	(300)	3.35"	(85)	.18" (4.6)	Natural	100
111-05230	T50I9M4	T50I	MS3367-7-9	50 lbs	(225)	11.8"	(300)	3.35"	(85)	.18" (4.6)		1000
111-00444	T50I0C2	T50I	*	50 lbs	(225)	11.8"	(300)	3.35"	(85)	.18" (4.6)	Black	100
111-05216	T50I0M4	T50I	*	50 lbs	(225)	11.8"	(300)	3.35"	(85)	.18" (4.6)		1000
T50L												
112-05419	T50L9C2	T50L	MS3367-2-9	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18" (4.6)	Natural	100
111-05449	T50L9M4	T50L	MS3367-2-9	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18" (4.6)		1000
111-00445	T50L0C2	T50L	*	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18" (4.6)	Black	100
111-00504	T50L0M4	T50L	*	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18" (4.6)		1000

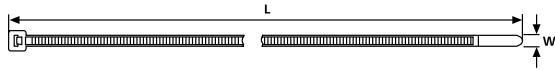
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes.

Use **Part No.** for ordering and **Type** for specification purposes.

* Military black available. Contact HellermannTyton for more information.

Standard Cable Ties

T18R and T30R Series - Colors



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



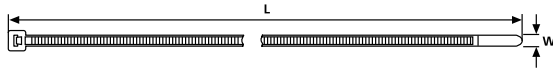
Product Selection			File# E64139										File# E64139	
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.		
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)				
T18R														
116-01811	T18R1C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Brown	100		
111-01849	T18R1M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
111-01880	T18R2C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Red	100		
111-01882	T18R2M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
116-01813	T18R3C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Orange	100		
111-01877	T18R3M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
111-01896	T18R4C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Yellow	100		
111-01898	T18R4M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
111-01853	T18R5C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Green	100		
111-01855	T18R5M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
111-01842	T18R6C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Blue	100		
111-01845	T18R6M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
116-01817	T18R7C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Purple	100		
111-01888	T18R7M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
111-01857	T18R8C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Gray	100		
111-01859	T18R8M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
116-01819	T18R10C2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	White	100		
111-01892	T18R10M4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)		1000		
T30R														
116-03011	T30R1C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Brown	100		
111-03038	T30R1M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03012	T30R2C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Red	100		
111-03056	T30R2M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03013	T30R3C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Orange	100		
111-03052	T30R3M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03014	T30R4C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Yellow	100		
111-03065	T30R4M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03015	T30R5C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Green	100		
111-03041	T30R5M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03016	T30R6C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Blue	100		
111-03036	T30R6M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03017	T30R7C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Purple	100		
111-03062	T30R7M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03018	T30R8C2	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Gray	100		
111-03061	T30R8M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		
116-03019	116-03019	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	White	100		
116-03064	T30R10M4	T30R	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)		1000		

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties.

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Standard Cable Ties

T50R and T50L Series - Colors



Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



File# E64139



File# E64139

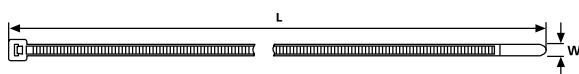
Product Selection

Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
T50R												
116-05011	T50R1C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Brown	100
111-04852	T50R1M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05012	T50R2C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Red	100
111-04868	T50R2M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05013	T50R3C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Orange	100
111-04865	T50R3M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05014	T50R4C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Yellow	100
111-04892	T50R4M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05015	T50R5C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Green	100
111-04854	T50R5M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05016	T50R6C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Blue	100
111-04849	T50R6M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05017	T50R7C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Purple	100
111-04877	T50R7M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
111-04870	T50R8C2	T50R	50 lbs	(225)	7.9"	(202)	1.97"	(50)	.18"	(4.6)	Gray	100
111-04872	T50R8M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
116-05019	T50R10C2	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	White	100
111-04879	T50R10M4	T50R	50 lbs	(225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)		1000
T50L												
111-05443	T50L1C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Brown	100
111-05444	T50L1M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05457	T50L2C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Red	100
111-05458	T50L2M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05451	T50L3C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Orange	100
111-05454	T50L3M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05467	T50L4C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Yellow	100
111-05468	T50L4M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05445	T50L5C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Green	100
111-00502	T50L5M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05431	T50L6C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Blue	100
111-05434	T50L6M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05464	T50L7C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Purple	100
111-00503	T50L7M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05461	T50L8C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Gray	100
111-05462	T50L8M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000
111-05466	T50L10C2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	White	100
111-05465	T50L10M4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)		1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties.

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Heavy Duty Cable Ties



Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



T120 Series



File# E64139

File# E64139

Product Selection				File# E64139								File# E64139	
Article No.	Part No.	Type	US Gov. Designation	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
				lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
T120S													
111-12819	T120S9K2	T120S	—	120 lbs	(535)	8.85"	(225)	2.17"	(55)	.30"	(7.6)	Natural	50
111-12813	T120S9H4	T120S	—	120 lbs	(535)	8.85"	(225)	2.17"	(55)	.30"	(7.6)		500
111-12803	T120S0K2	T120S	—	120 lbs	(535)	8.85"	(225)	2.17"	(55)	.30"	(7.6)	Black	50
111-12808	T120S0H4	T120S	—	120 lbs	(535)	8.85"	(225)	2.17"	(55)	.30"	(7.6)		500
T120I													
111-12211	T120I9K2	T120I	—	120 lbs	(535)	11.81"	(300)	3.15"	(80)	.30"	(7.6)	Natural	50
111-12213	T120I9H4	T120I	—	120 lbs	(535)	11.81"	(300)	3.15"	(80)	.30"	(7.6)		500
111-12201	T120I0K2	T120I	—	120 lbs	(535)	11.81"	(300)	3.15"	(80)	.30"	(7.6)	Black	50
111-12206	T120I0H4	T120I	—	120 lbs	(535)	11.81"	(300)	3.15"	(80)	.30"	(7.6)		500
T120R													
112-12019	T120R9K2	T120R	MS3367-3-9	120 lbs	(535)	15.24"	(387)	4.13"	(105)	.30"	(7.6)	Natural	50
111-12036	T120R9H4	T120R	MS3367-3-9	120 lbs	(535)	15.24"	(387)	4.13"	(105)	.30"	(7.6)		500
112-12060	T120R0K2	T120R	*	120 lbs	(535)	15.24"	(387)	4.13"	(105)	.30"	(7.6)	Black	50
111-12013	T120R0H4	T120R	*	120 lbs	(535)	15.24"	(387)	4.13"	(105)	.30"	(7.6)		500
T120L													
111-12419	T120L9K2	T120L	MS3367-6-9	120 lbs	(535)	30.0"	(760)	8.85"	(225)	.30"	(7.6)	Natural	50
111-12405	T120L0K2	T120L	*	120 lbs	(535)	30.0"	(760)	8.85"	(225)	.30"	(7.6)	Black	50

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. *Military black available. Contact HellermannTyton for more information.

T150 Series



File# E64139

File# E64139

Product Selection				Min. Tensile Strength	Length (L)		Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	US Gov. Designation							
T150R										
111-15203	T150R9X2	T150R(U)	–	175 lbs (780)	15.35″ (390)	4.13″ (105)	.35″ (8.8)	Natural	25	
111-15200	T150R0X2	T150R(U)	–	175 lbs (780)	15.35″ (390)	4.13″ (105)	.35″ (8.8)	Black	25	
T150M										
111-15619	T150M9X2	T150M	–	175 lbs (780)	21.00″ (530)	5.91″ (150)	.35″ (8.9)	Natural	25	
111-00124	T150M0X2	T150M	–	175 lbs (780)	21.00″ (530)	5.91″ (150)	.35″ (8.9)	Black	25	
T150L										
111-15419	T150L9X2	T150L	–	175 lbs (780)	32.28″ (820)	9.65″ (245)	.35″ (8.9)	Natural	25	
111-15405	T150L0X2	T150L	–	175 lbs (780)	32.28″ (820)	9.65″ (245)	.35″ (8.9)	Black	25	
T150LL										
111-15719	T150LL9X2	T150LL	–	175 lbs (780)	36.42″ (925)	10.83″ (275)	.35″ (8.9)	Natural	25	
111-15700	T150LL0X2	T150LL	–	175 lbs (780)	36.42″ (925)	10.83″ (275)	.35″ (8.9)	Black	25	
T150XL										
111-15519	T150XL9X2	T150XL	–	175 lbs (780)	43.11″ (1095)	13.00″ (330)	.35″ (8.9)	Natural	25	
111-15500	T150XL0X2	T150XL	–	175 lbs (780)	43.11″ (1095)	13.00″ (330)	.35″ (8.9)	Black	25	
T150XLL										
111-15304	T150XLL9X2	T150XLL	–	175 lbs (780)	52.17″ (1325)	15.95″ (405)	.35″ (8.9)	Natural	25	
111-15300	T150XLL0X2	T150XLL	–	175 lbs (780)	52.17″ (1325)	15.95″ (405)	.35″ (8.9)	Black	25	

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

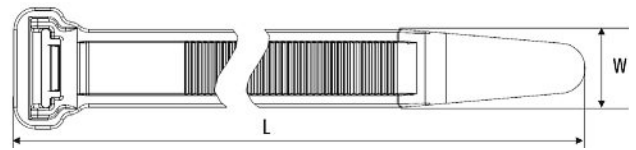
For product information visit or www.hellermann.tyton.com or call **800-537-1512**

Wide Strap Heavy Duty Cable Ties

The wide strap cable tie minimizes pinching on soft bundles and features a low profile head to provide compact bundling. A thinner strap provides increased flexibility for improved ergonomics

- Designed to minimize pinching of soft hoses and convoluted tubing
- Low profile head
- Clamping rails on the bottom of head to increase grip on round bundles
- Large bundle diameter range: .375" - 4.125" (9.5mm - 104.7mm)
- Flexible strap with bent tip for quick insertion into mounts

Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	



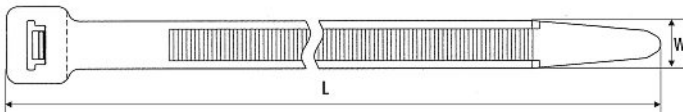
Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-12300	111-12300	WSS	120 lbs (534)	9.1" (231.14)	2.25" (57.15)	.5" (12.7)	Black	300
111-12301	111-12301	WSI	120 lbs (534)	12.1" (307.34)	3.25" (82.55)	.5" (12.7)	Black	300
111-12302	111-12302	WSR	120 lbs (534)	15.1" (383.54)	4.125" (104.78)	.5" (12.7)	Black	300

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T255 Series Heavy Duty Cable Ties

HellermannTyton's T255 series heavy duty cable ties are ideal for bundles requiring a strong cable tie that may also require a higher temperature rating than the T250 series. These ties have a tensile strength of 250 lbs.

Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	



HELLERMANN **TYTON** **US**
File# E64139

Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-25500	T255S0HIRX2	T255S	250 lbs (1115)	8.86" (225)	2.16" (55)	.49" (12.5)	Black	25
111-25400	T255R0HIRX2	T255R	250 lbs (1115)	20.28" (520)	5.71" (145)	.49" (12.5)	Black	25
111-25300	T255M0HIRX2	T255M	250 lbs (1115)	22.05" (565)	6.30" (160)	.49" (12.5)	Black	25

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

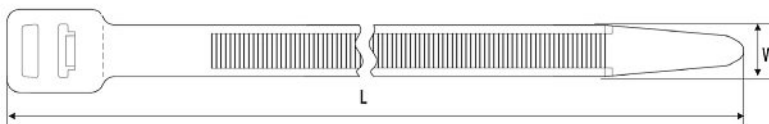
Heavy Duty Cable Ties T250 Series

These cable ties offer a high minimum tensile strength and have a buckle feature which allows the end of the cable tie to be tucked away if necessary. The buckle also snaps into HellermannTyton lashing tie mounts (LTM).



T250 heavy duty cable tie and lashing tie mount application

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



UL
c us
File# E64139

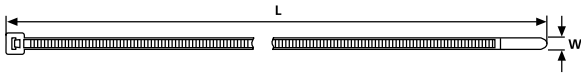
Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type										
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
T250S												
111-24702	T250S9X2	T250S	250 lbs	(1115)	9.05"	(230)	2.17"	(55)	.49"	(12.5)	Natural	25
111-24700	T250S0X2	T250S	250 lbs	(1115)	9.05"	(230)	2.17"	(55)	.49"	(12.5)	Black	25
T250R												
111-24803	T250R9X2	T250R	250 lbs	(1115)	20.47"	(520)	5.71"	(145)	.49"	(12.5)	Natural	25
111-24801	T250R0X2	T250R	250 lbs	(1115)	20.47"	(520)	5.71"	(145)	.49"	(12.5)	Black	25
T250M												
111-25002	T250M9X2	T250M	250 lbs	(1115)	22.24"	(565)	5.90"	(150)	.49"	(12.5)	Natural	25
111-25001	T250M0X2	T250M	250 lbs	(1115)	22.24"	(565)	5.90"	(150)	.49"	(12.5)	Black	25
T250I												
111-25219	T250I9X2	T250I	250 lbs	(1115)	28.54"	(725)	8.00"	(203)	.49"	(12.5)	Natural	25
111-00507	T250I0X2	T250I	250 lbs	(1115)	28.54"	(725)	8.00"	(203)	.49"	(12.5)	Black	25
T250L												
111-00436	T250L9X2	T250L	250 lbs	(1115)	34.65"	(880)	10.00"	(254)	.49"	(12.5)	Natural	25
111-24601	T250L0X2	T250L	250 lbs	(1115)	34.65"	(880)	10.00"	(254)	.49"	(12.5)	Black	25
T250XL												
111-00466	T250XL9X2	T250XL	250 lbs	(1115)	40.55"	(1030)	12.00"	(305)	.49"	(12.5)	Natural	25
111-25200	T250XL0X2	T250XL	250 lbs	(1115)	40.55"	(1030)	12.00"	(305)	.49"	(12.5)	Black	25

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T18 - T120 Series - Heat Stabilized

HellermannTyton's heat stabilized cable ties provide excellent resistance when exposed to high heat.

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +257 °F (-40 °C to +125 °C) continuous
Flammability	UL94 V2



File# E64139



File# E64139

File# E64139

File# E64139

Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)					
T18S												
111-02815	T18S0HSM4	T18S	18 lbs (80)	3.27" (83)	.63" (16)	.09" (2.3)		Black	1000			
T18R												
111-01905	T18R0HSC2	T18R	18 lbs (80)	4" (100)	.87" (22)	.10" (2.5)		Black	100			
111-00476	T18R0HSM4	T18R	18 lbs (80)	4" (100)	.87" (22)	.10" (2.5)		Black	1000			
T18I												
111-02305	T18I0HSM4	T18I	18 lbs (80)	5.5" (140)	1.38" (35)	.10" (2.5)		Black	1000			
T18L												
111-00403	T18L0HSC2	T18L	18 lbs (80)	8.0" (205)	2.17" (55)	.10" (2.5)		Black	100			
111-00404	T18L0HSM4	T18L	18 lbs (80)	8.0" (205)	2.17" (55)	.10" (2.5)		Black	1000			
T30R												
111-03067	T30R0HSC2	T30R	30 lbs (135)	5.9" (150)	1.38" (35)	.14" (3.5)		Black	100			
111-03068	T30R0HSM4	T30R	30 lbs (135)	5.9" (150)	1.38" (35)	.14" (3.5)		Black	1000			
T50R												
111-04900	T50R0HSC2	T50R	50 lbs (225)	7.9" (200)	1.97" (50)	.18" (4.6)		Black	100			
111-04901	T50R0HSM4	T50R	50 lbs (225)	7.9" (200)	1.97" (50)	.18" (4.6)		Black	1000			
T50I												
111-05248	T50I0HSC2	T50I	50 lbs (225)	11.8" (300)	3.35" (85)	.18" (4.6)		Black	100			
111-05251	T50I0HSM4	T50I	50 lbs (225)	11.8" (300)	3.35" (85)	.18" (4.6)		Black	1000			
T50L												
111-05470	T50L0HSC2	T50L	50 lbs (225)	15.35" (390)	4.33" (110)	.18" (4.6)		Black	100			
111-05471	T50L0HSM4	T50L	50 lbs (225)	15.35" (390)	4.33" (110)	.18" (4.6)		Black	1000			
T120R												
111-12061	T120R0HSMK2	T120R	120 lbs (535)	15.24" (387)	4.13" (105)	.30" (7.6)		Black	50			
111-12058	T120R0HSH4	T120R	120 lbs (535)	15.24" (387)	4.13" (105)	.30" (7.6)		Black	500			

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties.

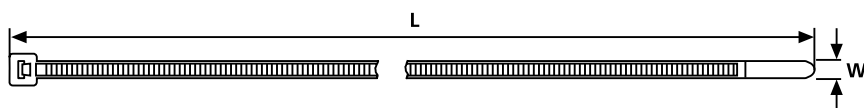
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

PA46 Ties

HellermannTyton's high temperature cable ties provide excellent resistance in operating temperatures up to 275°F (135°C), while still maintaining tensile strength properties.



Material Data	
Material	Polyamide 4.6 (PA46)
Operating Temperature	-40 °F to +275 °F (-40 °C to +135 °C) continuous
Flammability	UL94 V2



Product Selection								
Article No.	Part No.	Type	Min. Tensile Strength	Length (L)	Max Ø Bundle	Width (W)	Color	Pkg. Qty.
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-01836	T18R1STNLM5	T18R1STNLM5	18 lbs. (80)	4" (100)	.87" (22)	.10" (2.5)	Brown	100
111-01269	T30R1STNLM4	T30R1STNLM4	30 lbs. (135)	5.9" (150)	1.38" (35)	.14" (3.5)	Brown	100
111-04839	T50R1STNLM5	T50R1STNLM5	50 lbs. (225)	7.9" (200)	1.97" (50)	.18" (4.6)	Brown	100
111-05423	T50L1STNLM4	T50L1STNLM4	50 lbs. (225)	15.3" (390)	4.33" (110)	.18" (4.6)	Brown	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties.

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

PEEK Tie For High Temperature Applications

HellermannTyton's high performance PEEK material withstands temperatures up to +464°F (+240°C) and is highly resistant to chemicals. The cable tie is designed with a contoured head making it ideal for space restricted areas. The outside serrations minimize any damage to the cable insulation. HellermannTyton's fir tree mount provides a secure grip in a mounting hole and protect against dirt and other impurities. The mount can slide along the strap of the tie for proper orientation. The fir tree mounts are designed to provide a low insertion force and high extraction force. HellermannTyton's cable tie anchor mounts are designed with a 4-way entry point which allows the mount to be placed parallel or perpendicular to the wire bundle.

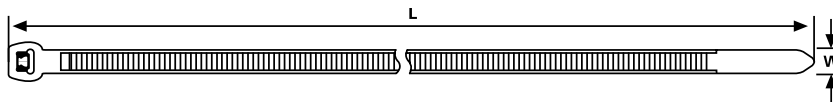


The contoured head takes up less space, provides a low insertion force, and offers high strength.

Material Data

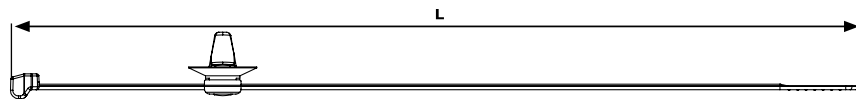
Material	Polyetheretherketone (PEEK)
Operating Temperature	-67 °F to +464 °F (-55 °C to +240 °C) continuous
Flammability	UL94 V0

RoHS



Product Selection

Product Selection		Type	Min. Tensile Strength	Max Ø Bundle	Length (L)	Width (W)	Mounting Hole Ø	Panel Thickness	Disc	Color	Pkg. Qty.
Article No.	Part No.		lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
Cable Ties											
118-00032	118-00032	PT2A	52 lbs. (230)	1.38" (35)	5.7" (145)	.13" (3.4)	—	—	—	Beige	100
111-01235	111-01235	PT220	85 lbs. (380)	2.2" (56)	8.6" (220)	.18" (4.6)	—	—	—	Beige	100



Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Max Ø Bundle	Length (L)	Width (W)	Mounting Hole Ø	Panel Thickness	Disc	Color	Pkg. Qty.
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
156-00455	156-00455	T50RO SP1SFT65	50 lbs. (225)	1.77" (45)	7.9" (200)	.18" (4.6)	.25" - .26" (6.3 - 6.7)	.028" - .051" (.7 - 1.3)	.63" (16)	Gray Beige	100
156-00456	156-00456	T50RO SP2SFT65	50 lbs. (225)	1.77" (45)	7.9" (200)	.18" (4.6)	.25" - .26" (6.3 - 6.7)	.028" - .051" (.7 - 1.3)	.63" (16)	Gray Beige	100

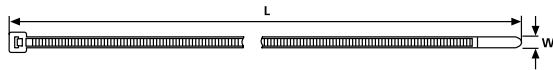


Product Selection

Product Selection		Type	Cable Tie Series	Mounting	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
Article No.	Part No.				in. (mm)	in. (mm)	in. (mm)		
					Mounts				
151-00757	151-00757	CTAM1	T18 - T50	#10 Screw	.81" (20.5)	.40" (10.2)	.22" (5.5)	Beige	100
151-00758	151-00758	CTAM2	T18 - T50	#10 Screw	.81" (20.5)	.40" (10.2)	.22" (5.5)	Beige	100

UV Stabilized Cable Ties

Used in the solar industry and other applications, HellermannTyton offers cable ties made of UV stabilized PA66UV material. This provides additional protection against UV radiation for long-term outdoor use and is available in various styles, tensile strengths and bundle diameters.



Material Data	
Material	Polyamide 6.6 – 2% Carbon UV Stabilized (OUV)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



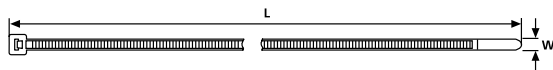
Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Length	Max Bundle	Width	Color	Pkg. Qty
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-03075	T30R0UVC2	T30R	30 (135)	5.9 (150)	1.38 (35)	.14 (3.5)	Black	100
111-04912	T50R0UVC2	T50R	50 (225)	7.9 (200)	1.97 (50)	.18 (4.6)	Black	100
111-05477	T50L0UVC2	T50L	50 (225)	15.35 (390)	4.33 (110)	.18 (4.6)	Black	100
111-00400	T120R0UVC2	T120R	120 (535)	15.24 (387)	4.13 (105)	.30 (7.6)	Black	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Heat/UV Stabilized Nylon 6.6 Cable Ties

Manufactured from a specially-formulated impact-resistant, heat and UV stabilized PA6.6 material, these cable ties offer increased flexibility, impact strength, heat and UV resistance to endure moisture fluctuations. These cable ties feature inside serrations providing a positive hold onto wire and cable bundles. The head design guarantees high tensile strength, as well as a low insertion force. The bent tail allows for quick and simple installation by hand.



Material Data	
Material	Polyamide 6.6 – High Impact Modified, Heat and UV Stabilized (PA66HIRHSUV)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Product Selection

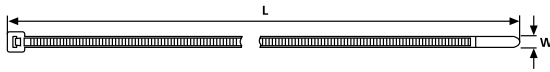
Article No.	Part No.	Type	Min. Tensile Strength	Length	Max Bundle	Width	Color	Pkg. Qty
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-03066	T30R0HIRM4	T30R	30 (135)	6.0" (150)	1.4" (35)	0.14" (3.6)	Black	1000
111-01566	T50R0HIRM4	T50R	50 (225)	8.0" (202)	2.0" (50)	0.18" (4.6)	Black	1000
111-01128	111-01128	T50L	50 (225)	15.0" (390)	4.3" (110)	0.19" (4.7)	Black	1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. MK9 and MK9P cannot be used with T18S cable ties. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

PA11 Ties

These inside serrated cable ties are manufactured from Polyamide 11 which provides excellent UV, chemical and moisture resistance, allowing a longer life span in outdoor use. This material is recommended for applications exposed to metal oxides. The tie strap has smooth edges which prevent bundle damage.

Material Data		RoHS
Material	Polyamide 11 (PA11)	
Operating Temperature	-40 °F to +203 °F (-40 °C to +95 °C) continuous	
Flammability	UL94 HB	



Product Selection								
Article No.	Part No.	Type	Min. Tensile Strength	Length	Max Bundle	Width	Color	Pkg. Qty
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-01264	111-01264	GL200	45 lbs (200)	8.0" (203)	2.0" (50)	.18" (4.7)	Black	100
111-01265	111-01265	GL250	56 lbs (250)	10.0" (252)	2.6" (65)	.19" (4.8)	Black	100
111-01266	111-01266	GL300	56 lbs (250)	12.01" (301)	3.1" (80)	.19" (4.8)	Black	100

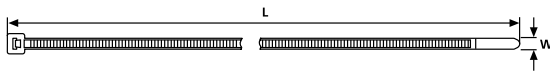
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P.

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

PA12 Ties

These inside serrated cable ties are manufactured from Polyamide 12 which provides excellent UV, chemical and moisture resistance, allowing a longer life span in outdoor use. Polyamide 12 material absorbs slightly less moisture than Polyamide 11, yet is equally resistant to metal oxides. The bent tail allows for quick and simple installation through the head of the tie. The tie strap has smooth edges which prevent bundle damage.

Material Data		RoHS
Material	Polyamide 12 (PA12)	
Operating Temperature	-40 °F to +203 °F (-40 °C to +95 °C) continuous	
Flammability	UL94 V2	



Product Selection								
Article No.	Part No.	Type	Min. Tensile Strength	Length	Max Bundle	Width	Color	Pkg. Qty
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
111-01560	111-01560	T50R	45 (200)	6.0" (150)	1.4" (35)	0.14" (3.6)	Black	100
111-01562	111-01562	T50L(US)	45 (200)	15.0" (390)	4.3" (110)	0.19" (4.8)	Black	100
111-01563	111-01563	T50XL(US)	45 (200)	18.0" (467)	5.3" (134)	0.19" (4.8)	Black	100

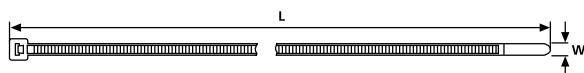
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P.

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T18 - T50 - Flame Retardant

HellermannTyton's flame retardant cable ties meet the UL 94V0 flammability requirements.

Material Data	
Material	Polyamide 6.6 V0 (PA66V0)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V0



File# E64139

File# E64139

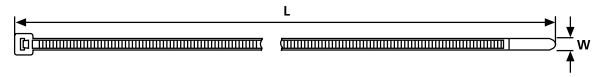
Product Selection			File# E64139 File# E64139									
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
T18R												
111-01834	T18R9VOC2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	White	100
111-01835	T18R9VOM4	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	White	1000
111-01833	T18R0VOC2	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Black	100
T18I												
111-02304	T18I9VOM4	T18I	18 lbs	(80)	5.5"	(144)	1.38"	(35)	.10"	(2.5)	White	1000
T18L												
111-02045	T18L9VOC2	T18L	18 lbs	(80)	7.95"	(202)	2.17"	(55)	.10"	(2.5)	White	100
111-02046	T18L9VOM4	T18L	18 lbs	(80)	7.95"	(202)	2.17"	(55)	.10"	(2.5)	White	1000
111-02044	T18L0VOC2	T18L	18 lbs	(80)	7.95"	(202)	2.17"	(55)	.10"	(2.5)	Black	100
T30R												
111-03073	T30R9VOC2	T30R	30 lbs	(135)	5.83"	(148)	1.38"	(35)	.14"	(3.6)	White	100
111-03074	T30R9VOM4	T30R	30 lbs	(135)	5.83"	(148)	1.38"	(35)	.14"	(3.6)	White	1000
111-03072	T30R0VOC2	T30R	30 lbs	(135)	5.83"	(148)	1.38"	(35)	.14"	(3.6)	Black	100
T50R												
111-04909	T50R9VOC2	T50R	50 lbs	(225)	7.95"	(202)	1.97"	(50)	.18"	(4.6)	White	100
111-04911	T50R9VOM4	T50R	50 lbs	(225)	7.95"	(202)	1.97"	(50)	.18"	(4.6)	White	1000
111-04887	T50R0VOC2	T50R	50 lbs	(225)	7.95"	(202)	1.97"	(50)	.18"	(4.6)	Black	100
111-04908	T50R0VOM4	T50R	50 lbs	(225)	7.95"	(202)	1.97"	(50)	.18"	(4.6)	Black	1000
T50I												
111-05254	T50I9VOC2	T50I	50 lbs	(225)	11.82"	(300)	3.35"	(85)	.18"	(4.6)	White	100
111-05255	T50I9VOM4	T50I	50 lbs	(225)	11.82"	(300)	3.35"	(85)	.18"	(4.6)	White	1000
111-05258	T50I0VOC2	T50I	50 lbs	(225)	11.82"	(300)	3.35"	(85)	.18"	(4.6)	Black	100
T50L												
111-05438	T50L9VOC2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.19"	(4.7)	White	100
111-05476	T50L9VOM4	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.19"	(4.7)	White	1000
111-05475	T50L0VOC2	T50L	50 lbs	(225)	15.35"	(390)	4.33"	(110)	.19"	(4.7)	Black	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T18 - T120 - Polypropylene

HellermannTyton's polypropylene cable ties offer added resistance to most chemicals.

Material Data	
Material	Polypropylene (PP)
Operating Temperature	-40 °F to +239 °F (-40 °C to +115 °C) continuous
Flammability	UL94 HB

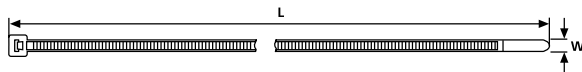


Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)			
Article No.	Part No.	Type										
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)	Color	Pkg. Qty.
T18R												
111-01921	T18R9PPC2	T18R	11 lbs	(49)	4"	(100)	.75"	(19)	.10"	(2.5)	Natural	100
111-01922	T18R9PPM4	T18R	11 lbs	(49)	4"	(100)	.75"	(19)	.10"	(2.5)	Natural	1000
111-01917	T18R0PPC2	T18R	11 lbs	(49)	4"	(100)	.75"	(19)	.10"	(2.5)	Black	100
111-01918	T18R0PPM4	T18R	11 lbs	(49)	4"	(100)	.75"	(19)	.10"	(2.5)	Black	1000
T30R												
111-03017	T30R9PPC2	T30R	20 lbs	(89)	5.83"	(148)	1.26"	(32)	.14"	(3.6)	Natural	100
T50R												
111-04931	T50R9PPC2	T50R	30 lbs	(133)	8.0"	(203.8)	1.75"	(44.5)	.19"	(4.7)	Natural	100
111-04928	T50R0PPC2	T50R	30 lbs	(133)	8.0"	(203.8)	1.75"	(44.5)	.19"	(4.7)	Black	100
111-04929	T50R0PPM4	T50R	30 lbs	(133)	8.0"	(203.8)	1.75"	(44.5)	.19"	(4.7)	Black	1000
T50I												
111-05262	T50I9PPM4	T50I	30 lbs	(133)	11.8"	(300)	3.35"	(85)	.18"	(4.6)	Natural	1000
T120R												
111-12067	T120R0PPK2	T120R	60 lbs	(267)	15.35"	(390)	4.13"	(105)	.30"	(7.6)	Black	50
111-12066	T120R0PPH4	T120R	60 lbs	(267)	15.35"	(390)	4.13"	(105)	.30"	(7.6)	Black	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

ETFE Cable Ties

ETFE ties provide excellent protection against radiation, ultraviolet light, and a wide range of chemicals. They are also rated for low outgassing applications. HellermannTyton's ETFE ties come in a standard color of blue for easy identification.



Material Data	
Material	Ethylentetrafluorethylene (ETFE)
Operating Temperature	-112 °F to +338°F (-80 °C to +170 °C) continuous
Flammability	UL94 V0



Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
111-00659	111-00659	T18R	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Blue	100
111-00698	111-00698	T30R	30 lbs	(133)	5.9"	(150)	1.42"	(36)	.14"	(3.5)	Blue	100
111-00732	111-00732	T50R	50 lbs	(222)	8"	(200)	1.97"	(50)	.18"	(4.6)	Blue	100
111-00718	111-00718	T50L	50 lbs	(222)	15"	(380)	4.13"	(105)	.18"	(4.6)	Blue	100
111-01125	111-01125	T120R	120 lbs	(535)	15"	(380)	4.13"	(105)	.30"	(7.6)	Blue	50

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P.

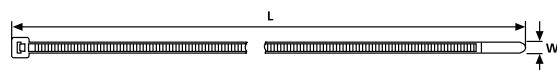
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Ties for Plenum Applications

HellermannTyton halar and U.L. Listed cable ties meet NEC regulations and can be used in applications where low smoke and low flame are a concern in air handling spaces.

Halar Cable Ties

The raw material used to manufacture HellermannTyton halar cable ties is UL 94V0 rated. The halar ties come in a distinct color of red for easy identification.



Material Data	
Material	PA66HL
Operating Temperature	-104 °F to +300 °F (-76 °C to +150 °C) continuous
Flammability	UL94 V0

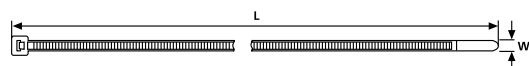


Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs. (N)	in.	(mm)	in.	(mm)	in.	(mm)		
111-01900	T18R2HALC2	T18R	14 lbs (80)	4"	(100)	.87"	(22)	.10"	(2.45)	Red	100
111-01902	T18R2HALM4	T18R	14 lbs (80)	4"	(100)	.87"	(22)	.10"	(2.45)	Red	1000
111-04895	T50R2HALC2	T50R	40 lbs (177.9)	8.0"	(203.2)	1.75"	(44.45)	.176"	(4.5)	Red	100
111-04897	T50R2HALM4	T50R	40 lbs (177.9)	8.0"	(203.2)	1.75"	(44.45)	.176"	(4.5)	Red	1000
111-01332	111-01332	T120R	80 lbs (355.9)	15.5"	(394.4)	4.0"	(101.6)	.31"	(7.8)	Red	50

Note: Halar ties are also available in natural color. Contact HellermannTyton for availability. Halar is a registered trademark of Solvay S.A. Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

UL Rated Cable Ties



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs. (N)	in.	(mm)	in.	(mm)	in.	(mm)		
111-00508	T18R9C2UL	T18R	18 lbs (80)	4"	(100)	.86"	(22)	.10"	(2.5)	Natural	100
111-00509	T18R9M4UL	T18R	18 lbs (80)	4"	(100)	.86"	(22)	.10"	(2.5)	Natural	1000
111-00510	T18R2C2UL	T18R	18 lbs (80)	4"	(100)	.86"	(22)	.10"	(2.5)	Red	100
111-00511	T18R2M4UL	T18R	18 lbs (80)	4"	(100)	.86"	(22)	.10"	(2.5)	Red	1000
111-00512	T50R9C2UL	T50R	50 lbs (225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Natural	100
111-00513	T50R9M4UL	T50R	50 lbs (225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Natural	1000
111-00514	T50R2C2UL	T50R	50 lbs (225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Red	100
111-00515	T50R2M4UL	T50R	50 lbs (225)	7.9"	(200)	1.97"	(50)	.18"	(4.6)	Red	1000
111-00516	T50I9C2UL	T50I	50 lbs (225)	11.8"	(300)	3.35"	(85)	.18"	(4.6)	Natural	100
111-00517	T50I9M4UL	T50I	50 lbs (225)	11.8"	(300)	3.35"	(85)	.18"	(4.6)	Natural	1000
111-00518	T50I2C2UL	T50I	50 lbs (225)	11.8"	(300)	3.35"	(85)	.18"	(4.6)	Red	100
111-00519	T50I2M4UL	T50I	50 lbs (225)	11.8"	(300)	3.35"	(85)	.18"	(4.6)	Red	1000
111-00520	T50L9C2UL	T50L	50 lbs (225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Natural	100
111-00521	T50L9M4UL	T50L	50 lbs (225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Natural	1000
111-00522	T50L2C2UL	T50L	50 lbs (225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Red	100
111-00523	T50L2M4UL	T50L	50 lbs (225)	15.35"	(390)	4.33"	(110)	.18"	(4.6)	Red	1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.



Metal Content Tie

HellermannTyton's Metal Content Tie is designed for the food and beverage processing industries to meet the safety standards set by Hazard Analysis and Critical Control Points (HACCP) to minimize the risk of contamination. The Metal Content Tie is a nylon based tie with metal content dispersed throughout the head and strap, allowing the tie to be easily identifiable by metal detectors and X-ray inspections. It is ideally suited for the management of cables and tubing in processing and packaging areas. The plastic tie can be found by metal detectors and identified in food and other products that have accidentally been contaminated either through human error or loose, cut-off sections.

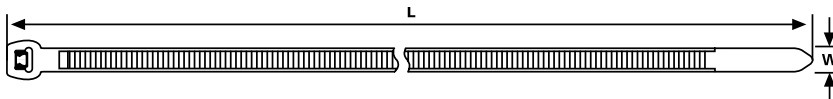
Product Features

- Metal content dispersed throughout the head and strap ensures identification by metal detectors and X-ray machines.
- Industry standard blue color assists with visual detection and greatly reduces the risk of contamination.
- Three different sizes and two tensile strengths.



Material Data

Material	Polyamide 6.6 with metal particles (PA66MP)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous



Product Selection		Type	Min. Tensile Strength		Length (L)		Width (W)		Color	Pkg. Qty.
Article No.	Part No.		lbs.	(N)	in.	(mm)	in.	(mm)		
111-00829	111-00829	MCT30R	30 lbs.	(135)	5.91"	(150)	.14"	(3.5)	Blue	100
111-00830	111-00830	MCT50R	50 lbs.	(225)	7.87"	(200)	.18"	(4.6)	Blue	100
111-00831	111-00831	MCT50L	50 lbs.	(225)	15.35"	(390)	.18"	(4.6)	Blue	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Stainless Steel Cable 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.

MK9SST Stainless Steel Cable Tie Installation Tool

Product Selection			Description	Cable Tie Series	Pkg. Qty.
Article No.	Part No.	Type			
110-95000	MK9SST	MK9SST	Adapted for use with stainless steel ties, the MK9 Stainless Steel tool 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

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.

- Self locking, ball bearing mechanism for quick and easy installation, either by hand or by tensioning tool
- Fully enclosed head does not allow dirt or grit to interfere with locking mechanism
- High tensile strength option for added strength and safety on heavy duty applications



HellermannTyton's MK9SST tool is durable and lightweight, offering superior stainless steel cable tie installation.

Material Data		RoHS
Material	Stainless Steel Type SS304 (SS304)	
Operating Temperature	-112 °F to +1000 °F (-80 °C to +538 °C)	

Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Pkg. Qty.
Article No.	Part No.	Type					
200 lb. Stainless Steel Ties			lbs. (N)	in. (mm)	in. (mm)	in. (mm)	
111-93058	MBT5S-S	MBT5SS	200 lbs (900)	5.0" (127)	1" (25)	.18" (4.6)	100
111-93088	MBT8S-S	MBT8SS	200 lbs (900)	7.9" (201)	2" (50)	.18" (4.6)	100
111-93148	MBT14S-S	MBT14SS	200 lbs (900)	14.3" (362)	4" (102)	.18" (4.6)	100
111-93208	MBT20S-S	MBT20SS	200 lbs (900)	20.5" (521)	6" (152)	.18" (4.6)	100
111-93278	MBT27S-S	MBT27SS	200 lbs (900)	26.8" (681)	8" (203)	.18" (4.6)	100
111-93338	MBT33S-S	MBT33SS	200 lbs (900)	33" (838)	10" (254)	.18" (4.6)	100
450 lb. Stainless Steel Ties							
111-94088	MBT8H-S	MBT8HS	450 lbs (2000)	7.9" (201)	2" (50)	.31" (7.9)	50
111-94148	MBT14H-S	MBT14HS	450 lbs (2000)	14.3" (362)	4" (102)	.31" (7.9)	50
111-94208	MBT20H-S	MBT20HS	450 lbs (2000)	20.5" (521)	6" (152)	.31" (7.9)	50
111-94278	MBT27H-S	MBT27HS	450 lbs (2000)	26.8" (681)	8" (203)	.31" (7.9)	50
111-94338	MBT33H-S	MBT33HS	450 lbs (2000)	33" (838)	10" (254)	.31" (7.9)	50

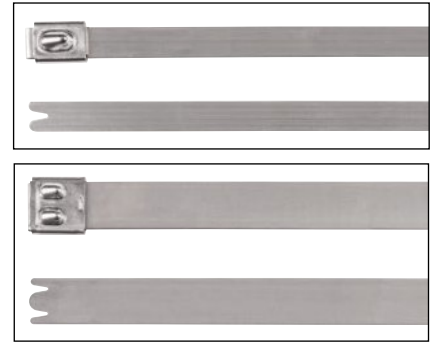
Installation tools for the above cable ties - MK9SST. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. Stainless steel ties and materials should be tested thoroughly under end use conditions to determine suitability for the application.

Stainless Steel Cable Ties *continued*

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

- Self locking, ball bearing mechanism for quick and easy installation, either by hand or by tensioning tool
- Fully enclosed head does not allow dirt or grit to interfere with locking mechanism
- High tensile strength option available for added strength and safety on heavy duty applications



Stainless Steel Cable Ties

Material Data

Material	Stainless Steel Type SS316 (SS316)
Operating Temperature	-112 °F to +1000 °F (-80 °C to +538 °C)



Product Selection

Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)		Pkg. Qty.
Article No.	Part No.	Type				lbs. (N)	in. (mm)	
200 lb. Stainless Steel Ties								
111-93059	MBT5S	MBT5S	200 lbs (900)	5.0" (127)	1.0" (25.4)	.18" (4.6)		100
111-93089	MBT8S	MBT8S	200 lbs (900)	7.9" (201)	2.0" (50)	.18" (4.6)		100
111-93149	MBT14S	MBT14S	200 lbs (900)	14.3" (362)	4.0" (102)	.18" (4.6)		100
111-93209	MBT20S	MBT20S	200 lbs (900)	20.5" (521)	6.0" (152)	.18" (4.6)		100
111-93279	MBT27S	MBT27S	200 lbs (900)	26.8" (681)	8.0" (203)	.18" (4.6)		100
111-93339	MBT33S	MBT33S	200 lbs (900)	33.0" (838)	10.0" (254)	.18" (4.6)		100
450 lb. Stainless Steel Ties								
111-94089	MBT8H	MBT8H	450 lbs (2000)	7.9" (201)	2.0" (50.8)	.31" (7.9)		50
111-94149	MBT14H	MBT14H	450 lbs (2000)	14.3" (362)	4.0" (102)	.31" (7.9)		50
111-94209	MBT20H	MBT20H	450 lbs (2000)	20.5" (521)	6.0" (152)	.31" (7.9)		50
111-94279	MBT27H	MBT27H	450 lbs (2000)	26.8" (681)	8.0" (203)	.31" (7.9)		50
111-94339	MBT33H	MBT33H	450 lbs (2000)	33.0" (838)	10.0" (254)	.31" (7.9)		50
607 lb. Stainless Steel Ties								
111-95148	MBT14XHS	MBT14XHS	607 lbs (2700)	14.3" (362)	4.0" (102)	.5" (12.3)		50
111-95208	MBT20XHS	MBT20XHS	607 lbs (2700)	20.5" (521)	6.0" (152)	.5" (12.3)		50
111-95278	MBT27XHS	MBT27XHS	607 lbs (2700)	26.8" (681)	8.0" (203)	.5" (12.3)		50
111-95338	MBT33XHS	MBT33XHS	607 lbs (2700)	33.0" (838)	10.0" (254)	.5" (12.3)		50
111-95149	MBT14XH	MBT14XH	607 lbs (2700)	14.3" (362)	4.0" (102)	.5" (12.3)		50
111-95209	MBT20XH	MBT20XH	607 lbs (2700)	20.5" (521)	6.0" (152)	.5" (12.3)		50
111-95279	MBT27XH	MBT27XH	607 lbs (2700)	26.8" (681)	8.0" (203)	.5" (12.3)		50
111-95339	MBT33XH	MBT33XH	607 lbs (2700)	33.0" (838)	10.0" (254)	.5" (12.3)		50
922 lb. Stainless Steel Ties								
111-01301	MBT14UH	MBT14UH	922 lbs (4100)	14.3" (362)	4.0" (102)	.6" (16.0)		50
111-01302	MBT20UH	MBT20UH	922 lbs (4100)	20.5" (521)	6.0" (152)	.6" (16.0)		50
111-01303	MBT27UH	MBT27UH	922 lbs (4100)	26.8" (681)	8.0" (203)	.6" (16.0)		50
111-01304	MBT33UH	MBT33UH	922 lbs (4100)	33.0" (838)	10.0" (254)	.6" (16.0)		50
111-01305	MBT43UH	MBT43UH	922 lbs (4100)	43.0" (1092)	13.0" (330)	.6" (16.0)		25
111-01306	MBT49UH	MBT49UH	922 lbs (4100)	49.0" (1245)	15.0" (380)	.6" (16.0)		25

Installation tools for the above cable ties - MK9SST. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. Stainless steel ties and materials should be tested thoroughly under end use conditions to determine suitability for the application.

Outside Serrated Cable Ties

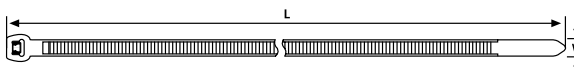
The outside serrated cable ties are for specific applications where thin walled or soft insulation is used (such as in aircraft, trains, etc.), and for applications that are very sensitive to the amount of force applied to the cable.



Outside serrated cable ties are also available in natural. Contact HellermannTyton for more information.

Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Product Selection

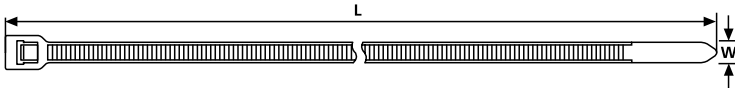
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
118-04700	118-04700	T18ROS	18 lbs	(80)	3.94"	(100)	.79"	(20)	.10"	(2.5)	Black	100
118-04800	118-04800	T30ROS	30 lbs	(135)	5.71"	(145)	1.34"	(35)	.13"	(3.4)	Black	100
118-04900	118-04900	T30LOS	30 lbs	(135)	7.87"	(200)	2.0"	(50)	.13"	(3.4)	Black	100
118-00110	118-00110	T50SOS	50 lbs	(225)	6.0"	(150)	1.36"	(35)	.18"	(4.6)	Black	1000
118-00111	118-00111	T50ROS	50 lbs	(225)	8"	(200)	1.95"	(50)	.18"	(4.6)	Black	1000
118-05900	118-05900	T50LOS	50 lbs	(225)	15"	(384)	4.29"	(110)	.18"	(4.6)	Black	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

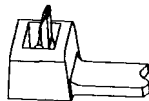
Releasable Ties

The extended pawl allows for simple and quick release of the ties. Perfect for prototype construction and service requiring the addition of wires on existing harnesses.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



RT40R



RT50S and RT50LL



File# E64139

Product Selection												
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs. (N)		in. (mm)		in. (mm)		in. (mm)			
RT40R												
115-06219	RT40R9C2	RT40R	40 lbs	(178)	8.46"	(215)	2.0"	(51)	.16"	(4.0)	Natural	100
115-06204	RT40R9M4	RT40R	40 lbs	(178)	8.46"	(215)	2.0"	(51)	.16"	(4.0)		1000
115-06200	RT40R0C2	RT40R	40 lbs	(178)	8.46"	(215)	2.0"	(51)	.16"	(4.0)	Black	100
115-06202	RT40R0M4	RT40R	40 lbs	(178)	8.46"	(215)	2.0"	(51)	.16"	(4.0)		1000
RT50S												
115-06319	RT50S9C2	RT50S	50 lbs	(225)	6.5"	(165)	1.38"	(35)	.18"	(4.6)	Natural	100
115-06304	RT50S9M4	RT50S	50 lbs	(225)	6.5"	(165)	1.38"	(35)	.18"	(4.6)		1000
115-06300	RT50S0C2	RT50S	50 lbs	(225)	6.5"	(165)	1.38"	(35)	.18"	(4.6)	Black	100
115-00035	RT50S0M4	RT50S	50 lbs	(225)	6.5"	(165)	1.38"	(35)	.18"	(4.6)		1000
RT50LL												
115-06102	RT50LL9C2	RT50LL	50 lbs	(225)	15"	(380)	3.98"	(101)	.18"	(4.6)	Natural	100
115-06104	RT50LL9M4	RT50LL	50 lbs	(225)	15"	(380)	3.98"	(101)	.18"	(4.6)		1000
115-00039	RT50LL0C2	RT50LL	50 lbs	(225)	15"	(380)	3.98"	(101)	.18"	(4.6)	Black	100
115-06101	RT50LL0M4	RT50LL	50 lbs	(225)	15"	(380)	3.98"	(101)	.18"	(4.6)		1000

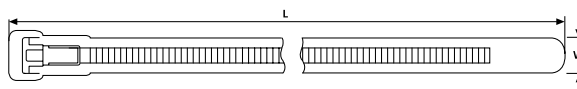
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

REL Releasable Ties

for use in applications where there is the need to repeatedly open and close the tie.



Material Data		RoHS
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2	

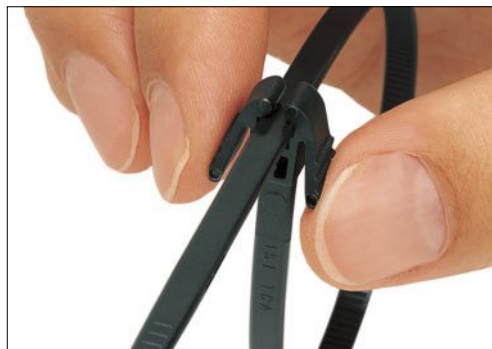


Product Selection												
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
REL50R												
115-00503	REL50R9C2	REL50R	50 lbs	(225)	5.5"	(140)	1.38"	(35)	.29"	(7.4)	Natural	100
115-00505	REL50R9L4	REL50R	50 lbs	(225)	5.5"	(140)	1.38"	(35)	.29"	(7.4)		200
115-00500	REL50R0C2	REL50R	50 lbs	(225)	5.5"	(140)	1.38"	(35)	.29"	(7.4)	Black	100
115-00502	REL50R0L4	REL50R	50 lbs	(225)	5.5"	(140)	1.38"	(35)	.29"	(7.4)		200
REL50L												
115-00605	REL50L9C2	REL50L	50 lbs	(225)	9.84"	(250)	2.76"	(70)	.29"	(7.4)	Natural	100
115-00607	REL50L9L4	REL50L	50 lbs	(225)	9.84"	(250)	2.76"	(70)	.29"	(7.4)		200
115-00600	REL50L0C2	REL50L	50 lbs	(225)	9.84"	(250)	2.76"	(70)	.29"	(7.4)	Black	100
115-00602	REL50L0L4	REL50L	50 lbs	(225)	9.84"	(250)	2.76"	(70)	.29"	(7.4)		200

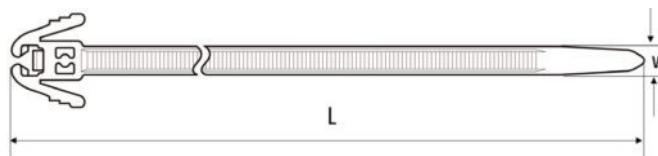
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Pinch Releasable Ties

Patented pinch release mechanism for easy handling allows tie to be released using one hand.



Material Data		RoHS
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2	



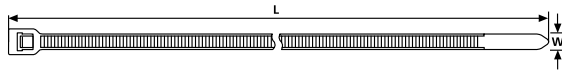
Product Selection									
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Color
			lbs.	(N)	in.	(mm)	in.	(mm)	
115-40200	REZ200.NB3P	REZ200	30 lbs	(135)	7.88"	(200)	1.97"	(50)	Black
115-40300	REZ300.NB3P	REZ300	30 lbs	(135)	12.00"	(305)	3.15"	(80)	Black

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Heavy Duty Releasable Cable Ties

The RT150 and RT250 heavy duty releasable cable ties feature an extended pawl which allows for simple and quick release of the ties.

RT150 Heavy Duty Releasable Cable Ties



Material Data

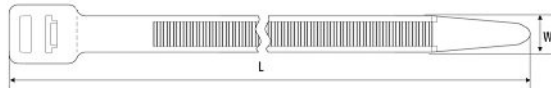
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
115-00036	RT150REP0X2	RT150REP	175 lbs	(780)	15.35"	(390)	4"	(105)	.346"	(8.8)	Black	25
115-00037	RT150MEP0X2	RT150MEP	175 lbs	(780)	21.06"	(535)	5.90"	(150)	.346"	(8.8)	Black	25
115-00038	RT150LEP0X2	RT150LEP	175 lbs	(780)	32.28"	(820)	9.65"	(245)	.346"	(8.8)	Black	25

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

RT250 Heavy Duty Releasable Cable Ties



Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



File# E64139

Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)			
Article No.	Part No.	Type										
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)	Color	Pkg. Qty.
RT250S												
131-75819	RT250S9X2	RT250S	250 lbs	(1115)	9.05"	(230)	2.17"	(55)	.49"	(12.5)	Natural	25
115-41800	RT250S0X2	RT250S	250 lbs	(1115)	9.05"	(230)	2.17"	(55)	.49"	(12.5)	Black	25
RT250R												
131-75019	RT250R9X2	RT250R	250 lbs	(1115)	20.47"	(520)	5.71"	(145)	.49"	(12.5)	Natural	25
115-41300	RT250R0X2	RT250R	250 lbs	(1115)	20.47"	(520)	5.71"	(145)	.49"	(12.5)	Black	25
RT250M												
131-75619	RT250M9X2	RT250M	250 lbs	(1115)	22.24"	(565)	5.90"	(150)	.49"	(12.5)	Natural	25
131-75610	RT250M0X2	RT250M	250 lbs	(1115)	22.24"	(565)	5.90"	(150)	.49"	(12.5)	Black	25
RT250I												
131-75219	RT250I9X2	RT250I	250 lbs	(1115)	28.54"	(725)	8.00"	(203)	.49"	(12.5)	Natural	25
115-41401	RT250I0X2	RT250I	250 lbs	(1115)	28.54"	(725)	8.00"	(203)	.49"	(12.5)	Black	25
RT250L												
131-75419	RT250L9X2	RT250L	250 lbs	(1115)	34.65"	(880)	10.00"	(254)	.49"	(12.5)	Natural	25
115-41500	RT250L0X2	RT250L	250 lbs	(1115)	34.65"	(880)	10.00"	(254)	.49"	(12.5)	Black	25
RT250XL												
131-75519	RT250XL9X2	RT250XL	250 lbs	(1115)	40"	(1016.0)	12"	(304.8)	.49"	(12.5)	Natural	25
131-75510	RT250XL0X2	RT250XL	250 lbs	(1115)	40"	(1016.0)	12"	(304.8)	.49"	(12.5)	Black	25

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Speedy Tie

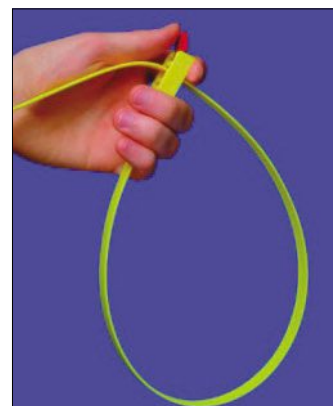
An entirely new design in cable management, the Speedy Tie is a fully re-usable, easily releasable lashing tie. The Speedy Tie's unique design allows it to be released with one hand.

- Just one click to tie and untie
- Fully re-usable
- Once applied, the tail can be neatly tucked away for added safety
- Highly visible yellow color — also available in black, impact modified material
- Versatile design allows use for multiple applications

The Speedy Tie is a versatile tool for countless applications, including:

- In plant transfer of products
- Temporary and secure bundling
- Packaging

Material Data	
Material	Polyamide 6.6 (PA66)
Color	Yellow , Red
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Speedy Tie - Quick and easy.

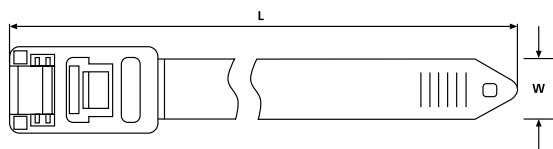
Packaging Configurations

Distributor Packs

- Printed bag with a hang hole
- 60 SpeedyTies - 12 bags of 5

OEM Packs

- Plain bag (no hang hole)
- Standard box
- 300 SpeedyTies - 12 bags of 25

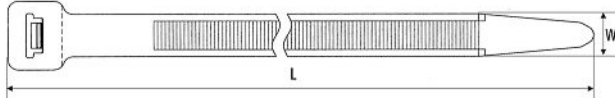


Product Selection			Description	Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Pkg. Qty.	Carton Qty.
Article No.	Part No.	Type		lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
115-00001	RTT750HR.NX900	RTT750HR	Distributor Pack - order in carton qty. only	200 lbs (888)	29.52" (750)	8.27" (210)	.51" (13)	5	60
115-00000	RTT750HR.NX1P	RTT750HR	OEM Pack - order in carton qty. only	200 lbs (888)	29.52" (750)	8.27" (210)	.51" (13)	25	300

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

RT255 Heavy Duty Releasable Ties

Material Data	
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



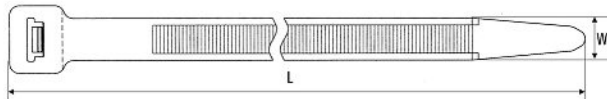
Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
115-01200	RT255S0HIRX2	RT255S	250 lbs	(1112)	8.86"	(225)	2.16"	(55)	.49"	(12.5)	Black	25
115-01300	RT255R0HIRX2	RT255R	250 lbs	(1112)	20.28"	(515)	5.71"	(145)	.49"	(12.5)	Black	25
115-01400	RT255M0HIRX2	RT255M	250 lbs	(1112)	22.05"	(560)	6.30"	(160)	.49"	(12.5)	Black	25

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

SR255 Heavy Duty Sub-Releasable Ties

The SR255 series releasable heavy duty cable tie offers a release that is lower than the head of the cable tie, facilitating easy installation with the use of a HellermannTyton cable tie tool.

Material Data	
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB

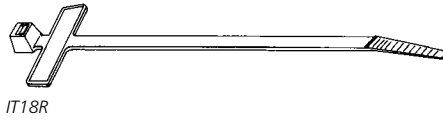


Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
115-42002	SR255S0HIHSUVX2	SR255S	250 lbs	(1112)	8.86"	(225)	2.16"	(50)	.49"	(12.5)	Black	25
115-42101	SR255X0HIHSUVX2	SR255X	250 lbs	(1112)	14"	(372)	3.94"	(100)	.49"	(12.5)	Black	25

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Identification Ties

Tie and identify bundles of cable in one operation. Large flat area for imprinting or writing the required information. Hot stamping available, which is subject to minimums and lead times.



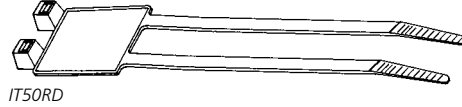
IT18R



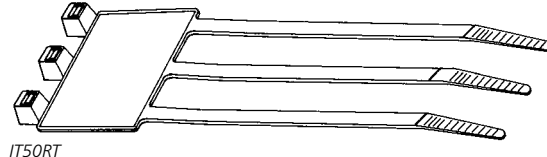
IT18FL



IT50R



IT50RD



IT50RT



IT50L

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



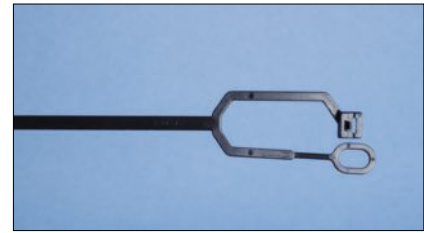
File# E64139

Product Selection													
Article No.	Part No.	Type	US Gov. Designation	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
				lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
IT18R	Marking Pad Size: .98" x .32" (25 x 8)												
111-81819	IT18R9C2	IT18R	MS3368-5-9E	18 lbs	(80)	3.94"	(100)	.75"	(22.0)	.09"	(2.3)	Natural	100
111-81808	IT18R9L4	IT18R	MS3368-5-9E	18 lbs	(80)	3.94"	(100)	.75"	(22.0)	.09"	(2.3)	Natural	200
111-81801	IT18R0C2	IT18R	*	18 lbs	(80)	3.94"	(100)	.75"	(22.0)	.09"	(2.3)	Black	100
111-81803	IT18R0L4	IT18R	*	18 lbs	(80)	3.94"	(100)	.75"	(22.0)	.09"	(2.3)	Black	200
IT18FL	Marking Pad Size: .81" x .35" (20.5 x 9)												
111-81919	IT18FL9C2	IT18FL	—	18 lbs	(80)	4.33"	(110)	.75"	(19.0)	.10"	(2.5)	Natural	100
111-81907	IT18FL9L4	IT18FL	—	18 lbs	(80)	4.33"	(110)	.75"	(19.0)	.10"	(2.5)	Natural	200
111-81910	IT18FL0C2	IT18FL	—	18 lbs	(80)	4.33"	(110)	.75"	(19.0)	.10"	(2.5)	Black	100
111-81903	IT18FL0L4	IT18FL	—	18 lbs	(80)	4.33"	(110)	.75"	(19.0)	.10"	(2.5)	Black	200
IT50R	Marking Pad Size: 1.10" x .51" (28 x 12.9)												
111-85019	IT50R9C2	IT50R	MS3368-1-9A	50 lbs	(225)	7.99"	(203)	1.75"	(44.5)	.18"	(4.6)	Natural	100
111-85020	IT50R9M4	IT50R	MS3368-1-9A	50 lbs	(225)	7.99"	(203)	1.75"	(44.5)	.18"	(4.6)	Natural	1000
111-85011	IT50R0C2	IT50R	*	50 lbs	(225)	7.99"	(203)	1.75"	(44.5)	.18"	(4.6)	Black	100
111-85013	IT50R0M4	IT50R	*	50 lbs	(225)	7.99"	(203)	1.75"	(44.5)	.18"	(4.6)	Black	1000
IT50RD	Marking Pad Size: 1.14" x 1.04" (29 x 26.3)												
111-85219	IT50RD9K2	IT50RD	MS3368-3-9C	50 lbs	(225)	8.07"	(205)	1.73"	(44.0)	.19"	(4.7)	Natural	50
111-85201	IT50RD0K2	IT50RD	*	50 lbs	(225)	8.07"	(205)	1.73"	(44.0)	.19"	(4.7)	Black	50
IT50RT	Marking Pad Size: 1.81" x 1.04" (46 x 26.3)												
111-85119	IT50RT9K2	IT50RT	MS3368-4-9D	50 lbs	(225)	8.07"	(205)	1.73"	(44.0)	.19"	(4.7)	Natural	50
111-85100	IT50RT0K2	IT50RT	*	50 lbs	(225)	8.07"	(205)	1.73"	(44.0)	.19"	(4.7)	Black	50
IT50L	Marking Pad Size: .5" x 2.20" (12.8 x 56)												
111-85319	IT50L9C2	IT50L	MS3368-2-9A	50 lbs	(225)	15.35"	(390)	3.94"	(100)	.19"	(4.7)	Natural	100
111-85306	IT50L9M4	IT50L	MS3368-2-9A	50 lbs	(225)	15.35"	(390)	3.94"	(100)	.19"	(4.7)	Natural	1000

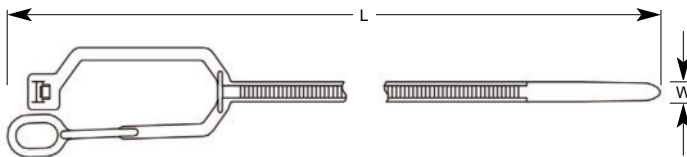
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. * Military black available. Contact HellermannTyton for more information.

Branch Cable Tie

The branch tie is ideal for wire harness applications where wires "branch" away from the main assembly. The branch tie reduces wire harness assembly time by eliminating the need to use electrical tape. After the tie is placed on the main assembly, the strap is inserted through the oval opening and then through the cable tie head. Once applied, the branch tie holds the branch in its proper position on the wire harness.



Material Data		RoHS
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2	



Product Selection														
Article No.	Part No.	Type	Main Bundle Ø		Branch Bundle Ø		Min. Tensile Strength		Length (L)		Width (W)		Color	Pkg. Qty.
			in.	(mm)	in.	(mm)	lbs.	(N)	in.	(mm)	in.	(mm)		
115-00042	115-00042	YT200	.63" – 1.57"	(16 - 40)	.59" – 1.18"	(15 - 30)	33 lbs	(147)	7.87"	(200)	.18"	(4.7)	Black	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Kabelrap Bundling System

The patented Kabelrap bundling system offers a very high bundling strength and is particularly resistant to saltwater, oils, greases, and hydraulic fluids. Special hand tool required for installation.

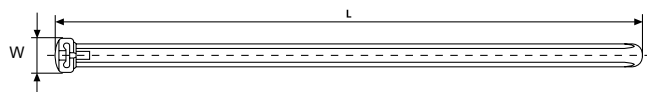


Required Tool - 121-00680



Kabelrap Application

Material Data		RoHS
Material	Polyamide 6.6 UV-resistant (PA66UV)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2	



Product Selection												
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
121-63560	121-63560	KR6/35	110 lbs	(490)	14"	(356)	3.75"	(93)	.25"	(6)	Black	50
121-82160	121-82160	KR8/21	175 lbs	(785)	8.25"	(210)	1.75"	(47)	.31"	(8)	Black	50
121-83360	121-83360	KR8/33	175 lbs	(785)	13.25"	(337)	3.37"	(86)	.31"	(8)	Black	50

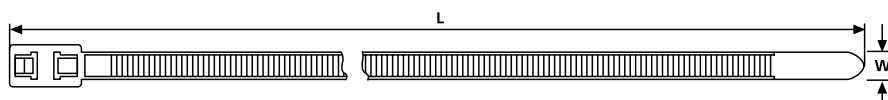
Required Installation Tool - 121-00680. Black is the standard color. Natural is available based upon minimums, custom terms and lead times. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Double Head Ties

Double head ties create two loops that separate two bundles. They also can be used to secure a bundle to an existing fixing point.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Flammability	UL94 V2

RoHS



UL
us
File# E64139

File# E64139

Product Selection			Min. Tensile Strength		Length (L)		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	lbs.	(N)	in.	(mm)	in.	(mm)		
T50SDH										
117-00016	117-00016	T50SDH	50 lbs	(225)	6.26"	(159)	.19"	(4.7)	Natural	100
117-00017	117-00017	T50SDH	50 lbs	(225)	6.26"	(159)	.19"	(4.7)		1000
117-00018	117-00018	T50SDH	50 lbs	(225)	6.26"	(159)	.19"	(4.7)	Black	100
117-00019	117-00019	T50SDH	50 lbs	(225)	6.26"	(159)	.19"	(4.7)		1000
T50RDH										
117-05006	T50RDH9C2	T50RDH	50 lbs	(225)	8.25"	(210)	.19"	(4.7)	Natural	100
117-05008	T50RDH9M4	T50RDH	50 lbs	(225)	8.25"	(210)	.19"	(4.7)		1000
117-05004	T50RDH0C2	T50RDH	50 lbs	(225)	8.25"	(210)	.19"	(4.7)	Black	100
117-05005	T50RDH0M4	T50RDH	50 lbs	(225)	8.25"	(210)	.19"	(4.7)		1000
T50IDH										
117-05302	T50IDH9C2	T50IDH	50 lbs	(225)	12"	(305)	.19"	(4.7)	Natural	100
117-05303	T50IDH9M4	T50IDH	50 lbs	(225)	12"	(305)	.19"	(4.7)		1000
117-05362	T50IDH0C2	T50IDH	50 lbs	(225)	12"	(305)	.19"	(4.7)	Black	100
117-05300	T50IDH0M4	T50IDH	50 lbs	(225)	12"	(305)	.19"	(4.7)		1000
T50LDH										
117-05402	T50LDH9C2	T50LDH	50 lbs	(225)	15.5"	(395)	.19"	(4.7)	Natural	100
117-05461	T50LDH9M4	T50LDH	50 lbs	(225)	15.5"	(395)	.19"	(4.7)		1000
117-05400	T50LDH0C2	T50LDH	50 lbs	(225)	15.5"	(395)	.19"	(4.7)	Black	100
117-05401	T50LDH0M4	T50LDH	50 lbs	(225)	15.5"	(395)	.19"	(4.7)		1000
T120RDH										
117-05501	T120RDH0K2	T120RDH	120 lbs	(535)	15.7"	(398)	.29"	(7.6)	Black	50
117-05500	T120RDH0H4	T120RDH	120 lbs	(535)	15.7"	(398)	.29"	(7.6)		500

Maximum bundle diameter is variable due to double loops. Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Clamp Ties

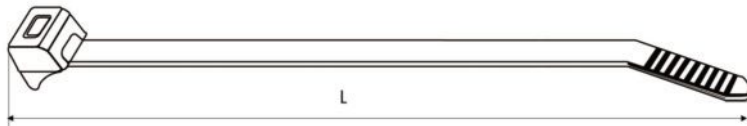
The clamp tie has triangular shaped tabs extending beneath the head, allowing for optimal surface contact and complete circumferential compression to 360 degrees. The clamps are recommended for soft rubber hose applications including fuel, water, and air vacuum lines.



Material Data	
Color	Natural
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Material Data	
Color	Black
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



File# E64139

File# E64139

Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type						
CTT20R								
112-51919	CTT20R9C2	CTT20R	20 lbs (90)	4" (100)	.50" (13)	.10" (2.5)	Natural	100
112-51904	CTT20R9M4	CTT20R	20 lbs (90)	4" (100)	.50" (13)	.10" (2.5)		1000
112-51905	CTT20R0HSC2	CTT20R	20 lbs (90)	4" (100)	.50" (13)	.10" (2.5)	Black	100
112-51960	CTT20R0HSM4	CTT20R	20 lbs (90)	4" (100)	.50" (13)	.10" (2.5)		1000
CTT60R								
112-52104	CTT60R9C2	CTT60R	60 lbs (265)	8" (205)	1.77" (45)	.19" (4.7)	Natural	100
112-52106	CTT60R9M4	CTT60R	60 lbs (265)	8" (205)	1.77" (45)	.19" (4.7)		1000
112-52112	CTT60R0HSC2	CTT60R	60 lbs (265)	8" (205)	1.77" (45)	.19" (4.7)	Black	100
112-52114	CTT60R0HSM4	CTT60R	60 lbs (265)	8" (205)	1.77" (45)	.19" (4.7)		1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Dual Clamp Ties

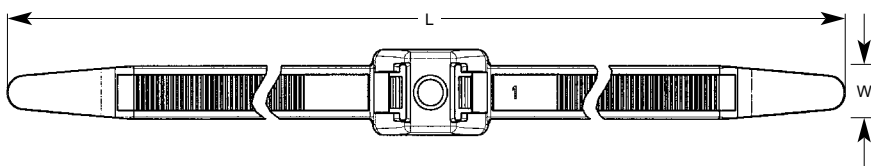
HellermannTyton's dual clamp ties are designed to provide parallel separation between hoses, wires, cables and tubing, protecting them from abrasion. These ties have an optional mounting hole for securing bundles along the chassis of trucks, trailers, and heavy duty equipment. The unique, one-piece design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

Available in two lengths, the dual clamp ties accommodate bundles ranging from .25 inches to 2.3 inches. The flexible wide straps minimize pinching of hoses and convoluted tubing. The straps are also releasable.



U.S. Patent Number 5,966,781

Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	



Product Selection			Stud Ø	Min. Tensile Strength	Length (L)	Max. Ø Bundle (each side)	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type							
115-30900	DCT90HIRK2	DCT9	.25 " (6.35)	150 lbs (670)	13.0" (331)	1.3" (33.02)	.50" (12.7)	Black	50
115-00034	DCT90HIRC2	DCT9	.25 " (6.35)	150 lbs (670)	13.0" (331)	1.3" (33.02)	.50" (12.7)	Black	100
115-31100	DCT110HIRK2	DCT11	.25 " (6.35)	150 lbs (670)	19.2" (489)	2.3" (58.42)	.50" (12.7)	Black	50
115-00033	DCT110HIRC2	DCT11	.25 " (6.35)	150 lbs (670)	19.2" (489)	2.3" (58.42)	.50" (12.7)	Black	100

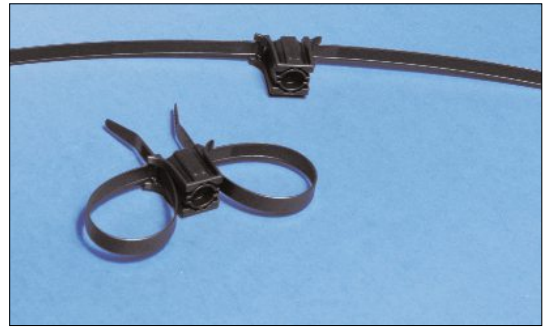
Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Standoff Mounting Dual Clamp Ties

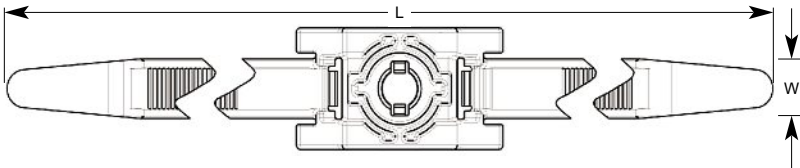
HellermannTyton's standoff dual clamp tie offers the same features as the standard dual clamp tie with a standoff mount that secures the bundle away from the side of the frame rail, protecting the bundles from bolts and other protrusions.

Features

- Wide strap minimizes pinching of soft hoses & convoluted tubing
- Clamping rails increase circumferential grip on varying bundle diameters
- Locking stud mount pawls allow for easy hand insertion
- Nut or weld nesting counterbore provides flush mounting at the base
- Socket counterbore for fastening a nut provides added retention



Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	



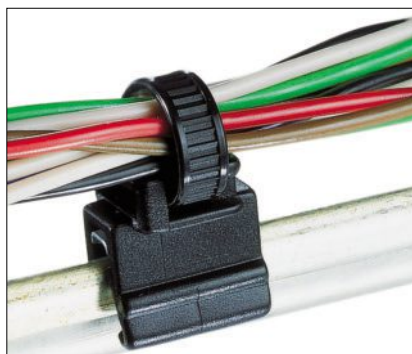
Product Selection			Stud Ø	Min. Tensile Strength	Length (L)	Max. Ø Bundle (each side)	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type							
117-00012	117-00012	SDCTR312	.31" (7.94)	100 lbs (445)	20.1" (511)	2.3" (58.42)	.50" (12.7)	Black	150
157-00060	157-00060	SDCTL312	.31" (7.94)	100 lbs (445)	26.1" (663)	3.4" (86.36)	.50" (12.7)	Black	150

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Ties and Edge Clips

HellermannTyton's edge clips are designed specifically to route bundles by securing them to the edge of a plastic or metal sheet without the need for a mounting hole. The clip is easy to secure and the extraction force is high due to the integrated metal clamp that holds the edge clip in place. Edge clips are available in three configurations: a two piece clip and tie assembly, a one piece clip and tie combination, and a edge clip and tape bar combination. When noted (*), cable ties are outside serrated which can reduce bundle chafing.

Two Pieces Edge Clip and Cable Tie Assemblies



T50ROSEC4A - the cable bundle runs parallel with the edge.

Material Data- Cable Tie

Material	Polyamide 6.6 heat stabilized (PA66HS)
Color	Black
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

RoHS

Material Data - Edge Clip

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color	Black
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB

RoHS

Product Selection

Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Pkg.	
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	Qty.	Drawing
Panel Thickness, — .039" .117" (1-3mm)							
150-76090	150-76090	T30REC4A	30 lbs (135)	5.9 " (150)	1.3" (33)	500	
156-00858	156-00858	T50SOSEC4A	50 lbs (225)	5.9" (150)	1.2" (31)	500	
156-00539	156-00539	T50REC4A	50 lbs (225)	8" (202)	1.8" (45)	500	
156-00860	156-00860	T50ROSEC4A	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-00856	156-00856	T30REC4B	50 lbs (135)	5.9" (150)	1.3" (33)	500	
156-00859	156-00859	T50SOSEC4B	50 lbs (225)	6.5" (165)	1.2" (31)	500	
156-00861	156-00861	T50ROSEC4B	50 lbs (225)	8" (202)	1.8" (45)	500	
156-00538	156-00538	T50REC4B	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-00865	156-00865	T50SOSEC5A	50 lbs (225)	5.9" (150)	1.2" (31)	500	
156-00864	156-00864	T50ROSEC5A	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-01007	156-01007	T50RDHEC5A	50 lbs (225)	8.3" (210)	1.8" (45)	500	
156-00541	156-00541	T50REC5A	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-00863	156-00863	T50SOSEC5B	50 lbs (225)	5.9" (150)	1.2" (31)	500	
156-00540	156-00540	T50REC5B	50 lbs (225)	8" (202)	1.8" (45)	500	
156-00862	156-00862	T50ROSEC5B	50 lbs (225)	7.9" (200)	1.8" (45)	500	

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. * outside serrated cable tie. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Two Piece Edge Clip and Cable Tie Assemblies *continued*

Material Data- Cable Tie

Material	Polyamide 6.6 heat stabilized (PA66HS)
Color	Black
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

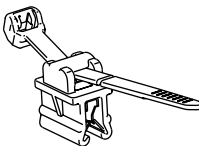
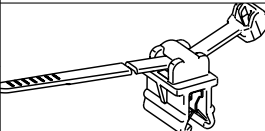
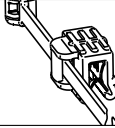
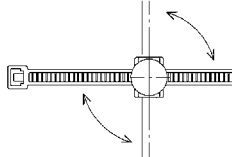


Material Data - Edge Clip

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color	Black
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



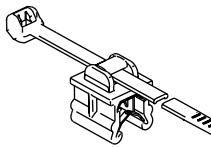
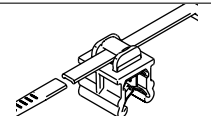
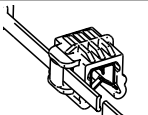
Product Selection

Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Pkg. Qty.	Drawing
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)					
Panel Thickness, — .039" - .117" (1-3mm)										
155-37104	155-37104	T18REC9	18 lbs (80)	3.9" (100)	.75" (19)		500			
156-00866	156-00866	T50SOSEC9	50 lbs (225)	5.9" (150)	1.2" (31)		500			
156-00867	156-00867	T50ROSEC9	50 lbs (225)	7.9" (200)	1.8" (45)		500			
156-00868	156-00868	T18REC10	18 lbs (80)	3.9" (100)	.79" (20)		500			
156-00871	156-00871	T50ROSEC10	50 lbs (225)	7.9" (200)	1.8" (45)		500			
156-00017	156-00017	T50SOSEC21	50 lbs (225)	5.9" (150)	1.3" (33)		500			
156-00874	156-00874	T50ROSEC21	50 lbs (225)	7.9" (200)	1.8" (45)		500			
156-00875	156-00875	T50SOSEC22	50 lbs (225)	5.9" (150)	1.3" (33)		500			
156-00876	156-00876	T50ROSEC22	50 lbs (225)	7.9" (200)	1.8" (45)		500			
156-01601	156-01601	CBTO-50R	50 lbs (225)	8" (202)	1.85" (47)		500			

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P.

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Two Piece Edge Clip and Cable Tie Assemblies *continued*

Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Pkg. Qty.	Drawing
Article No.	Part No.	Type					
Panel Thickness — .117" - .234" (3-6 mm)							
156-04600	156-04600	T18ROSEC19	18 lbs (80)	3.9" (100)	.79" (20)	500	
156-04601	156-04601	T50SOSEC19	50 lbs (225)	5.9" (150)	1.2" (31)	500	
156-00872	156-00872	T50ROSEC19	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-00016	156-00016	T50SOSEC20	50 lbs (225)	5.9" (150)	1.3" (33)	500	
156-00873	156-00873	T50ROSEC20	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-00877	156-00877	T50ROSEC23	50 lbs (225)	7.9" (200)	1.8" (45)	500	
156-00878	156-00878	T50ROSEC24	50 lbs (225)	7.9" (200)	1.8" (45)	500	

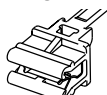
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

One Piece Edge Clip and Cable Tie Combinations

The plastic area of the edge clips and the cable ties are molded together.

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Color	Black
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 HB

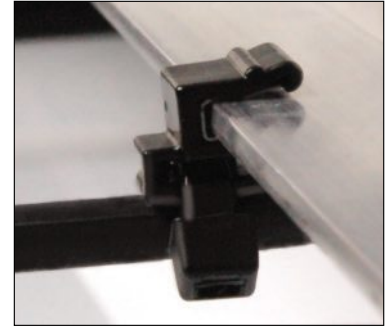


Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Pkg. Qty.	Drawing
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)					
Panel Thickness — .039" - .117" (1-3 mm)										
126-00036	126-00036	T50SOSEC34E	40 lbs (180)	6" (155)	1.8" (35)	500				
148-00200	148-00200	T50SOSECIZE	40 lbs (180)	6" (160)	1.2" (35)	500				
126-00000	126-00000	T50SOSEC1ZE	40 lbs (180)	8" (160)	1.8" (35)	500				

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Edge Clip and UV Stabilized Tie Assemblies

HellermannTyton's high-performance edge clip and UV stabilized cable tie assemblies are designed specifically to route cables by securing them to a metal or plastic frame rail edge, eliminating the need for mounting holes and mechanical fasteners. The clip is easy to secure and the extraction force is high due to the integrated metal clamp that holds the edge clip in place. The cable tie firmly grips the cable, preventing chafing of the cable and ensuring long-term reliability.



Material Data - Mounts

Material	Polyamide 6.6 – Impact Modified, Heat Stabilized, UV Stabilized (PA66HIRHSUV)
Operating Temperature	-40 °F to +230°F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



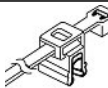
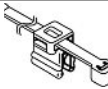
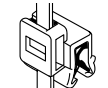
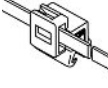
Material Data - Ties

Material	Polyamide 6.6 – 2% Carbon UV Stabilized (OUV)
Operating Temperature	-40 °F to +185°F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Product Selection

duct Selection

Article No.	Part No.	Type	Min. Tensile Strength	Length	Max Bundle	Color	Pkg. Qty	Drawing
			lbs. (N)	in. (mm)	in. (mm)			
1-3 mm Edge Thickness								
156-00635	156-00635	T50REC4A	50 (225)	7.9 (200)	1.8 (45)	Black	100	
156-00588	156-00588	T50REC4B	50 (225)	7.9 (200)	1.8 (45)	Black	100	
156-00589	156-00589	T50REC5A	50 (225)	7.9 (200)	1.8 (45)	Black	100	
156-00468	156-00468	T50REC5B	50 (225)	7.9 (200)	1.8 (45)	Black	100	
3-6 mm Edge Thickness								
156-00590	156-00590	T50REC19	50 (225)	7.9 (200)	1.8 (45)	Black	100	
156-00591	156-00591	T50REC20	50 (225)	7.9 (200)	1.8 (45)	Black	100	
156-00592	156-00592	T50REC23	50 (225)	7.9 (200)	1.8 (45)	Black	100	
156-00593	156-00593	T50REC24	50 (225)	7.9 (200)	1.8 (45)	Black	100	

Use **Part No.** for ordering and **Type** for specification purposes.

Edge Clip and Tape Clip Combination

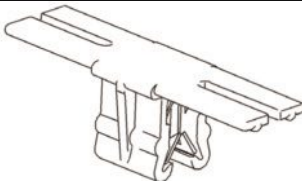
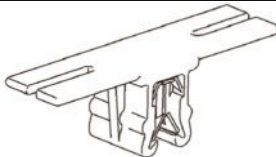
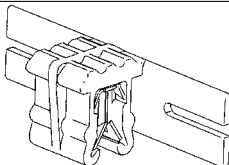
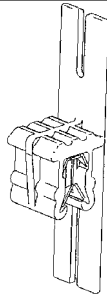
These clips can be secured to cables with cable ties or tape.

Material Data - Cable Tie and Tape Clip Combination

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color	Black
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Product Selection

Product Selection								
Article No.	Part No.	Type	Length (L)		Width (W)		Pkg. Qty.	Drawing
			in.	(mm)	in.	(mm)		
Panel Thickness — .039" - .117" (1-3 mm)								
151-03404	151-03404	EC14	1.57"	(40.0)	.39"	(10.0)	500	
151-03401	151-03401	EC15	1.57"	(40.0)	.39"	(10.0)	500	
151-03402	151-03402	EC16	1.57"	(40.0)	.39"	(10.0)	500	
151-03403	151-03403	EC17	1.57"	(40.0)	.39"	(10.0)	500	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

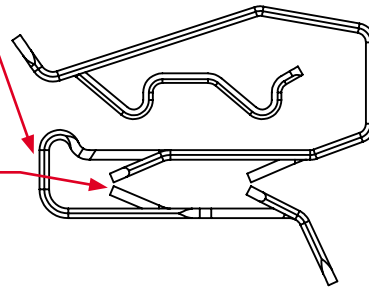
Metal Edge Clip

HellermannTyton's metal edge clip manages wire and cable on solar panel frames and other channels. Developed for applications where plastic fasteners are not the preferred method, this corrosion-resistant 304 stainless steel clip has smooth, rounded edges that will not abrade wire or cable. The Metal Edge Clip has a larger thumb surface allowing for an effortless insertion by hand and eliminating the need for tools. This clip also features a dual-sided teeth design that makes for an easier insertion and a higher extraction force that tolerates extreme environments and provides assurance that cables are secure on the PV panel or other frame. The clip has a double-compression retention tab to handle either one or two cables. The Metal Edge Clip is easily removed with a flathead screwdriver.



Product Features & Benefits:

- Larger thumb surface for simple installation.
- Coined edges that prevent the clip from chafing and damaging PV cables.
- Dual-sided teeth offer optimal retention in extreme conditions.
- Configuration fits frames from 1 to 3 mm in thickness.
- Engineered profile accommodates either single or multiple cables.



Material Data

Material	Stainless Steel Type SS304 (SS304)
Operating Temperature	-112 °F to +1000 °F (-80 °C to +538 °C)



Product Selection

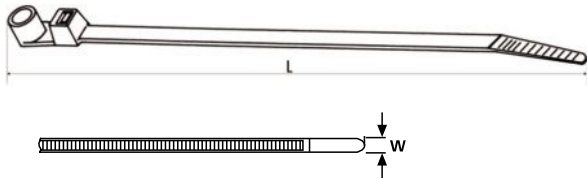
Article No.	Part No.	Type	Panel Thickness Min. in. (mm)	Panel Thickness Max. in. (mm)	Cable Dia. Min. in. (mm)	Cable Dia. Max. in. (mm)	Length in. (mm)	Width in. (mm)	Color	Bag Qty.	Carton Qty.	Sample Pack No.
151-00982	151-00982	MSC2	.04" (1)	.12" (3)	.20" (5)	.30" (7.6)	.95" (24)	.50" (13)	n/a	100	5000	SPLMSC2

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Screw Mount Ties

Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Product Selection

Product Selection										
Article No.	Part No.	Type	Mounting	Min. Tensile Strength lbs. (N)	Length (L) in. (mm)	Max. Ø Bundle in. (mm)	Width (W) in. (mm)	Color	Pkg. Qty.	
T18MR										
113-00026	T18MR9C2	T18MR	# 4 screw	18 lbs (80)	4.33" (110)	.79" (20)	.10" (2.5)	Natural	100	
113-00028	T18MR9M4	T18MR		18 lbs (80)	4.33" (110)	.79" (20)	.10" (2.5)	Natural	1000	
113-00022	T18MR0C2	T18MR		18 lbs (80)	4.33" (110)	.79" (20)	.10" (2.5)	Black	100	
113-00024	T18MR0M4	T18MR		18 lbs (80)	4.33" (110)	.79" (20)	.10" (2.5)	Black	1000	
T30MR										
113-03019	T30MR9C2	T30MR	# 8 screw	30 lbs (135)	6.30" (160)	1.26" (32)	.14" (3.5)	Natural	100	
113-00036	T30MR9M4	T30MR		30 lbs (135)	6.30" (160)	1.26" (32)	.14" (3.5)	Natural	1000	
113-03010	T30MR0C2	T30MR		30 lbs (135)	6.30" (160)	1.26" (32)	.14" (3.5)	Black	100	
113-03011	T30MR0M4	T30MR		30 lbs (135)	6.30" (160)	1.26" (32)	.14" (3.5)	Black	1000	
T50MR										
113-05004	T50MR9C2	T50MR	# 10 screw	50 lbs (225)	8.46" (215)	1.77" (45)	.18" (4.6)	Natural	100	
113-05007	T50MR9M4	T50MR		50 lbs (225)	8.46" (215)	1.77" (45)	.18" (4.6)	Natural	1000	
113-05000	T50MR0C2	T50MR		50 lbs (225)	8.46" (215)	1.77" (45)	.18" (4.6)	Black	100	
113-05002	T50MR0M4	T50MR		50 lbs (225)	8.46" (215)	1.77" (45)	.18" (4.6)	Black	1000	
T50MI										
113-00032	T50MI9C2	T50MI	# 10 screw	50 lbs (225)	12.40" (315)	3.35" (85)	.19" (4.7)	Natural	100	
113-00033	T50MI9M4	T50MI		50 lbs (225)	12.40" (315)	3.35" (85)	.19" (4.7)	Natural	1000	
113-00038	T50MI0C2	T50MI		50 lbs (225)	12.40" (315)	3.35" (85)	.19" (4.7)	Black	100	
113-00031	T50MI0M4	T50MI		50 lbs (225)	12.40" (315)	3.35" (85)	.19" (4.7)	Black	1000	
T50ML										
113-05419	T50ML9C2	T50ML	# 10 screw	50 lbs (225)	15.35" (390)	4.00" (100)	.18" (4.6)	Natural	100	
113-05403	T50ML9M4	T50ML		50 lbs (225)	15.35" (390)	4.00" (100)	.18" (4.6)	Natural	1000	
113-00007	T50ML0C2	T50ML		50 lbs (225)	15.35" (390)	4.00" (100)	.18" (4.6)	Black	100	
113-00035	T50ML0M4	T50ML		50 lbs (225)	15.35" (390)	4.00" (100)	.18" (4.6)	Black	1000	
T120MR										
113-12029	T120MR9K2	T120MR	# 1/4" screw	120 lbs (535)	15.55" (395)	4.02" (102)	.30" (7.6)	Natural	50	
113-00018	T120MR9H4	T120MR		120 lbs (535)	15.55" (395)	4.02" (102)	.30" (7.6)	Natural	500	
113-12020	T120MR0K2	T120MR		120 lbs (535)	15.55" (395)	4.02" (102)	.30" (7.6)	Black	50	
113-00011	T120MR0H4	T120MR		120 lbs (535)	15.55" (395)	4.02" (102)	.30" (7.6)	Black	500	

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

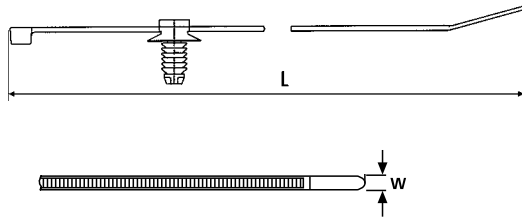
Fir Tree Mount and Cable Tie Assemblies

HellermannTyton's fir tree mounts provide a secure grip in a mounting hole and protect against dirt and other impurities. The mount can slide along the strap of the tie for proper orientation. The fir tree mounts are designed to provide a low insertion force and high extraction force. These mounts are sold as an assembly with the cable tie.



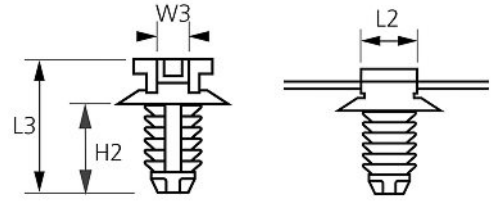
Material Data - All Cable Ties/ FT4, FT7, FT8 and FT10 Mounts

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C)
Color	Black
Flammability	UL94 V2



Material Data - FT5, FT6 and FT6LG Mounts

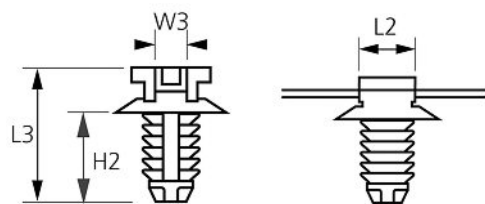
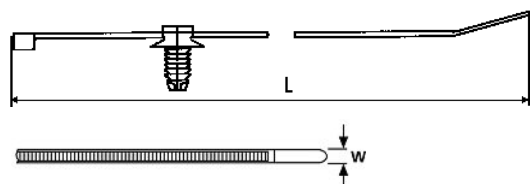
Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C)
Color	Black
Flammability	UL94 HB



Product Selection

Product Selection												
Article No.	Part No.	Type	Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Cable Tie		Mount					Pkg. Qty.
					Length (L) in. (mm)	Width (W) in. (mm)	Disc Ø in. (mm)	Length (L2) in. (mm)	Length (L3) in. (mm)	Width (W3) in. (mm)	Height (H2) in. (mm)	
FT4 – Mounting Hole Ø: .13" - .16" (3.3 – 4.0mm) - Panel Thickness: .04" - .118" (1.0 – 3.0mm)												
156-00953	156-00953	T30RFT4	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.51 " (13.0)	.33 " (8.5)	.46 " (11.8)	.20 " (5.0)	.22 " (5.6)	500
FT5 – Mounting Hole Ø: .177" - .197" (4.5-5.0mm) - Panel Thickness: .028" - .193" (0.7 - 3.0mm)												
150-55850	150-55850	T30RFT5	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.63 " (16.0)	.46 " (11.6)	.52 " (13.2)	.20 " (5)	.27 " (6.9)	500
156-00025	156-00025	T50RFT5	50 lbs (225)	1.75 " (44.5)	8 " (203.2)	.18 " (4.6)	.63 " (16.0)	.46 " (11.6)	.52 " (13.2)	.20 " (5)	.27 " (6.9)	500
FT6 – Mounting Hole Ø: .252" - .28" (6.4-7.1mm) - Panel Thickness: .028" - .193" (0.75 - 3.0mm)												
150-77940	150-77940	T30RFT6	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.63 " (16.0)	.46 " (11.6)	.54 " (13.8)	.20 " (5)	.295 " (7.5)	500
156-00156	156-00156	T50SFT6	50 lbs (225)	1.38 " (35)	6.3 " (160)	.18 " (4.6)	.63 " (16.0)	.46 " (11.6)	.54 " (13.8)	.20 " (5)	.295 " (7.5)	500
156-00157	156-00157	T50RFT6	50 lbs (225)	1.75 " (44.5)	8 " (203.2)	.18 " (4.6)	.63 " (16.0)	.46 " (11.6)	.54 " (13.8)	.20 " (5)	.295 " (7.5)	500
156-00066	156-00066	T50LFT6	50 lbs (225)	4.33 " (110)	15 " (380)	.18 " (4.7)	.63 " (16)	.46 " (11.6)	.54 " (13.8)	.20 " (5)	.295 " (7.5)	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Fir Tree Mount and Cable Tie Assemblies *continued*

Product Selection												
Article No.	Part No.	Type	Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Cable Tie		Mount					Pkg. Qty.
					Length (L) in. (mm)	Width (W) in. (mm)	Disc Ø in. (mm)	Length (L2) in. (mm)	Length (L3) in. (mm)	Width (W3) in. (mm)	Height (H2) in. (mm)	
FT6LG - Mounting Hole Ø: .256" - .276" (6.4-7.1mm) - Panel Thickness: .03" - .24" (0.75 - 6.0mm)												
150-31090	150-31090	T30RFT6LG	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.63 " (16)	.46 " (11.6)	.69 " (17.5)	.19 " (5)	.44 " (11.1)	500
150-31093	150-31093	T50SFT6LG	50 lbs (225)	1.38 " (35)	6.3 " (160)	.18 " (4.6)	.63 " (16)	.46 " (11.6)	.69 " (17.5)	.19 " (5)	.44 " (11.1)	500
150-31091	150-31091	T50RFT6LG	50 lbs (225)	1.75 " (44)	8 " (203.2)	.18 " (4.6)	.63 " (16)	.46 " (11.6)	.69 " (17.5)	.19 " (5)	.44 " (11.1)	500
156-00054	156-00054	T50IFT6LG	50 lbs (225)	3.35 " (85)	11.8 " (300)	.18 " (4.6)	.63 " (16)	.46 " (11.6)	.69 " (17.5)	.19 " (5)	.44 " (11.1)	500
FT7 - Mounting Hole Ø: .256" - .276" (6.5-7.0mm) - Panel Thickness: .031" - .276" (0.8 - 7.0mm)												
156-00057	156-00057	T30RFT7	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.63 " (16)	.46 " (11.6)	.75 " (19)	.20 " (5)	.5 " (12.7)	500
156-00056	156-00056	T50SFT7	50 lbs (225)	1.38 " (35)	6.3 " (160)	.18 " (4.6)	.63 " (16)	.46 " (11.6)	.75 " (19)	.20 " (5)	.5 " (12.7)	500
111-85871	111-85871	T50RFT7	50 lbs (225)	1.75 " (44)	8 " (203.2)	.18 " (4.6)	.63 " (16)	.46 " (11.6)	.75 " (19)	.20 " (5)	.5 " (12.7)	500
111-05350	111-05350	T50IFT7	50 lbs (225)	3.35 " (85)	11.8 " (300)	.18 " (4.6)	.63 " (16)	.46 " (11.6)	.75 " (19)	.20 " (5)	.5 " (12.7)	500
156-00055	156-00055	T50LFT7	50 lbs (225)	4.33 " (110)	15 " (380)	.18 " (4.7)	.63 " (16)	.46 " (11.6)	.75 " (19)	.20 " (5)	.5 " (12.7)	500
FT8 - Mounting Hole Ø: .3" - .31" (7.7-8.0mm) - Panel Thickness: .03" - .31" (0.8 - 8.0mm)												
156-00375	156-00375	T30RFT8	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.63 " (16)	.47 " (12.0)	.7 " (17.8)	.35 " (9)	.45 " (11.5)	500
156-00376	156-00376	T50RFT8	50 lbs (225)	1.75 " (44)	8 " (203.2)	.18 " (4.6)	.63 " (16)	.47 " (12.0)	.7 " (17.8)	.35 " (9)	.45 " (11.5)	500
156-00377	156-00377	T50IFT8	50 lbs (225)	3.35 " (81)	11.8 " (300)	.18 " (4.6)	.63 " (16)	.47 " (12.0)	.7 " (17.8)	.35 " (9)	.45 " (11.5)	500
156-00378	156-00378	T50LFT8	50 lbs (225)	4.33 " (110)	15 " (380)	.18 " (4.7)	.63 " (16)	.47 " (12.0)	.7 " (17.8)	.35 " (9)	.45 " (11.5)	500
FT10 - Mounting Hole Ø: .38" - .39" (9.7-10.0mm) - Panel Thickness: .031" - .236" (0.8 - 5.0mm)												
156-00089	156-00089	T30RFT10	30 lbs (135)	1.38 " (35)	5.8 " (148)	.14 " (3.6)	.71 " (18)	.47 " (12)	.75 " (18.6)	.20 " (5)	.48 " (12.1)	500
156-00090	156-00090	T50SFT10	50 lbs (225)	1.38 " (35)	6.3 " (160)	.18 " (4.6)	.71 " (18)	.47 " (12)	.75 " (18.6)	.20 " (5)	.48 " (12.1)	500
156-00091	156-00091	T50RFT10	50 lbs (225)	1.75 " (44)	8 " (203.2)	.18 " (4.6)	.71 " (18)	.47 " (12)	.75 " (18.6)	.20 " (5)	.48 " (12.1)	500
156-00092	156-00092	T50IFT10	50 lbs (225)	3.35 " (81)	11.8 " (300)	.18 " (4.6)	.71 " (18.0)	.47 " (12)	.75 " (18.6)	.20 " (5)	.48 " (12.1)	500
156-00093	156-00093	T50LFT10	50 lbs (225)	4.33 " (110)	15 " (380)	.18 " (4.7)	.71 " (18)	.47 " (12)	.75 " (18.6)	.20 " (5)	.48 " (12.1)	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes.

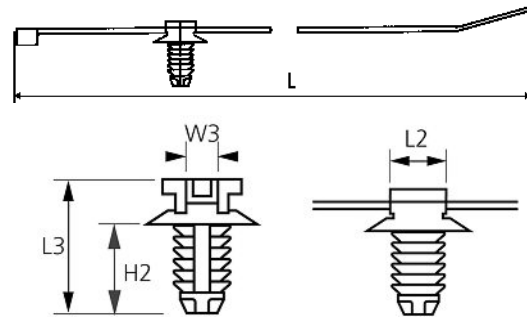
Use **Part No.** for ordering and **Type** for specification purposes.

High Temperature Fir Tree Mount and Cable Tie Assemblies

HellermannTyton's high temperature fir tree mounts and cable tie assemblies provide excellent resistance in operating temperatures up to 275°F (135°C), while still maintaining tensile and retention strength properties.



Material Data	
Material	Polyamide 4.6 (PA46)
Operating Temperature	-40 °F to +275 °F (-40 °C to +135 °C) continuous
Flammability	UL94 V2



Product Selection		Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Cable Tie		Mount					Pkg. Qty.
Part No.	Type			Length (L)	Width (W)	Disc Ø	Length (L2)	Length (L3)	Width (W3)	Height (H2)	
				in. (mm)	in. (mm)		in. (mm)	in. (mm)	in. (mm)	in. (mm)	
				in. (mm)	in. (mm)		in. (mm)	in. (mm)	in. (mm)	in. (mm)	
FT5 - Mounting Hole Ø : .177" - .197" (4.5 - 5.0mm) - Panel Thickness: .028" - .12" (0.7 - 3.0mm)											
150-55948	T30RFT5	30 lbs (135)	1.34" (34)	5.9" (150)	.14" (3.6)	.63" (16)	.46" (11.6)	.52" (13.2)	.20" (5.0)	.27" (6.9)	500
FT6 - Mounting Hole Ø : .25" - .28" (6.4 - 7.1mm) - Panel Thickness: .03" - .12" (0.75 - 3.0mm)											
150-77938	T50RFT6	50 lbs (225)	1.8" (45)	7.87" (200)	.18" (4.6)	.63" (16)	.46" (11.6)	.54" (13.8)	.20" (5.0)	.3" (7.5)	500
156-00085	T50RO SFT6SD	50 lbs (225)	1.8" (45)	7.87" (200)	.18" (4.6)	.63" (16)	.46" (11.6)	.57" (14.5)	.21" (5.2)	.3" (7.5)	500
FT6LG - Mounting Hole Ø : .25" - .28" (6.4 - 7.1mm) - Panel Thickness: .03" - .24" (0.75 - 6.0mm)											
150-31098	T50RF T6LG	50 lbs (225)	1.8" (45)	7.87" (200)	.18" (4.6)	.63" (16)	.46" (11.6)	.69" (17.5)	.20" (5.0)	.44" (11.1)	500
FT7HD - Mounting Hole Ø : .244" - .284" (6.2 - 7.2mm) - Panel Thickness: .03" - .276" (0.8 - 7.0mm)											
156-00457	T50RF T7HD	50 lbs (225)	1.8" (45)	7.87" (200)	.18" (4.6)	.63" (16)	.46" (11.6)	.78" (19.3)	.232" (5.9)	.36" (12.4)	500
FT8G - Mounting Hole Ø : .32" - .33" (8.0 - 8.5mm) - Panel Thickness: .06" - .16" (1.5 - 4.0mm)											
156-00235	T50RF T8GSD	50 lbs (225)	1.8" (45)	7.87" (200)	.18" (4.6)	.63" (16)	.46" (11.6)	.68" (17.2)	.24" (6.0)	.18" (4.6)	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes.

Use **Part No.** for ordering and **Type** for specification purposes.

Fir Tree Mount For Automatic Cable Tie Tool System

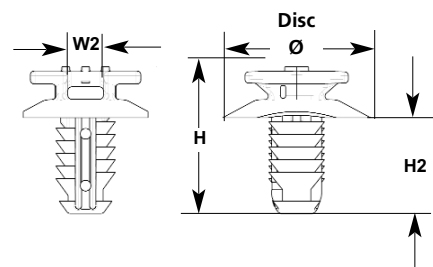
Engineered for use with HellermannTyton's automatic cable tie tool systems, this fir tree mount has an anti-rotational design and features a low insertion force and high extraction force. For more information on automatic tool systems, see page 88.

Material Data		
Material		Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color		Black
Operating Temperature		-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability		UL94 HB



Product Selection							
Article No.	Part No.	Type	Disc Ø in. (mm)	Width (W2) in. (mm)	Height (H) in. (mm)	Height (H2) in. (mm)	Pkg. Qty.
FT7AT - Mounting Hole Ø: .24" - .28" (6.0 - 7.0mm) - Panel Thickness: .03" - .276" (0.8 - 7.0mm)							
151-00492	151-00492	FT7AT	.73" (18.6)	.18" (4.5)	.72" (18.34)	.47" (11.9)	100

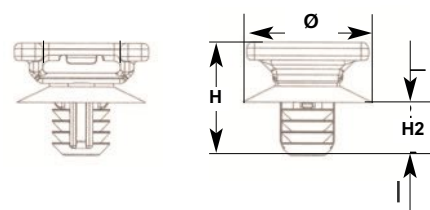
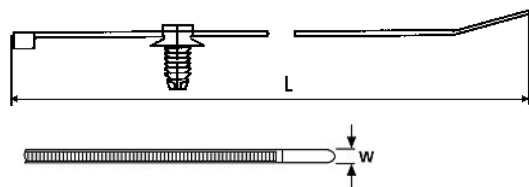
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.



Heavy Duty Fir Tree Mounts and Cable Tie Assemblies

The FT7HD, is a heavy duty alternative to HellermannTyton's standard FT7 mount and cable tie assembly. The H profile of the mount offers durability and the assembly is available with a 50 lb. cable tie in 8" and 11.8" lengths.

Material Data		
Material		Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color		Black
Operating Temperature		-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability		UL94 HB



Product Selection			Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Cable Tie		Mount				Pkg. Qty.
Article No.	Part No.	Type			Length (L) in. (mm)	Width (W) in. (mm)	Disc Ø in. (mm)	Width (W2) in. (mm)	Height (H) in. (mm)	Height (H2) in. (mm)	
FT7HD - Mounting Hole Ø: .24" - .28" (6.2 - 7.2mm) - Panel Thickness: .03" - .276" (0.8 - 7.0mm)											
156-00329	156-00329	T50RFT7HD	50 lbs (225)	1.75" (44)	8" (203.2)	.18" (4.6)	.85" (21.6)	.232" (5.9)	.78" (19.8)	.36" (12.4)	500
156-00282	156-00282	T50LFT7HD	50 lbs (225)	3.35" (85)	11.8" (300)	.18" (4.6)					

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Heavy Duty Fir Tree Mounts and Cable Tie Assemblies *continued*

Designed specifically for 120 - 250 lb. cable ties, the heavy duty fir tree mounts are optimized for up to 3 to 1 extraction versus insertion force. The "H" profile provides a broad surface contact to minimize the pinching of bundles and will easily hold bundles ranging from 3/8" to 3". Heavy duty fir tree mounts are equipped with a friction tab that will hold the tie in the mount, allowing them to be preassembled prior to installation. These mounts are sold as an assembly with the cable tie.

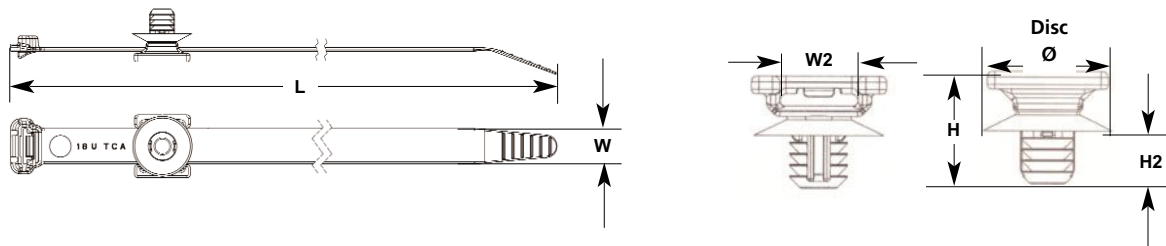
Material Data-Fir Tree Mount and WSS, WSI, WSR Cable Ties

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color	Black
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Material Data - T120R Cable Tie

Material	Polyamide 6.6 heat stabilized (PA66HS)
Color	Black
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 HB



Product Selection

Product Selection			Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Cable Tie		Mount				Pkg. Qty.
Article No.	Part No.	Type			Length (L) in. (mm)	Width (W) in. (mm)	Disc Ø in. (mm)	Width (W2) in. (mm)	Height (H) in. (mm)	Height (H2) in. (mm)	
FT9A - Mounting Hole Ø: .343"-.363" (8.75 - 9.25mm) - Panel Thickness: .04" - .26" (1.0 - 6.5mm)											
156-00067	156-00067	T120RFT9A	120 lbs (534)	4" (101.6)	15.25" (387.4)	.30" (7.6)	.85" (21.6)	.51" (13)	.75" (19.1)	.36" (9)	100
156-00068	156-00068	WSSFT9A	120 lbs (534)	2.25" (57.1)	9" (228.6)	.50" (12.7)	.85" (21.6)	.51" (13)	.75" (19.1)	.36" (9)	100
156-00069	156-00069	WSIFT9A	120 lbs (534)	3.25" (82.5)	12" (304.8)	.50" (12.7)	.85" (21.6)	.51" (13)	.75" (19.1)	.36" (9)	100
156-00070	156-00070	WSRFT9A	120 lbs (534)	4.13" (104.8)	15" (381)	.50" (12.7)	.85" (21.6)	.51" (13)	.75" (19.1)	.36" (9)	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes.

Use **Part No.** for ordering and **Type** for specification purposes.

Product Selection

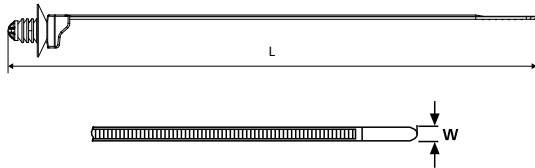
Article No.	Part No.	Type	Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Cable Tie		Mount				Pkg. Qty.
					Length (L) in. (mm)	Width (W) in. (mm)	Disc Ø in. (mm)	Width (W2) in. (mm)	Height (H) in. (mm)	Height (H2) in. (mm)	
FT9B - Mounting Hole Ø: .343"- .363" (8.75 - 9.25mm) - Panel Thickness: .04" - .62" (1.0 - 15.8 mm)											
156-00071	156-00071	T120RFT9B	120 lbs (534)	4" (101.6)	15.25" (387.4)	.30" (7.6)	.85" (21.6)	.51" (13)	1.12" (28.4)	.73" (18.4)	100
156-00072	156-00072	WSSFT9B	120 lbs (534)	2.25" (57.1)	9" (228.6)	.50" (12.7)	.85" (21.6)	.51" (13)	1.12" (28.4)	.73" (18.4)	100
156-00074	156-00074	WSRFT9B	120 lbs (534)	4.13" (104.8)	15" (381)	.50" (12.7)	.85" (21.6)	.51" (13)	1.12" (28.4)	.73" (18.4)	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes.

Use **Part No.** for ordering and **Type** for specification purposes.

Cable Tie with Fir Tree Mount

This fir tree mount tie provides a low insertion force with a high extraction force. The outside serrations present a smooth surface to the cables preventing damage to the insulation. The unique head design allows the cable tie to firmly hold bundles as small as .06" diameter and the disc offers added water protection.



Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +257 °F (-40 °C to +125 °C) continuous
Flammability	UL94 V2



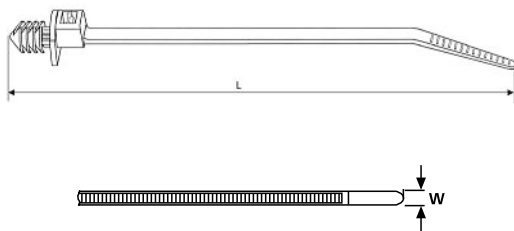
Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
157-00108	157-00108	T50SOSFT6E2	40 lbs (180)	.248 - .275" (6.3 - 7.0)	.02 - .16" (.06 - 4.2)	6.3" (160)	1.4" (35)	.18" (4.6)	Black	1000
157-00097	157-00097	T50SOSFT6LG-E	40 lbs (180)	.248 - .275" (6.3 - 7.0)	.03 - .28" (.07 - 7.0)	6.5" (165)	1.4" (35)	.18" (4.6)	Black	1000
157-00140	157-00140	T50SOSFT6LG-E2	40 lbs (180)	.24 - .28" (6.1 - 7.0)	.02 - .32" (.6 - 8.2)	6.7" (170)	1.4" (35)	.18" (4.6)	Black	1000
157-00072	157-00072	T50SOSFT8E	40 lbs (180)	.31 - .33" (8.0 - 8.5)	.02 - .24" (.6 - 6.0)	6.4" (163)	1.4" (35)	.18" (4.6)	Black	1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

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. Type T50RTM25E has a longer fir tree for larger panel thicknesses.



Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Material Data

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



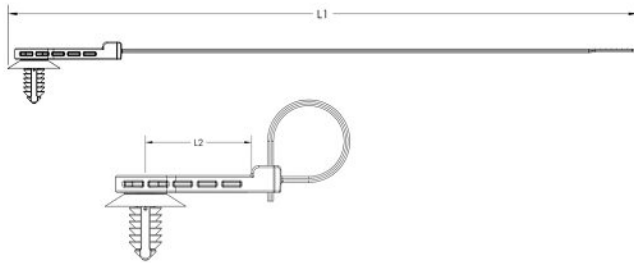
Product Selection

Product Selection										
Article No.	Part No.	Type	Min. Tensile Strength	Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
Heat Stabilized Material										
126-03501	T50RTM250HSM4	T50RTM25	50 lbs (225)	.25" - .26" (6.5 - 6.6)	.052" - .28" (1.32 - 7.0)	8.27" (210)	1.97"(50.0)	.19" (4.7)	Black	1000
Impact Modified Heat Stabilized, UV Resistant Material										
126-03504	T50RTM25E8HM4	T50RTM25E	50 lbs (225)	.25" - .26" (6.5 - 6.6)	.09" - .55" (2.3 - 13.94)	8.43" (214)	1.97"(50.0)	.19" (4.7)	Gray	1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Offset Fir Tree Cable Ties

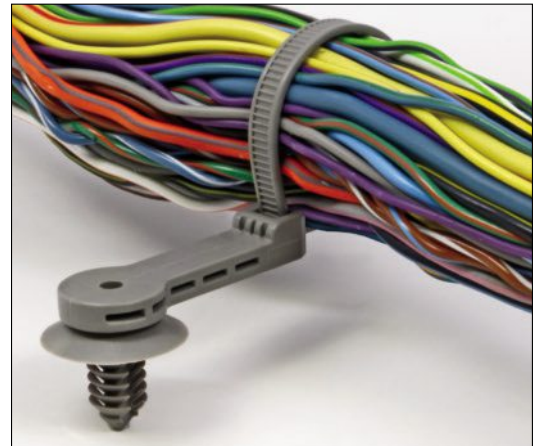
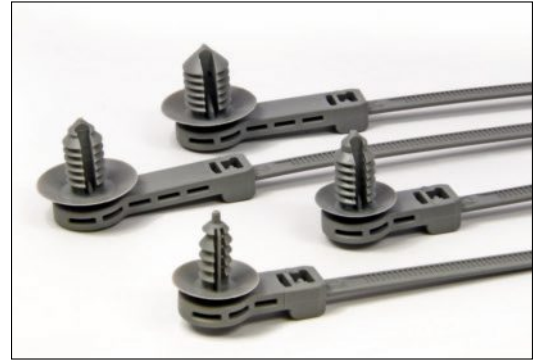
The Offset Cable Ties route and position wire and cable bundles away from a mounting hole. The offset bar between the fir tree and cable tie strap provides a robust and cored-out design to eliminate any potential bending of the wire or cable assembly once installed. The combination of 12.5mm and 25.0mm offset distances and various fir tree sizes offer coverage for a majority of industry offset routing applications. The outside serrations of the tie strap present a smooth surface to the cables preventing any possible damage to soft or delicate bundles.



Material Data

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB

RoHS



Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Mounting Hole Ø	Length (L1)	Length (L2)	Max. Ø Bundle	Color	Pkg. Qty.
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
157-00118	157-00118	T50ROSFTM6SO12.5A	50 lbs (225)	6mm Threaded	8.5" (215.5)	0.5" (12.5)	1.97" (50)	Gray	500
157-00130	157-00130	T50ROSFT6SO12.5A	50 lbs (225)	0.24 - 0.28" (6.1-7.0)	8.5" (215.5)	0.5" (12.5)	1.97" (50)	Gray	500
157-00119	157-00119	T50ROSFT6SO25A	50 lbs (225)	0.24 - 0.28" (6.1-7.0)	9.0" (230.0)	1.0" (25.0)	1.97" (50)	Gray	500
157-00120	157-00120	T50ROSFT8SO25A	50 lbs (225)	0.30 - 0.33" (7.6-8.4)	9.0" (230.0)	1.0" (25.0)	1.97" (50)	Gray	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Oval Fir Tree Cable Ties

These cable ties feature a fir tree mount that has an innovative four-sided 360° branch design that offers full interference for a wide range of oval hole applications. This industry-first design allows for one part to be used across multiple hole diameters, and delivers cost savings through part consolidation. The clamp rails along the inside of the cable tie strap increase the grip around bundles, lowering the potential for lateral cable bundle movement.



Material Data	
Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Material Data	
Material	Polyamide 4.6 (PA46)
Operating Temperature	-40 °F to +275 °F (-40 °C to +135 °C) continuous
Flammability	UL94 V2



Product Selection									
Article No.	Part No.	Type	Min.Tensile Strength lbs. (N)	*Mounting Hole Ø in. (mm)	Length (L1) in. (mm)	Max. Bundle Ø in. (mm)	Material	Pkg. Qty.	
157-00143	157-00143	T50SOSFTOVALU	50 lbs (225)	6.2x12.2mm	6.6" (168)	1.38" (35)	PA66HS	500	
157-00142	157-00142	T50ROSFTOVALU	50 lbs (225)	6.5x12.5mm	8.6" (219)	1.97" (50)	PA66HIRHS	500	
157-00157	157-00157	T50ROSFTOVALU	50 lbs (225)	6.5x13.0mm	8.6" (219)	1.97" (50)	PA46	500	
				7.0x12.0mm					

*Each oval fir tree cable ties fit all four mounting hole diameters. Dimensions are approximate and subject to technical changes.

Use **Part No.** for ordering and **Type** for specification purposes.

Fir Tree Cable Tie for 6mm Threaded Holes

Ideal for use in applications where the ease of insertion and the difficulty of extraction is a primary concern, this fastening device provides for both a low insertion and high extraction force in 6mm threaded mounting holes. This cable tie with fir tree mount features a low-profile head that delivers compact bundling by securing the bundle near the threaded hole. The fir tree functions to spiral downward in a stairwell fashion to provide perfect alignment with the pitch of the threads in the hole. The clamp rails along the inside of the cable tie strap enhance the hold around bundles, lowering the potential for lateral cable bundle movement.



Material Data	
Material	Polyamide 4.6 (PA46)
Operating Temperature	-40 °F to +275 °F (-40 °C to +135 °C) continuous
Flammability	UL94 V2



Material Data	
Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



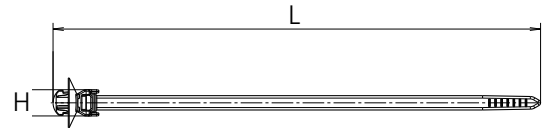
Product Selection									
Article No.	Part No.	Type	Min. Tensile Strength lbs. (N)	Mounting Hole Ø in. (mm)	Length (L1) in. (mm)	Max. Bundle Ø in. (mm)	Material	Color	Pkg. Qty.
157-00112	157-00112	T50ROSFTQM6	50 lbs (225)	6mm Threaded	8.6" (219)	1.97" (50)	PA66HIRHS	Black	500
157-00144	157-00144	T50ROSFTQM6	50 lbs (225)	6mm Threaded	8.6" (219)	1.97" (50)	PA46	Brown	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Domed Low Profile Push Mount Ties

The low profile push mount design provides an overall shortened length which assists in limiting protrusion on the opposing side of application surfaces. The rounded tip of the mount allows for a smoother surface in case of contact with surrounding components or human touch during service. The dome provides a tight, rattle-free installation and the outside serrated strap has ribs designed for convoluted tubing. The dome also acts as a seal to keep out dust and liquid.

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



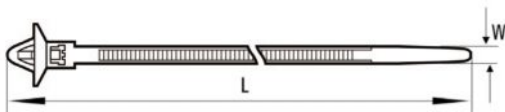
Product Selection			Min. Tensile Strength	Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)		Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Color	
126-00099	126-00099	T50SOSKSFT5SE	40 (180)	.189-.205" (4.8-5.2)	.027 - .051" (.70 - 1.3)	6.2" (156)	1.38" (35.0)	.18" (4.6)	Black	1000
126-00075	126-00075	T50SOSKSFT5.4E	50 (225)	.205-.220" (5.2-5.6)	.027 - .051" (.70 - 1.3)	6.2" (156)	1.38" (35.0)	.18" (4.6)	Black	500
126-00081	126-00081	T50SOSKSFT6SE	40 (180)	.248-.264" (6.3-6.7)	.027 - .051" (.70 - 1.3)	6.2" (156)	1.38" (35.0)	.18" (4.6)	Black	500
126-00086	126-00086	T50SOSKSFT6.5S2-E	50 (225)	.25-.26" (6.3-6.7)	.06 - .09" (1.7 - 2.3)	6.2" (156)	1.38" (35.0)	.18" (4.6)	Black	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Domed Push Mount Ties

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

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Product Selection			Min. Tensile Strength	Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)		Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Color	
111-85350	111-85350	T50SD6	50lbs. (225)	.25 - .30" (6.3 - 7.5)	.023 - .047" (.06 - 1.2)	6.3" (160)	1.22" (31)	1.22" (5.1)	Black	500
126-00015	126-00015	T50SDOP	50lbs. (225)	.25 - .48" (6.2 - 12.2)	.028 - .079" (0.7 - .028)	6.3" (160)	1.18" (30)	1.97" (5.0)	Black	500
126-02300	126-02300	T50SSTS	50lbs. (225)	.24 - .255" (6.1 - 6.5)	.027 - .059" (0.7 - .15)	6.7" (170)	1.22" (31)	.18" (4.6)	Natural	1000
111-85850	111-85850	T50MD7	50lbs. (225)	.267 - .283" (6.8 - 7.2)	.05 - .08" (1.2 - 2.0)	8.9" (225)	2.3" (59)	.2" (5)	Black	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Push Mount Ties

One-piece, all plastic ties for quick, simple cable mounting.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



File# E64139

Product Selection											
Article No.	Part No.	Type	Min. Tensile Strength		Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
			lbs.	(N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
T30RSF											
111-85603	T30RSF9C2	T30RSF(U)	30 lbs	(135)	.19" - .22" (4.76-5.59)	.04" - .09" (0.9-2.36)	6.34" (161)	1.25" (31.8)	.14" (3.6)	Natural	100
126-00704	T30RSF9M4	T30RSF(U)	30 lbs	(135)	.19" - .22" (4.76-5.59)	.04" - .09" (0.9-2.36)	6.34" (161)	1.25" (31.8)	.14" (3.6)	Natural	1000
126-00700	T30RSF0C2	T30RSF(U)	30 lbs	(135)	.19" - .22" (4.76-5.59)	.04" - .09" (0.9-2.36)	6.34" (161)	1.25" (31.8)	.14" (3.6)	Black	100
126-00702	T30RSF0M4	T30RSF(U)	30 lbs	(135)	.19" - .22" (4.76-5.59)	.04" - .09" (0.9-2.36)	6.34" (161)	1.25" (31.8)	.14" (3.6)	Black	1000
T50SSF											
126-00043	126-00043	T50SSF	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	6.26" (159)	1.38" (35)	.19" (4.7)	Natural	100
126-00044	126-00044	T50SSF	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	6.26" (159)	1.38" (35)	.19" (4.7)	Natural	1000
126-00045	126-00045	T50SSF	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	6.26" (159)	1.38" (35)	.19" (4.7)	Black	100
126-00046	126-00046	T50SSF	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	6.26" (159)	1.38" (35)	.19" (4.7)	Black	1000
T50RSF											
111-85789	T50RSF9C2	T50RSF(U)	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	8.27" (210)	1.73" (44)	.19" (4.7)	Natural	100
126-01011	T50RSF9M4	T50RSF(U)	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	8.27" (210)	1.73" (44)	.19" (4.7)	Natural	1000
126-01003	T50RSF0C2	T50RSF(U)	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	8.27" (210)	1.73" (44)	.19" (4.7)	Black	100
126-01004	T50RSF0M4	T50RSF(U)	50 lbs	(225)	.25" - .28" (6.4-7.1)	.04" - .14" (1.0-3.56)	8.27" (210)	1.73" (44)	.19" (4.7)	Black	1000

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Wing Push Mount Ties

Wing design helps stabilize the tie in high vibration applications. They can be used on sheet metal, wood, and cast iron.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2

RoHS

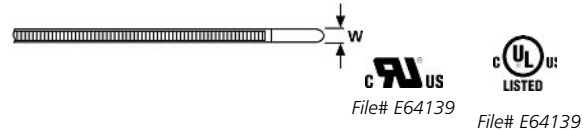
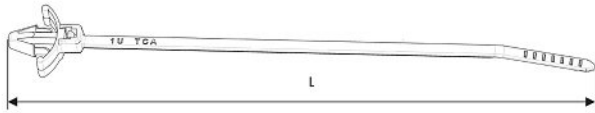


Material Data	
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB

RoHS

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

RoHS



File# E64139

File# E64139

File# E64139

Product Selection			Min. Tensile Strength	Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)			
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Color	Material	Pkg. Qty.
T18RWPM											
126-00041	126-00041	T18RWPM	18 lbs (80)	.19" - .22" (4.76-5.59)	.07" - .13" (1.85 - 3.18)	4.45" (113)	.87" (22)	.10" (2.5)	Natural	PA66	100
126-00603	T18RWPM9M4	T18RWPM	18 lbs (80)	.19" - .22" (4.76-5.59)	.07" - .13" (1.85 - 3.18)	4.45" (113)	.87" (22)	.10" (2.5)		PA66	1000
126-00042	126-00042*	T18RWPM	18 lbs (80)	.19" - .22" (4.76-5.59)	.07" - .13" (1.85 - 3.18)	4.45" (113)	.87" (22)	.10" (2.5)	Black	PA66HS	1000
T50SSFM											
126-00049	126-00049	T50SSFM	50 lbs (225)	.24" - .26" (6.0 - 6.6)	.03" - .12" (.7 - 3.0)	6.3" (160)	1.38" (35)	.18" (4.7)	Black	PA66HIRHS	500
126-00069	126-00069	T50SSFM	50 lbs (225)	.24" - .26" (6.0 - 6.6)	.03" - .12" (.7 - 3.0)	6.3" (160)	1.38" (35)	.18" (4.7)	Natural	PA66	500
T50SL6											
111-85469	T50SL6.NN6P	T50SL6	50 lbs (225)	.24" - .26" (6.1 - 6.5)	.03" - .10" (0.8 - 2.5)	6.50" (165)	1.34" (34)	.18" (4.6)	Natural	PA66	500
T50SL7											
111-85479	T50SL7.NN6P	T50SL7	50 lbs (225)	.27" - .28" (6.9 - 7.1)	.03" - .10" (0.8 - 2.5)	6.50" (165)	1.34" (34)	.18" (4.6)	Natural	PA66	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. UL recognition applies to T18RWPM ties. *UL listing applies to 126-00042.

Arrowhead Mount Ties with Seal

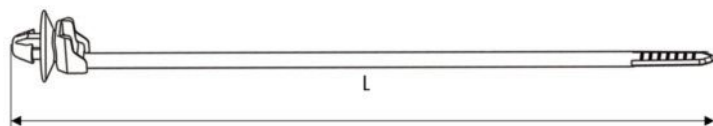
The arrowhead design of these ties offers a positive, low insertion force and a high extraction force. These ties feature a foam rubber seal which provides additional protection against moisture, dirt and other impurities.



Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

RoHS



Product Selection

Article No.	Part No.	Type	Min. Tensile Strength	Mounting Hole Ø	Panel Thickness	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
			lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
126-03100	126-03100	T50SOSSFT6.5E-MD	50 lbs (225)	.25" - .26" (6.3-6.7)	.02" - .07" (0.6 - 1.8)	6.30" (160)	1.38" (35)	.18" (4.6)	Green	500
156-00264	156-00264	T50SOSSFT6.5E-MD	50 lbs (225)	.25" - .26" (6.3-6.7)	.02" - .07" (0.6 - 1.8)	6.30" (160)	1.38" (35)	.18" (4.6)	Black	500
126-00065*	126-00065	T50SOSSFT6.5E-MS-MD	50 lbs (225)	.25" - .27" (6.3-6.75)	.03" - .06" (0.7 - 1.6)	6.42" (163)	1.38" (35)	.18" (4.6)	Natural	500
156-00444	156-00444	T50ROSAH6MDU	50 lbs (225)	.24 - .25" (6.3 - 6.6)	.03" - .08" (0.7 - 2.1)	8.5" (216)	1.97" (50)	.20" (5.0)	Natural	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

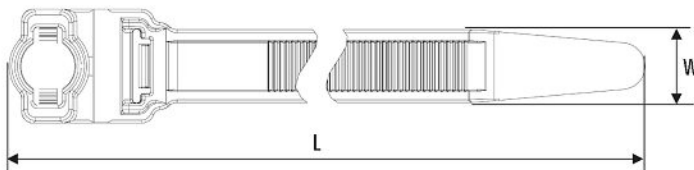
*Arrowhead includes a pointed mount feature to assist in puncturing through plastic sheeting and other protective films.

Wide Strap Heavy Duty Stud Mount Cable Ties

The wide strap stud mount cable tie minimizes pinching on soft bundles and features a low profile head to provide compact bundling. A thinner strap provides increased flexibility for improved ergonomics. Available with a 1/4" and 3/8" stud mount, the wide strap tie utilizes a strong hinge between the stud mount and head to provide superior holding ability on a threaded stud.

- Wide strap to minimize pinching of soft hoses and convoluted tubing
- Clamping rails to increase grip on round bundles
- Wide variation of bundle diameters: .375" - 4.125" (9.5mm - 104.7mm)
- Flexible strap
- Flexible hinge
- Mount provides low insertion and high extraction forces

Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	



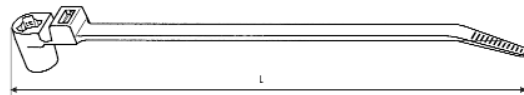
Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
1/4" (6.35 mm) Stud Mount								
157-00400	157-00400	WSS250	120 lbs (534)	9.7" (246.38)	2.25" (57.15)	.5" (12.7)	Black	300
157-00401	157-00401	WSI250	120 lbs (534)	12.7" (322.58)	3.25" (82.55)	.5" (12.7)	Black	300
157-00402	157-00402	WSR250	120 lbs (534)	15.7" (398.78)	4.125" (104.78)	.5" (12.7)	Black	300
8 mm Stud Mount								
157-00034	157-00034	WSS8MM	120 lbs (534)	9.7" (246.38)	2.25" (57.15)	.5" (12.7)	Black	300
157-00035	157-00035	WSI8MM	120 lbs (534)	12.7" (322.58)	3.25" (82.55)	.5" (12.7)	Black	300
157-00036	157-00036	WSR8MM	120 lbs (534)	15.7" (398.78)	4.125" (104.78)	.5" (12.7)	Black	300
3/8" (9.25 mm) Stud Mount								
157-00403	157-00403	WSS380	120 lbs (534)	9.7" (246.38)	2.25" (57.15)	.5" (12.7)	Black	300
157-00404	157-00404	WSI380	120 lbs (534)	12.7" (322.58)	3.25" (82.55)	.5" (12.7)	Black	300
157-00405	157-00405	WSR380	120 lbs (534)	15.7" (398.78)	4.125" (104.78)	.5" (12.7)	Black	300

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Stud Mount Tie

The stud mount tie mounts and secures a cable bundle in one component. The stud mount tie is designed for use on a 1/4" - 20 UNC threaded stud or the exposed threads of a machine screw.

Material Data	
Material	Polyamide 6.6 impact modified, heat stabilized (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Product Selection			Stud Ø	Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
157-01300	T120RSM0HIRK2	T120RSM	.25 " (6.25)	120 lbs (535)	15.94" (405)	3.98" (101)	.30" (7.6)	Black	50

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Standoff Stud Mount Ties

This tie is easily mounted on the top of the stud, and the additional height gained by this design gives the bundle added clearance from the panel.

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

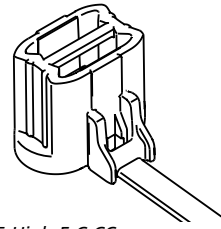


Product Selection			Stud Ø	Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	lbs. (N)	in. (mm)	in. (mm)	in. (mm)		
155-30602	155-30602	T50SSBS50TE	.20 " (5)	45 lbs (200)	6.30" (160)	1.38" (35)	.181" (4.6)	Black	500
157-00083	157-00083	T50SSBS60TE	.24 " (6)	45 lbs (200)	6.30" (160)	1.38" (35)	.181" (4.6)	Black	1000

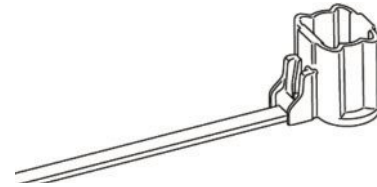
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Oval Shaped Variable Stud Mount Ties

The special oval shape provides for an approximate .20" (5.5mm) lateral adjustment, allowing for any misalignment of the stud or incorrect positioning of the tie on the cables. The "soft push" mount allows it to be installed onto a weld stud without the use of any tools.



T50SOSSB5-High-E-C-CC



T50SOSSB5-High-E-O-US

Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



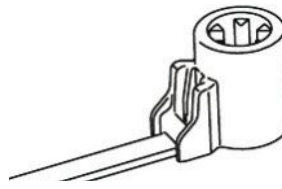
Product Selection

Article No.	Part No.	Type	Stud Ø		Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			in. (mm)	(5)/(6)	lbs. (N)	(225)	in. (mm)	(167)	in. (mm)	(35)	in. (mm)	(5.0)		
157-00105	157-00105	T50SOSSB5-High-E-C-CC	.20"(.24")	(5)/(6)	50 lbs	(225)	6.6"	(167)	1.4"	(35)	.20"	(5.0)	Black	1000
157-00106	157-00106	T50SOSSB5-High-E-O-US	.20"(.24")	(5)/(6)	50 lbs	(225)	6.6"	(167)	1.4"	(35)	.20"	(5.0)	Black	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Stud Mount Ties with Outside Serrations

Providing an especially secure hold and the ability to mount the cables very close to the stud, this tie is outside serrated preventing damage to the insulation of the cable.



T50SOSSB5SE

Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Product Selection

Article No.	Part No.	Type	Stud Ø		Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			in. (mm)	(5)	lbs. (N)	(225)	in. (mm)	(160)	in. (mm)	(35)	in. (mm)	(4.6)		
155-12300	155-12300	T50SOSSB5SE	.20 "	(5)	50 lbs	(225)	6.30"	(160)	1.38"	(35)	.18"	(4.6)	Black	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Flexible Head Stud Mount Tie

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

Material Data		RoHS
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2	



Product Selection			Stud Ø	Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type							
111-07110	T50RS5.NB3P	T50RS5	#10-24"	50 lbs (225)	7.5" (190)	1.5" (40)	.18" (4.6)	Black	100

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

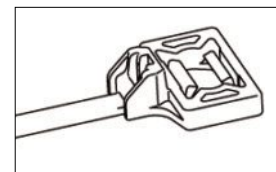
Stud Mount Lateral Adjustment Tie

The special shape of this mount provides a .20" (5-6 mm) lateral adjustment to allow for any misalignment of the stud or incorrect positioning of the tie on the cables. The low profile of the mount allows for several ties to be installed one-on-top of the other (on the same stud) to accommodate different cable bundles.



T50SOSWSP5E, parallel installation using two stud mount lateral ties.

Material Data		RoHS
Material	Polyamide 6.6 heat stabilized (PA66HS)	
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous	
Flammability	UL94 V2	



Product Selection			Stud Ø	Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type							
155-23601	155-23601	T50SOSWSP5E	.20" (5)	50 lbs (225)	6.35" (163)	1.4" (35)	.18" (4.6)	Black	500

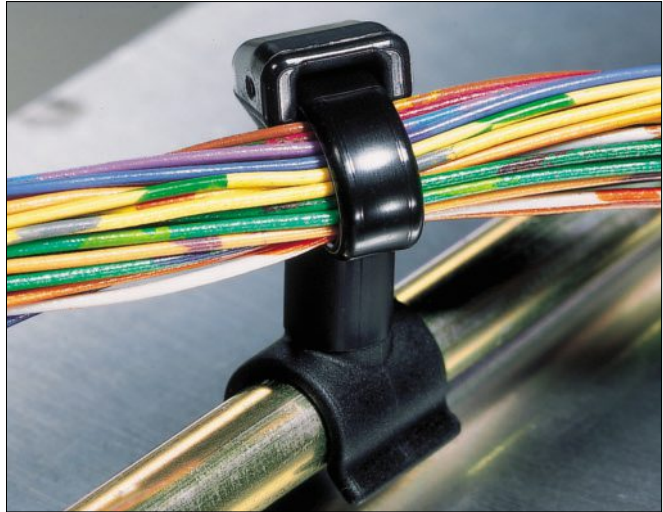
Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Wire and Hose Swivel Clip Ties

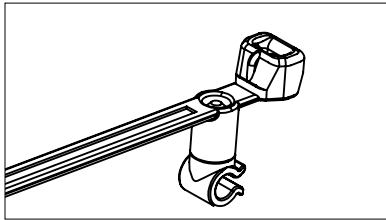
These simple to use inside serrated ties provide the opportunity to attach an additional wire or hose to an existing harness. Offering a full 360 degrees of rotation, the wire/hose can be oriented in any direction in relation to the main harness. It is ideally suited for any application in which the wire or hose can move in relation to the mounting point.

Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

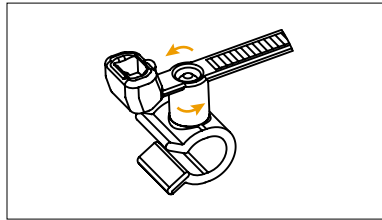
RoHS



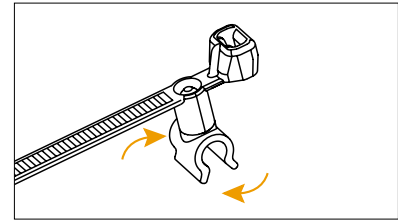
T50SVC rotates in any direction.



T50SVC3.5



T50SVC6.5



T50SVC4/T50SVC5

Product Selection

Article No.	Part No.	Type	Tensile Strength		Hose Clip Ø	Maximum Bundle Ø	Length (L)	Width (W)	Color	Pkg. Qty.
			lbs	(N)						
156-00791	156-00791	T50SVC3.5	50 lbs	(222)	.13 - .17 (3.4 - 3.6)	1.4 (35)	6.35 (163)	.18 (4.6)	Black	1000
156-00318	156-00318	T50SVC4	50 lbs	(225)	.15 - .17 (3.8 - 4.2)	1.4 (35)	6.1 (155)	.19 (4.7)	Black Natural	500
155-31202	155-31202	T50SVC5	50 lbs	(222)	.17 - .20 (4.5 - 5.2)	1.4 (35)	6.35 (163)	.18 (4.6)	Black	500
156-00155	156-00155	T50SVC6.5	50 lbs	(222)	.26 - .32 (6.5 - 8.0)	1.4 (35)	6.1 (155)	.19 (4.7)	Black	500

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Omega Clip Cable Ties

Omega Clip Cable Ties provide the opportunity to attach a wire or hose to an existing bundle. Offering a full range of orientations, the wire/hose can be oriented in any direction in relation to the main harness. The omega clip design is ideally suited for easing the application process on the production floor by allowing for an easy one-step snap fit of the harness assembly to the wire or hose.



Omega Clips secure cables to harnesses, hoses, or tubular frame rails.

Material Data - Cable Ties

Material	Polyamide 6.6 heat stabilized (PA66HS)	RoHS
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous	
Flammability	UL94 V2	

Material Data - Omega Clips

Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)	RoHS
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	

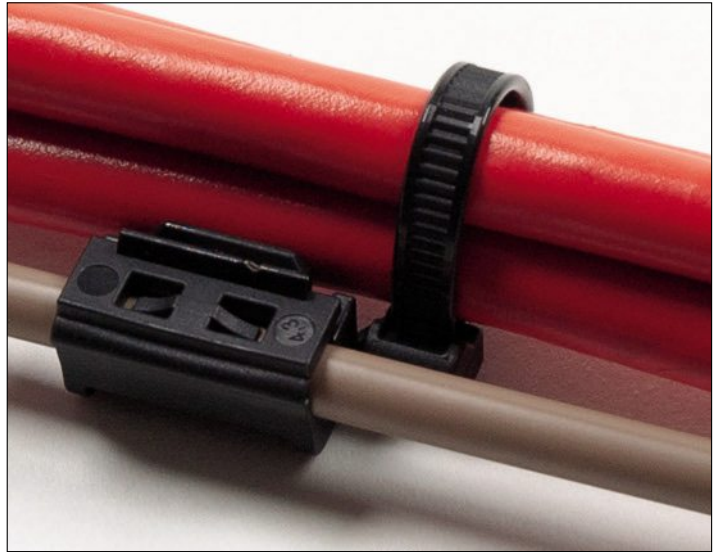
Product Selection

Article No.	Part No.	Type	Tensile Strength	Length (L)	Maximum Bundle Ø	Attaches to Diameter	Color	Pkg. Qty.	Drawing
			lbs (N)	in. (mm)	in. (mm)	in. (mm)			
156-00036	156-00036	T50ROC1A	50 (225)	7.9 (200)	1.8 (45)	0.16 - 0.40 (4.0 - 10.0)	Black	500	
156-00306	156-00306	T50ROC1B	50 (225)	7.9 (200)	1.8 (45)	0.16 - 0.40 (4.0 - 10.0)	Black	500	
156-00134	156-00134	T50SVC OC10-14	50 (225)	6.0 (155)	1.4 (35)	.40 - .55 (10.0 - 14.0)	Black	500	
156-00135	156-00135	T50SVC OC15-18	50 (225)	6.0 (155)	1.4 (35)	.60 - .71 (15.0 - 18.0)	Black	500	
156-00136	156-00136	T50SVC OC19-24.5	50 (225)	6.0 (155)	1.4 (35)	.75-.96 (19.0 - 24.5)	Black	500	
156-00272	156-00272	T50SVC OC25-31	50 (225)	6.0 (155)	1.4 (35)	.98-1.22 (25.0 - 31.0)	Black	250	
156-00273	156-00273	T50SVC OC31-39	50 (225)	6.0 (155)	1.4 (35)	1.22 - 1.54 (31.0 - 39.0)	Black	250	
156-00137	156-00137	T50SVC OC39-45	50 (225)	6.0 (155)	1.4 (35)	1.54 - 1.77 (39.0 - 45.0)	Black	250	

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Wire Clamping Cable Ties

Wire Clamping Ties were designed as an innovative solution to mounting wire or cable harness assemblies to wire suspension frames found in seating applications. The clamp easily secures to the wire frame for a tight fit and is available in four different wire frame sizes and two separate orientations to provide both perpendicular and parallel routing. The wire clamp design is ideally suited for easing the application process on the production floor by allowing for an easy snap fit of the harness assembly to the wire frame.



Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Product Selection		Type	Tensile Strength	Length (L)	Maximum Bundle Ø	Attaches to Diameter	Color	Pkg. Qty.	Drawing
Article No.	Part No.		lbs (N)	in. (mm)	in. (mm)	in. (mm)			
148-00089	148-00089	T50SOSWA1.8E	50 (225)	6 (150)	1.4 (35)	.07 (1.8)	Black	500	
148-00088	148-00088	T50SOSWA2.0E	50 (225)	6 (150)	1.4 (35)	.09 (2.18)	Black	500	
148-00095	148-00095	T50SOSWA3.4E	50 (225)	6 (150)	1.4 (35)	.13 (3.4)	Black	500	
148-00092	148-00092	T50SOSWA4.3E	50 (225)	6 (150)	1.4 (35)	.17 (4.3)	Black	500	
148-00090	148-00090	T50SOSWB1.8E	50 (225)	6 (150)	1.4 (35)	.07 (1.8)	Black	500	
148-00093	148-00093	T50SOSWB2.0E	50 (225)	6 (150)	1.4 (35)	.09 (2.18)	Black	500	
148-00096	148-00096	T50SOSWB3.4E	50 (225)	6 (150)	1.4 (35)	.13 (3.4)	Black	500	
148-00091	148-00091	T50SOSWB4.3E	50 (225)	6 (150)	1.4 (35)	.17 (4.3)	Black	500	

Installation tools - EVO7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Button Head Ties

Button Head ties provide a one-piece mounting solution for bundles, eliminating the need for additional mounts and fasteners. The strap contains serrations on both sides and has two opposing pawls recessed within the domed head, enabling the strap to be directed either way through the button head.

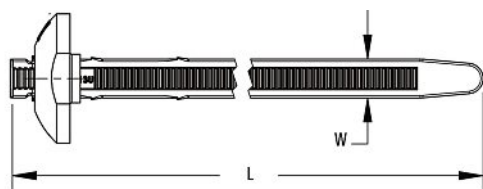
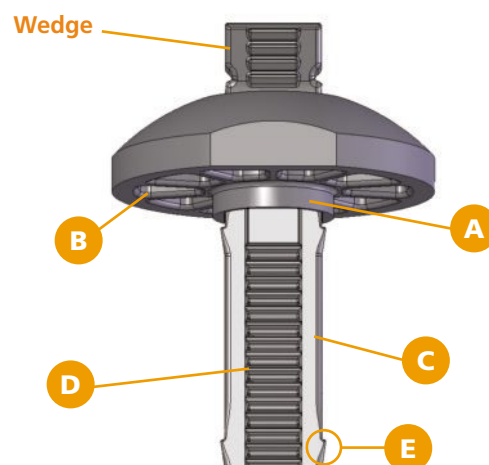
These key features of the Button Head Ties present ease of installation and high durability.

- A. Pilot Bushing** – Protects the strap from abrasion on the mounting hold edge
- B. Ribs** – Adds stability on the bottom of the head
- C. Strap** – Enhances flexibility due to its edge radiuses
- D. Serrations and Wedge** – Provides optimal strength when the strap serrations are seated in the head
- E. Lower Retainers** – Holds HellermannTyton's MSBT120 saddle mounts in place during assembly (BT130 only)



Material Data- Button Head	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Color	Black
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2

Material Data - Strap	
Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Color	Black
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Note: In order to assure the strap is fully locked in its final secure position, the installer must make sure that the "wedge" located at the end of the strap is fully seated in the button and flush with the top of the button. The MK9 cable tie tool is recommended and end use testing is advised.



MK9 Tool -
See page 77

See page 77

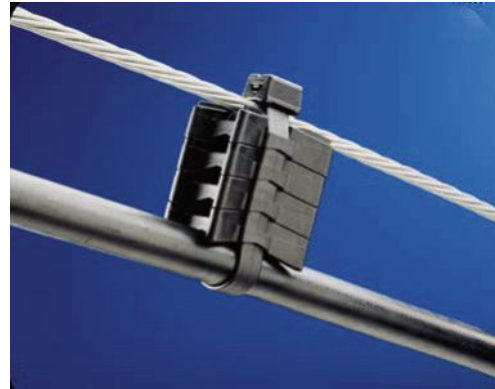
Product Selection			Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type										
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
BT105 Button Head Ties												
132-00010	132-00010	BT105R	105 lbs	(467)	9.63"	(244.4)	2.62"	(66.7)	.22"	(5.6)	Black	50
132-00011	132-00011	BT105L	105 lbs	(467)	15"	(381.5)	4.33"	(110)	.22"	(5.6)	Black	50
BT105 Button Head Ties with Pilot Bushings												
132-00006	132-00006	BT105RP	105 lbs	(467)	9.63"	(244.4)	2.62"	(66.7)	.22"	(5.6)	Black	50
132-00007	132-00007	BT105LP	105 lbs	(467)	15"	(381.5)	4.33"	(110)	.22"	(5.6)	Black	50
BT130 Button Head Ties with Retainers and Pilot Bushings												
132-00008	132-00008	BT130RDP	130 lbs	(578)	10.51"	(267.0)	2.87"	(73)	.30"	(7.6)	Black	50
132-00009	132-00009	BT130LDP	130 lbs	(578)	15"	(381.5)	4.33"	(110)	.30"	(7.6)	Black	50

Installation tools - MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Extended Length Ties (EL-TY)

HellermannTyton's El-Ty is a high strength strapping system used for supporting, securing, fastening, and spacing cables, 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.

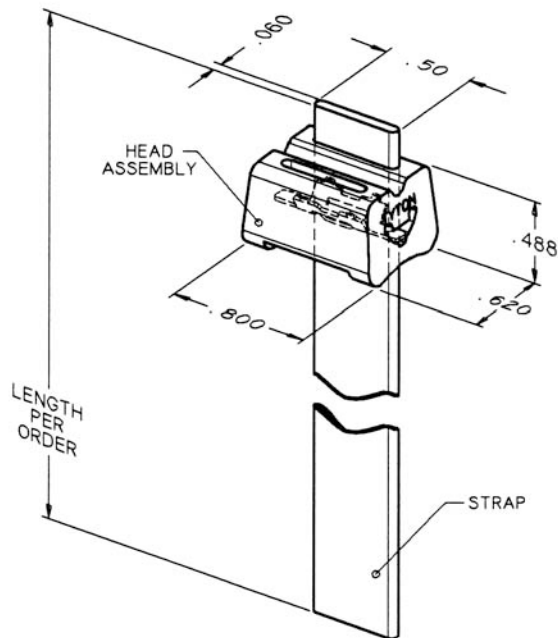


Material Data- Strap and Head

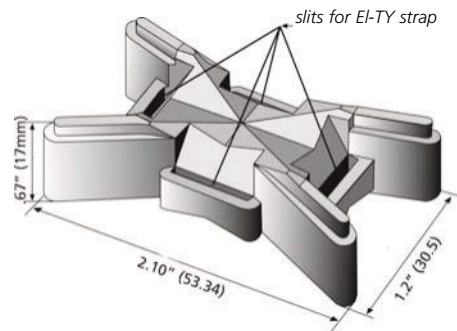
Material	Polyacetal (POM)	RoHS
Color	Black	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)	
Flammability	UL94 HB	

Material Data- Spacer

Material	Polypropylene, UV-resistant (PP)	RoHS
Color	Black	
Operating Temperature	-40 °F to +239 °F (-40 °C to +115 °C) continuous	
Flammability	UL94 HB	



El-Ty Strap and Locking Head



El-Ty Spacer

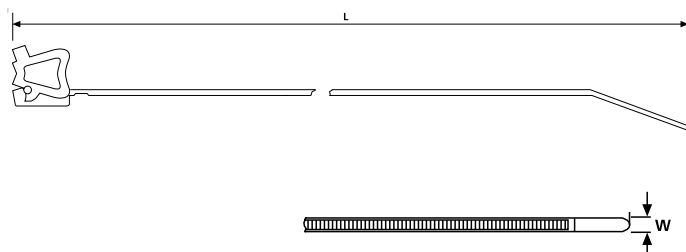
Product Selection

Article No.	Part No.	Type	Description	Color	Pkg. Qty.
111-30000	TELS-1	TELS1	1 - 50 ft reel of strap and 30 heads	Black	1
111-31000	TELS-H	TELSH	Double entry and locking heads	Black	25
111-32108	TELS-13	TELS-13	10 - 13.5" straps and 10 double locking heads	Black	1
111-32110	TELS-27	TELS-27	10 - 27" straps and 10 double locking heads	Black	1
111-32111	TELS-5K	TELS-5K	5 - 50 ft. reels and 150 heads	Black	1
111-32107	TELS-10K	TELS-10K	10 - 50 ft. reels and 300 heads	Black	1
111-32000	TELS-SPK2	TELS-SPK2	EL-TY Spacer	Black	50
111-32106	TELS-SPOOL	TELS-SPOOL	50 ft. reel of strap	Black	1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Aerial Support Spacer Ties

Aerial support spacer ties are two piece ties designed for standard spacing applications. The strap is molded from special high impact polyamide 6/6. The support spacer and head are made from a high density outdoor black polypropylene. Both materials offer resistance to sunlight, saltwater, and harsh chemical environments.



Material Data- Strap

Material	Polyamide 6.6 high impact modified (PA66HIR)
Color	Black
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Material Data-Spacer/Head

Material	Polypropylene, UV-resistant (PP)
Color	Black
Operating Temperature	-40 °F to +239 °F (-40 °C to +115 °C) continuous
Flammability	UL94 HB



Product Selection

Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
			lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
111-98501	TAS100RWS	TAS100RWS	100 lbs	(445)	8.25"	(209.6)	1.75"	(44.5)	.50"	(12.7)	Black	100
111-98500	TAS100MWS	TAS100MWS	100 lbs	(445)	10.7"	(272.3)	2.75"	(70)	.50"	(12.7)	Black	100
148-00022	TAS100LWS	TAS100LWS	100 lbs	(445)	16"	(420)	4.5"	(115)	.50"	(12.7)	Black	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.
Installation tools - MK9, MK9HT, MK9P.

Bundling Clips

Bundling clips are designed to provide simple and easy methods for securing cable bundles, hoses or pipes. They are fastened onto the tape bar using bundle or cable ties. The different fixing orientations allow tape clips to be used with a wide range of panel thicknesses and hole diameters. Standard bundling clips are available as well as standoff and stud mount versions.



Material Data	
Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Standard Bundling Clips

Standard bundling clips secure the bundle directly above the mounting hole.

Product Selection										
Article No.	Part No.	Type	Tape Bar Length (L)	Panel Thickness Minimum	Panel Thickness Maximum	Mounting Hole Ø	Material	Color	Pkg. Qty.	Drawing
			in. (mm)	in. (mm)	in. (mm)	in. (mm)				
151-00663	151-00663	TC6FT6	1.55" (39.3)	.03" (.07)	.22" (5.7)	.24 - .27" (6.2 - 6.8)	PA66HIRHS	Black	2000	
151-00651	151-00651	TC6FT6LG	1.55" (39.3)	.03" (.07)	.71" (18)	.24 - .27" (6.2 - 6.8)	PA66HIRHS	Natural	2000	
155-30802	155-30802	TC2FT6LG	2.17" (55)	.02" (0.6)	.2" (5.1)	.25 - .28" (6.5 - 7.0)	PA66HIRHS	Black	500	
150-95500	150-95500	TC5FT6S	1.46" (37)	.03" (0.75)	.06" (1.5)	.26 - .28" (6.5 - 7.0)	PA66HIRHS	Black	1000	
151-02901	151-02901	CHA2	2.13" (54)	.03" (0.8)	.08" (2)	.26 - .28" (6.5 - 7.0)	PA66	Black	500	
151-00605	151-00605	TCOP6 2x122	2.17" (55)	.02" (.6)	.24" (6)	.24 x .48" (6.2 x 12.2)	PA66HIRHS	Black	5000	
151-00029	151-00029	TCOP7 0x120	2.17" (55)	.02" (.6)	.24" (6)	.28 x .47" (7.0 x 12)	PA66HIRHS	Black	5000	
155-11601	155-11601	CLIP	2.17" (55)	.06" (1.5)	.12" (3.0)	.25 - .28" (6.3 - 7.0)	PA66HIRHS	Black	500	
150-08110	150-08110	CHA1	2.13" (54)	.02" (.05)	.05" (1.2)	.25 - .28" (6.3 - 7.0)	PA66	Black	500	
151-00790	151-00790	BCOW FT6M	1.46" (37)	.02" (.6)	.14" (3.5)	.26 - .28" (6.5 - 7.0)	PA66HIRHS	Black	2000	
102-69068	102-69068	ATSBC2 KSFT6,5	1.5" (39)	.06" (1.7)	.09" (2.3)	.25 - .27" (6.3 - 6.7)	PA66HIRHS	Black	500	
102-69067	102-69067	ATSBC2 KSFT6,5	1.5" (39)	.03" (.7)	.05" (1.3)	.25 - .27" (6.3 - 6.7)	PA66HIRHS	Black	500	
151-01109	151-01109	BC90AH2	1.0" (25)	.04" (1.0)	.06" (1.5)	.24 - .27" (6.2 - 6.8)	PA66HIRHS	Black	5000	
151-01125	151-01125	SOC13FT6LGL	1.7" (43)	.02" (0.6)	.22" (5.7)	.24 - .27" (6.1 - 6.9)	PA66HIRHS	Gray	6000	
151-01126	151-01126	SOC13FT6LGR	1.7" (43)	.02" (0.6)	.22" (5.7)	.24 - .27" (6.1 - 6.9)	PA66HIRHS	Black	6000	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Bundling Clips *continued*

Standoff Bundling Clips

Standoff bundling clips secure the bundle away from the mounting hole.

Product Selection											
Article No.	Part No.	Type	Tape Bar Length (L)	Panel Thickness Minimum	Panel Thickness Maximum	Distance Hole to Bundle	Mounting Hole Ø	Material	Color	Pkg. Qty.	Drawing
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)				
151-00623	151-00623	SOCH FT6	2.2" (56)	.03" (0.7)	.22" (5.7)	1.2" (31)	.25 - .27" (6.3 - 6.9)	PA66HIRHS	Black	1500	
151-00629	151-00629	SOCH FT6	2.2" (56)	.03" (0.7)	.22" (5.7)	1.2" (31)	.25 - .27" (6.3 - 6.9)	PA66HIRHS	Black	1500	
151-00650	151-00650	SOC8 FT6	2.4" (61)	.03" (0.7)	.22" (5.7)	.88" (22.4)	.24 - .27" (6.2 - 6.8)	PA66HIRHS	Natural	1500	
155-30902	155-30902	SOC4 M.FT6	2.2" (55)	.03" (0.7)	0.2" (5.1)	.79" (20)	.26 - .28" (6.5 - 7.0)	PA66HIRHS	Black	500	
151-00074	151-00074	SOC4 M.FT6	2.2" (55)	.03" (0.7)	0.2" (5.1)	.51" (13)	.26 - .28" (6.5 - 7.0)	PA66HIRHS	Black	500	
150-09201	150-09201	COW2 ODP7	1.7" (42)	.03" (0.8)	.18" (4.5)	.79" (20)	.25 - .28" (6.3 - 7.0)	PA66	Brown	500	
151-00080	151-00080	COW3 ODP7	1.7" (42)	.03" (0.8)	.18" (4.5)	1.2" (30)	.25 - .28" (6.3 - 7.0)	PA66HS	Black	500	
151-00665	151-00665	SOC8 FT6LG	1.6" (40)	.03" (0.7)	.23" (5.75)	.276" (7)	.26 - .28" (6.5 - 7.0)	PA66HIRHS	Black	1000	
155-01600	155-01600	STAND-OFF CLIP	1.6" (40)	.02" (0.4)	.06" (1.6)	.98" (25)	.26 - .27" (6.5 - 6.8)	PA66HIRHS	Black	500	
150-45397	150-45397	STAND-OFF CLIP	1.6" (40)	.02" (0.4)	.06" (1.6)	1.2" (31)	.26 - .27" (6.5 - 6.8)	PA66HIRHS	Black	500	
151-02600	151-02600	CH20D7	2.0" (50)	.03" (0.8)	.06" (1.6)	.79" (20)	.28" (7.0)	PA66	Black	100	
151-00903	151-00903	SOC10 FT6LG	2.3" (58)	.02" (.6)	.24" (6.7)	.58" (14.5)	.24 - .27" (6.1 - 6.9)	PA66HIRHS	Natural	3000	
151-00932	151-00932	SOC11 FTOVAL	2" (50)	.02" (.06)	.27" (6.8)	.79" (20)	.26 x .49" (6.5 x 12.5)	PA66HIRHS	Natural	3000	
151-00282	151-00282	SOC1 0405	2.2" (55)	.03" (0.7)	.14" (3.5)	.79" (20)	.25 - .26" (6.3 - 6.7)	PA66HIRHS	Black	500	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Stud Mount Bundling Clips

Stud mount bundling clips are easily inserted onto welded studs to secure the bundle.

Product Selection									
Article No.	Part No.	Type	Length (L)	Recommended Weld Stud Size	Distance Weld Stud to Bundle	Material	Color	Pkg. Qty.	Drawing
			in. (mm)	in. (mm)	in. (mm)				
151-00664	151-00664	BCOS5	2.3 " (59)	.2 " (5)	—	PA66HIRHS	Black	500	
151-00281	151-00281	BCOS6	2.3 " (59)	.24 " (6)	—	PA66HIRHS	Black	500	
151-26101	151-26101	TCSB5C-SD	2.2 " (55)	.2 " (5)	.49 " (12.5)	PA66HS	Black	500	
151-00017	151-00017	Tape Bar	2.2 " (55)	.2 " (5)	.90 " (22.8)	PA66HIRHS	Black	500	
151-00016	151-00016	BC30	2.2 " (55)	.2 " (5)	1.9 " (30)	PA66HIRHS	Black	500	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Connector Clips

Connector Clips are initially installed onto the appropriate mating connector found on a wire or cable harness assembly. The connector is then secured to the attachment surface using the connector clip mount. The attachment surface can be a hole, edge, stud, or even another harness assembly depending on the connector clip mount being used.



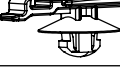
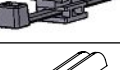
Material Data		RoHS
Material	Polyamide 6.6 heat stabilized (PA66HS)	
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous	
Flammability	UL94 V2	

Material Data		RoHS
Material	Polyamide 6.6 impact modified, heat stabilized, UV resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	

Product Selection									
Article No.	Part No.	Type	Panel Thickness Minimum	Panel Thickness Maximum	Mounting Hole Ø	Material	Color	Pkg. Qty.	Drawing
			in. (mm)	in. (mm)	in. (mm)				
151-00785	151-00785	CCFT6LG	.03" (.07)	.16" (4.0)	.24 - .26" (6.0 - 6.7)	PA66HIRHS	Black	5000	
151-00786	151-00786	CCFT6XLG	.03" (.07)	.43" (11.0)	.24 - .26" (6.0 - 6.7)	PA66HIRHS	Black	5000	
151-00775	151-00775	CCSFT6.5	.07" (1.7)	.09" (2.3)	.24 - .26" (6.0 - 6.7)	PA66HIRHS	Black	5000	
155-32602	155-32602	FT6LG.M.ST. AUFN.II	.03" (.075)	.20" (5.0)	.26 - .28" (6.5 - 7.0)	PA66HIRHS	Black	500	
151-00677	151-00677	CC08	.03" (0.7)	.23" (5.75)	.25 - .27" (6.25 - 6.75)	PA66HIRHS	Natural	5000	
151-00925	151-00925	CCOVAL	.02" (0.6)	.24" (6.0)	.24 x .48" (6.2 x 12.2)	PA66HIRHS	Black	5000	
151-01108	151-01108	CCOVAL2	.02" (0.6)	.24" (6.0)	(6.2x12.2) (6.5x12.5) (6.5x13.0) (7.0x12.0)	PA66HIRHS	Black	5000	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

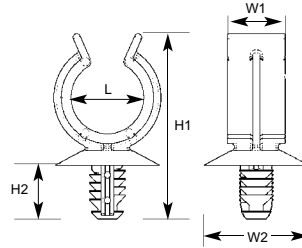
Connector Clips *continued*

Product Selection									
Article No.	Part No.	Type	Panel Thickness Minimum	Panel Thickness Maximum	Mounting Hole Ø	Material	Color	Pkg. Qty.	Drawing
			in. (mm)	in. (mm)	in. (mm)				
155-30702	155-30702	FT6LG.YAZ. CONNECT-TS	.03" (.07)	.20" (5.1)	.25 - .28" (6.3 - 7.0)	PA66HIRHS	Black	500	
151-01136	151-01136	CC12	.02" (0.6)	.25" (6.5)	.31 x .59" (8.0x15.0)	PA66HIRHS	Black	5000	
151-00765	151-00765	CC09	.02" (0.6)	.25" (6.35)	.35 x .67" (9.0 x 17.0)	PA66HIRHS	Black	1000	
151-00704	151-00704	YCCFT82x185	.06" (1.5)	.18" (4.5)	.322 x .728" (8.5 x 18.5)	PA66HIRHS	Black	1000	
151-00675	151-00675	YCKKSFT6.5	.03" (.07)	.05" (1.3)	.25 - .26" (6.3 - 6.7)	PA66HIRHS	Black	500	
151-00792	151-00792	YCKKSFT 6.5-PT1.7-2.3	.07" (1.7)	.09" (2.3)	.25 - .26" (6.3 - 6.7)	PA66HIRHS	Black	500	
151-00835	151-00835	YCKKSFT62x122 PT0.7-1.3	.03" (.07)	.05" (1.3)	.24 x .48" (6.2 x 12.2)	PA66HS	Black	10000	
151-00836	151-00836	YCKKSFT62x122 PT1.7-2.3	.07" (1.7)	.09" (2.3)	.24 x .48" (6.2 x 12.2)	PA66HS	Black	10000	
151-00833	151-00833	YCKKSFT62x122 PT0.7-1.3 90	.03" (.07)	.05" (1.3)	.24 x .48" (6.2 x 12.2)	PA66HS	Black	10000	
151-00834	151-00834	YCKKSFT62x12 2PT1.7-2.3 90	.07" (1.7)	.09" (2.3)	.24 x .48" (6.2 x 12.2)	PA66HS	Black	10000	
151-00513	151-00513	YCCSFT 62122	.02" (.06)	.04" (1.0)	.24 x .48" (6.2 x 12.2)	PA66HIRHS	Black	500	
155-31102	155-31102	YAZ-CONN- TAPE-CLIP	—	—	—	PA66HS	Black	500	
156-00507	156-00507	T50RYCCA	—	—	—	PA66HS PA66HIRHS	Black	100	
156-00521	156-00521	T50RYCCB	—	—	—	PA66HS PA66HIRHS	Black	100	
155-36002	155-36002	STECKERHALTER SITZ	.02" (0.6)	.12" (3.0)	.26 - .28" (6.7 - 7.0)	PA66HIRHS	Black	1000	
155-03800	155-03800	FT6 LG-AMP	.03" (.07)	.24" (6.0)	.26 x .28" (6.7 - 7.0)	PA66HIRHS	Black	500	
151-00429	151-00429	EC42	.06" (1.5)	.16" (4.0)	—	PA66HIRHS	Black	500	
151-00430	151-00430	EC43	.06" (1.5)	.16" (4.0)	—	PA66HIRHS	Black	500	
151-01113	151-01113	EC46	.04" (1.0)	.12" (3.0)	—	PA66HIRHS	Black	10000	

Fir Tree Mount Tube Clip

Designed to offer a durable single-hole mounting, this tube clip allows the installer to insert the fir tree with minimal force while providing a secure hold.

Material Data	
Material	Polyamide 6.6 impact modified (PA66HIR)
Color	Black
Operating Temperature	-40 °F to +110 °F (-40 °C to +230 °C) continuous
Flammability	UL94 HB



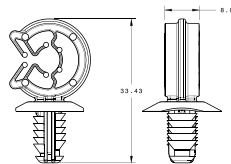
Product Selection											
Article No.	Part No.	Type	Dimensions in. (mm)					Mounting Hole Ø	Panel Thickness	Color	Pkg. Qty.
			H1	H2	W1	W2	L				
151-14303	PC15FT7	PC15FT7	1.07" (27.1)	.44" (11.1)	.47" (12)	.85" (21.6)	.62" (15.7)	.25" (6.5)	.12" (3.055)	Black	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

C Clip with Fir Tree Mount

The SC6.6 is designed for quick installation of cables to frames or rails. The unique fir tree design allows for easy insertion of the clip into a pre-drilled hole. Once installed, the cable can be quickly snapped in place for a secure fit. The SC6.6 is made of our durable impact modified, heat/UV stabilized PA6/6 material.

Material Data	
Material	Polyamide 6.6 high impact modified, heat and UV stabilized (PA66HIRHSUV)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



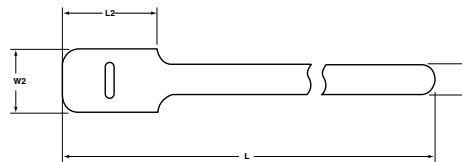
Product Selection									
Article No.	Part No.	Type	Panel Thickness Minimum	Panel Thickness Maximum	Bundle Ø Maximum	Mounting Hole Ø	Material	Color	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)			
151-00927	151-00927	SC6.6	.25" (6.35)	.03" (.70)	.30" (7.6)	.26" (6.6)	PA66HIRHSUV	Black	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Grip Tie Straps

The Grip Tie is a low profile, one piece fastening device. Constructed of polyethylene hook and nylon loop and laminated back to back, the Grip Tie features quick release for repetitive access to cable and wire. It can be opened and closed numerous times without failure. The Grip Tie is reusable, adjustable, releasable, and easy to install.

Available in rolls and straps in 6", 8", 11" and 15" sizes. Grip Ties are available in a variety of colors and are versatile enough for applications ranging from network installations to bundling power cords. Grip Ties are also customizable with your company name (minimum quantities apply).

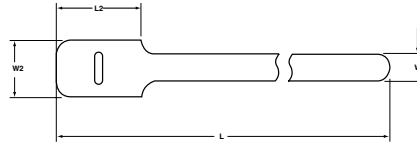


Product Selection

			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Width (W2)	Length (L2)		Pkg. Qty.
Article No.	Part No.	Type	lbs. (N)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Color	
6" Grip Ties										
854-44316	GT.375X60C2	GT.375X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.375" (9.525)	.75" (19.05)	1.5" (38.1)	Black	100
854-44339	GT.50X60P2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		10
854-44336	GT.50X60C2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44342	GT.50X62P2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Red	10
854-44341	GT.50X62C2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44344	GT.50X63P2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Orange	10
854-44343	GT.50X63C2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44346	GT.50X64P2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Yellow	10
854-44345	GT.50X64C2	GT.50x6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44348	GT.50X65P2	GT.50x6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Green	10
854-44347	GT.50X65C2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44350	GT.50X66P2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Blue	10
854-44349	GT.50X66C2	GT.50X6	40 lbs (177.93)	6" (152.4)	1" (25.4)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
8" Grip Ties										
854-44355	GT.50X80P2	GT.50x8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Black	10
854-44353	GT.50X80C2	GT.50x8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44358	GT.50X82P2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Red	10
854-44357	GT.50X82C2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44360	GT.50X83P2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Orange	10
854-44359	GT.50X83C2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44362	GT.50X84P2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Yellow	10
854-44361	GT.50X84C2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44364	GT.50X85P2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Green	10
854-44363	GT.50X85C2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44366	GT.50X86P2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Blue	10
854-44365	GT.50X86C2	GT.50X8	40 lbs (177.93)	8" (203.2)	1.75" (44.45)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Grip Tie Straps *continued*



Product Selection			Min. Tensile Strength	Length (L)	Max. Ø Bundle	Width (W)	Width (W2)	Length (L2)		Pkg. Qty.
Article No.	Part No.	Type								
11" Grip Ties										
854-44320	GT.50X110P2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Black	10
854-44317	GT.50X110C2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44323	GT.50X112P2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Red	10
854-44322	GT.50X112C2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44325	GT.50X113P2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Orange	10
854-44324	GT.50X113C2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44327	GT.50X114P2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Yellow	10
854-44326	GT.50X114C2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44329	GT.50X115P2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Green	10
854-44328	GT.50X115C2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
854-44331	GT.50X116P2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)	Blue	10
854-44330	GT.50X116C2	GT.50X11	40 lbs (177.93)	11" (279.4)	2.63" (66.802)	.5" (12.7)	1" (25.4)	1.5" (38.1)		100
15" Grip Ties										
854-44371	GT.75X150P2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)	Black	10
854-44369	GT.75X150C2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)		100
854-44374	GT.75X152P2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)	Red	10
854-44373	GT.75X152C2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)		100
854-44376	GT.75X153P2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)	Orange	10
854-44375	GT.75X153C2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)		100
854-44377	GT.75X154C2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)	Yellow	100
854-44378	GT.75X154P2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)		10
854-44380	GT.75X155P2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)	Green	10
854-44379	GT.75X155C2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)		100
854-44382	GT.75X156P2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)	Blue	10
854-44381	GT.75X156C2	GT.75X15	50 lbs (222.41)	15" (381)	3.88" (98.552)	.75" (19.05)	1.5" (38.1)	2.5" (63.5)		100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Grip Tie Rolls

For custom-cut lengths, HellermannTyton offers the hook and loop strap on a five yard and 25 yard roll. Ideal for job site applications, desired lengths can be cut on the spot.

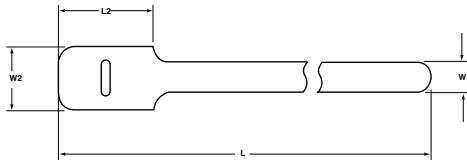


Product Selection			Width (W)		Color	Pkg. Qty.
Article No.	Part No.	Type	in.	(mm)		
854-44384	GT.75X1800	GT.75X180	.75"	(19.05)	Black	180" (5 yds.)
854-44388	GT.75X1802	GT.75X180	.75"	(19.05)	Red	180" (5 yds.)
854-44389	GT.75X1803	GT.75X180	.75"	(19.05)	Orange	180" (5 yds.)
854-44390	GT.75X1804	GT.75X180	.75"	(19.05)	Yellow	180" (5 yds.)
854-44391	GT.75X1805	GT.75X180	.75"	(19.05)	Green	180" (5 yds.)
854-44392	GT.75X1806	GT.75X180	.75"	(19.05)	Blue	180" (5 yds.)
854-44395	GT.75X6000	GT.75X600	.75"	(19.05)	Black	600" (16.6 yds.)
854-44396	GT.75X9000	GT.75X900	.75"	(19.05)	Black	900" (25 yds.)
854-44397	GT.75X9004	GT.75X900	.75"	(19.05)	Yellow	900" (25 yds.)

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Write-on Grip Ties

In situations where instant identification is needed, HellermannTyton provides Grip Ties with a white write-on area. This smudge-free surface is ideal for fast and easy identification with a ballpoint pen or felt-tip marker. The write-on area is approximately 3/8" (H) x 1-1/4" (W). It is positioned in the center of the black 6", 8" and 11" straps, as well as spaced every 12" on the Grip Tie rolls.

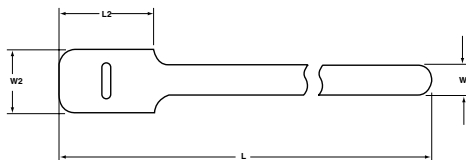


Product Selection											
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Pkg. Qty.
			lbs. (N)		in. (mm)		in. (mm)		in. (mm)	in. (mm)	
854-44340	GT.50X60P2W	GT.50X6W	40 lbs	(177.93)	6"	(152.4)	1"	(25.4)	.5"	(12.7)	10
854-44338	GT.50X60C2W	GT.50X6W	40 lbs	(177.93)	6"	(152.4)	1"	(25.4)	.5"	(12.7)	100
854-44356	GT.50X80P2W	GT.50X8W	40 lbs	(177.93)	8"	(203.2)	1.75"	(44.45)	.5"	(12.7)	10
854-44354	GT.50X80C2W	GT.50X8W	40 lbs	(177.93)	8"	(203.2)	1.75"	(44.45)	.5"	(12.7)	100
854-44321	GT.50X110P2W	GT.50X11W	40 lbs	(177.93)	11"	(279.4)	2.63"	(66.8)	.5"	(12.7)	10
854-44319	GT.50X110C2W	GT.50X11W	40 lbs	(177.93)	11"	(279.4)	2.63"	(66.8)	.5"	(12.7)	10
854-44386	GT.75X1800W	GT.75X180W	-	-	180"	(5 Yds.)	-	-	.75"	(19.05)	180"

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Grip Ties for Plenum Applications

HellermannTyton offers UL94V-2 flame rated Grip Ties for use in air handling spaces. These Grip Ties are UL Listed in accordance with the National Electrical Code regulations. They are available in three lengths as well as a 180" roll.



Product Selection											
Article No.	Part No.	Type	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Pkg. Qty.
			lbs. (N)		in. (mm)		in. (mm)		in. (mm)	in. (mm)	
854-44352	GT.50X6MP2V2	GT.50X6	40 lbs	(177.93)	6"	(152.4)	1"	(25.4)	.5"	(12.7)	10
854-44368	GT.50X8MP2V2	GT.50X8	40 lbs	(177.93)	8"	(203.2)	1.91"	(48.5)	.5"	(12.7)	10
854-44334	GT.50X12MP2V2	GT.50X12	40 lbs	(177.93)	12"	(304.8)	3.18"	(80.7)	.5"	(12.7)	10
854-44394	GT.75X180MV2	GT.75X180	-	-	-	-	-	-	.75"	(19.05)	180"

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

EVO7™ Tool

At the heart of the EVO 7 lies revolutionary, patent-pending Tension/Lock/Cut (TLC) technology that dramatically changes how cable ties are cut. The key is TLC's ability to lock each tie in place at the desired tension prior to cutting. Because the tension is fixed at the trigger when squeezing begins, only a minimum of hand force and a shorter range of motion is required to cut through each tie.

A. Easy Blade Replacement

One-way blade installation makes on-site blade replacement a snap.

B. Long Narrow Nose

Allows you to cut cable ties in the tightest of spaces quickly and easily.

C. Trigger

Made from soft-grip, non-slip material, the contoured full-length trigger incorporates individual finger grips to accommodate multiple hand sizes.

D. Integrated Hanger Hook

Allows easy storage and accessibility.

E. Contoured Ergonomically-Engineered Handle

Crafted from soft-grip, non-slip material, the grip features an integrated air cushion that conforms to your hand for maximum comfort.

F. Tension Knob

Rotate the knob to any of 33 precise pre-set tension settings.

G. Thumb Lock

To unlock the tension knob, slide the non-slip thumb lock forward, adjust to desired tension setting and release the thumb lock to lock in place.

H. Impact-Resistant Housing

Made from durable, light-weight composite, the EVO 7 weighs 9.7 oz. (.275 kg), resists chemical contamination and is built to stand up to the toughest industrial environments.



Product Selection

Article No.	Part No.	Type	Description	Cable Tie Series	Pkg. Qty.
110-70083	110-70083	EVO7	Standard hand span 3.5" (90mm).	All 18-80 lb. Series Ties	1
110-70084	110-70084	EVO7SP	Short hand span 3.1" (80mm).	All 18-80 lb. Series Ties	1
110-70106	110-70106	BLADEKT	Blade replacement kit for EVO7 and EVO7SP. Contains (1) Blade & (1) Nose piece screw.		1
110-70091	110-70091	T8SD	T8 Star Driver for removal/insertion of tension lock out screw.		1
110-70089	110-70089	CALTOOL	Calibration tool to be used for removal of cap at back of tension knob and for calibrating tool on site.		1
110-99000	110-99000	UC200	UC200 Tension Gauge for tensile read outs when calibrating tools on site.		1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification.

MARK 9 Tools

Specifically-developed for maximum ergonomic and performance values, the Mark 9 series tools combine reduced hand effort and durable components to ensure efficient cable tie assembly and a longer life cycle. The Mark 9 tools can be used with nearly every HellermannTyton cable tie. Able to accommodate ties up to .53" in width, the Mark 9 tools can be used with HellermannTyton's T18* series cable ties as well as our heavy duty ties which include the T250 series and EL-TY. HellermannTyton offers a high-tension version of the Mark 9 (MK9HT) that has the same design features as the standard counterparts but with higher cut-off tension capabilities. The Mark 9 high tension tools offer a 5/8" stroke.



MK9



MK9HT



MK9SST

Product Selection

Article No.	Part No.	Type	Description	Mil. Spec.	Cable Tie Series	Pkg. Qty.
110-09500	MK9	MK9	Durable and lightweight, the Mark 9 tool is user friendly and adjustable, with top-of-the-line design features. Accommodates heavy duty cable ties.	MS90387-1	T18* thru T250 Series CTT20 thru CTT175 Series EL-TY Series Wide Strap Series	1
110-09000	MK9HT	MK9HT	The Mark 9 High Tension tool has the same design features as the MK9, but offers an increased tension range.		T18* thru T250 Series CTT20 thru CTT175 Series EL-TY Series Wide Strap Series	1
110-09800	MK9RE	MK9RE	The MK9 Rounded Edge tool has the same design features as the MK9 although it has a special nose piece that leaves a 2mm round tail.		T18* thru T250 Series CTT20 thru CTT175 Series EL-TY Series Wide Strap Series	1
110-09600	MK9REF	MK9REF	The Mark 9 Reduced Effort tool has a reduced effort trigger mechanism for operators with small hands. It has a shorter pawl stroke.		T18* thru T250 Series CTT20 thru CTT175 Series EL-TY Series Wide Strap Series	1
110-95000	MK9SST	MK9SST	Adapted for use with stainless steel ties, the MK9 Stainless Steel tool retains the same design features as the MK9 series.		All MBT Series for both 304 and 316 materials	1
110-00220	MK9BLADEKIT	MK9BLADEKIT	Service kit for the MK9 tool includes replacement blade, screw for nose piece, and instructional card.			1
110-00221	MK9-221	MK9-221	Replacement blade for MK9 series.			1
110-05114	MK9SS-114	MK9SS-114	Replacement blade for MK9SST series tools.			1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification. *Does not include T18S Series ties .08" wide.

Other Mechanical Cable Tie Tools

HellermannTyton offers an assortment of mechanical tools which can be used with any HellermannTyton cable tie. When using these tools, the cable tie is hand applied and then manually tensioned and cut-off without the use of an extraneous power source.



MK7HT



TWT2

TWT1

Product Selection

Article No.	Part No.	Type	Description	Cable Tie Series	Pkg. Qty.
110-07000	MK7HT	MK7HT	Durable and lightweight, the Mark 7 High Tension tool is user friendly and adjustable; with top-of-the-line design features and offers an increased tension range.	T30 thru T50 Series CTT20 thru CTT60 Series	1
110-20003	TWT1	MK20	The TWT1 is a lightweight and economical twist tool for standard cable ties. Offers speed and efficiency. Fits into a pocket. (Color Orange).	T18 thru T50 Series CTT20 thru CTT60 Series	1
110-21060	TWT2	MK21	The TWT2 is a lightweight and economical twist tool for heavy duty cable ties. Offers speed and efficiency. Fits into a pocket. (Color Blue).	T120 thru T150 Series CTT175 Series	1
110-11150	T150	T150	The T150 Tool is a 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
111-11250	T250	T250	The T250 has the same design features as the T150 Tool, but can tension and cutoff a wider tie.	T150 thru T250 Series CTT175 Series	1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification.

Power Assisted Cable Tie Tools

HellermannTyton's Mark 7 and Mark 9 power assisted (MK7P & MK9P) tools utilize pneumatic power to tension and cut-off HellermannTyton cable ties. The MK7P and MK9P tools feature an ergonomic design while offering time/labor savings and ease of use benefits derived from pneumatic power. These tools feature a non-slip, comfortable grip, soft touch trigger, and one touch tensioning/cut-off capability. HellermannTyton's pneumatic cable tie tools are lightweight, high performance, and suited for extended use.

Product Features

- Ergonomic

The ergonomic design of the pneumatic cable tie tools incorporates a comfortable grip, low weight, and easy trigger depression to reduce installer effort and strain while installing cable ties.

- Operation

MK7P & MK9P speed assembly. Just one pulse of the soft touch trigger assembly actuates an immediate tension and cut-off of the cable tie.

- Cable tie waste is ejected to the side after the cable tie is applied, ensuring smooth operation of the tool.
- Uses dry or lubricated air.
- Operates between 90 PSI and 105 PSI maximum.
- Supplied with a 6 inch lead which comes with a male quick connect fitting with a female coupler for 1/8" flow.

- Design

HellermannTyton's pneumatic tools are manufactured with tough, chromium steel components and high impact, glass reinforced nylon housings for maximum durability.

- Tensioning

An easy to read indicator verifies tension settings. The tools feature an easy dial-in tension adjustment, along with a lock-out capability. The tension adjustment on the MK7P and the MK9P is designed with an operator friendly, positive "click" design for easy use. The tension can readily be locked out to allow the tension adjustment to remain at a constant setting that can only be changed by approved personnel. The fine adjust tension knob has a unique lever feature used to reduce adjustment torque.



MK9P

Mark 7 Pneumatic

The Mark 7 Pneumatic (MK7P) is built to perform in demanding production and manufacturing environments. Heavy duty precision parts ensure repeatability in the tensioning process. The MK7P fits comfortably in the operator's hand, reducing hand, arm and wrist fatigue. Due to its ergonomic features, HellermannTyton's MK7P makes it easier for the installer to consistently apply cable ties while maintaining correct tension and flush cut-off. Safety is enhanced, as the MK7P can eliminate sharp edges of a cut-off cable tie.



MK7P

Material Data

Power Supply	Dry or Lubricated Air
Cycle Time	4 strokes per second
Weight	16oz
Pawl Travel Stroke	1.0" (2.54 cm)
Tension Force	125 to 180 N, adjustable

Product Selection

Article No.	Part No.	Type	Description	Cable Tie Series	Pkg. Qty.
110-07101	MK7P	MK7P	Includes Mark 7 Pneumatic tool and quick connect fittings. Ergonomic tool uses pneumatic power and accomplishes rapid tension and cut-off with one trigger depression.	T18 thru T50 Series CTT20 thru CTT60 Series	1
110-07111	MK7P-342	Replacement Blade	MK7P Replacement Blade		1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. Minimum order quantity for MK7P-342 is 5.

MK9 Pneumatic

The Mark 9 Pneumatic (MK9P) is constructed with heavy-duty parts to ensure that it performs optimally in demanding environments. It is ideally designed to apply heavy-duty ties (T50-T250), clamp and button head ties.

Like the MK7P, HellermannTyton's MK9P incorporates the next level of ergonomic improvement with its low weight, comfortable grip and easy trigger depression. Very durable, the pneumatic MK9P features adjustable, easy to read tension settings. Lock-out features are standard.

The MK9P is available with lower air attachment (standard) or can be ordered with an upper air attachment.



MK9PUA (Upper Air)



MK9P

Material Data

Power Supply	Dry or Lubricated Air
Cycle Time	2 strokes per second
Weight	32oz
Pawl Travel Stroke	1.25" (3.175 cm)
Tension Force	125 to 310 N, adjustable

Product Selection

Article No.	Part No.	Type	Description	Cable Tie Series	Pkg. Qty.
110-09101	MK9P	MK9P	Includes Mark 9 Pneumatic tool and quick connect fittings. Ergonomic tool uses pneumatic power and accomplishes rapid tension and cut-off with one trigger depression.	T50 thru T250 Series CTT20 thru CTT175 Series EL-TY Series Button Head Ties	1
110-09112	MK9PUA	MK9P	Includes Mark 9 Pneumatic tool and quick connect fittings with upper air option for top air connection. Includes a hanger for an optional overhead tool balancer (not included). Ergonomic tool uses pneumatic power and accomplishes rapid tension and cut-off with one trigger depression.	T50 thru T250 Series CTT20 thru CTT175 Series EL-TY Series Button Head Ties	1
110-09111	MK9P-109	MK9P-109	MK9P Replacement Blade		1**

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

**Minimum order quantity of MK9P-109 is 5.

Common Accessories for MK7P and MK9P

HellermannTyton offers a portable kit that incorporates carbon dioxide (CO₂) as the primary air source. This unique feature will allow for greater flexibility, mobility and the elimination of air line to the tool.

Product Selection

Article No.	Part No.	Type	Description	Pkg. Qty.
110-09005	MKPCOHOSE	MKPCOHOSE	Regulator and hose that attaches to HPA tanks to supply portable air for all pneumatic series tools.	1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Automatic Cable Tie Systems

HellermannTyton's automatic cable tie tool systems are compact, fast, reliable, and versatile accommodating a variety of wiring harness, and bundling and securing requirements. These tool systems are designed to provide significant labor and cost savings through process improvements, lower installed costs and greater consistency, quality and ergonomic benefits.

Product Features

- Fast

Cable ties are installed quickly with one easy trigger depression, increasing productivity while decreasing labor costs.

- Reliable

HellermannTyton's automatic cable tie systems have been tested to perform extremely consistently without interruption to work flow.

- Ergonomic

The ergonomic design of the automatic cable tie tool systems feature a comfortable grip, low weight, and easy trigger depression to reduce installer effort and strain while installing cable ties.

- Easy to Use

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

- Automation

The automatic cable tie systems can be implemented into fully automated applications to further increase productivity and decrease labor costs.

- Flexible Manufacturing/Versatility

HellermannTyton's automatic cable tie tool systems support principles of flexible manufacturing requirements and environments. The systems can be used in handheld, bench mount and overhead assembly configurations. The versatile overhead assembly option provides the ultimate integration to the customer's manufacturing area. HellermannTyton's automatic tools are powered by a standard 110 AC 24V (AT2000) and 110 AC 27 V (AT2060) electrical outlet that converts to a low DC voltage to the tool. All power systems offer the installer the mobility needed to tackle different harnessing requirements.

- Uniform Fastening Quality

HellermannTyton's automatic cable tie systems feature adjustable tension control to deliver consistent levels of cable tie fastening.

- Range

HellermannTyton offers the widest range of automatic cable tie tool systems which cover cable tie tensile strengths of 18, 30, and 50 pounds with bundle diameters between 1/16" to over 3".



AT2000



An LED panel shows the status of the tool.

Product Selection		
Article No.	Part No.	Max. Ø Bundle
120-00000	AT2000	.75" (20 mm)
103-00000	AT2060	1.25" (31 mm)
102-00000	ATS10200000	3.14" (80 mm)

AT2000

The HellermannTyton Autotool 2000 completely installs cable ties on bundles up to 3/4" in diameter. This automatic cable tie tool is highly reliable and offers ergonomic benefits including low weight, easy trigger depression, a comfortable hand grip and correct balance - all which reduce operator strain. The AT2000 possesses an LED panel which makes it easier to maintain and operate the tool.

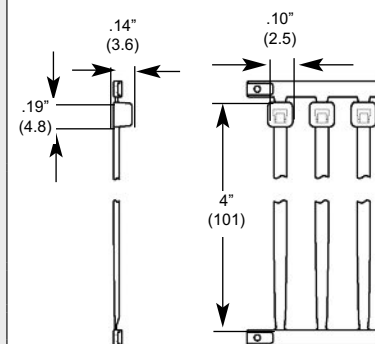


AT2000 Technical Specifications

Power Supply	Electrical, with Power Pack or Battery Pack
Cycle Time	0.8 s
Weight	2.6lbs
Installation	Handheld, bench mount or overhead
Tension Force	Adjustable

AT2000 Cable Tie Specifications

Operating Temperature	
Natural Polyamide 6.6	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Heat stabilized, black Polyamide 6.6	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Natural, Stanyl Polyamide 4.6	-40 °F to +275 °F (-40 °C to +135 °C) continuous
Reel Diameter	17.7 " (450)
Reel Width	5.20 " (132)



AT2000 Cable Ties

US
File# E64139

Product Selection

Article No.	Part No.	Type	Description	Min. Tensile Strength lbs. (N)	Max. Ø Bundle in. (mm)	Pkg. Qty.
120-00000	AT2000	Autotool 2000	Includes AT2000 tool, power supply, power cord, tool cord, and manual			1
120-00060	120-00060	Control Box	Control Box for linking AT2000 to automation			1

Natural Cable Ties

120-05001	T18RA50	T18RA50-N66-NA	Cable ties on bandolier for use with the AT2000	18 lbs (80)	.75" (20)	20,000 per carton includes: 50 per bandolier 500 per package
120-05004	T18RA5000	T18RA5000-N66-NA	Cable ties on reel for use with the AT2000	18 lbs (80)	.75" (20)	10,000 per carton includes: 5,000 per reel 2 reels per carton

Black, Heat Stabilized Cable Ties

120-05003	T18RA50HSW	T18RA50-HSW-BK	Cable ties on bandolier for use with the AT2000	18 lbs (80)	.75" (20)	20,000 per carton includes: 50 per bandolier 500 per package
120-05007	T18RA5000HSW	T18RA5000-HSW-BK	Cable ties on reel for use with the AT2000	18 lbs (80)	.75" (20)	10,000 per carton includes: 5,000 per reel 2 reels per carton

Natural, Stanyl Cable Ties

120-05015	T18RA5000HR	T18RA5000HR-N46	Cable ties on reel for use with the AT2000	18 lbs (80)	.75" (20)	10,000 per carton includes: 5,000 per reel 2 reels per carton
-----------	--------------------	-----------------	--	-------------	-----------	---

V/O rated ties can be made available for the AT2000. Various tie colors available upon request (Contact HellermannTyton for lead time). Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. For information on AT2000's Bench Mount System and Overhead Suspension Assembly see page 85 and 86. For information on Wire Retainers for Harness Boards and AT2000's battery pack see page 87.

AT2060

HellermannTyton's AT2060 automatically installs cable ties for bundles up to 1-1/4". The many ergonomic benefits include easy trigger depression and low weight that reduces operator effort and strain. Operation and maintenance of the tool are enhanced by the self-diagnostic LED panel located on the AT2060.

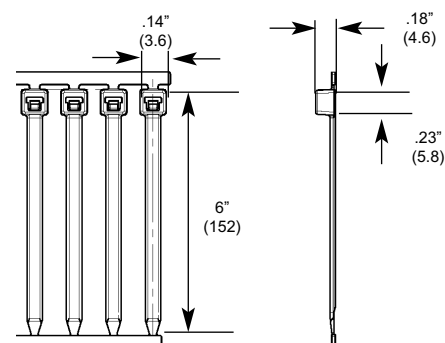


AT2060 Technical Specifications

Power Supply	Electrical
Cycle Time	1.2 seconds
Weight	3.9lbs
Pawl Travel	1.25" (3.175 cm)
Stroke	
Tension Force	Adjustable

AT2060 Cable Tie Specifications

Operating Temperature	
Natural Polyamide 6.6	-40 °F to +185 °F (-40 °C to +85 °C)
Heat stabilized, black, Polyamide 6.6	-40 °F to +221 °F (-40 °C to +105 °C)
Reel Diameter	17.7 " (450)
Reel Width	7.197 " (182.8)
Reel Weight	7 lbs



Product Selection

Article No.	Part No.	Type	Description	Min. Tensile Strength	Max. Ø Bundle	Pkg. Qty.
				lbs. (N)	in. (mm)	
103-00000	AT2060	AT2060	Includes AT2060 tool, power supply, power cord, tool cord, and maintenance and operation manual.			1

Natural Cable Ties

103-00002	T30RA30	T30RA	Cable ties on a bandolier for use with the AT2060 tool	30 lbs (133.44)	1.25" (31)	6,000 per carton includes: 30 per bandolier 600 per bag
103-00001	T30RA3000	T30RA3000	Cable ties on a reel for use with the AT2060 tool	30 lbs (133.44)	1.25" (31)	6,000 per carton includes: 3,000 per reel 2 reels per carton

Black, Heat Stabilized Cable Ties

103-00003	T30RA300HS	T30RA	Cable ties on a bandolier for use with the AT2060 tool	30 lbs (133.44)	1.25" (31)	6,000 per carton includes: 30 per bandolier 600 per bag
103-00004	T30RA30000HS	T30RA	Cable ties on a reel for use with the AT2060 tool	30 lbs (133.44)	1.25" (31)	6,000 per carton includes: 3,000 per reel 2 reels per carton

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. V/O rated ties and 4/6 ties for high temperatures can be made available for the AT2060. Various colors available upon request (Contact HellermannTyton for lead time).

For information on AT2060's Bench Mount System and Overhead Suspension Assembly see page 85 and 86.
For information on Wire Retainers for Harness Boards see page 87.

AT2000 and AT2060

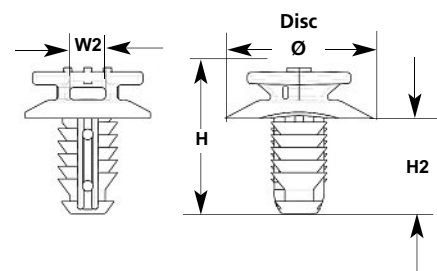
Fir Tree Mount For Automatic Cable Tie Tool System

This fir tree mount is designed for use with HellermannTyton Automatic Cable Tie Tool Systems. For more information on this system, contact HellermannTyton.

Material Data		RoHS
Material	Polyamide 6.6 high impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C)	
Flammability	continuous	
		UL94 HB

Product Selection							
Article No.	Part No.	Type	Disc Ø in. (mm)	Width (W2) in. (mm)	Height (H) in. (mm)	Height (H2) in. (mm)	Pkg. Qty.
FT7AT - Mounting Hole Ø: .24" - .8" (6.2 - 7.2mm) - Panel Thickness: .03" - .276" (0.8 - 7.0mm)							
151-00492	151-00492	FT7AT	.73" (18.6)	.18" (4.5)	.72" (18.34)	.47" (11.9)	100

Installation tools - MK7, MK7HT, MK7P, MK9, MK9HT, MK9P. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.



AT2000 & AT2060 Bench Mount System

HellermannTyton offers a portable bench mount system which works with the AT2000 and AT2060 tool systems. It is extremely easy to set up and use. Within seconds, the AT2000 or the AT2060 can be converted from a handheld tool to a bench mount system. With the touch of the foot pedal, the cable tie is applied.



Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
120-00040	AT2BENCHMOUNT	Bench Mount Kit	Includes foot pedal, tie reel stand and tool mounting stand	1

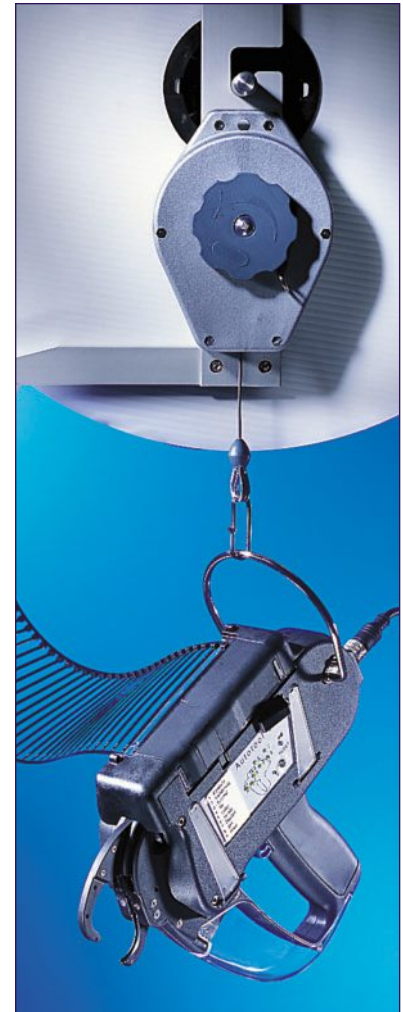
Use **Part No.** for ordering and **Type** for specification purposes.

AT2000 and AT2060 Overhead Suspension Assembly

HellermannTyton's overhead suspension assembly system holds the AT2000 or AT2060, reel of cable ties, and power source. The overhead assembly is available in several configurations in a variety of mounting options and is easily integrated into various manufacturing environments. The modular design allows for easy additions or modifications of the system design.

The overhead assembly system provides additional ergonomic advantages to the AT2000 and AT2060. The system features overhead hanging, a trolley slide which allows for mobility within the frame, and an adjustable counter balance. These features allow for low operator strain and easy use. Since the assembly integrates the automatic cable tie systems and reel of ties, continuous feed is achieved. Reloading of cable ties is greatly reduced, further optimizing efficiencies.

For more information on the system, contact HellermannTyton.



AT2000 Battery Pack

HellermannTyton's battery pack powers the AT2000 and is worn by the operator, allowing for complete mobility.

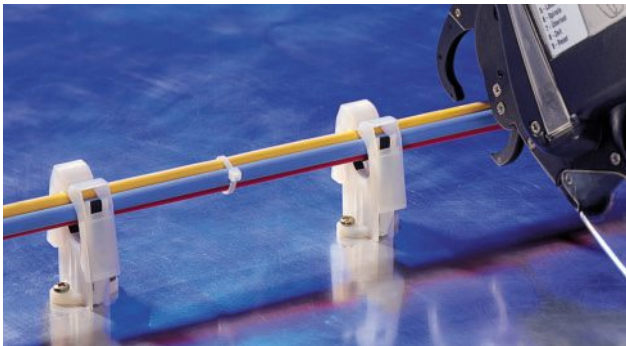


Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
120-00031	120-00031	Battery Pack	Battery with belt clip and connector cord	1
120-00021	120-00021	Battery Charger	Charging unit for battery	1

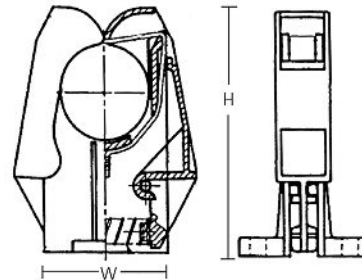
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Wire Retainer for Harness Boards

Designed for use in harness board assemblies, these wire retainers stand-off wire and cable bundles for easier cable tie application. Wires are individually inserted, and bundles are preformed, making harnessing easier.



Wire Retainer for Harness Boards



Product Selection				Height (H)	Width (W)	Max. Ø Bundle	Pkg. Qty.
Article No.	Part No.	Type	Description	in. (mm)	in. (mm)	in. (mm)	
120-00080	HH-20	HH20	Harness Board Assembly	2.12" (54)	1.22" (31)	.83" (20)	25

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

AutoTool System 3080 For bundles up to 3.14"

HellermannTyton's ATS3080 automatically installs cable ties for bundles up to 3.14" in diameter with one trigger depression. This innovative system utilizes strap and closures (ordered separately) to achieve a waste free system. The ATS3080 uses only the required strap length required for the diameter. The strap is outside serrated so that it will not damage sensitive wire and cable bundles.

This well balanced tool has ergonomic benefits that include low weight and a comfortable hand grip which reduces operator strain and injury while installing cable ties. The ATS3080 possesses a LED panel that provides critical operational feedback that makes it easier to maintain and operate the tool.

The ATS3080 has three jaw diameters available: 1.18" (30mm), 1.96" (50mm), and 3.14" (80mm). The jaws are easily interchanged and further tool adjustment between the three jaw diameters is unnecessary.



ATS3080 Technical Specifications

Power Supply	Electrical
Cycle Time	approx. 1.3 sec. (50 mm jaw)
Weight	3.2lbs
Installation	Mobile, bench mount or overhead
Tension Force	Adjustable



Closures and strap for ATS3080



ATS3080 Cable Tie Specifications

Material	Polyamide 6.6 high impact modified, heat and UV stabilized (PA66HIRHSUV)
Operating Temperature	-40 °C to +95 °C continuous, (+105 °C for 5000 h)
Flammability	UL94 HB
Strap Reel Dimensions	
Reel Diameter	15.25" (387 mm)
Reel Width	3.5" (88.9 mm)
Reel Weight	6lbs (2.72 kg)
Closure Reel Dimensions	
Reel Diameter	15.25" (387 mm)
Reel Width	3.5" (88.9 mm)
Reel Weight	3.5lbs (1.58 kg)





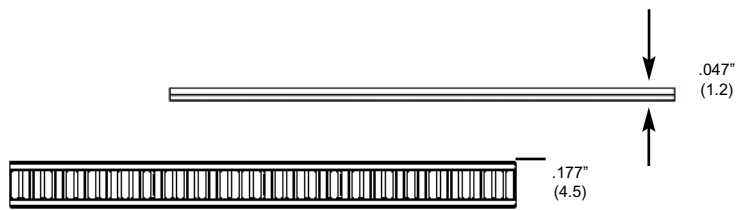
ATS3080 with mobile trolley unit



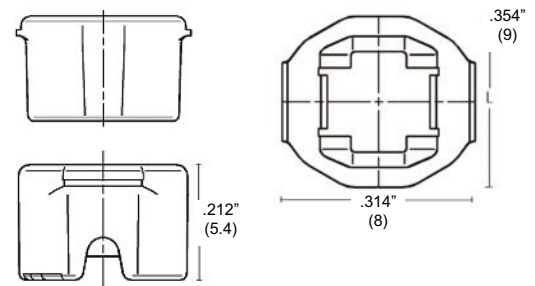
ATS3080 with overhead



ATS3080 with bench mount



Strap ATS3080



Closures ATS3080

Product Selection					
Article No.	Part No.	Type	Description	Min Tensile Unlocking Strength (lbs)	Pkg. Qty. ft. (m)
102-00000	ATS10200000	ATS3080	Includes ATS3080 tool, power cord, tool cord, and maintenance and operation manual. Does not include power supply.		1
102-00010	ATS10200010	Power Pack ATS3080	Power Supply Unit for ATS3080 Input: 230/115 VAC, 50-60 Hz Output: 48 VDC, max. 50W		1
Natural Strap and Closures					
102-66109	ATS10266109	Strap Natural ATS3080	ATS3080 Strap	50 lbs	1640 ft. (500)
102-66209	ATS10266209	Closures Natural ATS3080	ATS3080 Closure	50 lbs	5000 pcs
Black Strap and Closures					
102-66110	ATS10266110	Strap Black ATS3080	ATS3080 Strap	50 lbs	1640 ft. (500)
102-66210	ATS10266210	Closures Black ATS3080	ATS3080 Closures	50 lbs	5000 pcs
102-00040	ATS10200040	Bench Mount Kit	Bench Mount Kit for ATS 3080 Integrated pneumatic system that coordinates tool and reels. Foot pedal application, other actuation options available		1
102-00050	ATS10200050	Overhead Suspender	Overhead Suspender ATS 3080		1
102-00030	ATSTROLLEY	Trolley ATS 3080	Trolley		1

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Quick Tool

HellermannTyton's Quick Tool is an automatic bench mount system suited for high volume cable tie applications. This air powered tool accommodates a reel of 5,000 ties and, like HellermannTyton's other automated systems, can be integrated into further automation as well as fully incorporated into conveyor or assembly line applications.

Product Features

- The system is a one piece, bench top unit which increases efficiency through quick and reliable fastening.
- It can be installed where a 110 VAC electrical outlet and pneumatic air source are available.
- Provides consistent fastening tension.
- Controls fastening tension.
- Ties are available in two styles: standard and heat stabilized.
- Custom colors for Quick Tool ties are also available. Contact HellermannTyton for more information.



QS101 Cable Tie Specifications

Operating Temperature	
Natural	-40 °F to +185 °F (-40 °C to +85 °C)
Polyamide 6.6	
Heat stabilized, black, Polyamide 6.6	-40 °F to +221 °F (-40 °C to +105 °C)
Reel Diameter	18" (457 mm)
Reel Width	5.20" (132 mm)
Reel Weight	4.8 lbs (2.18 kg)



QS101 Technical Specifications

Max. Ø Bundle	0.630" (16.00 mm)
Wattage	70W
Power Supply	Electrical/Pneumatic Power
Cycle Time	1.2 Seconds
Weight	40 lbs.
Installation	Bench
Tension Force	Adjustable (9.92 lbs - 19.84 lbs)

Product Selection

Article No.	Part No.	Type	Description	Min Tensile Unlocking Strength (lbs)	Max. Ø Bundle	Width (W)	Length (L)	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)	
105-00000	QS101	QS101	Includes Quick Tool, power cord, maintenance and operation manual and foot pedal.					1

Natural Cable Ties

105-00006	QTTIE9	QTTIE9	Cable ties on reel for use with the Quick Tool.	18	.63 " (16)	.10 " (2.5)	4.0 " (101)	10,000 per carton: 5,000 per reel 2 reels per carton
-----------	---------------	--------	---	----	------------	-------------	-------------	---

Black Heat Stabilized Cable Ties

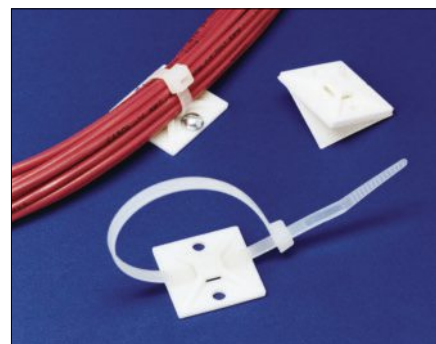
105-00001	QTTIEOHS	QTTIEOHS	Cable ties on reel for use with the Quick Tool.	18	.63 " (16)	.10 " (2.5)	4.0 " (101)	10,000 per carton: 5,000 per reel 2 reels per carton
-----------	-----------------	----------	---	----	------------	-------------	-------------	---

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. Various colored cable ties available upon request. Contact HellermannTyton for more information and lead times.

Cable Tie Mounts

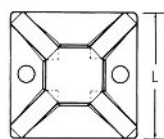
HellermannTyton's 4-way mounting bases are available in four sizes to accommodate T18 through T150 series cable ties. Insertion of ties can be made from all four sides. Each mount may be secured with two screws (four screws for the MB2.5 mount), with adhesive backing, or both, for ease of application and stability.

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.

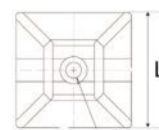


Adhesive mounts are supplied in pairs connected together on an adhesive liner.

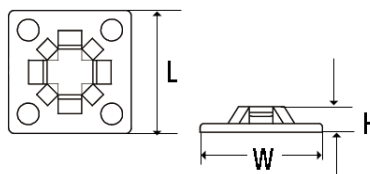
Material Data		
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2 (excluding adhesive)	



4-way, MB3, MB4 and MB5 mounts



2-way mount



4-way, MB2.5 mount

Cable Tie Mounting Bases - Screw Mount

CA
US
File# E64139

Product Selection												
Article No.	Part No.	Type	Cable Tie Series	Mounting	Length (L)		Width (W)		Height (H)		Color	Pkg. Qty.
					in.	(mm)	in.	(mm)	in.	(mm)		
2- Way Screw Mount												
151-29104	MB4SH10C2	MB4SH	T18 - T50	# 6 Screw	1.115" (28.32)	1.115" (28.32)	.202" (5.13)		White	100		
151-00323	MB4SH10H4	MB4SH			1.115" (28.32)	1.115" (28.32)	.202" (5.13)		White	500		
151-29100	MB4SH0C2	MB4SH			1.115" (28.32)	1.115" (28.32)	.202" (5.13)		Black	100		
151-29101	MB4SH0H4	MB4SH			1.115" (28.32)	1.115" (28.32)	.202" (5.13)		Black	500		
4- Way Screw Mount												
151-28901	MB2.510C2	MB2.5	T18	# 3 Screw	.625" (15.88)	.625" (15.88)	.130" (3.3)		White	100		
151-28902	MB2.510M4	MB2.5			.625" (15.88)	.625" (15.88)	.130" (3.3)		White	1000		
151-00285	MB2.50C2	MB2.5			.625" (15.88)	.625" (15.88)	.130" (3.3)		Black	100		
151-00286	MB2.50M4	MB2.5			.625" (15.88)	.625" (15.88)	.130" (3.3)		Black	1000		
151-28302	MB310C2	MB3	T18, T30	#4 Screw	.75" (19.0)	.75" (19.0)	.15" (3.8)		White	100		
151-28305	MB310M4	MB3			.75" (19.0)	.75" (19.0)	.15" (3.8)		White	1000		
151-00136	MB30C2	MB3			.75" (19.0)	.75" (19.0)	.15" (3.8)		Black	100		
151-28301	MB30M4	MB3			.75" (19.0)	.75" (19.0)	.15" (3.8)		Black	1000		
151-28802	MB410C2	MB4	T18 - T50	#8 Screw	1.12" (28.5)	1.12" (28.5)	.19" (4.8)		White	100		
151-00319	MB410H4	MB4			1.12" (28.5)	1.12" (28.5)	.19" (4.8)		White	500		
151-00320	MB40C2	MB4			1.12" (28.5)	1.12" (28.5)	.19" (4.8)		Black	100		
151-28801	MB40H4	MB4			1.12" (28.5)	1.12" (28.5)	.19" (4.8)		Black	500		
151-00324	MB510C2	MB5	T18 - T150	#8 Screw	1.485" (37.7)	1.485" (37.7)	.245" (6.2)		White	100		
151-28504	MB510F4	MB5			1.485" (37.7)	1.485" (37.7)	.245" (6.2)		White	250		
151-28500	MB50C2	MB5			1.485" (37.7)	1.485" (37.7)	.245" (6.2)		Black	100		
151-28501	MB50F4	MB5			1.485" (37.7)	1.485" (37.7)	.245" (6.2)		Black	250		

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Tie Mounting Bases - Rubber-Based Adhesive

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
2- Way Mount with Rubber - Based Adhesive									
151-29203	MB4SHA10C2	MB4SHA	T18 - T50	Adhesive	1.115" (28.32)	1.115" (28.32)	.232" (5.89)	White	100
151-29206	MB4SHA10H4	MB4SHA			1.115" (28.32)	1.115" (28.32)	.232" (5.89)	White	500
151-29200	MB4SHA0C2	MB4SHA			1.115" (28.32)	1.115" (28.32)	.232" (5.89)	Black	100
4- Way Mount with Rubber - Based Adhesive									
151-29002	MB2.5A10C2	MB2.5A	T18	Adhesive	.625" (15.88)	.625" (15.88)	.160" (4.1)	White	100
151-00298	MB2.5A10M4	MB2.5A			.625" (15.88)	.625" (15.88)	.160" (4.1)	White	1000
151-29000	MB2.5A0C2	MB2.5A			.625" (15.88)	.625" (15.88)	.160" (4.1)	Black	100
151-29001	MB2.5A0M4	MB2.5A			.625" (15.88)	.625" (15.88)	.160" (4.1)	Black	1000
151-28718	MB3A10C2	MB3A	T18, T30	Adhesive	.75" (19.0)	.75" (19.0)	.18" (4.6)	White	100
151-28721	MB3A10M4	MB3A			.75" (19.0)	.75" (19.0)	.18" (4.6)	White	1000
151-28710	MB3A0C2	MB3A			.75" (19.0)	.75" (19.0)	.18" (4.6)	Black	100
151-28713	MB3A0M4	MB3A			.75" (19.0)	.75" (19.0)	.18" (4.6)	Black	1000
151-28421	MB4A10C2	MB4A	T18 - T50	Adhesive	1.12" (28.0)	1.12" (28.0)	.22" (5.6)	White	100
151-00321	MB4A10H4	MB4A			1.12" (28.0)	1.12" (28.0)	.22" (5.6)	White	500
151-28403	MB4A0C2	MB4A			1.12" (28.0)	1.12" (28.0)	.22" (5.6)	Black	100
151-28406	MB4A0H4	MB4A			1.12" (28.0)	1.12" (28.0)	.22" (5.6)	Black	500
151-28529	MB5A10C2	MB5A	T18 - T150	Adhesive	1.485" (37.7)	1.485" (37.7)	.275" (6.9)	White	100
151-00427	MB5A10F4	MB5A			1.485" (37.7)	1.485" (37.7)	.275" (6.9)	White	250
151-28602	MB5A0C2	MB5A			1.485" (37.7)	1.485" (37.7)	.275" (6.9)	Black	100
151-28605	MB5A0F4	MB5A			1.485" (37.7)	1.485" (37.7)	.275" (6.9)	Black	250

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

RU
US
File# E64139

Cable Tie Mounting Bases - Acrylic Adhesive

File# E04713

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
4 - Way Screw Mount Acrylic Adhesive									
151-00331	MB3A10A2C2	MB3A	T18, T30	Adhesive	.75" (19.0)	.75" (19.0)	.18" (4.6)	White	100
151-28717	MB3A10A2H4	MB3A			.75" (19.0)	.75" (19.0)	.18" (4.6)	White	500
151-28711	MB3A0A2C2	MB3A			.75" (19.0)	.75" (19.0)	.18" (4.6)	Black	100
151-28709	MB3A0A2H4	MB3A			.75" (19.0)	.75" (19.0)	.18" (4.6)	Black	500
151-28420	MB4A10A2C2	MB4A	T18 - T50	Adhesive	1.12" (28.5)	1.12" (28.5)	.23" (5.9)	White	100
151-00322	MB4A10A2H4	MB4A			1.12" (28.5)	1.12" (28.5)	.23" (5.9)	White	500
151-28402	MB4A0A2C2	MB4A			1.12" (28.5)	1.12" (28.5)	.23" (5.9)	Black	100
151-28405	MB4A0A2H4	MB4A			1.12" (28.5)	1.12" (28.5)	.23" (5.9)	Black	500
151-28607	MB5A10A2C2	MB5A	T18 - T150	Adhesive	1.485" (37.7)	1.485" (37.7)	.275" (6.9)	White	100
151-28610	MB5A10A2F4	MB5A			1.485" (37.7)	1.485" (37.7)	.275" (6.9)	White	250
151-28600	MB5A0A2C2	MB5A			1.485" (37.7)	1.485" (37.7)	.275" (6.9)	Black	100
151-28604	MB5A0A2F4	MB5A			1.485" (37.7)	1.485" (37.7)	.275" (6.9)	Black	250

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Tie Mounting Bases - High Temperature/Heavy Bond Adhesive

For extreme heavy duty applications, our high temperature/heavy bond adhesive mounts work well on difficult surfaces such as paint or plastics. The mounts are made of our high temp, impact modified PA66 material and use a specially formulated acrylic adhesive making the bond extremely durable.

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
151-00432	151-00432	MB3APT	T18, T30	Adhesive	.75" (19.0)	.75" (19.0)	.15" (3.8)	Black	100
151-00433	151-00433	MB4APT	T18 - T50		1.1" (28.0)	1.1" (28.0)	.19" (4.7)	Black	100

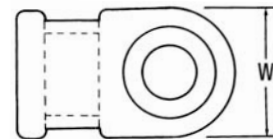
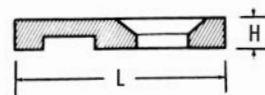
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Low Profile Cable Tie Mounts

Low profile mounts are intended for use in securing bundles where space is limited. Each mount is fastened with a single screw.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
151-28119	MB19C2	MB1	T18	#2 Screw	.500" (12.70)	.312" (7.92)	.130" (3.30)	Natural	100
151-28101	MB19M4				.500" (12.70)	.312" (7.92)	.130" (3.30)	Natural	1000
151-00295	MB10C2				.500" (12.70)	.312" (7.92)	.130" (3.30)	Black	100
151-00296	MB10M4				.500" (12.70)	.312" (7.92)	.130" (3.30)	Black	1000
151-00227	MB29C2	MB2	T18 - T50	# 8 Screw	.807" (20.50)	.490" (12.45)	.130" (3.30)	Natural	100
151-00297	MB29M4				.807" (20.50)	.490" (12.45)	.130" (3.30)	Natural	1000
151-28210	MB20C2				.807" (20.50)	.490" (12.45)	.130" (3.30)	Black	100
151-28202	MB20M4				.807" (20.50)	.490" (12.45)	.130" (3.30)	Black	1000

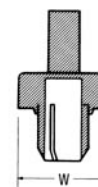
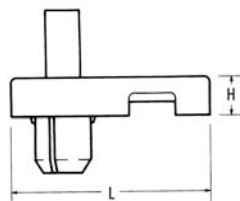
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Low Profile Rivet Mounts

The low profile rivet mount is designed to secure wiring bundles and fastens with the drive rivet through a predrilled hole. This mount is ideal for use in applications where space is limited.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2

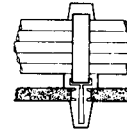
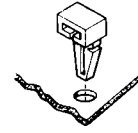
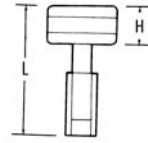
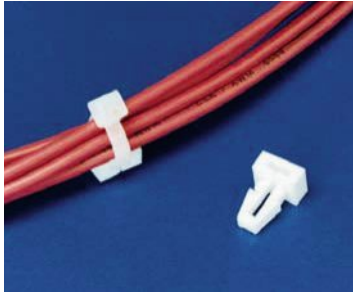


Product Selection										
Article No.	Part No.	Type	Cable Tie Series	Mounting Hole Ø	Max. Panel Thickness	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-27000	LKCRF19C2	LKCRF1	T18 -	.250" (6.35)	.134" (3.4)	.938" (23.82)	.470" (11.94)	.157" (3.99)	Natural	100
151-27009	LKCRF19H4	LKCRF1	T50	.250" (6.35)	.134" (3.4)	.938" (23.82)	.470" (11.91)	.157" (3.99)	Natural	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Push Mounts

Intended for use in a predrilled hole, this push mount accepts T18 through T50 series cable ties. Once inserted through the hole, the mount locks into place.



Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



UL US
File# E64139

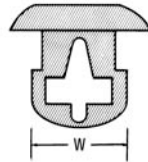
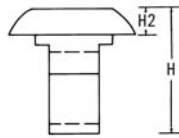
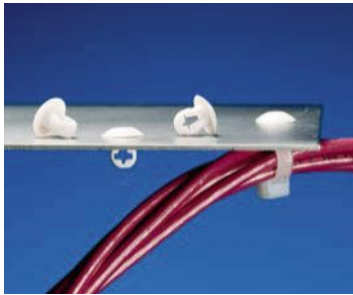
Product Selection

Article No.	Part No.	Type	Cable Tie Series	Mounting Hole Ø	Max. Panel Thickness	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-40106	TM1SF10C2	TM1SF	T18 - T50	.25" (6.3)	.134" (3.4)	.616" (15.65)	.401" (10.19)	.181" (4.60)	White	100
151-00328	TM1SF10M4	TM1SF		.25" (6.3)	.134" (3.4)	.616" (15.65)	.401" (10.19)	.181" (4.60)	White	1000
151-40100	TM1SF0C2	TM1SF		.25" (6.3)	.134" (3.4)	.616" (15.65)	.401" (10.19)	.181" (4.60)	Black	100
151-40101	TM1SF0M4	TM1SF		.25" (6.3)	.134" (3.4)	.616" (15.65)	.401" (10.19)	.181" (4.60)	Black	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Push Button Mounts

The push button mounts are used where the back of the panel is accessible.



Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



UL US
File# E64139

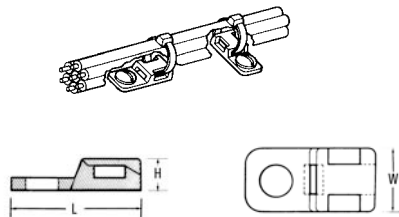
Product Selection

Article No.	Part No.	Type	Cable Tie Series	Mounting Hole Ø	Max. Panel Thickness	Width (W)	Height (H)	Height (H2)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-00230	PBM10C2	PBM	T18 - T50	.25" (6.4)	.122" (3.1)	.26" (6.60)	.40" (10.16)	.08" (2.03)	White	100
151-00231	PBM10M4	PBM		.25" (6.4)	.122" (3.1)	.26" (6.60)	.40" (10.16)	.08" (2.03)	White	1000
151-00228	PBM0C2	PBM		.25" (6.4)	.122" (3.1)	.26" (6.60)	.40" (10.16)	.08" (2.03)	Black	100
151-00229	PBM0M4	PBM		.25" (6.4)	.122" (3.1)	.26" (6.60)	.40" (10.16)	.08" (2.03)	Black	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Tie Anchor Mounts (CTAM)

Cable ties may be inserted from any of the four sides of the CTAM. This feature allows the mount to be placed either parallel or perpendicular to the wires.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



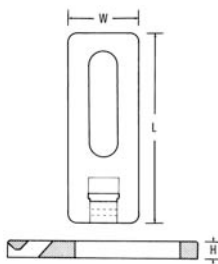
UL
US
File# E64139

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Width (W)	Length (L)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
151-31103	CTAM110C2	CTAM1	T18 - T50	#8 screw	.400" (10.16)	.800" (20.32)	.200" (5.08)	White	100
151-31106	CTAM110M4	CTAM1			.400" (10.16)	.800" (20.32)	.200" (5.08)	White	1000
151-31101	CTAM10C2	CTAM1			.400" (10.16)	.800" (20.32)	.200" (5.08)	Black	100
151-00287	CTAM10M4	CTAM1			.400" (10.16)	.800" (20.32)	.200" (5.08)	Black	1000
151-31203	CTAM210C2	CTAM2		#10 screw	.400" (10.16)	.800" (20.32)	.200" (5.08)	White	100
151-31205	CTAM210M4	CTAM2			.400" (10.16)	.800" (20.32)	.200" (5.08)	White	1000
151-31201	CTAM20C2	CTAM2			.400" (10.16)	.800" (20.32)	.200" (5.08)	Black	100
151-31202	CTAM20M4	CTAM2			.400" (10.16)	.800" (20.32)	.200" (5.08)	Black	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Tie Anchor Plates (CTAP)

These plates have slotted mounting holes to provide for easier alignment of mount and bundles. Once aligned, they are fastened securely by tightening the applied screw. The CTAP2 allows an additional screw for maximum stability. Both plates are used perpendicularly to the wire bundle.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



UL
US
File# E64139

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Width (W)	Length (L)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
151-30100	CTAP110C2	CTAP1	T18 - T50	#10 screw	.50" (12.7)	1.34" (34.04)	.15" (3.81)	White	100
151-00288	CTAP110M4	CTAP1			.50" (12.7)	1.34" (34.04)	.15" (3.81)	White	1000
151-00289	CTAP10C2	CTAP1			.50" (12.7)	1.34" (34.04)	.15" (3.81)	Black	100
151-00290	CTAP10M4	CTAP1			.50" (12.7)	1.34" (34.04)	.15" (3.81)	Black	1000
151-30200	CTAP210C2	CTAP2			.50" (12.7)	2.13" (54.1)	.14" (3.5)	White	100
151-00308	CTAP210H4	CTAP2			.50" (12.7)	2.13" (54.1)	.14" (3.5)	White	500
151-00291	CTAP20C2	CTAP2			.50" (12.7)	2.13" (54.1)	.14" (3.5)	Black	100
151-00292	CTAP20M4	CTAP2			.50" (12.7)	2.13" (54.1)	.14" (3.5)	Black	500

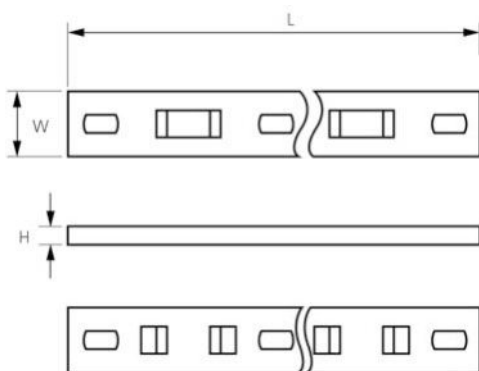
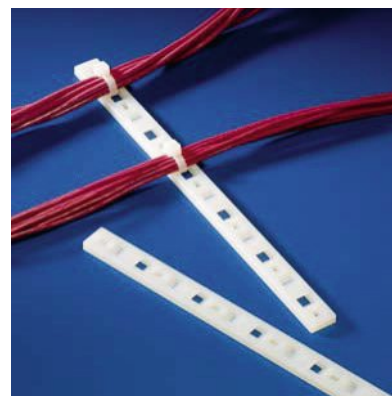
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Cable Tie Mounting Plates

Allowing multiple cables to be run in parallel, these mounting plates are secured with two screws. The cables are attached to the mounting plate by using a cable tie through any combination of the available slots.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Color	Natural
Flammability	UL94 V2

RoHS

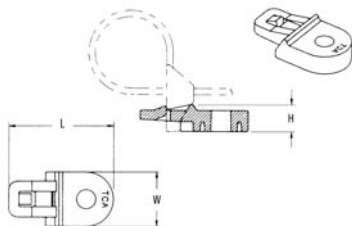


Product Selection			Cable Tie Series	Mounting	Width (W)		Length (L)		Height (H)		Pkg. Qty.
Article No.	Part No.	Type			in.	(mm)	in.	(mm)	in.	(mm)	
154-00000	MP1M3.NN3P	MP1M3	T18 - T50	# 6 (M3) screw	.50"	(12.7)	1.75"	(44.4)	.125"	(3.2)	100
154-00100	MP1M5.NN3P	MP1M5		#10 (M5) screw	.50"	(12.7)	1.75"	(44.4)	.125"	(3.2)	100
151-24219	MP2M3.NN3P	MP2M3		# 6 (M3) screw	.50"	(12.7)	3.00"	(76.2)	.125"	(3.2)	100
154-00300	MP2M5.NN3P	MP2M5		#10 (M5) screw	.50"	(12.7)	3.00"	(76.2)	.125"	(3.2)	100
151-24319	MP3M3.NN3P	MP3M3		# 6 (M3) screw	.50"	(12.7)	4.25"	(108.0)	.125"	(3.2)	100
154-00500	MP3M5.NN3P	MP3M5		#10 (M5) screw	.50"	(12.7)	4.25"	(108.0)	.125"	(3.2)	100
151-24419	MP4M3.NN3P	MP4M3		# 6 (M3) screw	.50"	(12.7)	5.50"	(139.8)	.125"	(3.2)	100
154-00700	MP4M5.NN3P	MP4M5		#10 (M5) screw	.50"	(12.7)	5.50"	(139.8)	.125"	(3.2)	100
151-24519	MP5M3.NN3P	MP5M3		# 6 (M3) screw	.50"	(12.7)	6.75"	(171.6)	.125"	(3.2)	100
154-00900	MP5M5.NN3P	MP5M5		#10 (M5) screw	.50"	(12.7)	6.75"	(171.6)	.125"	(3.2)	100
154-00018	MSMP5/69C2	MSMP5/6	T18 - T120	# 6 (M3) screw	.618"	(15.7)	8.08"	(205.3)	.21"	(5.33)	100
154-01200	MSMP5/109C2	MSMP5/10		#10 (M5) screw	.618"	(15.7)	8.08"	(205.3)	.21"	(5.33)	100
154-01302	MSMP6/69C2	MSMP6/6		# 6 (M3) screw	.618"	(15.7)	9.58"	(243.3)	.21"	(5.33)	100
154-01300	MSMP6/109C2	MSMP6/10		#10 (M5) screw	.618"	(15.7)	9.58"	(243.3)	.21"	(5.33)	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Lashing Tie Mounts

The lashing tie mount is designed to snap into the T250 lashing tie. The tie head is assembled perpendicular to the mount. The strap is parallel to the mount when inserted into the head. The lashing tie mount is recommended for indoor or outdoor wall mount cable applications.



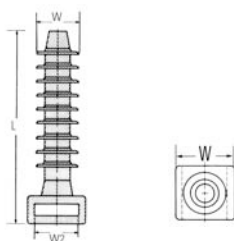
Material Data		RoHS
Material	Polyamide 6.6 heat stabilized (PA66HS)	
Operating Temperature	-40 °F to +221°F (-40 °C to +105 °C) continuous	
Flammability	UL94 V2	

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Width (W)	Length (L)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
151-00358	LTM2500C2	LTM250	T250	.25" screw	.733" (18.62)	1.46" (37.08)	.378" (9.60)	Black	100
151-00293	LTM2500H4	LTM250			.733" (18.62)	1.46" (37.08)	.378" (9.60)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Masonry Mounts

Masonry mounts provide a permanent method of attaching wire and cable to masonry surfaces. HellermannTyton's masonry mounts simply tap into predrilled holes and can be used for indoor and outdoor applications.



Material Data		RoHS
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous	
Flammability	UL94 V2	

Product Selection											
Article No.	Part No.	Type	Cable Tie Series	Mounting Hole Ø	Min. Depth	Length (L)	Width (W)	Width (W2)	Width (W3)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-29800	MMB00C2	MMB0	T18 - T50	.188" (4.7)	1.0" (25.4)	1.185" (30.1)	.355" (9.02)	.218" (5.54)	.236" (5.99)	Black	100
151-00325	MMB00M4	MMB0		.188" (4.7)		1.185" (30.1)	.355" (9.02)	.218" (5.54)	.236" (5.99)	Black	1000
151-00116	MMB.50C2	MMB.5		.25" (6.25)		1.244" (31.60)	.375" (9.53)	.220" (5.59)	.308" (7.82)	Black	100
151-30001	MMB.50M4	MMB.5		.25" (6.25)		1.244" (31.60)	.375" (9.53)	.220" (5.59)	.308" (7.82)	Black	1000
151-00326	MMB10C2	MMB1		.312" (8.0)	1.5" (38.10)	1.71" (43.49)	.508" (12.9)	.374" (9.50)	.362" (9.19)	Black	100
151-00327	MMB10H4	MMB1		.312" (8.0)		1.71" (43.49)	.508" (12.9)	.374" (9.50)	.362" (9.19)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Heavy Duty Mounts

The heavy duty mount, when used with a cable tie, eliminates the need to carry multiple sizes of fixed bundle diameter clamps, which reduces inventory and purchasing costs while simplifying the assembly process.

The heavy duty mount and cable tie combination makes it easy to service bundles in the field. Simply remove the cable tie, leave the mount in place, and replace the cable tie.

The heavy duty mounts are designed for use with HellermannTyton's heavy duty T250, T255, and wide strap cable ties to harness wires and hoses; however, they accept all standard cable ties up to .5" wide.



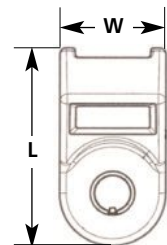
U.S. Patent Number 5,820,083

Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	

Standard Torque Mounts

These mounts contain a small tab inside the mounting hole to temporarily engage the threads, which allows assemblers to pre-install the mount on a stud before securing with a washer and a nut.

Product Selection			Mounting	Max Torque	Max Ø for Washer/Socket	Length (L)	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	lb. - in	in. (mm)	in. (mm)	in. (mm)		
151-00134	HDM190HIRC2	HDM19	.1875 (4.8)	115 lb. - in.	.73" (18.5)	1.43" (36.32)	.76" (19.3)	Black	100
151-00436	HDM190HIRH4	HDM19	.1875 (4.8)	115 lb. - in.	.73" (18.5)	1.43" (36.32)	.76" (19.3)	Black	500
151-00437	HDM250HIRC2	HDM25	.25" (6.4)	115 lb. - in.	.73" (18.5)	1.43" (36.32)	.76" (19.3)	Black	100
151-00438	HDM250HIRH4	HDM25	.25" (6.4)	115 lb. - in.	.73" (18.5)	1.43" (36.32)	.76" (19.3)	Black	500
151-00439	HDM3120HIRC2	HDM312	.3125" (8)	115 lb. - in.	.73" (18.5)	1.43" (36.32)	.76" (19.3)	Black	100
151-00440	HDM3120HIRH4	HDM312	.3125" (8)	115 lb. - in.	.73" (18.5)	1.43" (36.32)	.76" (19.3)	Black	500

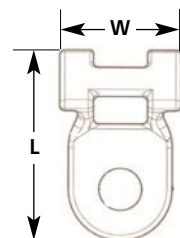


Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Medium Torque Mounts

The arched "H" profile of the saddle surface allows for a broad surface contact with the bundle, minimizing pinching and crushing of the bundles, and adjusts to a wide variety of bundle diameters.

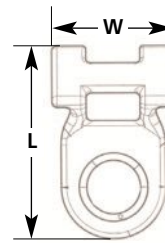
Product Selection			Mounting	Max Torque	Max Ø for Washer/Socket	Length (L)	Width (W)	Color	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	lb. - ft.	in. (mm)	in. (mm)	in. (mm)		
151-00441	HDM321HIHSUVC2	HDM321	.3125" (8)	40 lb. - ft.	.90" (23)	1.8" (46)	.96" (24)	Black	100
151-07100	HDM321HIHSUVH4	HDM321	.3125" (8)	40 lb. - ft.	.90" (23)	1.8" (46)	.96" (24)	Black	500
151-00442	HDM401HIHSUVC2	HDM401	.375" (9.5)	40 lb. - ft.	.90" (23)	1.8" (46)	.96" (24)	Black	100
151-07300	HDM401HIHSUVH4	HDM401	.375" (9.5)	40 lb. - ft.	.90" (23)	1.8" (46)	.96" (24)	Black	500
151-00443	HDM501HIHSUVC2	HDM501	.5" (12.7)	40 lb. - ft.	.90" (23)	1.8" (46)	.96" (24)	Black	100
151-07500	HDM501HIHSUVH4	HDM501	.5" (12.7)	40 lb. - ft.	.90" (23)	1.8" (46)	.96" (24)	Black	500



Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

High Torque Mounts

The high torque mount is designed for use with power-assisted impact wrenches and is molded with a metal bushing to withstand the forces required to tighten grade 8 bolts. The arched "H" profile of the saddle surface allows for a broad surface contact with the bundle, minimizing pinching and crushing of bundles, and it adjusts to a wide variety of bundle diameters.

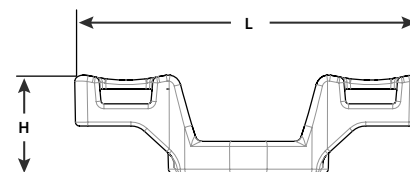
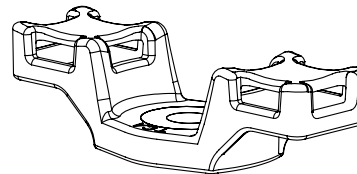


Product Selection									
Article No.	Part No.	Type	Mounting	Max Torque	Max Ø for Washer/Socket	Length (L)	Width (W)	Color	Pkg. Qty.
			in. (mm)	lb. - ft.	in. (mm)	in. (mm)	in. (mm)		
151-00444	HDM320BHIHSUVC2	HDM320	.3125" (8)	114 lb. - ft.	.9" (23)	1.85" (47)	.99" (25)	Black	100
151-07000	HDM320BHIHSUVH4	HDM320	.3125" (8)	114 lb. - ft.	.9" (23)	1.85" (47)	.99" (25)	Black	500
151-00445	HDM400BHISHUVC2	HDM400	.375" (9.5)	114 lb. - ft.	1.26" (32)	1.85" (47)	.99" (25)	Black	100
151-07200	HDM400BHIHSUVH4	HDM400	.375" (9.5)	114 lb. - ft.	1.26" (32)	1.85" (47)	.99" (25)	Black	500
151-00446	HDM500BHIHSUVC2	HDM500	.5" (12.7)	114 lb. - ft.	1.26" (32)	1.85" (47)	.99" (25)	Black	100
151-07400	HDM500BHIHSUVH4	HDM500	.5" (12.7)	114 lb. - ft.	1.26" (32)	1.85" (47)	.99" (25)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

High Torque Double Mount

This mount is designed for use with power-assisted impact wrenches and is molded with a metal bushing to withstand the forces required to tighten grade 8 bolts. The high torque double mount secures the bundle directly over the mounting fastener. The arched saddle surface allows for a broad surface contact with the bundle, minimizing pinching and crushing of the bundles, and accommodates a wide variety of bundle diameters.



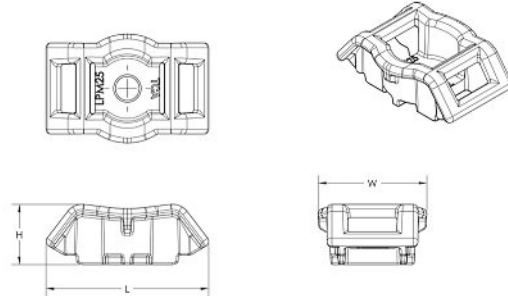
Product Selection									
Article No.	Part No.	Type	Mounting	Max Torque	Max Ø for Washer/Socket	Length (L)	Height (H)	Color	Pkg. Qty.
			in. (mm)	lb. - ft.	in. (mm)	in. (mm)	in. (mm)		
151-00756	151-00756	HDM375	.375" (9.5)	114 lb. - ft.	1.27" (32.5)	3.43" (87)	.99" (25.2)	Black	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Low Profile Mount

The Low Profile Mount is used in conjunction with a cable tie to attach a bundle to a flat surface, making it ideal for applications where space is limited for positioning a bundle. This device is secured to the mounting surface with a .25" mechanical fastener and features a counter bore for easy access with a socket. HellermannTyton cable ties, up to .5" wide, are used to fasten bundles to the Low Profile Mount. Single bundles can be positioned on top of the mount, or two bundles can be separated using the two side saddles.

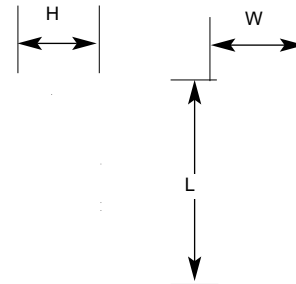
Material Data	
Material	Polyamide 6.6 – Impact Modified, Heat and UV Stabilized (PA66HIRHSUV)
Operating Temperature	-40 °F to +221°F (-40 °C to +105 °C) continuous
Flammability	UL94 HB



Product Selection		Bolt Hole Diameter	Max Torque	Length (L)	Width in (mm)	Height in (mm)	Cable Tie Series	Color	Pkg. Qty.
Article No.	Part No.			in. (mm)	in. (mm)	in. (mm)			
151-01122	LPM25	.262" (6.65)	11.3 Nm (100 in/lb)	1.78" (45.1)	1.18" (30.0)	.66" (16.7)	T50 - T250	Black	500

Mounting Cradle

The mounting cradle holds cables and harnesses secure yet clear of the panel surface. This cradle is for use with HellermannTyton cable ties.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2 (excluding adhesive)



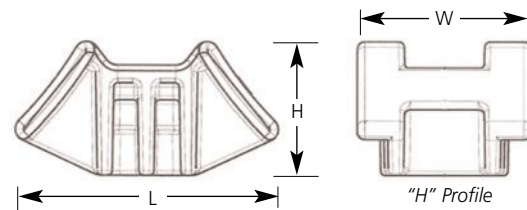
Product Selection				Length (L)	Width (W)	Height (H)	Mounting Hole Ø	Color	Pkg. Qty.
Article No.	Part No.	Type	Cable Tie Series	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-27010	151-27010	LKC	T50 - T250	.98" (76.2)	.67" (17)	.53" (13.5)	.21" (8)	Black	100
151-27019	151-27019	LKC	T50 - T250	1.6" (40)	.75" (19)	.66" (16.8)	.21" (8)	Natural	100
151-27219	151-27219	LKCSF1	T50 - T250	1.6" (40)	.75" (19)	.66" (16.8)	.23" (6)	Natural	100
151-27202	151-27202	LKCSF1	T50 - T250	1.6" (40)	.75" (19)	.66" (16.8)	.23" (6)	Black	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Two Way Saddle Mounts

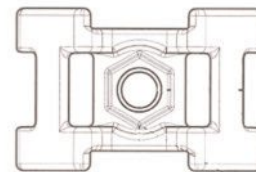
This saddle mount is installed between two bundles (such as wires, cables, hoses, tubing, conduit, etc.) to separate them and prevent chafing and wear. Fastened to a frame rail or mounting bracket, the "H" profile on the saddle mount provides a tight circumferential loop on large and small bundles. Cable ties, which secure the bundles, are used with the mount. The two way saddle mount accommodates cable ties up to 1/2" wide.

Material Data		RoHS
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)	
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous	
Flammability	UL94 HB	



S2HM25

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

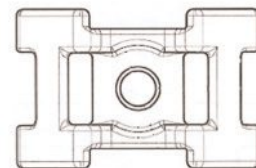


Product Selection										
Article No.	Part No.	Type	Cable Tie Series	Max Bundle Ø (each side)	Stud Ø	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-29403	S2HM250HIRHSH1	S2HM25	T50 - T250	3.5" (89)	.25" (6.35)	1.76" (44.8)	1.17" (29.7)	.90" (22.9)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

S2CM25

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



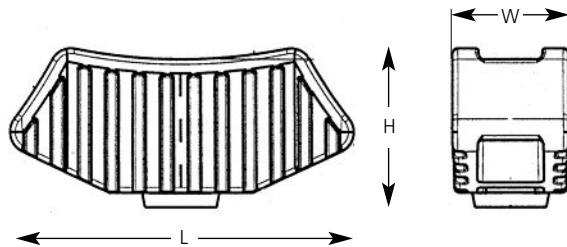
Product Selection										
Article No.	Part No.	Type	Cable Tie Series	Max Bundle Ø (each side)	Stud Ø	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-29400	S2CM258HIRHSH1	S2CM25	T50 - T250	3.5" (89)	.25" (6.35)	1.76" (44.8)	1.17" (29.7)	.90" (22.9)	Gray	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Saddle Mount for the Button Head Tie

Designed to be used with HellermannTyton's 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 the 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.

This product for use with the button head ties on p.65



Material Data	
Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Product Selection			Mounting Hole Ø	Panel Thickness	Standoff Height	Length (L)	Width (W)	Height (H)	Max Bundle Ø		Color	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Center in. (mm)	Sides in. (mm)		
151-29301	MSBT1200HIRHSH1	MSBT120	.440" - .820" (11.18 - 20.83)	.160" - .75" (4.06 - 19.05)	.875" (22.23)	1.90" (48.3)	.65" (16.5)	.81" (20.6)	6.0" (152.4)	1.0" (25.4) (dependent upon size of center bundle)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

H-Mount Series

HellermannTyton's new H-Mount product line offers a secure bundle mounting solution that utilizes existing frame bolts. H-Mounts fasten to three bolt sizes: 1/2", 5/8" and 3/4". The H-Mounts have three bundle mounting locations, each accommodating ties up to 1/2" wide.

Application

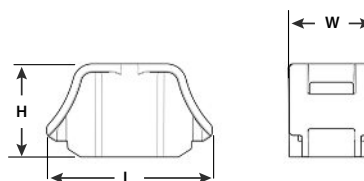
The preferred mount method is to use the specially designed drill bit to spin the H-Mount onto the bolt. The bit fits all 1/4" drills and has tapered sides to secure the H-Mount during installation.

Benefits

- The H-Mounts utilize existing frame bolts which reduce component costs and improve installation time.
- The H-Mounts have a top tie slot which allows the bundle to be positioned directly over the bolt, and two curved tie slots on the sides that minimize bundle abrasion and position the bundles adjacent to the bolt yet away from the frame.

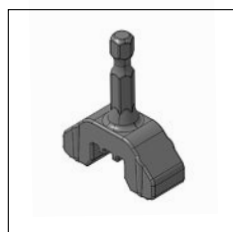


Material Data	
Material	Polyamide 6.6 high impact modified, heat and UV stabilized (PA66HIRHSUV)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Product Selection								
Article No.	Part No.	Type	Stud Bolt Size	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-00812	151-00812	HM5	.5" (12.7)	1.97" (50.0)	1.02" (25.98)	1.1" (28.0)	Black	900
151-00813	151-00813	HM6	.625" (15.9)	1.97" (50.0)	1.02" (25.98)	1.1" (28.0)	Black	900
151-00814	151-00814	HM7	.75" (19.0)	1.97" (50.0)	1.02" (25.98)	1.1" (28.0)	Black	900

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.



904-00284

H Mount Drill Bit				
Article No.	Part No.	Type	Color	Pkg. Qty.
904-00284	904-00284	HBIT	Black	1



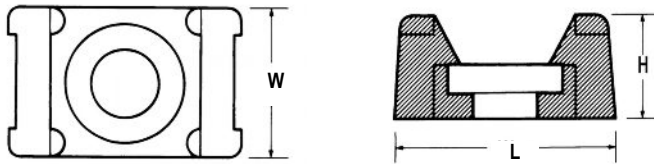
H Bit in the H Mount

Cable Tie Mounts (CTM)

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.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 V2



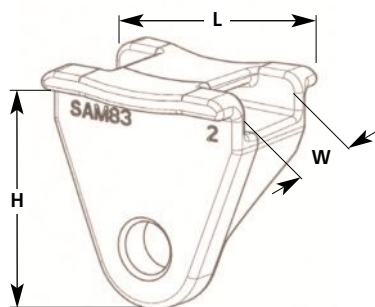
UL
File# E64139

Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Mounting	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)		
151-30303	CTM010C2	CTM0	T18 - T50	# 6 Screw	.578" (14.68)	.375" (9.52)	.266" (6.76)	White	100
151-30305	CTM010M4				.578" (14.68)	.375" (9.52)	.266" (6.76)	White	1000
151-30300	CTM00C2				.578" (14.68)	.375" (9.52)	.266" (6.76)	Black	100
151-30301	CTM00M4				.578" (14.68)	.375" (9.52)	.266" (6.76)	Black	1000
151-30404	CTM110C2	CTM1		# 8 Screw	.579" (14.71)	.370" (9.40)	.266" (6.76)	White	100
151-30406	CTM110M4				.579" (14.71)	.370" (9.40)	.266" (6.76)	White	1000
151-30400	CTM10C2				.579" (14.71)	.370" (9.40)	.266" (6.76)	Black	100
151-30402	CTM10M4				.579" (14.71)	.370" (9.40)	.266" (6.76)	Black	1000
151-30504	CTM210C2	CTM2	.857" (21.77)		.605" (15.37)	.372" (9.45)	White	100	
151-30506	CTM210M4		.857" (21.77)		.605" (15.37)	.372" (9.45)	White	1000	
151-30500	CTM20C2		.857" (21.77)		.605" (15.37)	.372" (9.45)	Black	100	
151-30501	CTM20M4		.857" (21.77)		.605" (15.37)	.372" (9.45)	Black	1000	
151-30605	CTM310C2	CTM3	T18 -T120	#10 Screw	.858" (21.79)	.609" (15.47)	.374" (9.50)	White	100
151-30607	CTM310M4				.858" (21.79)	.609" (15.47)	.374" (9.50)	White	1000
151-30600	CTM30C2				.858" (21.79)	.609" (15.47)	.374" (9.50)	Black	100
151-30603	CTM30M4				.858" (21.79)	.609" (15.47)	.374" (9.50)	Black	1000
151-30703	CTM410C2	CTM4		.25" Screw	.864" (21.95)	.616" (15.65)	.372" (9.45)	White	100
151-30705	CTM410M4				.864" (21.95)	.616" (15.65)	.372" (9.45)	White	1000
151-30700	CTM40C2				.864" (21.95)	.616" (15.65)	.372" (9.45)	Black	100
151-30702	CTM40M4				.864" (21.95)	.616" (15.65)	.372" (9.45)	Black	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Axial Oval Mounts

HellermannTyton's axial oval mounts stand 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.



Material Data

Material	Polyamide 6.6 impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB

RoHS

Product Selection

Article No.	Part No.	Type	Cable Tie Series	Bolt Hole Ø	Offset Distance from Mounting Slot	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-29600	SAM83HIRHSH1	SAM83	T50 - T250	5/16" (8)	.78" (19.8)	1.35" (34.3)	1.02" (25.9)	1.39" (35.3)	Gray	500
151-29701	SAOM820HIRHSH1	SAOM82	T50 - T250	5/16" (8)	.78" (19.8)	1.35" (34.3)	1.02" (25.9)	1.39" (35.3)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Dual Swivel Saddle Spacer

DSWS4

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

The "H" profile of the saddles allows for broad surface contact with the bundle, minimizing pinching and crushing of the bundle, and it accepts a wide range of bundle diameters from .25 inches to 3 inches.

The DSWS4 Dual Swivel Saddle Spacer provides a .7 inch (17.8 millimeter) separation between bundles.

Friction tabs in the tie slots help hold the cable ties in place during assembly.

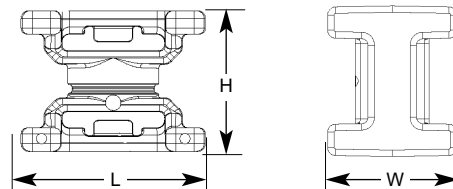
The DSWS4 is two-shot molded with polyacetal and polyamide 6.6 heat stabilized materials.



Material Data	
Material	Polyacetal (POM)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous
Flammability	UL94 HB



Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Product Selection										
Article No.	Part No.	Type	Cable Tie Series	Bundle Ø	Minimum Extraction Strength	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)						
151-06500	151-06500	DSWS4	T50 - T250	.25" - 3" (6.35 - 76.2)	100 lb. (445)	.93" (23.6)	.8" (20.3)	.71" (18)	Black	2200
151-00644	151-00644	DSWS4	T50 - T250	.25" - 3" (6.35 - 76.2)	100 lb. (445)	.93" (23.6)	.8" (20.3)	.71" (18)	Black	50

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Dual Swivel Saddle Spacer

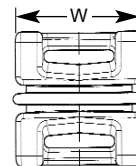
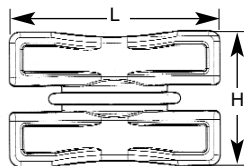
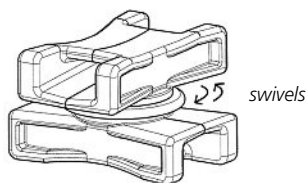
DSWS5

These saddle spacers are installed between two bundles (such as wires, cables, hoses, tubing, conduit, etc.) to separate them and prevent chafing and wear. The spacers can be easily rotated by hand, allowing the bundles to be crossed and rotated at any angle. Cable ties, which secure the bundles, are used with the spacers.

The DSWS5 accepts bundle diameters ranging from .625 inches to 6 inches. The DSWS5 provides a .93 inch (23.6 millimeter) separation between bundles. The dual swivel saddle spacers accommodate cable ties up to 1/2" wide.



Material Data	
Material	Polyamide 6.6 heat stabilized (PA66HS)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C) continuous
Flammability	UL94 V2



Product Selection									
Article No.	Part No.	Type	Cable Tie Series	Bundle Ø	Length (L)	Width (W)	Height (H)	Color	Pkg. Qty.
				in. (mm)	in. (mm)	in. (mm)	in. (mm)		
151-06502	DSWS50HSK2	DSWS5	T50 - T250	.625" - 6" (15.8 - 152.4)	1.6" (40.6)	1" (25.4)	.93" (23.6)	Black	50
151-06501	DSWS50HSH1	DSWS5	T50 - T250	.625" - 6" (15.8 - 152.4)	1.6" (40.6)	1" (25.4)	.93" (23.6)	Black	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

ROUTING AND PROTECTION SOLUTIONS

Wiring Duct	109-132
Helawrap	133-136
Spiralwrap	137-139
Convolved Tubing	140-142
Braided Sleeving	143-164
Grommet	165-166
Electrical Tape	167



Pro-Duct Wiring Duct

HellermannTyton's Pro-Duct wiring duct efficiently routes and protects wire and cable. Manufactured from high impact, rigid PVC, Pro-Duct includes solid, slotted and high density slotted styles. Pro-Duct comes in standard colors of white, gray and black in 6 foot lengths. Blue wiring duct is also available in a variety of standard sizes. Other colors are available. Contact HellermannTyton for minimum volume requirements.

Pro-Duct Features

All styles of Pro-Duct wiring duct (solid, slotted and high density slotted) are designed with many installer preferred features:

- Cover is supplied with a film which protects against scratches and is writable for temporary identification during installation.
- Smooth edges protect installer and wires from abrasion.
- Cover is flush with the side of the duct for increased wire capacity. It also allows for tight, side-by-side placement.
- No cover slippage. The covers are provided with a non-slip lining. This ensures that the covers remain in place during vibration, yet they easily snap on and off, offering ready access to the wire run.
- Mounting holes are designed for installation versatility. Elongated mounting holes allow for changes in panel designs and installation flexibility.
- Mounting holes are standard. Contact HellermannTyton for duct without mounting holes.
- Enhanced wire capacity helps maximize space within panels.
- Interchangeable covers between solid, slotted, and high density slotted styles reduce inventory and increase versatility.
- Professional appearance increases panel's overall neatness.

Pro-Duct is U.L. Recognized, CSA Certified, CE Compliant and carries a U.L. flame rating of 94V0.

Pro-Duct is lead-free and is made with flame retardant PVC.



Lead Free



File # E64139



File # 49249



Solid Wall Duct

Solid wall duct is designed for straight wire runs where break-outs are not required.

- Smooth edges
- Non-slip cover
- Professional appearance



Slotted Wall Duct

Slotted wall duct features break-away fingers which provide additional access for wire leads.

Slotted wall duct is manufactured with two continuous score lines.

The first score line is at the base of the finger, allowing the finger to be bent and broken away when a greater opening is required. The second score line is lower allowing a section of the sidewall to be easily removed by cutting the sidewall down to the lower score line. Use HellermannTyton's TDNT notching tool and snap out the desired section. Both score lines provide smooth edges to ensure worker safety.

Strong fingers prevent unwanted breaking.

The fingers are easily deflected outward, allowing ready positioning of the wires within the slotted wall duct.

Restricted opening design in the finger of the duct helps keep wires in place.

Restriction also prevents unintended removal of wires and permits any individual wire to be traced without disconnection.



High Density Slotted Duct

High density slotted wall duct comes with narrow fingers, equaling a 2-to-1 finger ratio compared to standard slotted wiring duct.

Narrow fingers reduce fanning of the wires to the terminal blocks.

Compact designs and components are more easily accommodated with the high density duct's 2-to-1 finger ratio.

High density duct also incorporates the double scored design, similar to the standard slotted wall duct.

With sizes 2" high and above, high density duct features a double restriction on each finger of the duct.

The double restriction helps retain wires in the bottom portion of the duct for easier installation.

Mounting holes are uniform in size to the solid and slotted wall duct but are offered every 2 inches to accommodate compact designs and installations.



Adhesive Backing

Most sizes of Pro-Duct wiring duct are available with a pressure sensitive, rubber based adhesive backing. The adhesive backing can be utilized for temporary positioning. This is an optional feature and must be specified when ordering. For part number information, contact HellermannTyton or see notation at the end of each duct dimensional chart.

Please note: Adhesive duct orders are non-cancellable and non-returnable.

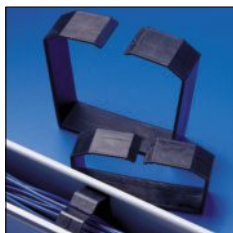
Duct Width	Rows of Tape	Tape Width
.50"	1	3/8"
.75"	1	1/2"
1.0"	1	3/4"
1.5"	1	1-1/8"
2.0"	2	3/4"
3.0"	2	3/4"
4.0"	2	3/4"

Modular Packaging

Pro-Duct wiring duct is available in modular, easy to stock packaging. Each master carton contains 120 feet of duct divided into four inner cartons of 30 feet each. This better serves the inventory needs of users who require smaller quantities of several sizes. Due to weight restrictions, 3" x 5" and 4" x 5" sizes are only available in bulk packaging.

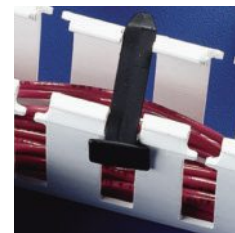
Solid Style Wire Retainers

The solid wall wire retainer is inserted in the duct and snaps into place. The retainer can be used on any smooth, straight run of duct and can work with vertical and overhead applications. Solid wall wire retainers are manufactured from black PVC.



Slotted Style Wire Retainers

The slotted wall wire retainer snaps in from the outside of the duct, allowing for fast and easy installation and removal. The retainer spans approximately 90% over the duct opening for effective wire management. Slotted wall wire retainers are manufactured from black nylon 6/6.

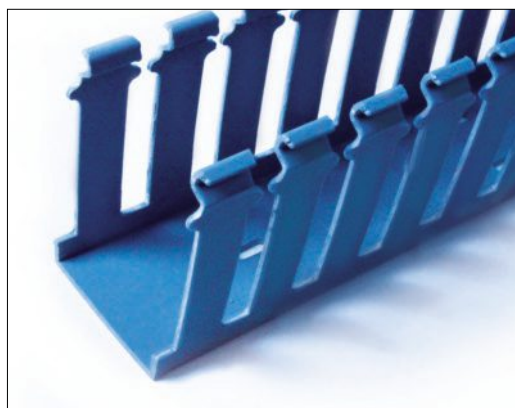


Product Selection					
Article No.	Part No.	Type	Description	Color	Pkg. Qty.
Solid Style Wire Retainers					
181-20201	SDWR2X20K2	SDWR2X20	Wire Retainer for 2" X 2" Solid Duct	Black	50
181-00158	SDWR4X20K2	SDWR4X20	Wire Retainer for 4" X 2" Solid Duct	Black	50
181-00441	SDWR4X40P2	SDWR4X40	Wire Retainer for 4" X 4" Solid Duct	Black	10
Slotted Style Wire Retainers					
181-20021	SLWR20C2	SLWR20	Wire Retainer for 2" Wide Slotted Duct	Black	100
181-30031	SLWR30C2	SLWR30	Wire Retainer for 3" Wide Slotted Duct	Black	100
181-40041	SLWR40C2	SLWR40	Wire Retainer for 4" Wide Slotted Duct	Black	100

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Intrinsic Blue Wiring Duct

Designed for identification purposes, HellermannTyton offers intrinsic blue Pro-Duct wiring duct. Manufactured from the same PVC material as HellermannTyton's standard duct, the blue color indicates that the wiring contained in the duct runs to intrinsically safe components in the control panel. Control panels used in chemical plants, grain elevators or other environments where explosive gases may exist are examples of where intrinsic blue duct might be needed. For more information contact HellermannTyton.



Panel Mounting Rivets and Tool

HellermannTyton panel rivets are one piece drive rivets that provide a fast, economical means of affixing wiring duct. The rivet is inserted into a 3/16" pre-punched hole and the pin is driven into the base, thereby expanding the rivet legs and locking the duct and sub-panel in place. The panel thickness (including the duct thickness) should be a maximum of 3/16". A panel rivet tool is also available for quick and easy installation of the drive rivets.



Product Selection

Article No.	Part No.	Type	Description	Color	Pkg. Qty.
181-00139	PR1	PR1	Panel Rivet	Natural	1000
182-00001	PRT1	PRT1	Panel Rivet Tool	Yellow	1

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Corner Strips

HellermannTyton corner strips are supplied in six foot lengths which can be cut to provide a rounded corner for two duct sections meeting at right angles. They are made from PVC material and can be used with any size HellermannTyton wiring duct.



Straight Connectors

HellermannTyton's PVC straight connectors join straight duct runs to cover and protect wires. The connectors can be used with all sizes of duct. Supplied in six foot lengths, they can be cut to fit duct sidewall heights.



Product Selection

Article No.	Part No.	Type	Description	Color	Pkg. Qty.
181-00001	CSG	CSG	Corner Strip - Gray	Gray	6
181-00002	CSW	CSW	Corner Strip - White	White	6
181-00003	SCG	SCG	Straight Connector - Gray	Gray	6
181-00004	SCW	SCW	Straight Connector - White	White	6

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Bench Mounted Wiring Duct Cutting Tool

The HellermannTyton Bench Mounted Wiring Duct Cutting Tool is used to accurately measure and cut all of HellermannTyton's slotted and high density slotted wiring duct, solid dividers and covers. The hand lever is ergonomically designed to reduce user fatigue. The measuring guide incorporates both imperial and metric values which eliminates the need for secondary measurement devices. The stop bar slides up and down the measuring guide, improving productivity on repetitive cuts. The long lasting, hardened blade produces burr free edges and improves productivity by eliminating the need for filing the edges after cutting. The integrated safety guide protects the operator from the blade during operation which preserves workplace safety.

Product Selection			
Article No.	Part No.	Description	Pkg. Qty.
904-00295	904-00295	Duct Cutter	1
904-00296	904-00296	Replacement Blade	1
904-00297	904-00297	Safety Guide	1



Duct Notching Tool

HellermannTyton's Duct Notching Tool is designed for use with HellermannTyton's slotted wall and slotted high density Pro-Duct wiring duct. This hand held tool features plastic grips for easy handling and allows users to notch a duct sidewall section down to the very base for finger and sidewall removal.

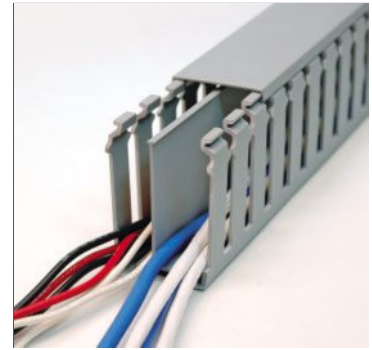


Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
182-00002	TDNT	TDNT	Notching Tool	1

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Wiring Duct Solid Wall Dividers

HellermannTyton's Solid Wall Dividers can be securely mounted into all types of HellermannTyton wiring duct to separate high and low voltage reducing interference. The dividers simply snap or slide into the HellermannTyton specially designed mount, instantly creating multiple channels within a single duct size. The dividers have continuous score lines for smooth breakouts where needed. The top of the dividers has a double-sided lip which reduces the likelihood of wires falling out during installation. Dividers are available in gray and white colors. Contact HellermannTyton for additional colors.



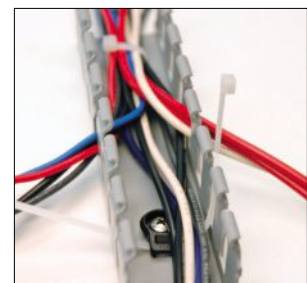
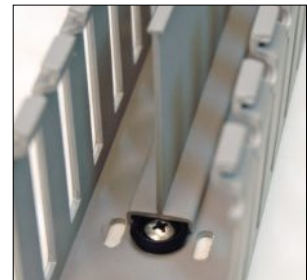
Product Selection							
Article No.	Part No.	Type	Width	Height	Description	Color	Pkg. Qty
			in. (mm)	in. (mm)			ft. (6ft lengths)
181-00300	181-00300	DV1G4	.75 (19.1)	.9 (22.9)	Duct Divider for 1" High Duct	Gray	120
181-00301	181-00301	DV1.5G4	.75 (19.1)	1.4 (35.6)	Duct Divider for 1.5" High Duct	Gray	120
181-00302	181-00302	DV2G4	.75 (19.1)	1.85 (47.0)	Duct Divider for 2" High Duct	Gray	120
181-00303	181-00303	DV3G4	.77 (19.6)	2.85 (72.4)	Duct Divider for 3" High Duct	Gray	120
181-00304	181-00304	DV4G4	.77 (19.6)	3.85 (97.8)	Duct Divider for 4" High Duct	Gray	120
181-00305	181-00305	DV1W4	.75 (19.1)	.9 (22.9)	Duct Divider for 1" High Duct	White	120
181-00306	181-00306	DV1.5W4	.75 (19.1)	1.4 (35.6)	Duct Divider for 1.5" High Duct	White	120
181-00307	181-00307	DV2W4	.75 (19.1)	1.85 (47.0)	Duct Divider for 2" High Duct	White	120
181-00308	181-00308	DV3W4	.77 (19.6)	2.85 (72.4)	Duct Divider for 3" High Duct	White	120
181-00309	181-00309	DV4W4	.77 (19.6)	3.85 (97.8)	Duct Divider for 4" High Duct	White	120

Universal Duct Mount

The HellermannTyton Universal Duct Mount is a multipurpose mount which secures duct dividers or secures wire bundles inside the duct with a cable tie. The mount can be installed with duct panel rivets or mechanical fasteners. The bottom of the mount has locator tabs that fit into the duct mounting holes preventing the mount from spinning during installation. The tabs also align the mount for easy divider installation. The top of the mount creates separation between wires and the fastener head which protects the wires from abrasion.

When used as a duct divider mount, the divider snaps or slides over the mount resulting in a quick, secure installation.

When used as a wire bundle mount, simply slide the cable tie through the four-way tie slot to secure the bundle. This method prevents the cables from falling outside the duct during installation and cover removal.



Product Selection					
Article No.	Part No.	Type	Color	Material	Pkg. Qty.
181-00684	181-00684	DVM	Black	PA66VO	100

Covers

Covers for Pro-Duct wiring duct are sold separately and are interchangeable among the 3 styles of duct (solid, slotted and high density). The covers include a film which protects against scratches and is writable for temporary identification during installation. The film is easily removed when installation is complete. The inner sides of the covers have a non-slip lining, ensuring the cover will not slide down the duct.



Product Selection						
Article No.	Part No.	Type	Width		Color	Pkg. Qty
			in.	mm		ft. (6 ft. lengths)
.5" wide covers						
181-00443	181-00443	TC.5	.76	19.3	White	120
181-00442	181-00442	TC.5			Gray	120
181-90050	181-90050	TC.5			Black	120
.75" wide covers						
181-00447	181-00447	TC.75	1.01	25.65	White	120
181-00446	181-00446	TC.75			Gray	120
181-00445	181-00445	TC.75			Black	120
1" wide covers						
181-91008	181-91008	TC1	1.0	25.4	White	120
181-91004	181-91004	TC1			Gray	120
181-91000	181-91000	TC1			Black	120
1.5" wide covers						
181-91510	181-91510	TC1.5	1.5	38.1	White	120
181-91507	181-91507	TC1.5			Gray	120
181-91503	181-91503	TC1.5			Black	120
2" wide covers						
181-92011	181-92011	TC2	2.0	50.8	White	120
181-92005	181-92005	TC2			Gray	120
181-92001	181-92001	TC2			Black	120
2.5" wide covers						
181-00262	181-00262	TC2.5	2.5	63.5	White	120
181-00260	181-00260	TC2.5			Gray	120
181-00311	181-00311	TC2.5			Black	120
3" wide covers						
181-93011	181-93011	TC3	3.0	76.2	White	120
181-93008	181-93008	TC3			Gray	120
181-93003	181-93003	TC3			Black	120
4" wide covers						
181-94014	181-94014	TC4	4.0	101.6	White	120
181-94009	181-94009	TC4			Gray	120
181-94003	181-94003	TC4			Black	120
6" wide covers						
181-96002	181-96002	TC6	6.0	152.4	White	60
181-96000	181-96000	TC6			Gray	60
181-00448	181-00448	TC6			Black	60
8" wide covers						
181-00451	181-00451	TC8	8.0	203.2	White	60
181-00450	181-00450	TC8			Gray	60
181-00449	181-00449	TC8			Black	60

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Cover Hinge

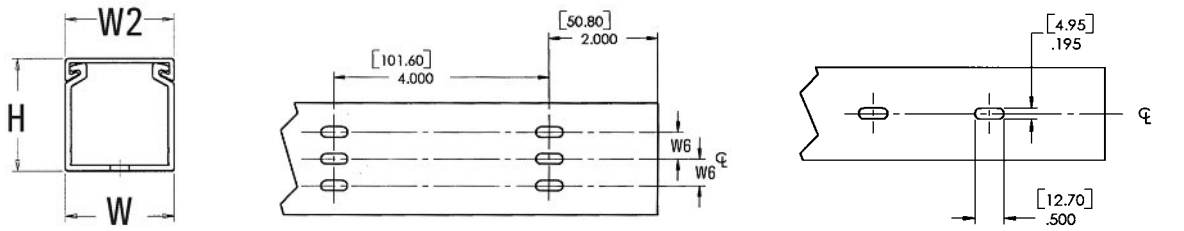
The hinge easily snaps onto the cover and the wiring duct (slotted wall duct only.) Once assembled, the hinge permits the cover to open like a door, providing easy access to the wires.



Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
854-09272	WMBH	WMBH	Wire Management Hinges	25

Use **Part No.** for ordering and **Type** for specification purposes.

Solid Wall Duct

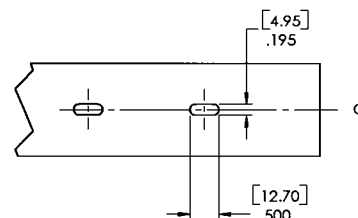
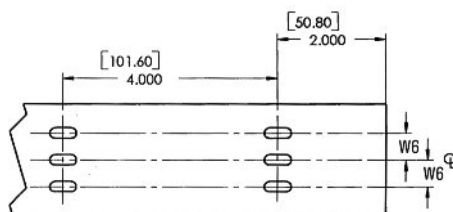
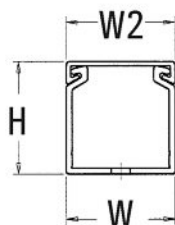


Product Selection

Product Selection			Width (W)	Height (H)	Width (W2)	Width (W6)			Pkg. Qty
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Description	Color	ft. (6 ft. lengths)
.5" x .5" (12.7 x 12.7) Nominal Duct Size									
181-00453	181-00453	SD.5X.5	.5 (12.7)	.55 (14.0)	.76 (19.3)	One rows of holes ☒	Non-Adhesive	White	120
181-00525	181-00525	SDA.5X.5					Adhesive	White	120
181-00452	181-00452	SD.5X.5					Non-Adhesive	Gray	120
181-00524	181-00524	SDA.5X.5					Adhesive	Gray	120
181-05500	181-05500	SD.5X.5					Non-Adhesive	Black	120
181-00481	181-00481	SDA.5X.5					Adhesive	Black	120
.5" x 1" (12.7 x 25.4) Nominal Duct Size									
181-00143	181-00143	SD.5X1	.5 (12.7)	1.05 (26.7)	.76 (19.3)	One rows of holes ☒	Non-Adhesive	White	120
181-00528	181-00528	SDA.5X1					Adhesive	White	120
181-00145	181-00145	SD.5X1					Non-Adhesive	Gray	120
181-00526	181-00526	SDA.5X1					Adhesive	Gray	120
181-00144	181-00144	SD.5X1					Non-Adhesive	Black	120
181-00527	181-00527	SDA.5X1					Adhesive	Black	120
.75" x .75" (19.1 x 19.1) Nominal Duct Size									
181-00456	181-00456	SD.75X.75	.75 (19.1)	.8 (20.3)	1.01 (25.7)	One rows of holes ☒	Non-Adhesive	White	120
181-00142	181-00142	SDA.75X.75					Adhesive	White	120
181-00455	181-00455	SD.75X.75					Non-Adhesive	Gray	120
181-00140	181-00140	SDA.75X.75					Adhesive	Gray	120
181-00454	181-00454	SD.75X.75					Non-Adhesive	Black	120
181-00141	181-00141	SDA.75X.75					Adhesive	Black	120
1" x 1" (25.4 x 25.4) Nominal Duct Size									
181-11005	181-11005	SD1X1	1.0 (25.4)	1.05 (26.7)	1.0 (25.4)	One rows of holes ☒	Non-Adhesive	White	120
181-11008	181-11008	SDA1X1					Adhesive	White	120
181-11002	181-11002	SD1X1					Non-Adhesive	Gray	120
181-00493	181-00493	SDA1X1					Adhesive	Gray	120
181-11000	181-11000	SD1X1					Non-Adhesive	Black	120
181-00492	181-00492	SDA1X1					Adhesive	Black	120
1" x 1.5" (25.4 x 38.1) Nominal Duct Size									
181-11502	181-11502	SD1X1.5	1.02 (25.9)	1.56 (39.6)	1.0 (25.4)	One rows of holes ☒	Non-Adhesive	White	120
181-00491	181-00491	SDA1X1.5					Adhesive	White	120
181-11501	181-11501	SD1X1.5					Non-Adhesive	Gray	120
181-00490	181-00490	SDA1X1.5					Adhesive	Gray	120
181-00457	181-00457	SD1X1.5					Non-Adhesive	Black	120
181-00529	181-00529	SDA1X1.5					Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
Solid wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Solid Wall Duct



Lead Free File # E64139 File # 49249

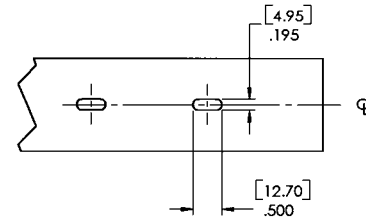
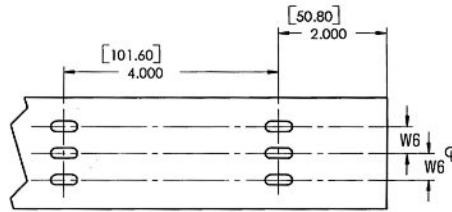
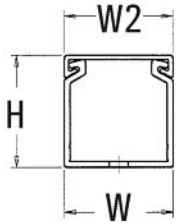
Product Selection

Product Selection			Width (W)	Height (H)	Width (W2)	Width (W6)			Pkg. Qty
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Description	Color	ft. (6 ft. lengths)
1" x 2" (25.4 x 50.8) Nominal Duct Size									
181-12002	181-12002	SD1X2	1.03 (26.2)	2.06 (52.3)	1.0 (25.4)	One rows of holes ☒	Non-Adhesive	White	120
181-00495	181-00495	SDA1X2					Adhesive	White	120
181-12001	181-12001	SD1X2					Non-Adhesive	Gray	120
181-00494	181-00494	SDA1X2					Adhesive	Gray	120
181-00458	181-00458	SD1X2					Non-Adhesive	Black	120
181-00530	181-00530	SDA1X2					Adhesive	Black	120
1" x 3" (25.4 x 76.2) Nominal Duct Size									
181-13001	181-13001	SD1X3	1.02 (25.9)	3.06 (77.7)	1.0 (25.4)	One rows of holes ☒	Non-Adhesive	White	120
181-00496	181-00496	SDA1X3					Adhesive	White	120
181-00136	181-00136	SD1X3					Non-Adhesive	Gray	120
181-00671	181-00671	SDA1X3					Adhesive	Gray	120
181-00459	181-00459	SD1X3					Non-Adhesive	Black	120
181-00531	181-00531	SDA1X3					Adhesive	Black	120
1" x 4" (25.4 x 101.6) Nominal Duct Size									
181-14000	181-14000	SD1X4	1.0 (25.4)	4.06 (103.1)	1.0 (25.4)	One rows of holes ☒	Non-Adhesive	White	120
181-00497	181-00497	SDA1X4					Adhesive	White	120
181-00461	181-00461	SD1X4					Non-Adhesive	Gray	120
181-00533	181-00533	SDA1X4					Adhesive	Gray	120
181-00460	181-00460	SD1X4					Non-Adhesive	Black	120
181-00532	181-00532	SDA1X4					Adhesive	Black	120
1.5" x 1" (38.1 x 25.4) Nominal Duct Size									
181-15102	181-15102	SD1.5X1	1.5 (38.1)	1.05 (26.7)	1.5 (38.1)	One rows of holes ☒	Non-Adhesive	White	120
181-00486	181-00486	SDA1.5X1					Adhesive	White	120
181-15101	181-15101	SD1.5X1					Non-Adhesive	Gray	120
181-00025	181-00025	SDA1.5X1					Adhesive	Gray	120
181-15100	181-15100	SD1.5X1					Non-Adhesive	Black	120
181-00485	181-00485	SDA1.5X1					Adhesive	Black	120
1.5" x 1.5" (38.1 x 38.1) Nominal Duct Size									
181-15503	181-15503	SD1.5X1.5	1.52 (38.6)	1.56 (39.6)	1.5 (38.1)	One rows of holes ☒	Non-Adhesive	White	120
181-15504	181-15504	SDA1.5X1.5					Adhesive	White	120
181-15502	181-15502	SD1.5X1.5					Non-Adhesive	Gray	120
181-00483	181-00483	SDA1.5X1.5					Adhesive	Gray	120
181-15500	181-15500	SD1.5X1.5					Non-Adhesive	Black	120
181-00482	181-00482	SDA1.5X1.5					Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Solid wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Solid Wall Duct



Lead Free



File # E64139



File # 49249

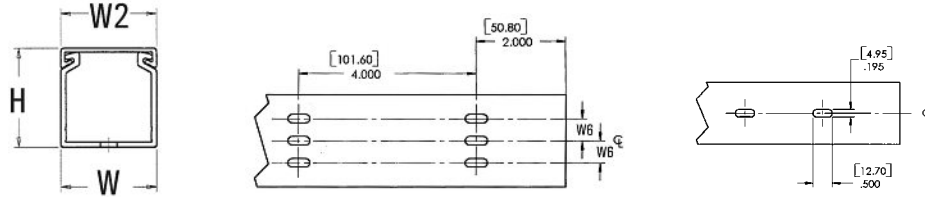


Product Selection			Lead Free File # E64139 File # 49249						
Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W6)	Description	Color	Pkg. Qty
			in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)
1.5" x 2" (38.1 x 50.8) Nominal Duct Size									
181-15202	181-15202	SD1.5X2	1.53 (38.9)	2.06 (52.3)	1.5 (38.1)	One rows of holes 	Non-Adhesive	White	120
181-00488	181-00488	SDA1.5X2					Adhesive	White	120
181-15201	181-15201	SD1.5X2					Non-Adhesive	Gray	120
181-00487	181-00487	SDA1.5X2					Adhesive	Gray	120
181-00462	181-00462	SD1.5X2					Non-Adhesive	Black	120
181-00534	181-00534	SDA1.5X2					Adhesive	Black	120
1.5" x 3" (38.1 x 76.2) Nominal Duct Size									
181-00464	181-00464	SD1.5X3	1.52 (38.6)	3.06 (77.7)	1.5 (38.1)	One rows of holes 	Non-Adhesive	White	120
181-00536	181-00536	SDA1.5X3					Adhesive	White	120
181-15300	181-15300	SD1.5X3					Non-Adhesive	Gray	120
181-00489	181-00489	SDA1.5X3					Adhesive	Gray	120
181-00463	181-00463	SD1.5X3					Non-Adhesive	Black	120
181-00535	181-00535	SDA1.5X3					Adhesive	Black	120
1.5" x 4" (38.1 x 101.6) Nominal Duct Size									
181-00467	181-00467	SD1.5X4	1.5 (38.1)	4.06 (103.1)	1.5 (38.1)	One rows of holes 	Non-Adhesive	White	120
181-00539	181-00539	SDA1.5X4					Adhesive	White	120
181-00574	181-00574	SD1.5X4					Non-Adhesive	Gray	120
181-00538	181-00538	SDA1.5X4					Adhesive	Gray	120
181-00465	181-00465	SD1.5X4					Non-Adhesive	Black	120
181-00537	181-00537	SDA1.5X4					Adhesive	Black	120
2" x 1" (50.8 x 25.4) Nominal Duct Size									
181-21003	181-21003	SD2X1	2.01 (51.1)	1.05 (26.7)	2.0 (50.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-00500	181-00500	SDA2X1					Adhesive	White	120
181-21001	181-21001	SD2X1					Non-Adhesive	Gray	120
181-00499	181-00499	SDA2X1					Adhesive	Gray	120
181-21000	181-21000	SD2X1					Non-Adhesive	Black	120
181-00498	181-00498	SDA2X1					Adhesive	Black	120
2" x 2" (50.8 x 50.8) Nominal Duct Size									
181-22013	181-22013	SD2X2	2.03 (51.6)	2.06 (52.3)	2.0 (50.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-22018	181-22018	SDA2X2					Adhesive	White	120
181-22008	181-22008	SD2X2					Non-Adhesive	Gray	120
181-22016	181-22016	SDA2X2					Adhesive	Gray	120
181-22005	181-22005	SD2X2					Non-Adhesive	Black	120
181-00501	181-00501	SDA2X2					Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Solid wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Solid Wall Duct



Lead Free



File # E64139



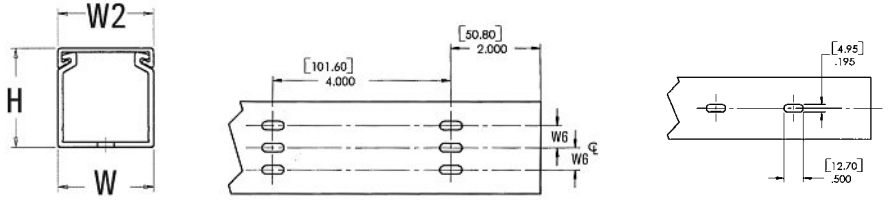
File # 49249



Product Selection			Width (W)	Height (H)	Width (W2)	Width (W6)			Pkg. Qty
Article No.	Part No.	Type							
2" x 3" (50.8 x 76.2) Nominal Duct Size									
181-23002	181-23002	SD2X3	2.02 (51.3)	3.06 (77.7)	2.0 (50.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-00504	181-00504	SDA2X3					Adhesive	White	120
181-23001	181-23001	SD2X3					Non-Adhesive	Gray	120
181-00503	181-00503	SDA2X3					Adhesive	Gray	120
181-00468	181-00468	SD2X3					Non-Adhesive	Black	120
181-00540	181-00540	SDA2X3					Adhesive	Black	120
2" x 4" (50.8 x 101.6) Nominal Duct Size									
181-24002	181-24002	SD2X4	2.0 (50.8)	4.06 (103.1)	2.0 (50.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-00506	181-00506	SDA2X4					Adhesive	White	120
181-24000	181-24000	SD2X4					Non-Adhesive	Gray	120
181-00505	181-00505	SDA2X4					Adhesive	Gray	120
181-00469	181-00469	SD2X4					Non-Adhesive	Black	120
181-00541	181-00541	SDA2X4					Adhesive	Black	120
2" x 5" (50.8 x 127) Nominal Duct Size									
181-00248	181-00248	SD2X5	2.0 (50.8)	5.0 (127)	2.0 (50.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-00250	181-00250	SDA2X5					Adhesive	White	120
181-00244	181-00244	SD2X5					Non-Adhesive	Gray	120
181-00246	181-00246	SDA2X5					Adhesive	Gray	120
181-00312	181-00312	SD2X5					Non-Adhesive	Black	120
181-00313	181-00313	SDA2X5					Adhesive	Black	120
2.5" x 3" (63.5 x 76.2) Nominal Duct Size									
181-00224	181-00224	SD2.5X3	2.50 (63.5)	3.0 (76.2)	2.5 (63.5)	Three rows of holes .75 (19.05)	Non-Adhesive	White	120
181-00226	181-00226	SDA2.5X3					Adhesive	White	120
181-00220	181-00220	SD2.5X3					Non-Adhesive	Gray	120
181-00222	181-00222	SDA2.5X3					Adhesive	Gray	120
181-00314	181-00314	SD2.5X3					Non-Adhesive	Black	120
181-00315	181-00315	SDA2.5X3					Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
Solid wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Solid Wall Duct



Lead Free



File # E64139



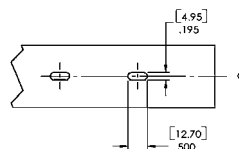
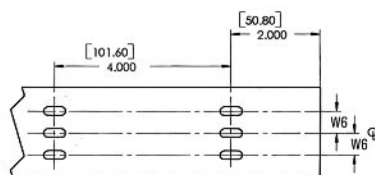
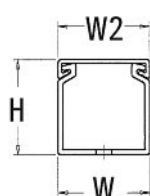
File # 49249



Product Selection			Width (W)	Height (H)	Width (W2)	Width (W6)			Pkg. Qty
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Description	Color	ft. (6 ft. lengths)
3" x 1" (76.2 x 25.4) Nominal Duct Size									
181-31002	181-31002	SD3X1	3.04 (77.2)	1.05 (26.7)	3.0 (76.2)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00508	181-00508	SDA3X1					Adhesive	White	120
181-31001	181-31001	SD3X1					Non-Adhesive	Gray	120
181-00507	181-00507	SDA3X1					Adhesive	Gray	120
181-00470	181-00470	SD3X1					Non-Adhesive	Black	120
181-00672	181-00672	SDA3X1					Adhesive	Black	120
3" x 2" (76.2 x 50.8) Nominal Duct Size									
181-32003	181-32003	SD3X2	3.03 (77.0)	2.06 (52.5)	3.0 (76.2)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00510	181-00510	SDA3X2					Adhesive	White	120
181-32002	181-32002	SD3X2					Non-Adhesive	Gray	120
181-00509	181-00509	SDA3X2					Adhesive	Gray	120
181-00471	181-00471	SD3X2					Non-Adhesive	Black	120
181-00542	181-00542	SDA3X2					Adhesive	Black	120
3" x 3" (76.2 x 76.2) Nominal Duct Size									
181-33006	181-33006	SD3X3	3.02 (76.7)	3.06 (77.7)	3.0 (76.2)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00513	181-00513	SDA3X3					Adhesive	White	120
181-33004	181-33004	SD3X3					Non-Adhesive	Gray	120
181-00512	181-00512	SDA3X3					Adhesive	Gray	120
181-33000	181-33000	SD3X3					Non-Adhesive	Black	120
181-00511	181-00511	SDA3X3					Adhesive	Black	120
3" x 4" (76.2 x 101.6) Nominal Duct Size									
181-34001	181-34001	SD3X4	3.0 (76.2)	4.06 (103.1)	3.0 (76.2)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00515	181-00515	SDA3X4					Adhesive	White	120
181-34000	181-34000	SD3X4					Non-Adhesive	Gray	120
181-00514	181-00514	SDA3X4					Adhesive	Gray	120
181-00472	181-00472	SD3X4					Non-Adhesive	Black	120
181-00147	181-00147	SDA3X4					Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
Solid wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Solid Wall Duct



Lead Free File # E64139 File # 49249

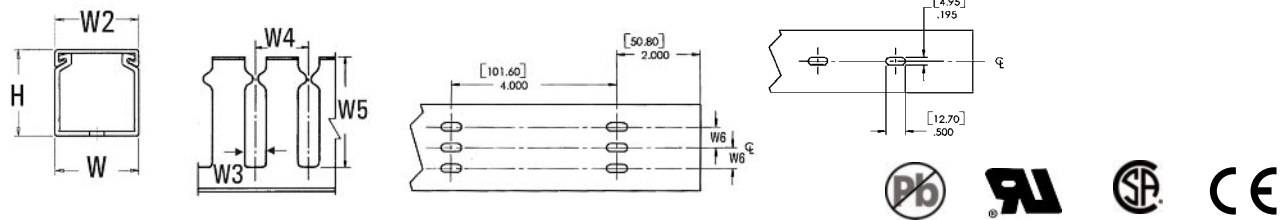
Product Selection

Product Selection			Width (W)	Height (H)	Width (W2)	Width (W6)			Pkg. Qty
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Description	Color	ft. (6 ft. lengths)
3" x 5" (76.2 x 127.0) Nominal Duct Size									
181-00475	181-00475	SD3X5	3.0 (76.2)	5.06 (128.5)	3.0 (76.2)	Three rows f holes 1.0 (25.4)	Non-Adhesive	White	60
181-00544	181-00544	SDA3X5					Adhesive	White	60
181-00474	181-00474	SD3X5					Non-Adhesive	Gray	60
181-00148	181-00148	SDA3X5					Adhesive	Gray	60
181-00473	181-00473	SD3X5					Non-Adhesive	Black	60
181-00543	181-00543	SDA3X5					Adhesive	Black	60
4" x 2" (101.6 x 50.8) Nominal Duct Size									
181-42004	181-42004	SD4X2	4.03 (102.4)	2.06 (52.3)	4.0 (101.6)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120
181-00517	181-00517	SDA4X2					Adhesive	White	120
181-42002	181-42002	SD4X2					Non-Adhesive	Gray	120
181-00516	181-00516	SDA4X2					Adhesive	Gray	120
181-00476	181-00476	SD4X2					Non-Adhesive	Black	120
181-00545	181-00545	SDA4X2					Adhesive	Black	120
4" x 3" (101.6 x 76.2) Nominal Duct Size									
181-43002	181-43002	SD4X3	4.03 (102.4)	3.06 (77.7)	4.0 (101.6)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120
181-00519	181-00519	SDA4X3					Adhesive	White	120
181-43001	181-43001	SD4X3					Non-Adhesive	Gray	120
181-00518	181-00518	SDA4X3					Adhesive	Gray	120
181-00477	181-00477	SD4X3					Non-Adhesive	Black	120
181-00546	181-00546	SDA4X3					Adhesive	Black	120
4" x 4" (101.6 x 101.6) Nominal Duct Size									
181-44015	181-44015	SD4X4	4.00 (101.6)	4.06 (103.1)	4.0 (101.6)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120
181-00521	181-00521	SDA4X4					Adhesive	White	120
181-44009	181-44009	SD4X4					Non-Adhesive	Gray	120
181-44018	181-44018	SDA4X4					Adhesive	Gray	120
181-44006	181-44006	SD4X4					Non-Adhesive	Black	120
181-00520	181-00520	SDA4X4					Adhesive	Black	120
4" x 5" (101.6 x 127) Nominal Duct Size									
181-45001	181-45001	SD4X5	4.0 (101.6)	5.06 (128.5)	4.0 (101.6)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	60
181-00523	181-00523	SDA4X5					Adhesive	White	60
181-45000	181-45000	SD4X5					Non-Adhesive	Gray	60
181-00522	181-00522	SDA4X5					Adhesive	Gray	60
181-00137	181-00137	SD4X5					Non-Adhesive	Black	60
181-00547	181-00547	SDA4X5					Adhesive	Black	60
6" x 4" (152.4 x 101.6) Nominal Duct Size									
181-64001	181-64001	SD6X4	6.0 (152.4)	4.07 (103.4)	6.0 (152.4)	No mounting holes	Non-Adhesive	White	60
181-64000	181-64000	SD6X4					Non-Adhesive	Gray	60
181-00479	181-00479	SD6X4					Non-Adhesive	Black	60
8" x 4" (203.2x 101.6) Nominal Duct Size									
181-84007	181-84007	SD8X4	8.0 (203.2)	4.09 (103.9)	8.0 (203.2)	No mounting holes	Non-Adhesive	White	30
181-84004	181-84004	SD8X4					Non-Adhesive	Gray	30
181-00480	181-00480	SD8X4					Non-Adhesive	Black	30

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. Covers are listed on page 115.

For product information visit or www.hellermann.tyton.com or call 800-537-1512

Slotted Wall Duct

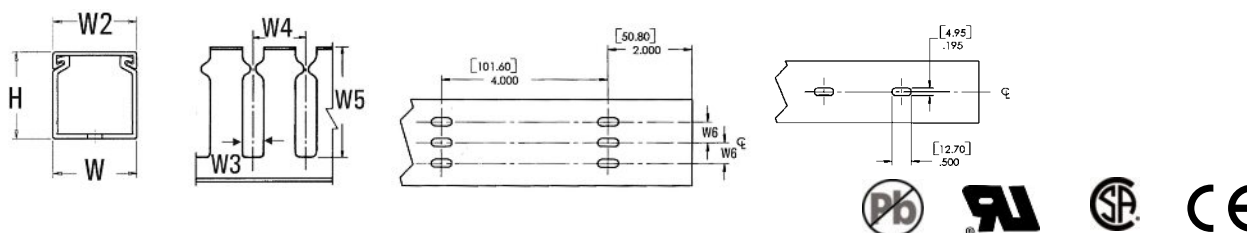


Lead Free File # E64139 File # 49249

Product Selection			Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color	Pkg. Qty
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)
1" x 1" (25.4 x 25.4) Nominal Duct Size												
181-11015	181-11015	SL1x1	1.0 (25.4)	1.05 (26.7)	1.0 (25.4)	.4 (10.2)	1.0 (25.4)	.75 (19.05)	One row of holes on 	Non-Adhesive	White	120
181-11021	181-11021	SLA1X1								Adhesive	White	120
181-11013	181-11013	SL1x1								Non-Adhesive	Gray	120
181-11019	181-11019	SLA1X1								Adhesive	Gray	120
181-11009	181-11009	SL1x1								Non-Adhesive	Black	120
181-11016	181-11016	SLA1X1								Adhesive	Black	120
1" x 1.5" (25.4 x 38.1) Nominal Duct Size												
181-11507	181-11507	SL1X1.5	1.02 (25.91)	1.56 (26.1)	1.0 (25.4)	.4 (10.2)	1.0 (25.4)	1.19 (30.2)	One row of holes on 	Non-Adhesive	White	120
181-11511	181-11511	SLA1X1.5								Adhesive	White	120
181-11505	181-11505	SL1X1.5								Non-Adhesive	Gray	120
181-11509	181-11509	SLA1X1.5								Adhesive	Gray	120
181-00552	181-00552	SL1X1.5								Non-Adhesive	Black	120
181-00564	181-00564	SLA1X1.5								Adhesive	Black	120
1" x 2" (25.4 x 50.8) Nominal Duct Size												
181-12008	181-12008	SL1X2	1.03 (26.16)	2.06 (52.32)	1.0 (25.4)	.4 (10.2)	1.0 (25.4)	1.62 (41.1)	One row of holes on 	Non-Adhesive	White	120
181-12013	181-12013	SLA1X2								Adhesive	White	120
181-12005	181-12005	SL1X2								Non-Adhesive	Gray	120
181-12011	181-12011	SLA1X2								Adhesive	Gray	120
181-00024	181-00024	SL1X2								Non-Adhesive	Black	120
181-00565	181-00565	SLA1X2								Adhesive	Black	120
1" x 3" (25.4 x 76.2) Nominal Duct Size												
181-13008	181-13008	SL1X3	1.02 (25.91)	3.06 (77.72)	1.0 (25.4)	.4 (10.2)	1.0 (25.4)	2.6 (66.0)	One row of holes on 	Non-Adhesive	White	120
181-13012	181-13012	SLA1X3								Adhesive	White	120
181-13006	181-13006	SL1X3								Non-Adhesive	Gray	120
181-13010	181-13010	SLA1X3								Adhesive	Gray	120
181-13003	181-13003	SL1X3								Non-Adhesive	Black	120
181-00566	181-00566	SLA1X3								Adhesive	Black	120
1" x 4" (25.4 x 101.6) Nominal Duct Size												
181-14006	181-14006	SL1X4	1.0 (25.4)	4.06 (103.12)	1.0 (25.4)	.4 (10.2)	1.0 (25.4)	3.6 (91.4)	One row of holes on 	Non-Adhesive	White	120
181-00569	181-00569	SLA1X4								Adhesive	White	120
181-14003	181-14003	SL1X4								Non-Adhesive	Gray	120
181-00568	181-00568	SLA1X4								Adhesive	Gray	120
181-14001	181-14001	SL1X4								Non-Adhesive	Black	120
181-00567	181-00567	SLA1X4								Adhesive	Black	120
1.5" x 1" (38.1 x 25.4) Nominal Duct Size												
181-15107	181-15107	SL1.5X1	1.5 (38.1)	1.05 (26.67)	1.5 (38.1)	.4 (10.2)	1.0 (25.4)	.75 (19.1)	One row of holes on 	Non-Adhesive	White	120
181-00572	181-00572	SLA1.5X1								Adhesive	White	120
181-15105	181-15105	SL1.5X1								Non-Adhesive	Gray	120
181-00571	181-00571	SLA1.5X1								Adhesive	Gray	120
181-00548	181-00548	SL1.5X1								Non-Adhesive	Black	120
181-00570	181-00570	SLA1.5X1								Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. Slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Slotted Wall Duct



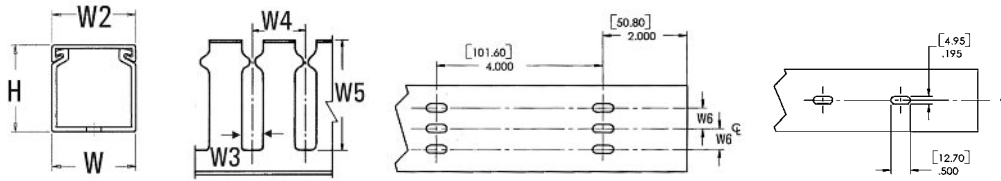
Lead Free File # E64139 File # 49249

Product Selection			Lead Free File # E64139 File # 49249									
Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)
1.5" x 1.5" (38.1 x 38.1) Nominal Duct Size												
181-15511	181-15511	SL1.5X1.5	1.52 (38.61)	1.56 (34.6)	1.5 (38.1)	.4 (10.16)	1.0 (25.4)	1.19 (30.2)	One row of holes on 	Non-Adhesive	White	120
181-15515	181-15515	SLA1.5X1.5								Adhesive	White	120
181-15509	181-15509	SL1.5X1.5								Non-Adhesive	Gray	120
181-15513	181-15513	SLA1.5X1.5								Adhesive	Gray	120
181-15505	181-15505	SL1.5X1.5								Non-Adhesive	Black	120
181-00027	181-00027	SLA1.5X1.5								Adhesive	Black	120
1.5" x 2" (38.1 x 50.8) Nominal Duct Size												
181-15209	181-15209	SL1.5X2	1.53 (38.86)	2.06 (52.32)	1.5 (38.1)	.4 (10.16)	1.0 (25.4)	1.62 (41.1)	One row of holes on 	Non-Adhesive	White	120
181-15213	181-15213	SLA1.5X2								Adhesive	White	120
181-15207	181-15207	SL1.5X2								Non-Adhesive	Gray	120
181-15211	181-15211	SLA1.5X2								Adhesive	Gray	120
181-15203	181-15203	SL1.5X2								Non-Adhesive	Black	120
181-00573	181-00573	SLA1.5X2								Adhesive	Black	120
1.5" x 3" (38.1 x 76.2) Nominal Duct Size												
181-15306	181-15306	SL1.5X3	1.52 (38.61)	3.06 (77.72)	1.5 (38.1)	.4 (10.16)	1.0 (25.4)	2.6 (66.0)	One row of holes on 	Non-Adhesive	White	120
181-15308	181-15308	SLA1.5X3								Adhesive	White	120
181-15304	181-15304	SL1.5X3								Non-Adhesive	Gray	120
181-15307	181-15307	SLA1.5X3								Adhesive	Gray	120
181-00550	181-00550	SL1.5X3								Non-Adhesive	Black	120
181-00575	181-00575	SLA1.5X3								Adhesive	Black	120
1.5" x 4" (38.1 x 101.6) Nominal Duct Size												
181-15406	181-15406	SL1.5X4	1.5 (38.1)	4.06 (103.12)	1.5 (38.1)	.4 (10.16)	1.0 (25.4)	3.6 (91.4)	One row of holes on 	Non-Adhesive	White	120
181-00578	181-00578	SLA1.5X4								Adhesive	White	120
181-15404	181-15404	SL1.5X4								Non-Adhesive	Gray	120
181-00577	181-00577	SLA1.5X4								Adhesive	Gray	120
181-15400	181-15400	SL1.5X4								Non-Adhesive	Black	120
181-00576	181-00576	SLA1.5X4								Adhesive	Black	120
2" x 1" (50.8 x 25.4) Nominal Duct Size												
181-21007	181-21007	SL2X1	2.01 (51.05)	1.05 (26.7)	2.0 (50.8)	.4 (10.16)	1.0 (25.4)	.75 (19.1)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-00580	181-00580	SLA2X1								Adhesive	White	120
181-21005	181-21005	SL2X1								Non-Adhesive	Gray	120
181-21009	181-21009	SLA2X1								Adhesive	Gray	120
181-00554	181-00554	SL2X1								Non-Adhesive	Black	120
181-00579	181-00579	SLA2X1								Adhesive	Black	120
2" x 2" (50.8 x 50.8) Nominal Duct Size												
181-22028	181-22028	SL2X2	2.03 (51.56)	2.0 (50.8)	2.0 (50.8)	.4 (10.16)	1.0 (25.4)	1.62 (41.1)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-22034	181-22034	SLA2X2								Adhesive	White	120
181-22024	181-22024	SL2x2								Non-Adhesive	Gray	120
181-22032	181-22032	SLA2X2								Adhesive	Gray	120
181-22020	181-22020	SL2x2								Non-Adhesive	Black	120
181-22030	181-22030	SLA2X2								Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
Slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

For product information visit or www.hellermann.tyton.com or call 800-537-1512

Slotted Wall Duct



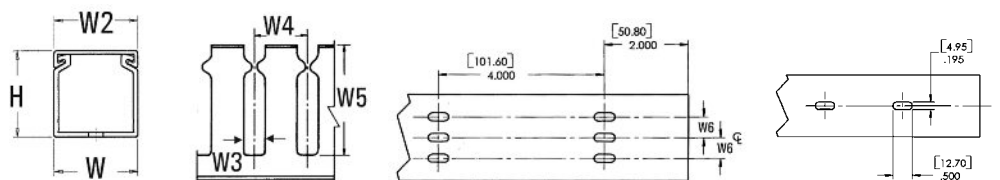
Lead Free File # E64139 File # 49249



Product Selection													
Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color	Pkg. Qty	
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)	
2" x 3" (50.8 x 76.2) Nominal Duct Size													
181-23009	181-23009	SL2X3	2.02 (51.3)	3.06 (77.7)	2.0 (50.8)	.4 (10.16)	1.0 (25.4)	2.6 (66.0)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120	
181-23012	181-23012	SLA2X3								Adhesive	White	120	
181-23007	181-23007	SL2X3								Non-Adhesive	Gray	120	
181-00582	181-00582	SLA2X3								Adhesive	Gray	120	
181-23003	181-23003	SL2X3								Non-Adhesive	Black	120	
181-00581	181-00581	SLA2X3								Adhesive	Black	120	
2" x 4" (50.8 x 101.6) Nominal Duct Size													
181-24011	181-24011	SL2X4	2.0 (50.8)	4.06 (103.1)	2.0 (50.8)	.4 (10.16)	1.0 (25.4)	3.6 (91.4)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120	
181-24014	181-24014	SLA2X4								Adhesive	White	120	
181-24008	181-24008	SL2X4								Non-Adhesive	Gray	120	
181-24013	181-24013	SLA2X4								Adhesive	Gray	120	
181-24003	181-24003	SL2X4								Non-Adhesive	Black	120	
181-00583	181-00583	SLA2X4								Adhesive	Black	120	
2" x 5" (50.8 x 127) Nominal Duct Size													
181-00240	181-00240	SL2X5	2.0 (50.8)	5.0 (127)	2.0 (50.8)	.40 (10.2)	1.0 (25.1)	4.6 (116.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120	
181-00242	181-00242	SLA2X5								Adhesive	White	120	
181-00236	181-00236	SL2X5								Non-Adhesive	Gray	120	
181-00238	181-00238	SLA2X5								Adhesive	Gray	120	
181-00316	181-00316	SL2X5								Non-Adhesive	Black	120	
181-00317	181-00317	SLA2X5								Adhesive	Black	120	
2.5" x 3" (63.5 x 76.2) Nominal Duct Size													
181-00216	181-00216	SL2.5X3	2.5 (63.5)	3.0 (76.2)	2.5 (63.5)	.4 (10.2)	1.0 (25.1)	2.6 (66.0)	Three rows of holes .75 (19.05)	Non-Adhesive	White	120	
181-00218	181-00218	SLA2.5X3								Adhesive	White	120	
181-00212	181-00212	SL2.5X3								Non-Adhesive	Gray	120	
181-00214	181-00214	SLA2.5X3								Adhesive	Gray	120	
181-00318	181-00318	SL2.5X3								Non-Adhesive	Black	120	
181-00319	181-00319	SLA2.5X3								Adhesive	Black	120	

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. Slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Slotted Wall Duct

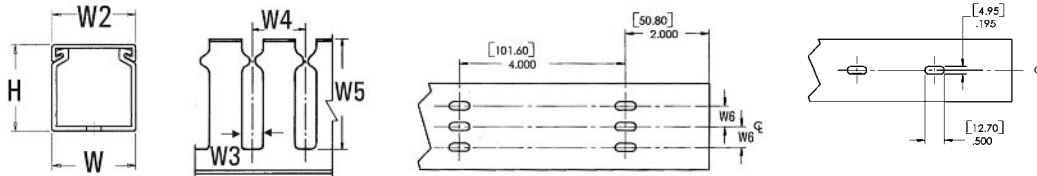


Lead Free File # E64139 File # 49249

			Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)			Pkg. Qty
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Description	Color	ft. (6 ft. lengths)
3" x 1" (76.2 X 25.4) Nominal Duct Size												
181-31007	181-31007	SL3X1	3.04 (77.22)	1.0 (25.4)	3.0 (76.2)	.4 (10.16)	1.0 (25.4)	.75 (19.1)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00586	181-00586	SLA3X1								Adhesive	White	120
181-00558	181-00558	SL3X1								Non-Adhesive	Gray	120
181-00585	181-00585	SLA3X1								Adhesive	Gray	120
181-00557	181-00557	SL3X1								Non-Adhesive	Black	120
181-00584	181-00584	SLA3X1								Adhesive	Black	120
3" x 2" (76.2 x 50.8) Nominal Duct Size												
181-32009	181-32009	SL3X2	3.03 (76.96)	2.0 (50.8)	3.0 (76.2)	.4 (10.16)	1.0 (25.40)	1.62 (41.1)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-32015	181-32015	SLA3X2								Adhesive	White	120
181-32005	181-32005	SL3X2								Non-Adhesive	Gray	120
181-32012	181-32012	SLA3X2								Adhesive	Gray	120
181-32004	181-32004	SL3X2								Non-Adhesive	Black	120
181-00587	181-00587	SLA3X2								Adhesive	Black	120
3" x 3" (76.2 x 76.2) Nominal Duct Size												
181-33018	181-33018	SL3X3	3.02 (76.71)	3.0 (76.2)	3.0 (76.2)	.4 (10.2)	1.0 (25.1)	2.6 (66.0)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-33022	181-33022	SL3X3								Adhesive	White	120
181-33015	181-33015	SLA3X3								Non-Adhesive	Gray	120
181-33021	181-33021	SLA3X3								Adhesive	Gray	120
181-33009	181-33009	SL3X3								Non-Adhesive	Black	120
181-00159	181-00159	SL3X3								Adhesive	Black	120
3" x 4" (76.2 x 101.6) Nominal Duct Size												
181-34007	181-34007	SL3X4	3.0 (76.2)	4.0 (101.6)	3.0 (76.2)	0.4 (10.2)	1.0 (25.1)	3.6 (91.4)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00590	181-00590	SL3X4								Adhesive	White	120
181-34004	181-34004	SLA3X4								Non-Adhesive	Gray	120
181-00589	181-00589	SLA3X4								Adhesive	Gray	120
181-34002	181-34002	SL3X4								Non-Adhesive	Black	120
181-00588	181-00588	SL3X4								Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. Slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

Slotted Wall Duct



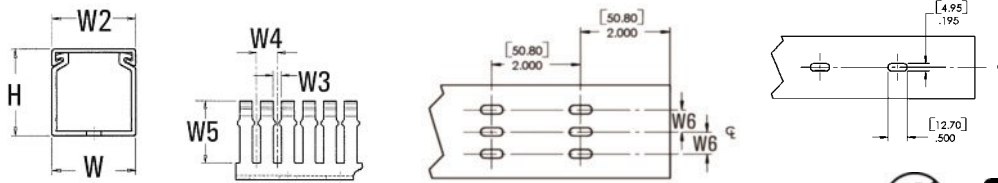
Lead Free File # E64139 File # 49249

Product Selection

Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)
3" x 5" (76.2 x 127.0) Nominal Duct Size												
181-00560	181-00560	SL3X5	3.0 (76.2)	5.0 (127.0)	3.0 (76.2)	.4 (10.16)	1.0 (25.4)	4.6 (116.8)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	60
181-00156	181-00156	SLA3X5								Adhesive	White	60
181-35005	181-35005	SL3X5								Non-Adhesive	Gray	60
181-00155	181-00155	SLA3X5								Adhesive	Gray	60
181-35002	181-35002	SL3X5								Non-Adhesive	Black	60
181-00157	181-00157	SLA3X5								Adhesive	Black	60
4" x 2" (101.6 x 50.8) Nominal Duct Size												
181-42010	181-42010	SL4X2	4.03 (102.36)	2.06 (52.3)	4.0 (101.6)	.4 (10.16)	1.0 (25.4)	1.62 (41.1)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120
181-42014	181-42014	SLA4X2								Adhesive	White	120
181-42008	181-42008	SL4X2								Non-Adhesive	Gray	120
181-00592	181-00592	SLA4X2								Adhesive	Gray	120
181-42005	181-42005	SL4X2								Non-Adhesive	Black	120
181-00591	181-00591	SLA4X2								Adhesive	Black	120
4" x 3" (101.6 x 76.2) Nominal Duct Size												
181-43006	181-43006	SL4X3	4.03 (102.36)	3.0 (76.2)	4.0 (101.6)	.4 (10.16)	1.0 (25.4)	2.6 (66.0)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120
181-00594	181-00594	SLA4X3								Adhesive	White	120
181-43004	181-43004	SL4X3								Non-Adhesive	Gray	120
181-43008	181-43008	SLA4X3								Adhesive	Gray	120
181-00562	181-00562	SL4X3								Non-Adhesive	Black	120
181-00593	181-00593	SLA4X3								Adhesive	Black	120
4" x 4" (101.6 x 101.6) Nominal Duct Size												
181-44031	181-44031	SL4X4	4.0 (101.6)	4.0 (101.6)	4.0 (101.6)	.4 (10.16)	1.0 (25.4)	3.6 (91.4)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120
181-44035	181-44035	SLA4X4								Adhesive	White	120
181-44027	181-44027	SL4X4								Non-Adhesive	Gray	120
181-44033	181-44033	SLA4X4								Adhesive	Gray	120
181-44020	181-44020	SL4X4								Non-Adhesive	Black	120
181-00595	181-00595	SLA4X4								Adhesive	Black	120
4" x 5" (101.6 x 127) Nominal Duct Size												
181-45011	181-45011	SL4X5	4.0 (101.6)	5.06 (128.52)	4.0 (101.6)	.4 (10.16)	1.0 (25.4)	4.6 (116.8)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	60
181-45013	181-45013	SLA4X5								Adhesive	White	60
181-45010	181-45010	SL4X5								Non-Adhesive	Gray	60
181-00596	181-00596	SLA4X5								Adhesive	Gray	60
181-45002	181-45002	SL4X5								Non-Adhesive	Black	60
181-45012	181-45012	SLA4X5								Adhesive	Black	60

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
Covers are listed on page 115.

High Density Slotted Duct



Lead Free File # E64139 File # 49249

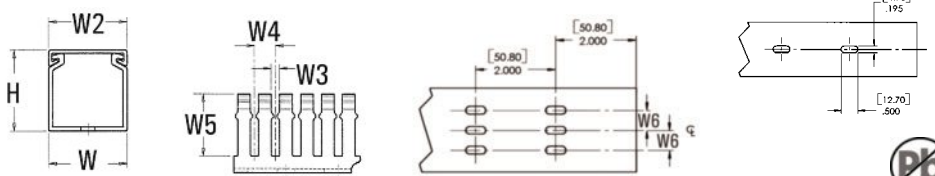
Product Selection

Product Selection			Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)			Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	Description	Color	ft. (6 ft. lengths)
1" x 1" (25.4 x 25.4) Nominal Duct Size												
184-11006	184-11006	SLHD1X1	1.0 (25.4)	1.05 (26.7)	1.0 (25.4)	.16 (4.1)	.4 (10.2)	.75 (19.1)	One row of holes on 	Non-Adhesive	White	120
181-00622	181-00622	SLHDA1X1								Adhesive	White	120
184-11004	184-11004	SLHD1X1								Non-Adhesive	Gray	120
181-00621	181-00621	SLHDA1X1								Adhesive	Gray	120
181-00597	181-00597	SLHD1X1								Non-Adhesive	Black	120
181-00637	181-00637	SLHDA1X1								Adhesive	Black	120
1" x 1.5" (25.4 x 38.1) Nominal Duct Size												
184-11012	184-11012	SLHD1X1.5	1.02 (25.9)	1.56 (39.6)	1.0 (25.4)	.16 (4.1)	.4 (10.2)	1.19 (30.2)	One row of holes on 	Non-Adhesive	White	120
184-11009	184-11009	SLHDA1X1.5								Adhesive	White	120
184-11010	184-11010	SLHD1X1.5								Non-Adhesive	Gray	120
184-11008	184-11008	SLHDA1X1.5								Adhesive	Gray	120
181-00598	181-00598	SLHD1X1.5								Non-Adhesive	Black	120
181-00623	181-00623	SLHDA1X1.5								Adhesive	Black	120
1" x 2" (25.4 x 50.8) Nominal Duct Size												
184-12007	184-12007	SLHD1X2	1.03 (26.2)	2.06 (52.3)	1.0 (25.4)	.16 (4.1)	.4 (10.2)	1.62 (41.1)	One row of holes on 	Non-Adhesive	White	120
184-12004	184-12004	SLHDA1X2								Adhesive	White	120
184-12005	184-12005	SLHD1X2								Non-Adhesive	Gray	120
184-12002	184-12002	SLHDA1X2								Adhesive	Gray	120
181-00599	181-00599	SLHD1X2								Non-Adhesive	Black	120
181-00624	181-00624	SLHDA1X2								Adhesive	Black	120
1" x 3" (25.4 x 76.2) Nominal Duct Size												
184-13007	184-13007	SLHD1X3	1.02 (25.9)	3.06 (77.7)	1.0 (25.4)	.16 (4.1)	.4 (10.2)	2.6 (66.0)	One row of holes on 	Non-Adhesive	White	120
184-13003	184-13003	SLHDA1X3								Adhesive	White	120
184-13005	184-13005	SLHD1X3								Non-Adhesive	Gray	120
181-00626	181-00626	SLHDA1X3								Adhesive	Gray	120
181-00600	181-00600	SLHD1X3								Non-Adhesive	Black	120
181-00625	181-00625	SLHDA1X3								Adhesive	Black	120
1" x 4" (25.4 x 101.6) Nominal Duct Size												
184-14004	184-14004	SLHD1X4	1.0 (25.4)	4.06 (103.1)	1.0 (25.4)	.16 (4.1)	.4 (10.2)	3.6 (91.4)	One row of holes on 	Non-Adhesive	White	120
181-00629	181-00629	SLHDA1X4								Adhesive	White	120
184-14002	184-14002	SLHD1X4								Non-Adhesive	Gray	120
181-00628	181-00628	SLHDA1X4								Adhesive	Gray	120
181-00601	181-00601	SLHD1X4								Non-Adhesive	Black	120
181-00627	181-00627	SLHDA1X4								Adhesive	Black	120
1.5" x 1" (38.1 x 25.4) Nominal Duct Size												
184-15102	184-15102	SLHD1.5X1	1.5 (38.1)	1.05 (26.7)	1.5 (38.1)	.16 (4.1)	.4 (10.2)	.75 (19.1)	One row of holes on 	Non-Adhesive	White	120
181-00632	181-00632	SLHDA1.5X1								Adhesive	White	120
184-15101	184-15101	SLHD1.5X1								Non-Adhesive	Gray	120
181-00631	181-00631	SLHDA1.5X1								Adhesive	Gray	120
181-00602	181-00602	SLHD1.5X1								Non-Adhesive	Black	120
181-00630	181-00630	SLHDA1.5X1								Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
High density slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

For product information visit or www.hellermann.tyton.com or call 800-537-1512

High Density Slotted Duct

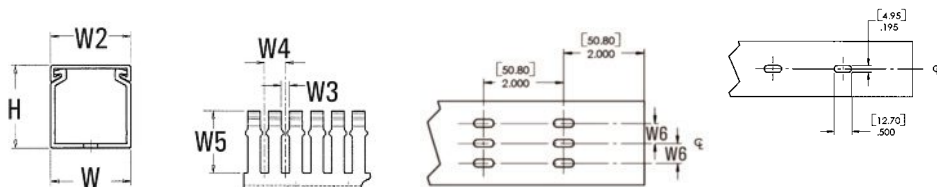


Lead Free File # E64139 File # 49249

Product Selection			Lead Free File # E64139 File # 49249									
Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)
1.5" x 1.5" (38.1 x 38.1) Nominal Duct Size												
184-15155	184-15155	SLHD1.5X1.5	1.52 (38.6)	1.56 (39.6)	1.5 (38.1)	.16 (4.1)	.4 (10.2)	1.19 (30.2)	One row of holes on 	Non-Adhesive	White	120
184-15153	184-15153	SLHDA1.5X1.5								Adhesive	White	120
184-15152	184-15152	SLHD1.5X1.5								Non-Adhesive	Gray	120
184-15151	184-15151	SLHDA1.5X1.5								Adhesive	Gray	120
181-00603	181-00603	SLHD1.5X1.5								Non-Adhesive	Black	120
181-00633	181-00633	SLHD1.5X1.5								Adhesive	Black	120
1.5" x 2" (38.1 x 50.8) Nominal Duct Size												
184-15206	184-15206	SLHD1.5X2	1.53 (38.9)	2.06 (52.3)	1.5 (38.1)	.16 (4.1)	.4 (10.2)	1.62 (41.1)	One row of holes on 	Non-Adhesive	White	120
184-15205	184-15205	SLHDA1.5X2								Adhesive	White	120
184-15202	184-15202	SLHD1.5X2								Non-Adhesive	Gray	120
184-15201	184-15201	SLHDA1.5X2								Adhesive	Gray	120
181-00604	181-00604	SLHD1.5X2								Non-Adhesive	Black	120
181-00634	181-00634	SLHDA1.5X2								Adhesive	Black	120
1.5" x 3" (38.1 x 76.2) Nominal Duct Size												
184-15304	184-15304	SLHD1.5X3	1.52 (38.6)	3.06 (77.7)	1.5 (38.1)	.16 (4.1)	.4 (10.2)	2.6 (66.0)	One row of holes on 	Non-Adhesive	White	120
184-15301	184-15301	SLHDA1.5X3								Adhesive	White	120
184-15302	184-15302	SLHD1.5X3								Non-Adhesive	Gray	120
181-00636	181-00636	SLHDA1.5X3								Adhesive	Gray	120
181-00605	181-00605	SLHD1.5X3								Non-Adhesive	Black	120
181-00635	181-00635	SLHDA1.5X3								Adhesive	Black	120
1.5" x 4" (38.1 x 101.6) Nominal Duct Size												
184-15403	184-15403	SLHD1.5X4	1.5 (38.1)	4.06 (103.1)	1.5 (38.1)	.16 (4.1)	.4 (10.2)	3.6 (91.4)	One row of holes on 	Non-Adhesive	White	120
181-00639	181-00639	SLHDA1.5X4								Adhesive	White	120
184-15401	184-15401	SLHD1.5X4								Non-Adhesive	Gray	120
181-00638	181-00638	SLHDA1.5X4								Adhesive	Gray	120
181-00606	181-00606	SLHD1.5X4								Non-Adhesive	Black	120
181-00620	181-00620	SLHDA1.5X4								Adhesive	Black	120
2" x 1" (50.8 x 25.4) Nominal Duct Size												
184-21003	184-21003	SLHD2X1	2.01 (51.1)	1.05 (26.7)	2.0 (50.8)	.16 (4.1)	.4 (10.2)	.75 (19.1)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
181-00642	181-00642	SLHDA2X1								Adhesive	White	120
184-21002	184-21002	SLHD2X1								Non-Adhesive	Gray	120
181-00641	181-00641	SLHDA2X1								Adhesive	Gray	120
181-00607	181-00607	SLHD2X1								Non-Adhesive	Black	120
181-00640	181-00640	SLHDA2X1								Adhesive	Black	120
2" x 2" (50.8 x 50.8) Nominal Duct Size												
184-22008	184-22008	SLHD2X2	2.03 (51.6)	2.06 (52.3)	2.0 (50.8)	.16 (4.1)	.4 (10.2)	1.62 (41.1)	Three rows of holes .5 (12.7)	Non-Adhesive	White	120
184-22003	184-22003	SLHDA2X2								Adhesive	White	120
184-22005	184-22005	SLHD2X2								Non-Adhesive	Gray	120
181-00644	181-00644	SLHDA2X2								Adhesive	Gray	120
181-00608	181-00608	SLHD2X2								Non-Adhesive	Black	120
181-00643	181-00643	SLHDA2X2								Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
High density slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

High Density Slotted Duct



Lead Free File # E64139 File # 49249

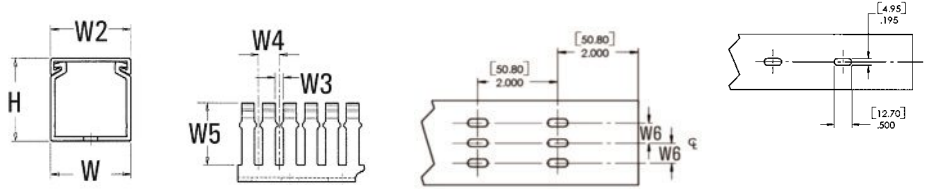


Product Selection

Product Selection													Pkg. Qty
Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color		
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)				ft. (6 ft. lengths)
2" x 3" (50.8 x 76.2) Nominal Duct Size													
184-23006	184-23006	SLHD2X3	2.02 (51.3)	3.06 (77.7)	2.0 (50.8)	.16 (4.1)	.4 (10.2)	2.6 (66.0)	Three rows of holes .5 (12.7)	Non-Adhesive	White		120
184-23003	184-23003	SLHDA2X3								Adhesive	White		120
184-23004	184-23004	SLHD2X3								Non-Adhesive	Gray		120
181-00646	181-00646	SLHDA2X3								Adhesive	Gray		120
181-00609	181-00609	SLHD2X3								Non-Adhesive	Black		120
181-00645	181-00645	SLHDA2X3								Adhesive	Black		120
2" x 4" (50.8 x 101.6) Nominal Duct Size													
184-24007	184-24007	SLHD2X4	2.0 (50.8)	4.06 (103.1)	2.0 (50.8)	.16 (4.1)	.4 (10.2)	3.6 (91.4)	Three rows of holes .5 (12.7)	Non-Adhesive	White		120
184-24003	184-24003	SLHDA2X4								Adhesive	White		120
184-24004	184-24004	SLHD2X4								Non-Adhesive	Gray		120
181-00648	181-00648	SLHDA2X4								Adhesive	Gray		120
181-00610	181-00610	SLHD2X4								Non-Adhesive	Black		120
181-00647	181-00647	SLHDA2X4								Adhesive	Black		120
2" x 5" (50.8 x 127) Nominal Duct Size													
181-00265	181-00265	SLHD2X5	2.0 (50.8)	5.0 (127.0)	2.0 (50.8)	.16 (4.1)	.4 (10.2)	4.6 (116.8)	Three rows of holes .5 (12.7)	Non-Adhesive	White		120
181-00259	181-00259	SLHDA2X5								Adhesive	White		120
181-00252	181-00252	SLHD2X5								Non-Adhesive	Gray		120
181-00254	181-00254	SLHDA2X5								Adhesive	Gray		120
181-00320	181-00320	SLHD2X5								Non-Adhesive	Black		120
181-00321	181-00321	SLHDA2X5								Adhesive	Black		120
2.5" x 3" (63.5 x 76.2) Nominal Duct Size													
181-00232	181-00232	SLHD2.5X3	2.5 (63.5)	3.0 (76.2)	2.5 (63.5)	.16 (4.1)	.4 (10.2)	2.6 (66.0)	Three rows of holes .75 (19.05)	Non-Adhesive	White		120
181-00234	181-00234	SLHDA2.5X3								Adhesive	White		120
181-00228	181-00228	SLHD2.5X3								Non-Adhesive	Gray		120
181-00230	181-00230	SLHDA2.5X3								Adhesive	Gray		120
181-00322	181-00322	SLHD2.5X3								Non-Adhesive	Black		120
181-00323	181-00323	SLHDA2.5X3								Adhesive	Black		120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. High density slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

High Density Slotted Duct



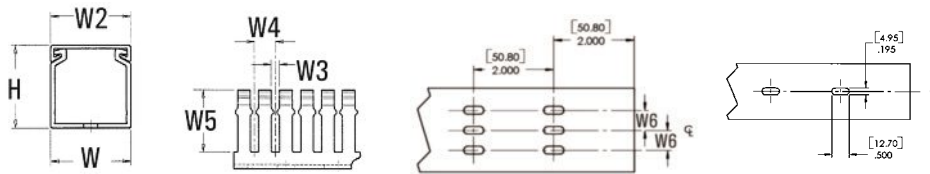
Lead Free File # E64139 File # 49249



			Width (W) in. (mm)	Height (H) in. (mm)	Width (W2) in. (mm)	Width (W3) in. (mm)	Width (W4) in. (mm)	Width (W5) in. (mm)	Width (W6) in. (mm)			Pkg. Qty ft. (6 ft. lengths)
Article No.	Part No.	Type								Description	Color	
3" x 1" (76.2 x 25.4) Nominal Duct Size												
181-00613	181-00613	SLHD3X1	3.02 (76.7)	1.0 (25.4)	3.0 (76.2)	.16 (4.1)	.4 (10.2)	.75 (19.1)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00652	181-00652	SLHDA3X1								Adhesive	White	120
181-00612	181-00612	SLHD3X1								Non-Adhesive	Gray	120
181-00651	181-00651	SLHDA3X1								Adhesive	Gray	120
181-00611	181-00611	SLHD3X1								Non-Adhesive	Black	120
181-00649	181-00649	SLHDA3X1								Adhesive	Black	120
3" x 2" (76.2 x 50.8) Nominal Duct Size												
184-32004	184-32004	SLHD3X2	3.03 (76.96)	2.06 (52.3)	3.0 (76.2)	.16 (4.1)	.4 (10.2)	1.62 (41.1)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
181-00655	181-00655	SLHDA3X2								Adhesive	White	120
184-32001	184-32001	SLHD3X2								Non-Adhesive	Gray	120
181-00654	181-00654	SLHDA3X2								Adhesive	Gray	120
181-00614	181-00614	SLHD3X2								Non-Adhesive	Black	120
181-00653	181-00653	SLHDA3X2								Adhesive	Black	120
3" x 3" (76.2 x 76.2) Nominal Duct Size												
184-33004	184-33004	SLHD3X3	3.02 (76.71)	3.06 (77.7)	3.0 (76.2)	.16 (4.1)	.4 (10.2)	2.6 (66.0)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
184-33001	184-33001	SLHD3X3								Adhesive	White	120
184-33002	184-33002	SLHDA3X3								Non-Adhesive	Gray	120
181-00657	181-00657	SLHDA3X3								Adhesive	Gray	120
181-00615	181-00615	SLHD3X3								Non-Adhesive	Black	120
181-00656	181-00656	SLHD3X3								Adhesive	Black	120
3" x 4" (76.2 x 101.6) Nominal Duct Size												
184-34005	184-34005	SLHD3X4	3.0 (76.2)	4.06 (103.1)	3.0 (76.2)	.16 (4.1)	.4 (10.2)	3.6 (91.4)	Three rows of holes 1.0 (25.4)	Non-Adhesive	White	120
184-34001	184-34001	SLHD3X4								Adhesive	White	120
184-34003	184-34003	SLHDA3X4								Non-Adhesive	Gray	120
181-00659	181-00659	SLHDA3X4								Adhesive	Gray	120
181-00616	181-00616	SLHD3X4								Non-Adhesive	Black	120
181-00658	181-00658	SLHD3X4								Adhesive	Black	120

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.
High density slotted wall duct in larger sizes continued on the next page. Covers are listed on page 115.

High Density Slotted Duct



Lead Free



File # E64139



File # 49249



Product Selection

Product Selection													
Article No.	Part No.	Type	Width (W)	Height (H)	Width (W2)	Width (W3)	Width (W4)	Width (W5)	Width (W6)	Description	Color	Pkg. Qty.	
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			ft. (6 ft. lengths)	
4" x 2" (101.6 x 50.8) Nominal Duct Size													
184-42003	184-42003	SLHD4X2	4.03 (102.4)	2.06 (52.3)	4.0 (101.6)	.16 (4.1)	.40 (10.2)	1.62 (41.1)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120	
181-00665	181-00665	SLHDA4X2								Adhesive	White	120	
184-42001	184-42001	SLHD4X2								Non-Adhesive	Gray	120	
181-00664	181-00664	SLHDA4X2								Adhesive	Gray	120	
181-00617	181-00617	SLHD4X2								Non-Adhesive	Black	120	
181-00663	181-00663	SLHDA4X2								Adhesive	Black	120	
4" x 3" (101.6 x 76.2) Nominal Duct Size													
184-43003	184-43003	SLHD4X3	4.03 (102.4)	3.06 (77.7)	4.0 (101.6)	.16 (4.1)	.4 (10.2)	2.6 (66.0)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120	
181-00152	181-00152	SLHDA4X3								Adhesive	White	120	
184-43001	184-43001	SLHD4X3								Non-Adhesive	Gray	120	
181-00153	181-00153	SLHDA4X3								Adhesive	Gray	120	
181-00618	181-00618	SLHD4X2								Non-Adhesive	Black	120	
181-00154	181-00154	SLHDA4X3								Adhesive	Black	120	
4" x 4" (101.6 x 101.6) Nominal Duct Size													
184-44004	184-44004	SLHD4X4	4.0 (101.6)	4.06 (103.1)	4.0 (101.6)	.16 (4.1)	.4 (10.2)	3.6 (91.4)	Three rows of holes 1.5 (38.1)	Non-Adhesive	White	120	
184-44001	184-44001	SLHDA4X4								Adhesive	White	120	
184-44002	184-44002	SLHD4X4								Non-Adhesive	Gray	120	
181-00667	181-00667	SLHDA4X4								Adhesive	Gray	120	
181-00619	181-00619	SLHD4X4								Non-Adhesive	Black	120	
181-00666	181-00666	SLHDA4X4								Adhesive	Black	120	

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. Covers are listed on page 115.

Material Properties and Capacity Chart

Wiring Duct Material Properties

Physical Properties	Material	ASTM Method	Test Units	Test Results
Specific Gravity (Gray)	PVC	D-792	—	1.4
Durometer Hardness	PVC	D-2240	Shore Hardness	77D
Flexural Strength	PVC	D-790	psi	9,900
Modulus of Elasticity (Tension)	PVC	D-638	psi	351,000
Continuous Operating Temperature	PVC	UL746B	°F (°C)	122 (50)
Heat Deflection Temperature (264 psi)	PVC	D-648	°F (°C)	161 (72)
Tensile Strength (+73°F)	PVC	D-638	psi	6,500
Izod Impact Strength (+73°F)	PVC	D-256	ft. lbs./in. notch	15
Flame Resistance	PVC	D-635	—	Self-extinguishing
UL Standard 94	PVC		.029 and .062	94V-O



Wiring Capacity

Duct Size (W"xH")	Duct Area (Sq. In.)	ELECTRICAL							DATA		
		10 AWG	12 AWG	14AWG	14AWG	16 AWG	18 AWG	22 AWG	CAT 5E	CAT 6	CAT 6A
		WIRE O.D.									
		0.176	0.158	0.165	0.139	0.125	0.113	0.065	0.217	0.240	0.354
.5x.5	0.18	4	5	4	6	7	9	27	2	2	1
.5x1	0.38	8	10	9	13	15	19	57	5	4	2
.75x.75	0.28	6	7	7	9	11	14	42	4	3	1
1x1	0.735	15	19	17	24	30	37	111	10	8	4
1x1.5	1.135	23	29	27	37	46	57	171	15	13	6
1x2	1.515	31	39	35	50	62	76	228	20	17	8
1x3	2.22	46	57	52	73	90	111	335	30	25	11
1x4	2.936	60	75	69	97	120	146	443	40	32	15
1.5x1	1.205	25	31	28	40	49	60	182	16	13	6
1.5x1.5	1.85	38	47	43	61	75	92	279	25	20	9
1.5x2	2.475	51	63	58	82	101	123	373	33	27	13
1.5x3	3.669	75	94	86	121	150	183	553	50	41	19
1.5x4	4.881	100	125	114	161	199	243	736	66	54	25
2x1	1.678	35	43	39	55	68	84	253	23	19	9
2x2	3.438	71	88	80	113	140	171	518	47	38	17
2x3	5.122	105	131	120	169	209	255	772	69	57	26
2x4	6.829	140	174	160	225	278	341	1030	92	76	35
2x5	8.488	175	217	199	280	346	423	1280	115	94	43
2.5x3	6.564	135	167	154	216	268	327	990	89	73	33
3x1	2.57	53	66	60	85	105	128	388	35	28	13
3x2	5.36	110	137	125	177	219	268	809	73	59	27
3x3	8.03	165	205	188	265	327	400	1210	109	89	41
3x4	10.72	221	274	251	354	437	535	1617	145	119	55
3x5	13.38	275	341	313	441	546	668	2017	181	148	68
4x2	7.288	150	186	171	240	297	364	1099	99	81	37
4x3	10.932	225	279	256	360	446	545	1648	148	121	56
4x4	14.62	301	373	342	482	596	729	2204	198	162	74
4x5	18.27	375	466	427	602	745	911	2754	247	202	93
6x4	22.4	461	572	524	739	913	1117	3377	303	248	114
8x4	30.16	620	770	706	994	1230	1505	4548	408	334	153

Formula used to calculate fill capacity: Number of wires = duct area / (1.57 x (wire o.d.)²) or duct area x (0.637/(wire o.d.)²) * 50% Fill Capacity

Helawrap Cable Management System

Helawrap is the flexible and complete solution for bundling, protecting and securing cables and wires in industrial, datacom and electrical applications. Material options include both rugged Polypropylene (PP) and flame retardant Polyamide 6 V0 (PA6V0). Helawrap bases and clips are specifically designed to organize Helawrap sleeving, which can be affixed effectively anywhere. An installation tool is available for quick and effortless assembly over long cable lengths.

Application

Helawrap is designed to bundle and protect cable assemblies in the electrical industry, in panel building, on machines, transportation, electronics, and in industrial automation applications—especially within environments where movement and vibration are experienced. The easy branch-out feature and flexible sleeving also protect against unintentional bending of critical data transmission cables, making it ideal for sensitive data networking applications. Helawrap Polyamide 6 V0 is available for applications that require flame retardant properties.

Benefits

- Unique open design allows for easy branch-offs at any point along the harness.
- Overwrap formation provides abrasion protection and accommodates multiple bundle configurations.
- Flexible construction and design is well suited for applications that involve movement and vibration.
- Innovative split shape allows for future access without disassembly.
- Eliminates pinch points and minimizes bending fatigue to wires and cables.
- Easy to use installation tool makes assembly fast and easy.
- Specially-designed swivel clips and bases help hold Helawrap sleeving in place.



The protection and affixing of cables in a wiring cabinet with Helawrap sleeving.



Cables can be branched off at any point for better, more flexible protection.

Material Data	
Series	HWPP
Material	Polypropylene (PP)
Operating Temperature	-76° F to +230° F, Intermittent -60° C to +110° C, Intermittent
Melt Point	284° F / +140° C
Flammability	UL 94 HB



Material Data	
Series	HWPA6-V0 Flame Retardant
Material	Polyamide 6 V0 (PA6V0)
Operating Temperature	-40° F to +194° F, Intermittent -40° C to +90° C, Intermittent
Melt Point	248° F / +120° C
Flammability	UL 94 V0



HWPP Series - Polypropylene (PP)

Flexible cable protection for applications that require movement or vibration.

Product Selection

Part No.	Nominal Size		Type	Minimum Bundle Diameter		Maximum Bundle Diameter		Color	Package Quantity per Carton		Wall Thickness		Weight (est)	
	In.	mm.		in.	mm.	in.	mm.		ft.	m.	in.	mm.	lbs.	kg.
161-64112	.25	8	HWPP8	0.28	7	0.36	9	Black	100	30.5	0.029	0.75	1.61	0.73
161-64213	.5	16	HWPP16	0.51	13	0.63	16	Black	100	30.5	0.031	0.80	2.55	1.16
161-64310	.75	20	HWPP20	0.71	18	0.83	21	Black	100	30.5	0.037	0.95	2.56	1.18
161-64414	1	25	HWPP25	0.91	23	1.06	27	Black	100	30.5	0.041	1.05	6.45	2.93
161-64507	1.25	30	HWPP30	1.14	29	1.26	32	Black	100	30.5	0.051	1.30	9.68	4.39

Each package will include one corresponding application tool (HAT). Use Part No. for ordering and Type for specification purposes.

HWPA6-V0 Series - Polyamide 6 V0 (PA6V0)

Flexible cable protection in dynamic conditions where flame retardant properties are required.

Product Selection

Part No.	Nominal Size		Type	Minimum Bundle Diameter		Maximum Bundle Diameter		Color	Package Quantity per Carton		Wall Thickness		Weight (est)	
	In.	mm.		in.	mm.	in.	mm.		ft.	m.	in.	mm.	lbs.	kg.
161-63103	.25	8	HWPAV08	0.28	7	0.36	9	Black	100	30.5	0.033	0.85	2.66	1.21
161-63203	.5	16	HWPAV016	0.51	13	0.63	16	Black	100	30.5	0.033	0.85	3.95	1.79
161-63303	.75	20	HWPAV020	0.71	18	0.83	21	Black	100	30.5	0.037	0.95	5.73	2.6
161-63403	1	25	HWPAV025	0.91	23	1.06	27	Black	100	30.5	0.041	1.05	8.06	3.66
161-63503	1.25	30	HWPAV030	1.14	29	1.26	32	Black	100	30.5	0.041	1.05	9.83	4.46

Use Part No. for ordering and Type for specification purposes.



Helawrap Accessories HWClips and HWBases

Helawrap accessories consist of retaining clips and mounting plates designed specifically for the Helawrap cable sleeving. Each size clip is designed to fit with its corresponding Helawrap sleeving diameter (i.e. use HWCLIP16 with HWPP16).

Material Data

Series	HWCLIP
Material	Polyamide 6.6 High Impact Modified Heat Stabilized (PA66HIRHS)
Operating Temperature	-40° F to +221° F, Intermittent -40° C to +105° C, Intermittent
Melt Point	284° F / +140° C
Flammability	UL 94 HB



Clips

Helawrap accessory clips and mounting plates can be linked together to bundle, protect and secure any number of cables on industrial machines, as well as in the door area of an automation wiring cabinet where repeated movement occurs.

Each clip size sits snugly around the corresponding Helawrap sleeving and holds it firmly in place. With an innovative coupling system, each clip is to be joined to a mounting plate or another clip of any size. Many clips can be linked together and each can turn freely. As a result, any number of differing cable sizes can be bundled together.



Multiple clips can be joined. Clips swivel freely.



For secure hold, R1 loop can be used (for HWClip25 and HWClip30 only).

Product Selection

Part No.	Nominal size		Type	Color	Pack Count	Weight	
	in.	mm.				lbs.	kg.
161-64002	.5	8	HWCLIP08	Black	50	0.19	0.09
161-64004	.75	16	HWCLIP16	Black	50	0.3	0.14
161-64006	1.25	20	HWCLIP20	Black	50	0.35	0.16
161-64008	2	25	HWCLIP25	Black	50	0.42	0.19
161-64010	2.5	30	HWCLIP30	Black	50	0.5	0.23
201-20010	----	----	R1	Black	500	0.67	0.3

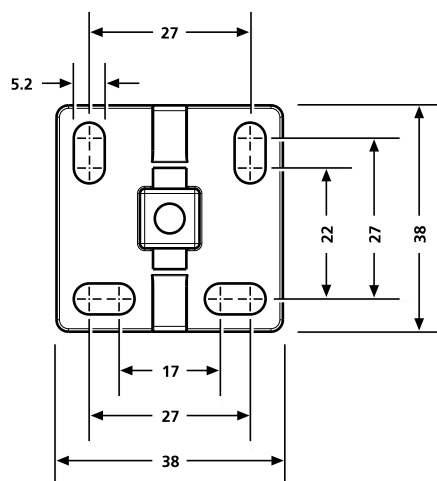
Use Part No. for ordering and Type for specification purposes.

Bases

With the highly adaptable mounting plate, cables can be protected alongside most existing structures and installations. The plate can be affixed with screws, with a cable tie threaded through or around the base of the plate, or with an adhesive to provide a long-lasting hold.

Benefits

- An innovative coupling system allows for an unlimited number of bundling combinations.
- Clips can be easily released and re-used.
- Clips swivel freely which reduces mechanical stress and eliminates pinch points.
- High Impact Polyamide 6.6 material provides firm fit even in rugged conditions.
- An R1 strap can be stretched over larger clips to provide a tight hold in rugged industrial applications.
- Consists of acrylate adhesive with base of polyurethane foam allowing it to adhere firmly and easily to nearly any surface.



Product Selection

Part No.	Adhesive	Type	Color	Pack Count	Weight	
					lbs.	kg.
161-64012	Acrylate with base of Polyurethane foam	HWBASEA	Black	50	0.35	0.16
161-64014	----	HWBASE	Black	50	0.31	0.14

Use Part No. for ordering and Type for specification purposes.

Application Tool (HAT)

The Helawrap applicator tool enables the end user to bundle cable rapidly and effortlessly. The applicator tool has been optimized to glide smoothly through the sleeving and allows easy insertion of cable into the Helawrap sleeving. The unique design also allows individual cables to be removed from the applicator tool and branched off through the sleeve opening. A tool is included with every Helawrap package.

Product Selection

Part No.	Use with Nominal Size		Type	Color	Pack Count	Weight	
	in.	mm.				lbs.	kg.
161-60001	.25	8	HAT8	Blue	10	0.078	0.035
161-60002	.5	16	HAT16	Blue	10	0.27	0.122
161-60003	.75	20	HAT20	Blue	10	0.45	0.204
161-60004	1.0	25	HAT25	Blue	10	0.71	0.321
161-60005	1.25	30	HAT30	Blue	10	0.77	0.348

Use Part No. for ordering and Type for specification purposes.



Applicator tools HAT are available for every Helawrap sleeving size.



Insert one or more cables into the insertion slot of the applicator tool.



Place the applicator tool in one end of the Helawrap cable sleeving.



Simply slide the applicator tool through the Helawrap sleeving.

Split Wrap Installation Tool

This installation tool is designed especially for post installation or retrofit applications. The Split Wrap tool has a twist barrel design that allows the tool to be inserted over a wire bundle that is currently in place. There is no need to disassemble the harness to add the Helawrap sleeving. Simply twist the white barrel to its open position, insert the bundle, twist the barrel to its closed position and pull the tool through the Helawrap sleeving. Wires can be branched off at any point by twisting the white barrel open at the desired location and removing the wires.

Product Selection

Part No.	Use With Nominal Size		Type	Color	Pack Count	Weight	
	in.	mm.				lbs.	kg.
170-03067	.25	8	BSWTOOL14	Orange	1	0.03	0.014
170-03032	.5	16	BSWTOOL12	Orange	1	0.03	0.014
170-03068	.75	20	BSWTOOL34	Orange	1	0.04	0.018
170-03033	1.0	25	BSWTOOL1	Orange	1	0.05	0.023
170-03034	1.25	30	BSWTOOL114	Orange	1	0.06	0.028

Purchased separately. Use Part No. for ordering and Type for specification purposes.



Spiralwrap

Spiralwrap protective sheathing allows flexible routing and lead-out of cables. The inner edges are beveled to prevent damage to cables. U.L. Recognized Spiralwrap is reusable and resistant to most chemicals. Natural and black are standard colors (see material descriptions). Colors may be available dependent upon volume requirements. Contact HellermannTyton for more information.

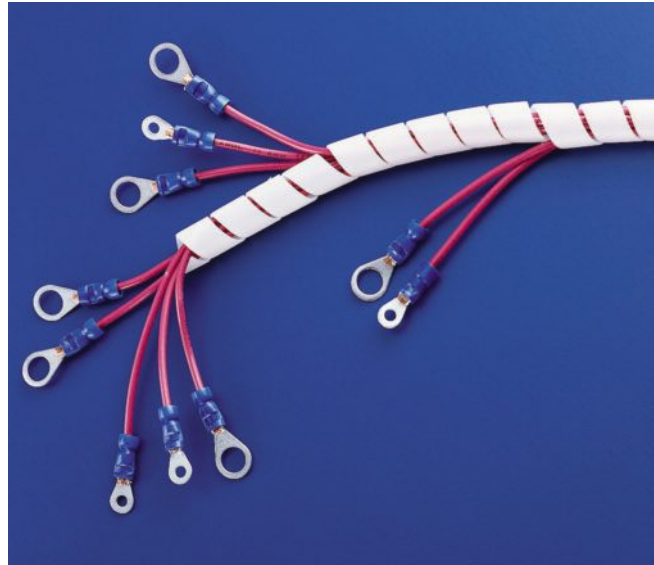
Application

Control Cabinet Doors: Protects cable from friction when one end of the cable is fastened within the panel and the other is fastened to the panel door. Allows flexibility and prevents wire chafing when door is opened and closed.

Robotics: Protects hoses and wires during movement.

Pneumatic Hoses: Protects hoses from abrasion while on semi-trucks and other vehicles.

Spark Plug Wires: Lengthens the life of spark plug wires by reducing abrasion to wire insulation.



Installation

Spiralwrap can be installed in two basic ways:

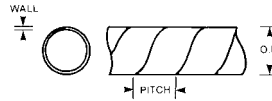
In a gapped installation, Spiralwrap is wrapped with space between the sheathing. This accommodates wire breakouts and also keeps the wire bundle flexible.

In a butted installation, Spiralwrap is wrapped so the sheathing completely insulates the wire bundle. This provides superior abrasion resistance and additional rigidity.

Polyethylene (PE)	Size					
	1/8"	1/4"	3/8"	1/2"	3/4"	1"
Color						
Brown (1)	X	X		X		
Red (2)	X		X	X	X	X
Orange (3)	X		X			
Yellow (4)	X	X	X	X	X	X
Green (5)	X	X	X			
Blue (6)	X	X	X	X	X	X
Purple (7)	X		X			
Gray (8)						
White (10)	X	X	X	X	X	X
Pink (15)			X			
DG Orange (DG3)	X	X	X	X	X	X
DG Yellow (DG4)			X			
DG Green (DG5)						
Glow in the Dark (DG9)			X			
DG Pink (DG15)		X	X			

All size/color combinations denoted with an "X" in the table above are available upon request. Contact HellermannTyton for pricing, part numbers, minimum order quantities and lead times. Additional size/color combinations may be available upon request. Contact your local HellermannTyton representative for pricing and minimums.

Spiralwrap continued



File # E147924

Product Selection										
Article No.	Part No.	Type	Ø D	Wall Thickness	Pitch	Min. Ø Bundle	Max. Ø Bundle	Color	Pkg. Qty.	
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)			
Natural Polyethylene (PE)										
161-05013	1NFP9C	1NFP	.125" (3.18)	.032" (.81)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Natural	100	
161-05043	2NFP9C	2NFP	.250" (6.35)	.045" (1.14)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Natural	100	
161-05027	2.5NFP9C	2.5NFP	.375" (9.53)	.052" (1.32)	.438" (11.13)	.3125" (7.92)	3" (76.2)	Natural	100	
161-05055	3NFP9C	3NFP	.5" (12.7)	.062" (1.57)	.563" (14.3)	.375" (9.52)	4" (102)	Natural	100	
161-05075	4NFP9C	4NFP	.750" (19.05)	.065" (1.65)	.750" (19.05)	.750" (19.10)	5" (127)	Natural	100	
161-05080	5NFP9C	5NFP	1" (25.4)	.095" (2.41)	1" (25.4)	1" (25.4)	7" (178)	Natural	100	
Black Polyethylene (PE)										
161-05004	1NFP0C	1NFP	.125" (3.18)	.032" (.81)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Black	100	
161-05036	2NFP0C	2NFP	.250" (6.35)	.045" (1.14)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Black	100	
161-05024	2.5NFP0C	2.5NFP	.375" (9.53)	.052" (1.32)	.438" (11.13)	.3125" (7.92)	3" (76.2)	Black	100	
161-05052	3NFP0C	3NFP	.5" (12.7)	.062" (1.57)	.5" (12.7)	.375" (9.52)	4" (102)	Black	100	
161-05074	4NFP0C	4NFP	.750" (19.05)	.065" (1.65)	.750" (19.05)	.750" (19.10)	5" (127)	Black	100	
161-05079	5NFP0C	5NFP	1" (25.4)	.095" (2.41)	1" (25.4)	1" (25.4)	7" (178)	Black	100	
Natural Polyethylene (PE), flame-retardant										
161-05001	1FRP9C	1FRP	.125" (3.18)	.032" (.81)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Natural	100	
161-05030	2FRP9C	2FRP	.250" (6.35)	.045" (1.14)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Natural	100	
161-05017	2.5FRP9C	2.5FRP	.375" (9.53)	.052" (1.32)	.438" (11.13)	.3125" (7.92)	3" (76.2)	Natural	100	
161-05049	3FRP9C	3FRP	.5" (12.7)	.062" (1.57)	.563" (14.3)	.375" (9.52)	4" (102)	Natural	100	
161-05058	4FRP9C	4FRP	.750" (19.05)	.065" (1.65)	.750" (19.05)	.750" (19.10)	5" (127)	Natural	100	
161-05077	5FRP9C	5FRP	1" (25.4)	.095" (2.41)	1" (25.4)	1" (25.4)	7" (178)	Natural	100	
Black Polyethylene (PE), flame-retardant										
161-05000	1FRP0C	1FRP	.125" (3.18)	.032" (.81)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Black	100	
161-05029	2FRP0C	2FRP	.250" (6.35)	.045" (1.14)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Black	100	
161-05016	2.5FRP0C	2.5FRP	.375" (9.53)	.052" (1.32)	.438" (11.13)	.3125" (7.92)	3" (76.2)	Black	100	
161-05048	3FRP0C	3FRP	.5" (12.7)	.062" (1.57)	.563" (14.3)	.375" (9.52)	4" (102)	Black	100	
161-05057	4FRP0C	4FRP	.750" (19.05)	.065" (1.65)	.750" (19.05)	.750" (19.10)	5" (127)	Black	100	
161-05084	5FRP0C	5FRP	1" (25.4)	.095" (2.41)	1" (25.4)	1" (25.4)	7" (178)	Black	100	
Natural Polyamide 6 (PA6)										
161-05003	1N9C	1N	.125" (3.18)	.015" (.38)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Natural	100	
161-05034	2N9C	2N	.250" (6.35)	.0250" (.64)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Natural	100	
161-05019	2.5N9C	2.5N	.375" (9.53)	.035" (.89)	.438" (11.13)	.3125" (7.92)	3" (76.2)	Natural	100	
161-05051	3N9C	3N	.5" (12.7)	.035" (.89)	.500" (12.7)	.375" (9.52)	4" (102)	Natural	100	
161-05072	4N9C	4N	.750" (19.05)	.032" (.81)	.750" (19.05)	.5" (12.7)	5" (127)	Natural	100	
161-05085	5N9C	5N	1" (25.4)	.032" (.81)	1" (25.4)	1" (25.4)	7" (178)	Natural	100	
Black Polyamide 6 (PA6)										
161-05002	1N0C	1N	.125" (3.18)	.015" (.38)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Black	100	
161-05032	2N0C	2N	.250" (6.35)	.025" (.64)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Black	100	
161-05018	2.5N0C	2.5N	.375" (9.53)	.035" (.89)	.438" (11.13)	.3125" (7.92)	3" (76.2)	Black	100	
161-05050	3N0C	3N	.5" (12.7)	.035" (.89)	.50" (12.7)	.375" (9.52)	4" (102)	Black	100	
161-05071	4N0C	4N	.750" (19.05)	.032" (.81)	.750" (19.05)	.50" (12.7)	5" (127)	Black	100	
161-05078	5N0C	5N	1" (25.4)	.032" (.81)	1" (25.4)	1" (25.4)	7" (178)	Black	100	
Natural Polytetrafluoroethylene -Teflon (PTFE)										
161-05015	1P9C	1P	.125" (3.18)	.020" (.76)	.187" (4.75)	.0625" (1.60)	.50" (12.7)	Natural	100	
161-05047	2P9C	2P	.250" (6.35)	.030" (.76)	.375" (9.53)	.1875" (4.75)	2" (50.8)	Natural	100	
161-05028	2.5P9C	2.5P	.375" (9.53)	.030" (.76)	.438" (11.13)	.3125" (7.92)	2.5" (63.5)	Natural	100	
161-05056	3P9C	3P	.5" (12.7)	.030" (.76)	.5" (12.7)	.375" (9.52)	3" (76.2)	Natural	100	
161-05076	4P9C	4P	.750" (19.05)	.032" (.81)	.750" (19.05)	.5" (12.7)	4" (102)	Natural	100	
161-05081	5P9C	5P	1" (25.4)	.040 (1.02)	1" (25.4)	.750" (19.10)	5" (127)	Natural	100	

Teflon is a registered trademark of the DuPont Corporation. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Spiralwrap continued

Material Data

	Material	Operating Temperature	Abrasion Resistance	Specific Gravity D792-66	Effect of Solvents	Effect of Acids	Effect of Alkalies	Water Absorption	Flammability	Mil. Spec & Approvals
RoHS	Polyethylene (PE)	Polyethylene is ideal for general applications that are not affected by ordinary solvents. Available in colors. Ultraviolet resistant black polyethylene is for outdoor use. It has the same qualities as clear polyethylene, but also contains an ultraviolet absorber which permits it to be used in direct sunlight for long periods of time. Available by special order in gray.								
	Natural Polyethylene (PE)	-76°F to +190°F (-60°C to +88°C)	22	0.92	None below 122°F (50°C)	None	None	0.014	Flammable	MIL I-631D MIL P-21922B Fed. Spec. LP390C A-A-59602 Typel
	Black Polyethylene (PE)	-76°F to +190°F (-60°C to +88°C)	20	0.93	None below 122°F (50°C)	None	None	0.03	Flammable	MIL I-631D MIL P-21922B Fed. Spec. LP390C A-A-59602 Typel
RoHS	Polyethylene (PE), flame-retardant	Suitable for applications requiring a self-extinguishing material. Lower cost than polyamide 6 or teflon materials. Note: Natural color is milky white.								
	Natural Polyethylene (PE), flame-retardant	-4°F to +176°F (-20°C to + 80°C)	27	1.29	None below 122°F (50°C)	None	None	0.02	94-V2	
	Black Polyethylene (PE), flame-retardant	-4°F to +176°F (-20°C to + 80°C)	27	1.29	None below 122°F (50°C)	None	None	0.02	94-V2	
RoHS	Polyamide 6 (PA6)	Natural polyamide 6 is recommended for use in enclosed environments where the possibility of fire exists. Self-extinguishing. Does not produce any toxic or irritation, even when exposed to open flame or excessive temperatures. Polyamide 6 is six times as strong as polyethylene. Black polyamide 6 features the same properties as natural polyamide 6 with the added benefit of an ultraviolet absorber so that it can be used in direct sunlight for long periods of time.								
	Natural Polyamide 6 (PA6)	-40°F to +250°F (-40°C to +121°C)	6-8	1.14	None	Satisfactory except for strong acids	None	1.5	Self Extinguishing	AS 1294 A-A 59602 Type II
	Black Polyamide 6 (PA6)	-40°F to +250°F (-40°C to +121°C)	6-8	1.14	None	Satisfactory except for strong acids	None	1.5	Self Extinguishing	AS 1294 A-A 59602 Type II
RoHS	Polytetrafluoroethylene -Teflon (PTFE)	Polytetrafluoroethylene -Teflon (PTFE) offers the widest operating temperature range of any material. It's chemically inert and non-flammable. Natural color is milky white, available with special order in black and colors.								
	Natural Polytetrafluoroethylene -Teflon (PTFE)	-450°F to +500°F (-268°C to +260°C)	7	2.1	None	None	None	0.05	Non-flammable	AMS 3653C AMS 3654 AMS 3655 ASTM D3295 MIL I-22129C AS 1294 ASTMD1710 A-A 59602 Type III

Teflon is a registered trademark of the DuPont Corporation.

For product information visit or www.hellermann.tyton.com or call 800-537-1512

Convoluted Tubing

Convoluted 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 convoluted tubing offers excellent protection against automotive fluids, vibration wear, water, snow, ice, and the effects of heat, cold, and sunlight on cables and wires. Available in standard, bulk, and dispenser box packaging.

Applications

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



Material Data		RoHS
Material	Polyethylene (PE)	
Operating Temperature	-40 °F to +200 °F (-40 °C to +93 °C)	
Flammability	UL94 V2	

Material Data		RoHS
Material	Polyamide 6 (PA6)	
Operating Temperature	-40 °F to +300 °F (-40 °C to +149 °C)	
Flammability	UL94 V2	

The following materials are available as a special order. Minimums and custom terms apply. Contact HellermannTyton for more information.

Material	Color	Operating Temperature
Polypropylene	Black w/ Blue Stripe	-40 °F (-40 °C) to 275 °F (135 °C)
Flame Retardant Polyethylene	Gray	-40 °F (-40 °C) to 200 °F (93 °C)

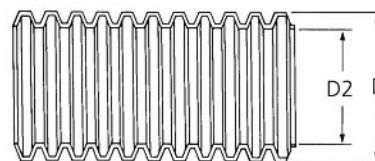
Convoluted Tubing Dispenser Box

The convoluted tubing dispenser boxes offer an efficient packaging option. The sturdy and compact dispenser boxes allow for easy storage and moving around in the work area. The reel inside the box allows for tangle free dispensing, making it much easier to work with the product. Convoluted tubing in dispenser boxes is available in polyamide 6 material –1/4", 3/8", 1/2", 3/4" and 1" sizes.

Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty. ft.
169-60022	169-60022	CTN140	1/4" Convoluted Tubing, Slit - Polyamide 6, Black	100 ft
169-60018	169-60018	CTN380	3/8" Convoluted Tubing, Slit - Polyamide 6, Black	100 ft
169-60019	169-60019	CTN120	1/2" Convoluted Tubing, Slit - Polyamide 6, Black	100 ft
169-60020	169-60020	CTN340	3/4" Convoluted Tubing, Slit - Polyamide 6, Black	100 ft
169-60021	169-60021	CTN10	1" Convoluted Tubing, Slit - Polyamide 6, Black	50 ft

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.



Convuluted Tubing *continued*

Product Selection			Nominal Ø in. (mm)	Ø D in. (mm)	Ø D2 in. (mm)	Wall Thickness in. (mm)	Pkg. Qty. ft.
Polyethylene (PE), Black							
169-60509	CTP140STD	CTP140	.250" (6.35)	.40" (10.16)	.27" (6.858)	.004" (.1016)	3200 ft
169-60508	CTP140	CTP140	.250" (6.35)	.40" (10.16)	.27" (6.858)	.004" (.1016)	25000 ft
169-60515	CTP380STD	CTP380	.380" (9.652)	.526" (13.36)	.380" (9.652)	.005" (.127)	1900 ft
169-60514	CTP380	CTP380	.380" (9.652)	.526" (13.36)	.380" (9.652)	.005" (.127)	15000 ft
169-60507	CTP120STD	CTP120	.50" (12.7)	.70" (17.78)	.516" (13.11)	.005" (.127)	1100 ft
169-60506	CTP120	CTP120	.50" (12.7)	.70" (17.78)	.516" (13.11)	.005" (.127)	8500 ft
169-60517	CTP580STD	CTP580	.625" (15.87)	.837" (21.26)	.639" (16.23)	.005" (.127)	800 ft
169-60516	CTP580	CTP580	.625" (15.87)	.837" (21.26)	.639" (16.23)	.005" (.127)	5500 ft
169-60513	CTP340STD	CTP340	.750" (19.05)	.989" (25.12)	.759" (19.28)	.005" (.127)	550 ft
169-60512	CTP340	CTP340	.750" (19.05)	.989" (25.12)	.759" (19.28)	.005" (.127)	4200 ft
169-60501	CTP10STD	CTP10	1" (25.4)	1.32" (33.53)	1.06" (26.92)	.005" (.127)	300 ft
169-60500	CTP10	CTP10	1" (25.4)	1.32" (33.53)	1.06" (26.92)	.005" (.127)	2250 ft
169-60505	CTP1140STD	CTP1140	1.250" (31.75)	1.50" (38.1)	1.257" (31.93)	.006" (.1524)	250 ft
169-60504	CTP1140	CTP1140	1.250" (31.75)	1.50" (38.1)	1.257" (31.93)	.006" (.1524)	1800 ft
169-60503	CTP1120STD	CTP1120	1.5" (38.1)	1.947" (49.45)	1.65" (41.91)	.006" (.1524)	150 ft
169-60502	CTP1120	CTP1120	1.5" (38.1)	1.947" (49.45)	1.65" (41.91)	.006" (.1524)	1000 ft
169-60511	CTP20STD	CTP20	2" (50.8)	2.42" (61.47)	2.05" (52.07)	.011" (.28)	100 ft
Polyamide 6 (PA6), Black with Gray Stripe							
169-60009	CTN140STD	CTN140	.250" (6.35)	.40" (10.16)	.27" (6.858)	.004" (.1016)	3200 ft
169-60008	CTN140	CTN140	.250" (6.35)	.40" (10.16)	.27" (6.858)	.004" (.1016)	28000 ft
169-60015	CTN380STD	CTN380	.380" (9.652)	.526" (13.36)	.380" (9.652)	.005" (.127)	1900 ft
169-60014	CTN380	CTN380	.380" (9.652)	.526" (13.36)	.380" (9.652)	.005" (.127)	15000 ft
169-60007	CTN120STD	CTN120	.50" (12.7)	.70" (17.78)	.516" (13.11)	.005" (.127)	1200 ft
169-60006	CTN120	CTN120	.50" (12.7)	.70" (17.78)	.516" (13.11)	.005" (.127)	8500 ft
169-60017	CTN580STD	CTN580	.625" (15.87)	.837" (21.26)	.639" (16.23)	.005" (.127)	800 ft
169-60016	CTN580	CTN580	.625" (15.87)	.837" (21.26)	.639" (16.23)	.005" (.127)	5500 ft
169-60013	CTN340STD	CTN340	.750" (19.05)	.989" (25.12)	.759" (19.28)	.005" (.127)	550 ft
169-60012	CTN340	CTN340	.750" (19.05)	.989" (25.12)	.759" (19.28)	.005" (.127)	4200 ft
169-60001	CTN10STD	CTN10	1" (25.4)	1.32" (33.53)	1.06" (26.92)	.005" (.127)	300 ft
169-60000	CTN10	CTN10	1" (25.4)	1.32" (33.53)	1.06" (26.92)	.005" (.127)	2250 ft
169-60005	CTN1140STD	CTN1140	1.250" (31.75)	1.50" (38.1)	1.257" (31.93)	.006" (.1524)	250 ft
169-60004	CTN1140	CTN1140	1.250" (31.75)	1.50" (38.1)	1.257" (31.93)	.006" (.1524)	1800 ft
169-60003	CTN1120STD	CTN1120	1.5" (38.1)	1.947" (49.45)	1.65" (41.91)	.006" (.1524)	150 ft
169-60002	CTN1120	CTN1120	1.5" (38.1)	1.947" (49.45)	1.65" (41.91)	.006" (.1524)	1000 ft
169-60011	CTN20STD	CTN20	2" (50.8)	2.42" (61.47)	2.05" (52.07)	.011" (.28)	100 ft

Standard tubing is slit. Unslit is available upon request. Please contact HellermannTyton for pre-cut length requirements. Colors are available dependent upon volume requirements. Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Convuluted Tubing Mounts

Designed especially for mounting convuluted tubing, these mounts are available in stud mount and fir tree mount versions and accommodate a range of tube diameters.

Material Data

Material	Polyamide 6.6 high impact modified, Heat Stabilized, UV Resistant (PA66HIRHS)
Operating Temperature	-40 °F to +230 °F (-40 °C to +110 °C) continuous
Flammability	UL94 HB



Stud Mount

Product Selection										
Article No.	Part No.	Type	Tube Ø		Recommended Weld Stud	Minimum Weld Stud Height		Color	Pkg. Qty.	Drawing
			in.	(mm)		in.	(mm)			
151-00700	151-00700	CTC4.5SBS6	.175"	(4.5)	M6	.39"	(10)	Black	500	
151-00701	151-00701	CTC7.5SBS6	.29"	(7.5)	M6	.39"	(10)	Black	500	
151-00702	151-00702	CTC10SBS6	.39"	(10)	M6	.39"	(10)	Black	500	
151-00703	151-00703	CTC13SBS6	.50"	(13)	M6	.39"	(10)	Black	500	 slots for cable tie
151-00010	151-00010	CTC17SBS6	.66"	(17)	M6	.39"	(10)	Black	500	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Fir Tree Mount

Product Selection										
Article No.	Part No.	Type	Tube Ø	Panel Thickness	Mounting Hole Ø	Color	Pkg. Qty.	Drawing		
			in. (mm)	in. (mm)	in. (mm)					
151-14314	151-14314	CTC4.5FT6LG	.17" (4.5)	.029" - .234" (.75 - 6)	.25" - .27" (6.5 - 7)	Black	500			
151-14313	151-14313	CTC7.5FT6LG	.29" (7.5)	.029" - .234" (.75 - 6)	.25" - .27" (6.5 - 7)	Black	500			
151-00018	151-00018	CTC10FT6LG	.39" (10)	.029" - .234" (.75 - 6)	.25" - .27" (6.5 - 7)	Black	500			
151-00019	151-00019	CTC13FT6LG	.507" (13)	.029" - .234" (.75 - 6)	.25" - .27" (6.5 - 7)	Black	500			

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Braided Sleeving

HellermannTyton's line of expandable braided sleeving provides protection for hoses, cable assemblies, and wire bundles against abrasion and damage caused by excessive wear and motion. Lightweight and flexible, the construction of braided sleeving allows it to expand beyond its nominal size to fit several bundle sizes and shapes. The relatively easy expansion and quick slip-over accommodates a variety of market applications. Securing the ends of braided sleeving is fast and easy with cable ties, electrical tape or heat shrink materials.

The braided sleeving lineup from HellermannTyton covers a range of materials, sizes and styles-including standard Polyester (PET), PA66 Nylon, Flame Retardant, Split Wrap and High Temperature products. The sleeving is also resistant to harsh environments such as chemicals, salts, solvents, de-icing fluids and petroleum products as well as being resilient against UV light. The unique physical weave of braided sleeving makes it extremely flexible yet it will not trap moisture or humidity. Most of the items can be cut with a hot knife, which shears the edges and reduces the amount of fraying that occurs during the lifetime of the product. For applications that do not allow access to a hot knife, a fray resistant version is available that can be cut with any ordinary scissors with minimal unravel.

Market Applications

Automotive, Transportation, Industrial Equipment, Electronics, Automation/Robotics, Control Panels, Marine, Machine Tools, General Manufacturing

Product Applications

Hose Assemblies, Cable Bundles, Wire Harnesses, Electrical Cables.

SELECTION GUIDE

Materials Comparison	General Purpose			Flame Retardant				
	General Purpose Expandable Braided Sleeving	General Purpose Expandable Braided Sleeving Helagaine Dispenser Packs	Fray Resistant Expandable Braided Sleeving	Flame Retardant Expandable Braided Sleeving	Flame Retardant + Fray Resistant Expandable Braided Sleeving	Hook & Loop Flame Retardant Expandable Braided Sleeving	Split Wrap Flame Retardant Braided Sleeving	Electromagnetic Flame Retardant Helagaine
Color	Black or Orange	Black	Black	Black or Gray	Black	Black	Black	Tin Colored & Black
Temperature Range	-94°F to 257°F	-58°F to 230°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-94°F to 257°F	-40°F to 347°F
	-70°C to 125°C	-50°C to 150°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-70°C to 125°C	-40°C to 175°C
Melt Point	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	446°F / 230°C	392°F / 200°C
Flammability Rating	UL 94-V0		UL 94-V0	UL VW-1	UL VW-1	UL VW-1	UL VW-1	UL94-V0
ROHS	•	•	•	•	•	•	•	•
UL / CSA	•		•	•	•	•	•	
Other Certifications	FMVSS 302, FAR-25			FMVSS 302, Mil-202 FAR-25	Mil-202	Mil-202	FAR-25	FMVSS 302
Recommended Cutting	Hot Knife	Hot Knife	Scissors	Hot Knife	Scissors	Hot Knife	Hot Knife	Shears
Abrasion Protection	M	M	M	M	M	M	H	H
Outgassing	M	M	M	M	M	M	M	M
Cut Resistance	M	M	H	M	H	M	H	H
Chemical Resistance	M	M	M	M	M	M	H	H
UV Resistance	•	•	•	•	•	•	•	•
Halogen Free	•	•	•	•	•	•	•	
Expandable	•	•	•	•	•	•		•

VH = Very High H = High M=Medium L=Low

Braided Sleeving *continued*

Key Benefits

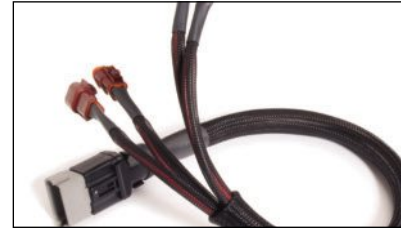
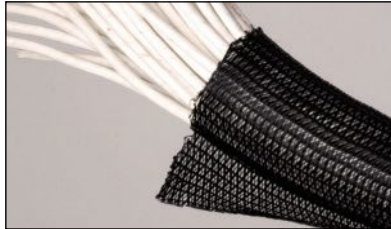
Flexible Installation Goes over cable bundles quickly and easily. Adjusts to fluctuations in bundle size or shape. Enables routing around obstructions, corners and edges.

Less Bulk Provides abrasion and corrosion protection without adding volume in tight spaces.

Lightweight Adds protection without increasing weight unlike convoluted tubing and spiral wrap materials.

Aesthetics Delivers a clean, crisp appearance.

Moisture Dissipation Results in no trapping of water, moisture or chemicals.



Specialty						Extreme Temperature		
Electromagnetic Helagaine	Polyamide 6.6 Expandable Braided Sleeving	Polyamide 6.6 Helagaine Expandable Braided Sleeving	Split Wrap Braided Sleeving	Hook & Loop Expandable Braided Sleeving	Plenum Rated Halar® Expandable Braided Sleeving	Extreme High Temperature Resin Saturated Fiberglass Expandable Braided Sleeving	High Temperature Nomex® Expandable Braided Sleeving	High Temperature Aluminum Laminated Fiberglass Sleeving
Tin Colored & Black	Black	Gray	Black or Orange	Black	Black or White	Black	Green	Silver
-40°F to 347°F	-49°F to 302°F	-76°F to 302°F	-94°F to 257°F	-94°F to 257°F	-103°F to 302°F	-94°F to 1,202°F	-320°F to 662°F	-76°F to 491°F
-40°C to 175°C	-45°C to 150°C	-60°C to 150°C	-70°C to 125°C	-70°C to 125°C	-75°C to 150°C	-70°C to 650°C	-196°C to 350°C	-60°C to 255°C
392°F / 200°C	491°F / 255°C	491°F / 255°C	482°F / 250°C	482°F / 250°C	482°F / 250°C	2,048°F / 1,120°C	NA	2,048°F / 1,120°C
UL94-V2	Non Flammable	UL 94-V2	UL 94-V0	UL 94-V0	UL VW-1	UL VW-1	Non Flammable	Non Flammable
•	•	•	•	•	•	•	•	•
		•	•	•	•	•		
FMVSS 302		FMVSS 302		FAR-25	UL 2024, NFPA 262, FAR-25, FMVSS 302			
Shears	Hot Knife	Hot Knife	Hot Knife	Hot Knife	Hot Knife	Scissors	Scissors	Scissors
H	H	H	M	M	M	VH	L	NA
M	H	H	M	M	L	L	NA	NA
H	H	H	M	M	M	VH	L	H
H	H	H	M	M	M	H	M	H
•	•	•	•	•	•	•	•	•
•	•	•	•			•	•	•
•	•	•		•	•	•	•	

Nomex® is a registered trademark of the DuPont Corporation. Halar® is a registered trademark of the Solvay Solexis Corporation.

General Purpose Expandable Braided Sleeving

Designed to adjust and expand to irregular shapes, this general purpose sleeving is lightweight and offers a high tensile strength while still maintaining flexibility. This sleeving is an excellent choice for protecting wire and cable bundles from abrasion, chafing, and heat degradation.

Application

Commonly used in electrical and industrial wire harnessing applications where economy and durability are required for the protection of wires, cables, tubing, bundles and pneumatic hoses.

Benefits

- Adjusts to twisting and flexing without creating wrinkles, bends or bulges.
- Provides tough, durable protection through a wide range of temperatures.
- Expands up to 150% of flat diameter for easy installation.
- Offers excellent abrasion and cut-through resistance as well as inertness to most chemicals and fungus.



Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03177	1/8	3.2	BSP180	.094	.25	2.4	6.4	Black	225	68.6	.41	.19
170-03000	1/4	6.4	BSP140	.125	.437	3.2	11.1	Black	200	61.0	.52	.24
170-03001	1/2	12.7	BSP120	.25	.75	6.4	19.1	Black	100	30.5	.77	.35
170-03002	3/4	19.1	BSP340	.50	1.25	12.7	31.8	Black	75	22.9	.90	.41
170-03003	1	25.4	BSP100	.625	1.625	15.9	41.3	Black	65	19.8	.87	.40
170-03004	1-1/4	31.8	BSP1140	.75	1.75	19.1	44.5	Black	50	15.2	.80	.363
170-03005	1-1/2	38.1	BSP1120	1.00	2.125	25.4	54.0	Black	40	12.2	.79	.358

Bulk Sized Reels

170-03174	1/8	3.2	BSP180B	.094	.25	2.4	6.4	Black	1000	304.8	1.8	.82
170-03041	1/4	6.4	BSP140B	.125	.437	3.2	11.1	Black	1000	304.8	2.60	1.18
170-03042	1/2	12.7	BSP120B	.25	.75	6.4	19.1	Black	500	152.4	3.85	1.75
170-03043	3/4	19.1	BSP340B	.50	1.25	12.7	31.8	Black	250	76.2	3.00	1.36
170-03044	1	25.4	BSP100B	.625	1.625	15.9	41.3	Black	250	76.2	3.35	1.52
170-03045	1-1/4	31.8	BSP1140B	.75	1.75	19.1	44.5	Black	250	76.2	4.00	1.81

Use Part No. for ordering and Type for specification. *Pre-cut lengths available upon request.



General Purpose Expandable Braided Sleeving Helagain® Dispenser Packs

This convenient package holds mini spools of expandable braided sleeving. Designed to save space and provide easy access when dispensing, this unit allows for the efficient handling and management of sleeving.

Application

The perfect solution for use in field-service applications where a large spool of braided sleeving is not feasible or when only a small amount of sleeving is required for a quick-fix project.

Benefits

- Expands (3:1 ratio) to allow for a wide range of bundle sizes.
- Dispenser box protects sleeving from dirt and keeps it from unraveling.



Material Data

Material	PET (Polyester)
Operating Temperature	-58°F to 230°F -50°C to 150°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-80150	1/4	6.4	HLB15	.20	.83	5.1	21.1	Black	32.8	10.0	.45	.20
170-80250	1/2	12.7	HLB25	.40	1.18	10.2	30.0	Black	32.8	10.0	.56	.25
170-80350	1	25.4	HLB35	.71	2.13	18.0	54.1	Black	32.8	10.0	.67	.30

Use Part No. for ordering and Type for specification.

General Purpose Expandable Braided Sleeving - Orange

Orange PET braided sleeving is an extremely flexible, general purpose option for bundling and protecting wires and cables in abrasive type applications. Its color makes it ideal for systematic color coding of complex wiring installations.

Application

Commonly used to shield cable harnesses in battery-powered vehicles, such as hybrid cars, golf carts, and light trucks.

Benefits

- Provides easy visual and safety identification of critical wiring components.
- Offers high tensile strength while maintaining extreme flexibility.
- Expands up to 150% of flat diameter for easy installation.
- Does not trap heat and humidity.
- Installs quickly and accommodates expansions and varying cable assembly shapes, reducing installation costs.



Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03076	1/4	6.4	BSP143B	.125	.437	3.2	11.1	Orange	1000	304.8	2.6	1.18
170-03077	1/2	12.7	BSP123B	.25	.75	6.4	19.1	Orange	500	152.4	3.85	1.75
170-03078	3/4	19.1	BSP343B	.50	1.25	12.7	31.8	Orange	250	76.2	3.0	1.36
170-03079	1	25.4	BSP103B	.625	1.625	15.9	41.3	Orange	250	76.2	3.35	1.52
170-03080	1-1/4	31.8	BSP1143B	.75	1.75	19.1	44.5	Orange	250	76.2	4.0	1.81
170-03081	1-1/2	38.1	BSP1123B	1.00	2.125	25.4	54.0	Orange	200	61.0	6.6	3.0

Use Part No. for ordering and Type for specification. *Pre-cut lengths available upon request.



Fray Resistant Expandable Braided Sleeving

A versatile and economical general purpose sleeving that resists fraying when cut with ordinary scissors.

Application

For use in automotive, industrial and computer applications where the wires, cables and hoses being covered endure frequent handling.

Benefits

- Enables field installations without a hot knife thus reducing time and assembly costs.
- Expands up to 150% of flat diameter for easy installation.
- Offers excellent abrasion and cut-through resistance as well as inertness to most chemicals and fungus.



Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Scissors



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03123	1/8	3.2	BSPSC180	.125	.25	3.2	6.4	Black	100	30.5	.40	.18
170-03035	1/4	6.4	BSPSC140	.156	.437	4.0	11.1	Black	100	30.5	.46	.21
170-03012	1/2	12.7	BSPSC120	.25	.75	6.4	19.1	Black	100	30.5	.82	.37
170-03013	3/4	19.1	BSPSC340	.625	1.0	15.9	25.4	Black	75	22.9	.83	.38
170-03014	1	25.4	BSPSC100	.75	1.19	19.1	30.2	Black	50	15.2	.62	.28
170-03015	1-1/4	31.8	BSPSC1140	1.0	1.50	25.4	38.1	Black	50	15.2	.78	.35
170-03016	1-1/2	38.1	BSPSC1120	1.25	2.0	31.8	50.8	Black	50	15.2	.93	.42

Use Part No. for ordering and Type for specification.



Flame Retardant Expandable Braided Sleeving

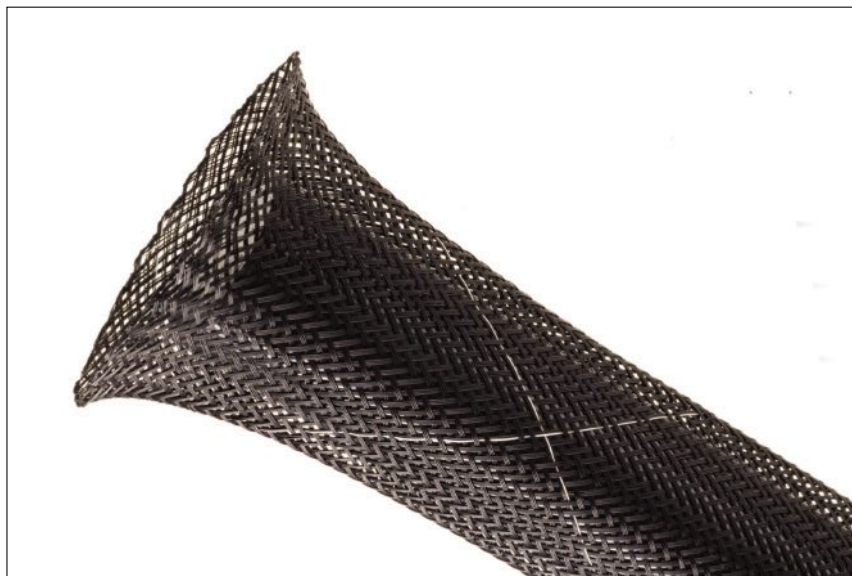
A flame retardant woven (threaded) polyester sleeving that is resistant to cuts and abrasion, and contains a combustion inhibitor allowing it to achieve a UL and CSA flame-resistance rating of VW-1.

Application

This fire extinguishing braided sleeving is ideal for electronic and high tech applications because of its light weight and durable qualities.

Benefits

- Resists gasoline, engine fluids, chemicals and cleaning solvents.
- Expands up to 150% of flat diameter for easy installation.
- Enables quick and easy installation over large connectors.



Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03006	1/4	6.4	BSPFR140	.125	.437	3.2	11.1	Black	200	61.0	.48	.22
170-03007	1/2	12.7	BSPFR120	.25	.75	6.4	19.1	Black	100	30.5	.72	.33
170-03008	3/4	19.1	BSPFR340	.50	1.25	12.7	31.8	Black	75	22.9	.65	.30
170-03010	1-1/4	31.8	BSPFR1140	.75	1.75	19.1	44.5	Black	50	15.2	.80	.363
170-03011	1-1/2	38.1	BSPFR1120	1.0	2.125	25.4	53.9	Black	40	12.2	.79	.358
170-03071	1/8	3.2	BSPFR188	.094	.25	2.4	6.4	Gray	225	68.6	.40	.18
170-03072	1/4	6.4	BSPFR148	.125	.437	3.2	11.1	Gray	200	61.0	.48	.22
170-03073	1/2	12.7	BSPFR128	.25	.75	6.4	19.1	Gray	100	30.5	.72	.33
170-03074	3/4	19.1	BSPFR348	.50	1.25	12.7	31.8	Gray	75	22.9	.65	.30
170-03066	1-1/2	38.1	BSPFR1128	1.0	2.125	25.4	53.9	Gray	40	12.2	.79	.358
Bulk Sized Reels												
170-03089	1/8	3.2	BSPFR180B	.094	.25	2.4	6.4	Black	1000	304.8	1.6	.73
170-03090	1/4	6.4	BSPFR140B	.125	.437	3.2	11.1	Black	1000	304.8	2.4	1.1
170-03091	1/2	12.7	BSPFR120B	.25	.75	6.4	19.1	Black	500	152.4	3.6	1.6
170-03092	3/4	19.1	BSPFR340B	.50	1.25	12.7	31.8	Black	250	76.2	2.2	1.0
170-03093	1	25.4	BSPFR100B	.625	1.625	15.9	41.3	Black	250	76.2	3.4	1.5
170-03094	1-1/4	31.8	BSPFR1140B	.75	1.75	19.1	44.5	Black	250	76.2	4.0	1.8
170-03095	1-1/2	38.1	BSPFR1120B	1.0	2.125	25.4	54.0	Black	200	61.0	3.9	1.77

Use Part No. for ordering and Type for specification.



Flame Retardant + Fray Resistant Expandable Braided Sleeving

This protective sleeving is self-extinguishing and can be cut with sharp scissors instead of a hot knife for fray-resistant ends.

Application

Readily used in the automotive, audiovisual, industrial, wire, cable and computer industries where flame retardancy is required to reduce the likelihood of ignition and/or reduce the rate of flame spread. It is suited for situations where access to a hot knife is either impractical or impossible.

Benefits

- Provides fuller coverage and a medium-to-high abrasion resistance.
- Expands for ease of installation in either the shop or the field.
- Offers increased braid density without loss of flexibility.
- Contains white tracer thread for simple identification of flame retardancy.
- Extinguishes quickly and reduces flame spread to surrounding components.



Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Scissors



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03036	1/4	6.4	BSSCFR140	.156	.437	4.0	11.1	Black	100	30.5	.40	.18
170-03017	1/2	12.7	BSSCFR120	.25	.75	6.4	19.1	Black	100	30.5	.82	.37
170-03018	3/4	19.1	BSSCFR340	.625	1.00	15.9	25.4	Black	75	22.9	.83	.38
170-03019	1	25.4	BSSCFR100	.75	1.188	19.1	30.2	Black	50	15.2	.62	.28
170-03020	1-1/4	31.8	BSSCFR1140	1.0	1.50	25.4	38.1	Black	50	15.2	.78	.35
170-03021	1-1/2	38.1	BSSCFR1120	1.25	2.0	31.8	50.8	Black	50	15.2	.93	.42
Bulk Sized Reels												
170-03116	1/8	3.3	BSSCFR180B	.125	.25	3.2	6.4	Black	1000	304.8	4.0	1.8
170-03117	1/4	6.4	BSSCFR140B	.156	.437	4.0	11.1	Black	1000	304.8	4.6	2.1
170-03118	1/2	12.7	BSSCFR120B	.25	.75	6.4	19.1	Black	500	152.4	4.1	1.9
170-03119	3/4	19.1	BSSCFR340B	.625	1.0	15.9	25.4	Black	250	76.2	2.78	1.3
170-03120	1	25.4	BSSCFR100B	.75	1.9	19.1	48.3	Black	250	76.2	3.1	1.4
170-03121	1-1/4	31.8	BSSCFR1140B	1.0	1.50	25.4	38.1	Black	250	76.2	3.9	1.8
170-03122	1-1/2	38.1	BSSCFR1120B	1.25	2.0	31.8	50.8	Black	250	76.2	4.63	2.1

Use Part No. for ordering and Type for specification.



Hook & Loop Flame Retardant Expandable Braided Sleeving

Hook and loop edging keeps this flame retardant sleeving securely wrapped around cables, but allows for easy access when maintenance is necessary.

Application

Ideal for high-technology applications, especially operating environments where harsh fluids are present.

Benefits

- Conforms to irregular shapes and contours.
- Meets military specifications (Mil-202 approved).
- Cuts easily with a bench-mount hot knife.
- Resists chemicals and cleaning solvents.



Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length		Weight	
	in.	mm.		in.	in.		ft.	m.	lbs.	kg.
170-03153	1/2	12.7	BSHKLPR120B	.25	6.4	Black	100	30.5	1.3	.60
170-03154	3/4	19.1	BSHKLPR340B	.63	16	Black	100	30.5	1.8	.82
170-03155	1-1/4	31.8	BSHKLPR1140B	.63	16	Black	100	30.5	2.3	1.04
170-03156	2	50.8	BSHKLPR200B	.63	16	Black	100	30.5	3.2	1.45
170-03157	2-1/2	63.5	BSHKLPR212B	.63	16	Black	100	30.5	3.75	1.70

Use Part No. for ordering and Type for specification.



Split Wrap Flame Retardant Braided Sleeving

Used when flame retardancy is a primary requirement, this protection option incorporates a lateral split which allows the tube to open up to accommodate a variety of bundling requirements and the semi-rigid braid configuration simply closes around the entire installation without the need for any additional fasteners.

Application

Use this self-extinguishing product that complies with UL VW-1 standards where cables exit a wall and need to be managed for an uncluttered, clean appearance.

Benefits

- Installs easily, saving assembly time.
- Allows for future accessibility without disassembly.
- Needs no fasteners (i.e., tape, hook and loop, etc.).
- Provides a greater flexibility than spiralwrap or convoluted tubing.
- Retains shape and rigidity throughout operating temperature range.



Material Data

Material	Treated PET (Polyester)
Flammability	UL VW-1
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	446°F / 230°C
Abrasion Protection	High
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size*		Type	Wall Thickness		Color	Reel Length		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03140	1/8	3.2	BSSWFR180B	.024	.61	Black	400	121.9	.80	.36
170-03141	1/4	6.4	BSSWFR140B	.025	.64	Black	200	61.0	1.2	.54
170-03142	1/2	12.7	BSSWFR120B	.025	.64	Black	150	45.7	2.1	.95
170-03143	3/4	19.1	BSSWFR340B	.025	.64	Black	100	30.5	1.6	.73
170-03144	1	25.4	BSSWFR100B	.038	.97	Black	100	30.5	20	.91
170-03145	1-1/4	31.8	BSSWFR1140B	.038	.97	Black	75	22.9	1.8	.82
170-03146	1-1/2	38.1	BSSWFR1120B	.038	.97	Black	75	22.9	2.1	.95
170-03147	2	50.8	BSSWFR200B	.038	.97	Black	50	15.2	1.8	.82

Use Part No. for ordering and Type for specification. *Nominal size measures internal diameter of sleeving.



Electromagnetic Flame Retardant Helagaine

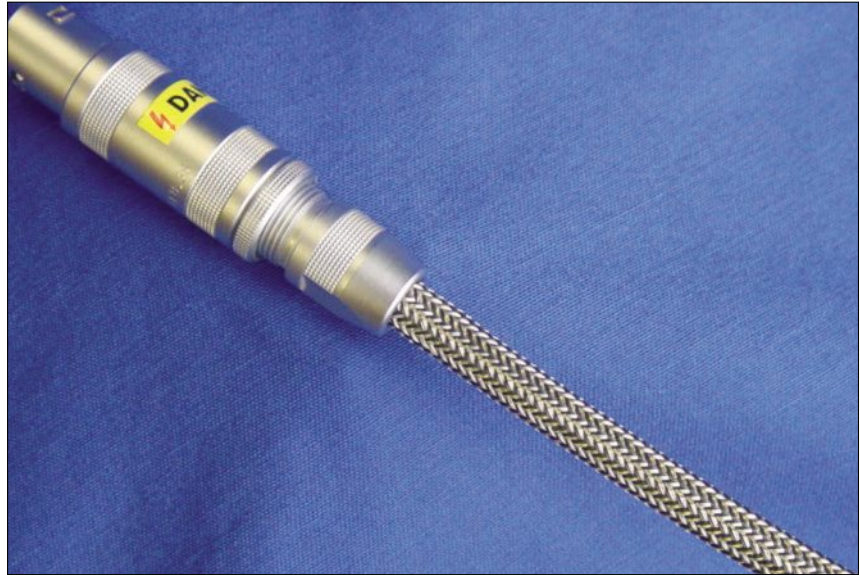
Helagaine VO (HEGEMIPVO) is tubular braided sleeving made from Polyester PBT monofilaments. The raw material is treated with non-burning agents so it has flame retardant and self-extinguishing properties. Rated VO by Underwriters Laboratories.

Application

Excellent for use where flame can cause damage therefore the protection of highly sensitive wiring is critical, such as in laboratories, computer rooms, satellites, mass transit and airplanes.

Benefits

- Shields or dissipates wire and cables from electromagnetic interference.
- Resists most chemicals.
- Expands (ratio 2:1) to allow for easy placement over bundles.



Material Data

Material	PBT / Tin-Plated Copper (TNCU)
Flammability	UL 94-V0
Operating Temperature	-40°F to 347°F -40°C to 175°C
Melt Point	392°F / 200°C
Abrasion Protection	High
Recommended Cutting	Shears
EMI Requirements	10 KHz to 1 GHz according to CISPR25



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
173-60400	1/8	3.2	HEGEMIPV004	.16	.26	4.1	6.6	Tin+Black	328	100	4.74	2.2
173-60600	1/4	6.4	HEGEMIPV006	.20	.40	5.1	10.2	Tin+Black	328	100	6.28	2.8
173-60800	5/16	7.9	HEGEMIPV008	.32	.45	8.1	11.4	Tin+Black	328	100	5.84	2.6
173-61000	3/8	9.5	HEGEMIPV010	.32	.52	8.1	13.2	Tin+Black	164	50	9.6	4.4
173-61200	7/16	11.1	HEGEMIPV012	.40	.59	10.20	15.0	Tin+Black	164	50	10.6	4.8
173-61400	1/2	12.7	HEGEMIPV014	.47	.71	11.9	18.0	Tin+Black	328	100	12.8	5.8
173-61600	9/16	14.3	HEGEMIPV016	.55	.79	14.0	20.1	Tin+Black	328	100	15.9	7.2
173-61800	5/8	15.9	HEGEMIPV018	.63	.87	16.0	22.1	Tin+Black	164	50	17.3	7.8
173-62000	3/4	19.1	HEGEMIPV020	.71	.98	18.0	25.0	Tin+Black	164	50	22.1	10.0

Use Part No. for ordering and Type for specification.

Electromagnetic Helagaine

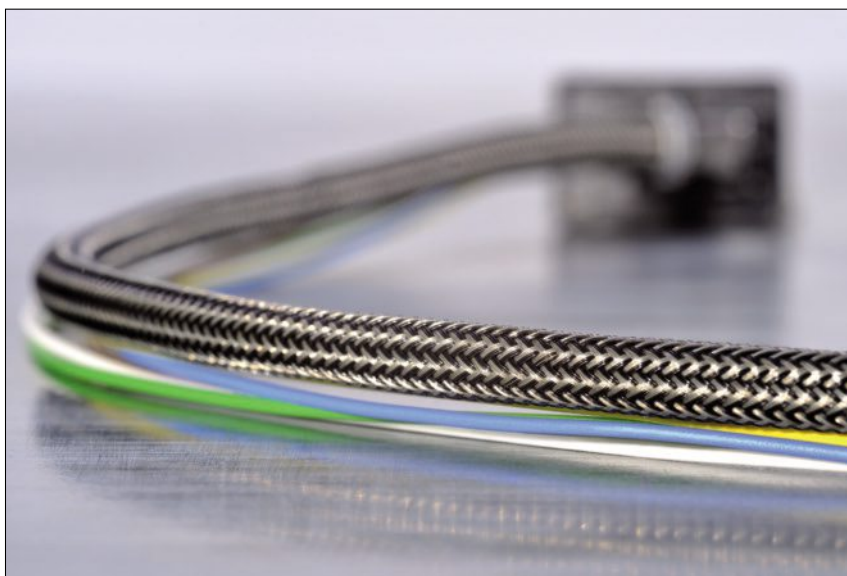
Helagaine (HEGEMIP) is a sleeving created from tin-plated copper and polyester threads that offers not only secure cable bundling but electromagnetic protection as well. The formulated mix of materials offers inside and outside abrasion resistance.

Application

Particularly suitable for applications with movement and little space; ideal for short-run cables found in electrical appliances and radio equipment.

Benefits

- Features a supporting inner tube that makes insertion of cable easier and protects the sleeve from deformation during transport.
- Attenuates electrical field interference.
- Provides electromagnetic and electrostatic shielding.
- Delivers added shielding in retrofit applications.
- Retains original form even when bent and twisted, unlike purely copper braids.



Material Data

Material	PET (Polyester) / Tin-Plated Copper (TNCU)
Flammability	UL 94-V2
Operating Temperature	-40°F to 347°F -40°C to 175°C
Melt Point	392°F / 200°C
Abrasion Protection	High
Recommended Cutting	Shears
EMI Requirements	10 KHz to 1 GHz according to CISPR25



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
173-00400	1/8	3.2	HEGEMIP04	.16	.26	4.1	6.6	Tin+Black	328	100	4.74	2.2
173-00600	1/4	6.4	HEGEMIP06	.20	.40	5.1	10.2	Tin+Black	328	100	6.28	2.8
173-00800	5/16	7.9	HEGEMIP08	.32	.45	8.1	11.4	Tin+Black	328	100	5.84	2.6
173-01000	3/8	9.5	HEGEMIP10	.32	.52	8.1	13.2	Tin+Black	164	50	9.6	4.4
173-01200	7/16	11.1	HEGEMIP12	.40	.59	10.2	15.0	Tin+Black	164	50	10.6	4.8
173-01400	1/2	12.7	HEGEMIP14	.47	.71	11.9	18.0	Tin+Black	328	100	12.8	5.8
173-01600	9/16	14.3	HEGEMIP16	.55	.79	14.0	20.1	Tin+Black	328	100	15.9	7.2
173-01800	5/8	15.9	HEGEMIP18	.63	.87	16.0	22.1	Tin+Black	164	50	17.3	7.8
173-02000	3/4	19.1	HEGEMIP20	.71	.98	18.0	25.0	Tin+Black	164	50	22.1	10.0

Use Part No. for ordering and Type for specification.

Polyamide 6.6 Expandable Braided Sleeving - Black

A pliable yet durable nylon sleeve that delivers excellent protection against cuts, abrasions and excessive wear caused by repetitive motion.

Application

Used on hoses, pipes, wiring harnesses and cables installed in cars, trucks, military vehicles, trains and industrial equipment. Protects delicate wiring in engine compartments and near exhaust systems or used to organize wires and breakouts in electrical harnesses.

Benefits

- Resists fuels, salts and solvents, gasoline, and other common contaminants.
- Offers a tight, 12 mil braid that provides full coverage but will not rot or retain moisture.
- Performs well in wet applications and where abiding substrate has a smooth surface.
- Expands up to 150% of flat diameter for easy installation.



Material Data

Material	Polyamide 6.6 (Nylon)
Flammability	Non-Flammable
Operating Temperature	-49°F to 302°F -45°C to 150°C
Melt Point	491°F / 255°C
Abrasion Protection	High
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length*		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03069	1/4	6.4	BSPA66140	.125	.375	3.2	9.5	Black	200	61.0	.60	.27
170-03027	1/2	12.7	BSPA66120	.375	.75	9.5	19.1	Black	100	30.5	1.03	.47
170-03028	3/4	19.1	BSPA66340	.50	1.25	12.7	31.8	Black	75	22.9	1.10	.50
170-03029	1	25.4	BSPA66100	.625	1.375	15.9	35.0	Black	50	15.2	.80	.36
170-03030	1-1/4	31.8	BSPA661140	.75	1.50	19.1	38.1	Black	50	15.2	.89	.40
Bulk Sized Reels												
170-03070	1/4	6.4	BSPA66140B	.125	.375	3.2	9.5	Black	1000	304.8	3.10	1.41
170-03046	1/2	12.7	BSPA66120B	.375	.75	9.5	19.1	Black	500	152.4	5.15	2.34
170-03047	3/4	19.1	BSPA66340B	.50	1.25	12.7	31.8	Black	250	76.2	3.68	1.67
170-03048	1	25.4	BSPA66100B	.625	1.375	15.9	35.0	Black	250	76.2	4.0	1.81
170-03049	1-1/4	31.8	BSPA661140B	.75	1.50	19.1	38.1	Black	250	76.2	4.50	4

Use Part No. for ordering and Type for specification. *Pre-cut lengths available upon request.

Polyamide 6.6 Helagaine Expandable Braided Sleeving - Gray

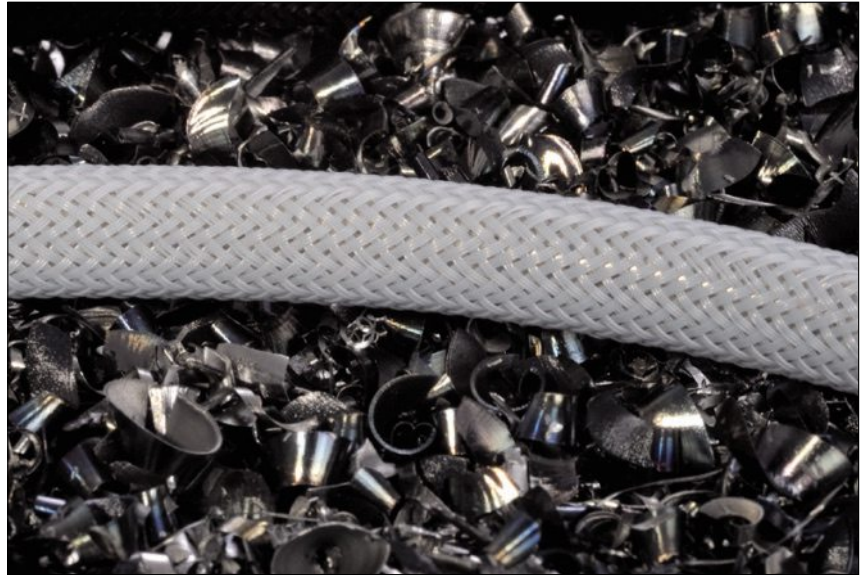
Made from heat-stabilized monofilament strands, this lightweight protection is a tougher sleeving with excellent resistance to abrasion. Despite its sturdy composition, Helagaine is expandable and durable and can easily be applied over irregular surfaces.

Application

Suitable for automotive and transportation industry applications for the protection of sensitive cables and wires from abrasion.

Benefits

- Offers a strand diameter that is approximately 10% larger than that of polyester, allowing for greater expandability.
- Resists fuels, salts and solvents, gasoline, and other common contaminants.
- Performs well in wet applications and where abiding substrate has a smooth surface.



Material Data

Material	Polyamide 6.6 (PA66)
Flammability	UL 94-V2
Operating Temperature	-76°F to 302°F -60°C to 150°C
Melt Point	491°F / 255°C
Abrasion Protection	High
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-20400	1/8	4	HEGPA6604	.12	.24	3.0	6.1	Gray	656	200.0	1.1	.50
170-20600	3/16	6	HEGPA6606	.16	.32	4.1	8.1	Gray	328	100.0	1.3	.59
170-20800	1/4	8	HEGPA6608	.20	.40	5.1	10.2	Gray	328	100.0	1.1	.50
170-21000	3/8	10	HEGPA6610	.28	.47	7.0	12.0	Gray	328	100.0	2.09	.95
170-21200	1/2	12	HEGPA6612	.32	.55	8.1	14.0	Gray	328	100.0	2.4	1.1
170-21500	5/8	16	HEGPA6616	.47	.71	12.0	18.0	Gray	164	50	2.76	1.25
170-22000	3/4	20	HEGPA6620	.59	.91	15.0	23.1	Gray	164	50.3	3.1	1.41
170-22500	1	25	HEGPA6625	.71	1.10	18.0	28.0	Gray	164	50.3	3.9	1.77
170-23000	1-1/4	30	HEGPA6630	.98	1.26	24.9	32.0	Gray	164	50.3	4.9	2.22
170-25000	2	50	HEGPA6650	1.58	2.17	40.1	55.1	Gray	164	50.3	10.4	4.72

Use Part No. for ordering and Type for specification.



Split Wrap Braided Sleeving

A bundling and protection option with a lateral split and a semi-rigid braid configuration that is the ideal solution for circumstances where ease of installation is the primary concern. The lateral split allows the sleeving to open up to adjust to the bundling requirement while the 25% edge overlap folds back over the connector or splices.



Application

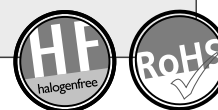
More flexible than spiral wraps or convoluted tubing, this product is a fast and easy option for adding protection in post-assembly or post-installation situations.

Benefits

- Needs no fasteners (i.e., tape, hook and loop, etc.).
- Bends to a tight radius without distortion or splitting open.
- Allows future access without disassembly.
- Withstands cuts, abrasions and tension.

Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length*		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03037	1/4	6.4	BSPSW140	.025	.64	Black	100	30.5	.60	.27
170-03024	1/2	12.7	BSPSW120	.025	.64	Black	75	22.9	1.05	.48
170-03038	3/4	19.1	BSPSW340	.025	.64	Black	50	15.2	.80	.36
170-03025	1	25.4	BSPSW100	.038	.97	Black	50	15.2	1.0	.45
170-03026	1-1/4	31.8	BSPSW1140	.038	.97	Black	25	7.1	.60	.27
Bulk Box										
170-03124	1/8	3.2	BSPSW180B	.024	.61	Black	400	121.9	.80	.36
170-03125	1/4	6.4	BSPSW140B	.025	.64	Black	200	61.0	1.2	.54
170-03126	1/2	12.7	BSPSW120B	.025	.64	Black	150	45.7	2.1	.95
170-03127	3/4	19.1	BSPSW340B	.025	.64	Black	100	30.5	1.6	.73
170-03128	1	25.4	BSPSW100B	.038	.97	Black	100	30.5	2.0	.91
170-03129	1-1/4	31.8	BSPSW1140B	.038	.97	Black	75	22.9	1.8	.82
170-03130	1-1/2	38.1	BSPSW1120B	.038	.97	Black	75	22.9	2.1	.95
170-03131	2	50.8	BSPSW200B	.038	.97	Black	50	15.2	1.8	.82
Large Bulk Sized Reels										
170-03132	1/8	3.2	BSPSW180LB	.024	.61	Black	10,000	3,048.8	20.0	9.0
170-03133	1/4	6.4	BSPSW140LB	.025	.64	Black	3,000	914.4	18.0	8.2
170-03134	1/2	12.7	BSPSW120LB	.025	.64	Black	1,200	365.8	12.0	5.4
170-03135	3/4	19.05	BSPSW340LB	.025	.64	Black	500	152.4	16.8	7.6
170-03136	1	25.4	BSPSW100LB	.038	.97	Black	400	121.9	8.0	3.6
170-03137	1-1/4	31.8	BSPSW140LB	.038	.97	Black	300	91.4	8.0	3.6
170-03138	1-1/2	38.1	BSPSW1120LB	.038	.97	Black	200	61.0	7.2	3.3
170-03139	2	50.8	BSPSW200LB	.038	.97	Black	150	45.7	5.4	2.4

Use Part No. for ordering and Type for specification. *Additional sizes available upon request.



Split Wrap Braided Sleeving - Orange

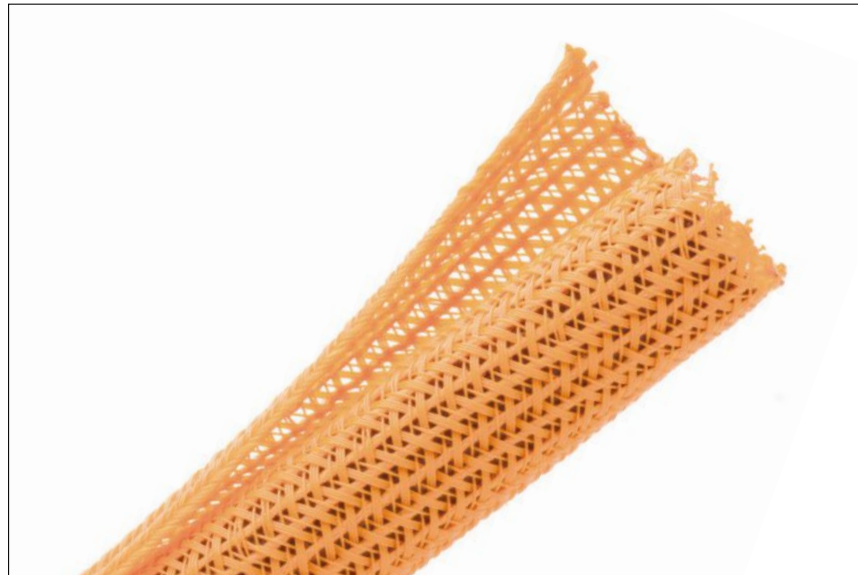
Used for safety identification, this bundling and protection option also offers a lateral split and a semi-rigid braid configuration that wraps around the bundle assembly without requiring any fasteners, such as hook & loop, cables ties or tape.

Application

A non-expandable product that is an uncomplicated option for adding protection and identification in electrical-powered vehicles, aircraft and automotive applications.

Benefits

- Contains the same physical properties of the General Purpose Black Split Wrap product.
- Needs no fasteners (i.e., tape, hook and loop, etc.).
- Bends to a tight radius without distortion or splitting open.
- Adapts easily and will not impair the flexibility of the harness assembly, nor will it fracture under stress.



Material Data

Material	PET (Polyester)
Flammability	UL 94-V0
Operating Temperature	-94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03082	1/4	6.4	BSPSW143B	.025	.64	Orange	200	61.0	1.2	.54
170-03083	1/2	12.7	BSPSW123B	.025	.64	Orange	150	45.7	2.1	.95
170-03084	3/4	19.1	BSPSW343B	.025	.64	Orange	100	30.5	1.6	.73
170-03085	1	25.4	BSPSW103B	.038	.97	Orange	100	30.5	2.0	.91
170-03086	1-1/4	31.8	BSPSW1143B	.038	.97	Orange	75	22.9	1.8	.82
170-03087	1-1/2	38.1	BSPSW1123B	.038	.97	Orange	75	22.9	2.1	.95
170-03088	2	50.8	BSPSW203B	.038	.97	Orange	50	15.2	1.8	.82

Use Part No. for ordering and Type for specification.



Hook & Loop Expandable Braided Sleeving

Designed for the quick and easy management of wires, this expandable sleeving has an internal hook and loop strap that is able to adhere to its outer PET braid, delivering flexibility that allows it to fit around odd-shaped connectors. Its color-matched hook-and-loop closure provides for an easy on-and-off installation, as well as instant and convenient access for harness break-outs and networks.

Application

When component disassembly is not an option or when frequent access to bundles wires or cables is essential. The primary application for this sleeving is the wrapping and bunching of cables in a deployed situation (i.e., location recordings).

Benefits

- Conforms to irregular shapes and contours.
- Wraps effortlessly over a cable bundle and closes; readily reopens.
- Saves time, allows those working on cables to easily splice or combine wires.
- Offers PET yarn construction for excellent protection against cuts and abrasions.



Material Data

Material	PET (Polyester)
Flammability	UL 94-VO
Operating Temperature	94°F to 257°F -70°C to 125°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Color	Reel Length		Weight	
	in.	mm.		in.	mm.		ft.	m.	lbs.	kg.
170-03148	1/2	12.7	BSHKLP120B	.25	6.4	Black	100	30.5	1.3	.60
170-03149	3/4	19.1	BSHKLP340B	.63	16.0	Black	100	30.5	1.8	.82
170-03150	1-1/4	31.8	BSHKLP1140B	.63	16.0	Black	100	30.5	2.3	1.04
170-03151	2	50.8	BSHKLP200B	.63	16.0	Black	100	30.5	3.2	1.45
170-03152	2.5	63.5	BSHKLP212B	.63	16.0	Black	100	30.5	3.75	1.7

Use Part No. for ordering and Type for specification.



Plenum Rated Halar® Expandable Braided Sleeving

Halar® self-extinguishing sleeving is used where flammability, high temperature endurance and low outgassing are the concern. This sleeving is made from strands of high temperature, flame resistant Halar monofilaments that are able to resist a wide range of corrosive chemicals and organic solvents.

Application

Its low flame spread and smoke generation properties make it the perfect option for use in technologically-advanced applications, such as those in the automotive, aerospace and vital military markets.

Benefits

- Resists gasoline and engine chemicals.
- Exceeds automotive industry requirements of FMVSS 302 as well as aviation industry requirements of FAR 25.
- Expands up to 150% for economical and expeditious installation.
- Withstands abrasion and won't degrade when exposed to Cobalt 60 radiation conditions.
- Meets UL 2024 and NFPA 262 specifications for plenum applications.



Material Data

Material	Ethylene Chlorotrifluoroethylene Monofilament (ECTFE)
Flammability	UL VW-1
Operating Temperature	-103°F to 302°F -75°C to 150°C
Melt Point	482°F / 250°C
Abrasion Protection	Medium
Recommended Cutting	Hot Knife



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03098	1/8	3.2	BSHLR180	.094	.25	2.4	6.4	Black	225	68.6	.6	.27
170-03100	1/4	6.4	BSHLR140	.125	.437	3.2	11.1	Black	200	61.0	.8	.36
170-03102	3/8	9.5	BSHLR380	.187	.625	4.7	15.9	Black	125	38.1	1.1	.50
170-03104	1/2	12.7	BSHLR120	.25	.75	6.4	19.1	Black	100	30.5	1.1	.50
170-03106	3/4	19.1	BSHLR340	.50	1.25	12.7	31.8	Black	75	22.9	1.3	.60
170-03108	1	25.4	BSHLR100	.625	1.625	15.9	41.3	Black	65	19.8	1.4	.64
170-03110	1-1/4	31.8	BSHLR1140	.75	1.75	19.1	44.5	Black	50	15.2	1.3	.60
170-03112	1-3/4	44.4	BSHLR1340	1.25	2.75	31.8	69.9	Black	30	9.1	1.3	.60
170-03114	2	50.8	BSHLR200	1.50	3.50	38.1	88.9	Black	50	15.2	2.3	1.04
170-03099	1/8	3.2	BSHLR1810	.094	.25	2.4	6.4	White	225	68.6	.6	.27
170-03101	1/4	6.4	BSHLR1410	.125	.437	3.2	11.1	White	200	61.0	.8	.36
170-03103	3/8	9.5	BSHLR3810	.187	.625	4.8	15.9	White	125	38.1	1.1	.50
170-03105	1/2	12.7	BSHLR1210	.25	.75	6.4	19.1	White	100	30.5	1.1	.50
170-03107	3/4	19.1	BSHLR3410	.50	1.25	12.7	31.8	White	75	22.9	1.3	.60
170-03109	1	25.4	BSHLR1010	.625	1.625	15.9	41.3	White	65	19.8	1.4	.64
170-03111	1-1/4	31.8	BSHLR11410	.75	1.75	19.1	44.5	White	50	15.2	1.3	.60
170-03113	1-3/4	44.4	BSHLR13410	1.25	2.75	31.8	69.9	White	30	9.1	1.3	.60
170-03115	2	50.8	BSHLR2010	1.50	3.50	38.1	88.9	White	50	15.2	2.3	1.04

Use Part No. for ordering and Type for specification.

Halar® is a registered trademark of the Solvey Solexis Corporation.

Halar product is produced on 8" diameter mini spools, which will not fit in merchandising display.



Extreme High Temperature Resin Saturated Fiberglass Expandable Braided Sleeving

An extremely high-temperature resistant sleeve designed as protection for wires and cables subjected to continuous temperature variations, vibration, abrasion, and mechanical stress.

Application

Perfect for engine manifolds and exhaust systems or any application where fire and exceeding temperatures create a hazard to workforce and equipment.

Benefits

- Provides thermal protection up to 1,200°F.
- Maintains its tight structure under extreme shaking, scraping, pressure and varying temperature conditions.
- Cuts cleanly with scissors and installs easily.
- Comes in a wide range of diameters.



Material Data

Material	Resin Saturated Fiberglass
Flammability	UL VW-1
Operating Temperature	-94°F to 1,202°F -70°C to 650°C
Melt Point	2,048°F / 1,120°C
Abrasion Protection	Very High
Recommended Cutting	Scissors



Product Selection

Part No.	Nominal Size		Type	Wall Thickness		Maximum Diameter		Color	Reel Length		Weight	
	in.	mm.		in.	mm.	in.	mm.		ft.	m.	lbs.	kg.
170-03058	1/4	6.4	BSHTFG140	.031	.79	.375	9.5	Black	50	15.2	1.0	.45
170-03059	1/2	12.7	BSHTFG120	.046	1.67	.75	19.1	Black	50	15.2	2.4	1.1
170-03060	3/4	19.1	BSHTFG340	.046	1.67	1.125	28.6	Black	50	15.2	3.2	1.5
170-03061	1	25.4	BSHTFG100	.057	1.45	1.625	41.3	Black	25	7.6	2.6	1.2
Bulk Sized Reels												
170-03050	1/4	6.4	BSHTFG140B	.031	.79	.375	9.5	Black	200	61.0	4.0	1.81
170-03051	1/2	12.7	BSHTFG120B	.046	1.17	.75	19.1	Black	200	61.0	9.6	4.35
170-03052	3/4	19.1	BSHTFG340B	.046	17	1.125	28.6	Black	200	61.0	12.8	5.81
170-03053	1	25.4	BSHTFG100B	.057	1.45	1.625	41.3	Black	100	30.5	10.5	4.76

Use Part No. for ordering and Type for specification.



High Temperature Nomex® Expandable Braided Sleeving

Manufactured with densely woven aramid fibers, this soft and flexible sleeving is self-extinguishing and is able to withstand temperatures reaching up to 662°F.

Application

Excellent for use in extremely harsh environments including those with exposure to direct flame, high temperatures, as well as Beta, Gamma and X-ray radiation – in particular, military and aerospace wiring and harnessing applications.

Benefits

- Does not melt and is unaffected by most acids.
- Provides excellent thermal stability against flames.
- Meets FMVSS 302 approval for use in automotive engineering.
- Cuts with ordinary scissors which reduces assembly time.



Material Data

Material	Polyaramid Polymetaphenylene Isophthalamide
Flammability	Non-Flammable
Operating Temperature	-320°F to 662°F -196°C to 350°C
Melt Point	N/A
Abrasion Protection	Low
Recommended Cutting	Scissors



Product Selection

Part No.	Nominal Size		Type	Expansion Range		Expansion Range		Color	Reel Length		Weight	
	in.	mm.		(Min.) in.	(Max.) in.	(Min.) mm.	(Max.) mm.		ft.	m.	lbs.	kg.
170-03158	1/8	3.2	BSNMX185B	.062	.25	1.6	6.4	Green	100	30.5	.12	.05
170-03159	1/4	6.4	BSNMX145B	.125	.312	3.2	7.9	Green	100	30.5	.50	.23
170-03160	3/8	9.5	BSNMX385B	.25	.50	6.4	12.7	Green	100	30.5	.67	.30
170-03161	1/2	12.7	BSNMX125B	.312	.625	7.9	15.9	Green	100	30.5	.91	.41
170-03162	3/4	19.1	BSNMX345B	.562	1	14.3	25.4	Green	100	30.5	1.34	.61
170-03163	1	25.4	BSNMX105B	.75	1.12	19.1	28.6	Green	100	30.5	2.42	1.1
170-03164	1-1/4	31.8	BSNMX1145B	1	1.5	25.4	38.1	Green	100	30.5	3.49	1.58
170-03165	1-1/2	38.1	BSNMX1125B	1.25	1.75	31.8	44.4	Green	100	30.5	4.03	1.83
170-03166	1-3/4	44.4	BSNMX1345B	1.50	2	38.1	50.9	Green	100	30.5	4.76	2.16

Use Part No. for ordering and Type for specification.

Nomex® is a registered trademark of the DuPont Corporation.

High Temperature Aluminum Laminated Fiberglass Sleeving

A tubular shaped product that combines the protection of bonded aluminum and fiberglass into a single solution that is able to reflect radiant heat away from the sensitive contents inside the tube.

Application

Terrific for applications when appearance and insulation are important for protecting delicate wire bundles, cables and hoses from damage caused by nearby exhaust pipes, headers or heat-generating components.

Benefits

- Adds a layer of protection that prevents scraping; cut and abrasion resistant.
- Resists gasoline and engine chemicals.
- Creates an insulation barrier for vulnerable cable and wire materials within high-temperature environments.
- Cuts cleanly with scissors.



Material Data

Material	Bonded Aluminum + Fiberglass
Flammability	Non-Flammable
Operating Temperature	-76°F to 491°F -60°C to 255°C
Melt Point	2,048°F / 1,120°C
Abrasion Protection	N/A
Recommended Cutting	Scissors



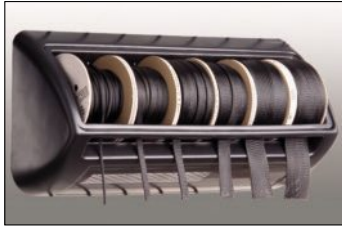
Product Selection

Part No.	Nominal Size*		Type	Wall Thickness *.006 in.		Maximum Diameter		Color	Reel Length		Weight	
	in.	mm.		in.	mm.	in.	mm.		ft.	m.	lbs.	kg.
170-03175	3/8	9.7	BSHTTST38SR	.025	.64	.317	8.1	Silver	100	30.5	2.3	1.1
170-03062	1/2	12.7	BSHTTST12SR	.025	.64	.437	11.1	Silver	100	30.5	2.6	1.2
170-03063	3/4	19.1	BSHTTST34SR	.025	.64	.687	17.4	Silver	100	30.5	3.5	1.6
170-03064	1	25.4	BSHTTST10SR	.025	.64	.937	23.8	Silver	100	30.5	4.5	2.0
170-03065	1-3/4	44.5	BSHTTST134SR	.025	.64	1.687	42.8	Silver	50	15.2	3.7	1.7
170-03097	2-1/2	63.5	BSHTTST212SR	.025	.64	2.375	60.3	Silver	50	15.2	5.05	2.3
Bulk Sized Reels												
170-03054	1/2	12.7	BSHTTST12SRB	.025	.64	.437	11.1	Silver	250	76.2	6.37	2.90
170-03055	3/4	19.1	BSHTTST34SRB	.025	.64	.687	17.4	Silver	250	76.2	8.62	3.91
170-03056	1	25.4	BSHTTST10SRB	.025	.64	.937	23.8	Silver	250	76.2	11.2	5.08
170-03057	1-3/4	44.5	BSHTTST134SRB	.025	.64	1.687	42.8	Silver	100	30.5	7.40	3.36

Use Part No. for ordering and Type for specification. *Nominal size measures external diameter of sleeving.

Merchandising Display Rack

Designed to save space and provide easy access when dispensing braided sleeving, this unit allows for the efficient handling and management of sleeving.



- Simplifies cut-to-length counter sales.
- Dispenses easily from preformed slot.
- Includes mounting hardware.
- Constructed of durable ABS plastic.
- Holds six standard-sized spools; drop-in reels sold separately.
- Dimensions:
23.5"(W) x 10"(D) x 6"(H)

Product Selection

Part No.	Type	Color
170-03031	BSDISPLAY	Black

Use Part No. for ordering and Type for specification.

Split Wrap Installation Tool

Use this wire loom tool to guide a cable or insert a cable harness inside the split wrap sleeving. Eases addition and removal of wires quickly and easily while protecting installer's hands from cuts. Can also be used with split loom convoluted tubing.



Product Selection

Part No.	Size	Type	Description
170-03067	1/4"	BSWTOOL14	1/4" Split Wrap Installation Tool
170-03032	1/2"	BSWTOOL12	1/2" Split Wrap Installation Tool
170-03068	3/4"	BSWTOOL34	3/4" Split Wrap Installation Tool
170-03033	1"	BSWTOOL1	1" Split Wrap Installation Tool
170-03034	1-1/4"	BSWTOOL114	1-1/4" – Split Wrap Installation Tool

Use Part No. for ordering and Type for specification.

Bench and Handheld Hot Knife Tools

For the best results during sleeving installation, the sleeving should be cut with a hot knife.



Bench Mount Braided Sleeve Hot Knife

- Designed for production Environments
- Uses 2.5" blade
- Lighted power switch
- Heats to 1,112°F in 30 sec.
- 110 volt operation
- Replaceable blades



Handheld Braided Sleeve Hot Knife

- Trigger switch
- Heats quickly
- 110 volt operation
- Replaceable blades

Product Selection

Part No.	Type	Color	Description
170-03039	BSBHK	White	Bench Mount Braided Sleeve Hot Knife
170-03040	BSPHK	Black	Handheld Braided Sleeve Hot Knife

Use Part No. for ordering and Type for specification.

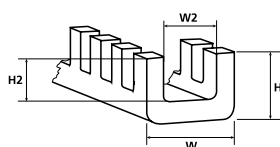
Flexiform Edge Protection Grommet Strip

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".



Optimal protection of cables and wires at panel edges.

Polyamide 6 Grommet



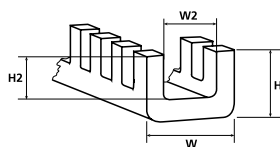
Flexiform grommet strip

Material Data		RoHS
Material	Polyamide 6 (PA6)	
Color	Natural	
Operating Temperature	-76 °F to +203 °F (-60 °C to +95 °C)	

Product Selection			Panel Thickness	Width (W)	Width (W2)	Height (H)	Height (H2)	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	ft.
Polyamide 6 (PA6)								
251-21109	FHA	G51NA	.015" - .059" (0.4 - 1.5)	.154" (3.9)	.059" (1.5)	.169" (4.3)	.106" (2.7)	82 ft
251-21209	FHB	G51NB	.051" - .094" (1.3 - 2.4)	.181" (4.6)	.094" (2.4)	.169" (4.3)	.106" (2.7)	82 ft
251-21309	FHC	G51NC	.087" - .134" (2.2 - 3.4)	.224" (5.7)	.138" (3.5)	.169" (4.3)	.106" (2.7)	82 ft
251-21409	FHD	G51ND	.130" - .197" (3.3 - 5.0)	.331" (8.4)	.201" (5.1)	.244" (6.2)	.169" (4.3)	82 ft
251-21509	FHE	G51NE	.193" - .264" (4.9 - 6.7)	.390" (9.9)	.264" (6.7)	.252" (6.4)	.177" (4.5)	82 ft
251-21609	FHF	G51NF	.256" - .323" (6.5 - 8.2)	.449" (11.4)	.327" (8.3)	.268" (6.8)	.189" (4.8)	82 ft
251-21709	FHG	G51NG	.315" - .394" (8.0 - 10.0)	.520" (13.2)	.398" (10.1)	.268" (6.8)	.189" (4.8)	82 ft
251-21809	FHH	G51NH	.382" - .520" (9.7 - 13.2)	.646" (16.4)	.520" (13.2)	.268" (6.8)	.189" (4.8)	82 ft

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Polyethylene Grommet



Flexiform grommet strip

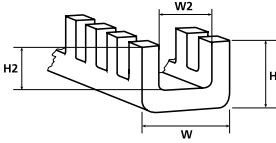
Material Data		RoHS
Material	Polyethylene (PE)	
Color	Natural	
Operating Temperature	-22 °F to +176 °F (-30 °C to +80 °C)	

Product Selection			Panel Thickness	Width (W)	Width (W2)	Height (H)	Height (H2)	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	ft.
Polyethylene (PE)								
251-10009	FPA	G51PAA	.016" - .035" (0.4 - 0.9)	.087" (2.2)	.037" (0.95)	.094" (2.4)	.063" (1.6)	82 ft
251-10109	FPA	G51PA	.016" - .059" (0.4 - 1.5)	.154" (3.9)	.059" (1.5)	.169" (4.3)	.106" (2.7)	82 ft
251-10209	FPB	G51PB	.051" - .094" (1.3 - 2.4)	.181" (4.6)	.094" (2.4)	.169" (4.3)	.106" (2.7)	82 ft
251-10309	FPC	G51PC	.087" - .134" (2.2 - 3.4)	.224" (5.7)	.138" (3.5)	.169" (4.3)	.106" (2.7)	82 ft
251-10409	FPD	G51PD	.130" - .197" (3.3 - 5.0)	.331" (8.4)	.201" (5.1)	.244" (6.2)	.169" (4.3)	82 ft
251-10509	FPE	G51PE	.193" - .264" (4.9 - 6.7)	.390" (9.9)	.264" (6.7)	.252" (6.4)	.177" (4.5)	82 ft
251-10609	FPF	G51PF	.256" - .323" (6.5 - 8.2)	.449" (11.4)	.327" (8.3)	.268" (6.8)	.189" (4.8)	82 ft
251-10709	FPG	G51PG	.315" - .394" (8.0 - 10.0)	.520" (13.2)	.398" (10.1)	.268" (6.8)	.189" (4.8)	82 ft
251-10809	FPH	G51PH	.382" - .520" (9.7 - 13.2)	.646" (16.4)	.520" (13.2)	.268" (6.8)	.189" (4.8)	82 ft

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Flexiform Edge Protection Grommet Strip *continued*

Teflon Grommet



Flexiform grommet strip

Material Data

Material	Polytetrafluoroethylene -Teflon (PTFE)
Color	Natural
Operating Temperature	-76 °F to +500 °F (-60 °C to +260 °C)
Flammability	non-burning



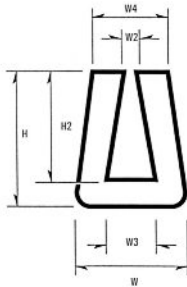
Product Selection

Article No.	Part No.	Type	Panel Thickness	Width (W)	Width (W2)	Height (H)	Height (H2)	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	ft.
Polytetrafluoroethylene -Teflon (PTFE)								
251-30109	FTA	G51TA	.015" - .059" (0.4 - 1.5)	.153" (3.9)	.059" (1.5)	.169" (4.3)	.106" (2.7)	9.7 ft
251-30209	FTB	G51TB	.051" - .094" (1.3 - 2.4)	.181" (4.6)	.094" (2.4)	.169" (4.3)	.106" (2.7)	9.7 ft
251-30309	FTC	G51TC	.087" - .134" (2.2 - 3.4)	.224" (5.7)	.138" (3.5)	.169" (4.3)	.106" (2.7)	9.7 ft
251-30409	FTD	G51TD	.130" - .196" (3.3 - 5.0)	.331" (8.4)	.201" (5.1)	.244" (6.2)	.169" (4.3)	9.7 ft
251-30509	FTE	G51TE	.193" - .264" (4.9 - 6.7)	.390" (9.9)	.264" (6.7)	.252" (6.4)	.177" (4.5)	9.7 ft
251-30609	FTF	G51TF	.256" - .323" (6.5 - 8.2)	.449" (11.4)	.327" (8.3)	.268" (6.8)	.189" (4.8)	9.7 ft
251-30709	FTG	G51TG	.315" - .394" (8.0 - 10.0)	.520" (13.2)	.398" (10.1)	.268" (6.8)	.189" (4.8)	9.7 ft
251-30809	FTH	G51TH	.382" - .520" (9.7 - 13.2)	.646" (16.4)	.520" (13.2)	.268" (6.8)	.189" (4.8)	9.7 ft

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. Teflon is a registered trademark of the DuPont Corporation.

Self-Extinguishing Flexiform Grommet

HellermannTyton's Flexiform grommet is also manufactured from a self-extinguishing UL 94 V0 rated flexible PVC compound which ensures flexibility and ease of application.



Material Data

Material	Flexible Polyvinyl Chloride, cadmium free (PVC)
Color	Black
Operating Temperature	-85 °F to +221 °F (-65 °C to +105 °C)
Flammability	UL94 V0



Product Selection

Article No.	Part No.	Type	Panel Thickness	Width (W)	Width (W2)	Width (W3)	Width (W4)	Height (H)	Height (H2)	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	ft. (Meters)
Flexible Polyvinyl Chloride, cadmium free (PVC)										
800-00004	SM1BK75MT	SM1	.03937" - .07874" (1.0 - 2.0)	.1969"(5.0)	.03937"(1.0)	.07" (1.8)	.165" (4.2)	.248" (6.3)	.192" (4.9)	246.1 ft (75)

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Electrical Tape



HellermannTyton electrical tapes are used for color coding, cable splicing, terminating, wire insulating, and more. These conformable, high quality tapes have exceptional surface adhesive characteristics.

Installation

For best results, the tape should be applied by using tension. When the application is complete, the memory of the tape returns, tightening the seal and making the taped area even more waterproof. For the best seal, each layer of tape should overlap the previous layer by approximately 50%. HellermannTyton electrical tapes are a fast, easy, and economical way of insulating, splicing, and terminating electrical connections.

Product Selection							
Article No.	Part No.	Type	Width (W)		Color	Roll Length	Pkg. Qty.
			in.	(mm)			
7.0 Mil PVC							
904-00007	ET330	ET33	.75 "	(19.05)	Black	33 ft/Roll	10 Rolls
904-00008	ET660	ET66	.75 "	(19.05)	Black	66 ft/Roll	10 Rolls
8.0 Mil PVC							
904-00010	ETCW660	ETCW66	.75 "	(19.05)	Black	66 ft/Roll	10 Rolls
Butyll Rubber							
904-00006	ETSB6210	ETSB	.75 "	(19.05)	Black	21 ft/Roll	10 Rolls
7.0 Mil PVC - Colors							
904-00011	ETST661	ETST66	.75 "	(19.05)	Brown	66 ft/Roll	10 Rolls
904-00012	ETST6610	ETST66	.75 "	(19.05)	White	66 ft/Roll	10 Rolls
904-00014	ETST662	ETST66	.75 "	(19.05)	Red	66 ft/Roll	10 Rolls
904-00016	ETST663	ETST66	.75 "	(19.05)	Orange	66 ft/Roll	10 Rolls
904-00018	ETST664	ETST66	.75 "	(19.05)	Yellow	66 ft/Roll	10 Rolls
904-00020	ETST665	ETST66	.75 "	(19.05)	Green	66 ft/Roll	10 Rolls
904-00022	ETST666	ETST66	.75 "	(19.05)	Blue	66 ft/Roll	10 Rolls
904-00024	ETST667	ETST66	.75 "	(19.05)	Purple	66 ft/Roll	10 Rolls
904-00026	ETST668	ETST66	.75 "	(19.05)	Gray	66 ft/Roll	10 Rolls

Dimensions are approximate and subject to technical changes.

Use **Part No.** for ordering and **Type** for specification.

Material Data					
Product Type and Material	Thickness	Technical	Operating Temperature	Description	Agency Approvals
ET & ETST (PVC)	7.0 mil	Adhesion: 16 oz./inch Tensile Strength: 15.4 lbs./inch Elongation: 180% Breakdown Voltage: 7,800 V	+20 °F to 176 °F (-7 °C to +80 °C)	A heavy duty vinyl tape which is ideal for general purpose applications.	U.L. Listed, Meets U.L. 510, Meets Mil-Std. Mil - 1-7798-A
ETCW (PVC)	8.0 mil	Adhesion: 17 oz./inch Tensile Strength: 20 lbs./inch Elongation: 200% Breakdown Voltage: 8,600 V	0 °F to +194 °F (-18 °C to +90 °C)	A heavy duty vinyl tape which is ideal for cold weather installations and "weather resistant" for outdoor installations.	U.L. Listed, Meets U.L. 510, Meets Mil-Std. Mil - 1-24391-A
ETSB (Butyl Rubber)	20 mil	Adhesion: n/a Tensile Strength: n/a Elongation: 600% Breakdown Voltage: 14,000 V	-14 °F to +176 °F (-26 °C to +80 °C)	A self-bonding butyl rubber tape which provides void-free insulation over irregular surfaces, such as splices. Outstanding self-bonding properties.	U.L. Listed, Meets ASTM D-119

Snapper Hose Clamps 169-174

Screw Mount Cable Clamps 175-177

Adhesive Cable Clamps 178-179

Flat Ribbon Cable Clamps 180

Nail Clips 181



Snapper Hose Clamps

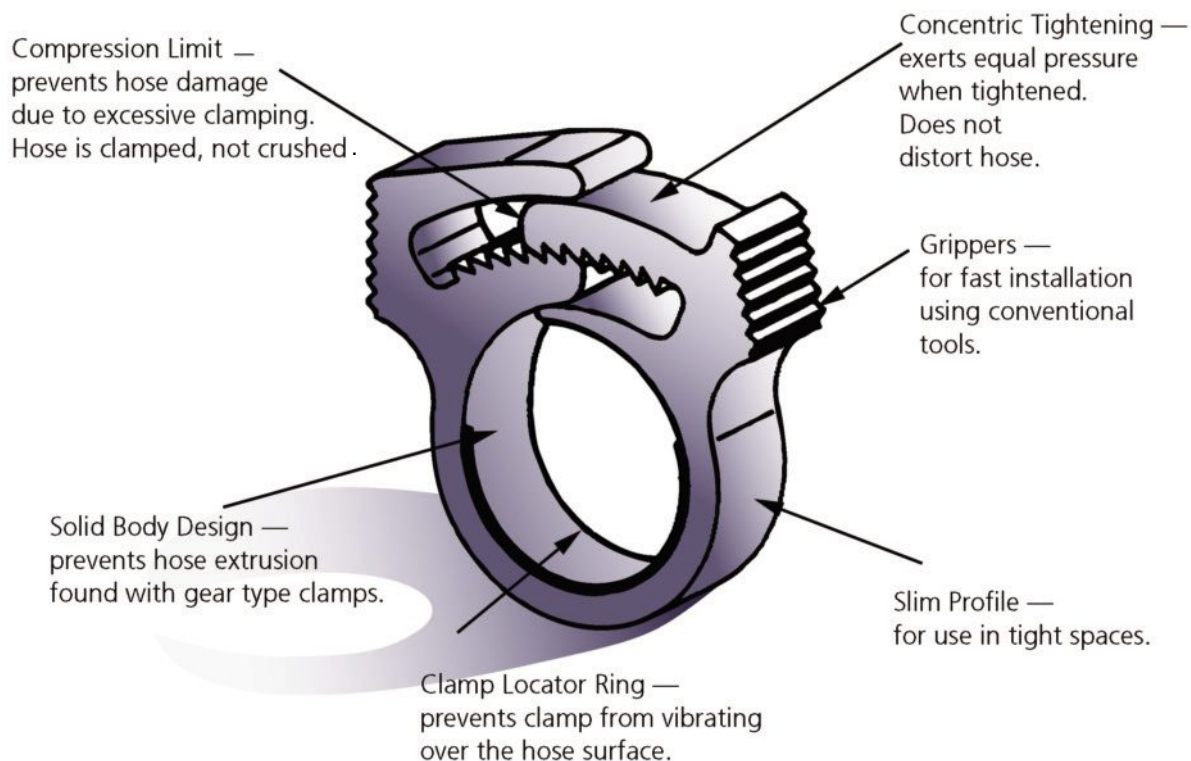
HellermannTyton's Snapper is a lightweight, corrosion resistant hose clamp manufactured from high performance, thermoplastic materials selected to work well in a variety of diverse environments. A quick, ratchet closure provides for reduced application time and allows for application after connection 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 polyacetal and black polyamide 6.6 glass filled impact modified heat stabilized material. Custom designed and different colored or shaped Snappers are available based upon applications and volume requirements.

Snapper Clamp Features

- Will not 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



Snapper Hose Clamp Applications



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

Snapper Clamp Applications

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

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

Double Braid Utility Hoses		Clear Vinyl Tubing		Neoprene Hoses		Fuel Line Hoses	
Diameter	Product	(I.D.) - (O.D.)	Product	Diameter	Product	Diameter	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	5/8"	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	Garden Hoses		Heater Hoses	
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"	Snapper 24	5/8"	Snapper 18	5/8"	Snapper 19
1-1/2"	Snapper 50	1" - 1-1/4"	Snapper 32	3/4"	Snapper 32	3/8"	Snapper 24

Snapper Hose Clamp Tools

Snapper installation tools are available in both pneumatic and mechanical versions. They are specifically developed to increase reliability, reduce operator fatigue and installation time.

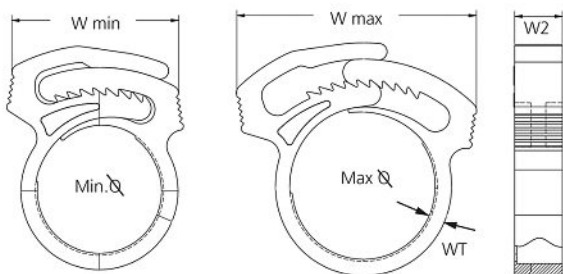


Product Selection			Tool Description			Snapper Range
Article No.	Part No.	Type	Type	Use	Stroke	
191-00010	PHSNP2-36	PHSNP2-36	Pneumatic	Production	Horizontal	2-36
191-00012	PHSNP38-100	PHSNP38-100				38-100
191-00014	PSNP2-22	PSNP2-22			Vertical	2-22
191-00019	PSNP24-70	PSNP24-70				24-70
191-02220	ASNP2-22	ASNP2-22	Mechanical	Production	Vertical	2-22
191-24700	ASNP24-70	ASNP24-70				24-70
191-01700	MSNP1-70	MSNP1-70		Maintenance/ Removal	Vertical	1-70

Use **Part No.** for ordering and **Type** for specification purposes.

Snapper Hose Clamps

Polyamide 6.6 Glass Filled Impact Modified Heat Stabilized



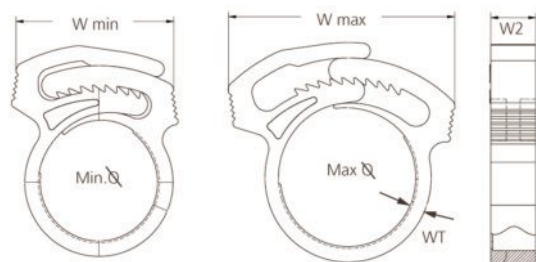
Material Data	
Material	Polyamide 6.6 glass filled impact modified heat stabilized (PA66GF13%)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C)
Color	Black
Flammability	UL94 HB



Product Selection									
Article No.	Part No.	Type	Min. Ø	Max. Ø	Width (W2) in. (mm)	Wall Thickness (WT) in. (mm)	Width (W) Min. in. (mm)	Width (W) Max. in. (mm)	Pkg. Qty.
192-10010	SNP1GHS0C2	SNP1	0.233 " (5.928)	0.262 " (6.643)	0.149" (3.838)	0.04 " (1.01)	0.323" (8.181)	0.456" (11.615)	100
190-00019	SNP1GHS0M4		0.233 " (5.928)	0.262 " (6.643)	0.149" (3.838)	0.04 " (1.01)	0.323" (8.181)	0.456" (11.615)	1000
190-00029	SNP1.25GHS0C2	SNP1.25	0.275 " (6.95)	0.297 " (7.563)	0.15" (3.838)	0.042 " (1.111)	0.408" (10.403)	0.491" (12.423)	100
190-00030	SNP1.25GHS0M4		0.275 " (6.95)	0.297 " (7.563)	0.15" (3.838)	0.042 " (1.111)	0.408" (10.403)	0.491" (12.423)	1000
190-00251	SNP1.5GHS0C2	SNP1.5	0.314 " (7.972)	0.35 " (8.891)	0.147" (3.737)	0.055 " (1.414)	0.414" (10.504)	0.593" (15.049)	100
190-00035	SNP1.5GHS0M4		0.314 " (7.972)	0.35 " (8.891)	0.147" (3.737)	0.055 " (1.414)	0.414" (10.504)	0.593" (15.049)	1000
192-10020	SNP2GHS0C2	SNP2	0.359 " (9.096)	0.403 " (10.22)	0.233" (5.959)	0.068 " (1.717)	0.477" (12.12)	0.679" (17.271)	100
190-00098	SNP2GHS0M4		0.359 " (9.096)	0.403 " (10.22)	0.233" (5.959)	0.068 " (1.717)	0.477" (12.12)	0.679" (17.271)	1000
190-00132	SNP3GHS0C2	SNP3	0.396 " (10.016)	0.45 " (11.446)	0.234" (5.959)	0.07 " (1.818)	0.567" (14.342)	0.805" (20.402)	100
190-00134	SNP3GHS0M4		0.396 " (10.016)	0.45 " (11.446)	0.234" (5.959)	0.07 " (1.818)	0.567" (14.342)	0.805" (20.402)	1000
192-10040	SNP4GH0C2	SNP4	0.413 " (10.527)	0.462 " (11.753)	0.235" (5.959)	0.067 " (1.717)	0.529" (13.433)	0.756" (19.19)	100
190-00167	SNP4GHS0M4		0.413 " (10.527)	0.462 " (11.753)	0.235" (5.959)	0.067 " (1.717)	0.529" (13.433)	0.756" (19.19)	1000
192-10060	SNP6GHS0C2	SNP6	0.459 " (11.651)	0.522 " (13.286)	0.235" (5.959)	0.07 " (1.818)	0.578" (14.645)	0.846" (21.513)	100
190-00186	SNP6GHS0M4		0.459 " (11.651)	0.522 " (13.286)	0.235" (5.959)	0.07 " (1.818)	0.578" (14.645)	0.846" (21.513)	1000
192-10070	SNP7GHS0C2	SNP7	0.463 " (11.753)	0.558 " (14.206)	0.235" (5.959)	0.07 " (1.818)	0.653" (16.564)	0.981" (24.947)	100
190-00202	SNP7GHS0M4		0.463 " (11.753)	0.558 " (14.206)	0.235" (5.959)	0.07 " (1.818)	0.653" (16.564)	0.981" (24.947)	1000
192-10080	SNP8GHS0C2	SNP8	0.524 " (13.286)	0.599 " (15.228)	0.233" (5.959)	0.07 " (1.818)	0.653" (16.564)	0.981" (24.947)	100
190-00222	SNP8GHS0M4		0.524 " (13.286)	0.599 " (15.228)	0.233" (5.959)	0.07 " (1.818)	0.653" (16.564)	0.981" (24.947)	1000
192-10100	SNP10GHS0C2	SNP10	0.582 " (14.819)	0.664 " (16.863)	0.235" (5.959)	0.069 " (1.717)	0.682" (17.372)	1.038" (26.361)	100
190-00043	SNP10GHS0M4		0.582 " (14.819)	0.664 " (16.863)	0.235" (5.959)	0.069 " (1.717)	0.682" (17.372)	1.038" (26.361)	1000
190-00254	SNP12AGHS0C2	SNP12A	.626 " (15.9)	.716 " (18.2)	.233" (5.92)	.070 " (1.78)	.816" (20.7)	1.172" (29.8)	100
190-00255	SNP12AGHS0M4		.626 " (15.9)	.716 " (18.2)	.233" (5.92)	.070 " (1.78)	.816" (20.7)	1.172" (29.8)	1000
190-00300	SNP14AGHS0C2	SNP14A	0.729 " (18.52)	0.827 " (21.01)	0.234" (5.94)	0.070 " (1.78)	0.823" (20.9)	1.185" (30.1)	100
190-00301	SNP14AGHS0M4		0.729 " (18.52)	0.827 " (21.01)	0.234" (5.94)	0.070 " (1.78)	0.823" (20.9)	1.185" (30.1)	1000
192-10160	SNP16GHS0C2	SNP16	0.776 " (19.735)	0.867 " (21.973)	0.234" (5.959)	0.068 " (1.717)	0.795" (20.2)	1.222" (31.209)	100
190-00076	SNP16GHS0M4		0.776 " (19.735)	0.867 " (21.973)	0.234" (5.959)	0.068 " (1.717)	0.795" (20.2)	1.222" (31.209)	1000
190-00258	SNP18AGHS0C2	SNP18A	.802 " (20.4)	.940 " (23.9)	.240" (6.1)	.070 " (1.78)	.958" (24.3)	1.418" (36)	100
190-00259	SNP18AGHS0M4		.802 " (20.4)	.940 " (23.9)	.240" (6.1)	.070 " (1.78)	.958" (24.3)	1.418" (36)	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.
Snapper performance varies on application and environmental factors; end use testing is highly recommended.

Snapper Hose Clamps Polyamide 6.6 Glass Filled Impact Modified Heat Stabilized *continued*



Material Data	
Material	Polyamide 6.6 glass filled impact modified heat stabilized (PA66GF13%)
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C)
Color	Black
Flammability	UL94 HB

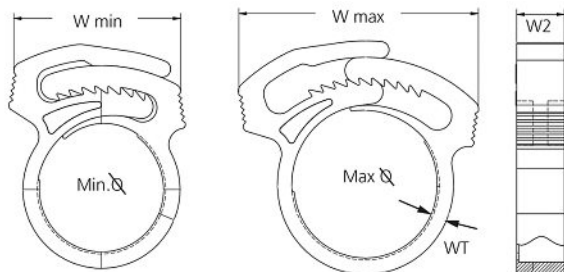


Product Selection									
Article No.	Part No.	Type	Min. Ø	Max. Ø	Width (W2)	Wall Thickness (WT)	Width (W) Min.	Width (W) Max.	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)	in. (mm)	
190-00090	SNP19GHS0C2	SNP19	0.878 " (22.28)	1.011 " (25.652)	0.234" (5.959)	0.071 " (1.818)	0.908" (23.028)	1.423" (36.158)	100
190-00093	SNP19GHS0M4		0.878 " (22.28)	1.011 " (25.652)	0.234" (5.959)	0.071 " (1.818)	0.908" (23.028)	1.423" (36.158)	1000
192-10220	SNP22GHS0C2	SNP22	0.948 " (24.119)	1.096 " (27.798)	0.236" (5.959)	0.071 " (1.818)	0.941" (23.937)	1.488" (37.774)	100
190-00111	SNP22GHS0M4		0.948 " (24.119)	1.096 " (27.798)	0.236" (5.959)	0.071 " (1.818)	0.941" (23.937)	1.488" (37.774)	1000
192-10240	SNP24GHS0C2	SNP24	1.007 " (25.55)	1.16 " (29.434)	0.295" (7.474)	0.07 " (1.818)	0.973" (24.745)	1.538" (39.087)	100
190-00119	SNP24GHS0H4		1.007 " (25.55)	1.16 " (29.434)	0.295" (7.474)	0.07 " (1.818)	0.973" (24.745)	1.538" (39.087)	500
190-00127	SNP28GHS0C2	SNP28	1.148 " (29.127)	1.325 " (33.624)	0.291" (7.373)	0.069 " (1.717)	1.018" (25.856)	1.647" (41.814)	100
190-00128	SNP28GHS0H4		1.148 " (29.127)	1.325 " (33.624)	0.291" (7.373)	0.069 " (1.717)	1.018" (25.856)	1.647" (41.814)	500
192-10320	SNP32GHS0K2	SNP32	1.245 " (31.58)	1.436 " (36.485)	0.29" (7.373)	0.069 " (1.717)	1.075" (27.27)	1.741" (44.238)	50
190-00140	SNP32GHS0H4		1.245 " (31.58)	1.436 " (36.485)	0.29" (7.373)	0.069 " (1.717)	1.075" (27.27)	1.741" (44.238)	500
190-00244	SNP33GHS0K2	SNP33	1.311 " (33.317)	1.63 " (41.391)	0.293" (7.474)	0.068 " (1.717)	1.58" (9.797)	2.542" (64.539)	50
190-00148	SNP33GHS0H4		1.311 " (33.317)	1.63 " (41.391)	0.293" (7.474)	0.068 " (1.717)	1.58" (9.797)	2.542" (64.539)	500
190-00149	SNP34GHS0K2	SNP34	1.367 " (34.748)	1.6 " (40.676)	0.295" (7.474)	0.069 " (1.717)	1.198" (30.401)	1.986" (50.399)	50
190-00150	SNP34GHS0H4		1.367 " (34.748)	1.6 " (40.676)	0.295" (7.474)	0.069 " (1.717)	1.198" (30.401)	1.986" (50.399)	500
192-10360	SNP36GHS0K2	SNP36	1.504 " (38.223)	1.762 " (44.764)	0.29" (7.373)	0.068 " (1.717)	1.274" (32.32)	2.113" (53.631)	50
190-00158	SNP36GHS0H4		1.504 " (38.223)	1.762 " (44.764)	0.29" (7.373)	0.068 " (1.717)	1.274" (32.32)	2.113" (53.631)	500
192-10380	SNP38GHS0K2	SNP38	1.629 " (41.391)	1.903 " (48.341)	0.294" (7.474)	0.069 " (1.717)	1.362" (34.643)	2.261" (57.469)	50
190-00163	SNP38GHS0H4		1.629 " (41.391)	1.903 " (48.341)	0.294" (7.474)	0.069 " (1.717)	1.362" (34.643)	2.261" (57.469)	500
191-00005	SNP42NGHS0K2	SNP42N	1.768 " (44.866)	2.054 " (52.224)	0.358" (9.09)	0.069 " (1.717)	1.383" (35.148)	2.325" (59.085)	50
191-00008	SNP42NGHS0C2		1.768 " (44.866)	2.054 " (52.224)	0.358" (9.09)	0.069 " (1.717)	1.383" (35.148)	2.325" (59.085)	100
192-10500	SNP50GHS0C2	SNP50	2.042 " (51.92)	2.327 " (59.07)	0.294" (7.474)	0.068 " (1.717)	1.425" (36.158)	2.364" (60.095)	100
190-00197	SNP60GHS0C2	SNP60	2.308 " (58.66)	2.639 " (67.04)	0.294" (7.474)	0.068 " (1.717)	1.463" (38.481)	2.585" (65.65)	100
190-00209	SNP70GHS0C2	SNP70	2.562 " (65.10)	2.961 " (75.22)	0.374" (9.494)	0.078 " (2.02)	1.834" (46.561)	3.02" (76.659)	100
190-00215	SNP76GHS0C2	SNP76	2.901 " (73.69)	3.276 " (83.19)	0.391" (9.898)	0.067 " (1.717)	1.704" (43.329)	2.862" (72.72)	100
190-00229	SNP80GHS0C2	SNP80	3.224 " (81.86)	3.600 " (91.47)	0.453" (11.514)	0.101 " (2.525)	1.913" (48.581)	3.171" (80.598)	100
190-00249	SNP90GHS0C2	SNP90	3.583 " (91.06)	4.008 " (101.79)	0.389" (9.898)	0.068 " (1.717)	1.936" (49.187)	3.236" (82.214)	100
192-11000	SNP100GHS0X2	SNP100	3.956 " (100.46)	4.491 " (114.06)	0.398" (10.1)	0.099 " (2.424)	2.068" (52.52)	3.543" (89.991)	25
190-00053	SNP101GHS0X2	SNP101	4.121 " (104.65)	4.718 " (119.88)	0.446" (11.312)	0.099 " (2.525)	2.426" (61.61)	4.261" (108.272)	25

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes. Snapper performance varies on application and environmental factors; end use testing is highly recommended.

Snapper Hose Clamps

Polyacetal (POM)



Material Data

Material	Polyacetal (POM)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Color	White
Flammability	UL94 HB



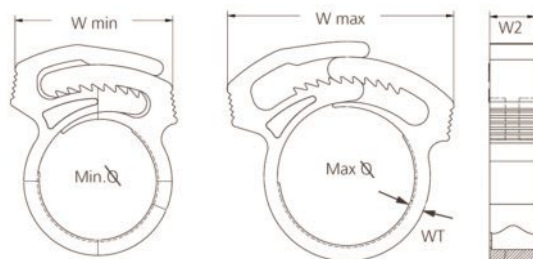
Product Selection

Article No.	Part No.	Type	Min. Ø	Max. Ø	Width (W2)	Wall Thickness (WT)	Width (W) Min.	Width (W) Max.	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)	in. (mm)	
190-00022	SNP110C2	SNP1	0.228 " (5.8)	0.256 " (6.5)	0.148" (3.8)	0.04 " (1)	0.32" (8.1)	0.451" (11.5)	100
190-00023	SNP110M4		0.228 " (5.8)	0.256 " (6.5)	0.148" (3.8)	0.04 " (1)	0.32" (8.1)	0.451" (11.5)	1000
190-00027	SNP1.2510C2	SNP1.25	0.269 " (6.8)	0.291 " (7.4)	0.149" (3.8)	0.042 " (1.1)	0.404" (10.3)	0.486" (12.3)	100
190-00028	SNP1.2510M4		0.269 " (6.8)	0.291 " (7.4)	0.149" (3.8)	0.042 " (1.1)	0.404" (10.3)	0.486" (12.3)	1000
190-00033	SNP1.510C2	SNP1.5	0.307 " (7.8)	0.342 " (8.7)	0.146" (3.7)	0.054 " (1.4)	0.41" (10.4)	0.587" (14.9)	100
190-00034	SNP1.510M4		0.307 " (7.8)	0.342 " (8.7)	0.146" (3.7)	0.054 " (1.4)	0.41" (10.4)	0.587" (14.9)	1000
190-00101	SNP210C2	SNP2	0.351 " (8.9)	0.394 " (10)	0.231" (5.9)	0.067 " (1.7)	0.472" (12)	0.672" (17.1)	100
190-00102	SNP210M4		0.351 " (8.9)	0.394 " (10)	0.231" (5.9)	0.067 " (1.7)	0.472" (12)	0.672" (17.1)	1000
190-00135	SNP310C2	SNP3	0.387 " (9.8)	0.44 " (11.2)	0.232" (5.9)	0.069 " (1.8)	0.561" (14.2)	0.797" (20.2)	100
190-00136	SNP310M4		0.387 " (9.8)	0.44 " (11.2)	0.232" (5.9)	0.069 " (1.8)	0.561" (14.2)	0.797" (20.2)	1000
190-00165	SNP410C2	SNP4	0.404 " (10.3)	0.452 " (11.5)	0.233" (5.9)	0.066 " (1.7)	0.524" (13.3)	0.749" (19)	100
190-00170	SNP410M4		0.404 " (10.3)	0.452 " (11.5)	0.233" (5.9)	0.066 " (1.7)	0.524" (13.3)	0.749" (19)	1000
190-00187	SNP610C2	SNP6	0.449 " (11.4)	0.511 " (13)	0.233" (5.9)	0.069 " (1.8)	0.572" (14.5)	0.838" (21.3)	100
190-00190	SNP610M4		0.449 " (11.4)	0.511 " (13)	0.233" (5.9)	0.069 " (1.8)	0.572" (14.5)	0.838" (21.3)	1000
190-00204	SNP710C2	SNP7	0.453 " (11.5)	0.546 " (13.9)	0.233" (5.9)	0.069 " (1.8)	0.647" (16.4)	0.971" (24.7)	100
190-00206	SNP710M4		0.453 " (11.5)	0.546 " (13.9)	0.233" (5.9)	0.069 " (1.8)	0.647" (16.4)	0.971" (24.7)	1000
190-00224	SNP810C2	SNP8	0.513 " (13)	0.586 " (14.9)	0.231" (5.9)	0.069 " (1.8)	0.647" (16.4)	0.971" (24.7)	100
190-00226	SNP810M4		0.513 " (13)	0.586 " (14.9)	0.231" (5.9)	0.069 " (1.8)	0.647" (16.4)	0.971" (24.7)	1000
190-00045	SNP1010C2	SNP10	0.569 " (14.5)	0.65 " (16.5)	0.233" (5.9)	0.068 " (1.7)	0.675" (17.2)	1.028" (26.1)	100
190-00046	SNP1010M4		0.569 " (14.5)	0.65 " (16.5)	0.233" (5.9)	0.068 " (1.7)	0.675" (17.2)	1.028" (26.1)	1000
190-00252	SNP12A10C2	SNP12A	.615 " (15.62)	.704 " (17.88)	.233" (5.92)	.070 " (1.78)	.802" (20.37)	1.152" (29.26)	100
190-00253	SNP12A10M4		.615 " (15.62)	.704 " (17.88)	.233" (5.92)	.070 " (1.78)	.802" (20.37)	1.152" (29.26)	1000
190-00302	SNP14A10C2	SNP14A	0.714 " (18.4)	0.810 " (20.57)	0.233" (5.92)	0.069 " (1.75)	0.805" (20.45)	1.157" (29.39)	100
190-00303	SNP14A10M4		0.714 " (18.4)	0.810 " (20.57)	0.233" (5.92)	0.069 " (1.75)	0.805" (20.45)	1.157" (29.39)	1000
190-00077	SNP1610C2	SNP16	0.759 " (19.31)	0.848 " (21.5)	0.232" (5.9)	0.067 " (1.7)	0.787" (20)	1.21" (30.9)	100
190-00079	SNP1610M4		0.759 " (19.31)	0.848 " (21.5)	0.232" (5.9)	0.067 " (1.7)	0.787" (20)	1.21" (30.9)	1000
181-00256	SNP18A10C2	SNP18A	.790 " (20)	.933 " (23.7)	.239" (6.07)	.067 " (1.7)	.940" (23.9)	1.391" (35.3)	100
190-00257	SNP18A10M4		.790 " (20)	.933 " (23.7)	.239" (6.07)	.067 " (1.7)	.940" (23.9)	1.391" (35.3)	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Acetal black is also available based upon minimum volume requirements. Snapper performance varies on application and environmental factors; end use testing is highly recommended.

Snapper Hose Clamps Polyacetal (POM) *continued*



Material Data

Material	Polyacetal (POM)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Color	White
Flammability	UL94 HB



Product Selection

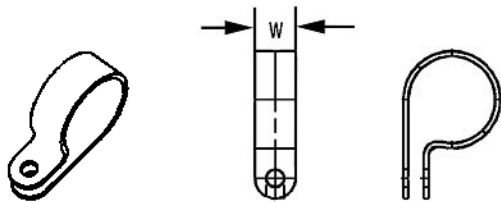
Article No.	Part No.	Type	Min. Ø	Max. Ø	Width (W2)	Wall Thickness (WT)	Width (W) Min.	Width (W) Max.	Pkg. Qty.
					in. (mm)	in. (mm)	in. (mm)	in. (mm)	
190-00094	SNP1910C2	SNP19	0.859 " (21.8)	0.989 " (25.1)	0.232" (5.9)	0.07 " (1.8)	0.899" (22.8)	1.409" (35.8)	100
190-00095	SNP1910M4		0.859 " (21.8)	0.989 " (25.1)	0.232" (5.9)	0.07 " (1.8)	0.899" (22.8)	1.409" (35.8)	1000
190-00113	SNP2210C2	SNP22	0.928 " (23.6)	1.072 " (27.2)	0.234" (5.9)	0.07 " (1.8)	0.932" (23.7)	1.473" (37.4)	100
190-00114	SNP2210M4		0.928 " (23.6)	1.072 " (27.2)	0.234" (5.9)	0.07 " (1.8)	0.932" (23.7)	1.473" (37.4)	1000
190-00121	SNP2410C2	SNP24	0.985 " (25)	1.135 " (28.8)	0.292" (7.4)	0.069 " (1.8)	0.963" (24.5)	1.523" (38.7)	100
190-00122	SNP2410H4		0.985 " (25)	1.135 " (28.8)	0.292" (7.4)	0.069 " (1.8)	0.963" (24.5)	1.523" (38.7)	500
190-00124	SNP2810C2	SNP28	1.123 " (28.5)	1.296 " (32.9)	0.288" (7.3)	0.068 " (1.7)	1.008" (25.6)	1.631" (41.4)	100
190-00125	SNP2810H4		1.123 " (28.5)	1.296 " (32.9)	0.288" (7.3)	0.068 " (1.7)	1.008" (25.6)	1.631" (41.4)	500
190-00142	SNP3210K2	SNP32	1.218 " (30.9)	1.405 " (35.7)	0.287" (7.3)	0.068 " (1.7)	1.064" (27)	1.724" (43.8)	50
190-00143	SNP3210H4		1.218 " (30.9)	1.405 " (35.7)	0.287" (7.3)	0.068 " (1.7)	1.064" (27)	1.724" (43.8)	500
190-00146	SNP3310K2	SNP33	1.283 " (32.6)	1.595 " (40.5)	0.29" (7.4)	0.067 " (1.7)	1.564" (9.7)	2.517" (63.9)	50
190-00147	SNP3310H4		1.283 " (32.6)	1.595 " (40.5)	0.29" (7.4)	0.067 " (1.7)	1.564" (9.7)	2.517" (63.9)	500
190-00151	SNP3410K2	SNP34	1.338 " (34)	1.566 " (39.8)	0.292" (7.4)	0.068 " (1.7)	1.186" (30.1)	1.966" (49.9)	50
190-00152	SNP3410H4		1.338 " (34)	1.566 " (39.8)	0.292" (7.4)	0.068 " (1.7)	1.186" (30.1)	1.966" (49.9)	500
190-00157	SNP3610K2	SNP36	1.472 " (37.4)	1.724 " (43.8)	0.287" (7.3)	0.067 " (1.7)	1.261" (32)	2.092" (53.1)	50
190-00156	SNP3610H4		1.472 " (37.4)	1.724 " (43.8)	0.287" (7.3)	0.067 " (1.7)	1.261" (32)	2.092" (53.1)	500
190-00162	SNP3810K2	SNP38	1.594 " (40.5)	1.862 " (47.3)	0.291" (7.4)	0.068 " (1.7)	1.349" (34.3)	2.239" (56.9)	50
190-00245	SNP3810H4		1.594 " (40.5)	1.862 " (47.3)	0.291" (7.4)	0.068 " (1.7)	1.349" (34.3)	2.239" (56.9)	500
190-00247	SNP42N10K2	SNP42N	1.73 " (43.9)	2.01 " (51.1)	0.354" (9)	0.068 " (1.7)	1.369" (34.8)	2.302" (58.5)	50
190-00246	SNP42N10C2		1.73 " (43.9)	2.01 " (51.1)	0.354" (9)	0.068 " (1.7)	1.369" (34.8)	2.302" (58.5)	100
190-00248	SNP5010C2	SNP50	1.999 " (50.8)	2.277 " (57.8)	0.291" (7.4)	0.067 " (1.7)	1.411" (35.8)	2.341" (59.5)	100
190-00196	SNP6010C2	SNP60	2.259 " (57.4)	2.582 " (65.6)	0.291" (7.4)	0.067 " (1.7)	1.449" (38.1)	2.559" (65)	100
190-00212	SNP7010C2	SNP70	2.507 " (63.7)	2.897 " (73.6)	0.37" (9.4)	0.077 " (2)	1.816" (46.1)	2.99" (75.9)	100
190-00217	SNP7610C2	SNP76	2.839 " (72.1)	3.206 " (81.4)	0.387" (9.8)	0.066 " (1.7)	1.687" (42.9)	2.834" (72)	100
190-00231	SNP8010C2	SNP80	3.155 " (80.1)	3.523 " (89.5)	0.449" (11.4)	0.1 " (2.5)	1.894" (48.1)	3.14" (79.8)	100
190-00233	SNP9010C2	SNP90	3.506 " (89.1)	3.922 " (99.6)	0.385" (9.8)	0.067 " (1.7)	1.917" (48.7)	3.204" (81.4)	100
190-00052	SNP10010X2	SNP100	3.871 " (98.3)	4.395 " (111.6)	0.394" (10)	0.098 " (2.4)	2.048" (52)	3.508" (89.1)	25
190-00250	SNP10110X2	SNP101	4.033 " (102.4)	4.617 " (117.3)	0.442" (11.2)	0.098 " (2.5)	2.402" (61)	4.219" (107.2)	25

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Clamps and Clips

P Clamps

HellermannTyton's P clamps are designed for locating wires, cables, and components in instruments, appliances, and electrical apparatus. These injection molded clamps are used for both internal and external installations. The inside edges are radiused to prevent cutting into cable insulation.



Material Data

Material	Polyamide 6.6 heat stabilized (PA66HS)
Color	Black
Operating Temperature	-40 °F to +221 °F (-40 °C to +105 °C)
Flammability	UL94 V2



Product Selection

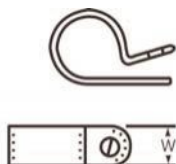
Article No.	Part No.	Type	Max. Ø Bundle	Width (W)	Mounting Hole Centers	Mounting Hole Ø	Radius	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	
211-60000	211-60000	H1P	.125" (3.2)	.393" (10.0)	.3346" (8.5)	.1654" (4.2)	.01969" (0.5)	100
211-60010	211-60010	H1P	.125" (3.2)	.393" (10.0)	.3346" (8.5)	.1654" (4.2)	.01969" (0.5)	1000
211-60001	211-60001	H2P	.196" (5.0)	.3937" (10.0)	.375" (9.5)	.1654" (4.2)	.03937" (1.0)	100
211-60020	211-60020	H2P	.196" (5.0)	.3937" (10.0)	.375" (9.5)	.1654" (4.2)	.03937" (1.0)	1000
211-60002	211-60002	H3P	.255" (6.5)	.3937" (10.0)	.3937" (10.0)	.1654" (4.2)	.03937" (1.0)	100
211-60040	211-60040	H3P	.255" (6.5)	.3937" (10.0)	.3937" (10.0)	.1654" (4.2)	.03937" (1.0)	1000
211-60003	211-60003	H4P	.314" (8.0)	.3937" (10.0)	.3937" (10.0)	.1654" (4.2)	.03937" (1.0)	100
211-60050	211-60050	H4P	.314" (8.0)	.3937" (10.0)	.3937" (10.0)	.1654" (4.2)	.03937" (1.0)	1000
211-60005	211-60005	H6P	.433" (11.0)	.3937" (10.0)	.5118" (13.0)	.1654" (4.2)	.03937" (1.0)	100
211-60061	211-60061	H6P	.433" (11.0)	.3937" (10.0)	.5118" (13.0)	.1654" (4.2)	.03937" (1.0)	1000
211-60006	211-60006	H7P	.492" (12.5)	.3937" (10.0)	.5512" (14.0)	.1654" (4.2)	.05906" (1.5)	100
211-60078	211-60078	H7P	.492" (12.5)	.3937" (10.0)	.5512" (14.0)	.1654" (4.2)	.05906" (1.5)	1000
211-60007	211-60007	H8P	.55" (14.0)	.3937" (10.0)	.5906" (15.0)	.1654" (4.2)	.05906" (1.5)	100
211-60090	211-60090	H8P	.55" (14.0)	.3937" (10.0)	.5906" (15.0)	.1654" (4.2)	.05906" (1.5)	1000
211-60008	211-60008	H9P	.629" (16.0)	.3937" (10.0)	.63" (16.0)	.1654" (4.2)	.05906" (1.5)	1000
211-60009	211-60009	H10P	.688" (17.5)	.3937" (10.0)	.6693" (17.0)	.1654" (4.2)	.05906" (1.5)	1000
211-60120	211-60120	H11P	.748" (19.0)	.3937" (10.0)	.7087" (18.0)	.1654" (4.2)	.07874" (2.0)	1000
211-60140	211-60140	H13P	.866" (22.0)	.4724" (12.0)	.8071" (20.5)	.2047" (5.2)	.07874" (2.0)	1000
211-60160	211-60160	H15P	1.003" (25.5)	.4724" (12.0)	.9055" (23.0)	.2047" (5.2)	.09843" (2.5)	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T Clamps

T3 Series

T Series clamps are injection molded and designed for applications in electronics, automotive, aircraft, and appliance industries. The T3 series has a 3/8" wide contact area. All contact edges have a full radius for product protection, and sizes are clearly marked on each clamp.



Material Data		RoHS
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)	
Flammability	UL94 V2	

UL US
File# E64139

Product Selection

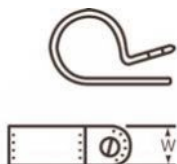
Product Selection								
Article No.	Part No.	Type	Max. Ø Bundle	Width (W)	Mounting Hole Centers	Wall Thickness	Color	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)		
T Clamps - T3 Series								
211-00132	T3D012510M4	T3D0125	.125"	.375"	.329"	.050"	White	1000
211-00131	T3D01250M4	T3D0125	(3.2)	(9.5)	(8.4)	(1.3)	Black	1000
211-00158	T3D018710M4	T3D0187	.188"	.375"	.430"	.050"	White	1000
211-00133	T3D01870M4	T3D0187	(4.7)	(9.5)	(10.9)	(1.3)	Black	1000
211-00135	T3D025010M4	T3D0250	.250"	.375"	.410"	.050"	White	1000
211-00134	T3D02500M4	T3D0250	(6.3)	(9.5)	(10.4)	(1.3)	Black	1000
211-00137	T3D031210M4	T3D0312	.313"	.375"	.495"	.050"	Black	1000
211-00136	T3D03120M4	T3D0312	(7.9)	(9.5)	(12.6)	(1.3)	Black	1000
211-00139	T3D037510M4	T3D0375	.375"	.375"	.595"	.050"	White	1000
211-00138	T3D03750M4	T3D0375	(9.5)	(9.5)	(15.1)	(1.3)	Black	1000
211-00140	T3D043710M4	T3D0437	.438"	.375"	.574"	.050"	White	1000
211-00146	T3D04370M4	T3D0437	(11.1)	(9.5)	(14.6)	(1.3)	Black	1000
211-00141	T3D050010M4	T3D0500	.500"	.375"	.605"	.050"	White	1000
211-00142	T3D05000M4	T3D0500	(12.7)	(9.5)	(15.4)	(1.3)	Black	1000
211-00143	T3D056210M4	T3D0562	.563"	.375"	.606"	.050"	White	1000
211-00159	T3D05620M4	T3D0562	(14.3)	(9.5)	(15.4)	(1.3)	Black	1000
211-00145	T3D062510M4	T3D0625	.625"	.375"	.678"	.050"	White	1000
211-00144	T3D06250M4	T3D0625	(15.8)	(9.5)	(17.2)	(1.3)	Black	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T Clamps

T5 Series

T Series clamps are injection molded and designed for applications in electronics, automotive, aircraft, and appliance industries. The T5 series provides a full 1/2" wide contact area. All contact edges have a full radius for product protection, and sizes are clearly marked on each clamp.



Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Flammability	UL94 V2





 File# E64139

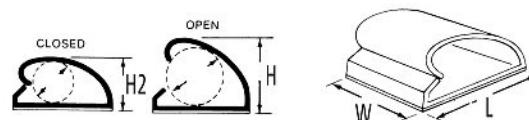
Product Selection									
Article No.	Part No.	Type	Max. Ø Bundle	Width (W)	Mounting Hole Centers	Wall Thickness	Color	Pkg. Qty.	
			in. (mm)	in. (mm)	in. (mm)	in. (mm)			
T Clamps - T5 Series									
211-00117	T5D012510M4	T5D0125	.125"	.500"	.315"	.050"	White	1000	
211-00129	T5D01250M4	T5D0125	(3.2)	(12.7)	(9.1)	(1.3)	Black	1000	
211-00118	T5D018710M4	T5D0187	.188"	.500"	.425"	.050"	White	1000	
211-00130	T5D01870M4	T5D0187	(4.7)	(12.7)	(10.8)	(1.3)	Black	1000	
211-00109	T5D025010M4	T5D0250	.250"	.500"	.410"	.050"	White	1000	
211-00123	T5D02500M4	T5D0250	(6.3)	(12.7)	(11.7)	(1.3)	Black	1000	
211-00110	T5D031210M4	T5D0312	.313"	.500"	.500"	.050"	White	1000	
211-00147	T5D03120M4	T5D0312	(7.9)	(12.7)	(12.7)	(1.3)	Black	1000	
211-00111	T5D037510M4	T5D0375	.375"	.500"	.530"	.050"	White	1000	
211-00124	T5D03750M4	T5D0375	(9.5)	(12.7)	(13.4)	(1.3)	Black	1000	
211-00148	T5D043710M4	T5D0437	.438"	.500"	.560"	.050"	White	1000	
211-00149	T5D04370M4	T5D0437	(11.1)	(12.7)	(14.2)	(1.3)	Black	1000	
211-00112	T5D050010M4	T5D0500	.500"	.500"	.595"	.050"	White	1000	
211-00125	T5D05000M4	T5D0500	(12.7)	(12.7)	(15.1)	(1.3)	Black	1000	
211-00113	T5D056210M4	T5D0562	.563"	.500"	.606"	.050"	White	1000	
211-00150	T5D05620M4	T5D0562	(14.3)	(12.7)	(15.4)	(1.3)	Black	1000	
211-00114	T5D062510M4	T5D0625	.625"	.500"	.655"	.050"	White	1000	
211-00126	T5D06250M4	T5D0625	(15.8)	(12.7)	(16.6)	(1.3)	Black	1000	
211-00115	T5D075010M4	T5D0750	.750"	.500"	.780"	.050"	White	1000	
211-00127	T5D07500M4	T5D0750	(19.0)	(12.7)	(19.8)	(1.3)	Black	1000	
211-00116	T5D087510H4	T5D0875	.875"	.500"	.845"	.050"	White	500	
211-00128	T5D08750H4	T5D0875	(22.2)	(12.7)	(21.4)	(1.3)	Black	500	
211-00119	T5D100010H4	T5D1000	1.000"	.500"	.910"	.050"	White	500	
211-00151	T5D10000H4	T5D1000	(25.4)	(12.7)	(23.1)	(1.3)	Black	500	
211-00120	T5D112510H4	T5D1125	1.125"	.500"	.970"	.050"	White	500	
211-00152	T5D11250H4	T5D1125	(125)	(12.7)	(24.6)	(1.3)	Black	500	
211-00153	T5D118710H4	T5D1187	1.188"	.500"	1.000"	.050"	White	500	
211-00154	T5D11870H4	T5D1187	(30.1)	(12.7)	(25.4)	(1.3)	Black	500	
211-00121	T5D125010F4	T5D1250	1.250"	.500"	1.060"	.050"	White	250	
211-00155	T5D12500F4	T5D1250	(31.7)	(12.7)	(26.9)	(1.3)	Black	250	
211-00157	T5D137510F4	T5D1375	1.375"	.500"	1.125"	.050"	White	250	
211-00156	T5D13750F4	T5D1375	(34.9)	(12.7)	(28.9)	(1.3)	Black	250	
211-00122	T5D150010F4	T5D1500	1.500"	.500"	1.190"	.050"	White	250	
			(38.1)	(12.7)	(30.2)	(1.3)			

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

WAC Adhesive

WAC Adhesive clamps offer a fast, convenient, low cost method of routing wires and cables. The easy to install adhesive system eliminates the time and expense of drilling holes. Ideal for economical wire and cable retention applications. Extruded from PVC. For 0.5" to 1" bundles.

Material Data	
Material	PVC (Polyvinylchloride)
Color	Gray
Operating Temperature	-20 °F to +150 °F (-28 °C to +65 °C)
Flammability	UL94 V0 (excluding adhesive)



Product Selection			Min. Ø Bundle	Max. Ø Bundle	Length (L)	Width (W)	Height (H)	Height (H2)	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	
151-00667	151-00667	WACO75	0.5" (12.7)	0.75" (19.1)	1.13" (28.7)	1" (25.4)	0.62" (15.75)	1.05" (26.7)	500
151-00668	151-00668	WAC100	0.75" (19.1)	1.0" (25.4)	1.5" (38.1)	1.25" (31.75)	0.85" (21.59)	1.39" (34.3)	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

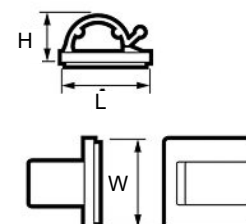
RB Clips

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".



Adhesive clips come in pairs connected together on adhesive liner.

Material Data	
Material	Polyamide 6.6 (PA66)
Color	Natural
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Flammability	UL94 V2 (excluding adhesive)

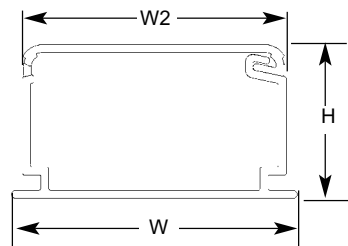
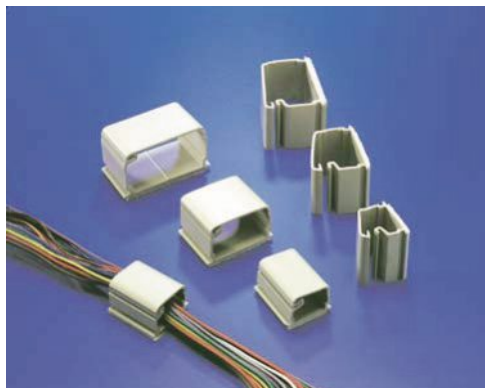


Product Selection			Max. Ø Bundle	Length (L)	Width (W)	Height (H)	Pkg. Qty.
Article No.	Part No.	Type	in. (mm)	in. (mm)	in. (mm)	in. (mm)	
151-14005	RB5H4	RB5	.1969" (5.0)	.75" (19.0)	.75" (19.0)	.24" (6.0)	500
151-13608	RB8L4	RB8	.315" (8.0)	1" (25.0)	1" (25.0)	.45" (11.5)	200
151-00506	RB14L4	RB14	.5512" (14.0)	1.307" (33.2)	1.079" (27.4)	.63" (16.0)	200

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

TSR Adhesive Clips

TSR clips are designed for HellermannTyton's TSR surface raceway. The co-extruded hinge offers almost unlimited access to wire and cable without deformation or signs of wear often found when using many conventional clips. Designed for applications that require repeated access to the wire and cable, TSR clips are easy to open and close quickly and repeatedly. The tough, rubber-based adhesive allows for permanent bond to most surfaces. TSR clips are especially useful in prototype construction, engineering labs, or where constant changes are necessary.



Material Data

Material	PVC (Polyvinylchloride)
Color	Ivory
Flammability	UL94 V0 (excluding adhesive)



Product Selection

Article No.	Part No.	Type	Max. Ø Bundle	Length (L)	Width (W)	Width (W2)	Height (H)	Pkg. Qty.
			in. (mm)	in. (mm)	in. (mm)	in. (mm)	in. (mm)	
151-00278	SRCI0500C2	SRCI0500	.50" (12.7)	.755" (19.17)	.84" (21.3)	.75" (19.05)	.50" (12.7)	100
151-00279	SRCI0750C2	SRCI0750	.75" (19.05)	1.25" (31.75)	1.36" (34.5)	1.25" (31.75)	.75" (19.05)	100
151-00280	SRCI1000K2	SRCI1000	1.0" (25.4)	1.75" (44.45)	1.88" (47.8)	1.75" (44.45)	1.0" (25.4)	50

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Dual Adjustable Flat Ribbon Cable Clamps

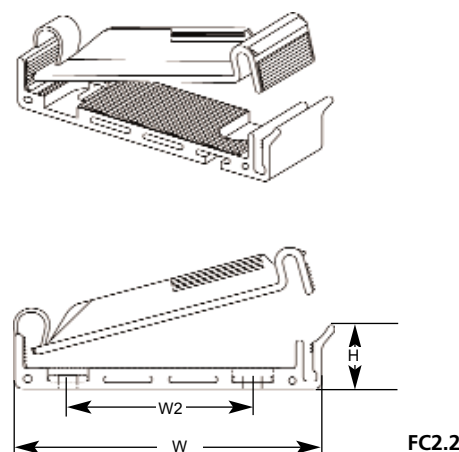
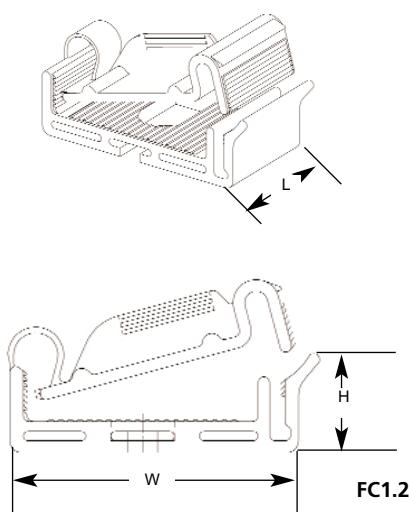
Designed to route, protect and secure flat ribbon cables in computers, electronics, panels and components, this unique adjustable clamp will not damage sensitive wire and cable. The clamp will adjust and close to the exact height of the ribbon cable, using only as much force as needed to secure the cable. The clamp is releasable on demand and adjustable on both sides. The low profile design allows for use in confined areas where space is a premium.

The clamp is adjustable so that single or stacked cable can be routed. The "snap clamp" design of this flat ribbon clamp makes it an excellent choice for specification and installation.

Both adhesive backed and non-adhesive screw mount versions are available.



Material Data	
Material	Polyamide 6.6 (PA66)
Color	Telecom Gray
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C)
Flammability	UL94 V2 (excluding adhesive)



Product Selection

Product Selection															
Article No.	Part No.	Type	Length (L)		Width (W)		Width (W2)		Height (H)		Mounting Hole Ø		Max Cable Width		Pkg. Qty.
			in. (mm)		in. (mm)		in. (mm)		in. (mm)		in. (mm)		in. (mm)		
Adhesive															
154-00013	FC1.2AK2	FC1.2A	.75"	(19)	1.5"	(38.1)	n/a	n/a	.51"	(13.1)	n/a	n/a	1.2 "	(30.48)	50
154-00012	FC1.2AH4	FC1.2A	.75"	(19)	1.5"	(38.1)	n/a	n/a	.51"	(12.9)	n/a	n/a	1.2 "	(30.48)	500
154-00017	FC2.2AK2	FC2.2A	.75"	(19)	2.5"	(63.5)	n/a	n/a	.51"	(12.75)	n/a	n/a	2.0 "	(50.8)	50
154-00016	FC2.2AH4	FC2.2A	.75"	(19)	2.5"	(63.5)	n/a	n/a	.51"	(12.75)	n/a	n/a	2.0 "	(50.8)	500
Non-Adhesive															
154-00011	FC1.2K2	FC1.2	.75"	(19)	1.5"	(38.1)	n/a	n/a	.51"	(12.9)	.138"	(6.0)	1.2 "	(30.48)	50
154-00010	FC1.2H4	FC1.2	.75"	(19)	1.5"	(38.1)	n/a	n/a	.51"	(12.9)	.138"	(6.0)	1.2 "	(30.48)	500
154-00015	FC2.2K2	FC2.2	.75"	(19)	2.5"	(63.5)	1.5"	(38.1)	.51"	(12.95)	.138"	(6.0)	2.0 "	(50.8)	50
154-00014	FC2.2H4	FC2.2	.75"	(19)	2.5"	(63.5)	1.5"	(38.1)	.51"	(12.95)	.138"	(6.0)	2.0 "	(50.8)	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Nail Clips

HellermannTyton nail clips are easy to use and highly reliable. The tough, precision engineered clips hold wire and cable securely in place. The nail is hardened for driving into wood, masonry joints, cinder block and mortar. The nails are also perpendicular to the work surface and are driven in straight, greatly reducing cracking. The nail clips do not have sharp edges, which reduce the chance of cutting cable jackets or sheaths and causing signal loss.

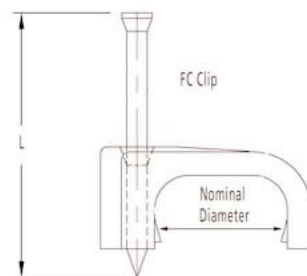
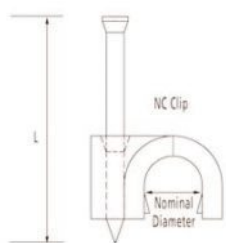


Material Data

Material

Polyethylene (PE), Steel (ST)

RoHS



Product Selection

Article No.	Part No.	Type	Nominal Ø in. (mm)	Length (L) in. (mm)	Application	Color	Pkg. Qty.
148-00005	NC3.50	NC3.5	.138" (3.5)	.630" (16)	14# Ground Wire, Telecom 1 pair	Black	100
148-00006	NC3.510	NC3.5	.138" (3.5)	.630" (16)		White	100
148-00007	NC50	NC5	.197" (5)	.630" (16)	Telecom 4 pair	Black	100
148-00008	NC510	NC5	.197" (5)	.630" (16)		White	100
148-00009	NC60	NC6	.236" (6)	.630" (16)	Telecom 6 pair, RG59	Black	100
148-00010	NC610	NC6	.236" (6)	.630" (16)		White	100
148-00011	NC70	NC7	.276" (7)	.787" (20)	RG6 and RG59 Double Shielded	Black	100
148-00012	NC710	NC7	.276" (7)	.787" (20)		White	100
148-00013	NC80	NC8	.315" (8)	.787" (20)	Telecom 10 pair RG7, and RG6 Double and Quad Shielded	Black	100
148-00014	NC810	NC8	.315" (8)	.787" (20)		White	100
148-00015	NC90	NC9	.354" (9)	.787" (20)	Telecom 12 pair	Black	100
148-00016	NC910	NC9	.354" (9)	.787" (20)		White	100
148-00003	NC110	NC11	.433" (11)	.984" (25)	Telecom 25 pair	Black	100
148-00004	NC1110	NC11	.433" (11)	.984" (25)		White	100
148-00017	FC140	FC14	.551" (14)	.984" (25)	RG59 and RG6 Flat Twin and Ground	Black	100
148-00018	FC1410	FC14	.551" (14)	.984" (25)		White	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

IDENTIFICATION SYSTEMS

TagPrint® PRO 3.0 Software	183-187
SwiftMark Automatic Label Printer and Applicator	188-191
Workstation Printers	192-193
Thermal Transfer Labels	194-201
Nameplate Labels	202-203
Continuous Vinyl Labels	204
ShrinkTrak Heat Shrinkable Markers	205-208
TipTag Cable Markers	209-210
Laser Tag Labels	211-216
Ink Jet Labels	217-220
Spirit 2100 Portable Printing System	221-223
Sport 1000 Handheld Printing System	224-226
Pre-Printed Installation Labels	227-230
Rite-On Markers	231-232
Wire Marker Tape	233



TagPrint[®]PRO 3.0

Increase Productivity, Reduce Errors and Decrease Time Spent Producing Labels with a Complete Labeling Management Solution from HellermannTyton

HellermannTyton's labeling system is comprised of the feature-rich labeling design software – TagPrint Pro 3.0, the highest quality thermal transfer, laser and ink jet printable labels, and a complete line of desk top thermal transfer printers.

Simplify Your Label Design and Printing Process with TagPrint Pro 3.0

TagPrint Pro 3.0 is the cost-effective, easy-to-use label design and printing software in the HellermannTyton labeling system for achieving improved efficiency in wire and component marking, asset tagging, and structured cabling identification. Compatible with Windows[®] 7, Vista and XP as well as future operating systems such as Windows[®] 8, TagPrint Pro 3.0 delivers an individualized, task-based experience that enables a user to easily develop labels with bar codes, text and graphics to meet numerous applications.

Designed for the industry specific needs of a business producing products on a shop floor or labeling products at a remote job site, the intuitive interface of TagPrint Pro 3.0 simplifies the process of creating labels. TagPrint Pro 3.0 streamlines labeling production by offering a user full control over the importing or entering of data, advanced security features, the option to group label designs under a single file name or job number, and the ability to batch print to either one or more printers at the same time.

Increase efficiency and reduce labor. TagPrint Pro 3.0 allows for complete management of the labeling production process with a label design software system that simplifies the label creation process used to identify cables, tubes, conduits, components and equipment.



① Familiar Task-based Navigation

TagPrint Pro 3.0 has a Ribbon interface that offers quick and easy access to the commands that are needed to complete a task. Commands are organized in logical groups, which are collected together under tabs. Each tab relates to a type of activity, such as "Label", "Table", "Print" and "Utility".

② Batch Printing

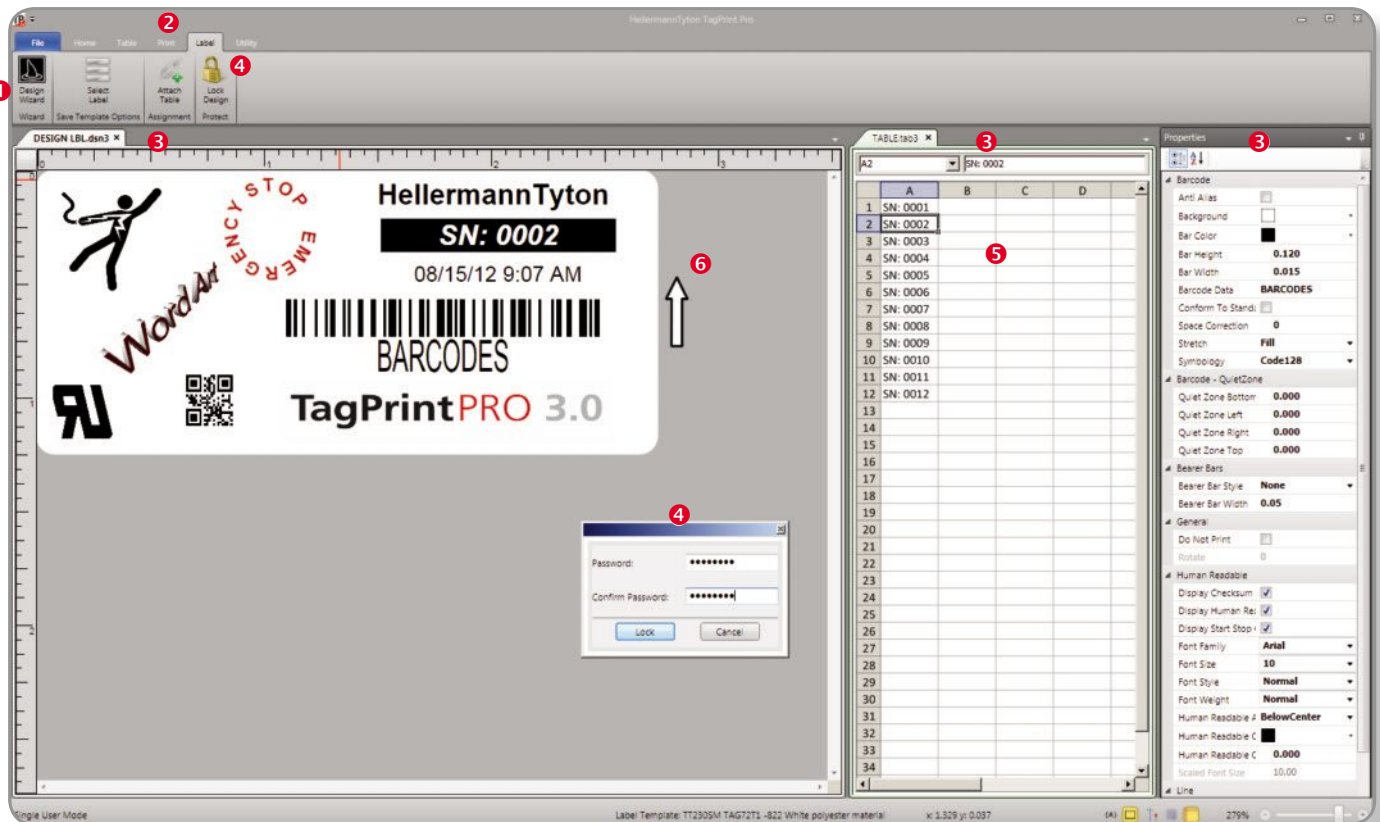
3.0 has a "print-later" feature for the purpose of batching under one file name in a simple print utility. Using built-in Macros, design each label and then define print options for execution at time of printing. Access the project file and concurrently print labels to a single printer or multiple printers.

③ At-a-glance Interface

Whether it is one label or a page of labels, the 3.0 interface was designed to allow ease of control over print jobs from a single screen. Information is viewable at a glance so a user can view object properties, data information, and actual label layout at the same time. When changes are made, information is updated.

④ Built-in Security

TagPrint Pro 3.0 offers a built-in security system for the restriction of use or protection of data. This feature allows the user to lockout or password protect label designs and data tables from unauthorized label editing. Available for purchase as a single-user or network license.



5 Expanded Import Capabilities and “Live Sync”

3.0 has the ability to import a database that has been exported from another program (i.e., CAD) or connect to existing database (i.e., Excel) files with the added ability to sync up to that database at timed intervals set by the user. If enabled, this feature allows variable information to be updated automatically so that print data is fully controlled from one location without a manual refresh at each computer terminal.

6 Editing Convenience

Label designs can be edited in Portrait or Landscape mode, as well as show the direction of label feed next to the design.

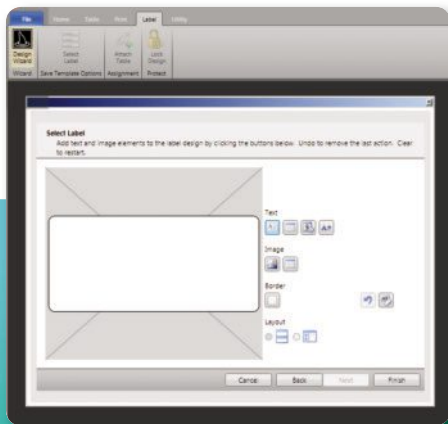
“PIN” Favorites

TagPrint Pro 3.0 allows the user to “pin” saved label designs and data tables making them immediately available in the file menu.

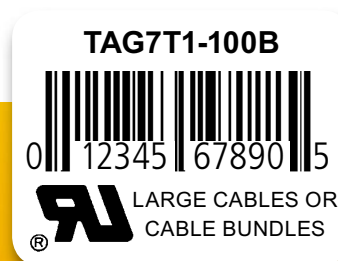
Single-user License or Network Version Available

TagPrint Pro 3.0 is available as a single-user license or as a network version which allows a user to share printers, label designs, and data tables from multiple workstations within a single location.

Enhanced Features

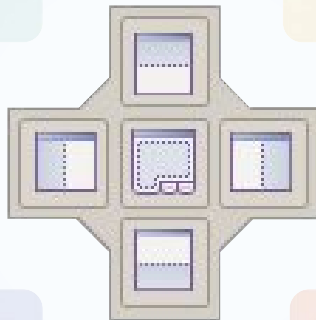


Optional **wizards** easily guide a user through the addition of text, images, and barcodes to create a label.



Barcodes now automatically scale and fit within the label eliminating the need to adjust barcode density, barcode ratio, and other attributes to get the barcode to fit on small labels.

The Screen View can be **Customized** by the End User.

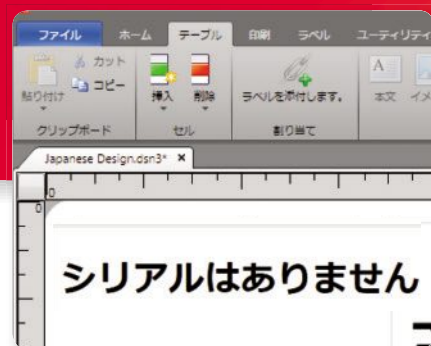


Manage and change the position and location of the screen attributes (snap-to properties).

Includes time stamp customization for easy insertion of date and/or time fields into the labels.



Interface can be configured to any one of a **number of supported languages** including: English, German, Spanish, French, Portuguese, Japanese and Korean.



DESIGN FEATURES

- TagPrint® Pro 3.0 is What You See Is What You Get (WYSIWYG) label creation software with practical pull-down menus and a wide array of design options.
- In PREVIEW mode, view multiple labels on a sheet at one time.
- Word Art for user creation of unique text.
- Open and print multiple label designs at one time.
- Save label designs as .jpg, or .xml files.
- Scale text size by simply increasing or decreasing the text box size on the label design.
- Scale text by height or width or by character spacing.
- Auto-distribute text.
- Draw lines and boxes.
- Text path capabilities (make text go in a circle).
- TagPrint Pro 3.0 allows for various templates and data tables to be open concurrently.

GRAPHIC FEATURES

- Manipulate graphics by forcing them to fit or automatically centering them in a specified area.
- Easily link graphics to the table for adding different graphics to different labels.
- Software includes hundreds of clip art images (or use your own).
- Flip, rotate, inverse or mirror image graphics and text.
- Adjust opacity of text and graphics.

BAR CODE FEATURES

- Human readable on top, side or bottom of the bar code.
- Control the position of the barcode properties box in TagPrint Pro 3.0.
- Allow "bold" text in the bar code.
- Print the most popular bar code symbologies. Datamatrix ECC 200, Code 39, Code 39 Extended, Code 128, EAN/UCC 128, QR Code, EAN 13, Interleaved 2/5, PDF417, UPC-A as well as many other types.
- Preview the barcodes on-screen before printing to ensure they will fit in the space provided.
- Control bar code specifications such as module, ratio, compensation and height.

PRINTING FEATURES

- Full software control of printer features and settings, eliminating the need to go to the printer driver.
- PREVIEW mode allows the user to check accuracy prior to printing.
- Print to virtually all thermal transfer, laser, ink jet or dot matrix printers with a valid 32 or 64 bit Windows or Windows NT driver.
- Select a "Do Not Print" option for specific objects on the label.
- Allows the user to customize the print functions.
- Stores heat and speed settings in the template, when saved.

TABLE FEATURES

- Open imported files directly into the table.
- Reuse the same table with different label designs.
- Create serial numbers automatically.
- TagPrint Pro 3.0 will auto size text when printing from a table.
- Data in the table will text wrap so that all the data in a cell is always visible.
- Copy rows to columns automatically.
- Cut and paste between cells.
- Insert and delete columns and rows.
- Import using the ASCII or ODBC utility field.
- Store saved label designs in each row of a column within a single table.
- Print multiple, different label designs from a single table.

Product Selection

Part No.	Type	Description	Pkg. Qty.
556-00035	TAGPRINT3	Single-user License	1
556-00042	TAGPRINT3UPGRD	Single-user License Upgrade	1
556-00036	TAGPRINT3LIC	2-3 Network User	1
556-00037	TAGPRINT5LIC	2-5 Network User	1
556-00038	TAGPRINT10LIC	2-10 Network User	1
556-00039	TAGPRINT25LIC	2-25 Network User	1

SUPPORTED GRAPHIC TYPES

BMP Bitmap, EMF Windows Metafile (Extended), GIF, JPEG, PNG, TIF, PCX, WMF

SYSTEM REQUIREMENTS**Single User:**

PC running Microsoft Windows XP, SP3, Vista SP1 or later,
Windows 7, 32-bit or 64-bit
.NET Framework 4
512 MB RAM (XP SP3)
1.0 GB RAM (Vista / Windows 7)
500 MB Available Hard Disk Space

Network User:

PC running Microsoft Windows 7, Windows Server 2008
.NET Framework 4
Microsoft SQL Server Express Edition 2008
1.0 GM RAM
500 MB Available Hard Disk Space

Made in the USA.



Wire & Cable Marking

Terminal Block Marking

Control Panel and Component Marking

Rating Plate Identification

Voice and Date Equipment Labeling

Conduit and Voltage Marking

110-block Marking

Cable Tray Identification

SwiftMark Automatic Label Printer and Applicator

Designed specifically for the wire and cable industry, the SwiftMark sets a new standard in labeling efficiency. The SwiftMark Automatic Label Printer and Applicator prints self-laminating vinyl labels and applies them to various sizes of wire and cable, increasing labeling productivity by up to 300%. With a cycle time of just over 4 seconds, the SwiftMark can print and apply labels in a fraction of the time required to manually print and apply labels, which increases productivity and reduces labeling errors while providing the highest printing and application quality.

Labels can be quickly and easily designed in the accompanying Tagprint Pro software, and label files can be downloaded and stored on the SwiftMark via a USB ethernet, Parallel port, or serial connection. Simply select the file and label quantity using the user-friendly touch screen, and labeling is as simple as placing the cable in the machine and pressing a button or foot pedal.

The SwiftMark has a simple interface which makes it very easy to use, yet it is capable of printing advanced label sequences such as label sets with different serial numbers and text on each label.

Product Features

- Fastest cycle time in the industry
- Touch screen LCD
- Marks to within .5" of the end of the cable
- Labels cables from .06" to .75" in diameter
- Works with various sizes of self-laminating adhesive labels
- Ribbon save feature minimizes ribbon usage by up to 85%
- 300 d.p.i. thermal transfer printer
- Stores label files on removable SD card
- USB, parallel port, and serial connections
- Accommodates various types of cables
- Eliminates label wrinkles or "flags"
- Adjustable wire grippers
- Easy to load with labels and ribbon
- Automatically keeps track of application cycles
- Foot pedal, touch screen, and 24V wrap initiation options
- Electric universal power supply
- View label on touch screen prior to printing
- Ethernet connectivity



Labels are designed in TagPrint Pro and downloaded to the SwiftMark.



The SwiftMark prints and automatically applies labels to various sizes of wire and cable.

Material Data	
Width	19.56" (497 mm)
Height	14.67" (372.6 mm)
Depth	31.6" (802.6 mm)
Weight	80 lbs.
Operating Temperature	+40 °F to +104 °F (+4 °C to +40 °C)
Storage Temperature	-30 °F to +160 °F (-34 °C to +71 °C)
Minimum-Maximum Cable Diameter	.06" to .75" (1.52 to 19.05 mm)
Minimum-Maximum Label Width	.5" to 2.0" (12.7 to 50.8 mm)
Print Method	Thermal Transfer

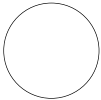
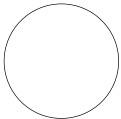
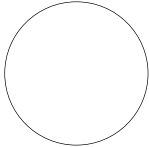
Product Selection

Article No.	Part No.	Type	Description	Pkg. Qty.
558-00060	558-00060	SMLA1	SwiftMark Printer Applicator	1
558-00065	558-00065	SMFP01	Foot Pedal for SwiftMark and Autotool Systems	1
558-00066	558-00066	SMSC01	Replacement shipping case	1

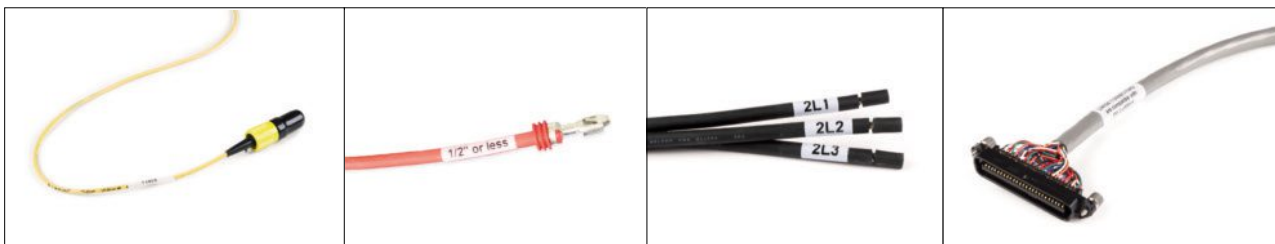
Use **Part No.** for ordering and **Type** for specification purposes.

Wire Diameter Guide to SwiftMark Labels

This guide can be used to determine which labels will work best with the wire diameter selected. Simply place the end of the wire over the appropriate circle to select the best label size.

If your wire or cable diameter is less than or equal to below, use:		Label Size	Label Width	Approximate Wire Gauge
.10"		558-00179	0.5" (12.7 mm)	18 - 22
.17"		558-00045	0.5" (12.7 mm)	6 - 16
		558-00046	0.5" (12.7 mm)	
		558-00047	1.0" (25.4 mm)	
		558-00063	1.5" (38.1 mm)	
		558-00069	1.0" (25.4 mm)	
.30"		558-00071	1.0" (25.4 mm)	6 - 16 14 - 18
		558-00045	0.5" (12.7 mm)	
		558-00046	1.0" (25.4 mm)	
		558-00047	1.5" (38.1 mm)	
		558-00061	2.0" (50.8 mm)	
.50"		558-00051	1.0" (25.4 mm)	1/0 - 8
		558-00052	1.5" (38.1 mm)	
		558-00053	2.0" (50.8 mm)	
.60"		558-00056	1.5" (38.1 mm)	3/0 - 6
		558-00057	1.75" (44.5 mm)	
		558-00059	2.0" (50.8 mm)	
		558-00058	2.0" (50.8 mm)	
.75"		558-00059	2.0" (50.8 mm)	4/0 - 3/0

Examples of SwiftMark Applications



The SwiftMark is gentle on delicate fiber optic cables and small wires.

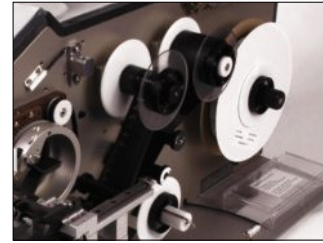
The SwiftMark can place a label to within .5" of the end of a cable.

Sets of labels can be printed for wire groups with different data on each conductor.

Even pre-terminated wire and cable can be marked using the SwiftMark.

SwiftMark Thermal Transfer Printer Ribbon

The SwiftMark utilizes a ribbon save feature that maximizes ribbon life. The ribbon only moves enough to accommodate each line of text printed and does not advance on a 1 to 1 ratio with label media. Label and ribbon loading is easy and the user has complete access to the entire ribbon and label path.



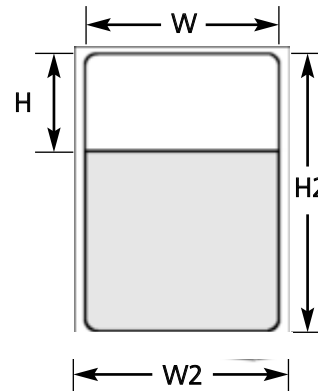
Product Selection							
Article No.	Part No.	Type	Color	Width		Length	
				In.	(mm)	Ft.	(M)
556-00165	SM100OUT	SM100OUT	Black	2.0	(50.8)	984	(300)
558-00227	SMWAXOUT	SMWAXOUT	Black	2.0		984	(300)

Use **Part No.** for ordering and **Type** for specification purposes. *UL Recognized when used with HellermannTyton SwiftMark labels.*

SwiftMark Thermal Transfer Labels

SwiftMark labels utilize a high quality self-laminating vinyl film that is UL recognized when used with SwiftMark thermal transfer printer ribbon. The vinyl has a highly adhesive bond that adheres quickly and strongly to the recommended wire insulation types.

Material Data	
Material	Clear Vinyl
Printer	SwiftMark
Liner	3.1 mil high speed dispensing 50# paper
Temperature Range	-40°F to +175°F (-40°C to +80°C)
Adhesive Type	Acrylic
Application	For marking wire and cable
Certifications	
Ribbon	TT100OUTSM



Product Selection															
Article No.	Part No.	Type	Width (W)		Height of Printable Area (H)		Height of Label (H2)		Width of Liner (W2)		Min. Ø Cable		Max. Ø Cable		Pkg. Qty.
			In.	(mm.)	In.	(mm.)	In.	(mm)	In.	(mm.)	In.	(mm)	In.	(mm.)	
558-00045	558-00045	TAG38-76W127SM	.5"	(12.7)	.5"	(12.7)	1.44"	(36.5)	.90"	(22.86)	.14"	3.5	.3"	7.6	2500
558-00046	558-00046	TAG38-76W254SM	1.0"	(25.4)	.5"	(12.7)	1.44"	(36.5)	1.13"	(28.57)	.14"	3.5	.3"	7.6	2500
558-00047	558-00047	TAG38-76W381SM	1.5"	(38.1)	.5"	(12.7)	1.44"	(36.5)	1.63"	(41.27)	.14"	3.5	.3"	7.6	2500
558-00061	558-00061	TAG38-76W508SM	2.0"	(50.8)	.75"	(19.05)	1.44"	(36.5)	1.13"	(28.57)	.14"	3.5	.3"	7.6	2500
558-00179	558-00179	TAG15-30W127SM	.5"	(12.7)	.35"	(8.89)	.875"	(22.2)	.90"	(22.86)	.06"	1.5	.13"	3.3	4500
558-00063	558-00063	TAG20-47W203SM	.8"	(20.3)	.35"	(8.89)	.94"	(23.9)	1.13"	(31.75)	.08"	2.0	.18"	4.7	2500
558-00052	558-00052	TAG61-121W254SM	1.0"	(25.4)	.75"	(19.05)	2.25"	(57.1)	1.13"	(28.57)	.24"	5.5	.47"	12.1	1000
558-00053	558-00053	TAG61-121W381SM	1.5"	(38.1)	.75"	(19.05)	2.25"	(57.1)	1.63"	(41.27)	.24"	5.5	.47"	12.1	1000
558-00056	558-00056	TAG85-100W381SM	1.5"	(38.1)	1.0"	(25.4)	3.0"	(76.2)	1.63"	(41.27)	.33"	8.5	.39"	10.0	1000
558-00057	558-00057	TAG85-100W444SM	1.75"	(44.5)	1.0"	(25.4)	3.0"	(76.2)	1.88"	(47.62)	.33"	8.5	.39"	10.0	1000
558-00058	558-00058	TAG85-100W508SM	2.0"	(50.8)	1.0"	(25.4)	3.0"	(76.2)	2.13"	(53.97)	.33"	8.5	.39"	10.0	1000
558-00059	558-00059	TAG111-190W508SM	2.0"	(50.8)	1.5"	(38.1)	3.75"	(95.3)	2.13"	(53.97)	.60"	11.1	.75"	19.0	1000
558-00069	558-00069	TAG26-53W254SM	1.0"	(25.4)	.35"	(8.89)	1.0"	(25.4)	1.13"	(28.57)	.10"	2.6	.20"	5.3	5000
558-00071	558-00071	TAG38-81W254SM	1.0"	(25.4)	.5"	(12.7)	1.5"	(38.1)	1.13"	(28.57)	.15"	3.8	.32"	8.1	2500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Label Sizes



TT230SM Printer

HellermannTyton's TT230SM thermal transfer printer is the next generation of printer available for small to medium volume users looking for an easy to use and functional thermal transfer printer. The TT230SM prints to a wide variety of materials including all of HellermannTyton labels and ShrinkTrak. The TT230SM is also Ethernet network ready, which gives the user options on placing the unit away from the host computer. The TT230SM comes with a label holder (caddy) for loading large reels behind the printer for easy dispensing and printing. There also is an optional carrying case that can be used to safely transport the printer to remote job sites.



Product Features

- Print on ShrinkTrak
- Print on Adhesive Labels
- Print on Tiptags
- Uses standard ribbons
- Print head 300dpi
- Barcodes: standard and 2D
- Print speed up to 3" (76.2mm) per second
- Max print width 4.1" (106mm)
- Max label width 4.37" (111mm)
- Max print length 39" (101cm)
- 8MB DRAM, 2MB Flash
- Interfaces: RS232-C, Ethernet, USB v.2.0 and Centronics
- Windows drivers: 2000, XP, NT4.0, Vista, 7
- Dimensions: 7.95" (201mm) x 10.16" (258mm) x 6.81" (172mm)
- Weight 4.4lbs (2kg)

Article No.	Part No.	Type	Description	Pkg. Qty.
556-00230	556-00230	TT230SM	TT230SM Printer	1
556-00231	556-00231	CASE230SM	Carrying Case for TT230SM Printer	1
556-00236	556-00236	TT230BATTERY	TT230SM Rechargeable Battery Pack	1

TT230SM Thermal Transfer Ribbons

Product Selection																	
Article No.	Part No.	Type	Color	Label Material										Width (W)		Length (L)	
				Paper	100	250	795	822	822C	900	1500	DTH	ShrinkTrak	In.	(mm)	Ft.	(M)
556-00147**	TT822OUTSM2	TT822OUTSM2	Red	•	•	•	•				•			4.33	(110)	242	(74)
556-00148**	TT822OUTSM3	TT822OUTSM3	Orange	•	•	•	•	•	•		•			4.33	(110)	242	(74)
556-00149**	TT822OUTSM4	TT822OUTSM4	Yellow	•	•	•	•	•	•		•			4.33	(110)	242	(74)
556-00150**	TT822OUTSM5	TT822OUTSM5	Green	•	•	•	•	•	•		•			4.33	(110)	242	(74)
556-00151**	TT822OUTSM6	TT822OUTSM6	Blue	•	•	•	•	•	•		•			4.33	(110)	242	(74)
556-00152**	TT822OUTSM7	TT822OUTSM7	Purple	•	•	•	•	•	•		•			4.33	(110)	242	(74)
556-00153**	TT822OUTSM8	TT822OUTSM8	Silver Gray								•		•	4.33	(110)	242	(74)
556-00143**	TTDTHOUTSM	TTDTHOUTSM	Black									• (5)	• (5)	4.33	(110)	242	(74)
556-00145	TT822OUTSM	TT822OUTSM	Black	•	(1)	•	• (1,2)	• (1,2)	•		•		• (4)	4.33	(110)	242	(74)
556-00163	TTTSTOUTSM	TTTSTOUTSM	Black		° (1)	°							• (4)	4.33	(110)	242	(74)
556-00169	TT100OUTSM	TT100OUTSM	Black	•	° (1)	°							• (4)	4.33	(110)	242	(74)
556-00190	556-00190	TTWHITEOUTSM	White								•			4.33	(110)	229	(70)

Use **Part No.** for ordering and **Type** for specification purposes.

• =Recommended ribbon

° =Acceptable ribbon alternative

(1) UL Recognized material / ribbon combination with HellermannTyton thermal transfer printers

(2) CSA Normal Use approved material / ribbon combination with HellermannTyton thermal transfer printers

(3) CSA Heavy Duty Use approved material / ribbon combination with HellermannTyton thermal transfer printers

(4) Meets ASM-DTL-23053/5 Class I & III, SAE-AS81531 for print performance

(5) Outstanding chemical, abrasion and solvent resistance where UL and CSA requirements are not needed

** 24 ribbon minimum order

* for use on black ShrinkTrak

TTM430/TTM460 Thermal Transfer Printer

HellermannTyton's TTM430 and TTM460 thermal transfer printers are ideal for medium to large volume users looking for an easy to use and extremely functional thermal transfer printer. The TTM430 is a high quality 300 dpi printer with excellent print resolution for text and barcodes used in general industrial applications. The TTM460 is a 600 dpi printer which produces the highest quality print for very small text or smooth graphics.



Product Features

- Print speed up to 7.87" per second
- Straight through design allows easy loading of ribbon and labels
- Larger spools or fanfold material can be fed through the back of the printer
- 64mb memory/8mb flash
- Easy to use operations and status panel
- Two adjustable gap and reflex sensors
- Optional cutter face plate allows labels and ShrinkTrak to be cut off after printing
- Printer status screen with date/time/ network status/head temperature/ ribbon amount
- Maximum print width – 4.25" (108mm)
- Minimum print width – .24" (6mm)

Product Selection

Article No:	Part No:	Type:	Description:	Pkg Qty:
556-00430	556-00430	TTM430	TTM430 Printer	1
556-00431	556-00431	430CFP	Cutter face plate	1
556-00432	556-00432	430WLAN	Wireless Network Card	1
556-00433	556-00433	430RLH	Label Holder	1
556-00434	556-00434	430RRH	Ribbon Holder	2
556-03065	556-03065	430RPH	TTM430 Printhead	1
556-00460	556-00460	TTM460	TTM460 Printer	1
556-00461	556-00461	460RPH	TTM460 Printhead	1

*Ribbons sold separately

TTM430/TTM460 Thermal Transfer Ribbons

Product Selection

Article No.	Part No.	Type	Color	Label Material										Width (W)		Length (L)	
				Paper	100	250	795	822	822C	900	1500	DTH	ShrinkTrak	In. (mm)	Ft. (M)		
556-00101	TT822OUT	TT822OUT	Black	•	•	•	•	•	•		• (5)		° (4)	4.33" (110.0)	984' (300)		
556-00104	TT100OUT	TT100OUT	Black	•	• (1)	•	•	•	•				° (4)	4.33" (110)	984' (300)		
556-00162	TTHTOUT	TTHTOUT	Black		° (1)	°							• (4)	4.0" (101.6)	984' (300)		
556-00144	TTDTHOUT	TTDTHOUT	Black		(1)							• (5)	• (5)	4.0" (101.6)	984' (300)		
556-00106	TT900OUT	TT900OUT	Black		• (5)	• (5)	• (5)	• (5)	• (5)	• (5)				4.0" (101.6)	984' (300)		
556-00155**	TT822OUT2	TT822OUT2	Red	•	•	•	•	•	•		• (5)			4.33" (110.0)	984' (300)		
556-00156**	TT822OUT3	TT822OUT3	Orange	•	•	•	•	•	•		• (5)			4.33" (110.0)	984' (300)		
556-00157**	TT822OUT4	TT822OUT4	Yellow	•	•	•	•	•	•		• (5)			4.33" (110.0)	984' (300)		
556-00158**	TT822OUT5	TT822OUT5	Green	•	•	•	•	•	•		• (5)			4.33" (110.0)	984' (300)		
556-00159**	TT822OUT6	TT822OUT6	Blue	•	•	•	•	•	•		• (5)			4.33" (110.0)	984' (300)		
556-00160**	TT822OUT7	TT822OUT7	Purple	•	•	•	•	•	•		• (5)			4.33" (110.0)	984' (300)		
556-00161	TT822OUT8	TT822OUT8	Silver Gray	•		•	• (1,2)	• (1,2)	•		• (5)		•	4.33" (110.0)	984' (300)		
556-00189	556-00189	TTWHITEOUT	White	•		•	• (1,2)	• (1,2)	•		• (5)			4.33" (110)	984' (300)		

*Call HellermannTyton for assistance when using this ribbon

** 10 ribbon minimum order

• = Recommended ribbon

(1) UL Recognized material & ribbon combination with HellermannTyton thermal transfer printers

(2) CSA Normal Use approved material & ribbon combination with HellermannTyton thermal transfer printers

(3) CSA Heavy Duty use approved material / ribbon combination with HellermannTyton thermal transfer printers

(4) Meets ASM-DTL-23053/5 Class I & III, SAE-AS81531 for print performance

(5) Outstanding chemical, abrasion, and solvent resistance where UL and CSA requirements are not needed

Material Shortcut Key

100	Self-laminating Vinyl
250	Conformable Woven Cloth
795	Metalized Polyester
822	White Polyester
822C	Clear Polyester
900	Polyamide Film
1500	Continuous Vinyl
DTH	Durattach
ShrinkTrak	Flexible, radiation cross-linked polyolefin

Thermal Transfer Label Materials

HellermannTyton provides a wide variety of thermal transfer label stocks to fit most industrial applications. Materials can be used in applications ranging from high heat, wire wrapping and long term indelible marking. A mix of sizes and types allows for stock solutions to most labeling needs. For instance, HellermannTyton provides thermal transfer labels in a high performance white polyester. HellermannTyton 822 material provides a high quality mark when used with the TT822 ribbon and the TT1210 printer, or compatible. If the 822 material is used in combination with the TT822 ribbon, the TT1210 printer or specific recommended printers, a UL Recognized mark can be achieved.*

Label Material	100 Material 	100B Material 	101 Material 	250 Material 
Material Name	Self-Laminating Vinyl	100 Clear Vinyl	Paper	Conformable Woven Cloth
Printer(s)	Spirit Handheld/ Dot Matrix	Thermal Transfer Desktop	Thermal Transfer Desktop	Thermal Transfer Desktop
Topcoat	Specially formulated for superb ink anchorage	Specially formulated for superb ink anchorage	Specially formulated for superb ink anchorage	Specially formulated for superb ink anchorage
Liner	50#	50#	40#	55#
Temperature Range	-50°F to +200°F (-46°C to +93°C)	-50°F to +200°F (-46°C to +93°C)	-65°F to +200°F (-40°C to +93°C)	-40°F to +250°F (-40°C to +121°C)
Adhesive Type	Permanent pressure sensitive acrylic	Permanent pressure sensitive acrylic	Permanent pressure sensitive rubber based	Permanent pressure sensitive acrylic
Application	For wires, cable and other conformable surfaces	For wires, cable and other conformable surfaces	For use on plastic bags	For wrapping and flagging on small gauge wires
Certifications				
Specifications	N/A	N/A	N/A	N/A
Ribbon	HHHST (recommended) HHIGR	TT100OUTSM TT100OUT TT822OUT TT822OUTSM TTHSTOUT TTHSTOUTSM	TT100OUTSM TT100OUT	TT100OUTSM TT100OUT
Notes	N/A	N/A	N/A	N/A

Label Material	336 Material 	518 Material 	795 Material 	799 Material 
Material Name	White Polyester	Polyethylene Foam and Polyester Laminate	Metalized Polyester	Metalized Polyester
Printer(s)	Thermal Transfer Desktop & Spirit Handheld	Thermal Transfer Desktop	Thermal Transfer Desktop	Spirit Handheld
Topcoat	Specially formulated for superb ink anchorage	Gloss surface for high contrast thermal transfer printing.	Specially formulated for superb ink anchorage	Specially formulated for superb ink anchorage
Liner	50#	6.7 Mil poly coated paper.	50#	50#
Temperature Range	-40°F to +300°F (-40°C to +149°C)	-40F to +176F (-40F to + 80C)	-40°F to +300°F (-40°C to +149°C)	-40°F to +300°F (-40°C to +149°C)
Adhesive Type	Permanent pressure sensitive acrylic	Permanent Acrylic	Permanent pressure sensitive acrylic	Permanent pressure sensitive acrylic
Application	For flat or slightly curved surfaces	Control panels, push button markers, nameplate identification	For flat or slightly curved surfaces only	For flat or slightly curved surfaces only
Certifications		ASTM D 903, ASTM D 3654, ASTM D 2970		
Specifications	N/A	Material tested to 10 years outdoor durability with no significant fading.	Use with 822OUT for UL and CSA recognition	Use HHIGR for UL recognition.
Ribbon	TT822OUT* TT822OUTSM* HHIGR	TT822OUT, TT822OUTSM, TT100OUT, TT100OUTSM	TT822OUT** TT822OUTSM**	HHIGR
Notes	*Use TT822OUT ribbon for UL Recognition on the TT1000, TT1210, TT300SM, TT10SM, TT210SM, TT310SM, & TT320SM printers. Use HHIGR for UL Recognition on the Spirit Printer.	Foam button and nameplate labels are easy to design and print using Tagprint Pro 3.0 labeling software.	**Use the TT822TYPE ribbon for UL & CSA Recognition on the TT1000, TT1210, TT300SM, TT10SM, TT210SM, TT310SM, & TT320SM - UL file no. MH18396, CSA file no. 106410. 2 Year outdoor durability.	Use HHIGR for UL Recognition on the Spirit Printer.

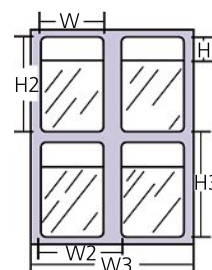
Thermal Transfer Label Materials *continued*

Label Material	822 Material 	822C Material 	395 Material 	1500 Material 
Material Name	White Polyester	Clear Polyester	White Polyethylene	Vinyl
Printer(s)	Thermal Transfer Desktop	Thermal Transfer Desktop	Thermal Transfer Desktop	Thermal Transfer Desktop
Topcoat	Specially formulated for superb ink anchorage	Specially formulated for superb ink anchorage	Smooth surface for thermal transfer printing	Smooth surface for thermal transfer printing
Liner	50#	50#	1.4 mil clear polyester	78#
Temperature Range	-40°F to +300°F (-40°C to +149°C)	-40°F to +300°F (-40°C to +149°C)	-40F to +176F (-40F to + 80C)	-40F to +180F (-40F to +82C)
Adhesive Type	Permanent pressure sensitive acrylic	Permanent pressure sensitive acrylic	Rubber Based	Acrylic
Application	For flat or slightly curved surfaces only	For flat or slightly curved surfaces only	Terminal Blocks	Alternative Energy
Certifications			ASTM D 903, ASTM D 3654, ASTM D 2979	UL File number MH18396, UL969
Specifications	Use with TT822TYPE ribbon for UL and CSA recognition	N/A	Use with TT822 Type ribbon. Made for marking terminal blocks and patch panels.	Material is extruded in color for maximum UV fade protection. Tested to 10 year outdoor durability with no significant fading.
Ribbon	TT822OUT* TT822OUTSM*	TT822OUT TT822OUTSM	TT822OUT, TT822OUTSM, TT100OUT, TT100OUTSM	TT822OUT, TT822OUTSM, TT100OUT, TT100OUTSM
Notes	*Use the TT822TYPE ribbon for UL & CSA Recognition on the TT1000, TT1210, TT300SM, TT10SM, TT210SM, TT310SM, & TT320SM - UL file no.MH18396, CSA file no. 106410. 5 year outdoor durability.	N/A	Tagprint Pro 3.0 can print the terminal to terminal spacing required to print a terminal block label.	Available on continuous rolls for printing and cutting.

Label Material	926 Material 	DTH Material 	ShrinkTrak™ Markers 
Material Name	White Polyester	Durattach - High Density Polyolefin	Flexible, radiation cross-linked polyolefin
Printer(s)	Thermal Transfer Desktop	TT320SM & TT1210 Desktop and Spirit Portable Printer	TT320SM & TT1210 Desktop
Topcoat	Smooth surface for thermal transfer printing	Specially formulated for formulated for indelible ink anchorage using DTH ribbon specifically	3:1 shrink ratio
Liner	3.2 mil SCK	50#	N/A
Temperature Range	-40F to +302F (-40C to +150C)	-40°F to +140°F (-40°C to +60°C)	-67°F to +275°F (-55°C to +135°C)
Adhesive Type	Acrylic	Acrylic	N/A
Application		For flat or slightly curved surfaces only	For cable, wire, terminals and other components
Specifications	Use for making signage for industrial automation and control panels.	N/A	Flammability - U.L. 224 U.L. Recognized SAE-AS81531 for print performance. AMS-DTL-23053/5 Class I & III. Mil STD 202G Method 215K
Ribbon	TT822OUT, TT822OUTSM, TT100OUT, TT100OUTSM	TTDTHOUT TTDTHOUTSM HHDTH	TT822OUT, TT822OUTSM TT100OUT, TT100OUTSM TTDTHOUT*,TTDTHOUTSM* TTHSTOUT, TTHSTOUTSM
Notes	Certifications: UL 969 File# MH12627,BS4509: 1986 edition	N/A	*Using the TTDTHOUTSM or TTDTHOUT ribbons will give an almost indelible mark on HellermannTyton's ShrinkTrak™.

Thermal Transfer Self-Laminating Labels

HellermannTyton's self-laminating labels are used for marking wire and cable. The clear overlap protects printed information. Thermal transfer labels and printers offer crisp, clear marking and a high level of durability.



Product Selection

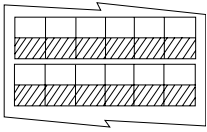
Product Selection

Article No.	Part No.	Type	Drawing Reference	Width (W)	Height of Printable Area (H)	Height of Label (H2)	Vertical Repeat (H3)	Horizontal Repeat (W2)	Width of Liner (W3)	Labels per Row	Pkg. Qty.
			(page 197)	In. (mm)	In. (mm)	In. (mm)	In. (mm)	In. (mm)	In. (mm)		
100B Material											
596-00009	TAG26T6-100B	TAG26T6	A	.5" (12.7)	.375" (9.52)	.75" (19.05)	1.0" (25.4)	.5" (12.7)	3.35" (85.09)	6	10000
596-00010	TAG2T5-100B	TAG2T5	B	.5" (12.7)	.5" (12.7)	1.43" (36.5)	1.62" (41.28)	.66" (16.81)	3.35" (85.09)	5	10000
596-00014	TAG51T3-100B	TAG51T3	C	1.0" (25.4)	.35" (8.8)	.75" (19.05)	.937" (23.7)	1.075" (27.3)	3.35" (85.09)	3	10000
596-00006	TAG22T2-100B	TAG22T2	D	1.0" (25.4)	.5" (12.7)	1.43" (36.5)	1.62" (41.28)	1.075" (27.3)	2.25" (57.1)	2	5000
596-00007	TAG22T3-100B	TAG22T3	E	1.0" (25.4)	.5" (12.7)	1.43" (36.5)	1.62" (41.28)	1.075" (27.3)	3.35" (85.09)	3	5000
596-00027	TAG9T3-100B	TAG9T3	F	1.0" (25.4)	.75" (19.05)	2.25" (57.1)	2.5" (63.5)	1.0" (25.4)	3.35" (85.09)	3	5000
596-00013	TAG3T3-100B	TAG3T3	G	1.0" (25.4)	1.0" (25.4)	3.75" (95.25)	4.0" (101.6)	1.075" (27.3)	3.35" (85.09)	3	3000
596-00011	TAG38T4-100B	TAG38T4	H	1.0" (25.4)	1.5" (38.1)	7.347" (188.89)	7.75" (196.80)	1.0" (25.4)	4.10" (104.14)	4	1000
596-00045	TAG53T2-100B	TAG53T2	I	1.5" (38.1)	.7" (17.78)	1.437" (36.49)	1.62" (41.28)	1.5" (38.1)	3.35" (89.05)	2	2500
596-00005	TAG1T1-100B	TAG1T1	J	1.9" (49.05)	.75" (19.05)	3.12" (79.2)	3.42" (86.8)	1.9" (48.2)	3.875" (98.42)	2	2500
596-00008	TAG24T1-100B	TAG24T1	K	2.0" (50.8)	.5" (12.7)	1.437" (36.49)	1.68" (42.6)	2.0" (50.8)	2.2" (55.9)	1	1000
596-00002	TAG10T2-100B	TAG10T2	L	2.0" (50.8)	.75" (19.05)	2.25" (57.1)	2.5" (63.5)	2.0" (50.8)	3.875" (98.42)	2	2500
596-00021	TAG7T1-100B	TAG7T1	M	2.0" (50.8)	1.5" (38.1)	7.347" (188.89)	7.75" (196.80)	2.0" (50.8)	4.10" (104.14)	2	1000
596-00016	TAG6T1-100B	TAG6T1	N	2.0" (50.8)	1.5" (38.1)	3.75" (95.25)	4.0" (101.6)	2.0" (50.8)	2.20" (68.58)	1	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

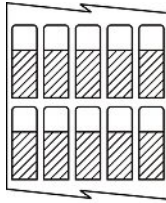
Thermal Transfer Self-Laminating Labels *continued*

(Not shown to scale)



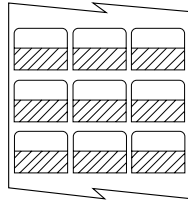
TAG26T6-100B

A



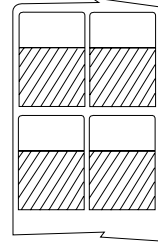
TAG2T5-100B

B



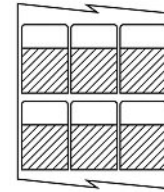
TAG51T3-100B

C



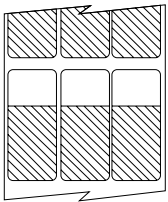
TAG22T2-100B

D



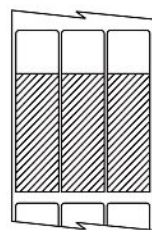
TAG22T3-100B

E



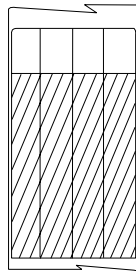
TAG9T3-100B

F



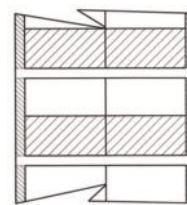
TAG3T3-100B

G



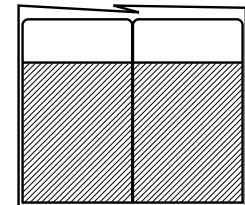
TAG38T4-100B

H



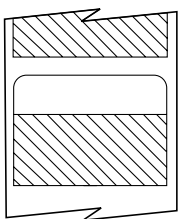
TAG53T2-100B

I



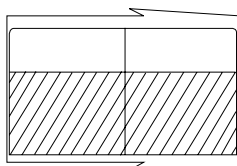
TAG1T1-100B

J



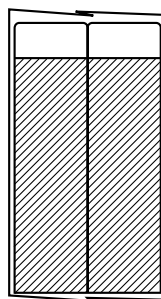
TAG24T1-100B

K



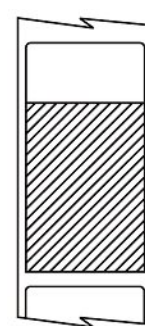
TAG10T2-100B

L



TAG7T1-100B

M

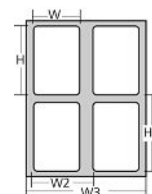


TAG6T1-100B

N

Thermal Transfer Labels

HellermannTyton thermal transfer labels provide the best printing quality. These labels are particularly suitable for permanent marking on the flat surfaces of production machines and equipment. The technology used in the printing of thermal transfer labels produces the most accurate barcodes of all existing printing technologies. The large selection of labels makes it easy to find the correct label for almost any application. Thermal transfer labels are designed for high heat and are resistant to chemicals as well as petroleum based oils and solvents.



Turn page for full selection.

Product Selection															
Article No.	Part No.	Type	Drawing Reference	Width (W)		Height (H)		Vertical Repeat (H2)		Horizontal Repeat (W2)		Width of Liner (W3)		Labels per Row	Pkg. Qty.
			pages (200-201)	In.	(mm.)	In.	(mm.)	In.	(mm.)	In.	(mm.)	In.	(mm.)		
250 Material															
598-00277	TYHCT-250	TYHC	A	.250"	(6.35)	1.50"	(38.10)	1.625	41.27	.250"	6.35	4.120"	104.70	16	5000
596-21250	TAG21T6-250	TAG21T6	B	.5"	(12.7)	.75"	(19.05)	.875"	22.22	.5"	12.7	3.25"	82.55	6	10000
596-11250	TAG11T4-250	TAG11T4	C	.65"	(16.5)	.2"	(5.08)	.3"	7.62	.65"	16.5	2.6"	66.04	4	5000
596-28250	TAG28T4-250	TAG28T4	D	.80"	(20.3)	1.43"	(36.3)	1.62"	41.1	.80"	20.3	3.45"	87.6	4	5000
596-15250	TAG15T3-250	TAG15T3	E	1.0"	(25.4)	.5"	(12.7)	.6"	15.24	1.0"	25.4	3.35"	85.09	3	10000
596-00044	TAG35T2-250	TAG35T2	F	2.0"	(50.8)	.375"	(9.53)	.50"	12.7	2.0"	50.8	4.1"	104.14	2	10000
336 Material															
596-00026	TAG96T1-336	TAG96T1	G	1.875"	(47.6)	.25"	(6.35)	.375"	9.35	1.875"	47.6	2.0"	50.8	1	5000
596-00041	TAG69T1-336	TAG69T1	H	2.0"	(50.8)	.275"	(6.98)	.5"	12.7	2.0"	50.8	2.125"	53.97	1	10000
596-00040	TAG68T1-336	TAG68T1	J	3.8"	(96.5)	.275"	(6.98)	.5"	12.7	3.8"	96.5	4.0"	101.6	1	10000
795 Material															
596-15795	TAG15T3-795	TAG15T3	E	1.0"	(25.4)	.5"	(12.7)	.6"	15.24	1.0"	25.4	3.35"	85.09	3	10000
596-27795	TAG27T1-795	TAG27T1	J	1.5"	(38.11)	.75"	(19.05)	.875"	22.2	1.5"	38.11	2.20"	55.88	1	3000
596-75795	TAG75T1-795	TAG75T1	K	2.0"	(50.8)	.625"	(15.87)	.75"	19.05	2.0"	50.8	2.12"	53.8	1	2000
596-73795	TAG73T1-795	TAG73T1	AA	2.0"	(50.8)	1.0"	(25.4)	1.125"	28.57	1.0"	25.4	2.20"	55.83	1	3000
596-76795	TAG76T1-795	TAG76T1	L	2.5"	(63.5)	2.0"	(50.8)	2.12"	53.8	2.5"	63.5	2.62"	66.5	1	1000
596-72795	TAG72T1-795	TAG72T1	M	2.75"	(69.85)	1.25"	(31.75)	1.375"	34.93	2.75"	69.85	2.95"	74.95	1	5000
596-78795	TAG78T1-795	TAG78T1	N	3.0"	(76.2)	4.0"	(101.6)	4.12"	104.7	3.0"	76.2	3.12"	79.2	1	500
596-80795	TAG80T1-795	TAG80T1	O	3.0"	(76.2)	5.0"	(127)	3.0"	76.2	3.0"	76.2	3.125"	79.37	1	500
596-79795	TAG79T1-795	TAG79T1	P	4.0"	(101.6)	2.0"	(50.8)	2.12"	53.97	4.0"	101.6	4.25"	107.9	1	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

* TAG17T2-822 not recommended for TT10SM, TT210SM, TT230SM, TT300SM, TT310SM, and TT330SM printers. Use TAG82T2 instead.

Terminal Block Labels

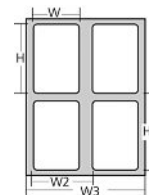
Terminal Block labels can be printed to match the terminal spacing of most terminal blocks using Tagprint Pro 3.0 labeling software.

Article No.	Part No.	Type	Description	Pkg. Qty.
596-00380	596-00380	TBL375	.375" wide continuous polyethylene	100
596-00381	596-00381	TBL500	.5" wide continuous polyethylene	100

Phase Labels

Phase labels are micro-perforated between each label so that it can be applied as one strip to the panel or broken into individual labels.

Article No.	Part No.	Type	Description	Pkg. Qty.
596-00382	596-00382	PLW3P	1" x .5" White polyester phase label	2500
596-00383	596-00383	PLB3P	1" x .5" Black polyester phase label	2500

Thermal Transfer Labels *continued*

Product Selection

Product Selection															
Article No.	Part No.	Type	Drawing Reference	Width (W)		Height (H)		Vertical Repeat (H2)		Horizontal Repeat (W2)		Width of Liner (W3)		Labels per Row	Pkg. Qty.
			pages (200-201)	In.	(mm.)	In.	(mm.)	In.	(mm.)	In.	(mm.)	In.	(mm.)		
822 Material															
596-27822	TAG27T1-822	TAG27T1	J	1.5"	(38.11)	.75"	(19.05)	.875"	22.2	1.5"	38.11	2.20"	55.88	1	3000
596-00019	TAG75T1-822	TAG75T1	K	2.0"	(50.8)	.625"	(15.87)	.75"	19.05	2.0"	50.8	2.12"	53.8	1	2000
596-70822	TAG70T12-822	TAG70T12	Q	.25"	(6.35)	.25"	(6.35)	.5"	12.7	.25"	6.35	3.2"	81.2	12	10000
596-00028	TAGPP1T6-822	TAGPP1T6	R	.625"	(15.87)	.333"	(8.45)	.75"	19.05	.625"	15.87	3.8"	96.52	6	1000
596-00082	TAGPP1T6-82210M	TAGPP1T6	R	.625"	(15.87)	.333"	(8.45)	.75"	19.05	.625"	15.87	3.8"	96.52	6	10000
596-11822	TAG11T4-822	TAG11T4	C	.65"	(16.5)	.2"	(5.08)	.3"	7.62	.65"	16.5	2.6"	66.04	4	5000
596-00046	TAGPP2T6-822	TAGPP2T6	T	.66"	(16.7)	.33"	(8.38)	.75"	19.05	.66"	16.7	4.125"	104.7	6	1000
596-00083	TAGPP3T4-822	TAGPP3T4	U	.688"	(17.4)	.25"	(6.35)	.375"	9.52	.688"	17.4	2.9"	73.66	4	1000
596-13822	TAG13T4-822	TAG13T4	V	.75"	(19.05)	.25"	(6.35)	.35"	8.89	.75"	19.05	3.35"	85.09	4	10000
596-15822	TAG15T3-822	TAG15T3	E	1.0"	(25.4)	.5"	(12.7)	.6"	15.24	1.0"	25.4	3.35"	85.09	3	1000
596-84822	TAG84T3-822	TAG84T3	S	1.25"	(31.75)	.375"	(9.53)	.50"	12.7	1.25"	31.75	4.0"	101.6	3	10000
596-00023	TAG83T1-822	TAG83T1	W	4.0"	(101.6)	.312"	(7.52)	.438"	11.13	4.0"	101.6	4.1"	104.14	1	5000
596-00022	TAG81T8-822	TAG81T8	X	.325"	(8.25)	.20"	(5.08)	.30"	7.62	.325"	8.25	2.6"	66.04	8	5000
596-16822	TAG16T3-822	TAG16T3	Y	.9"	(22.86)	.25"	(6.35)	.35"	8.89	.9"	22.86	3.35"	85.09	3	10000
596-17822	TAG17T2-822	TAG17T2	Z	1.5"	(38.11)	.25"	(6.35)	.35"	8.89	1.65"	41.98	3.35"	85.09	2	10000
596-73822	TAG73T1-822	TAG73T1	AA	2.0"	(50.8)	1.0"	(25.4)	1.125"	28.57	1.0"	25.4	2.20"	55.83	1	3000
596-42822	TAG72T1-822	TAG72T1	M	2.75"	(69.85)	1.25"	(31.75)	1.375"	34.93	2.75"	69.85	2.95"	74.95	1	3000
596-71822	TAG71T5-822	TAG71T5	BB	.5"	(12.7)	.43"	(11.1)	.662"	16.81	.43"	11.1	3.35"	85.09	5	10000
596-82822	TAG82T2-822	TAG82T2	CC	1.5"	(38.1)	.25"	(6.35)	.30"	7.62	1.5"	38.1	3.20"	81.28	2	10000
822C Material*															
596-00029	TAGPP1T6-822C	TAGPP1T6	R	.625"	(15.87)	.333"	(8.45)	.75"	19.05	.625"	15.87	3.8"	96.52	6	1000
596-00030	TAGPP1T6-822C10M	TAGPP1T6	R	.625"	(15.87)	.333"	(8.45)	.75"	19.05	.625"	15.87	3.8"	96.52	6	10000
596-00003	TAG11T4-822C	TAG11T4	C	.65"	(16.5)	.2"	(5.08)	.3"	7.62	.65"	16.5	2.6"	66.04	4	5000
596-00047	TAGPP2T6-822C	TAGPP2T6	T	.66"	(16.7)	.33"	(8.38)	.75"	19.05	.66"	16.7	4.125"	104.7	6	1000
596-00084	TAGPP3T4-822C	TAGPP3T4	U	.688"	(17.4)	.25"	(6.35)	.375"	9.52	.688"	17.4	2.9"	73.66	4	1000
596-00001	TAG15T3-822C10M	TAG15T3	E	1.0"	(25.4)	.5"	(12.7)	.6"	15.24	1.0"	25.4	3.35"	85.09	3	10000
596-00043	TAG27T1-822C	TAG27T1	J	1.5"	(38.11)	.75"	(19.05)	.875"	22.2	1.5"	38.11	2.20"	55.88	1	3000
DTH Material***															
596-00033	TAG13T4-DTH	TAG13T4	V	.75"	(19.05)	.25"	(6.35)	.35"	8.89	.75"	19.05	3.35"	85.09	4	10000
596-00034	TAG16T3-DTH	TAG16T3	Y	.9"	(22.86)	.25"	(6.35)	.35"	8.89	.9"	22.86	3.35"	85.09	3	10000
596-00035	TAG15T3-DTH	TAG15T3	E	1.0"	(25.4)	.5"	(12.7)	.6"	15.24	1.0"	25.4	3.35"	85.09	3	10000
596-00036	TAG27T2-DTH	TAG27T2	J	1.5"	(38.11)	.75"	(19.05)	.875"	22.2	1.5"	38.11	2.20"	55.83	2	10000
596-00037	TAG99T1-DTH	TAG99T1	DD	2.0"	(50.8)	.25"	(6.35)	.375"	9.52	2.0"	50.8	2.2"	55.8	1	2500
596-00038	TAG73T1-DTH	TAG73T1	AA	2.0"	(50.8)	1.0"	(25.4)	1.125"	28.57	1.0"	25.4	2.20"	55.83	1	3000
596-00039	TAG33T1-DTH	TAG33T1	EE	3.0"	(76.2)	2.0"	(50.8)	2.125"	53.97	2.0"	50.8	3.1"	78.74	1	1000
PAP - Non-Adhesive Cardstock															
596-00017	TAG74T2-PAP	TAG74T2	FF	1.75"	(44.45)	.375"	(9.53)	.562"	14.2	1.75"	44.45	3.5"	88.9	2	1000
596-00025	TAG82T2-PAP	TAG82T2	GG	2.0"	(50.8)	.396"	(10.05)	.562"	14.2	2.0"	50.8	4.05"	102.0	2	1000
596-00024	TAG85T1-PAP	TAG85T1	HH	3.0"	(76.2)	.50"	(12.7)	.60"	15.24	3.0"	76.2	3.2"	8.28	1	5000

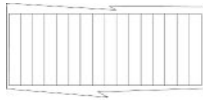
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

* Clear

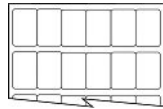
*** For use with DTH ribbons only!

Thermal Transfer Labels *continued*

(Not shown to scale)



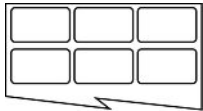
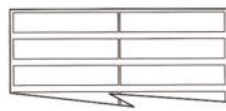
TYHCT-250

A

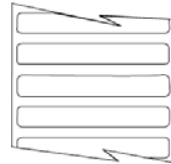
TAG21T6-250

BTAG11T4-250,
TAG11T4-822,
TAG11T4-822C**C**

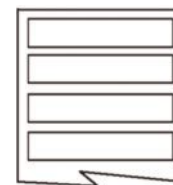
TAG28T4-250

DTAG15T3-DTH,
TAG15T3-795,
TAG15T3-822,
TAG15T3-822C10M
TAG15T3-250**E**

TAG35T2-250

F

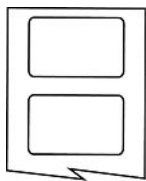
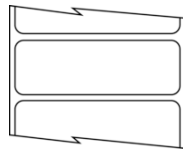
TAG96T1-336

G

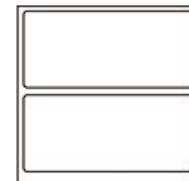
TAG69T1-336

H

TAG68T1-336

ITAG27T1-822,
TAG27T1-795,
TAG27T1-822C,
TAG27T2-DTH**J**TAG751-822
TAG75T1-795**K**

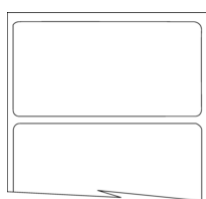
TAG76T1-795

LTAG72T1-795,
TAG72T1-822**M**

TAG78T1-795

N

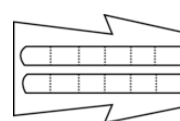
TAG80T1-795

O

TAG79T1-795

P

TAG70T12-822

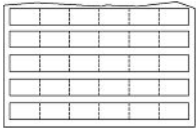
QTAGPP1T6-822,
TAGPP1T6-822C,
TAGPP1T6-82210M,
TAGPP1T6-822C10M**R**

TAG84T3-822

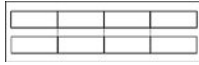
S

Thermal Transfer Labels *continued*

(Not shown to scale)



TAGPP2T6-822,
TAGPP2T6-822C
T



TAGPP3T4-822,
TAGPP3T4-822C
U



TAG13T4-822,
TAG13T4-900,
TAG13T4-DTH
V



TAG83T1-822
W



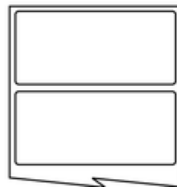
TAG81T8-822
X



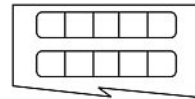
TAG16T3-DTH,
TAG16T3-822,
TAG16T3-900
Y



TAG17T2-822
Z



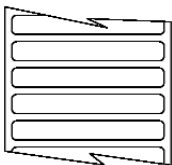
TAG73T1-822,
TAG73T1-DTH,
TAG73T1-795
AA



TAG71T5-822
BB



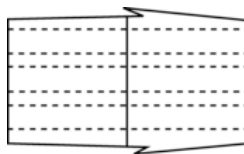
TAG82T2-822
CC



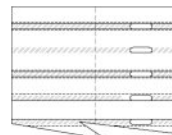
TAG99T1-DTH
DD



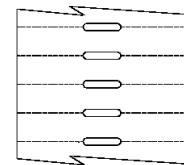
TAG33T1-DTH
EE



TAG74T2-PAP
FF



TAG82T2-PAP
GG



TAG85T1-PAP
HH

Foam Nameplate Labels

Foam nameplate labels are designed to replace plastic and metal engraved phenolic plates commonly found on control panels in many markets. The labels have a foam base so that they conform to textured surfaces, but still provide a perfectly flat printing surface that is resistant to chemicals, solvents, heat and UV exposure. HellermannTyton's foam nameplate labels include computer printable button labels that fit around the panel hole where the button is inserted. The foam nameplate labels can be printed on demand in any volume needed and any design can be printed on the labels using TagPrint® Pro labeling software and HellermannTyton thermal transfer printers.



Foam Nameplate Markers

Material Number:	518
Material:	Polyester
Foam:	Polyethylene
Adhesive:	Acrylic
Temperature Range:	-40°F (-40°C) to +176°F (+80°C) 2 year outdoor rated



Product Selection

Article No.	Part No.	Type	Width	Height	Hole Diameter	Color	Pkg. Qty
Foam Nameplates							
596-00500	596-00500	NPL27X13WH	1.06" (26.9mm)	.49" (12.4mm)	N/A	White	500
596-00503	596-00503	NPL27X13BK	1.06" (26.9mm)	.49" (12.4mm)	N/A	Black	500
596-00504	596-00504	NPL51X25WH	2" (50.8mm)	1" (25.4mm)	N/A	White	500
596-00507	596-00507	NPL51X25BK	2" (50.8mm)	1" (25.4mm)	N/A	Black	500
596-00417	596-00417	NPL76X101WH	3" (76.2mm)	4" (101.6mm)	N/A	White	150
Foam Button Nameplates							
596-00412	596-00412	NPLH31X31WH22.5	1.25" (31.7mm)	1.25" (31.7mm)	.88" (22.3mm)	White	250
596-00413	596-00413	NPLH31X31BK22.5	1.25" (31.7mm)	1.25" (31.7mm)	.88" (22.3mm)	Black	250
596-00414	596-00414	NPLH44X44WH30.5	1.75" (44.4mm)	1.75" (44.4mm)	1.2" (30.4mm)	White	250
596-00415	596-00415	NPLH44X44BK30.5	1.75" (44.4mm)	1.75" (44.4mm)	1.2" (30.4mm)	Black	250

Foam Nameplates



Foam Button Nameplates



Article No.	Part No.	Type	Description	Pkg. Qty
Colored Foam Button Nameplate Labels				
596-00405	596-00405	NPLH31X38YE22.5	1.2" x 1.5" Yellow button label with .88" (22.5mm) hole	500
596-00406	596-00406	NPLH31X38RD22.5	1.2" x 1.5" Red button label with .88" (22.5mm) hole	500
596-00407	596-00407	NPLH31X38BK22.5	1.2" x 1.5" Black button label with .88" (22.5mm) hole	500
596-00404	596-00404	NPLH31X38WH22.5	1.2" x 1.5" White button label with .88" (22.5mm) hole	500
596-00323	596-00323	NPLH31X38GN22.5	1.2" x 1.5" Green button label with .88" (22.5mm) hole	500
Emergency Stop Foam Nameplate Label				
596-00202	596-00202	NPL60X60YE	2.375" x 2.375" Yellow emergency stop label	100

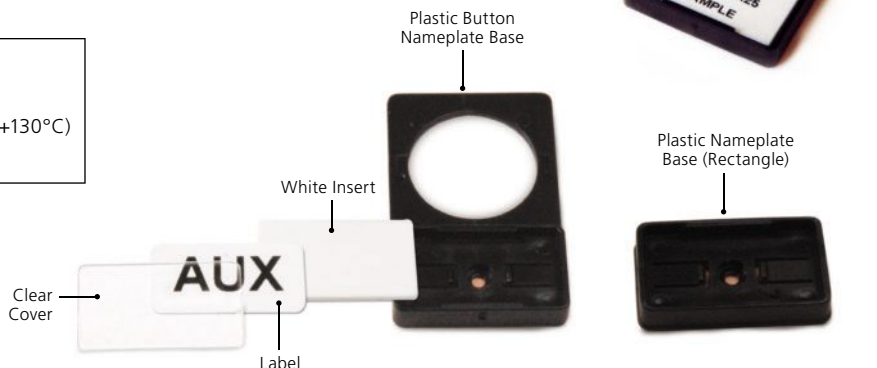
Use Part No. for ordering and Type for specification

Plastic Nameplate Markers

HellermannTyton plastic nameplate markers are made of polycarbonate that is rated to UL94VO. The plastic nameplate markers can be mechanically mounted and include a clear polycarbonate cover that protects the printed text. Both nameplate and button nameplate designs are available. Designed for long term durability, the plastic nameplate markers still allow individual customization, on demand, while providing the performance of an engraved plate. They are excellent for use on solar control panels, electrical boxes, inverters, or anything requiring long term identification.

Plastic Nameplates

Material:	Polycarbonate
Adhesive:	Acrylic
Temperature Range:	-22°F (30°C) to +266°F (+130°C)
Flammability:	UL94VO



Product Selection

Article No.	Part No.	Type	Width	Length	Description	Hole Diameter	Color	Pkg. Type	Pkg. Qty
Plastic Button Nameplate Bases									
596-00189	596-00189	PTSA-22	1.12" (28.4mm)	1.87" (47.4mm)	Button legend base WITH LOCATORS	.88" (22.3mm)	Black	Flat PKG	100
596-00190	596-00190	PTOA-22	1.12" (28.4mm)	1.87" (47.4mm)	Button legend base W/O LOCATORS	.88" (22.3mm)	Black	Flat PKG	100
White Inserts									
596-00418	596-00418	WPL15X27	1.06" (26.92mm)	.59" (14.9mm)	White insert for use in 596-00189, 596-00190 and 596-00191	N/A	White	Flat PKG	360
596-00419	596-00419	WPL15X49	1.92" (48.7mm)	.59" (14.9mm)	White insert for use in 596-00192	N/A	White	Flat PKG	180
596-00420	596-00420	WPL15X67	2.63" (66.8mm)	.59" (14.9mm)	White insert for use in 596-00193	N/A	Black	Flat PKG	90
Labels For Use On Inserts									
596-00184	596-00184	NPL25X13	1" (25.4mm)	.5" (12.7mm)	Label for use in 596-00418 insert	N/A	White	RL	500
596-00185	596-00185	NPL47X13	1.85" (46.9mm)	.5" (12.7mm)	Label for use in 596-00419 insert	N/A	White	RL	500
596-00183	596-00183	NPL63X13	2.5" (63.5mm)	.5" (12.7mm)	Label for use in 596-00420 insert	N/A	White	RL	500
Clear Covers									
596-00194	596-00194	TC15X27	1.06" (26.92mm)	.59" (14.9mm)	Clear cover for use with 596-00189, 596-00190 and 596-00191	N/A	Clear	Flat PKG	360
596-00195	596-00195	TC15X49	1.92" (48.7mm)	.59" (14.9mm)	Clear cover for use in 596-00192	N/A	Clear	Flat PKG	180
596-00196	596-00196	TC15X67	2.63" (66.8mm)	.59" (14.9mm)	Clear cover for use in 596-00193	N/A	Clear	Flat PKG	90
Plastic Nameplate Bases (Rectangle)									
596-00191	596-00191	LB15X27	1.06" (26.92mm)	.59" (14.9mm)	Black rectangle legend base	N/A	Black	Flat PKG	100
596-00192	596-00192	LB15X49	1.92" (48.7mm)	.59" (14.9mm)	Black rectangle legend base	N/A	Black	Flat PKG	100
596-00193	596-00193	LB15X67	2.63" (66.8mm)	.59" (14.9mm)	Black rectangle legend base	N/A	Black	Flat PKG	100

Use Part No. for ordering and Type for specification

Plastic nameplates are made to be assembled as kits. The black base should also include the white insert, a label for the insert and a clear cover to protect the printing. Each is sold separately. Please see descriptions of which parts are recommended to go with the basic Plastic button nameplate bases and or Plastic rectangular nameplate bases.

BASE + WHITE INSERT + LABEL (OPTIONAL*) + CLEAR COVER

*White inserts can also be directly printed using an ink jet plotter.

Continuous Vinyl Labels

HellermannTyton's continuous vinyl labels come in a variety of colors and printing widths. Designed to optimize unique and custom printing designs on demand, vinyl labels allow the maximum flexibility for printing unique sizes of labels. The vinyl has been tested for UV resistance up to ten years in outdoor applications and can be used to print warning labels, voltage markers, switch identifiers, and even pipe markers using TagPrint® Pro 3.0 labeling software and any HellermannTyton thermal transfer printing system.



Material Data

Material:	Vinyl
Adhesive:	Acrylic
Temperature Range:	-40°F to +180°F (-40°C to +82°C)
Liner:	10 Year Outdoor Rated

Product Selection

Article No.	Part No.	Type	Width	Length	Description	Color	Pkg. Type	Pkg. Qty
558-00309	558-00309	HT1WH250	1 (25.4)	250 (76)	1" White Vinyl Continuous Roll	White	RL	1
558-00313	558-00313	HT2WH250	2 (50.8)	250 (76)	2" White Vinyl Continuous Roll	White	RL	1
558-00345	558-00345	HT3WH250	3 (76.2)	250 (76)	3" White Vinyl Continuous Roll	White	RL	1
558-00350	558-00350	HT4WH250	4 (101.6)	250 (76)	4" White Vinyl Continuous Roll	White	RL	1
558-00310	558-00310	HT1YE250	1 (25.4)	250 (76)	1" Yellow Vinyl Continuous Roll	Yellow	RL	1
558-00314	558-00314	HT2YE250	2 (50.8)	250 (76)	2" Yellow Vinyl Continuous Roll	Yellow	RL	1
558-00346	558-00346	HT3YE250	3 (76.2)	250 (76)	3" Yellow Vinyl Continuous Roll	Yellow	RL	1
558-00308	558-00308	HT1RD250	1 (25.4)	250 (76)	1" Red Vinyl Continuous Roll	Red	RL	1
558-00312	558-00312	HT2RD250	2 (50.8)	250 (76)	2" Red Vinyl Continuous Roll	Red	RL	1
558-00006	558-00006	HT3RD250	3 (76.2)	250 (76)	3" Red Vinyl Continuous Roll	Red	RL	1
558-00370	558-00370	HT4RD250	4 (101.6)	250 (76)	4" Red Vinyl Continuous Roll	Red	RL	1
558-00307	558-00307	HT1BK250	1 (25.4)	250 (76)	1" Black Vinyl Continuous Roll	Black	RL	1
558-00311	558-00311	HT2BK250	2 (50.8)	250 (76)	2" Black Vinyl Continuous Roll	Black	RL	1
558-00374	558-00374	HT3BK250	3 (76.2)	250 (76)	3" Black Vinyl Continuous Roll	Black	RL	1
558-00336	558-00336	HT1OE250	1 (25.4)	250 (76)	1" Orange Vinyl Continuous Roll	Orange	RL	1
558-00337	558-00337	HT2OE250	2 (50.8)	250 (76)	2" Orange Vinyl Continuous Roll	Orange	RL	1
558-00338	558-00338	HT3OE250	3 (76.2)	250 (76)	3" Orange Vinyl Continuous Roll	Orange	RL	1
558-00339	558-00339	HT1BU250	1 (25.4)	250 (76)	1" Blue Vinyl Continuous Roll	Blue	RL	1
558-00341	558-00341	HT2BU250	2 (50.8)	250 (76)	2" Blue Vinyl Continuous Roll	Blue	RL	1
558-00343	558-00343	HT3BU250	3 (76.2)	250 (76)	3" Blue Vinyl Continuous Roll	Blue	RL	1
558-00340	558-00340	HT1GN250	1 (25.4)	250 (76)	1" Green Vinyl Continuous Roll	Green	RL	1
558-00342	558-00342	HT2GN250	2 (50.8)	250 (76)	2" Green Vinyl Continuous Roll	Green	RL	1
558-00344	558-00344	HT3GN250	3 (76.2)	250 (76)	3" Green Vinyl Continuous Roll	Green	RL	1
558-00351	558-00351	HT4GN250	4 (101.6)	250 (76)	4" Green Vinyl Continuous Roll	Green	RL	1

Use Part No. for ordering and Type for specification.

ShrinkTrak™ Heat Shrinkable Markers

HellermannTyton's ShrinkTrak™ heat shrinkable markers make it easy to mark wire, cable, and other components. These ladder-style markers are designed with side slits for easier application. All ShrinkTrak® markers are military specified. They also reduce printer jams with their efficient and high performance design. For seamless labeling, ShrinkTrak™ can be printed using HellermannTyton's TagPrint® Pro professional label creation software, thermal transfer printers and ribbons to create a permanent and solvent resistant print when shrunk and applied.

Versatile

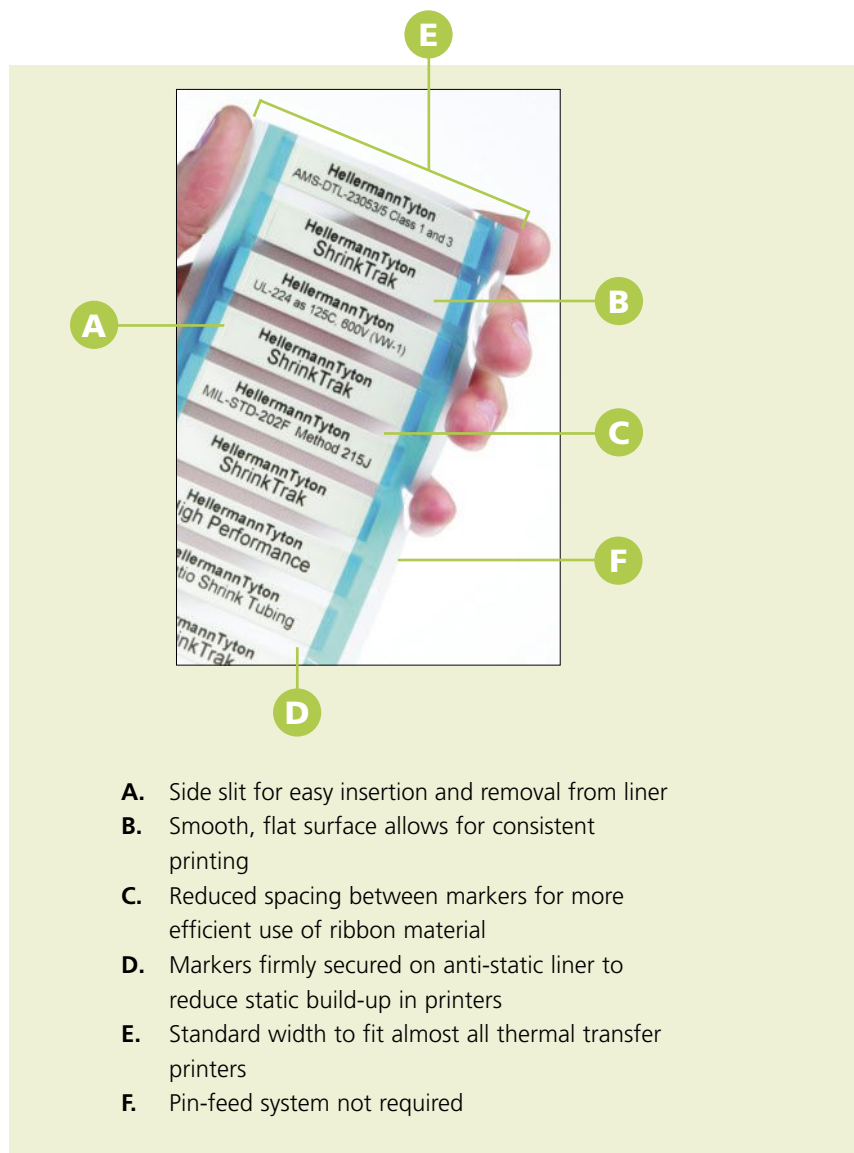
- Flexible, flame retardant, heat shrinkable polyolefin tubing meets all military specifications
- 3:1 shrink ratio
- Standard colors - yellow, white and black
- Larger packaging options result in less box changes

High Performance Design

- Center slit versions reduce or eliminate hand cutting
- Non-slip, printable liner allows additional marker data to be printed on the reverse side for records and placement instructions
- Utilize HellermannTyton's Durattach ribbon system for the highest print performance on the market

Reduce Printer Jams

- Markers dispense directly into HellermannTyton thermal transfer printers with custom box opening
- Dispense markers faster and easier with waxed core dispenser



- A. Side slit for easy insertion and removal from liner
- B. Smooth, flat surface allows for consistent printing
- C. Reduced spacing between markers for more efficient use of ribbon material
- D. Markers firmly secured on anti-static liner to reduce static build-up in printers
- E. Standard width to fit almost all thermal transfer printers
- F. Pin-feed system not required

Ease of Use - Step by Step Guide



Step 1
Print with thermal transfer printer



Step 2
Bend liner at side slit



Step 3
Insert wire into marker



Step 4
Pull-up on wire - the marker will pull away from liner



ShrinkTrak Applied!

ShrinkTrak™ Heat Shrinkable Markers *continued*

Material Data	
Material	Polyolefin, cross-linked (POX)
Product Thickness	3 mil total thickness
Shrink Temperature (nominal)	+194 °F (+90 °C)
Operating Temperature	-67 °F to +275 °F (-55 °C to +135 °C)
Flame Retardant	Yes
Flammability	UL224 VW1
Flexibility	flexible
Abrasion Resistance	Good
Solvent Resistance	Good
Standard Colors	White, Yellow & Black
*For other colors, contact HellermannTyton	
UL Rating	Meets UL-224 as +257 °F (+125 °C), 600V (VW-1)
Certification	AMS-DTL-23053/5 Class 1 and 3, SAE-AS81531, MIL-STD-202G Method 215K



Recommended Thermal Transfer Ribbons

TT230SM Printer

TTDTHOUTSM

T822OUTSM

TTHSTOUTSM

TT900OUTSM

TTM430/TTM460

or other thermal transfer printers

TTDTHOUT

TT822OUT

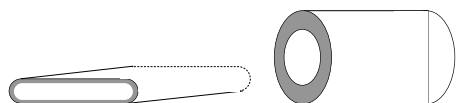
TTHSTOUT

TT900OUT



ShrinkTrak Specifications

Diameter Size	0.125"	0.187"	0.25"	0.375"	0.50"	0.75"	1.0"
Wire Size Range (AWG/MCM)	18-22 (.044 - 1)	12-18 (.063 - .17)	10-16 (.083 - .230)	8-14 (.122 - .340)	2-10 (.166 - .470)	6-0000 (.25 - .725)	1-400 (.330 - .876)
Inside Diameter as Supplied In. (mm)*	0.118 +/- 0.024 (3.0 +/- 0.6)	0.177 +/- 0.032 (4.5 +/- 0.8)	0.236 +/- 0.040 (6.0 +/- 1.0)	0.354 +/- 0.040 (9.0 +/- 1.0)	0.470 +/- 0.024 (12.0 +/- 1.0)	0.732 +/- 0.040 (18.6 +/- 1.0)	1.024 +/- 0.040 (26.0 +/- 1.0)
Inside Diameter After Recovery In. (mm)	0.043 (1.0)	0.063 (1.6)	0.083 (2.1)	0.122 (3.1)	0.166 (4.2)	0.25 (6.35)	0.33 (8.3)
Wall Thickness After Recovery In. (mm)	0.0209 +/- 0.004 (.53 +/- 0.10)	0.026 +/- 0.004 (.65 +/- 0.10)	0.028 +/- 0.004 (.71 +/- 0.10)	0.031 +/- 0.006 (0.78 +/- 0.15)	0.033 +/- 0.006 (0.83 +/- 0.15)	0.036 +/- 0.006 (0.91 +/- 0.15)	0.039 +/- 0.006 (.99 +/- 1.6)
Overall Width In. (mm)	0.209 +/- 0.040 (5.3 +/- 1.0)	0.303 +/- 0.052 (7.7 +/- 1.3)	0.398 +/- 0.063 (10.1 +/- 1.6)	0.587 +/- 0.063 (14.9 +/- 1.6)	0.776 +/- 0.063 (19.7 +/- 1.6)	1.21 +/- 0.063 (30.8 +/- 1.6)	1.63 +/- 0.063 (41.38 +/- 1.6)
Overall Height In. (mm)	0.020 (0.508)	0.020 (0.508)	0.020 (0.508)	0.022 (0.558)	0.023 (0.582)	0.025 (0.63)	0.03 (0.76)
Dimensional Reference (if the wire or cable diameter is less than or equal to)							

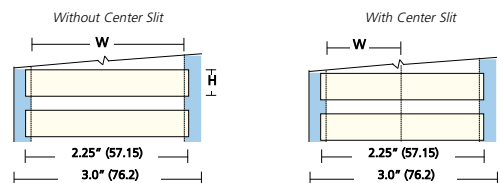


*As supplied

**Recovered

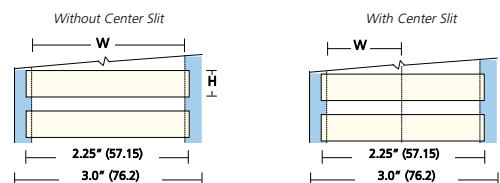
* Contact HellermannTyton for custom color options.

** Meets printer performance requirements of SAE-AS81531 using the ribbons listed above in any thermal transfer printer, including HellermannTyton's TT320SM and TT1210

ShrinkTrak Heat Shrinkable Markers *continued*

Product Selection										
Article No.	Part No.	Type	Cross Ref to Former Part No.	Color	Center Slit	Width (W)		Height (H)		Pkg. Qty.
						In.	(mm.)	In.	(mm.)	
0.125" (3.17mm) - Outside Diameter										
553-50001	553-50001	HST3-1BK	THS-610BM	Black	-	1.9"	(48.26)	.235"	(5.97)	250
553-50002	553-50002	HST3-1WH	THS-610W	White	-	1.9"	(48.26)	1.90"	(48)	250
553-50003	553-50003	HST3-1WH	THS-610W10C	White	-	1.9"	(48.26)	1.90"	(48)	1000
553-50078	553-50078	HST3-1WH	THS-610W25C	White	-	1.9"	(48.26)	.235"	(5.97)	2500
553-50004	553-50004	HST3-1WH-S	THS-610WP	White	Single	.95"	(24.1)	.235"	(5.97)	500
553-50074	553-50074	HST3-1WH-S	THS-610WP10C	White	Single	.95"	(24.1)	.235"	(5.97)	2000
553-50067	553-50067	HST3-1WH-S	THS-610WP25C	White	Single	.95"	(24.1)	.235"	(5.97)	5000
553-50070	553-50070	HST3-1WH-2S	THS-610W2P	White	Double	.63"	(16.08)	.235"	(5.97)	750
553-50075	553-50075	HST3-1WH-2S	THS-610W2P10C	White	Double	.63"	(16.08)	.235"	(5.97)	3000
553-50063	553-50063	HST3-1WH-3S	THS-610W3P	White	Triple	.475"	(12.07)	.235"	(5.97)	1000
553-50088	553-50088	HST3-1WH-3S	THS-610W3P10C	White	Triple	.475"	(12.07)	.475"	(12)	4000
553-50006	553-50006	HST3-1YE	THS-610Y10C	Yellow	-	1.9"	(48.26)	.235"	(5.97)	1000
553-50005	553-50005	HST3-1YE	THS-610Y	Yellow	-	1.9"	(48.26)	.235"	(5.97)	250
553-50007	553-50007	HST3-1YE-S	THS-610YP	Yellow	Single	.95"	(24.1)	.235"	(5.97)	500
553-50076	553-50076	HST3-1YE-S	THS-610YP10C	Yellow	Single	.95"	(24.1)	.235"	(5.97)	2000
553-50071	553-50071	HST3-1YE-2S	THS-610Y2P	Yellow	Double	.63"	(16.08)	.235"	(5.97)	750
553-50077	553-50077	HST3-1YE-2S	THS-610Y2P10C	Yellow	Double	.63"	(16.08)	.235"	(5.97)	3000
0.187" (4.74 mm) - Outside Diameter										
553-50008	553-50008	HST4.8-1.6BK	THS-615BM	Black	-	1.9"	(48.26)	.312"	(7.92)	250
553-50009	553-50009	HST4.8-1.6WH	THS-615W	White	-	1.9"	(48.26)	.312"	(7.92)	250
553-50010	553-50010	HST4.8-1.6WH	THS-615W10C	White	-	1.9"	(48.26)	.312"	(7.92)	1000
553-50177	553-50177	HST4.8-1.6WH	THS-615W30C	White	-	1.9"	(48.26)	.312"	(7.92)	3000
553-50079	553-50079	HST4.8-1.6WH	THS-615W50C	White	-	1.9"	(48.26)	.312"	(7.92)	5000
553-50011	553-50011	HST4.8-1.6WH-S	THS-615WP	White	Single	.95"	(24.1)	.312"	(7.92)	500
553-50080	553-50080	HST4.8-1.6WH-S	THS-615WP10C	White	Single	.95"	(24.1)	.312"	(7.92)	2000
553-50068	553-50068	HST4.8-1.6WH-2S	THS-615W2P	White	Double	.633"	(16.08)	.312"	(7.92)	750
553-50072	553-50072	HST4.8-1.6WH-2S	THS-615W2P10C	White	Double	.633"	(16.08)	.312"	(7.92)	3000
553-50064	553-50064	HST4.8-1.6WH-3S	THS-615W3P	White	Triple	.475"	(12.07)	.312"	(7.92)	1000
553-50081	553-50081	HST4.8-1.6WH-3S	THS-615W3P10C	White	Triple	.475"	(12.07)	.312"	(7.92)	4000
553-50013	553-50013	HST4.8-1.6YE	THS-615Y10C	Yellow	-	1.9"	(48.26)	.312"	(7.92)	1000
553-50012	553-50012	HST4.8-1.6YE	THS-615Y	Yellow	-	1.9"	(48.26)	.312"	(7.92)	250
553-50014	553-50014	HST4.8-1.6YE-S	THS-615YP	Yellow	Single	.95"	(24.1)	.312"	(7.92)	500
553-50069	553-50069	HST4.8-1.6YE-2S	THS-615Y2P	Yellow	Double	.633"	(16.08)	.312"	(7.92)	750
553-50073	553-50073	HST4.8-1.6YE-2S	THS-615Y2P10C	Yellow	Double	.633"	(16.08)	.312"	(7.92)	3000
553-50176	553-50176	HST4.8-1.6WH-S	THS-615Y2P10C	White	Double	.633"	(16.08)	.312"	(7.92)	3000
0.25" (6.35mm) - Outside Diameter										
553-50015	553-50015	HST6-2BK	THS-620BM	Black	-	1.9"	(48.26)	.420"	(10.67)	250
553-50016	553-50016	HST6-2WH	THS-620W	White	-	1.9"	(48.26)	.420"	(10.67)	250
553-50017	553-50017	HST6-2WH	THS-620W10C	White	-	1.9"	(48.26)	.420"	(10.67)	1000
553-50018	553-50018	HST6-2WH	THS-620W50C	White	-	1.9"	(48.26)	.420"	(10.67)	5000
553-50019	553-50019	HST6-2WHC	THS-620WP	White	Single	.95"	(24.1)	.420"	(10.67)	500
553-50020	553-50020	HST6-2YE-S	THS-620YP10C	Yellow	-	1.9"	(48.26)	.420"	(10.67)	2000
553-50021	553-50021	HTS6-2YE-2S	THS-620Y2P	Yellow	-	1.9"	(48.26)	.420"	(10.67)	1000
553-50022	553-50022	HST6-2YE-S	THS-620Y3P	Yellow	Single	.95"	(24.1)	.420"	(10.67)	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

ShrinkTrak Heat Shrinkable Markers *continued*

Product Selection								
Article No.	Part No.	Type	Cross Ref to Former Part No.	Color	Center Slit	Width (W) In. (mm.)	Height (H) In. (mm.)	Pkg. Qty.
0.25" (6.35mm) - Outside Diameter (continued)								
553-50082	553-50082	HST6-2WH-2S	THS-620W2P	White	Double	.633" (16.08)	.420" (10.67)	750
553-50083	553-50083	HST6-2YE-2S	THS-620Y2P	Yellow	Double	.633" (16.08)	.420" (10.67)	750
553-50084	553-50084	HST6-2WH-S	THS-620WP10C	White	Single	.95" (24.1)	.420" (10.67)	2000
553-50085	553-50085	HST6-2YE-S	THS-620YP10C	Yellow	Single	.95" (24.1)	.420" (10.67)	2000
553-50089	553-50089	HST6-2WH-3S	THS-620W3P10C	White	Triple	.475" (12.07)	.420" (10.67)	4000
0.375" (9.52 mm) - Outside Diameter								
553-50023	553-50023	HST9-3BK	THS-625BM	Black	-	1.9" (48.26)	.597" (15.16)	250
553-50024	553-50024	HST9-3WH	THS-625W	White	-	1.9" (48.26)	.597" (15.16)	250
553-50025	553-50025	HST9-3WH-S	THS-625WP	White	Single	.95" (24.1)	.597" (15.16)	500
553-50066	553-50066	HST9-3WH-3S	THS-625W3P	White	Triple	.475" (12.07)	.597" (15.16)	1000
553-50026	553-50026	HST9-3YE	THS-625Y	Yellow	-	1.9" (48.26)	.597" (15.16)	250
553-50027	553-50027	HST9-3YE-S	THS-625YP	Yellow	Single	.95" (24.1)	.597" (15.16)	500
553-50192	553-50192	HST9-3WH	THS-625W10C	White	-	1.9" (48.26)	.597" (15.16)	1000
0.50" (12.7 mm) - Outside Diameter								
553-50028	553-50028	HST12-4BK	THS-630BM	Black	-	1.9" (48.26)	.77" (19.55)	250
553-50029	553-50029	HST12-4WH	THS-630W	White	-	1.9" (48.26)	.77" (19.55)	250
553-50030	553-50030	HST12-4WH-S	THS-630WP	White	Single	.95" (24.1)	.77" (19.55)	500
553-50086	553-50086	HST12-4WH-3S	THS-630W3P	White	Triple	.475" (12.07)	.77" (19.55)	1000
553-50031	553-50031	HST12-4YE	THS-630Y	Yellow	-	1.9" (48.26)	.77" (19.55)	250
553-50032	553-50032	HST12-4YE-S	THS-630YP	Yellow	Single	.95" (24.1)	.77" (19.55)	500
553-50087	553-50087	HST12-4YE-3S	THS-630Y3P	Yellow	Triple	.475" (12.07)	.77" (19.55)	1000
553-50231	553-50231	HST12-4WH	THS-630W10C	White	-	1.9" (48.26)	.77" (19.55)	1000
553-50232	553-50232	HST12-4WH-S	THS-630WP10C	White	Single	.95" (24.1)	.77" (19.55)	2000
0.75" (19.05 mm) - Outside Diameter								
553-50033	553-50033	HST18-6BK	THS-635BM	Black	-	1.9" (48.26)	1.2" (30.48)	250
553-50034	553-50034	HST18-6WH	THS-635W	White	-	1.9" (48.26)	1.2" (30.48)	250
553-50035	553-50035	HST18-6WH-S	THS-635WP	White	Single	.95" (24.1)	1.2" (30.48)	500
553-50036	553-50036	HST18-6YE	THS-635Y	Yellow	-	1.9" (48.26)	1.2" (30.48)	250
553-50037	553-50037	HST18-6YE-S	THS-635YP	Yellow	Single	.95" (24.1)	1.2" (30.48)	500
553-50233	553-50233	HST18-6WH	THS-635W10C	White	-	1.9" (48.26)	1.2" (30.48)	1000
553-50234	553-50234	HST18-6WH-S	THS-635WP10C	White	Single	.95" (24.1)	1.2" (30.48)	2000
1.0" (25.4mm) - Outside Diameter								
553-50038	553-50038	HST24-8BK	THS-640BM	Black	-	1.9" (48.26)	1.69" (42.93)	250
553-50039	553-50039	HST24-8WH	THS-640W	White	-	1.9" (48.26)	1.69" (42.93)	250
553-50040	553-50040	HST24-8WH-S	THS-640WP	White	Single	.95" (24.1)	1.69" (42.93)	500
553-50041	553-50041	HST24-8YE	THS-640Y	Yellow	-	1.9" (48.26)	1.69" (42.93)	250
553-50042	553-50042	HST24-8YE-S	THS-640YP	Yellow	Single	.95" (24.1)	1.69" (42.93)	500
1.5" (38.1mm) - Outside Diameter								
553-50226	553-50226	HFST39-13WH-S	THS-645WP	White	Single	.95" (24.13)	2.26" (57.40)	300
553-50209	553-50209	HST39-13WH	THS-645W	White	-	1.9" (48.26)	2.26" (57.40)	150
553-50225	553-50225	HFST39-13YE	THS-645Y	Yellow	-	1.9" (48.26)	2.26" (57.40)	150
553-50227	553-50227	HFST39-13YE-S	THS-645YP	Yellow	Single	.95" (24.13)	2.26" (57.40)	300

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

TipTags Cable Markers

HellermannTyton's TipTags are non-adhesive, cross laminated polyolefin tags with die cut cable tie slots for mechanical fastening. These cable markers are designed to mark wire bundles or large cables. TipTags are ideal for applications where exceptional print performance and long term service life are critical. TipTags consist of a thin, strong material which allows the tags to be lightweight, very strong, tear resistant, and work well in thermal transfer printers.



- Thermal transfer printable for high print contrast
- Halogen free for low smoke and low fire hazard applications
- White front and yellow back for versatility
- Superior strength and tear resistance for long lasting identification
- Pre-cut slots to secure the TipTag using HellermannTyton cable ties
- Printable on both sides
- Printable with Durattach ribbon on white side for the most durable mark in the industry
- Pre-cut sensor slot which ensures the markers will work in any thermal transfer printer
- Perforated in a bandolier for easy knitting and access to individual markers
- Thin profile to take up less space and eliminate any chance of the marker damaging wire insulation
- Lightweight design for applications that require long-term fuel and weight considerations

Material: Polyolefin cross laminated with clear polyester laminate
 Polyolefin base: 6.5 mil
 Clear polyester laminate: 1.0 mil

Properties: Halogen-free (low smoke and low fire hazard)
 Superior print performance, especially with Durattach ribbons
 Unaffected by most chemicals
 Wide service temperature range
 Non-toxic, odorless, and can be recycled or incinerated

Service Temperature Range: -58°F to +221°F (-50°F to +105°C)
 Can withstand spikes up to 135°C (275°F) for short periods of time

Approvals: SAE-AS81531 and Mil-Std 202G, Method 215J



TipTags Cable Markers *continued*

Material Data	
Material	Polyolefin, cross laminated
Operating Temperature	-58 °F to +221 °F (-50 °C to +105 °C) continuous
Certification	Meets SAE-AS81531, Mil-Std 202G Method 215J, and BS 4G 198-3, Type 11a



Product Selection							
Article No.	Part No.	Type	Marker Size		Printable Area		Pkg. Qty.
			in.	(mm)	in.	(mm)	
556-26008	556-26008	TIPTAGVA15X65YEW	2.59" X .68"	(65 X 17.4)	2.58" X .59"	(65 X 15)	500
556-26006	556-26006	TIPTAGVA10X65YEW	2.59" X .50"	(65 X 12.7)	2.58" X .39"	(65 X 10)	500
556-26007	556-26007	TIPTAGVA10X90YEW	3.54" X .50"	(90 X 12.7)	3.54" X .40"	(90 X 10)	500
556-26009	556-26009	TIPTAGVA15X90YEW	3.54" X .68"	(90 X 17.4)	3.54" X .59"	(90 X 15)	500

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

T18 - T30 Series Cable Ties Natural and Black

Most popular cable ties for use with TipTags.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °F to +185 °F (-40 °C to +85 °C) continuous



File# E64139

File# E64139

Product Selection				File# E64139							File# E64139		
Article No.	Part No.	Type	US Gov. Designation	Min. Tensile Strength		Length (L)		Max. Ø Bundle		Width (W)		Color	Pkg. Qty.
				lbs.	(N)	in.	(mm)	in.	(mm)	in.	(mm)		
111-02809	T18S9M4	T18S	-	18 lbs	(80)	3.27"	(83)	.63"	(16)	.09"	(2.3)	Natural	1000
111-02811	T18S0M4	T18S	-	18 lbs	(80)	3.27"	(83)	.63"	(16)	.09"	(2.3)	Black	1000
111-01872	T18R9M4	T18R	MS3367-4-9	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Natural	1000
111-01841	T18R0M4	T18R	*	18 lbs	(80)	4"	(100)	.87"	(22)	.10"	(2.5)	Black	1000
111-02322	T18I9M4	T18I	—	18 lbs	(80)	5.51"	(140)	1.38"	(35)	.10"	(2.5)	Natural	1000
111-02315	T18I0M4	T18I	—	18 lbs	(80)	5.51"	(140)	1.38"	(35)	.10"	(2.5)	Black	1000
111-02026	T18L9M4	T18L	—	18 lbs	(80)	8.0"	(205)	2.17"	(55)	.10"	(2.5)	Natural	1000
111-02015	T18L0M4	T18L	—	18 lbs	(80)	8.0"	(205)	2.17"	(55)	.10"	(2.5)	Black	1000
111-03047	T30R9M4	T30R	MS3367-5-9	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Natural	1000
111-03034	T30R0M4	T30R	*	30 lbs	(135)	5.9"	(150)	1.38"	(35)	.14"	(3.5)	Black	1000
111-03327	T30L9M4	T30L	—	30 lbs	(135)	7.48"	(190)	1.97"	(50)	.14"	(3.5)	Natural	1000
111-03315	T30L0M4	T30L	—	30 lbs	(135)	7.48"	(190)	1.97"	(50)	.14"	(3.5)	Black	1000
111-03517	T30LL9M4	T30LL	—	30 lbs	(135)	11.42"	(290)	3.15"	(80)	.14"	(3.5)	Natural	1000
111-03511	T30LL0M4	T30LL	—	30 lbs	(135)	11.42"	(290)	3.15"	(80)	.14"	(3.5)	Black	1000
111-02907	T30XL9M4	T30XL	-	30 lbs	(135)	14.37"	(365)	4.13"	(105)	.14"	(3.5)	Natural	1000
111-02903	T30XL0M4	T30XL	-	30 lbs	(135)	14.37"	(365)	4.13"	(105)	.14"	(3.5)	Black	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

* Military black available. Contact HellermannTyton for more information.

Laser Tag Label Materials

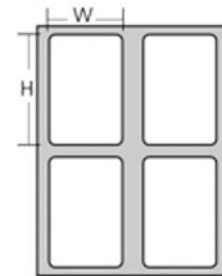
Laser Tags are durable, laser printable labels for applications requiring clear, crisp legibility. The labels come on 8.5" x 11" sheets and are printable using HellermannTyton TagPrint® Pro software and a standard laser printer. Specially designed adhesives and materials are used for the Laser Tags, ensuring that the labels will not curl, change color, or jam laser printers. Laser Tags are available in die-cut on 8-1/2" x 11" polyester sheets.



Label Material	105 Material 	788 Material 	788C Material 	789 Material 
Material Name	Self-Laminating Laser Polyester	White Laser Polyester	Clear Laser Polyester	White Laser Polyester
Printer	Laser	Laser	Laser	Laser
Topcoat	Specially formulated for superb ink anchorage	Specially formulated for superb toner anchorage for most laser printers	Specially formulated for superb toner anchorage for most laser printers	Specially formulated for superb ink anchorage
Liner	82#	68#	68#	90#
Temperature Range	-40°F to +300°F (-40°C to +149°C)	-40°F to +194°F (-40°C to +92°C)	-40°F to +194°F (-40°C to +92°C)	-40°F to +300°F (-40°C to +149°C)
Adhesive Type	Permanent pressure-sensitive acrylic	Permanent pressure-sensitive acrylic	Permanent pressure-sensitive acrylic	Permanent pressure-sensitive acrylic
Application	Excellent for on-the-job wire marking. Ideal for flat ribbon cable, machine tool, and underground wiring. Smallest diameter is 0.15"	Excellent for general purpose component or panel marking. Bar code printable.	Excellent for general purpose component or panel marking. Bar code printable.	For flat labeling applications that require solvent or high temperature resistance. Bar code printable. Can be used to mark electronics and printed circuit boards.
Certifications				
Outdoor Durability	N/A	1 year	1 year	2 years
Chemical Resistance	Good for most petroleum based solvents and lower aliphatic alcohols. Not good for most esters and ketones. Water resistant.	Applied labels will be resistant to water, mild acids, alkalis, salts and most petroleum-based solvents, oils, greases, aliphatic solvents such as kerosene, keptane and reference fuel	Applied labels will be resistant to water, mild acids, alkalis, salts and most petroleum-based solvents, oils, greases, aliphatic solvents such as kerosene, keptane and reference fuel	Applied labels will be resistant to water, mild acids, alkalis, salts and most petroleum based solvents, oils, greases, aliphatic solvent such as kerosene, keptane and reference fuel

Laser Tag Labels

HellermannTyton's Laser Tag labels are used for component marking.



Product Selection

Product Selection											
Article No.	Part No.	Type	Drawing Reference	Width (W)		Height (H)		Labels per Row	Labels per Column	Labels per Sheet	Pkg. Qty.
			(pages 213-214)	In.	(mm.)	In.	(mm.)				
788 Material											
594-01788	TAGPP1-788	TAGPP1	A	1.5"	(15.87)	.37"	(7.87)	12	30	360	1000
594-00001	TAGPP2-788	TAGPP2	B	.66"	(16.7)	.33"	(8.38)	12	30	360	1000
594-62788	TAG62L-788	TAG62L	C	1.50"	(31.75)	.37"	(9.52)	5	25	125	1000
594-61788	TAG61L-788	TAG61L	D	2.62"	(66.67)	1.0"	(25.4)	3	10	30	7500
594-60788	TAG60L-788	TAG60L	E	2.83"	(71.88)	1.5"	(38.1)	3	7	21	5250
594-59788	TAG59L-788	TAG59L	F	4.0"	(101.60)	1.5"	(38.1)	2	7	14	3500
594-58788	TAG58L-788	TAG58L	G	4.0"	(101.60)	2.0"	(50.8)	2	5	10	2500
594-56788	TAG56L-788	TAG56L	H	4.0"	(101.60)	3.33"	(84.5)	2	3	6	1500
594-57788	TAG57L-788	TAG57L	I	4.25"	(107.90)	2.75"	(69.8)	2	4	8	2000
594-55788	TAG55L-788	TAG55L	J	4.25"	(107.90)	5.5"	(139.70)	2	2	4	1000
594-54788	TAG54L-788	TAG54L	K	8.5"	(215.90)	5.5"	(139.70)	1	2	2	500
594-53788	TAG53L-788	TAG53L	L	8.5"	(215.90)	10.81"	(274.6)	1	1	1	250
788C Material											
594-02788	TAGPP1-788C	TAGPP1	A	.625"	(15.87)	.333"	(7.87)	12	30	360	1000
594-00002	TAGPP2-788C	TAGPP2	B	.66"	(16.7)	.33"	(8.38)	12	30	360	1000
789 Material											
594-11789	TAG11L-789	TAG11L	M	.65"	(16.50)	.20"	(5.08)	10	48	480	5000
594-13789	TAG13L-789	TAG13L	N	.75"	(19.00)	.25"	(6.35)	8	39	312	5000
594-14789	TAG14L-789	TAG14L	O	1.0"	(25.40)	.375"	(9.52)	7	25	175	5000
594-15789	TAG15L-789	TAG15L	P	1.0"	(25.40)	.5"	(12.70)	7	19	133	5000
594-96789	TAG96L-789	TAG96L	Q	1.875"	(47.62)	.25"	(6.35)	4	36	144	1000
594-69789	TAG69L-789	TAG69L	R	2.0"	(50.8)	.275"	(6.98)	4	35	140	5000
594-67789	TAG67L-789	TAG67L	S	2.87"	(73)	.375"	(9.52)	2	25	50	1000
594-66789	TAG66L-789	TAG66L	T	3.59"	(91.4)	.375"	(9.52)	2	25	50	1000
594-68789	TAG68L-789	TAG68L	U	3.8"	(96.5)	.275"	(6.98)	2	35	70	2500
594-45789	TAG45L-789	TAG45L	V	4.0"	(101.60)	.80"	(20.32)	2	12	24	5000
Cardstock Material											
593-00001	TAGPHONE	TAGPHONE	W	1.75"	(44.45)	.375"	(9.52)	4	21	84	1000

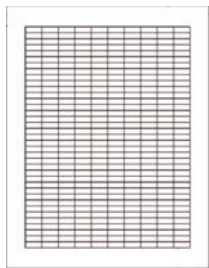
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Laser Tag Labels *continued*

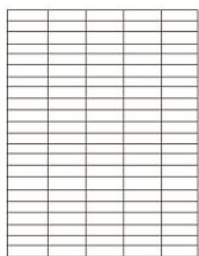
(Not shown to scale)



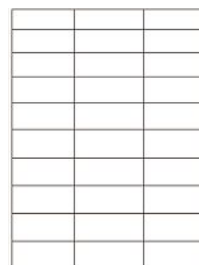
*TAGPP1-788,
TAGPP1-788C*
A



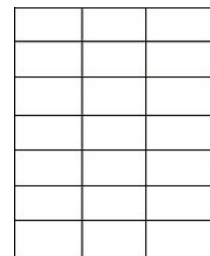
*TAGPP2-788,
TAGPP2-788C*
B



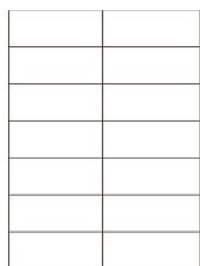
TAG62L-788
C



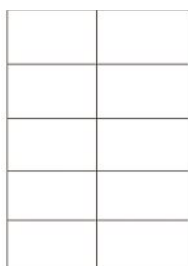
TAG61L-788
D



TAG60L-788
E



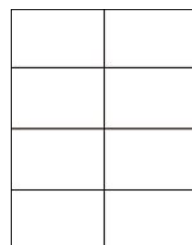
TAG59L-799
F



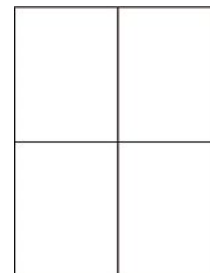
TAG58L-788
G



TAG56L-788
H



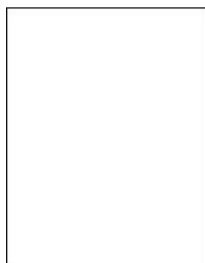
TAG57L-788
I



TAG55L-788
J



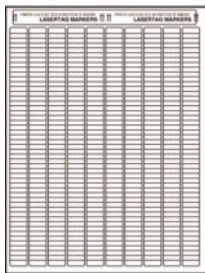
TAG54L-788
K



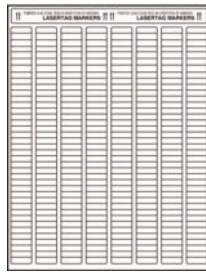
TAG53L-788
L

Laser Tag Labels *continued*

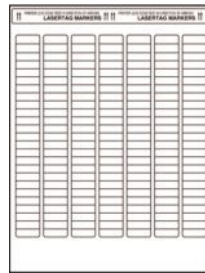
(Not shown to scale)



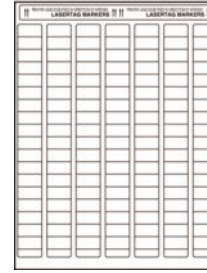
TAG11L-789
M



TAG13L-789
N



TAG14L-789
O



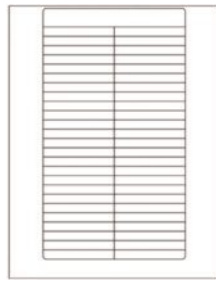
TAG15L-789
P



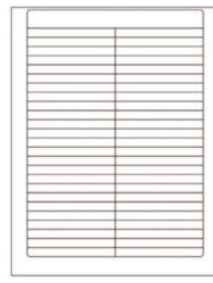
TAG96L-789
Q



TAG69L-789
R



TAG67L-789
S



TAG66L-789
T



TAG68L-789
U



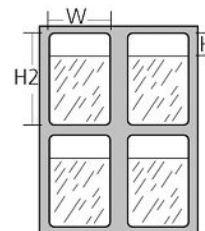
TAG45L-789
V



TAGPHONE
W

Self-Laminating Laser Tags

HellermannTyton self-laminating Laser Tags are durable, yet conformable to compound surfaces like wires and cables. These labels can be wrapped onto wires without fear of flagging or popping off the wires. The clear overlap protects printed information. Self-laminating Laser Tags are made of 1.0 MIL polyester (105 material).



Product Selection

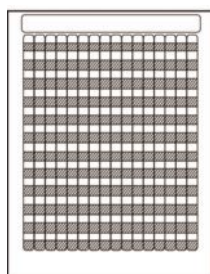
Product Selection

Article No.	Part No.	Type	Drawing References	Width (W)		Height of Printable Area (H)		Height of Label (H2)		Labels per Row	Labels per Column	Labels per Sheet	Pkg. Qty.
			(page 216)	In.	(mm.)	In.	(mm.)	In.	(mm.)				
105 Material													
594-26105	TAG26L-105	TAG26L	A	.5"	(12.70)	.375"	(9.5)	.75"	(19.0)	16	16	156	5000
594-02105	TAG2L-105	TAG2L	B	.5"	(12.70)	.5"	(12.7)	1.43"	(36.5)	16	7	112	5000
594-05105	TAG5L-105	TAG5L	C	.8"	(20.30)	.5"	(12.7)	1.43"	(36.4)	8	7	56	5000
594-65105	TAG65L-105	TAG65L	D	.81"	(20.70)	.81"	(20.7)	2.13"	(53.9)	9	4	36	1000
594-51105	TAG51L-105	TAG51L	E	1.0"	(25.40)	.35"	(8.89)	.75"	(19.0)	8	12	84	5000
594-49105	TAG49L-105	TAG49L	F	1.0"	(25.40)	.35"	(8.8)	1.0"	(25.5)	8	8	70	2500
594-63105	TAG63L-105	TAG63L	G	1.0"	(25.40)	.5"	(12.7)	1.33"	(33.78)	8	7	49	2500
594-09105	TAG9L-105	TAG9L	H	1.0"	(25.40)	.75"	(19.00)	2.25"	(57.1)	7	4	28	1000
594-50105	TAG50L-105	TAG50L	I	1.0"	(25.40)	1.0"	(25.4)	3.16"	(80.4)	8	3	21	1000
594-64105	TAG64L-105	TAG64L	J	1.17"	(29.6)	.83"	(21.08)	3.33"	(84.6)	6	3	18	1000
594-01105	TAG1L-105	TAG1L	K	1.9"	(48.20)	.75"	(19.0)	3.25"	(82.5)	4	3	12	1000
594-52105	TAG52L-105	TAG52L	L	2.0"	(50.80)	.47"	(33.70)	1.33"	(33.7)	3	7	21	1000
594-10105	TAG10L-105	TAG10L	M	2.0"	(50.8)	.75"	(19.1)	2.25"	(57.2)	4	4	16	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

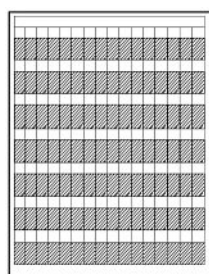
Self-Laminating Laser Tags *continued*

(Not shown to scale)



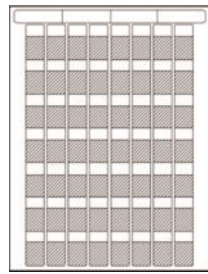
TAG26L-105

A



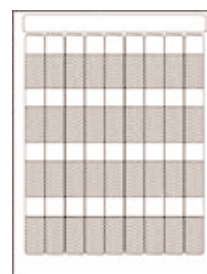
TAG2L-105

B



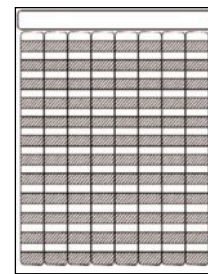
TAG5L-105

C



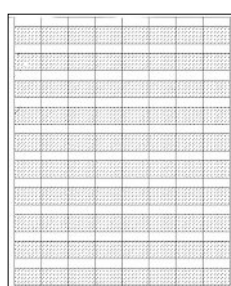
TAG65L-105

D



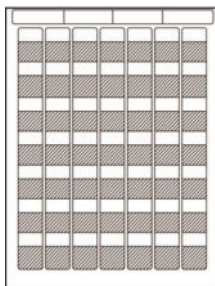
TAG51L-105

E



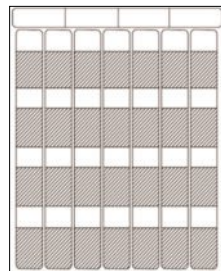
TAG49L-105

F



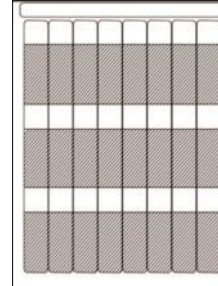
TAG63L-105

G



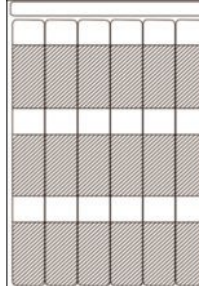
TAG9L-105

H



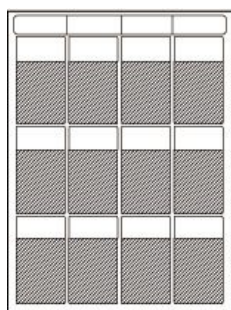
TAG50L-105

I



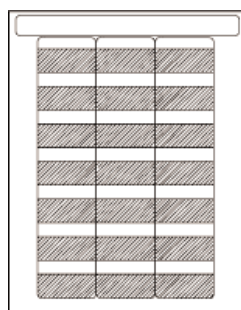
TAG64L-105

J



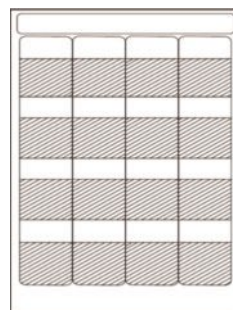
TAG1L-105

K



TAG52L-105

L



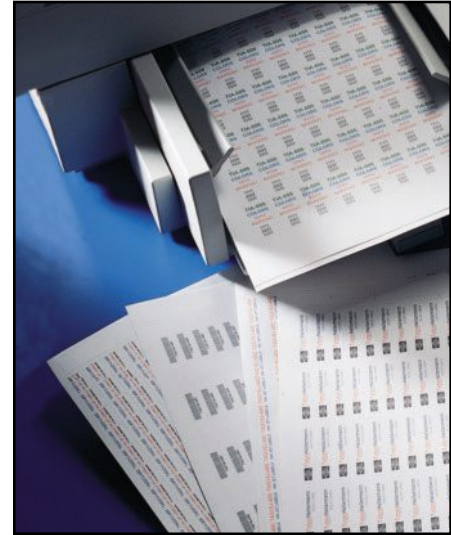
TAG10L-105

M

Ink Jet Label Materials

HellermannTyton offers a series of technologically advanced labels for use on standard ink jet printers. The labels come on 8.5" x 11" sheets and are printable using HellermannTyton's TagPrint® Pro software.

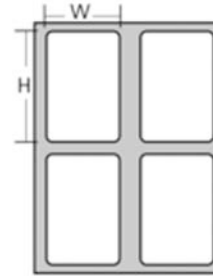
A wide range of materials and sizes is available for wire and component marking. When used with pigment based inks, HellermannTyton ink jet labels offer superior non-smear marks that are chemical and solvent resistant. Colors can be printed when used on a color ink jet printer. Ink jet labels are available in polyester or paper.



Label Material	108 Material 	450 Material 	994 Material 
Material Name	Paper	White Polyester	Clear Self-Laminating Polyester
Printer(s)	Ink Jet	Ink Jet	Ink Jet
Topcoat	Uncoated Paper	Specially formulated for superb toner anchorage and fast-drying printing	Formulated for superb anchorage for ink jet printing
Liner	50#	50#	82#
Temperature Range	-20°F to +200°F (-20°C to +93°C)	-40°F to +300°F (-40°C to +149°C)	-40°F to +300°F (-40°C to +149°C)
Adhesive Type	Pressure sensitive acrylic	Pressure sensitive acrylic	Permanent pressure sensitive acrylic
Application	General purpose flat label applications where the environment is not critical	Flat surface marking using ink jet labels	Excellent for on-the-job wire marking. Ideal for flat ribbon cable, machine tool and underground wiring. For use in ink jet or laser printers.
Chemical Resistance	General purpose paper permanent marking	Excellent chemical resistance to chemicals, solvents, and abrasion when using pigment based ink. Moderate resistance when using dye based inks.	Good for most petroleum based solvents and lower aliphatic alcohols. Not good for most esters and ketones. Water resistant

Ink Jet Labels

HellermannTyton's inkjet labels are used for component marking.



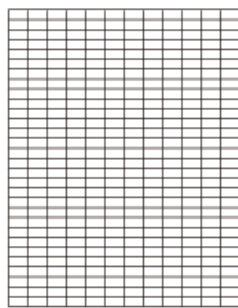
Product Selection

Product Selection											
Article No.	Part No.	Type	Drawing Reference	Width (W)		Height (H)		Labels per Row	Labels per Column	Labels per Sheet	Pkg. Qty.
			(page 219)	In.	(mm.)	In.	(mm.)				
108 Material											
593-01108	TAGPP1J-108	TAGPP1J	A	.625"	(15.87)	.31"	(7.87)	12	30	360	1000
593-65108	TAG65J-108	TAG65J	B	1.0"	(25.4)	1.50"	(31.75)	12	10	50	12500
593-59108	TAG59J-108	TAG59J	C	4.0"	(101.6)	1.5"	(38.1)	2	7	14	3500
593-57108	TAG57J-108	TAG57J	D	4.25"	(107.9)	2.75"	(69.80)	2	4	8	2000
593-56108	TAG56J-108	TAG56J	E	3.33"	(84.5)	4.0"	(101.6)	2	3	6	1500
450 Material											
593-11450	TAG11J-450	TAG11J	F	.20"	(5.08)	.65"	(16.05)	21	12	252	5000
593-13450	TAG13J-450	TAG13J	G	.25"	(6.35)	.75"	(19.00)	26	12	312	5000
593-14450	TAG14J-450	TAG14J	H	.375"	(9.52)	1.0"	(25.4)	16	9	144	5000
593-19450	TAG19J-450	TAG19J	I	.375"	(9.52)	2.0"	(50.8)	15	4	60	1000
593-15450	TAG15J-450	TAG15J	J	.5"	(12.7)	1.0"	(25.4)	13	9	117	5000
593-21450	TAG21J-450	TAG21J	K	.5"	(12.7)	.75"	(19.00)	13	12	156	5000
593-28450	TAG28J-450	TAG28J	L	.80"	(20.3)	1.437"	(36.49)	8	6	48	1000
Cardstock Material											
593-00001	TAGPHONE	TAGPHONE	M	1.75"	(44.45)	.375"	(9.52)	4	21	84	1000

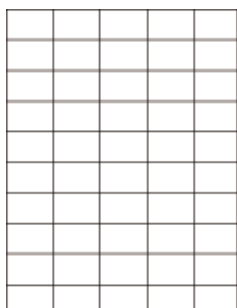
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Ink Jet Labels *continued*

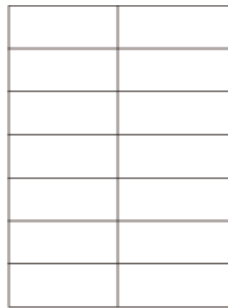
(Not shown to scale)



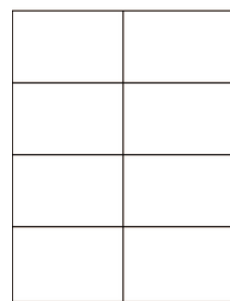
TAGPP1J-788

A

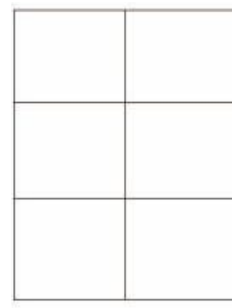
TAG65J-108

B

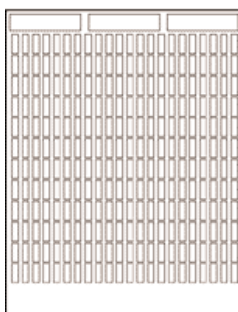
TAG59J-108

C

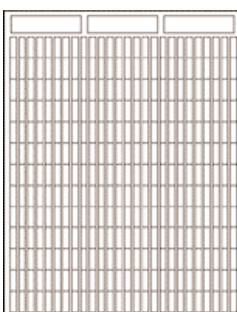
TAG57L-788

D

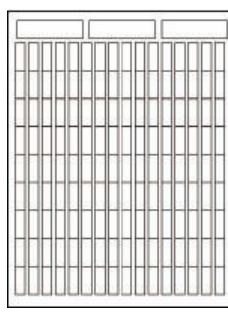
TAG56L-788

E

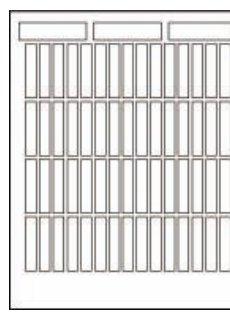
TAG11J-450

F

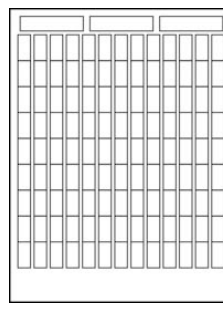
TAG13J-450

G

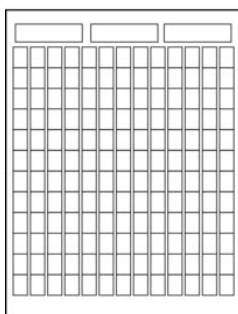
TAG14J-450

H

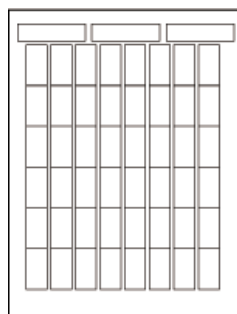
TAG19J-450

I

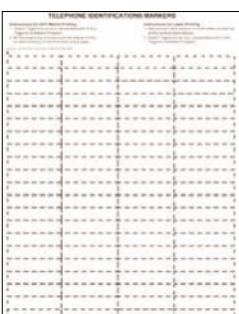
TAG15J-450

J

TAG21J-450

K

TAG28J-450

L

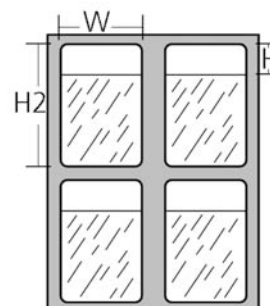
TAGPHONE

M

Ink Jet Self-Laminating Labels

HellermannTyton's ink jet self-laminating labels are smear resistant, allowing them to be handled immediately. The labels are made of a heat resistant 1mm polyester film with a strong acrylic-based adhesive. The printable area is a special ink-receptive film that absorbs the ink as it is printed on an ink jet printer. This same material, 994 clear polyester, can also be used in any standard laser printer.

Each sheet is smaller than the standard letter size (8.5"x11"). Less waste results from the smaller sheet size because the user can print smaller quantities at one time. HellermannTyton's ink jet self-laminating labels are also more convenient to store.



Product Selection

Product Selection													
Article No.	Part No.	Type	Drawing References	Width (W)		Height of Printable Area (H)		Height of Label (H2)		Labels per Row	Labels per Column	Labels per Sheet	Pkg. Qty.
			(page 221)	In.	(mm.)	In.	(mm.)	In.	(mm.)				
994 Material													
593-26994	TAG26J-994	TAG26J	A	.5"	(12.7)	.35"	(8.89)	.75"	(19.05)	16	8	128	2500
593-05994	TAG5J-994	TAG5J	B	.8"	(20.3)	.5"	(12.7)	1.43"	(36.32)	10	4	40	1000
593-51994	TAG51J-994	TAG51J	C	1.0"	(25.4)	.35"	(8.89)	.75"	(19.05)	8	8	64	1000
593-22994	TAG22J-994	TAG22J	D	1.0"	(25.4)	.5"	(12.7)	1.43"	(36.32)	8	4	32	1000
593-09994	TAG9J-994	TAG9J	E	1.0"	(25.4)	.75"	(19.05)	2.25"	(57.15)	8	3	24	1000
593-64994	TAG64J-994	TAG64J	F	1.16"	(29.6)	.86"	(21.8)	3.25"	(82.6)	7	2	14	1000

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Ink Jet Self-Laminating Labels *continued*

(Not shown to scale)



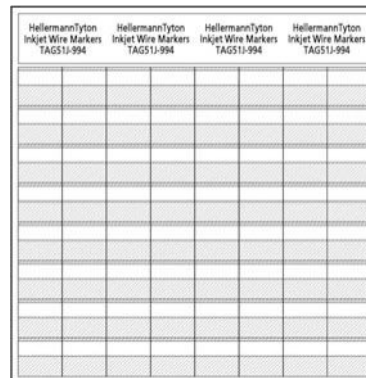
TAG26J-994

A



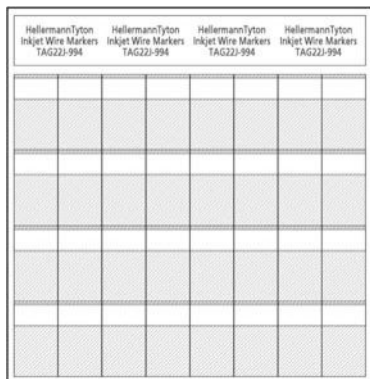
TAG5J-994

B



TAG51J-994

C



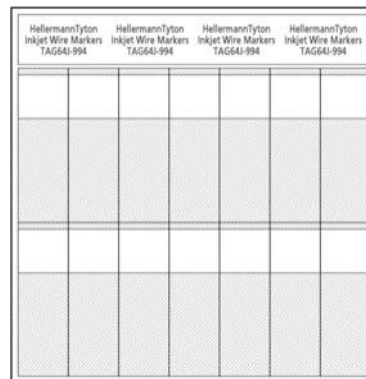
TAG22J-994

D



TAG9J-994

E



TAG64J-994

F

Spirit® 2100 Portable Printing System



The Spirit 2100 provides fast, high quality, thermal transfer printing for permanent and highly legible label printing. The Spirit 2100 prints on many different types of label materials for wire, cable, and component marking. Self-laminating, white and metalized polyester, and tamper evident materials for calibration and security labeling are available for use with the Spirit system.

Product Features

- "What You See Is What You Get" label design and creation
- Choose from normal or bold fonts to complete the label design
- Easily change text sizes: tiny, normal or large text
- And much more! Contact HellermannTyton for more details

Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
557-00085	HT2100	HT2100	Portable Printing System includes: Spirit 2100 printer, HT2100 rechargeable battery and charger, ribbon cartridge, TAGH73-336, printer manual, hard shell case, cleaning card, cleaning pen and Spiritlink computer interface software (interface software cable sold separately)	1

Use **Part No.** for ordering and **Type** for specification purposes.

Spirit 2100 Accessories

Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
591-00076	BC10	BC10	Battery Charger	1
557-00002	557-00002	2100CASE	Spirit Carrying Case	1
557-00004	2100CABLE	2100CABLE	SpiritLink interface cable.	1
557-00003	557-00003	RBP1	Battery Pack	1
557-00005	2100PEN	2100PEN	Cleaning Pen	1
557-00006	TS3003039	TS3003039	Spirit label Spindle Roll	1
557-00007	TS3003040	TS3003040	Spirit label Spindle cap	1
557-00008	2100CARD	2100CARD	Printhead cleaning card	1

Use **Part No.** for ordering and **Type** for specification purposes.

Ribbon

The ribbon is supplied in a self-contained cartridge for easy loading. *One ribbon per package.*

Product Selection								
Article No.	Part No.	Type	Description	Width (W)		Height (H)		Pkg. Qty.
				In.	(mm)	In.	(mm)	
557-00009*	HHIGR	HHIGR	Replacement ribbon cartridge	2.0	(50.8)	2.50	(63.5)	131 ft (40 m)
557-00092	HHHST	HHHST	Ribbon cartridge	2.0	(50.8)	2.50	(63.5)	131 ft (40 m)
557-00075**	HHDTH	HHDTH	Replacement Durattach ribbon	2.0	(50.8)	2.50	(63.5)	131 ft (40 m)

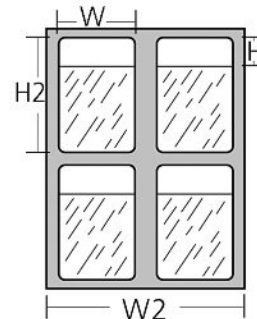
Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

* HHIGR works on all materials

** HHDTTH can only be used with label materials that have the DTH extension. This provides superior performance to most chemicals and solvents.

Spirit 2100 Self-Laminating Labels

Self-laminating labels are used for marking wire and cable. The clear overlap protects printed information.

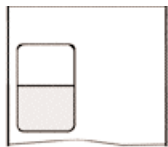


Product Selection													
Article No.	Part No.	Type	Drawing Reference	Color	Width (W)		Height of Printable Area (H)		Height of Label (H2)		Width of Liner (W2)		Pkg. Qty.
			(page 101)		In.	(mm.)	In.	(mm.)	In.	(mm.)	In.	(mm.)	
100 Material													
557-00026	TAGH26-100	TAGH26	A	White	.5"	(12.7)	.35"	(8.8)	.75"	(19.05)	.875"	(22.22)	500
557-00011	TAGH2-100	TAGH2	B	White	.5"	(12.7)	.5"	(12.7)	1.435"	(36.5)	.875"	(22.22)	250
557-00025	TAGH25-100	TAGH25	C	White	.75"	(19.05)	.5"	(12.7)	1.75"	(44.45)	.875"	(22.22)	175
557-00027	TAGH51-100	TAGH51	D	White	1.0"	(25.4)	.35"	(8.8)	.75"	(19.05)	1.125"	(28.57)	500
557-00021	TAGH22-100	TAGH22	E	White	1.0"	(25.4)	.5"	(12.7)	1.435"	(36.5)	1.125"	(28.57)	250
557-00018	TAGH9-100	TAGH9	F	White	1.0"	(25.4)	.75"	(19.05)	2.25"	(57.1)	1.125"	(53.97)	100
557-00013	TAGH3-100	TAGH3	G	White	1.0"	(25.4)	1.0"	(25.4)	3.75"	(95.25)	1.125"	(28.57)	100
557-00028	TAGH95-100	TAGH95	H	White	1.5"	(38.1)	1.0"	(25.4)	3.75"	(95.25)	1.625"	(41.25)	100
557-00010	TAGH1-100	TAGH1	I	White	1.9"	(48.26)	.75"	(19.05)	3.19"	(81.02)	2.025"	(51.43)	100
557-00024	TAGH24-100	TAGH24	J	White	2.0"	(50.8)	.5"	(12.7)	1.435"	(36.5)	2.125"	(53.97)	250
557-00020	TAGH10-100	TAGH10	K	White	2.0"	(50.8)	.75"	(19.05)	2.25"	(57.1)	2.125"	(53.97)	100
557-00015	TAGH6-100	TAGH6	L	White	2.0"	(50.8)	1.0"	(25.4)	3.75"	(95.25)	2.125"	(53.97)	100

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Spirit 2100 Self-Laminating Labels *continued*

(Not shown to scale)



TAG26-100

A

TAGH2-100

B

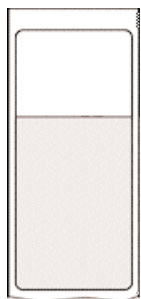
TAGH25-100

C

TAGH51-100

D

TAGH22-100

E

TAGH9-100

F

TAGH3-100

G

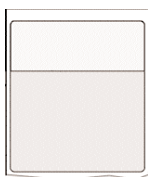
TAGH95-100

H

TAGH1-100

I

TAGH24-100

J

TAGH10-100

K

TAGH6-100

L

Sport Handheld Printing System

High-Quality Labels

- Prints on 1/2", 1" and 2" vinyl widths
- 203 dpi print resolution

Precision Cutter

- Manual cutter lever for clean, crisp label edges

Large LCD Screen

- 2.62" x 1.31" (256 x 128 pixels)
- LCD screen displays five lines of text in high resolution

Intuitive Capabilities

- Soft key menu for easy navigation
- ABC key layout

Rechargeable Battery

- Print for 120 minutes on a single charge
- Low self-discharge rate for long-term use

Rugged Design

- Industrial-strength nylon strap with metal loop
- Exterior casing stands up to industrial use

Lightweight Design

- Fits in the palm of your hand
- Weight: 2.7 lbs. (1.22 kg)



HellermannTyton introduces the newest innovation in portable labeling – The Sport hand-held thermal transfer printer allows for on-the-job label creation to ensure that applied labels meet all the current National Electrical Codes (NEC) and International Fire Codes (IFC). In addition, the portability of the Sport makes it ideal for getting off the job faster, and passing inspection the first time. The Sport can print labels on demand, even while the inspector is still present, allowing the installer to print any missing labels or correct any labels that the inspector rejects. This saves time and money by not having to re-schedule the inspection while waiting for replacement labels to be ordered, delivered and installed.

The Sport comes pre-loaded with all the label designs mandated by the NEC and IFC. The existing templates stored in the Sport can be modified to meet specific local code requirements which may be required by the Authority Having Jurisdiction (AHJ).

Standard and reflective label materials (and the printing ribbons) are available with the Sport printer in white and red. HellermannTyton's vinyl labels are manufactured based on the parameters outlined in Section 690 of the NEC using ultraviolet (UV) resistant permanent acrylic adhesive and a base material intended to endure harsh environmental elements. These pre-saved label designs, when pre-printed on the vinyl label stock, meet the governing requirements for durability, color, text height and visibility and can be applied to most surfaces.

Features

- 2.62" x 1.31" viewable LCD screen shows five lines and offers high resolution (256 x 128 pixels)
- Text/image auto-size eliminates time-consuming "guess-and-check" label design process
- Intuitive soft key menu system for easy navigation and label design
- Lightweight design with convenient hand strap for optimal portability
- 250 pre-installed safety symbols updated to the most-current ANSI standards
- Print 100' of labels before recharging battery
- Truly rugged printer body and internal components meet industrial expectations
- Manual precision cutter provides clean, sharp label edges
- 203 dpi print resolution gives clarity and visibility to label messages and images
- Indoor/Outdoor Premium Vinyl Tape sizes ½", 1" and 2" in width
- Industrial-grade ribbon and tape is resistant to chemicals, moisture, abrasion and fading
- Save up to 32 label designs for future print jobs
- Prints Bar Codes
- Print Preview to actual size

Designing a label is as easy as typing out the text and then selecting a font size.



Step 1) Turn on unit, press the FILE button and select one of the many pre-saved templates.



Step 2) Press the print button to start the printing process.



Step 3) Remove and apply your printed label.

PV Systems Label Material for Sport Printer

HellermannTyton offers all the labels required to pass an on-site inspection for a photovoltaic panel installation. The continuous vinyl rolls are available both in red and white. Reflective labels, also available in red and white, meet the latest IFC 2012 and NEC 2011 codes for marking a PV installation. Additionally, the white label stock is an option for PV and other types of installations per ANSI Z535.4 Article 7.3 in which black lettering can be used on a white background. Solid colors of red and white are supported by ANSI Z535.4 – Article 7.6.2; a benefit in that a minimum of label widths and colors as well as only two ribbon ink cartridges of black and white need be on hand to meet labeling code requirements. All materials are made of UV resistant adhesives and vinyl for long-lasting outdoor durability.



Sport Printer and Labels

Product Selection

Article No.	Part No.	Type	Pkg. Qty	Description
Reflective Solar Labels				
557-00112	557-00112	OSPLP	1	Sport Printer, White Ribbon, 2" Red Vinyl Roll, Charger, Battery, Instructions
557-00113	557-00113	OSPLPKIT	1	Sport Printer Kit, White Ribbon, 1" & 2" Red Vinyl Roll, 1" Reflective Roll, Charger, Battery, Instructions
591-00231	591-00231	SpindleKit	1	Replacement Spindle Slide and Spindle Cover
591-00076	591-00076	BC10	1	Replacement Battery Charger 120V 60Hz
557-00003	557-00003	RBP1	1	Replacement Battery
557-00002	557-00002	2100CASE	1	Optional Hard Shell Carrying Case
591-00263	591-00263	HT2-Softcase	1	Optional Soft Shell Carrying Case
591-00232	591-00232	HHIGRBG	1	Black Ribbon
591-00233	591-00233	HHIGRWG	1	White Ribbon
591-00243	591-00243	HT1RD30	1	1" Red Vinyl 30 Feet Per Roll
591-00264	591-00264	HT1RDRF20	1	1" Red Reflective Vinyl 20 Feet Per Roll
591-00244	591-00244	HT1WH30	1	1" White Vinyl 30 Feet Per Roll
591-00251	591-00251	HT.5RD30	1	1/2" Red Vinyl 30 Feet Per Roll
591-00252	591-00252	HT.5WH30	1	1/2" White Vinyl 30 Feet Per Roll
591-00259	591-00259	HT2RD30	1	2" Red Vinyl 30 Feet Per Roll
591-00265	591-00265	HT2RDRF20	1	2" Red Reflective Vinyl 20 Feet Per Roll
591-00261	591-00261	HT2WH20	1	2" White Vinyl 30 Feet Per Roll
591-00260	591-00260	HT2WHRF20	1	2" White Reflective Vinyl 20 Feet Per Roll
591-00278	591-00278	HT2AF30	1	2" White/Orange Vinyl 30 Feet Per Roll For Arc Flash Labeling

Use Part No. for ordering and Type for specification.

Pre-printed Labels

HellermannTyton pre-printed and thermal transfer printable labels have a special high-bond adhesive for use on both enamel and powder coat painted surfaces. Labels are a laminated construction for maximum UV stability. Where required, labels are reflective per NEC and IFC standards. Labels meet the requirements of UL969.



Material Data	
Material	443/552 UV Stable Flexible White Vinyl w/ Acrylic Laminate
Operating Temperature	-40 °F (-40 °C) to 175 °F (79 °C)
Min. Application Temp.	50 °F (10 °C)
Liner	78# White Bleached Paper
Certifications	UL969



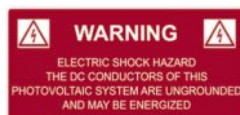
596-00233



596-00232



596-00234



596-00258



596-00235



596-00231



596-00236

Product Selection				
Article No.	Part No.	Type	Roll Qty.	Description
596-00233	596-00233	WESHLBL	50	WARNING - ELECTRICAL SHOCK HAZARD 3.75" (95.25mm) X 2.0" (50.8mm)
596-00232	596-00232	WESHLBLDC	50	WARNING - ELECTRICAL SHOCK HAZARD W/DC 3.75" (95.25mm) X 2.5" (63.5mm)
596-00234	596-00234	WGCME	50	WARNING - GROUNDED CONDUCTORS MAY BE ENERGIZED 4.12" (104.6mm) X 2" (50.8mm)
596-00258	596-00258	WDCCU	50	WARNING - DC CONDUCTORS MAY BE ENERGIZED 4.12" (104.6mm) X 2" (50.8mm)
596-00235	596-00235	WTOPVLBL	50	WARNING - TURN OFF PV AC PRIOR TO WORKING INSIDE PANEL 4.12" (104.6mm) X 2" (50.8mm)
596-00231	596-00231	WDPSLBL	50	WARNING - DUAL POWER SOURCE 4.12" (104.6mm) X .75" (19.05mm)
596-00236	596-00236	CBACKFED	50	CAUTION - PV SYSTEM CIRCUIT BREAKER IS BACKFED 4.12" (104.6mm) X .75" (19.05mm)

Use Part No. for ordering and Type for specification.

Reflective Rooftop Label

Designed to meet NEC2011 Section 690.4(F) as interpreted by the International Association of Electrical Inspectors (IAEI), HellermannTyton offers an aluminum and vinyl label designed for use on almost any type of roof shingle. Mount via a pre-cut aluminum plate with aluminum clips (both supplied with label) to standard tar shingles, or bend, shape and fasten with construction adhesive or grommet screws on composite or wooden roofing. Label text is reflective to meet IFC requirements.



Material Data	
Material	242/552 UV Stable Reflective Vinyl w/ Acrylic Laminate on Aluminum
Operating Temperature	-40 °F (-40 °C) to 175 °F (79 °C)
Min. Application Temp.	50 °F (10 °C)
Liner	Polyethylene Coated Paper
Certifications	UL969

Product Selection				
Article No.	Part No.	Type	Pkg. Qty.	Description
596-00257	596-00257	PVPSRTM	1	PHOTOVOLTAIC POWER SOURCE 6.75" (171.45mm) X 2.75" (69.85mm)

Use Part No. for ordering and Type for specification.

Pre-printed Reflective Labels

Reflective labels are easier to read at night and are used to ensure fire safety and NEC regulations.

Material Data	
Material	242/552 UV Stable Reflective Vinyl w/ Acrylic Laminate
Operating Temperature	-40 °F (-40 °C) to 175 °F (79 °C)
Min. Application Temp.	50 °F (10 °C)
Liner	Polyethylene Coated Paper
Certifications	UL969



Product Selection				
Article No.	Part No.	Type	Pkg. Qty.	Description
596-00244	596-00244	DND CUL	50	DO NOT DISCONNECT UNDER LOAD 6.5" (165.1mm) X 1" (25.4mm)
596-00245	596-00245	CSESC	50	CAUTION – SOLAR ELECTRIC SYSTEM CONNECTED 6.5" (165.1mm) X 1" (25.4mm)
596-00247	596-00247	CSCIRLBL	50	CAUTION - SOLAR CIRCUIT 6.5" (165.1mm) X 1" (25.4mm)
596-00246	596-00246	SOLARD	50	SOLAR DISCONNECT 6.5" (165.1mm) X 1" (25.4mm)
596-00243	596-00243	MPVSD	50	MAIN PV SYSTEM DISCONNECT 5.5" (139.7mm) X 1.75" (44.45mm)
596-00255	596-00255	MPVACDIS	50	MAIN PV SYSTEM AC DISCONNECT 5.5" (139.7mm) X 1.75" (44.45mm)
596-00206	596-00206	PVPSR	50	PHOTOVOLTAIC POWER SOURCE 6.5" (165.1mm) X 1" (25.4mm)

Use Part No. for ordering and Type for specification.

Caution Circuit Markers

The Photovoltaic Power Source markers are a pre-printed, non-adhesive, coiled marker that can be opened and snapped over the cable for long-term, reflective, permanent identification. Designed with a UV stable vinyl, the coiled markers come 25 per bag and will fit on all standard PV cables or EMT conduits.

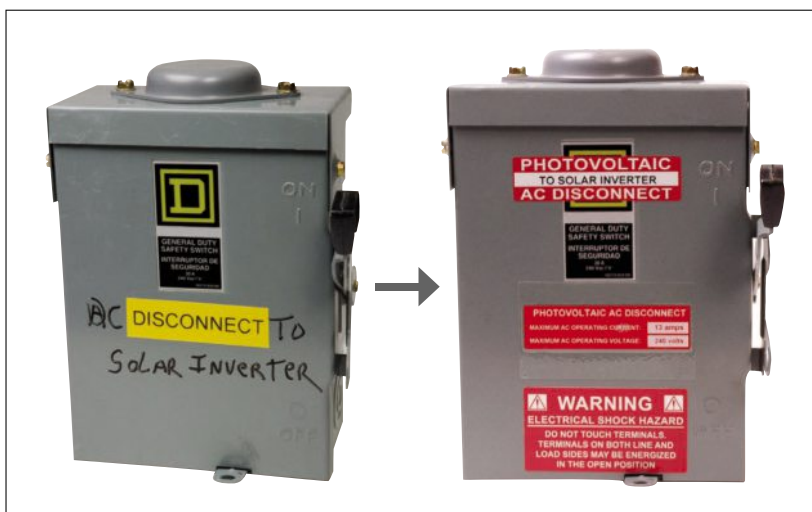


Product Selection				
Article No.	Part No.	Type	Pkg. Qty.	Description
596-00249	596-00249	CSCSNAP4	25	CAUTION - SOLAR CIRCUIT 4" (101.6mm) X 2" (50.8mm) Use on .25" OD PV cables
596-00251	596-00251	CSCSNAP72	25	CAUTION - SOLAR CIRCUIT 7.2" (182.88mm) X 5" (127mm) For EMT conduits up to 1" in OD
596-00207	596-00207	PVPSSNAP4R	25	PHOTOVOLTAIC POWER SOURCE 4" (101.6mm) X 2" (50.8mm) Use on .25" OD PV cables
596-00208	596-00208	PVPSSNAP72R	25	PHOTOVOLTAIC POWER SOURCE 7.2" (182.88mm) X 5" (127mm) For EMT conduits up to 1" in OD

Use Part No. for ordering and Type for specification.

Thermal Transfer Printable Solar Installation Labels*

Designed with cross-laminated UV stable materials, the variable imprintable solar installation labels are designed to accept printing from any standard thermal transfer printer using a resin-based ink ribbon for the best durability. Print your voltage information directly on the label and then laminate with an optional clear polyester laminate material for added protection. Even print your disconnecting means and breaker series directly on the labels for a more professional result, ensuring a smooth inspection process.



*Requires TT2305M printer or equivalent to print data for the rating labels.

Material Data	
Material	840/926 UV Stable White Polyester w/ Clear Polyester Laminate
Operating Temperature	-40 °F (-40 °C) to 300 °F (150 °C)
Min. Application Temp.	50 °F (10 °C)
Liner	55# Paper
Certifications	UL969



Designed to fit the common types of AC and DC breaker boxes, print the breaker series or disconnecting means directly on the labels.



596-00253



596-00240



596-00241



596-00239



596-00237



596-00238



596-00242



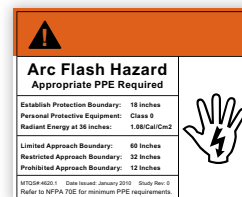
596-00252

Product Selection				
Article No.	Part No.	Type	Roll Qty.	Description
596-00253	596-00253	DC2011	50	DC MODULE LABEL 4" (101.6mm) X 2" (50.8mm)
596-00240	596-00240	ACRATING	50	DC BACKUP SYSTEM LABEL 4" (101.6mm) X 2" (50.8mm)
596-00241	596-00241	DCRATING	50	DC RATING LABEL 3.75" (95.25mm) X 2" (50.8mm)
596-00239	596-00239	PVACDIS	50	PV AC DISCONNECT RATING 3.75" (95.25mm) X 1" (25.4mm)
596-00237	596-00237	ACDISCT	50	PHOTOVOLTAIC - AC DISCONNECT 3.75" (95.25mm) X 1" (25.4mm)
596-00238	596-00238	DCDISCT	50	PHOTOVOLTAIC - DC DISCONNECT 3.75" (95.25mm) X 1" (25.4mm)
596-00242	596-00242	LAM1	50	LAMINATE FOR AC/DC RATING LABEL 4.2" (106.6mm) X 2.25" (57.15mm)
596-00252	596-00252	AC2011	50	AC MODULE LABEL 4" (101.6mm) X 2" (50.8mm)

Use Part No. for ordering and Type for specification.

Pre-Printed Continuous Colored Signal Labels

Pre-printed continuous colored signal panel labels come in two colors of yellow and white or orange and white for the creation of Caution or Warning signs to meet the various NEC and ANSI requirements for common safety signage. Using TagPrint Pro 3.0 software, almost any size and length marker can be printed and cut-to-size using pre-saved templates found in the labeling software. Simply open the loaded Caution or Warning design, set the desired length in the program, and print the required text in and below the pre-printed colored header. The orange pre-printed continuous colored signal panel labels are great for making custom ARC FLASH labels on demand.



Product Selection

Article No.	Part No.	Type	Description	Pkg. Qty.
558-00327	558-00327	HT2OE50250	2" White vinyl with .5" orange stripe on continuous roll	250
558-00328	558-00328	HT2YE50250	2" White vinyl with .5" yellow stripe on continuous roll	250
558-00330	558-00330	HT3OE75250	3" White vinyl with .75" orange stripe on continuous roll	250
558-00331	558-00331	HT3YE75250	3" White vinyl with .75" yellow stripe on continuous roll	250
558-00333	558-00333	HT4OE10250	4" White vinyl with 1" orange stripe on continuous roll	250
558-00334	558-00334	HT4YE10250	4" White vinyl with 1" yellow stripe on continuous roll	250

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification.

Pre-Printed Signal Word Labels

The most common signal word signs are DANGER, WARNING, CAUTION, NOTICE and SAFETY as defined by ANSI Z535.4. Each pre-printed Signal Word Label comes with the colored signal panel, signal word, and Safety Alert Symbol (if required). Using TagPrint Pro 3.0 software, the balance of information can easily be designed and printed using pre-saved templates in the labeling software and any HellermannTyton thermal transfer printer. This solution allows almost unlimited capabilities to create practically any conceivable sign on demand with no minimums.



Material Data

Material	Polyester and Clear Laminate
Material Number	690
Operating Temperature	-40°F to +302°F (-40°C to +150°C)
Adhesive	Acrylic

Product Selection

Article No.	Part No.	Type	Description	Pkg. Qty.
596-00203	596-00203	4X6DANGER	4" X 6" White with red DANGER header	250
596-00424	596-00424	3X2DANGER	3" X 2" White with red DANGER header	250
596-00204	596-00204	4X6NOTICE	4" X 6" White with blue NOTICE header	250
596-00426	596-00426	3X2NOTICE	3" X 2" White with blue NOTICE header	250
596-00427	596-00427	4X6CAUTION	4" X 6" White with yellow CAUTION header	250
596-00425	596-00425	3X2CAUTION	3" X 2" White with yellow CAUTION header	250
596-00371	596-00371	4X6SAFETY	4" X 6" White with green SAFETY header	250
596-00375	596-00375	3X2SAFETY	3" X 2" White with green SAFETY header	250
596-00378	596-00378	WV275X135	1.35" X 2.75" Orange WARNING header, blank yellow triangle	250
596-00379	596-00379	DV275X135	1.35" X 2.75" Red DANGER header, blank yellow triangle	250
596-00376	596-00376	WV55X275	2.75" X 5.5" Orange WARNING header, blank yellow triangle	250
596-00377	596-00377	DV55X275	2.75" X 5.5" Red DANGER header, blank yellow triangle	250
596-00386	596-00386	WS275X135	1.35" X 2.75" Orange WARNING header, blank white symbol panel	250
596-00387	596-00387	DS275X135	1.35" X 2.75" Red DANGER header, blank white symbol panel	250
596-00388	596-00388	WS55X275	2.75" X 5.5" Orange WARNING header, blank white symbol panel	250
596-00389	596-00389	DS55X275	2.75" X 5.5" Red DANGER header, blank white symbol panel	250

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification.

Rite-On® Markers

HellermannTyton's Rite-On Markers are made from a flexible vinyl film and are used to mark wire and cable. The self-laminating labels have a clear tail which seals the legend under clear vinyl, maintaining the quality of the labels. The Rite-On Markers® are packaged in a reusable dispenser made from high impact plastic which is resistant to oils and grease.



Product Features

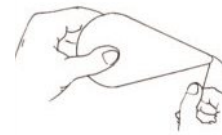
- Easily and conveniently fits in a pants or shirt pocket.
- Once loaded, unit allows minimal label exposure to dust and moisture.
- Can be used with standard ballpoint pens or HellermannTyton nylon making pens.
- Excess liner is easily cut-off by tearing it over the edge guide at the front of the unit.
- The dispenser can be reloaded over and over again, making it a cost-effective and efficient method of labeling.



A special label window holds the label firm for easy marking.



Can be held easily in the palm of the hand to provide a flat writing surface.



Label dispenses automatically when the liner is pulled from the front of the unit.

Self-Laminating Labels and Dispenser

Product Selection									
Article No.	Part No.	Type	Width in. (mm)	Height of Write-On Area in. (mm)	Height of Label in. (mm)	Wire Size Range (AWG)	Min. Wire Size (in ²)	Markers per Roll	Pkg. Qty.
590-01750	RO175	RO175	.75 " (19.05)	.75 " (19.05)	3.0 " (76.2)	4 to 4/0	.330	90	1 roll
590-05120	RO512	RO512	.75 " (19.05)	.50 " (12.7)	1.875 " (47.62)	8 to 4 AWG	.263	150	1 roll
590-05140	RO514	RO514	.75 " (19.05)	.375 " (9.52)	1.25 " (31.75)	14 to 8 AWG	.053	200	1 roll
590-10000	RO175WP	RO175WP	.75 " (19.05)	.75 " (19.05)	3.0 " (76.2)	4 to 4/0	.330	90	1 roll

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Refill Rolls

Product Selection								
Article No.	Part No.	Type	Width	Height of Write-On Area	Height of Label	Markers per Roll	Pkg. Qty.	
			in. (mm)	in. (mm)	in. (mm)			
590-01751	175REF	175REF	.75 " (19.05)	.75 " (19.05)	3.0 " (76.2)	40	1 roll	
590-05121	512REF	512REF	.75 " (19.05)	.50 " (12.7)	1.875 " (47.62)	40	1 roll	
590-05141	514REF	514REF	.75 " (19.05)	.375 " (9.52)	1.25 " (31.75)	40	1 roll	

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification purposes.

Nylon Marking Pens

When used with a non-smear FTP nylon marking pen, marking is fast and economical.

Product Selection				
Article No.	Part No.	Type	Color	Pkg. Qty.
500-50822	T82-R	T82R-RD	Red	2 pens
500-50820	T82-S	T82S-BK	Black	2 pens

Use **Part No.** for ordering and **Type** for specification purposes.



Wire Marker Tape

The wire marker tape dispenser provides a convenient, economical system for wire marking. HellermannTyton's white marker tape features sharp, crisp legends which are coated to resist smearing and abrasion. It is provided on a carrier strip to prevent contamination of the adhesive prior to installation, assuring permanent, non-flagging marker ends.



Material Data		RoHS
Material	Tyvek - a polyolefin material that resists tearing and abrasion	
Dimensions	.25" W x 1.25" L	
Markers per Roll	76 each legend	
Adhesive	Aggressive Acrylic Base	

Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
598-00256	WMTD0-9	WMTD0-9	Single box of wire marker tape refill. Each box contains 76 markers of each legend 0-9 and is use to refill the empty tape dispenser	1 Dispenser
598-00259	WMT0-9	WMT0-9	One wire marker tape dispenser with 10 rolls of 76 markers per roll, of each legend 0-9.	1 Refill

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification.

Handi-Paks

Pre-printed wire labels in a convenient pocket-size booklet. Labels are black with non-smear legends on a white background. The labels are made of a plastic-coated cloth that remains flexible, along with a strong adhesive that assures a firm bond on wires.

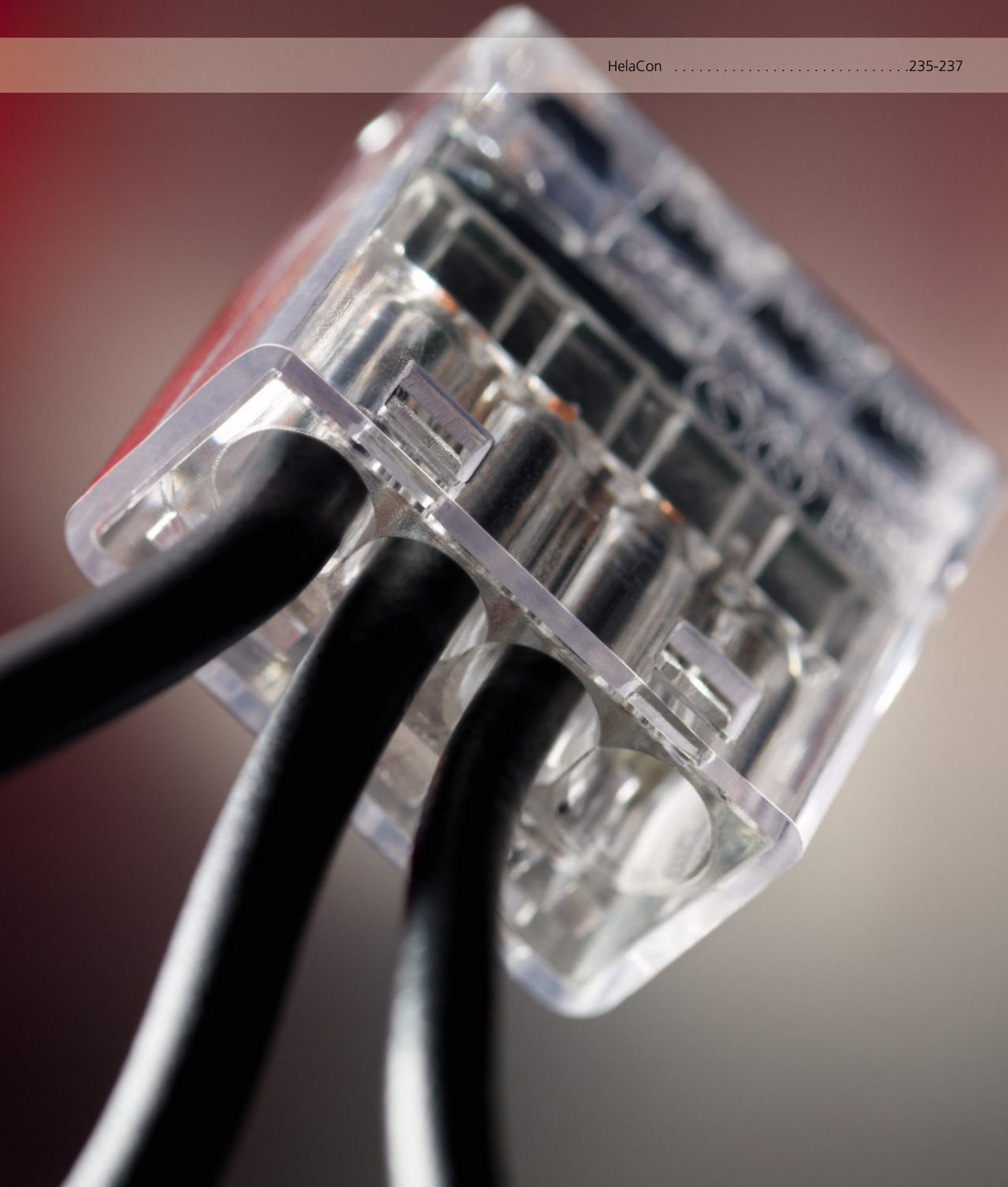
Material Data	
Material	Vinyl Cloth (TYHC)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Adhesion to Steel	40 oz./in. of width



Product Selection				
Article No.	Part No.	Type	Description	Pkg. Qty.
598-00260	TCWM1	TCWM1	45 Markers each of legend 0-9	1 Booklet
598-00261	TCWM2	TCWM2	10 Markers each of A-Z, 1-15, +, -, /	1 Booklet
598-00262	TCWM3	TCWM3	10 Markers each of 1-45	1 Booklet
598-00263	TCWM4	TCWM4	150 Markers each of 1, 2, and 3	1 Booklet
598-00264	TCWM5	TCWM5	150 Markers each of A, B, and C	1 Booklet
598-00265	TCWM6	TCWM6	150 Markers each of T1, T2, and T3	1 Booklet
598-00266	TCWM7	TCWM7	150 Markers each of L1, L2, and L3	1 Booklet
598-00267	TCWM8	TCWM8	6 Markers each 1-15, 4 Markers each 16-90, and 2 Markers each of A-Z, +, -, /	1 Booklet
598-00268	TCWM9	TCWM9	45 Markers each of 1, 2, 3, A, B, C, 30 Markers each of L1, L2, L3 and 30 Markers each of T1, T2, and T3	1 Booklet
598-00269	TCWM10	TCWM10	45 Markers each of 10 NEMA colors	1 Booklet
598-00270	TCWM11	TCWM11	15 Markers each of 1-30	1 Booklet
598-00271	TCWM12	TCWM12	15 Markers each of A-Z, 21 Markers blank, 8 Markers +, and 7 Markers -	1 Booklet
598-00272	TCWM13	TCWM13	45 Markers each of +, -, AC, DC, 33 Markers each of POS, NEG, and GND, 27 Markers each of NEUT and 21 Markers of SPARE and BLANK	1 Booklet
598-00273	TCWM14	TCWM14	45 Markers each of 0-9, 15 Markers each of L1, L2, L3, and 15 Markers each of T1, T2, and T3	1 Booklet
598-00274	TCWM15	TCWM15	10 Markers each of 46-90	1 Booklet
598-00275	TCWM16	TCWM16	10 Markers each of 1-33, A, B, C, +, -, T1, T2, T3, L1, L2, and L3	1 Booklet

Dimensions are approximate and subject to technical changes. Use **Part No.** for ordering and **Type** for specification.

HelaCon 235-237



The HelaCon Plus series of push-in wire connectors for both solid and stranded wire.



As a global manufacturer and supplier of solutions which help connect, manage and identify wire and cable components, HellermannTyton is known worldwide for its technological innovation, quality and value. Designed for wire-to-wire electrical connections, the HelaCon line of push-in wire connectors from HellermannTyton is the better alternative to the traditional wire connectors that involve the time-consuming twisting of wire. And, with the introduction of the double-spring HelaCon Plus push-in connectors, HellermannTyton has once again coupled safety and efficiency in a distinct solution that offers options to twist-on wire connectors for electrical and original equipment manufacturer applications.

HelaCon Plus is unique in that it is the only push-in style wire connector with a DOUBLE-SPRING DESIGN that delivers a safe, secure, and reliable wire connection. The DOUBLE-SPRING DESIGN requires a low insertion force, thus reducing wiring time and operator hand strain while providing a significantly higher retention value. With HelaCon Plus, HellermannTyton offers an affordable and ergonomically-friendly alternative for completing routine wire termination tasks.

Market Applications

Home & Light Commercial Construction

- Junction Boxes
- Dimmer Switches
- Home Automation
- Lighting Fixtures



OEM Lighting & Manufacturing

- Garbage Disposals
- Low-Voltage Lighting Systems
- Ceiling Fans
- Garage Door Openers
- Exhaust Units



Maintenance, Repair & Replacement

- Repair Kits
- Power Cord Kits
- Lighting Retrofits
- Security and Alarm Systems



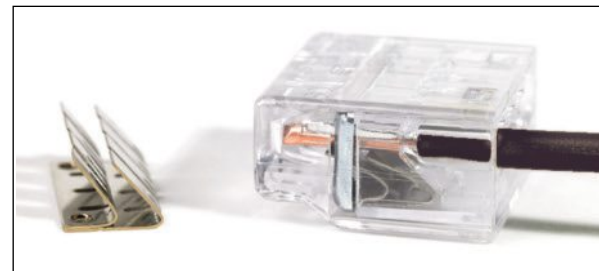
HelaCon Plus Wire Connector

- Transparent Housing** Clear material for simple identification and quick visual inspection; meets flammability standard of UL94V2.
- Multiple Ports** Individual pole slots for each distinctive wire, regardless of size and style, allowing for flexibility and versatility within the same connector unit.
- Accessible Test Port** Large test port for easy confirmation.

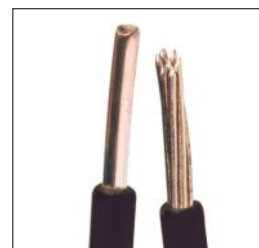


Material Data

Material Housing	Polycarbonate (PC)
Material Plated Brass	Brass Tinned
Material Spring Plate	Stainless Steel (SS)
Max Current	24 A
Max Voltage	600 V (cULus), 450 V (VDE)
Wire Range (cULus)	12 - 22 AWG solid/stranded
Wire Range (VDE)	0.5 - 2.5mm ² solid/stranded (max 7 cores)
Stripping Length	0.43 inches (11 mm)
Flammability	UL94 V2
Operating Temperature	-22°F (-30°C) to 221°F (+105°C) (cULus) -30°C to +110°C (VDE)
Certification	cULus, VDE, NEMKO, FIMKO, DEMKO, KEMA-KEUR



Double-spring technology provides for low insertion force while delivering a safe, secure connection.



Accommodates both solid and stranded wire (12-22 AWG)

Product Selection

Article No.	Part No.	Type	Color	Number of Conductors	UPC	Width		Height		Depth		Pkg. Qty.
						in.	(mm)	in.	(mm)	in.	(mm)	
148-90000	148-90000	HECP-2	Transparent, Yellow	2	089306277217	.46"	(11.75)	.41"	(10.45)	.75"	(19.00)	100
148-90001	148-90001	HECP-3	Transparent, Orange	3	089306277224	.63"	(15.90)	.41"	(10.45)	.75"	(19.00)	100
148-90002	148-90002	HECP-4	Transparent	4	089306277231	.79"	(20.05)	.41"	(10.45)	.75"	(19.00)	75
148-90003	148-90003	HECP-5	Transparent, Blue	5	089306277248	.95"	(24.20)	.41"	(10.45)	.75"	(19.00)	50
148-90004	148-90004	HECP-6	Transparent, Violet	6	089306277255	1.12"	(28.35)	.41"	(10.45)	.75"	(19.00)	50
148-90005	148-90005	HECP-8	Transparent, Gray	8	089306277262	1.44"	(36.65)	.41"	(10.45)	.75"	(19.00)	40
148-90024	148-90024	HECP-2B	Transparent, Yellow	2	089306326878	.46"	(11.75)	.41"	(10.45)	.75"	(19.00)	500
148-90025	148-90025	HECP-3B	Transparent, Orange	3	089306326861	.63"	(15.90)	.41"	(10.45)	.75"	(19.00)	400
148-90026	148-90026	HECP-4B	Transparent	4	089306326908	.79"	(20.05)	.41"	(10.45)	.75"	(19.00)	300
148-90027	148-90027	HECP-5B	Transparent, Blue	5	089306326915	.95"	(24.20)	.41"	(10.45)	.75"	(19.00)	300
148-90028	148-90028	HECP-6B	Transparent, Violet	6	089306326892	1.12"	(28.35)	.41"	(10.45)	.75"	(19.00)	250
148-90029	148-90029	HECP-8B	Transparent, Gray	8	089306326885	1.44"	(36.65)	.41"	(10.45)	.75"	(19.00)	200

Use **Part No.** for ordering and **Type** for specification purposes.

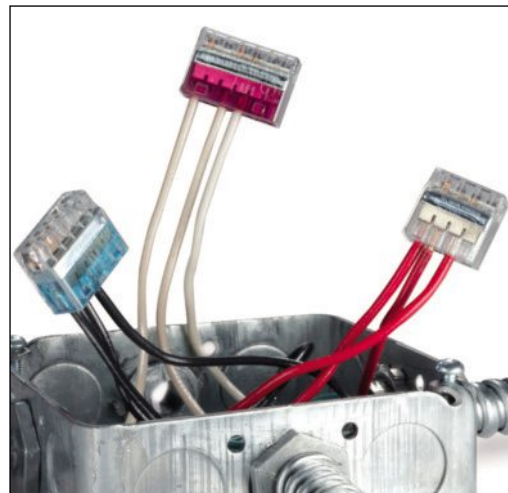
HelaCon Plus - The Unique Wire Termination Solution

1.) Double-Spring Technology

The HelaCon Plus line of wire connectors from HellermannTyton is the only push-in wire connector with a double-spring design: the first spring allows for low insertion force, and the second secures a firm connection with a significantly stronger retention value.

2.) For Both Stranded and Solid Wire

The “peace of mind” wire connector from HellermannTyton holds solid wire firmly in place, reduces buckling when connecting stranded wire, accepts a wider range of wire sizes (12 to 22 AWG wire), and houses both solid and stranded wire cores in one unit.



3.) The Ergonomically-Friendly Alternative to Twist-On Wire Connectors

No more twisting and taping. No repetitive motion fatigue. No contact stress from tools. Simply strip the wire and insert it into the connector. At HellermannTyton, we recognize the importance of reduced wiring time, lower labor costs and project expenses, easier installations in difficult spots, and the need to minimize hand strain.

4.) Color Coded with Multiple Ports

The “clear benefit” of the HelaCon Plus connector from HellermannTyton is its transparent housing with color-coded sides that allows for easy identification and visual verification. And, this connector has multiple in-line port options (2, 3, 4, 5, 6 and 8 pole selection) for future expansion.

5.) Testing Simplified

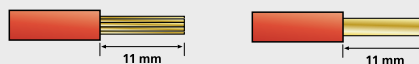
Featuring a separate test slot, the HellermannTyton HelaCon Plus product includes a larger, more accessible test port that is positioned in the center of the connector.

6.) Safer, More Dependable

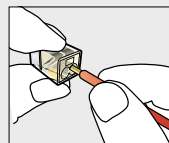
With a 24 A max current rating, the HellermannTyton HelaCon Plus connector easily exceeds even the most rigid building and construction standards with a UL listed approval up to 600 volts for building wire and 1000 volts

3 Easy Steps to using HelaCon Plus

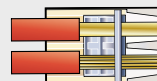
- 1 Strip cable to 0.43 in (11 mm)



- 2 Push cable into HelaCon Plus connector



- 3 Visibly check cable connection through transparent shell



Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
102-69067	102-69067	68	148-00092	148-00092	64	151-00903	151-00903	69	156-00444	156-00444	57
102-69068	102-69068	68	148-00093	148-00093	64	151-00925	151-00925	70	156-00455	156-00455	18
110-70083	110-70083	76	148-00095	148-00095	64	151-00927	151-00927	72	156-00456	156-00456	18
110-70084	110-70084	76	148-00096	148-00096	64	151-00932	151-00932	69	156-00457	156-00457	48
110-70089	110-70089	76	148-00200	148-00200	41	151-00982	151-00982	44	156-00468	156-00468	42
110-70091	110-70091	76	148-90000	148-90000	236	151-01108	151-01108	70	156-00507	156-00507	71
110-70106	110-70106	76	148-90001	148-90001	236	151-01109	151-01109	68	156-00521	156-00521	71
110-99000	110-99000	76	148-90002	148-90002	236	151-01113	151-01113	71	156-00538	156-00538	39
111-00659	111-00659	22	148-90003	148-90003	236	151-01125	151-01125	68	156-00539	156-00539	39
111-00698	111-00698	22	148-90004	148-90004	236	151-01126	151-01126	68	156-00540	156-00540	39
111-00718	111-00718	22	148-90005	148-90005	236	151-01136	151-01136	71	156-00541	156-00541	39
111-00732	111-00732	22	148-90024	148-90024	236	151-02600	151-02600	69	156-00588	156-00588	42
111-00829	111-00829	24	148-90025	148-90025	236	151-02901	151-02901	68	156-00589	156-00589	42
111-00830	111-00830	24	148-90026	148-90026	236	151-03401	151-03401	43	156-00590	156-00590	42
111-00831	111-00831	24	148-90027	148-90027	236	151-03402	151-03402	43	156-00591	156-00591	42
111-01125	111-01125	22	148-90028	148-90028	236	151-03403	151-03403	43	156-00592	156-00592	42
111-01128	111-01128	19	148-90029	148-90029	236	151-03404	151-03404	43	156-00593	156-00593	42
111-01235	111-01235	18	150-08110	150-08110	68	151-06500	151-06500	106	156-00635	156-00635	42
111-01264	111-01264	20	150-09201	150-09201	69	151-14313	151-14313	142	156-00791	156-00791	62
111-01265	111-01265	20	150-31090	150-31090	47	151-14314	151-14314	142	156-00856	156-00856	39
111-01266	111-01266	20	150-31091	150-31091	47	151-26101	151-26101	69	156-00858	156-00858	39
111-01332	111-01332	23	150-31093	150-31093	47	151-27010	151-27010	100	156-00859	156-00859	39
111-01560	111-01560	20	150-31098	150-31098	48	151-27019	151-27019	100	156-00860	156-00860	39
111-01562	111-01562	20	150-45397	150-45397	69	151-27202	151-27202	100	156-00861	156-00861	39
111-01563	111-01563	20	150-55850	150-55850	46	151-27219	151-27219	100	156-00862	156-00862	39
111-05350	111-05350	47	150-55948	150-55948	48	151-32602	151-32602	70	156-00863	156-00863	39
111-12300	111-12300	14	150-76090	150-76090	39	155-01600	155-01600	69	156-00864	156-00864	39
111-12301	111-12301	14	150-77938	150-77938	48	155-03800	155-03800	71	156-00865	156-00865	39
111-12302	111-12302	14	150-77940	150-77940	46	155-11601	155-11601	68	156-00866	156-00866	40
111-85350	111-85350	54	150-95500	150-95500	68	155-12300	155-12300	60	156-00867	156-00867	40
111-85850	111-85850	54	151-00010	151-00010	142	155-23601	155-23601	61	156-00868	156-00868	40
111-85871	111-85871	47	151-00016	151-00016	69	155-30602	155-30602	59	156-00871	156-00871	40
115-00042	115-00042	34	151-00017	151-00017	69	155-30702	155-30702	71	156-00872	156-00872	41
116-03019	116-03019	11	151-00018	151-00018	142	155-30802	155-30802	68	156-00873	156-00873	41
117-00012	117-00012	38	151-00019	151-00019	142	155-30902	155-30902	69	156-00874	156-00874	40
117-00016	117-00016	35	151-00029	151-00029	68	155-31102	155-31102	71	156-00875	156-00875	40
117-00017	117-00017	35	151-00074	151-00074	69	155-31202	155-31202	62	156-00876	156-00876	40
117-00018	117-00018	35	151-00080	151-00080	69	155-36002	155-36002	71	156-00877	156-00877	41
117-00019	117-00019	35	151-00281	151-00281	69	155-37104	155-37104	40	156-00878	156-00878	41
118-00032	118-00032	18	151-00282	151-00282	69	156-00016	156-00016	41	156-00953	156-00953	46
118-00110	118-00110	27	151-00429	151-00429	71	156-00017	156-00017	40	156-01007	156-01007	39
118-00111	118-00111	27	151-00430	151-00430	71	156-00025	156-00025	46	156-01601	156-01601	40
118-04700	118-04700	27	151-00432	151-00432	92	156-00036	156-00036	63	156-04600	156-04600	41
118-04800	118-04800	27	151-00433	151-00433	92	156-00054	156-00054	47	156-04601	156-04601	41
118-04900	118-04900	27	151-00492	151-00492	49, 85	156-00055	156-00055	47	157-00034	157-00034	58
118-05900	118-05900	27	151-00513	151-00513	71	156-00056	156-00056	47	157-00035	157-00035	58
120-00021	120-00021	87	151-00605	151-00605	68	156-00057	156-00057	47	157-00036	157-00036	58
120-00031	120-00031	87	151-00623	151-00623	69	156-00066	156-00066	46	157-00060	157-00060	38
120-00060	120-00060	83	151-00629	151-00629	69	156-00067	156-00067	50	157-00072	157-00072	51
121-63560	121-63560	34	151-00644	151-00644	106	156-00068	156-00068	50	157-00083	157-00083	59
121-82160	121-82160	34	151-00650	151-00650	69	156-00069	156-00069	50	157-00097	157-00097	51
121-83360	121-83360	34	151-00651	151-00651	68	156-00070	156-00070	50	157-00105	157-00105	60
126-00000	126-00000	41	151-00663	151-00663	68	156-00071	156-00071	50	157-00106	157-00106	60
126-00015	126-00015	54	151-00664	151-00664	69	156-00072	156-00072	50	157-00108	157-00108	51
126-00036	126-00036	41	151-00665	151-00665	69	156-00074	156-00074	50	157-00112	157-00112	53
126-00041	126-00041	56	151-00667	151-00667	178	156-00085	156-00085	48	157-00118	157-00118	52
126-00042	126-00042	56	151-00668	151-00668	178	156-00089	156-00089	47	157-00119	157-00119	52
126-00043	126-00043	55	151-00675	151-00675	71	156-00090	156-00090	47	157-00120	157-00120	52
126-00044	126-00044	55	151-00677	151-00677	70	156-00091	156-00091	47	157-00130	157-00130	52
126-00045	126-00045	55	151-00700	151-00700	142	156-00092	156-00092	47	157-00140	157-00140	51
126-00046	126-00046	55	151-00701	151-00701	142	156-00093	156-00093	47	157-00142	157-00142	53
126-00049	126-00049	56	151-00702	151-00702	142	156-00134	156-00134	63	157-00143	157-00143	53
126-00065	126-00065	57	151-00703	151-00703	142	156-00135	156-00135	63	157-00144	157-00144	53
126-00069	126-00069	56	151-00704	151-00704	71	156-00136	156-00136	63	157-00157	157-00157	53
126-00075	126-00075	54	151-00756	151-00756	99	156-00137	156-00137	63	157-00400	157-00400	58
126-00081	126-00081	54	151-00757	151-00757	18	156-00155	156-00155	62	157-00401	157-00401	58
126-00086	126-00086	54	151-00758	151-00758	18	156-00156	156-00156	46	157-00402	157-00402	58
126-00099	126-00099	54	151-00765	151-00765	71	156-00157	156-00157	46	157-00403	157-00403	58
126-02300	126-02300	54	151-00775	151-00775	70	156-00235	156-00235	48	157-00404	157-00404	58
126-03100	126-03100	57	151-00785	151-00785	70	156-00264	156-00264	57	157-00405	157-00405	58
132-00006	132-00006	65	151-00786	151-00786	70	156-00272	156-00272	63	161-60001	161-60001	136
132-00007	132-00007	65	151-00790	151-00790	68	156-00273	156-00273	63	161-60002	161-60002	136
132-00008	132-00008	65	151-00792	151-00792	71	156-00282	156-00282	49	161-60003	161-60003	136
132-00009	132-00009	65	151-00812	151-00812	103	156-00306	156-00306	63	161-60004	161-60004	136
132-00010	132-00010	65	151-00813	151-00813	103	156-00318	156-00318	62	161-60005	161-60005	136
132-00011	132-00011	65	151-00814	151-00814	103	156-00329	156-00329	49	161-63103	161-63103	134
148-00088	148-00088	64	151-00833	151-00833	71	156-00375	156-00375	47	161-63203	161-63203	134
148-00089	148-00089	64	151-00834	151-00834	71	156-00376	156-00376	47	161-63303	161-63303	134
148-00090	148-00090	64	151-00835	151-00835	71	156-00377	156-00377	47	161-63403	161-63403	134
148-00091	148-00091	64	151-00836	151-00836	71	156-00378	156-00378	47	161-63503	161-63503	134

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
161-64002	161-64002	135	170-03066	170-03066	149	170-03148	170-03148	159	181-00224	181-00224	119
161-64004	161-64004	135	170-03067	170-03067	136, 164	170-03149	170-03149	159	181-00226	181-00226	119
161-64006	161-64006	135	170-03068	170-03068	136, 164	170-03150	170-03150	159	181-00228	181-00228	129
161-64008	161-64008	135	170-03069	170-03069	155	170-03151	170-03151	159	181-00230	181-00230	129
161-64010	161-64010	135	170-03070	170-03070	155	170-03152	170-03152	159	181-00232	181-00232	129
161-64012	161-64012	135	170-03071	170-03071	149	170-03153	170-03153	151	181-00234	181-00234	129
161-64014	161-64014	135	170-03072	170-03072	149	170-03154	170-03154	151	181-00236	181-00236	124
161-64112	161-64112	134	170-03073	170-03073	149	170-03155	170-03155	151	181-00238	181-00238	124
161-64213	161-64213	134	170-03074	170-03074	149	170-03156	170-03156	151	181-00240	181-00240	124
161-64310	161-64310	134	170-03076	170-03076	147	170-03157	170-03157	151	181-00242	181-00242	124
161-64414	161-64414	134	170-03077	170-03077	147	170-03158	170-03158	162	181-00244	181-00244	119
161-64507	161-64507	134	170-03078	170-03078	147	170-03159	170-03159	162	181-00246	181-00246	119
169-60018	169-60018	140	170-03079	170-03079	147	170-03160	170-03160	162	181-00248	181-00248	119
169-60019	169-60019	140	170-03080	170-03080	147	170-03161	170-03161	162	181-00250	181-00250	119
169-60020	169-60020	140	170-03081	170-03081	147	170-03162	170-03162	162	181-00252	181-00252	129
169-60021	169-60021	140	170-03082	170-03082	158	170-03163	170-03163	162	181-00254	181-00254	129
169-60022	169-60022	140	170-03083	170-03083	158	170-03164	170-03164	162	181-00259	181-00259	129
170-03000	170-03000	145	170-03084	170-03084	158	170-03165	170-03165	162	181-00260	181-00260	115
170-03001	170-03001	145	170-03085	170-03085	158	170-03166	170-03166	162	181-00262	181-00262	115
170-03002	170-03002	145	170-03086	170-03086	158	170-03174	170-03174	145	181-00265	181-00265	129
170-03003	170-03003	145	170-03087	170-03087	158	170-03175	170-03175	163	181-00300	181-00300	114
170-03004	170-03004	145	170-03088	170-03088	158	170-03177	170-03177	145	181-00301	181-00301	114
170-03005	170-03005	145	170-03089	170-03089	149	170-20400	170-20400	156	181-00302	181-00302	114
170-03006	170-03006	149	170-03090	170-03090	149	170-20600	170-20600	156	181-00303	181-00303	114
170-03007	170-03007	149	170-03091	170-03091	149	170-20800	170-20800	156	181-00304	181-00304	114
170-03008	170-03008	149	170-03092	170-03092	149	170-21000	170-21000	156	181-00305	181-00305	114
170-03010	170-03010	149	170-03093	170-03093	149	170-21200	170-21200	156	181-00306	181-00306	114
170-03011	170-03011	149	170-03094	170-03094	149	170-21500	170-21500	156	181-00307	181-00307	114
170-03012	170-03012	148	170-03095	170-03095	149	170-22000	170-22000	156	181-00308	181-00308	114
170-03013	170-03013	148	170-03097	170-03097	163	170-22500	170-22500	156	181-00309	181-00309	114
170-03014	170-03014	148	170-03098	170-03098	160	170-23000	170-23000	156	181-00311	181-00311	115
170-03015	170-03015	148	170-03099	170-03099	160	170-25000	170-25000	156	181-00312	181-00312	119
170-03016	170-03016	148	170-03100	170-03100	160	170-80150	170-80150	146	181-00313	181-00313	119
170-03017	170-03017	150	170-03101	170-03101	160	170-80250	170-80250	146	181-00314	181-00314	119
170-03018	170-03018	150	170-03102	170-03102	160	170-80350	170-80350	146	181-00315	181-00315	119
170-03019	170-03019	150	170-03103	170-03103	160	173-00400	173-00400	154	181-00316	181-00316	124
170-03020	170-03020	150	170-03104	170-03104	160	173-00600	173-00600	154	181-00317	181-00317	124
170-03021	170-03021	150	170-03105	170-03105	160	173-00800	173-00800	154	181-00318	181-00318	124
170-03024	170-03024	157	170-03106	170-03106	160	173-01000	173-01000	154	181-00319	181-00319	124
170-03025	170-03025	157	170-03107	170-03107	160	173-01200	173-01200	154	181-00320	181-00320	129
170-03026	170-03026	157	170-03108	170-03108	160	173-01400	173-01400	154	181-00321	181-00321	129
170-03027	170-03027	155	170-03109	170-03109	160	173-01600	173-01600	154	181-00322	181-00322	129
170-03028	170-03028	155	170-03110	170-03110	160	173-01800	173-01800	154	181-00323	181-00323	129
170-03029	170-03029	155	170-03111	170-03111	160	173-02000	173-02000	154	181-00442	181-00442	115
170-03030	170-03030	155	170-03112	170-03112	160	173-60400	173-60400	153	181-00443	181-00443	115
170-03031	170-03031	164	170-03113	170-03113	160	173-60600	173-60600	153	181-00445	181-00445	115
170-03032	170-03032	136, 164	170-03114	170-03114	160	173-60800	173-60800	153	181-00446	181-00446	115
170-03033	170-03033	136, 164	170-03115	170-03115	160	173-61000	173-61000	153	181-00447	181-00447	115
170-03034	170-03034	136, 164	170-03116	170-03116	150	173-61200	173-61200	153	181-00448	181-00448	115
170-03035	170-03035	148	170-03117	170-03117	150	173-61400	173-61400	153	181-00449	181-00449	115
170-03036	170-03036	150	170-03118	170-03118	150	173-61600	173-61600	153	181-00450	181-00450	115
170-03037	170-03037	157	170-03119	170-03119	150	173-61800	173-61800	153	181-00451	181-00451	115
170-03038	170-03038	157	170-03120	170-03120	150	173-62000	173-62000	153	181-00452	181-00452	116
170-03039	170-03039	164	170-03121	170-03121	150	175REF	590-01751	232	181-00453	181-00453	116
170-03040	170-03040	164	170-03122	170-03122	150	181-00024	181-00024	122	181-00454	181-00454	116
170-03041	170-03041	145	170-03123	170-03123	148	181-00025	181-00025	117	181-00455	181-00455	116
170-03042	170-03042	145	170-03124	170-03124	157	181-00027	181-00027	123	181-00456	181-00456	116
170-03043	170-03043	145	170-03125	170-03125	157	181-00136	181-00136	117	181-00457	181-00457	116
170-03044	170-03044	145	170-03126	170-03126	157	181-00137	181-00137	121	181-00458	181-00458	117
170-03045	170-03045	145	170-03127	170-03127	157	181-00140	181-00140	116	181-00459	181-00459	117
170-03046	170-03046	155	170-03128	170-03128	157	181-00141	181-00141	116	181-00460	181-00460	117
170-03047	170-03047	155	170-03129	170-03129	157	181-00142	181-00142	116	181-00461	181-00461	117
170-03048	170-03048	155	170-03130	170-03130	157	181-00143	181-00143	116	181-00462	181-00462	118
170-03049	170-03049	155	170-03131	170-03131	157	181-00144	181-00144	116	181-00463	181-00463	118
170-03050	170-03050	161	170-03132	170-03132	157	181-00145	181-00145	116	181-00464	181-00464	118
170-03051	170-03051	161	170-03133	170-03133	157	181-00147	181-00147	120	181-00465	181-00465	118
170-03052	170-03052	161	170-03134	170-03134	157	181-00148	181-00148	121	181-00467	181-00467	118
170-03053	170-03053	161	170-03135	170-03135	157	181-00152	181-00152	131	181-00468	181-00468	119
170-03054	170-03054	163	170-03136	170-03136	157	181-00153	181-00153	131	181-00469	181-00469	119
170-03055	170-03055	163	170-03137	170-03137	157	181-00154	181-00154	131	181-00470	181-00470	120
170-03056	170-03056	163	170-03138	170-03138	157	181-00155	181-00155	126	181-00471	181-00471	120
170-03057	170-03057	163	170-03139	170-03139	157	181-00156	181-00156	126	181-00472	181-00472	120
170-03058	170-03058	161	170-03140	170-03140	152	181-00157	181-00157	126	181-00473	181-00473	121
170-03059	170-03059	161	170-03141	170-03141	152	181-00159	181-00159	125	181-00474	181-00474	121
170-03060	170-03060	161	170-03142	170-03142	152	181-00212	181-00212	124	181-00475	181-00475	121
170-03061	170-03061	161	170-03143	170-03143	152	181-00214	181-00214	124	181-00476	181-00476	121
170-03062	170-03062	163	170-03144	170-03144	152	181-00216	181-00216	124	181-00477	181-00477	121
170-03063	170-03063	163	170-03145	170-03145	152	181-00218	181-00218	124	181-00479	181-00479	121
170-03064	170-03064	163	170-03146	170-03146	152	181-00220	181-00220	119	181-00480	181-00480	121
170-03065	170-03065	163	170-03147	170-03147	152	181-00222	181-00222	119	181-00481	181-00481	116

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
181-00482	181-00482	117	181-00572	181-00572	122	181-00653	181-00653	130	181-21005	181-21005	123
181-00483	181-00483	117	181-00573	181-00573	123	181-00654	181-00654	130	181-21007	181-21007	123
181-00485	181-00485	117	181-00574	181-00574	118	181-00655	181-00655	130	181-21009	181-21009	123
181-00486	181-00486	117	181-00575	181-00575	123	181-00656	181-00656	130	181-22005	181-22005	118
181-00487	181-00487	118	181-00576	181-00576	123	181-00657	181-00657	130	181-22008	181-22008	118
181-00488	181-00488	118	181-00577	181-00577	123	181-00658	181-00658	130	181-22013	181-22013	118
181-00489	181-00489	118	181-00578	181-00578	123	181-00659	181-00659	130	181-22016	181-22016	118
181-00490	181-00490	116	181-00579	181-00579	123	181-00663	181-00663	131	181-22018	181-22018	118
181-00491	181-00491	116	181-00580	181-00580	123	181-00664	181-00664	131	181-22020	181-22020	123
181-00492	181-00492	116	181-00581	181-00581	124	181-00665	181-00665	131	181-22024	181-22024	123
181-00493	181-00493	116	181-00582	181-00582	124	181-00666	181-00666	131	181-22028	181-22028	123
181-00494	181-00494	117	181-00583	181-00583	124	181-00667	181-00667	131	181-22030	181-22030	123
181-00495	181-00495	117	181-00584	181-00584	125	181-00671	181-00671	117	181-22032	181-22032	123
181-00496	181-00496	117	181-00585	181-00585	125	181-00672	181-00672	120	181-22034	181-22034	123
181-00497	181-00497	117	181-00586	181-00586	125	181-00684	181-00684	114	181-23001	181-23001	119
181-00498	181-00498	118	181-00587	181-00587	125	181-05500	181-05500	116	181-23002	181-23002	119
181-00499	181-00499	118	181-00588	181-00588	125	181-11000	181-11000	116	181-23003	181-23003	124
181-00500	181-00500	118	181-00589	181-00589	125	181-11002	181-11002	116	181-23007	181-23007	124
181-00501	181-00501	118	181-00590	181-00590	125	181-11005	181-11005	116	181-23009	181-23009	124
181-00503	181-00503	119	181-00591	181-00591	126	181-11008	181-11008	116	181-23012	181-23012	124
181-00504	181-00504	119	181-00592	181-00592	126	181-11009	181-11009	122	181-24000	181-24000	119
181-00505	181-00505	119	181-00593	181-00593	126	181-11013	181-11013	122	181-24002	181-24002	119
181-00506	181-00506	119	181-00594	181-00594	126	181-11015	181-11015	122	181-24003	181-24003	124
181-00507	181-00507	120	181-00595	181-00595	126	181-11016	181-11016	122	181-24008	181-24008	124
181-00508	181-00508	120	181-00596	181-00596	126	181-11019	181-11019	122	181-24011	181-24011	124
181-00509	181-00509	120	181-00597	181-00597	127	181-11021	181-11021	122	181-24013	181-24013	124
181-00510	181-00510	120	181-00598	181-00598	127	181-11501	181-11501	116	181-24014	181-24014	124
181-00511	181-00511	120	181-00599	181-00599	127	181-11502	181-11502	116	181-31001	181-31001	120
181-00512	181-00512	120	181-00600	181-00600	127	181-11505	181-11505	122	181-31002	181-31002	120
181-00513	181-00513	120	181-00601	181-00601	127	181-11507	181-11507	122	181-31007	181-31007	125
181-00514	181-00514	120	181-00602	181-00602	127	181-11509	181-11509	122	181-32002	181-32002	120
181-00515	181-00515	120	181-00603	181-00603	128	181-11511	181-11511	122	181-32003	181-32003	120
181-00516	181-00516	121	181-00604	181-00604	128	181-12001	181-12001	117	181-32004	181-32004	125
181-00517	181-00517	121	181-00605	181-00605	128	181-12002	181-12002	117	181-32005	181-32005	125
181-00518	181-00518	121	181-00606	181-00606	128	181-12005	181-12005	122	181-32009	181-32009	125
181-00519	181-00519	121	181-00607	181-00607	128	181-12008	181-12008	122	181-32012	181-32012	125
181-00520	181-00520	121	181-00608	181-00608	128	181-12011	181-12011	122	181-32015	181-32015	125
181-00521	181-00521	121	181-00609	181-00609	129	181-12013	181-12013	122	181-33000	181-33000	120
181-00522	181-00522	121	181-00610	181-00610	129	181-13001	181-13001	117	181-33004	181-33004	120
181-00523	181-00523	121	181-00611	181-00611	130	181-13003	181-13003	122	181-33006	181-33006	120
181-00524	181-00524	116	181-00612	181-00612	130	181-13006	181-13006	122	181-33009	181-33009	125
181-00525	181-00525	116	181-00613	181-00613	130	181-13008	181-13008	122	181-33015	181-33015	125
181-00526	181-00526	116	181-00614	181-00614	130	181-13010	181-13010	122	181-33018	181-33018	125
181-00527	181-00527	116	181-00615	181-00615	130	181-13012	181-13012	122	181-33021	181-33021	125
181-00528	181-00528	116	181-00616	181-00616	130	181-14000	181-14000	117	181-33022	181-33022	125
181-00529	181-00529	116	181-00617	181-00617	131	181-14001	181-14001	122	181-34000	181-34000	120
181-00530	181-00530	117	181-00618	181-00618	131	181-14003	181-14003	122	181-34001	181-34001	120
181-00531	181-00531	117	181-00619	181-00619	131	181-14006	181-14006	122	181-34002	181-34002	125
181-00532	181-00532	117	181-00620	181-00620	128	181-15100	181-15100	117	181-34004	181-34004	125
181-00533	181-00533	117	181-00621	181-00621	127	181-15101	181-15101	117	181-34007	181-34007	125
181-00534	181-00534	118	181-00622	181-00622	127	181-15102	181-15102	117	181-35002	181-35002	126
181-00535	181-00535	118	181-00623	181-00623	127	181-15105	181-15105	122	181-35005	181-35005	126
181-00536	181-00536	118	181-00624	181-00624	127	181-15107	181-15107	122	181-42002	181-42002	121
181-00537	181-00537	118	181-00625	181-00625	127	181-15201	181-15201	118	181-42004	181-42004	121
181-00538	181-00538	118	181-00626	181-00626	127	181-15202	181-15202	118	181-42005	181-42005	126
181-00539	181-00539	118	181-00627	181-00627	127	181-15203	181-15203	123	181-42008	181-42008	126
181-00540	181-00540	119	181-00628	181-00628	127	181-15207	181-15207	123	181-42010	181-42010	126
181-00541	181-00541	119	181-00629	181-00629	127	181-15209	181-15209	123	181-42014	181-42014	126
181-00542	181-00542	120	181-00630	181-00630	127	181-15211	181-15211	123	181-43001	181-43001	121
181-00543	181-00543	121	181-00631	181-00631	127	181-15213	181-15213	123	181-43002	181-43002	121
181-00544	181-00544	121	181-00632	181-00632	127	181-15300	181-15300	118	181-43004	181-43004	126
181-00545	181-00545	121	181-00633	181-00633	128	181-15304	181-15304	123	181-43006	181-43006	126
181-00546	181-00546	121	181-00634	181-00634	128	181-15306	181-15306	123	181-43008	181-43008	126
181-00547	181-00547	121	181-00635	181-00635	128	181-15307	181-15307	123	181-44006	181-44006	121
181-00548	181-00548	122	181-00636	181-00636	128	181-15308	181-15308	123	181-44009	181-44009	121
181-00550	181-00550	123	181-00637	181-00637	127	181-15400	181-15400	123	181-44015	181-44015	121
181-00552	181-00552	122	181-00638	181-00638	128	181-15404	181-15404	123	181-44018	181-44018	121
181-00554	181-00554	123	181-00639	181-00639	128	181-15406	181-15406	123	181-44020	181-44020	126
181-00557	181-00557	125	181-00640	181-00640	128	181-15500	181-15500	117	181-44027	181-44027	126
181-00558	181-00558	125	181-00641	181-00641	128	181-15502	181-15502	117	181-44031	181-44031	126
181-00560	181-00560	126	181-00642	181-00642	128	181-15503	181-15503	117	181-44033	181-44033	126
181-00562	181-00562	126	181-00643	181-00643	128	181-15504	181-15504	117	181-44035	181-44035	126
181-00564	181-00564	122	181-00644	181-00644	128	181-15505	181-15505	123	181-45000	181-45000	121
181-00565	181-00565	122	181-00645	181-00645	129	181-15509	181-15509	123	181-45001	181-45001	121
181-00566	181-00566	122	181-00646	181-00646	129	181-15511	181-15511	123	181-45002	181-45002	126
181-00567	181-00567	122	181-00647	181-00647	129	181-15513	181-15513	123	181-45010	181-45010	126
181-00568	181-00568	122	181-00648	181-00648	129	181-15515	181-15515	123	181-45011	181-45011	126
181-00569	181-00569	122	181-00649	181-00649	130	181-21000	181-21000	118	181-45012	181-45012	126
181-00570	181-00570	122	181-00651	181-00651	130	181-21001	181-21001	118	181-45013	181-45013	126
181-00571	181-00571	122	181-00652	181-00652	130	181-21003	181-21003	118	181-64000	181-64000	121

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
181-64001	181-64001	121	1N9C	161-05003	138	553-50024	553-50024	208	557-00113	557-00113	227
181-84004	181-84004	121	1NFP0C	161-05004	138	553-50025	553-50025	208	558-00006	558-00006	204
181-84007	181-84007	121	1NFP9C	161-05013	138	553-50026	553-50026	208	558-00045	558-00045	190
181-90050	181-90050	115	1P9C	161-05015	138	553-50027	553-50027	208	558-00046	558-00046	190
181-91000	181-91000	115	2.5FRP0C	161-05016	138	553-50028	553-50028	208	558-00047	558-00047	190
181-91004	181-91004	115	2.5FRP9C	161-05017	138	553-50029	553-50029	208	558-00052	558-00052	190
181-91008	181-91008	115	2.5N0C	161-05018	138	553-50030	553-50030	208	558-00053	558-00053	190
181-91503	181-91503	115	2.5N9C	161-05019	138	553-50031	553-50031	208	558-00056	558-00056	190
181-91507	181-91507	115	2.5NFP0C	161-05024	138	553-50032	553-50032	208	558-00057	558-00057	190
181-91510	181-91510	115	2.5NFP9C	161-05027	138	553-50033	553-50033	208	558-00058	558-00058	190
181-92001	181-92001	115	2.5P9C	161-05028	138	553-50034	553-50034	208	558-00059	558-00059	190
181-92005	181-92005	115	201-20010	201-20010	135	553-50035	553-50035	208	558-00060	558-00060	188
181-92011	181-92011	115	2100CABLE	557-00004	222	553-50036	553-50036	208	558-00061	558-00061	190
181-93003	181-93003	115	2100CARD	557-00008	222	553-50037	553-50037	208	558-00063	558-00063	190
181-93008	181-93008	115	2100OPEN	557-00005	222	553-50038	553-50038	208	558-00065	558-00065	188
181-93011	181-93011	115	211-60000	211-60000	175	553-50039	553-50039	208	558-00066	558-00066	188
181-94003	181-94003	115	211-60001	211-60001	175	553-50040	553-50040	208	558-00069	558-00069	190
181-94009	181-94009	115	211-60002	211-60002	175	553-50041	553-50041	208	558-00071	558-00071	190
181-94014	181-94014	115	211-60003	211-60003	175	553-50042	553-50042	208	558-00179	558-00179	190
181-96000	181-96000	115	211-60005	211-60005	175	553-50063	553-50063	207	558-00307	558-00307	204
181-96002	181-96002	115	211-60006	211-60006	175	553-50064	553-50064	207	558-00308	558-00308	204
184-11004	184-11004	127	211-60007	211-60007	175	553-50066	553-50066	208	558-00309	558-00309	204
184-11006	184-11006	127	211-60008	211-60008	175	553-50067	553-50067	207	558-00310	558-00310	204
184-11008	184-11008	127	211-60009	211-60009	175	553-50068	553-50068	207	558-00311	558-00311	204
184-11009	184-11009	127	211-60010	211-60010	175	553-50069	553-50069	207	558-00312	558-00312	204
184-11010	184-11010	127	211-60020	211-60020	175	553-50070	553-50070	207	558-00313	558-00313	204
184-11012	184-11012	127	211-60040	211-60040	175	553-50071	553-50071	207	558-00314	558-00314	204
184-12002	184-12002	127	211-60050	211-60050	175	553-50072	553-50072	207	558-00327	558-00327	231
184-12004	184-12004	127	211-60061	211-60061	175	553-50073	553-50073	207	558-00328	558-00328	231
184-12005	184-12005	127	211-60078	211-60078	175	553-50074	553-50074	207	558-00330	558-00330	231
184-12007	184-12007	127	211-60090	211-60090	175	553-50075	553-50075	207	558-00331	558-00331	231
184-13003	184-13003	127	211-60120	211-60120	175	553-50076	553-50076	207	558-00333	558-00333	231
184-13005	184-13005	127	211-60140	211-60140	175	553-50077	553-50077	207	558-00334	558-00334	231
184-13007	184-13007	127	211-60160	211-60160	175	553-50078	553-50078	207	558-00336	558-00336	204
184-14002	184-14002	127	2FRP0C	161-05029	138	553-50079	553-50079	207	558-00337	558-00337	204
184-14004	184-14004	127	2FRP9C	161-05030	138	553-50080	553-50080	207	558-00338	558-00338	204
184-15101	184-15101	127	2N0C	161-05032	138	553-50081	553-50081	207	558-00339	558-00339	204
184-15102	184-15102	127	2N9C	161-05034	138	553-50082	553-50082	208	558-00340	558-00340	204
184-15151	184-15151	128	2NFP0C	161-05036	138	553-50083	553-50083	208	558-00341	558-00341	204
184-15152	184-15152	128	2NFP9C	161-05043	138	553-50084	553-50084	208	558-00342	558-00342	204
184-15153	184-15153	128	2P9C	161-05047	138	553-50085	553-50085	208	558-00343	558-00343	204
184-15155	184-15155	128	3FRP0C	161-05048	138	553-50086	553-50086	208	558-00344	558-00344	204
184-15201	184-15201	128	3FRP9C	161-05049	138	553-50087	553-50087	208	558-00345	558-00345	204
184-15202	184-15202	128	3N0C	161-05050	138	553-50088	553-50088	207	558-00346	558-00346	204
184-15205	184-15205	128	3N9C	161-05051	138	553-50089	553-50089	208	558-00350	558-00350	204
184-15206	184-15206	128	3NFP0C	161-05052	138	553-50176	553-50176	207	558-00351	558-00351	204
184-15301	184-15301	128	3NFP9C	161-05055	138	553-50177	553-50177	207	558-00370	558-00370	204
184-15302	184-15302	128	3P9C	161-05056	138	553-50192	553-50192	208	558-00374	558-00374	204
184-15304	184-15304	128	4FRP0C	161-05057	138	553-50209	553-50209	208	591-00076	591-00076	227
184-15401	184-15401	128	4FRP9C	161-05058	138	553-50225	553-50225	208	591-00231	591-00231	227
184-15403	184-15403	128	4N0C	161-05071	138	553-50226	553-50226	208	591-00232	591-00232	227
184-21002	184-21002	128	4N9C	161-05072	138	553-50227	553-50227	208	591-00233	591-00233	227
184-21003	184-21003	128	4NFP0C	161-05074	138	553-50231	553-50231	208	591-00243	591-00243	227
184-22003	184-22003	128	4NFP9C	161-05075	138	553-50232	553-50232	208	591-00244	591-00244	227
184-22005	184-22005	128	4P9C	161-05076	138	556-00035	556-00035	187	591-00251	591-00251	227
184-22008	184-22008	128	512REF	590-05121	232	556-00036	556-00036	187	591-00252	591-00252	227
184-23003	184-23003	129	514REF	590-05141	232	556-00037	556-00037	187	591-00259	591-00259	227
184-23004	184-23004	129	553-50001	553-50001	207	556-00038	556-00038	187	591-00260	591-00260	227
184-23006	184-23006	129	553-50002	553-50002	207	556-00039	556-00039	187	591-00261	591-00261	227
184-24003	184-24003	129	553-50003	553-50003	207	556-00042	556-00042	187	591-00263	591-00263	227
184-24004	184-24004	129	553-50004	553-50004	207	556-00189	556-00189	193	591-00264	591-00264	227
184-24007	184-24007	129	553-50005	553-50005	207	556-00190	556-00190	192	591-00265	591-00265	227
184-32001	184-32001	130	553-50006	553-50006	207	556-00230	556-00230	192	591-00278	591-00278	227
184-32004	184-32004	130	553-50007	553-50007	207	556-00231	556-00231	192	596-00183	596-00183	203
184-33001	184-33001	130	553-50008	553-50008	207	556-00236	556-00236	192	596-00184	596-00184	203
184-33002	184-33002	130	553-50009	553-50009	207	556-00430	556-00430	193	596-00185	596-00185	203
184-33004	184-33004	130	553-50010	553-50010	207	556-00431	556-00431	193	596-00189	596-00189	203
184-34001	184-34001	130	553-50011	553-50011	207	556-00432	556-00432	193	596-00190	596-00190	203
184-34003	184-34003	130	553-50012	553-50012	207	556-00433	556-00433	193	596-00191	596-00191	203
184-34005	184-34005	130	553-50013	553-50013	207	556-00434	556-00434	193	596-00192	596-00192	203
184-42001	184-42001	131	553-50014	553-50014	207	556-00460	556-00460	193	596-00193	596-00193	203
184-42003	184-42003	131	553-50015	553-50015	207	556-00461	556-00461	193	596-00194	596-00194	203
184-43001	184-43001	131	553-50016	553-50016	207	556-03065	556-03065	193	596-00195	596-00195	203
184-43003	184-43003	131	553-50017	553-50017	207	556-26006	556-26006	210	596-00196	596-00196	203
184-44001	184-44001	131	553-50018	553-50018	207	556-26007	556-26007	210	596-00202	596-00202	202
184-44002	184-44002	131	553-50019	553-50019	207	556-26008	556-26008	210	596-00203	596-00203	231
184-44004	184-44004	131	553-50020	553-50020	207	556-26009	556-26009	210	596-00204	596-00204	231
1FRP0C	161-05000	138	553-50021	553-50021	207	557-00002	557-00002	222, 227	596-00206	596-00206	229
1FRP9C	161-05001	138	553-50022	553-50022	207	557-00003	557-00003	222, 227	596-00207	596-00207	229
1N0C	161-05002	138	553-50023	553-50023	208	557-00112	557-00112	227	596-00208	596-00208	229

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
596-00231	596-00231	228	ATS10266110	102-66110	89	CTT20R9M4	112-51904	36	GT.50X62P2	854-44342	73
596-00232	596-00232	228	ATS10266209	102-66209	89	CTT60R0HSC2	112-52112	36	GT.50X63C2	854-44343	73
596-00233	596-00233	228	ATS10266210	102-66210	89	CTT60R0HSM4	112-52114	36	GT.50X63P2	854-44344	73
596-00234	596-00234	228	ATSTROLLEY	102-00030	89	CTT60R9C2	112-52104	36	GT.50X64C2	854-44345	73
596-00235	596-00235	228	BC10	591-00076	222	CTT60R9M4	112-52106	36	GT.50X64P2	854-44346	73
596-00236	596-00236	228	CSG	181-00001	112	DCT110HIRC2	115-00033	37	GT.50X65C2	854-44347	73
596-00237	596-00237	230	CSW	181-00002	112	DCT110HIRK2	115-31100	37	GT.50X65P2	854-44348	73
596-00238	596-00238	230	CTAM10C2	151-31101	95	DCT90HIRC2	115-00034	37	GT.50X66C2	854-44349	73
596-00239	596-00239	230	CTAM10M4	151-00287	95	DCT90HIRK2	115-30900	37	GT.50X66P2	854-44350	73
596-00240	596-00240	230	CTAM110C2	151-31103	95	DSWS50HSH1	151-06501	107	GT.50X6MP2V2	854-44352	75
596-00241	596-00241	230	CTAM110M4	151-31106	95	DSWS50HSH2	151-06502	107	GT.50X80C2	854-44353	73
596-00242	596-00242	230	CTAM20C2	151-31201	95	ET330	904-00007	167	GT.50X80C2W	854-44354	75
596-00243	596-00243	229	CTAM20M4	151-31202	95	ET660	904-00008	167	GT.50X80P2	854-44355	73
596-00244	596-00244	229	CTAM210C2	151-31203	95	ETCW660	904-00010	167	GT.50X80P2W	854-44356	75
596-00245	596-00245	229	CTAM210M4	151-31205	95	ETS210	904-00006	167	GT.50X82C2	854-44357	73
596-00246	596-00246	229	CTAP10C2	151-00289	95	ETST661	904-00011	167	GT.50X82P2	854-44358	73
596-00247	596-00247	229	CTAP10M4	151-00290	95	ETST6610	904-00012	167	GT.50X83C2	854-44359	73
596-00249	596-00249	229	CTAP110C2	151-30100	95	ETST662	904-00014	167	GT.50X83P2	854-44360	73
596-00251	596-00251	229	CTAP110M4	151-00288	95	ETST663	904-00016	167	GT.50X84C2	854-44361	73
596-00252	596-00252	230	CTAP20C2	151-00291	95	ETST664	904-00018	167	GT.50X84P2	854-44362	73
596-00253	596-00253	230	CTAP20M4	151-00292	95	ETST665	904-00020	167	GT.50X85C2	854-44363	73
596-00255	596-00255	229	CTAP210C2	151-30200	95	ETST666	904-00022	167	GT.50X85P2	854-44364	73
596-00257	596-00257	228	CTAP210M4	151-00308	95	ETST667	904-00024	167	GT.50X86C2	854-44365	73
596-00258	596-00258	228	CTM00C2	151-30300	104	ETST668	904-00026	167	GT.50X86P2	854-44366	73
596-00323	596-00323	202	CTM00M4	151-30301	104	FC1.2AH4	154-00012	180	GT.50X8MP2V2	854-44368	75
596-00371	596-00371	231	CTM010C2	151-30303	104	FC1.2AK2	154-00013	180	GT.75X150C2	854-44369	74
596-00375	596-00375	231	CTM010M4	151-30305	104	FC1.2H4	154-00010	180	GT.75X150P2	854-44371	74
596-00376	596-00376	231	CTM10C2	151-30400	104	FC1.2K2	154-00011	180	GT.75X152C2	854-44373	74
596-00377	596-00377	231	CTM10M4	151-30402	104	FC140	148-00017	181	GT.75X152P2	854-44374	74
596-00378	596-00378	231	CTM110C2	151-30404	104	FC1410	148-00018	181	GT.75X153C2	854-44375	74
596-00379	596-00379	231	CTM110M4	151-30406	104	FC2.2AH4	154-00016	180	GT.75X153P2	854-44376	74
596-00380	596-00380	198	CTM20C2	151-30500	104	FC2.2AK2	154-00017	180	GT.75X154C2	854-44378	74
596-00381	596-00381	198	CTM20M4	151-30501	104	FC2.2H4	154-00014	180	GT.75X154P2	854-44377	74
596-00382	596-00382	198	CTM210C2	151-30504	104	FC2.2K2	154-00015	180	GT.75X155C2	854-44379	74
596-00383	596-00383	198	CTM210M4	151-30506	104	FHA	251-21109	165	GT.75X155P2	854-44380	74
596-00386	596-00386	231	CTM30C2	151-30600	104	FHB	251-21209	165	GT.75X156C2	854-44381	74
596-00387	596-00387	231	CTM30M4	151-30603	104	FHC	251-21309	165	GT.75X156P2	854-44382	74
596-00388	596-00388	231	CTM310C2	151-30605	104	FHD	251-21409	165	GT.75X1800	854-44384	74
596-00389	596-00389	231	CTM310M4	151-30607	104	FHE	251-21509	165	GT.75X1800V	854-44386	75
596-00404	596-00404	202	CTM40C2	151-30700	104	FHF	251-21609	165	GT.75X1802	854-44388	74
596-00405	596-00405	202	CTM40M4	151-30702	104	FHG	251-21709	165	GT.75X1803	854-44389	74
596-00406	596-00406	202	CTM410C2	151-30703	104	FHH	251-21809	165	GT.75X1804	854-44390	74
596-00407	596-00407	202	CTM410M4	151-30705	104	FPA	251-10109	165	GT.75X1805	854-44391	74
596-00412	596-00412	202	CTN10	169-60000	141	FPA4	251-10009	165	GT.75X1806	854-44392	74
596-00413	596-00413	202	CTN10STD	169-60001	141	FPB	251-10209	165	GT.75X180MV2	854-44394	75
596-00414	596-00414	202	CTN1120	169-60002	141	FPC	251-10309	165	GT.75X6000	854-44395	74
596-00415	596-00415	202	CTN1120STD	169-60003	141	FPD	251-10409	165	GT.75X9000	854-44396	74
596-00417	596-00417	202	CTN1140	169-60004	141	FPE	251-10509	165	GT.75X9004	854-44397	74
596-00418	596-00418	203	CTN1140STD	169-60005	141	FPF	251-10609	165	HDM190HIRC2	151-00134	98
596-00419	596-00419	203	CTN120	169-60006	141	FPG	251-10709	165	HDM190HIRH4	151-00436	98
596-00420	596-00420	203	CTN120STD	169-60007	141	FPH	251-10809	165	HDM250HIRC2	151-00437	98
596-00424	596-00424	231	CTN140	169-60008	141	FTA	251-30109	166	HDM250HIRH4	151-00438	98
596-00425	596-00425	231	CTN140STD	169-60009	141	FTB	251-30209	166	HDM3120HIRC2	151-00439	98
596-00426	596-00426	231	CTN20STD	169-60011	141	FTC	251-30309	166	HDM3120HIRH4	151-00440	98
596-00427	596-00427	231	CTN340	169-60012	141	FTD	251-30409	166	HDM320BHHSUVC2	151-00444	99
596-00500	596-00500	202	CTN340STD	169-60013	141	FTE	251-30509	166	HDM320BHHSUVH4	151-07000	99
596-00503	596-00503	202	CTN380	169-60014	141	FTF	251-30609	166	HDM321HHHSUVC2	151-00441	98
596-00504	596-00504	202	CTN380STD	169-60015	141	FTG	251-30709	166	HDM321HHHSUVH4	151-07100	98
596-00507	596-00507	202	CTN580	169-60016	141	FTH	251-30809	166	HDM400BHHSUVC2	151-00445	99
5FRP0C	161-05084	138	CTN580STD	169-60017	141	GT.375X60C2	854-44316	73	HDM400BHHSUVH4	151-07200	99
5FRP9C	161-05077	138	CTP10	169-60500	141	GT.50X110C2	854-44317	74	HDM401HHHSUVC2	151-00442	98
5NOC	161-05078	138	CTP10STD	169-60501	141	GT.50X110C2W	854-44319	75	HDM401HHHSUVH4	151-07300	98
5N9C	161-05085	138	CTP1120	169-60502	141	GT.50X110P2	854-44320	74	HDM500BHHSUVC2	151-00446	99
5NFP0C	161-05079	138	CTP1120STD	169-60503	141	GT.50X110P2W	854-44321	75	HDM500BHHSUVH4	151-07400	99
5NFP9C	161-05080	138	CTP1140	169-60504	141	GT.50X112C2	854-44322	74	HDM501HHHSUVC2	151-00443	98
5P9C	161-05081	138	CTP1140STD	169-60505	141	GT.50X112P2	854-44323	74	HDM501HHHSUVH4	151-07500	98
904-00284	904-00284	103	CTP120	169-60506	141	GT.50X113C2	854-44324	74	HH-20	120-00080	87
904-00295	904-00295	113	CTP120STD	169-60507	141	GT.50X113P2	854-44325	74	HHDTH	557-00075	222
904-00296	904-00296	113	CTP140	169-60508	141	GT.50X114C2	854-44326	74	HHHST	557-00092	222
904-00297	904-00297	113	CTP140STD	169-60509	141	GT.50X114P2	854-44327	74	HHIGR	557-00009	222
ASNP2-22	191-02220	170	CTP20STD	169-60511	141	GT.50X115C2	854-44328	74	HT2100	557-00085	222
ASNP24-70	191-24700	170	CTP340	169-60512	141	GT.50X115P2	854-44329	74	IT18FLOC2	111-81910	33
AT2000	120-00000	82, 83	CTP340STD	169-60513	141	GT.50X116C2	854-44330	74	IT18FLOL4	111-81903	33
AT2060	130-00000	82, 84	CTP380	169-60514	141	GT.50X116P2	854-44331	74	IT18FL9C2	111-81919	33
AT2BENCHMOUNT	120-00040	85	CTP380STD	169-60515	141	GT.50X12MP2V2	854-44334	75	IT18FL9L4	111-81907	33
ATS10200000	102-00000	82, 89	CTP580	169-60516	141	GT.50X60C2	854-44336	73	IT18ROC2	111-81801	33
ATS10200010	102-00010	89	CTP580STD	169-60517	141	GT.50X60C2W	854-44338	75	IT18ROL4	111-81803	33
ATS10200040	102-00040	89	CTT20R0HSC2	112-51905	36	GT.50X60P2	854-44339	73	IT18R9C2	111-81819	33
ATS10200050	102-00050	89	CTT20R0HSM4	112-51960	36	GT.50X60P2W	854-44340	75	IT18R9L4	111-81808	33
ATS10266109	102-66109	89	CTT20R9C2	112-51919	36	GT.50X62C2	854-44341	73	IT50L9C2	111-85319	33

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
IT50L9M4	111-85306	33	MBT20H	111-94209	26	PBM0C2	151-00228	94	SNP1.25GHS0C2	190-00029	171
IT50R0C2	111-85011	33	MBT20H-S	111-94208	25	PBM0M4	151-00229	94	SNP1.25GHS0M4	190-00030	171
IT50R0M4	111-85013	33	MBT20S	111-93209	26	PBM10C2	151-00230	94	SNP1.510C2	190-00033	173
IT50R9C2	111-85019	33	MBT20S-S	111-93208	25	PBM10M4	151-00231	94	SNP1.510M4	190-00034	173
IT50R9M4	111-85020	33	MBT20UH	111-01302	26	PC15FT7	151-14303	72	SNP1.5GHS0C2	190-00251	171
IT50RD0K2	111-85201	33	MBT20XH	111-95209	26	PHSNP2-36	191-00010	170	SNP1.5GHS0M4	190-00035	171
IT50RD9K2	111-85219	33	MBT20XHS	111-95208	26	PHSNP38-100	191-00012	170	SNP10010X2	190-00052	174
IT50RT0K2	111-85100	33	MBT27H	111-94279	26	PR1	181-00139	112	SNP100GHS0X2	192-11000	172
IT50RT9K2	111-85119	33	MBT27H-S	111-94278	25	PRT1	182-00001	112	SNP1010C2	190-00045	173
LKCRF19C2	151-27000	93	MBT27S	111-93279	26	PSNP2-22	191-00014	170	SNP1010M4	190-00046	173
LKCRF19H4	151-27009	93	MBT27S-S	111-93278	25	PSNP24-70	191-00019	170	SNP10110X2	190-00250	174
LPM25	151-01122	100	MBT27UH	111-01303	26	QS101	105-00000	90	SNP101GHS0X2	190-00053	172
LTM2500C2	151-00358	97	MBT27XH	111-95279	26	QTIE9	105-00006	90	SNP10GHS0C2	192-10100	171
LTM2500H4	151-00293	97	MBT27XHS	111-95278	26	QTIE0HS	105-00001	90	SNP10GHS0M4	190-00043	171
MB10C2	151-00295	93	MBT33H	111-94339	26	RB14L4	151-00506	178	SNP110C2	190-00022	173
MB10M4	151-00296	93	MBT33H-S	111-94338	25	RB5H4	151-14005	178	SNP110M4	190-00023	173
MB19C2	151-28119	93	MBT33S	111-93339	26	RB8L4	151-13608	178	SNP12A10C2	190-00252	173
MB19M4	151-28101	93	MBT33S-S	111-93338	25	REL50L0C2	115-00600	29	SNP12A10M4	190-00253	173
MB2.50C2	151-00285	91	MBT33UH	111-01304	26	REL50L0L4	115-00602	29	SNP12AGHS0C2	190-00254	171
MB2.50M4	151-00286	91	MBT33XH	111-95339	26	REL50L9C2	115-00605	29	SNP12AGHS0M4	190-00255	171
MB2.510C2	151-28901	91	MBT33XHS	111-95338	26	REL50L9L4	115-00607	29	SNP14A10C2	190-00302	173
MB2.510M4	151-28902	91	MBT43UH	111-01305	26	REL50R0C2	115-00500	29	SNP14A10M4	190-00303	173
MB2.5A0C2	151-29000	92	MBT49UH	111-01306	26	REL50R0L4	115-00502	29	SNP14AGHS0C2	190-00300	171
MB2.5A0M4	151-29001	92	MBT5S	111-93059	26	REL50R9C2	115-00503	29	SNP14AGHS0M4	190-00301	171
MB2.5A10C2	151-29002	92	MBT5S-S	111-93058	25	REL50R9L4	115-00505	29	SNP1610C2	190-00077	173
MB2.5A10M4	151-00298	92	MBT8H	111-94089	26	REZ200.NB3P	115-40200	29	SNP1610M4	190-00079	173
MB20C2	151-28210	93	MBT8H-S	111-94088	25	REZ300.NB3P	115-40300	29	SNP16GHS0C2	192-10160	171
MB20M4	151-28202	93	MBT8S	111-93089	26	RO175	590-01750	232	SNP16GHS0M4	190-00076	171
MB29C2	151-00227	93	MBT8S-S	111-93088	25	RO175WP	590-10000	232	SNP18A10C2	181-00256	173
MB29M4	151-00297	93	MK7HT	110-07000	77, 78	RO512	590-05120	232	SNP18A10M4	190-00257	173
MB30C2	151-00136	91	MK7P	110-07101	80	RO514	590-05140	232	SNP18AGHS0C2	190-00258	171
MB30M4	151-28301	91	MK7P-342	110-07111	80	RT150LEPOX2	115-00038	30	SNP18AGHS0M4	190-00259	171
MB310C2	151-28302	91	MK9	110-09500	77	RT150MEPOX2	115-00037	30	SNP1910C2	190-00094	174
MB310M4	151-28305	91	MK9-221	110-00221	77	RT150REPOX2	115-00036	30	SNP1910M4	190-00095	174
MB3A0AC2	151-28711	92	MK9BLADEKIT	110-00220	77	RT250I0X2	115-41401	30	SNP19GHS0C2	190-00090	172
MB3A0AH4	151-28709	92	MK9HT	110-09000	77	RT250I9X2	131-75219	30	SNP19GHS0M4	190-00093	172
MB3A0C2	151-28710	92	MK9P	110-09101	81	RT250L0X2	115-41500	30	SNP1GHS0C2	192-10010	171
MB3A0M4	151-28713	92	MK9P-109	110-09111	81	RT250L9X2	131-75419	30	SNP1GHS0M4	190-00019	171
MB3A10A2C2	151-00331	92	MK9PUA	110-09112	81	RT250M0X2	131-75610	30	SNP210C2	190-00101	173
MB3A10A2H4	151-28717	92	MK9RE	110-09800	77	RT250M9X2	131-75619	30	SNP210M4	190-00102	173
MB3A10C2	151-28718	92	MK9REF	110-09600	77	RT250R0X2	115-41300	30	SNP2210C2	190-00113	174
MB3A10M4	151-28721	92	MK9SS-114	110-05114	77	RT250R9X2	131-75019	30	SNP2210M4	190-00114	174
MB40C2	151-00320	91	MK9SST	110-95000	77	RT250S0X2	115-48100	30	SNP22GHS0C2	192-10220	172
MB40H4	151-28801	91	MKPCOHOSE	110-09005	81	RT250S9X2	131-75819	30	SNP22GHS0M4	190-00111	172
MB410C2	151-28802	91	MMB.50C2	151-00116	97	RT250XL0X2	131-75510	30	SNP2410C2	190-00121	174
MB410H4	151-00319	91	MMB.50M4	151-30001	97	RT250XL9X2	131-75519	30	SNP2410H4	190-00122	174
MB4A0A2C2	151-28402	92	MMB00C2	151-29800	97	RT255M0HIRX2	115-01400	32	SNP24GHS0C2	192-10240	172
MB4A0A2H4	151-28405	92	MMB00M4	151-00325	97	RT255R0HIRX2	115-01300	32	SNP24GHS0H4	190-00119	172
MB4A0C2	151-28403	92	MMB10C2	151-00326	97	RT255S0HIRX2	115-01200	32	SNP2810C2	190-00124	174
MB4A0H4	151-28406	92	MMB10H4	151-00327	97	RT40R0C2	115-06200	28	SNP2810H4	190-00125	174
MB4A10A2C2	151-28420	92	MP1M3.NN3P	154-00000	96	RT40R0M4	115-06202	28	SNP28GHS0C2	190-00127	172
MB4A10A2H4	151-00322	92	MP1M5.NN3P	154-00100	96	RT40R9C2	115-06219	28	SNP28GHS0H4	190-00128	172
MB4A10C2	151-28421	92	MP2M3.NN3P	151-24219	96	RT40R9M4	115-06204	28	SNP2GHS0C2	192-10020	171
MB4A10H4	151-00321	92	MP2M5.NN3P	154-00300	96	RT50L0C2	115-00039	28	SNP2GHS0M4	190-00098	171
MB4SH0C2	151-29100	91	MP3M3.NN3P	151-24319	96	RT50L0M4	115-06101	28	SNP310C2	190-00135	173
MB4SH0H4	151-29101	91	MP3M5.NN3P	154-00500	96	RT50L9C2	115-06102	28	SNP310M4	190-00136	173
MB4SH10C2	151-29104	91	MP4M3.NN3P	151-24419	96	RT50L9M4	115-06104	28	SNP3210H4	190-00143	174
MB4SH10H4	151-00323	91	MP4M5.NN3P	154-00700	96	RT50S0C2	115-06300	28	SNP3210K2	190-00142	174
MB4SHA0C2	151-29200	92	MP5M3.NN3P	151-24519	96	RT50S0M4	115-00035	28	SNP32GHS0H4	190-00140	172
MB4SHA10C2	151-29203	92	MP5M5.NN3P	154-00900	96	RT50S9C2	115-06319	28	SNP32GHS0K2	192-10320	172
MB4SHA10H4	151-29206	92	MSBT1200HIRHS1	151-29301	102	RT50S9M4	115-06304	28	SNP3310H4	190-00147	174
MB50C2	151-28500	91	MSMP5/109C2	154-01200	96	RTT750HR.NX1P	115-00000	31	SNP3310K2	190-00146	174
MB50F4	151-28501	91	MSMP5/69C2	154-00018	96	RTT750HR.NX900	115-00001	31	SNP33GHS0H4	190-00148	172
MB510C2	151-00324	91	MSMP6/109C2	154-01300	96	S2CM258HIRHS1	151-29400	101	SNP33GHS0K2	190-00244	172
MB510F4	151-28504	91	MSMP6/69C2	154-01302	96	S2HM250HIRHS1	151-29403	101	SNP3410H4	190-00152	174
MB5A0A2C2	151-28600	92	MSNP1-70	191-01700	170	SAM83HIRHS1	151-29600	105	SNP3410K2	190-00151	174
MB5A0A2F4	151-28604	92	NC110	148-00003	181	SAOM820HIRHS1	151-29701	105	SNP34GHS0H4	190-00150	172
MB5A0C2	151-28602	92	NC1110	148-00004	181	SCG	181-00003	112	SNP34GHS0K2	190-00149	172
MB5A0F4	151-28605	92	NC3.50	148-00005	181	SCW	181-00004	112	SNP3610H4	190-00156	174
MB5A10A2C2	151-28607	92	NC3.510	148-00006	181	SDWR2X20K2	181-20201	111	SNP3610K2	190-00157	174
MB5A10A2F4	151-28610	92	NC50	148-00007	181	SDWR4X20K2	181-00158	111	SNP36GHS0H4	190-00158	172
MB5A10C2	151-28529	92	NC510	148-00008	181	SDWR4X40P2	181-00441	111	SNP36GHS0K2	192-10360	172
MB5A10F4	151-00427	92	NC60	148-00009	181	SLWR20C2	181-20021	111	SNP3810H4	190-00245	174
MBT14H	111-94149	26	NC610	148-00010	181	SLWR30C2	181-30031	111	SNP3810K2	190-00162	174
MBT14H-S	111-94148	25	NC70	148-00011	181	SLWR40C2	181-40041	111	SNP38GHS0H4	190-00163	172
MBT14S	111-93149	26	NC710	148-00012	181	SM100OUT	556-00165	190	SNP38GHS0K2	192-10380	172
MBT14S-S	111-93148	25	NC80	148-00013	181	SM1BK75MT	800-00004	166	SNP3GHS0C2	190-00132	171
MBT14UH	111-01301	26	NC810	148-00014	181	SMWWAXOUT	558-00227	190	SNP3GHS0M4	190-00134	171
MBT14XH	111-95149	26	NC90	148-00015	181	SNP1.2510C2	190-00027	173	SNP410C2	190-00165	173
MBT14XHS	111-95148	26	NC910	148-00016	181	SNP1.2510M4	190-00028	173	SNP410M4	190-00170	173

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
SNP42N10C2	190-00246	174	T18L0C2	111-00401	9	T30L9C2	111-03325	9	T40R9C2	112-04019	10
SNP42N10K2	190-00247	174	T18LOHSC2	111-00403	16	T30L9M4	111-03327	9, 210	T40R9M4	111-04131	10
SNP42NGHSOC2	191-00008	172	T18LOHSM4	111-00404	16	T30LLOC2	111-03501	9	T50I0C2	111-00444	10
SNP42NGHSOK2	191-00005	172	T18LOM4	111-02015	9, 210	T30LLOM4	111-03511	9, 210	T50IOHSC2	111-05248	16
SNP4GHSOC2	192-10040	171	T18LOVOC2	111-02044	21	T30LL9C2	111-03515	9	T50IOHSM4	111-05251	16
SNP4GHSOM4	190-00167	171	T18L9C2	111-02189	9	T30LL9M4	111-03517	9, 210	T50IOM4	111-05216	10
SNP5010C2	190-00248	174	T18L9M4	111-02026	9, 210	T30MR0C2	113-03010	45	T50I0VOC2	111-05258	21
SNP50GHSOC2	192-10500	172	T18L9VOC2	111-02045	21	T30MR0M4	113-03011	45	T50I2C2UL	111-00518	23
SNP6010C2	190-00196	174	T18L9VOM4	111-02046	21	T30MR9C2	113-03019	45	T50I2M4UL	111-00519	23
SNP60GHSOC2	190-00197	172	T18MROC2	113-00022	45	T30MR9M4	113-00036	45	T50I9C2	112-05219	10
SNP610C2	190-00187	173	T18MR0M4	113-00024	45	T30ROC2	111-00438	9	T50I9C2UL	111-00516	23
SNP610M4	190-00190	173	T18MR9C2	113-00026	45	T30R0HIRM4	111-03066	19	T50I9M4	111-05230	10
SNP6GHSOC2	192-10060	171	T18MR9M4	113-00028	45	T30R0HSC2	111-03067	16	T50I9M4UL	111-00517	23
SNP6GHSOM4	190-00186	171	T18ROC2	111-00405	9	T30R0HSM4	111-03068	16	T50I9PPM4	111-05262	22
SNP7010C2	190-00212	174	T18ROHSC2	111-01905	16	T30R0M4	111-03034	9, 210	T50I9VOC2	111-05254	21
SNP70GHSOC2	190-00209	172	T18R0HSM4	111-00476	16	T30R0UVC2	111-03075	19	T50I9VOM4	111-05255	21
SNP710C2	190-00204	173	T18ROM4	111-01841	9, 210	T30ROVOC2	111-03072	21	T50IDHOC2	117-05362	35
SNP710M4	190-00206	173	T18R0PPC2	111-01917	22	T30R10M4	116-03064	11	T50IDHOM4	117-05300	35
SNP7610C2	190-00217	174	T18R0PPM4	111-01918	22	T30R1C2	116-03011	11	T50IDH9C2	117-05302	35
SNP76GHSOC2	190-00215	172	T18R0VOC2	111-01833	21	T30R1M4	111-03038	11	T50IDH9M4	117-05303	35
SNP7GHSOC2	192-10070	171	T18R10C2	116-01819	11	T30R1STNLM4	111-01269	17	T50LOC2	111-00445	10
SNP7GHSOM4	190-00202	171	T18R10M4	111-01892	11	T30R2C2	116-03012	11	T50LOHSC2	111-05470	16
SNP8010C2	190-00231	174	T18R1C2	116-01811	11	T30R2M4	111-03056	11	T50LOHSM4	111-05471	16
SNP80GHSOC2	190-00229	172	T18R1M4	111-01849	11	T30R3C2	116-03013	11	T50L0M4	111-00504	10
SNP810C2	190-00224	173	T18R1STNLM5	111-01836	17	T30R3M4	111-03052	11	T50LOUVC2	111-05477	19
SNP810M4	190-00226	173	T18R2C2	111-01880	11	T30R4C2	116-03014	11	T50LOVOC2	111-05475	21
SNP8GHSOC2	192-10080	171	T18R2C2UL	111-00510	23	T30R4M4	111-03065	11	T50L10C2	111-05466	12
SNP8GHSOM4	190-00222	171	T18R2HALC2	111-01900	23	T30R5C2	116-03015	11	T50L10M4	111-05465	12
SNP9010C2	190-00233	174	T18R2HALM4	111-01902	23	T30R5M4	111-03041	11	T50L1C2	111-05443	12
SNP90GHSOC2	190-00249	172	T18R2M4	111-01882	11	T30R6C2	116-03016	11	T50L1M4	111-05444	12
SR2550HIHSUVX2	115-42002	32	T18R2M4UL	111-00511	23	T30R6M4	111-03036	11	T50L1STNLM4	111-05423	17
SR2550HIHSUVX2	115-42101	32	T18R3C2	116-01813	11	T30R7C2	116-03017	11	T50L2C2	111-05457	12
SRCI0500C2	151-00278	179	T18R3M4	111-01877	11	T30R7M4	111-03062	11	T50L2C2UL	111-00522	23
SRCI0750C2	151-00279	179	T18R4C2	111-01896	11	T30R8C2	116-03018	11	T50L2M4	111-05458	12
SRCI1000K2	151-00280	179	T18R4M4	111-01898	11	T30R8M4	111-03061	11	T50L2M4UL	111-00523	23
T120I0H4	111-12206	13	T18R5C2	111-01853	11	T30R9C2	112-03019	9	T50L3C2	111-05451	12
T120I0K2	111-12201	13	T18R5M4	111-01855	11	T30R9M4	111-03047	9, 210	T50L3M4	111-05454	12
T120I9H4	111-12213	13	T18R6C2	111-01842	11	T30R9PPC2	111-03017	22	T50L4C2	111-05467	12
T120I9K2	111-12211	13	T18R6M4	111-01845	11	T30R9VOC2	111-03073	21	T50L4M4	111-05468	12
T120L0K2	111-12405	13	T18R7C2	116-01817	11	T30R9VOM4	111-03074	21	T50L5C2	111-05445	12
T120L9K2	111-12419	13	T18R7M4	111-01888	11	T30RA30	103-00002	84	T50L5M4	111-00502	12
T120MROH4	113-00011	45	T18R8C2	111-01857	11	T30RA3000	103-00001	84	T50L6C2	111-05431	12
T120MROK2	113-12020	45	T18R8M4	111-01859	11	T30RA30000HS	103-00004	84	T50L6M4	111-05434	12
T120MR9H4	113-00018	45	T18R9C2	112-01819	9	T30RA300HS	103-00003	84	T50L7C2	111-05464	12
T120MR9K2	113-12029	45	T18R9C2UL	111-00508	23	T30RSFOC2	126-00700	55	T50L7M4	111-00503	12
T120ROH4	111-12013	13	T18R9M4	111-01872	9, 210	T30RSFOM4	126-00702	55	T50L8C2	111-05461	12
T120ROHSH4	111-12058	16	T18R9M4UL	111-00509	23	T30RSFPC2	111-85803	55	T50L8M4	111-05462	12
T120ROHSK2	111-12061	16	T18R9PPC2	111-01921	22	T30RSF9M4	126-00704	55	T50L9C2	112-05419	10
T120ROK2	112-12060	13	T18R9PPM4	111-01922	22	T30XLOC2	111-02901	9	T50L9C2UL	111-00520	23
T120R0PPH4	111-12066	22	T18R9VOC2	111-01834	21	T30XL0M4	111-02903	9, 210	T50L9M4	111-05449	10
T120R0UVC2	111-00400	19	T18R9VOM4	111-01835	21	T30XL9C2	111-02900	9	T50L9M4UL	111-00521	23
T120R9H4	111-12036	13	T18RA50	120-05001	83	T30XL9M4	111-02907	9, 210	T50L9VOC2	111-05438	21
T120R9K2	112-12019	13	T18RA5000	120-05004	83	T3D01250M4	211-00131	176	T50L9VOM4	111-05476	21
T120R9PPK2	111-12067	22	T18RA5000HR	120-05015	83	T3D012510M4	211-00132	176	T50LDHOC2	117-05400	35
T120RDH0H4	117-05500	35	T18RA5000HSW	120-05007	83	T3D01870M4	211-00133	176	T50LDH0M4	117-05401	35
T120RDH0K2	117-05501	35	T18RA50HSW	120-05003	83	T3D018710M4	211-00158	176	T50LDH9C2	117-05402	35
T120RSM0HIRK2	157-01300	59	T18RVPM9M4	126-00603	56	T3D02500M4	211-00134	176	T50LDH9M4	117-05461	35
T120S0H4	111-12808	13	T18SOC2	111-02810	9	T3D025010M4	211-00135	176	T50MOC2	113-00038	45
T120S0K2	111-12803	13	T18S0HSM4	111-02815	16	T3D03120M4	211-00136	176	T50MIOM4	113-00031	45
T120S9H4	111-12813	13	T18S0M4	111-02811	9, 210	T3D031210M4	211-00137	176	T50MI9C2	113-00032	45
T120S9K2	111-12819	13	T18S9C2	111-02805	9	T3D03750M4	211-00138	176	T50MI9M4	113-00033	45
T150	110-11150	78	T18S9M4	111-02809	9, 210	T3D037510M4	211-00139	176	T50MLOC2	113-00007	45
T150L0X2	111-15405	13	T250	111-11250	78	T3D04370M4	211-00146	176	T50MLOM4	113-00035	45
T150L9X2	111-15419	13	T250I0X2	111-00507	15	T3D043710M4	211-00140	176	T50ML9C2	113-05419	45
T150LLOX2	111-15700	13	T250I9X2	111-25219	15	T3D05000M4	211-00142	176	T50ML9M4	113-05403	45
T150LL9X2	111-15719	13	T250L0X2	111-24601	15	T3D050010M4	211-00141	176	T50MROC2	113-05000	45
T150M0X2	111-00124	13	T250L9X2	111-00436	15	T3D05620M4	211-00159	176	T50MR0M4	113-05002	45
T150M9X2	111-15619	13	T250M0X2	111-25001	15	T3D056210M4	211-00143	176	T50MR9C2	113-05004	45
T150R0X2	111-15200	13	T250M9X2	111-25002	15	T3D06250M4	211-00144	176	T50MR9M4	113-05007	45
T150R9X2	111-15203	13	T250R0X2	111-24801	15	T3D062510M4	211-00145	176	T50ROC2	112-04878	10
T150XL0X2	111-15500	13	T250R9X2	111-24803	15	T40I0C2	111-04600	10	T50R0HIRM4	111-01566	19
T150XL9X2	111-15519	13	T250S0X2	111-24700	15	T40I0M4	111-04604	10	T50R0HSC2	111-04900	16
T150XLLOX2	111-15300	13	T250S9X2	111-24702	15	T40I9C2	111-04609	10	T50R0HSM4	111-04901	16
T150XLL9X2	111-15304	13	T250XL0X2	111-25200	15	T40I9M4	111-04612	10	T50R0M4	111-04846	10
T18I0C2	111-02308	9	T250XL9X2	111-00466	15	T40LOC2	111-04301	10	T50R0PPC2	111-04928	22
T18I0HSM4	111-02305	16	T255M0HIRX2	111-25300	14	T40L0M4	111-04305	10	T50R0PPM4	111-04929	22
T18I0M4	111-02315	9, 210	T255R0HIRX2	111-25400	14	T40L9C2	111-04300	10	T50R0UVC2	111-04192	19
T18I9C2	111-02311	9	T255S0HIRX2	111-25500	14	T40L9M4	111-04311	10	T50R0VOC2	111-04887	21
T18I9M4	111-02322	9, 210	T30L0C2	111-03313	9	T40R0C2	112-04060	10	T50R0VOM4	111-04908	21
T18I9VOM2	111-02304	21	T30L0M4	111-03315	9, 210	T40R0M4	111-04122	10	T50R10C2	116-05019	12

Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page	Part No.	Article No.	Page
T50R10M4	111-04879	12	T82-5	500-50820	232	TAG69L-789	594-69789	212	TELS-5K	111-32111	66
T50R1C2	116-05011	12	TAG10L-105	594-10105	215	TAG69T1-336	598-00041	198	TELS-H	111-31000	66
T50R1M4	111-04852	12	TAG10T2-100B	596-00002	196	TAG6T1-100B	596-00016	196	TELS-SPK2	111-32000	66
T50R1STNLM5	111-04839	17	TAG11J-450	593-11450	218	TAG70T12-822	596-70822	199	TELS-SPOOL	111-32106	66
T50R2C2	116-05012	12	TAG11L-789	594-11789	212	TAG71T5-822	596-71822	199	TM1STOC2	151-40100	94
T50R2C2UL	111-00514	23	TAG11T4-250	598-11250	198	TAG72T1-795	598-72795	198	TM1STOM4	151-40101	94
T50R2HALC2	111-04895	23	TAG11T4-822	596-11822	199	TAG72T1-822	596-42822	199	TM1ST10C2	151-40106	94
T50R2HALM4	111-04897	23	TAG11T4-822C	596-00003	199	TAG73T1-795	598-73795	198	TM1ST10M4	151-00328	94
T50R2M4	111-04868	12	TAG13J-450	593-13450	218	TAG73T1-822	596-73822	199	TS3003039	557-00006	222
T50R2M4UL	111-00515	23	TAG13L-789	594-13789	212	TAG73T1-DTH	596-00038	199	TS3003040	557-00007	222
T50R3C2	116-05013	12	TAG13T4-822	596-13822	199	TAG74T2-PAP	596-00017	199	TT100OUT	556-00104	193
T50R3M4	111-04865	12	TAG13T4-DTH	596-00033	199	TAG75T1-795	598-75795	198	TT100OUTSM	556-00169	192
T50R4C2	116-05014	12	TAG14J-450	593-14450	218	TAG75T1-822	596-00019	199	TT822OUT	556-00101	193
T50R4M4	111-04892	12	TAG14L-789	594-14789	212	TAG76T1-795	598-76795	198	TT822OUT2	556-00155	193
T50R5C2	116-05015	12	TAG15J-450	593-15450	218	TAG78T1-795	598-78795	198	TT822OUT3	556-00156	193
T50R5M4	111-04854	12	TAG15L-789	594-15789	212	TAG79T1-795	598-79795	198	TT822OUT4	556-00157	193
T50R6C2	116-05016	12	TAG15T3-250	598-15250	198	TAG7T1-100B	596-00021	196	TT822OUT5	556-00158	193
T50R6M4	111-04849	12	TAG15T3-795	598-15795	198	TAG80T1-795	598-80795	198	TT822OUT6	556-00159	193
T50R7C2	116-05017	12	TAG15T3-822	596-15822	199	TAG81T8-822	596-00022	199	TT822OUT7	556-00160	193
T50R7M4	111-04877	12	TAG15T3-822C10M	596-00001	199	TAG82T1-PAP	596-00024	199	TT822OUT8	556-00161	193
T50R8C2	111-04870	12	TAG15T3-DTH	596-00035	199	TAG82T2-822	596-82822	199	TT822OUTSM	556-00145	192
T50R8M4	111-04872	12	TAG16T3-822	596-16822	199	TAG82T2-PAP	596-00025	199	TT822OUTSM2	556-00147	192
T50R9C2	112-05019	10	TAG16T3-DTH	596-00034	199	TAG83T1-822	596-00023	199	TT822OUTSM3	556-00148	192
T50R9C2UL	111-00512	23	TAG17T2-822	596-17822	199	TAG84T3-822	596-84822	199	TT822OUTSM4	556-00149	192
T50R9M4	111-04862	10	TAG19J-450	593-19450	218	TAG96L-789	594-96789	212	TT822OUTSM5	556-00150	192
T50R9M4UL	111-00513	23	TAG1L-105	594-01105	215	TAG96T1-336	598-00026	198	TT822OUTSM6	556-00151	192
T50R9PPC2	111-04931	22	TAG1T1-100B	596-00005	196	TAG99T1-DTH	596-00037	199	TT822OUTSM7	556-00152	192
T50R9VOC2	111-04909	21	TAG21J-450	593-21450	218	TAG9J-994	593-09994	220	TT822OUTSM8	556-00153	192
T50R9VOM4	111-04911	21	TAG21T6-250	598-21250	198	TAG9L-105	594-09105	215	TT900OUT	556-00106	193
T50RDHOC2	117-05004	35	TAG22J-994	593-22994	220	TAG9T3-100B	596-00027	196	TTDTHOUT	556-00144	193
T50RDHOM4	117-05005	35	TAG22T2-100B	596-00006	196	TAGH10-100	557-00020	223	TTDTHOUTSM	556-00143	192
T50RDH9C2	117-05006	35	TAG22T3-100B	596-00007	196	TAGH1-100	557-00010	223	TTHTOUT	556-00162	193
T50RDH9M4	117-05008	35	TAG24T1-100B	596-00008	196	TAGH2-100	557-00011	223	TTHTOUTSM	556-00163	192
T50RS5.NB3P	111-07110	61	TAG26J-994	593-26994	220	TAGH22-100	557-00021	223	TWT1	110-20003	78
T50RSFOC2	126-01003	55	TAG26L-105	594-26105	215	TAGH24-100	557-00024	223	TWT2	110-21060	78
T50RSFOM4	126-01004	55	TAG26T6-100B	596-00009	196	TAGH25-100	557-00025	223	TYHCT-250	598-00277	198
T50RSF9C2	111-85789	55	TAG27T1-795	598-27795	198	TAGH26-100	557-00026	223	WMBH	854-90272	115
T50RSF9M4	126-01011	55	TAG27T1-822	596-27822	199	TAGH3-100	557-00013	223	WMT0-9	598-00259	233
T50RTM250HSM4	126-03501	51	TAG27T1-822C	596-00043	199	TAGH51-100	557-00027	223	WMTD0-9	598-00256	233
T50RTM25E8HM4	126-03504	51	TAG27T2-DTH	596-00036	199	TAGH6-100	557-00015	223			
T50SOC2	111-05806	10	TAG28J-450	593-28450	218	TAGH9-100	557-00018	223			
T50SOM4	111-05808	10	TAG28T4-250	598-28250	198	TAGH95-100	557-00028	223			
T50S9C2	111-05811	10	TAG2L-105	594-02105	215	TAGPHONE	593-00001212, 218				
T50S9M4	111-05813	10	TAG2T5-100B	596-00010	196	TAGPP1-788	594-01788	212			
T50SL6.NN6P	111-85469	56	TAG33T1-DTH	596-00039	199	TAGPP1-788C	594-02788	212			
T50SL7.NN6P	111-85479	56	TAG35T2-250	598-00044	198	TAGPP1J-108	593-01108	218			
T5D01250M4	211-00129	177	TAG38T4-100B	596-00011	196	TAGPP1T6-822	596-00028	199			
T5D012510M4	211-00117	177	TAG3T3-100B	596-00013	196	TAGPP1T6-82210M	596-00082	199			
T5D01780M4	211-00130	177	TAG45L-789	594-45789	212	TAGPP1T6-822C	596-00029	199			
T5D017810M4	211-00118	177	TAG49L-105	594-49105	215	TAGPP1T6-822C10M	596-00030	199			
T5D02500M4	211-00123	177	TAG50L-105	594-50105	215	TAGPP2-788	594-00001	212			
T5D025010M4	211-00109	177	TAG51J-994	593-51994	220	TAGPP2-788C	594-00002	212			
T5D03120M4	211-00147	177	TAG51L-105	594-51105	215	TAGPP2T6-822	596-00046	199			
T5D031210M4	211-00110	177	TAG51T3-100B	596-00014	196	TAGPP2T6-822C	596-00047	199			
T5D03750M4	211-00124	177	TAG52L-105	594-52105	215	TAGPP3T4-822	596-00083	199			
T5D037510M4	211-00111	177	TAG53L-788	594-53788	212	TAGPP3T4-822C	596-00084	199			
T5D04370M4	211-00149	177	TAG53T2-100B	596-00045	196	TAS100LWS	148-00022	67			
T5D043710M4	211-00148	177	TAG54L-788	594-54788	212	TAS100MWS	111-98500	67			
T5D05000M4	211-00125	177	TAG55L-788	594-55788	212	TAS100RWS	111-98501	67			
T5D050010M4	211-00112	177	TAG56J-108	593-56108	218	TCWM1	598-00260	233			
T5D05620M4	211-00150	177	TAG56L-788	594-56788	212	TCWM10	598-00269	233			
T5D056210M4	211-00113	177	TAG57J-108	593-57108	218	TCWM11	598-00270	233			
T5D06250M4	211-00126	177	TAG57L-788	594-57788	212	TCWM12	598-00271	233			
T5D062510M4	211-00114	177	TAG58L-788	594-58788	212	TCWM13	598-00272	233			
T5D07500M4	211-00127	177	TAG59J-108	593-59108	218	TCWM14	598-00273	233			
T5D075010M4	211-00115	177	TAG59L-788	594-59788	212	TCWM15	598-00274	233			
T5D08750H4	211-00128	177	TAG5J-994	593-05994	220	TCWM16	598-00275	233			
T5D087510H4	211-00116	177	TAG5L-105	594-05105	215	TCWM2	598-00261	233			
T5D10000H4	211-00151	177	TAG60L-788	594-60788	212	TCWM3	598-00262	233			
T5D100010H4	211-00119	177	TAG61L-788	594-61788	212	TCWM4	598-00263	233			
T5D11250H4	211-00152	177	TAG62L-788	594-62788	212	TCWM5	598-00264	233			
T5D112510H4	211-00120	177	TAG63L-105	594-63105	215	TCWM6	598-00265	233			
T5D11870H4	211-00154	177	TAG64J-994	593-64994	220	TCWM7	598-00266	233			
T5D118710H4	211-00153	177	TAG64L-105	594-64105	215	TCWM8	598-00267	233			
T5D12500F4	211-00155	177	TAG65J-108	593-65108	218	TCWM9	598-00268	233			
T5D125010F4	211-00121	177	TAG65L-105	594-65105	215	TDNT	182-00002	113			
T5D13750F4	211-00156	177	TAG66L-789	594-66789	212	TELS-1	111-30000	66			
T5D137510F4	211-00157	177	TAG67L-789	594-67789	212	TELS-10K	111-32107	66			
T5D150010F4	211-00122	177	TAG68L-789	594-68789	212	TELS-13	111-32108	66			
T82-R	500-50822	232	TAG68T1-336	598-00040	198	TELS-27	111-32110	66			

Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
102-00000	ATS10200000	82, 89	111-00831	111-00831	24	111-03068	T30R0HSM4	16	111-05476	T50L9VOM4	21
102-00010	ATS10200010	89	111-01125	111-01125	22	111-03072	T30R0VOC2	21	111-05477	T50L0UVC2	19
102-00030	ATSTROLLEY	89	111-01128	111-01128	19	111-03073	T30R9VOC2	21	111-05806	T50S0C2	10
102-00040	ATS10200040	89	111-01235	111-01235	18	111-03074	T30R9VOM4	21	111-05808	T50S0M4	10
102-00050	ATS10200050	89	111-01264	111-01264	20	111-03075	T30R0UVC2	19	111-05811	T50S9C2	10
102-66109	ATS10266109	89	111-01265	111-01265	20	111-03313	T30LOC2	9	111-05813	T50S9M4	10
102-66110	ATS10266110	89	111-01266	111-01266	20	111-03315	T30L0M4	9, 210	111-07110	T50RS5.NB3P	61
102-66209	ATS10266209	89	111-01269	T30R1STNLM4	17	111-03325	T30L9C2	9	111-11250	T250	78
102-66210	ATS10266210	89	111-01301	MBT14UH	26	111-03327	T30L9M4	9, 210	111-12013	T120R0H4	13
102-69067	102-69067	68	111-01302	MBT20UH	26	111-03501	T30LLOC2	9	111-12036	T120R9H4	13
102-69068	102-69068	68	111-01303	MBT27UH	26	111-03511	T30LL0M4	9, 210	111-12058	T120R0HSH4	16
103-00001	T30RA3000	84	111-01304	MBT33UH	26	111-03515	T30LL9C2	9	111-12061	T120R0H5K2	16
103-00002	T30RA30	84	111-01305	MBT43UH	26	111-03517	T30LL9M4	9, 210	111-12066	T120R0PPH4	22
103-00003	T30RA300HS	84	111-01306	MBT49UH	26	111-04122	T40R0M4	10	111-12067	T120R9PPK2	22
103-00004	T30RA30000HS	84	111-01332	111-01332	23	111-04131	T40R9M4	10	111-12201	T120I0K2	13
105-00000	QS101	90	111-01560	111-01560	20	111-04192	T50R0UVC2	19	111-12206	T120I0H4	13
105-00001	QTTEOHS	90	111-01562	111-01562	20	111-04300	T40L9C2	10	111-12211	T120I9K2	13
105-00006	QTTEI9	90	111-01563	111-01563	20	111-04301	T40LOC2	10	111-12213	T120I9H4	13
110-00220	MK9BLADEKIT	77	111-01566	T50R0HIRM4	19	111-04305	T40L0M4	10	111-12300	111-12300	14
110-00221	MK9-221	77	111-01833	T18R0VOC2	21	111-04311	T40L9M4	10	111-12301	111-12301	14
110-05114	MK9S5-114	77	111-01834	T18R9VOC2	21	111-04600	T40I0C2	10	111-12302	111-12302	14
110-07000	MK7HT	77, 78	111-01835	T18R9VOM4	21	111-04604	T40I0M4	10	111-12405	T120L0K2	13
110-07101	MK7P	80	111-01836	T18R1STNLM5	17	111-04609	T40I9C2	10	111-12419	T120L9K2	13
110-07111	MK7P-342	80	111-01841	T18R0M4	9, 210	111-04612	T40I9M4	10	111-12803	T120S0K2	13
110-09000	MK9HT	77	111-01842	T18R6C2	11	111-04839	T50R1STNLM5	17	111-12808	T120S0H4	13
110-09005	MKPCOHOSE	81	111-01845	T18R6M4	11	111-04846	T50R0M4	10	111-12813	T120S9H4	13
110-09101	MK9P	81	111-01849	T18R1M4	11	111-04849	T50R6M4	12	111-12819	T120S9K2	13
110-09111	MK9P-109	81	111-01853	T18R5C2	11	111-04852	T50R1M4	12	111-15200	T150R0X2	13
110-09112	MK9PUA	81	111-01855	T18R5M4	11	111-04854	T50R5M4	12	111-15203	T150R9X2	13
110-09500	MK9	77	111-01857	T18R8C2	11	111-04862	T50R9M4	10	111-15300	T150XLLOX2	13
110-09600	MK9REF	77	111-01859	T18R8M4	11	111-04865	T50R3M4	12	111-15304	T150XL9X2	13
110-09800	MK9RE	77	111-01872	T18R9M4	9, 210	111-04868	T50R2M4	12	111-15405	T150LOX2	13
110-11150	T150	78	111-01877	T18R3M4	11	111-04870	T50R8C2	12	111-15419	T150L9X2	13
110-20003	TWT1	78	111-01880	T18R2C2	11	111-04872	T50R8M4	12	111-15500	T150LLOX2	13
110-21060	TWT2	78	111-01882	T18R2M4	11	111-04877	T50R7M4	12	111-15519	T150XL9X2	13
110-70083	110-70083	76	111-01888	T18R7M4	11	111-04878	T50R0C2	10	111-15619	T150M9X2	13
110-70084	110-70084	76	111-01892	T18R10M4	11	111-04879	T50R10M4	12	111-15700	T150LLOX2	13
110-70089	110-70089	76	111-01896	T18R4C2	11	111-04887	T50R0VOC2	21	111-15719	T150L9X2	13
110-70091	110-70091	76	111-01898	T18R4M4	11	111-04892	T50R4M4	12	111-24601	T250LOX2	15
110-70106	110-70106	76	111-01900	T18R2HALC2	23	111-04895	T50R2HALC2	23	111-24700	T250S0X2	15
110-95000	MK9SST	77	111-01902	T18R2HALM4	23	111-04897	T50R2HALM4	23	111-24702	T250S9X2	15
110-99000	110-99000	76	111-01905	T18R0H5C2	16	111-04900	T50R0H5C2	16	111-24801	T250R0X2	15
111-00124	T150M0X2	13	111-01917	T18R0PPC2	22	111-04901	T50R0HSM4	16	111-24803	T250R9X2	15
111-00400	T120R0UVC2	19	111-01918	T18R0PPM4	22	111-04908	T50R0VOM4	21	111-25001	T250M0X2	15
111-00401	T18LOC2	9	111-01921	T18R9PPC2	22	111-04909	T50R9VOC2	21	111-25002	T250M9X2	15
111-00403	T18LOHSC2	16	111-01922	T18R9PPM4	22	111-04911	T50R9VOM4	21	111-25200	T250XL0X2	15
111-00404	T18LOHSM4	16	111-02015	T18L0M4	9, 210	111-04928	T50R0PPC2	22	111-25219	T250I9X2	15
111-00405	T18ROC2	9	111-02026	T18L9M4	9, 210	111-04929	T50R0PPM4	22	111-25300	T255M0HIRX2	14
111-00436	T250L9X2	15	111-02044	T18LOVOC2	21	111-04931	T50R9PPC2	22	111-25400	T255R0HIRX2	14
111-00438	T30ROC2	9	111-02045	T18L9VOC2	21	111-05216	T50I0M4	10	111-25500	T255S0HIRX2	14
111-00444	T50I0C2	10	111-02046	T18L9VOM4	21	111-05230	T50I9M4	10	111-30000	TELS-1	66
111-00445	T50LOC2	10	111-02189	T18L9C2	9	111-05248	T50I0HSC2	16	111-31000	TELS-H	66
111-00466	T250XL9X2	15	111-02304	T18I9VOM2	21	111-05251	T50I0HSM4	16	111-32000	TELS-SPK2	66
111-00476	T18R0HSM4	16	111-02305	T18I0HSM4	16	111-05254	T50I9VOC2	21	111-32106	TELS-SPOOL	66
111-00502	T50L5M4	12	111-02308	T18I0C2	9	111-05255	T50I9VOM4	21	111-32107	TELS-10K	66
111-00503	T50L7M4	12	111-02311	T18I9C2	9	111-05258	T50I0VOC2	21	111-32108	TELS-13	66
111-00504	T50L0M4	10	111-02315	T18I0M4	9, 210	111-05262	T50I9PPM4	22	111-32110	TELS-27	66
111-00507	T250I0X2	15	111-02322	T18I9M4	9, 210	111-05350	111-05350	47	111-32111	TELS-5K	66
111-00508	T18R9C2UL	23	111-02805	T18S9C2	9	111-05423	T50L1STNLM4	17	111-81801	IT18ROC2	33
111-00509	T18R9M4UL	23	111-02809	T18S9M4	9, 210	111-05431	T50L6C2	12	111-81803	IT18ROL4	33
111-00510	T18R2C2UL	23	111-02810	T18S0C2	9	111-05434	T50L6M4	12	111-81808	IT18R9L4	33
111-00511	T18R2M4UL	23	111-02811	T18S0M4	9, 210	111-05438	T50L9VOC2	21	111-81819	IT18R9C2	33
111-00512	T50R9C2UL	23	111-02815	T18S0HSM4	16	111-05443	T50L1C2	12	111-81903	IT18FLOL4	33
111-00513	T50R9M4UL	23	111-02900	T30XL9C2	9	111-05444	T50L1M4	12	111-81907	IT18FL9L4	33
111-00514	T50R2C2UL	23	111-02901	T30XLOC2	9	111-05445	T50L5C2	12	111-81910	IT18FLOC2	33
111-00515	T50R2M4UL	23	111-02903	T30XL0M4	9, 210	111-05449	T50L9M4	10	111-81919	IT18FL9C2	33
111-00516	T50I9C2UL	23	111-02907	T30XL9M4	9, 210	111-05451	T50L3C2	12	111-85011	IT50ROC2	33
111-00517	T50I9M4UL	23	111-03017	T30R9PPC2	22	111-05454	T50L3M4	12	111-85013	IT50R0M4	33
111-00518	T50I2C2UL	23	111-03034	T30R0M4	9, 210	111-05457	T50L2C2	12	111-85019	IT50R9C2	33
111-00519	T50I2M4UL	23	111-03036	T30R6M4	11	111-05458	T50L2M4	12	111-85020	IT50R9M4	33
111-00520	T50L9C2UL	23	111-03038	T30R1M4	11	111-05461	T50L8C2	12	111-85100	IT50R0K2	33
111-00521	T50L9M4UL	23	111-03041	T30R5M4	11	111-05462	T50L8M4	12	111-85119	IT50R9K2	33
111-00522	T50L2C2UL	23	111-03047	T30R9M4	9, 210	111-05464	T50L7C2	12	111-85201	IT50R0K2	33
111-00523	T50L2M4UL	23	111-03052	T30R3M4	11	111-05465	T50L10M4	12	111-85219	IT50R9K2	33
111-00659	111-00659	22	111-03056	T30R2M4	11	111-05466	T50L10C2	12	111-85306	IT50L9M4	33
111-00698	111-00698	22	111-03061	T30R8M4	11	111-05467	T50L4C2	12	111-85319	IT50L9C2	33
111-00718	111-00718	22	111-03062	T30R7M4	11	111-05468	T50L4M4	12	111-85350	111-85350	54
111-00732	111-00732	22	111-03065	T30R4M4	11	111-05470	T50L0HSC2	16	111-85469	T50SL6.NN6P	56
111-00829	111-00829	24	111-03066	T30R0HIRM4	19	111-05471	T50L0HSM4	16	111-85479	T50SL7.NN6P	56
111-00830	111-00830	24	111-03067	T30R0H5C2	16	111-05475	T50L0VOC2	21	111-85789	T50RSF9C2	55

Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
111-85803	T30RSF9C2	55	115-00035	RT50S0M4	28	118-00111	118-00111	27	148-00090	148-00090	64
111-85850	111-85850	54	115-00036	RT150REPOX2	30	118-04700	118-04700	27	148-00091	148-00091	64
111-85871	111-85871	47	115-00037	RT150MEPOX2	30	118-04800	118-04800	27	148-00092	148-00092	64
111-93058	MBT5S-S	25	115-00038	RT150LEPOX2	30	118-04900	118-04900	27	148-00093	148-00093	64
111-93059	MBT5S	26	115-00039	RT50LLOC2	28	118-05900	118-05900	27	148-00095	148-00095	64
111-93088	MBT8S-S	25	115-00042	115-00042	34	120-00000	AT2000	82, 83	148-00096	148-00096	64
111-93089	MBT8S	26	115-00500	REL50ROC2	29	120-00021	120-00021	87	148-00200	148-00200	41
111-93148	MBT14S-S	25	115-00502	REL50ROL4	29	120-00031	120-00031	87	148-90000	148-90000	236
111-93149	MBT14S	26	115-00503	REL50R9C2	29	120-00040	AT2BENCHMOUNT	85	148-90001	148-90001	236
111-93208	MBT20S-S	25	115-00505	REL50R9L4	29	120-00060	120-00060	83	148-90002	148-90002	236
111-93209	MBT20S	26	115-00600	REL50LOC2	29	120-00080	HH-20	87	148-90003	148-90003	236
111-93278	MBT27S-S	25	115-00602	REL50L0L4	29	120-05001	T18RA50	83	148-90004	148-90004	236
111-93279	MBT27S	26	115-00605	REL50L9C2	29	120-05003	T18RAS0HSW	83	148-90005	148-90005	236
111-93338	MBT33S-S	25	115-00607	REL50L9L4	29	120-05004	T18RA5000	83	148-90024	148-90024	236
111-93339	MBT33S	26	115-01200	RT255S0HIRX2	32	120-05007	T18RAS000HSW	83	148-90025	148-90025	236
111-94088	MBT8H-S	25	115-01300	RT255R0HIRX2	32	120-05015	T18RAS000HR	83	148-90026	148-90026	236
111-94089	MBT8H	26	115-01400	RT255M0HIRX2	32	121-63560	121-63560	34	148-90027	148-90027	236
111-94148	MBT14H-S	25	115-06101	RT50LLOM4	28	121-82160	121-82160	34	148-90028	148-90028	236
111-94149	MBT14H	26	115-06102	RT50LL9C2	28	121-83360	121-83360	34	148-90029	148-90029	236
111-94208	MBT20H-S	25	115-06104	RT50LL9M4	28	126-00000	126-00000	41	150-08110	150-08110	68
111-94209	MBT20H	26	115-06200	RT40ROC2	28	126-00015	126-00015	54	150-09201	150-09201	69
111-94278	MBT27H-S	25	115-06202	RT40ROM4	28	126-00036	126-00036	41	150-31090	150-31090	47
111-94279	MBT27H	26	115-06204	RT40R9M4	28	126-00041	126-00041	56	150-31091	150-31091	47
111-94338	MBT33H-S	25	115-06219	RT40R9C2	28	126-00042	126-00042	56	150-31093	150-31093	47
111-94339	MBT33H	26	115-06300	RT50S0C2	28	126-00043	126-00043	55	150-31098	150-31098	48
111-95148	MBT14XH-S	26	115-06304	RT50S9M4	28	126-00044	126-00044	55	150-45397	150-45397	69
111-95149	MBT14XH	26	115-06319	RT50S9C2	28	126-00045	126-00045	55	150-55850	150-55850	46
111-95208	MBT20XH-S	26	115-30900	DCT90HIRK2	37	126-00046	126-00046	55	150-55948	150-55948	48
111-95209	MBT20XH	26	115-31100	DCT110HIRK2	37	126-00049	126-00049	56	150-76090	150-76090	48
111-95278	MBT27XH-S	26	115-40200	REZ200.NB3P	29	126-00065	126-00065	57	150-77938	150-77938	48
111-95279	MBT27XH	26	115-40300	REZ300.NB3P	29	126-00069	126-00069	56	150-77940	150-77940	46
111-95338	MBT33XH-S	26	115-41300	RT250R0X2	30	126-00075	126-00075	54	150-95500	150-95500	68
111-95339	MBT33XH	26	115-41401	RT250I0X2	30	126-00081	126-00081	54	151-00010	151-00010	142
111-98500	TAS100MWS	67	115-41500	RT250L0X2	30	126-00086	126-00086	54	151-00016	151-00016	69
111-98501	TAS100RWS	67	115-42002	SR255S0HIHSUVX2	32	126-00099	126-00099	54	151-00017	151-00017	69
112-01819	T18R9C2	9	115-42101	SR255X0HIHSUVX2	32	126-00603	T18RWPM9M4	56	151-00018	151-00018	142
112-03019	T30R9C2	9	115-48100	RT250S0X2	30	126-00700	T30RSFOC2	55	151-00019	151-00019	142
112-04019	T40R9C2	10	116-01811	T18R1C2	11	126-00702	T30RSFOM4	55	151-00029	151-00029	68
112-04060	T40ROC2	10	116-01813	T18R3C2	11	126-00704	T30RSF9M4	55	151-00074	151-00074	69
112-05019	T50R9C2	10	116-01817	T18R7C2	11	126-01003	T50RSFOC2	55	151-00080	151-00080	69
112-05219	T50I9C2	10	116-01819	T18R10C2	11	126-01004	T50RSFOM4	55	151-00116	MMB.50C2	97
112-05419	T50L9C2	10	116-03011	T30R1C2	11	126-01011	T50RSF9M4	55	151-00134	HDM190HIRC2	98
112-12019	T120R9K2	13	116-03012	T30R2C2	11	126-02300	126-02300	54	151-00136	MB30C2	91
112-12060	T120R0K2	13	116-03013	T30R3C2	11	126-03100	126-03100	57	151-00227	MB29C2	93
112-51904	CTT20R9M4	36	116-03014	T30R4C2	11	126-03501	T50RTM250HSM4	51	151-00228	PBMOC2	94
112-51905	CTT20ROHSC2	36	116-03015	T30R5C2	11	126-03504	T50RTM25E8HM4	51	151-00229	PBMOM4	94
112-51919	CTT20R9C2	36	116-03016	T30R6C2	11	130-00000	AT2060	82, 84	151-00230	PBM10C2	94
112-51960	CTT20ROHSM4	36	116-03017	T30R7C2	11	131-75019	RT250R9X2	30	151-00231	PBM10M4	94
112-52104	CTT60R9C2	36	116-03018	T30R8C2	11	131-75219	RT250I9X2	30	151-00278	SRCI0500C2	179
112-52106	CTT60R9M4	36	116-03019	116-03019	11	131-75419	RT250L9X2	30	151-00279	SRCI0750C2	179
112-52112	CTT60ROHSC2	36	116-03064	T30R10M4	11	131-75510	RT250XL0X2	30	151-00280	SRCI1000K2	179
112-52114	CTT60ROHSM4	36	116-05011	T50R1C2	12	131-75519	RT250XL9X2	30	151-00281	151-00281	69
113-00007	T50MLOC2	45	116-05012	T50R2C2	12	131-75610	RT250M0X2	30	151-00282	151-00282	69
113-00011	T120MR0H4	45	116-05013	T50R3C2	12	131-75619	RT250M9X2	30	151-00285	MB2.50C2	91
113-00018	T120MR9H4	45	116-05014	T50R4C2	12	131-75819	RT250S9X2	30	151-00286	MB2.50M4	91
113-00022	T18MR0C2	45	116-05015	T50R5C2	12	132-00006	132-00006	65	151-00287	CTAM10M4	95
113-00024	T18MR0M4	45	116-05016	T50R6C2	12	132-00007	132-00007	65	151-00288	CTAP110M4	95
113-00026	T18MR9C2	45	116-05017	T50R7C2	12	132-00008	132-00008	65	151-00289	CTAP10C2	95
113-00028	T18MR9M4	45	116-05019	T50R10C2	12	132-00009	132-00009	65	151-00290	CTAP10M4	95
113-00031	T50M10M4	45	117-00012	117-00012	38	132-00010	132-00010	65	151-00291	CTAP20C2	95
113-00032	T50M19C2	45	117-00016	117-00016	35	132-00011	132-00011	65	151-00292	CTAP20M4	95
113-00033	T50M19M4	45	117-00017	117-00017	35	148-00003	NC110	181	151-00293	LTM2500H4	97
113-00035	T50M10M4	45	117-00018	117-00018	35	148-00004	NC1110	181	151-00295	MB10C2	93
113-00036	T30MR9M4	45	117-00019	117-00019	35	148-00005	NC3.50	181	151-00296	MB10M4	93
113-00038	T50M10C2	45	117-05004	T50RDH0C2	35	148-00006	NC3.510	181	151-00297	MB29M4	93
113-03010	T30MR0C2	45	117-05005	T50RDH0M4	35	148-00007	NC50	181	151-00298	MB2.5A10M4	92
113-03011	T30MR0M4	45	117-05006	T50RDH9C2	35	148-00008	NC510	181	151-00308	CTAP210M4	95
113-03019	T30MR9C2	45	117-05008	T50RDH9M4	35	148-00009	NC60	181	151-00319	MB410H4	91
113-05000	T50MR0C2	45	117-05300	T50IDH0M4	35	148-00010	NC610	181	151-00320	MB40C2	91
113-05002	T50MR0M4	45	117-05302	T50IDH9C2	35	148-00011	NC70	181	151-00321	MB4A10H4	92
113-05004	T50MR9C2	45	117-05303	T50IDH9M4	35	148-00012	NC710	181	151-00322	MB4A10A2H4	92
113-05007	T50MR9M4	45	117-05362	T50IDH0C2	35	148-00013	NC80	181	151-00323	MB45H10H4	91
113-05403	T50ML9M4	45	117-05400	T50LDH0C2	35	148-00014	NC810	181	151-00324	MB510C2	91
113-05419	T50ML9C2	45	117-05401	T50LDH0M4	35	148-00015	NC90	181	151-00325	MMB00M4	97
113-12020	T120MR0K2	45	117-05402	T50LDH9C2	35	148-00016	NC910	181	151-00326	MMB10C2	97
113-12029	T120MR9K2	45	117-05461	T50LDH9M4	35	148-00017	FC140	181	151-00327	MMB10H4	97
115-00000	RTT750HR.NX1P	31	117-05500	T120RDH0H4	35	148-00018	FC1410	181	151-00328	TM15T10M4	94
115-00001	RTT750HR.NX900	31	117-05501	T120RDH0K2	35	148-00022	TAS100LWS	67	151-00331	MB3A10A2C2	92
115-00033	DCT110HIRC2	37	118-00032	118-00032	18	148-00088	148-00088	64	151-00358	LTM2500C2	97
115-00034	DCT90HIRC2	37	118-00110	118-00110	27	148-00089	148-00089	64	151-00427	MB5A10F4	92

Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
151-00429	151-00429	71	151-14005	RB5H4	178	151-30603	CTM30M4	104	156-00272	156-00272	63
151-00430	151-00430	71	151-14303	PC15FT7	72	151-30605	CTM310C2	104	156-00273	156-00273	63
151-00432	151-00432	92	151-14313	151-14313	142	151-30607	CTM310M4	104	156-00282	156-00282	49
151-00433	151-00433	92	151-14314	151-14314	142	151-30700	CTM40C2	104	156-00306	156-00306	63
151-00436	HDM190HIRH4	98	151-24219	MP2M3.NN3P	96	151-30702	CTM40M4	104	156-00318	156-00318	62
151-00437	HDM250HIRC2	98	151-24319	MP3M3.NN3P	96	151-30703	CTM410C2	104	156-00329	156-00329	49
151-00438	HDM250HIRH4	98	151-24419	MP4M3.NN3P	96	151-30705	CTM410M4	104	156-00375	156-00375	47
151-00439	HDM3120HIRC2	98	151-24519	MP5M3.NN3P	96	151-31101	CTAM10C2	95	156-00376	156-00376	47
151-00440	HDM3120HIRH4	98	151-26101	151-26101	69	151-31103	CTAM110C2	95	156-00377	156-00377	47
151-00441	HDM321HIHSUVC2	98	151-27000	LKCRF19C2	93	151-31106	CTAM110M4	95	156-00378	156-00378	47
151-00442	HDM401HIHSUVC2	98	151-27009	LKCRF19H4	93	151-31201	CTAM20C2	95	156-00444	156-00444	57
151-00443	HDM501HIHSUVC2	98	151-27010	151-27010	100	151-31202	CTAM20M4	95	156-00455	156-00455	18
151-00444	HDM320BHIHSUVC2	99	151-27019	151-27019	100	151-31203	CTAM210C2	95	156-00456	156-00456	18
151-00445	HDM400BHIHSUVC2	99	151-27202	151-27202	100	151-31205	CTAM210M4	95	156-00457	156-00457	48
151-00446	HDM500BHIHSUVC2	99	151-27219	151-27219	100	151-32602	151-32602	70	156-00468	156-00468	42
151-00492	151-00492	49, 85	151-28101	MB19M4	93	151-40100	TM1ST0C2	94	156-00507	156-00507	71
151-00506	RB14L4	178	151-28119	MB19C2	93	151-40101	TM1ST0M4	94	156-00521	156-00521	71
151-00513	151-00513	71	151-28202	MB20M4	93	151-40106	TM1ST10C2	94	156-00538	156-00538	39
151-00605	151-00605	68	151-28210	MB20C2	93	154-00000	MP1M3.NN3P	96	156-00539	156-00539	39
151-00623	151-00623	69	151-28301	MB30M4	91	154-00010	FC1.2H4	180	156-00540	156-00540	39
151-00629	151-00629	69	151-28302	MB310C2	91	154-00011	FC1.2K2	180	156-00541	156-00541	39
151-00644	151-00644	106	151-28305	MB310M4	91	154-00012	FC1.2AH4	180	156-00588	156-00588	42
151-00650	151-00650	69	151-28402	MB4A0A2C2	92	154-00013	FC1.2AK2	180	156-00589	156-00589	42
151-00651	151-00651	68	151-28403	MB4A0C2	92	154-00014	FC2.2H4	180	156-00590	156-00590	42
151-00663	151-00663	68	151-28405	MB4A0A2H4	92	154-00015	FC2.2K2	180	156-00591	156-00591	42
151-00664	151-00664	69	151-28406	MB4A0H4	92	154-00016	FC2.2AH4	180	156-00592	156-00592	42
151-00665	151-00665	69	151-28420	MB4A10A2C2	92	154-00017	FC2.2AK2	180	156-00593	156-00593	42
151-00667	151-00667	178	151-28421	MB4A10C2	92	154-00018	MSMP5/69C2	96	156-00635	156-00635	42
151-00668	151-00668	178	151-28500	MB50C2	91	154-00100	MP1M5.NN3P	96	156-00791	156-00791	62
151-00675	151-00675	71	151-28501	MB50F4	91	154-00300	MP2M5.NN3P	96	156-00856	156-00856	39
151-00677	151-00677	70	151-28504	MB510F4	91	154-00500	MP3M5.NN3P	96	156-00858	156-00858	39
151-00700	151-00700	142	151-28529	MB5A10C2	92	154-00700	MP4M5.NN3P	96	156-00859	156-00859	39
151-00701	151-00701	142	151-28600	MB5A0A2C2	92	154-00900	MP5M5.NN3P	96	156-00860	156-00860	39
151-00702	151-00702	142	151-28602	MB5A0C2	92	154-01200	MSMP5/109C2	96	156-00861	156-00861	39
151-00703	151-00703	142	151-28604	MB5A0A2F4	92	154-01300	MSMP6/109C2	96	156-00862	156-00862	39
151-00704	151-00704	71	151-28605	MB5A0F4	92	154-01302	MSMP6/69C2	96	156-00863	156-00863	39
151-00756	151-00756	99	151-28607	MB5A10A2C2	92	155-01600	155-01600	69	156-00864	156-00864	39
151-00757	151-00757	18	151-28610	MB5A10A2F4	92	155-03800	155-03800	71	156-00865	156-00865	39
151-00758	151-00758	18	151-28709	MB3A0AH4	92	155-11601	155-11601	68	156-00866	156-00866	40
151-00765	151-00765	71	151-28710	MB3A0C2	92	155-12300	155-12300	60	156-00867	156-00867	40
151-00775	151-00775	70	151-28711	MB3A0AC2	92	155-23601	155-23601	61	156-00868	156-00868	40
151-00785	151-00785	70	151-28713	MB3A0M4	92	155-30602	155-30602	59	156-00871	156-00871	40
151-00786	151-00786	70	151-28717	MB3A10A2H4	92	155-30702	155-30702	71	156-00872	156-00872	41
151-00790	151-00790	68	151-28718	MB3A10C2	92	155-30802	155-30802	68	156-00873	156-00873	41
151-00792	151-00792	71	151-28721	MB3A10M4	92	155-30902	155-30902	69	156-00874	156-00874	40
151-00812	151-00812	103	151-28801	MB40H4	91	155-31102	155-31102	71	156-00875	156-00875	40
151-00813	151-00813	103	151-28802	MB410C2	91	155-31202	155-31202	62	156-00876	156-00876	40
151-00814	151-00814	103	151-28901	MB2.510C2	91	155-36002	155-36002	71	156-00877	156-00877	41
151-00833	151-00833	71	151-28902	MB2.510M4	91	155-37104	155-37104	40	156-00878	156-00878	41
151-00834	151-00834	71	151-29000	MB2.5A0C2	92	156-00016	156-00016	41	156-00953	156-00953	46
151-00835	151-00835	71	151-29001	MB2.5A0M4	92	156-00017	156-00017	40	156-01007	156-01007	39
151-00836	151-00836	71	151-29002	MB2.5A10C2	92	156-00025	156-00025	46	156-01601	156-01601	40
151-00903	151-00903	69	151-29100	MB4SH0C2	91	156-00036	156-00036	63	156-04600	156-04600	41
151-00925	151-00925	70	151-29101	MB4SH0H4	91	156-00054	156-00054	47	156-04601	156-04601	41
151-00927	151-00927	72	151-29104	MB4SH10C2	91	156-00055	156-00055	47	157-00034	157-00034	58
151-00932	151-00932	69	151-29200	MB4SHA0C2	92	156-00056	156-00056	47	157-00035	157-00035	58
151-00982	151-00982	44	151-29203	MB4SHA10C2	92	156-00057	156-00057	47	157-00036	157-00036	58
151-01108	151-01108	70	151-29206	MB4SHA10H4	92	156-00066	156-00066	46	157-00060	157-00060	38
151-01109	151-01109	68	151-29301	MSBT1200HIRHS1	102	156-00067	156-00067	50	157-00072	157-00072	51
151-01113	151-01113	71	151-29400	S2CM258HIRHS1	101	156-00068	156-00068	50	157-00083	157-00083	59
151-01122	LPM25	100	151-29403	S2HM250HIRHS1	101	156-00069	156-00069	50	157-00097	157-00097	51
151-01125	151-01125	68	151-29600	SAM83HIRHS1	105	156-00070	156-00070	50	157-00105	157-00105	60
151-01126	151-01126	68	151-29701	SAOM820HIRHS1	105	156-00071	156-00071	50	157-00106	157-00106	60
151-01136	151-01136	71	151-29800	MMB00C2	97	156-00072	156-00072	50	157-00108	157-00108	51
151-02600	151-02600	69	151-30001	MMB.50M4	97	156-00074	156-00074	50	157-00112	157-00112	53
151-02901	151-02901	68	151-30100	CTAP110C2	95	156-00085	156-00085	48	157-00118	157-00118	52
151-03401	151-03401	43	151-30200	CTAP210C2	95	156-00089	156-00089	47	157-00119	157-00119	52
151-03402	151-03402	43	151-30300	CTM00C2	104	156-00090	156-00090	47	157-00120	157-00120	52
151-03403	151-03403	43	151-30301	CTM00M4	104	156-00091	156-00091	47	157-00130	157-00130	52
151-03404	151-03404	43	151-30303	CTM010C2	104	156-00092	156-00092	47	157-00140	157-00140	51
151-06500	151-06500	106	151-30305	CTM010M4	104	156-00093	156-00093	47	157-00142	157-00142	53
151-06501	DSWS50HS1	107	151-30400	CTM10C2	104	156-00134	156-00134	63	157-00143	157-00143	53
151-06502	DSWS50HSK2	107	151-30402	CTM10M4	104	156-00135	156-00135	63	157-00144	157-00144	53
151-07000	HDM320BHIHSUVH4	99	151-30404	CTM110C2	104	156-00136	156-00136	63	157-00157	157-00157	53
151-07100	HDM321HIHSUVH4	98	151-30406	CTM110M4	104	156-00137	156-00137	63	157-00400	157-00400	58
151-07200	HDM400BHIHSUVH4	99	151-30500	CTM20C2	104	156-00155	156-00155	62	157-00401	157-00401	58
151-07300	HDM401HIHSUVH4	98	151-30501	CTM20M4	104	156-00156	156-00156	46	157-00402	157-00402	58
151-07400	HDM500BHIHSUVH4	99	151-30504	CTM210C2	104	156-00157	156-00157	46	157-00403	157-00403	58
151-07500	HDM501HIHSUVH4	98	151-30506	CTM210M4	104	156-00235	156-00235	48	157-00404	157-00404	58
151-13608	RB8L4	178	151-30600	CTM30C2	104	156-00264	156-00264	57	157-00405	157-00405	58

Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
157-01300	T120RSMOHIRK2	59	169-60016	CTN580	141	170-03059	170-03059	161	170-03141	170-03141	152
161-05000	1FRPOC	138	169-60017	CTN580STD	141	170-03060	170-03060	161	170-03142	170-03142	152
161-05001	1FRP9C	138	169-60018	169-60018	140	170-03061	170-03061	161	170-03143	170-03143	152
161-05002	1NOC	138	169-60019	169-60019	140	170-03062	170-03062	163	170-03144	170-03144	152
161-05003	1N9C	138	169-60020	169-60020	140	170-03063	170-03063	163	170-03145	170-03145	152
161-05004	1NFP9C	138	169-60021	169-60021	140	170-03064	170-03064	163	170-03146	170-03146	152
161-05013	1NFP9C	138	169-60022	169-60022	140	170-03065	170-03065	163	170-03147	170-03147	152
161-05015	1P9C	138	169-60500	CTP10	141	170-03066	170-03066	149	170-03148	170-03148	159
161-05016	2.5FRPOC	138	169-60501	CTP10STD	141	170-03067	170-03067	136, 164	170-03149	170-03149	159
161-05017	2.5FRP9C	138	169-60502	CTP1120	141	170-03068	170-03068	136, 164	170-03150	170-03150	159
161-05018	2.5NOC	138	169-60503	CTP1120STD	141	170-03069	170-03069	155	170-03151	170-03151	159
161-05019	2.5N9C	138	169-60504	CTP1140	141	170-03070	170-03070	155	170-03152	170-03152	159
161-05024	2.5NFP9C	138	169-60505	CTP1140STD	141	170-03071	170-03071	149	170-03153	170-03153	151
161-05027	2.5NFP9C	138	169-60506	CTP120	141	170-03072	170-03072	149	170-03154	170-03154	151
161-05028	2.5P9C	138	169-60507	CTP120STD	141	170-03073	170-03073	149	170-03155	170-03155	151
161-05029	2FRPOC	138	169-60508	CTP140	141	170-03074	170-03074	149	170-03156	170-03156	151
161-05030	2FRP9C	138	169-60509	CTP140STD	141	170-03076	170-03076	147	170-03157	170-03157	151
161-05032	2NOC	138	169-60511	CTP20STD	141	170-03077	170-03077	147	170-03158	170-03158	162
161-05034	2N9C	138	169-60512	CTP340	141	170-03078	170-03078	147	170-03159	170-03159	162
161-05036	2NFP9C	138	169-60513	CTP340STD	141	170-03079	170-03079	147	170-03160	170-03160	162
161-05043	2NFP9C	138	169-60514	CTP380	141	170-03080	170-03080	147	170-03161	170-03161	162
161-05047	2P9C	138	169-60515	CTP380STD	141	170-03081	170-03081	147	170-03162	170-03162	162
161-05048	3FRPOC	138	169-60516	CTP580	141	170-03082	170-03082	158	170-03163	170-03163	162
161-05049	3FRP9C	138	169-60517	CTP580STD	141	170-03083	170-03083	158	170-03164	170-03164	162
161-05050	3NOC	138	170-03000	170-03000	145	170-03084	170-03084	158	170-03165	170-03165	162
161-05051	3N9C	138	170-03001	170-03001	145	170-03085	170-03085	158	170-03166	170-03166	162
161-05052	3NFP9C	138	170-03002	170-03002	145	170-03086	170-03086	158	170-03174	170-03174	145
161-05055	3NFP9C	138	170-03003	170-03003	145	170-03087	170-03087	158	170-03175	170-03175	163
161-05056	3P9C	138	170-03004	170-03004	145	170-03088	170-03088	158	170-03177	170-03177	145
161-05057	4FRPOC	138	170-03005	170-03005	145	170-03089	170-03089	149	170-20400	170-20400	156
161-05058	4FRP9C	138	170-03006	170-03006	149	170-03090	170-03090	149	170-20600	170-20600	156
161-05071	4NOC	138	170-03007	170-03007	149	170-03091	170-03091	149	170-20800	170-20800	156
161-05072	4N9C	138	170-03008	170-03008	149	170-03092	170-03092	149	170-21000	170-21000	156
161-05074	4NFP9C	138	170-03010	170-03010	149	170-03093	170-03093	149	170-21200	170-21200	156
161-05075	4NFP9C	138	170-03011	170-03011	149	170-03094	170-03094	149	170-21500	170-21500	156
161-05076	4P9C	138	170-03012	170-03012	148	170-03095	170-03095	149	170-22000	170-22000	156
161-05077	5FRP9C	138	170-03013	170-03013	148	170-03097	170-03097	163	170-22500	170-22500	156
161-05078	5NOC	138	170-03014	170-03014	148	170-03098	170-03098	160	170-23000	170-23000	156
161-05079	5NFP9C	138	170-03015	170-03015	148	170-03099	170-03099	160	170-25000	170-25000	156
161-05080	5NFP9C	138	170-03016	170-03016	148	170-03100	170-03100	160	170-80150	170-80150	146
161-05081	5P9C	138	170-03017	170-03017	150	170-03101	170-03101	160	170-80250	170-80250	146
161-05084	5FRPOC	138	170-03018	170-03018	150	170-03102	170-03102	160	170-80350	170-80350	146
161-05085	5N9C	138	170-03019	170-03019	150	170-03103	170-03103	160	173-00400	173-00400	154
161-60001	161-60001	136	170-03020	170-03020	150	170-03104	170-03104	160	173-00600	173-00600	154
161-60002	161-60002	136	170-03021	170-03021	150	170-03105	170-03105	160	173-00800	173-00800	154
161-60003	161-60003	136	170-03024	170-03024	157	170-03106	170-03106	160	173-01000	173-01000	154
161-60004	161-60004	136	170-03025	170-03025	157	170-03107	170-03107	160	173-01200	173-01200	154
161-60005	161-60005	136	170-03026	170-03026	157	170-03108	170-03108	160	173-01400	173-01400	154
161-63103	161-63103	134	170-03027	170-03027	155	170-03109	170-03109	160	173-01600	173-01600	154
161-63203	161-63203	134	170-03028	170-03028	155	170-03110	170-03110	160	173-01800	173-01800	154
161-63303	161-63303	134	170-03029	170-03029	155	170-03111	170-03111	160	173-02000	173-02000	154
161-63403	161-63403	134	170-03030	170-03030	155	170-03112	170-03112	160	173-60400	173-60400	153
161-63503	161-63503	134	170-03031	170-03031	164	170-03113	170-03113	160	173-60600	173-60600	153
161-64002	161-64002	135	170-03032	170-03032	136, 164	170-03114	170-03114	160	173-60800	173-60800	153
161-64004	161-64004	135	170-03033	170-03033	136, 164	170-03115	170-03115	160	173-61000	173-61000	153
161-64006	161-64006	135	170-03034	170-03034	136, 164	170-03116	170-03116	150	173-61200	173-61200	153
161-64008	161-64008	135	170-03035	170-03035	148	170-03117	170-03117	150	173-61400	173-61400	153
161-64010	161-64010	135	170-03036	170-03036	150	170-03118	170-03118	150	173-61600	173-61600	153
161-64012	161-64012	135	170-03037	170-03037	157	170-03119	170-03119	150	173-61800	173-61800	153
161-64014	161-64014	135	170-03038	170-03038	157	170-03120	170-03120	150	173-62000	173-62000	153
161-64112	161-64112	134	170-03039	170-03039	164	170-03121	170-03121	150	181-00001	CSG	112
161-64213	161-64213	134	170-03040	170-03040	164	170-03122	170-03122	150	181-00002	CSW	112
161-64310	161-64310	134	170-03041	170-03041	145	170-03123	170-03123	148	181-00003	SCG	112
161-64414	161-64414	134	170-03042	170-03042	145	170-03124	170-03124	157	181-00004	SCW	112
161-64507	161-64507	134	170-03043	170-03043	145	170-03125	170-03125	157	181-00024	181-00024	122
169-60000	CTN10	141	170-03044	170-03044	145	170-03126	170-03126	157	181-00025	181-00025	117
169-60001	CTN10STD	141	170-03045	170-03045	145	170-03127	170-03127	157	181-00027	181-00027	123
169-60002	CTN1120	141	170-03046	170-03046	155	170-03128	170-03128	157	181-00136	181-00136	117
169-60003	CTN1120STD	141	170-03047	170-03047	155	170-03129	170-03129	157	181-00137	181-00137	121
169-60004	CTN1140	141	170-03048	170-03048	155	170-03130	170-03130	157	181-00139	PR1	112
169-60005	CTN1140STD	141	170-03049	170-03049	155	170-03131	170-03131	157	181-00140	181-00140	116
169-60006	CTN120	141	170-03050	170-03050	161	170-03132	170-03132	157	181-00141	181-00141	116
169-60007	CTN120STD	141	170-03051	170-03051	161	170-03133	170-03133	157	181-00142	181-00142	116
169-60008	CTN140	141	170-03052	170-03052	161	170-03134	170-03134	157	181-00143	181-00143	116
169-60009	CTN140STD	141	170-03053	170-03053	161	170-03135	170-03135	157	181-00144	181-00144	116
169-60011	CTN20STD	141	170-03054	170-03054	163	170-03136	170-03136	157	181-00145	181-00145	116
169-60012	CTN340	141	170-03055	170-03055	163	170-03137	170-03137	157	181-00147	181-00147	120
169-60013	CTN340STD	141	170-03056	170-03056	163	170-03138	170-03138	157	181-00148	181-00148	121
169-60014	CTN380	141	170-03057	170-03057	163	170-03139	170-03139	157	181-00152	181-00152	131
169-60015	CTN380STD	141	170-03058	170-03058	161	170-03140	170-03140	152	181-00153	181-00153	131

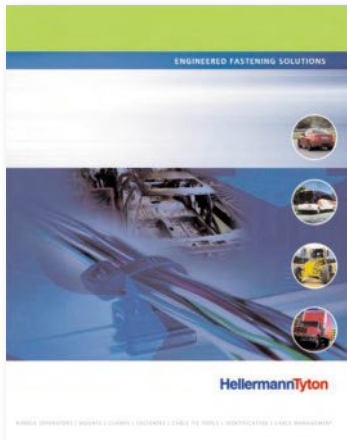
Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
181-00154	181-00154	131	181-00467	181-00467	118	181-00552	181-00552	122	181-00638	181-00638	128
181-00155	181-00155	126	181-00468	181-00468	119	181-00554	181-00554	123	181-00639	181-00639	128
181-00156	181-00156	126	181-00469	181-00469	119	181-00557	181-00557	125	181-00640	181-00640	128
181-00157	181-00157	126	181-00470	181-00470	120	181-00558	181-00558	125	181-00641	181-00641	128
181-00158	SDWR4X20K2	111	181-00471	181-00471	120	181-00560	181-00560	126	181-00642	181-00642	128
181-00159	181-00159	125	181-00472	181-00472	120	181-00562	181-00562	126	181-00643	181-00643	128
181-00212	181-00212	124	181-00473	181-00473	121	181-00564	181-00564	122	181-00644	181-00644	128
181-00214	181-00214	124	181-00474	181-00474	121	181-00565	181-00565	122	181-00645	181-00645	129
181-00216	181-00216	124	181-00475	181-00475	121	181-00566	181-00566	122	181-00646	181-00646	129
181-00218	181-00218	124	181-00476	181-00476	121	181-00567	181-00567	122	181-00647	181-00647	129
181-00220	181-00220	119	181-00477	181-00477	121	181-00568	181-00568	122	181-00648	181-00648	129
181-00222	181-00222	119	181-00479	181-00479	121	181-00569	181-00569	122	181-00649	181-00649	130
181-00224	181-00224	119	181-00480	181-00480	121	181-00570	181-00570	122	181-00651	181-00651	130
181-00226	181-00226	119	181-00481	181-00481	116	181-00571	181-00571	122	181-00652	181-00652	130
181-00228	181-00228	129	181-00482	181-00482	117	181-00572	181-00572	122	181-00653	181-00653	130
181-00230	181-00230	129	181-00483	181-00483	117	181-00573	181-00573	123	181-00654	181-00654	130
181-00232	181-00232	129	181-00485	181-00485	117	181-00574	181-00574	118	181-00655	181-00655	130
181-00234	181-00234	129	181-00486	181-00486	117	181-00575	181-00575	123	181-00656	181-00656	130
181-00236	181-00236	124	181-00487	181-00487	118	181-00576	181-00576	123	181-00657	181-00657	130
181-00238	181-00238	124	181-00488	181-00488	118	181-00577	181-00577	123	181-00658	181-00658	130
181-00240	181-00240	124	181-00489	181-00489	118	181-00578	181-00578	123	181-00659	181-00659	130
181-00242	181-00242	124	181-00490	181-00490	116	181-00579	181-00579	123	181-00663	181-00663	131
181-00244	181-00244	119	181-00491	181-00491	116	181-00580	181-00580	123	181-00664	181-00664	131
181-00246	181-00246	119	181-00492	181-00492	116	181-00581	181-00581	124	181-00665	181-00665	131
181-00248	181-00248	119	181-00493	181-00493	116	181-00582	181-00582	124	181-00666	181-00666	131
181-00250	181-00250	119	181-00494	181-00494	117	181-00583	181-00583	124	181-00667	181-00667	131
181-00252	181-00252	129	181-00495	181-00495	117	181-00584	181-00584	125	181-00671	181-00671	117
181-00254	181-00254	129	181-00496	181-00496	117	181-00585	181-00585	125	181-00672	181-00672	120
181-00256	SNP18A10C2	173	181-00497	181-00497	117	181-00586	181-00586	125	181-00684	181-00684	114
181-00259	181-00259	129	181-00498	181-00498	118	181-00587	181-00587	125	181-05500	181-05500	116
181-00260	181-00260	115	181-00499	181-00499	118	181-00588	181-00588	125	181-11000	181-11000	116
181-00262	181-00262	115	181-00500	181-00500	118	181-00589	181-00589	125	181-11002	181-11002	116
181-00265	181-00265	129	181-00501	181-00501	118	181-00590	181-00590	125	181-11005	181-11005	116
181-00300	181-00300	114	181-00503	181-00503	119	181-00591	181-00591	126	181-11008	181-11008	116
181-00301	181-00301	114	181-00504	181-00504	119	181-00592	181-00592	126	181-11009	181-11009	122
181-00302	181-00302	114	181-00505	181-00505	119	181-00593	181-00593	126	181-11013	181-11013	122
181-00303	181-00303	114	181-00506	181-00506	119	181-00594	181-00594	126	181-11015	181-11015	122
181-00304	181-00304	114	181-00507	181-00507	120	181-00595	181-00595	126	181-11016	181-11016	122
181-00305	181-00305	114	181-00508	181-00508	120	181-00596	181-00596	126	181-11019	181-11019	122
181-00306	181-00306	114	181-00509	181-00509	120	181-00597	181-00597	127	181-11021	181-11021	122
181-00307	181-00307	114	181-00510	181-00510	120	181-00598	181-00598	127	181-11501	181-11501	116
181-00308	181-00308	114	181-00511	181-00511	120	181-00599	181-00599	127	181-11502	181-11502	116
181-00309	181-00309	114	181-00512	181-00512	120	181-00600	181-00600	127	181-11505	181-11505	122
181-00311	181-00311	115	181-00513	181-00513	120	181-00601	181-00601	127	181-11507	181-11507	122
181-00312	181-00312	119	181-00514	181-00514	120	181-00602	181-00602	127	181-11509	181-11509	122
181-00313	181-00313	119	181-00515	181-00515	120	181-00603	181-00603	128	181-11511	181-11511	122
181-00314	181-00314	119	181-00516	181-00516	121	181-00604	181-00604	128	181-12001	181-12001	117
181-00315	181-00315	119	181-00517	181-00517	121	181-00605	181-00605	128	181-12002	181-12002	117
181-00316	181-00316	124	181-00518	181-00518	121	181-00606	181-00606	128	181-12005	181-12005	122
181-00317	181-00317	124	181-00519	181-00519	121	181-00607	181-00607	128	181-12008	181-12008	122
181-00318	181-00318	124	181-00520	181-00520	121	181-00608	181-00608	128	181-12011	181-12011	122
181-00319	181-00319	124	181-00521	181-00521	121	181-00609	181-00609	129	181-12013	181-12013	122
181-00320	181-00320	129	181-00522	181-00522	121	181-00610	181-00610	129	181-13001	181-13001	117
181-00321	181-00321	129	181-00523	181-00523	121	181-00611	181-00611	130	181-13003	181-13003	122
181-00322	181-00322	129	181-00524	181-00524	116	181-00612	181-00612	130	181-13006	181-13006	122
181-00323	181-00323	129	181-00525	181-00525	116	181-00613	181-00613	130	181-13008	181-13008	122
181-00441	SDWR4X40P2	111	181-00526	181-00526	116	181-00614	181-00614	130	181-13010	181-13010	122
181-00442	181-00442	115	181-00527	181-00527	116	181-00615	181-00615	130	181-13012	181-13012	122
181-00443	181-00443	115	181-00528	181-00528	116	181-00616	181-00616	130	181-14000	181-14000	117
181-00445	181-00445	115	181-00529	181-00529	116	181-00617	181-00617	131	181-14001	181-14001	122
181-00446	181-00446	115	181-00530	181-00530	117	181-00618	181-00618	131	181-14003	181-14003	122
181-00447	181-00447	115	181-00531	181-00531	117	181-00619	181-00619	131	181-14006	181-14006	122
181-00448	181-00448	115	181-00532	181-00532	117	181-00620	181-00620	128	181-15100	181-15100	117
181-00449	181-00449	115	181-00533	181-00533	117	181-00621	181-00621	127	181-15101	181-15101	117
181-00450	181-00450	115	181-00534	181-00534	118	181-00622	181-00622	127	181-15102	181-15102	117
181-00451	181-00451	115	181-00535	181-00535	118	181-00623	181-00623	127	181-15105	181-15105	122
181-00452	181-00452	116	181-00536	181-00536	118	181-00624	181-00624	127	181-15107	181-15107	122
181-00453	181-00453	116	181-00537	181-00537	118	181-00625	181-00625	127	181-15201	181-15201	118
181-00454	181-00454	116	181-00538	181-00538	118	181-00626	181-00626	127	181-15202	181-15202	118
181-00455	181-00455	116	181-00539	181-00539	118	181-00627	181-00627	127	181-15203	181-15203	123
181-00456	181-00456	116	181-00540	181-00540	119	181-00628	181-00628	127	181-15207	181-15207	123
181-00457	181-00457	116	181-00541	181-00541	119	181-00629	181-00629	127	181-15209	181-15209	123
181-00458	181-00458	117	181-00542	181-00542	120	181-00630	181-00630	127	181-15211	181-15211	123
181-00459	181-00459	117	181-00543	181-00543	121	181-00631	181-00631	127	181-15213	181-15213	123
181-00460	181-00460	117	181-00544	181-00544	121	181-00632	181-00632	127	181-15300	181-15300	118
181-00461	181-00461	117	181-00545	181-00545	121	181-00633	181-00633	128	181-15304	181-15304	123
181-00462	181-00462	118	181-00546	181-00546	121	181-00634	181-00634	128	181-15306	181-15306	123
181-00463	181-00463	118	181-00547	181-00547	121	181-00635	181-00635	128	181-15307	181-15307	123
181-00464	181-00464	118	181-00548	181-00548	122	181-00636	181-00636	128	181-15308	181-15308	123
181-00465	181-00465	118	181-00550	181-00550	123	181-00637	181-00637	127	181-15400	181-15400	123

Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
181-15404	181-15404	123	181-43008	181-43008	126	184-24004	184-24004	129	190-00204	SNP710C2	173
181-15406	181-15406	123	181-44006	181-44006	121	184-24007	184-24007	129	190-00206	SNP710M4	173
181-15500	181-15500	117	181-44009	181-44009	121	184-32001	184-32001	130	190-00209	SNP70GHSOC2	172
181-15502	181-15502	117	181-44015	181-44015	121	184-32004	184-32004	130	190-00212	SNP7010C2	174
181-15503	181-15503	117	181-44018	181-44018	121	184-33001	184-33001	130	190-00215	SNP76GHSOC2	172
181-15504	181-15504	117	181-44020	181-44020	126	184-33002	184-33002	130	190-00217	SNP7610C2	174
181-15505	181-15505	123	181-44027	181-44027	126	184-33004	184-33004	130	190-00222	SNP8GHSOM4	171
181-15509	181-15509	123	181-44031	181-44031	126	184-34001	184-34001	130	190-00224	SNP810C2	173
181-15511	181-15511	123	181-44033	181-44033	126	184-34003	184-34003	130	190-00226	SNP810M4	173
181-15513	181-15513	123	181-44035	181-44035	126	184-34005	184-34005	130	190-00229	SNP80GHSOC2	172
181-15515	181-15515	123	181-45000	181-45000	121	184-42001	184-42001	131	190-00231	SNP8010C2	174
181-20021	SLWR20C2	111	181-45001	181-45001	121	184-42003	184-42003	131	190-00233	SNP9010C2	174
181-20201	SDWR2X20K2	111	181-45002	181-45002	126	184-43001	184-43001	131	190-00244	SNP33GHSOK2	172
181-21000	181-21000	118	181-45010	181-45010	126	184-43003	184-43003	131	190-00245	SNP3810H4	174
181-21001	181-21001	118	181-45011	181-45011	126	184-44001	184-44001	131	190-00246	SNP42N10C2	174
181-21003	181-21003	118	181-45012	181-45012	126	184-44002	184-44002	131	190-00247	SNP42N10K2	174
181-21005	181-21005	123	181-45013	181-45013	126	184-44004	184-44004	131	190-00248	SNP5010C2	174
181-21007	181-21007	123	181-64000	181-64000	121	190-00019	SNP1GHSOM4	171	190-00249	SNP90GHSOC2	172
181-21009	181-21009	123	181-64001	181-64001	121	190-00022	SNP110C2	173	190-00250	SNP10110X2	174
181-22005	181-22005	118	181-84004	181-84004	121	190-00023	SNP110M4	173	190-00251	SNP1.5GHSOC2	171
181-22008	181-22008	118	181-84007	181-84007	121	190-00027	SNP1.2510C2	173	190-00252	SNP12A10C2	173
181-22013	181-22013	118	181-90050	181-90050	115	190-00028	SNP1.2510M4	173	190-00253	SNP12A10M4	173
181-22016	181-22016	118	181-91000	181-91000	115	190-00029	SNP1.25GHSOC2	171	190-00254	SNP12AGHSOC2	171
181-22018	181-22018	118	181-91004	181-91004	115	190-00030	SNP1.25GHSOM4	171	190-00255	SNP12AGHSOM4	171
181-22020	181-22020	123	181-91008	181-91008	115	190-00033	SNP1.510C2	173	190-00257	SNP18A10M4	173
181-22024	181-22024	123	181-91503	181-91503	115	190-00034	SNP1.510M4	173	190-00258	SNP18AGHSOC2	171
181-22028	181-22028	123	181-91507	181-91507	115	190-00035	SNP1.5GHSOM4	171	190-00259	SNP18AGHSOM4	171
181-22030	181-22030	123	181-91510	181-91510	115	190-00043	SNP10GHSOM4	171	190-00300	SNP14AGHSOC2	171
181-22032	181-22032	123	181-92001	181-92001	115	190-00045	SNP1010C2	173	190-00301	SNP14AGHSOM4	171
181-22034	181-22034	123	181-92005	181-92005	115	190-00046	SNP1010M4	173	190-00302	SNP14A10C2	173
181-23001	181-23001	119	181-92011	181-92011	115	190-00052	SNP10010X2	174	190-00303	SNP14A10M4	173
181-23002	181-23002	119	181-93003	181-93003	115	190-00053	SNP101GHSOX2	172	191-00005	SNP42NGHSOK2	172
181-23003	181-23003	124	181-93008	181-93008	115	190-00076	SNP16GHSOM4	171	191-00008	SNP42NGHSOC2	172
181-23007	181-23007	124	181-93011	181-93011	115	190-00077	SNP1610C2	173	191-00010	PHSNP2-36	170
181-23009	181-23009	124	181-94003	181-94003	115	190-00079	SNP1610M4	173	191-00012	PHSNP38-100	170
181-23012	181-23012	124	181-94009	181-94009	115	190-00090	SNP19GHSOC2	172	191-00014	PSNP2-22	170
181-24000	181-24000	119	181-94014	181-94014	115	190-00093	SNP19GHSOM4	172	191-00019	PSNP24-70	170
181-24002	181-24002	119	181-96000	181-96000	115	190-00094	SNP1910C2	174	191-01700	MSNP1-70	170
181-24003	181-24003	124	181-96002	181-96002	115	190-00095	SNP1910M4	174	191-02220	ASN2-22	170
181-24008	181-24008	124	182-00001	PRT1	112	190-00098	SNP2GHSOM4	171	191-24700	ASN24-70	170
181-24011	181-24011	124	182-00002	TDNT	113	190-00101	SNP210C2	173	192-10010	SNP1GHSOC2	171
181-24013	181-24013	124	184-11004	184-11004	127	190-00102	SNP210M4	173	192-10020	SNP2GHSOC2	171
181-24014	181-24014	124	184-11006	184-11006	127	190-00111	SNP22GHSOM4	172	192-10040	SNP4GHSOC2	171
181-30031	SLWR30C2	111	184-11008	184-11008	127	190-00113	SNP2210C2	174	192-10060	SNP6GHSOC2	171
181-31001	181-31001	120	184-11009	184-11009	127	190-00114	SNP2210M4	174	192-10070	SNP7GHSOC2	171
181-31002	181-31002	120	184-11010	184-11010	127	190-00119	SNP24GHSOH4	172	192-10080	SNP8GHSOC2	171
181-31007	181-31007	125	184-11012	184-11012	127	190-00121	SNP2410C2	174	192-10100	SNP10GHSOC2	171
181-32002	181-32002	120	184-12002	184-12002	127	190-00122	SNP2410H4	174	192-10160	SNP16GHSOC2	171
181-32003	181-32003	120	184-12004	184-12004	127	190-00124	SNP2810C2	174	192-10220	SNP22GHSOC2	172
181-32004	181-32004	125	184-12005	184-12005	127	190-00125	SNP2810H4	174	192-10240	SNP24GHSOC2	172
181-32005	181-32005	125	184-12007	184-12007	127	190-00127	SNP28GHSOC2	172	192-10320	SNP32GHSOK2	172
181-32009	181-32009	125	184-13003	184-13003	127	190-00128	SNP28GHSOH4	172	192-10360	SNP36GHSOK2	172
181-32012	181-32012	125	184-13005	184-13005	127	190-00132	SNP3GHSOC2	171	192-10380	SNP38GHSOK2	172
181-32015	181-32015	125	184-13007	184-13007	127	190-00134	SNP3GHSOM4	171	192-10500	SNP50GHSOC2	172
181-33000	181-33000	120	184-14002	184-14002	127	190-00135	SNP310C2	173	192-11000	SNP100GHSOX2	172
181-33004	181-33004	120	184-14004	184-14004	127	190-00136	SNP310M4	173	201-20010	201-20010	135
181-33006	181-33006	120	184-15101	184-15101	127	190-00140	SNP32GHSOH4	172	211-00109	TSD025010M4	177
181-33009	181-33009	125	184-15102	184-15102	127	190-00142	SNP3210K2	174	211-00110	TSD031210M4	177
181-33015	181-33015	125	184-15151	184-15151	128	190-00143	SNP3210H4	174	211-00111	TSD037510M4	177
181-33018	181-33018	125	184-15152	184-15152	128	190-00146	SNP3310K2	174	211-00112	TSD050010M4	177
181-33021	181-33021	125	184-15153	184-15153	128	190-00147	SNP3310H4	174	211-00113	TSD056210M4	177
181-33022	181-33022	125	184-15155	184-15155	128	190-00148	SNP33GHSOH4	172	211-00114	TSD062510M4	177
181-34000	181-34000	120	184-15201	184-15201	128	190-00149	SNP34GHSOK2	172	211-00115	TSD075010M4	177
181-34001	181-34001	120	184-15202	184-15202	128	190-00150	SNP34GHSOH4	172	211-00116	TSD087510H4	177
181-34002	181-34002	125	184-15205	184-15205	128	190-00151	SNP3410K2	174	211-00117	TSD012510M4	177
181-34004	181-34004	125	184-15206	184-15206	128	190-00152	SNP3410H4	174	211-00118	TSD017810M4	177
181-34007	181-34007	125	184-15301	184-15301	128	190-00156	SNP3610H4	174	211-00119	TSD100010H4	177
181-35002	181-35002	126	184-15302	184-15302	128	190-00157	SNP3610K2	174	211-00120	TSD112510H4	177
181-35005	181-35005	126	184-15304	184-15304	128	190-00158	SNP36GHSOH4	172	211-00121	TSD125010F4	177
181-40041	SLWR40C2	111	184-15401	184-15401	128	190-00162	SNP3810K2	174	211-00122	TSD150010F4	177
181-42002	181-42002	121	184-15403	184-15403	128	190-00163	SNP38GHSOH4	172	211-00123	TSD02500M4	177
181-42004	181-42004	121	184-21002	184-21002	128	190-00165	SNP410C2	173	211-00124	TSD03750M4	177
181-42005	181-42005	126	184-21003	184-21003	128	190-00167	SNP4GHSOM4	171	211-00125	TSD05000M4	177
181-42008	181-42008	126	184-22003	184-22003	128	190-00170	SNP410M4	173	211-00126	TSD06250M4	177
181-42010	181-42010	126	184-22005	184-22005	128	190-00186	SNP6GHSOM4	171	211-00127	TSD07500M4	177
181-42014	181-42014	126	184-22008	184-22008	128	190-00187	SNP610C2	173	211-00128	TSD08750H4	177
181-43001	181-43001	121	184-23003	184-23003	129	190-00190	SNP610M4	173	211-00129	TSD01250M4	177
181-43002	181-43002	121	184-23004	184-23004	129	190-00196	SNP6010C2	174	211-00130	TSD01780M4	177
181-43004	181-43004	126	184-23006	184-23006	129	190-00197	SNP60GHSOC2	172	211-00131	TSD01250M4	176
181-43006	181-43006	126	184-24003	184-24003	129	190-00202	SNP7GHSOM4	171	211-00132	TSD012510M4	176

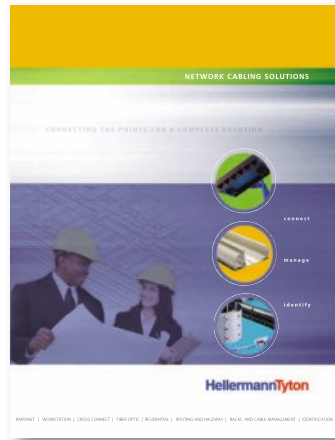
Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
211-00133	T3D01870M4	176	553-50008	553-50008	207	556-00144	TTDTHOUT	193	558-00227	SMWWAXOUT	190
211-00134	T3D02500M4	176	553-50009	553-50009	207	556-00145	TT822OUTSM	192	558-00307	558-00307	204
211-00135	T3D025010M4	176	553-50010	553-50010	207	556-00147	TT822OUTSM2	192	558-00308	558-00308	204
211-00136	T3D03120M4	176	553-50011	553-50011	207	556-00148	TT822OUTSM3	192	558-00309	558-00309	204
211-00137	T3D031210M4	176	553-50012	553-50012	207	556-00149	TT822OUTSM4	192	558-00310	558-00310	204
211-00138	T3D03750M4	176	553-50013	553-50013	207	556-00150	TT822OUTSM5	192	558-00311	558-00311	204
211-00139	T3D037510M4	176	553-50014	553-50014	207	556-00151	TT822OUTSM6	192	558-00312	558-00312	204
211-00140	T3D043710M4	176	553-50015	553-50015	207	556-00152	TT822OUTSM7	192	558-00313	558-00313	204
211-00141	T3D050010M4	176	553-50016	553-50016	207	556-00153	TT822OUTSM8	192	558-00314	558-00314	204
211-00142	T3D05000M4	176	553-50017	553-50017	207	556-00155	TT822OUT2	193	558-00327	558-00327	231
211-00143	T3D056210M4	176	553-50018	553-50018	207	556-00156	TT822OUT3	193	558-00328	558-00328	231
211-00144	T3D06250M4	176	553-50019	553-50019	207	556-00157	TT822OUT4	193	558-00330	558-00330	231
211-00145	T3D062510M4	176	553-50020	553-50020	207	556-00158	TT822OUT5	193	558-00331	558-00331	231
211-00146	T3D04370M4	176	553-50021	553-50021	207	556-00159	TT822OUT6	193	558-00333	558-00333	231
211-00147	T5D03120M4	177	553-50022	553-50022	207	556-00160	TT822OUT7	193	558-00334	558-00334	231
211-00148	T5D043710M4	177	553-50023	553-50023	208	556-00161	TT822OUT8	193	558-00336	558-00336	204
211-00149	T5D04370M4	177	553-50024	553-50024	208	556-00162	THSTOUT	193	558-00337	558-00337	204
211-00150	T5D05620M4	177	553-50025	553-50025	208	556-00163	THSTOUTSM	192	558-00338	558-00338	204
211-00151	T5D10000H4	177	553-50026	553-50026	208	556-00165	SM100OUT	190	558-00339	558-00339	204
211-00152	T5D11250H4	177	553-50027	553-50027	208	556-00169	TT100OUTSM	192	558-00340	558-00340	204
211-00153	T5D118710H4	177	553-50028	553-50028	208	556-00189	556-00189	193	558-00341	558-00341	204
211-00154	T5D11870H4	177	553-50029	553-50029	208	556-00190	556-00190	192	558-00342	558-00342	204
211-00155	T5D12500F4	177	553-50030	553-50030	208	556-00230	556-00230	192	558-00343	558-00343	204
211-00156	T5D13750F4	177	553-50031	553-50031	208	556-00231	556-00231	192	558-00344	558-00344	204
211-00157	T5D137510F4	177	553-50032	553-50032	208	556-00236	556-00236	192	558-00345	558-00345	204
211-00158	T3D018710M4	176	553-50033	553-50033	208	556-00430	556-00430	193	558-00346	558-00346	204
211-00159	T3D05620M4	176	553-50034	553-50034	208	556-00431	556-00431	193	558-00350	558-00350	204
211-60000	211-60000	175	553-50035	553-50035	208	556-00432	556-00432	193	558-00351	558-00351	204
211-60001	211-60001	175	553-50036	553-50036	208	556-00433	556-00433	193	558-00370	558-00370	204
211-60002	211-60002	175	553-50037	553-50037	208	556-00434	556-00434	193	558-00374	558-00374	204
211-60003	211-60003	175	553-50038	553-50038	208	556-00460	556-00460	193	590-01750	RO175	232
211-60005	211-60005	175	553-50039	553-50039	208	556-00461	556-00461	193	590-01751	175REF	232
211-60006	211-60006	175	553-50040	553-50040	208	556-03065	556-03065	193	590-05120	RO512	232
211-60007	211-60007	175	553-50041	553-50041	208	556-26006	556-26006	210	590-05121	512REF	232
211-60008	211-60008	175	553-50042	553-50042	208	556-26007	556-26007	210	590-05140	RO514	232
211-60009	211-60009	175	553-50063	553-50063	207	556-26008	556-26008	210	590-05141	514REF	232
211-60010	211-60010	175	553-50064	553-50064	207	556-26009	556-26009	210	590-10000	RO175WP	232
211-60020	211-60020	175	553-50066	553-50066	208	557-00002	557-00002	222, 227	591-00076	BC10	222
211-60040	211-60040	175	553-50067	553-50067	207	557-00003	557-00003	222, 227	591-00076	591-00076	227
211-60050	211-60050	175	553-50068	553-50068	207	557-00004	2100CABLE	222	591-00231	591-00231	227
211-60061	211-60061	175	553-50069	553-50069	207	557-00005	2100OPEN	222	591-00232	591-00232	227
211-60078	211-60078	175	553-50070	553-50070	207	557-00006	TS3003039	222	591-00233	591-00233	227
211-60090	211-60090	175	553-50071	553-50071	207	557-00007	TS3003040	222	591-00243	591-00243	227
211-60120	211-60120	175	553-50072	553-50072	207	557-00008	2100CARD	222	591-00244	591-00244	227
211-60140	211-60140	175	553-50073	553-50073	207	557-00009	HHGR	222	591-00251	591-00251	227
211-60160	211-60160	175	553-50074	553-50074	207	557-00010	TAGH1-100	223	591-00252	591-00252	227
251-10009	FPAA	165	553-50075	553-50075	207	557-00011	TAGH2-100	223	591-00259	591-00259	227
251-10109	FPA	165	553-50076	553-50076	207	557-00013	TAGH3-100	223	591-00260	591-00260	227
251-10209	FPB	165	553-50077	553-50077	207	557-00015	TAGH6-100	223	591-00261	591-00261	227
251-10309	FPC	165	553-50078	553-50078	207	557-00018	TAGH9-100	223	591-00263	591-00263	227
251-10409	FPD	165	553-50079	553-50079	207	557-00020	TAGH10-100	223	591-00264	591-00264	227
251-10509	FPE	165	553-50080	553-50080	207	557-00021	TAGH22-100	223	591-00265	591-00265	227
251-10609	FPF	165	553-50081	553-50081	207	557-00024	TAGH24-100	223	591-00278	591-00278	227
251-10709	FPG	165	553-50082	553-50082	208	557-00025	TAGH25-100	223	593-00001	TAGPHONE	212, 218
251-10809	FPH	165	553-50083	553-50083	208	557-00026	TAGH26-100	223	593-01108	TAGPP1J-108	218
251-21109	FHA	165	553-50084	553-50084	208	557-00027	TAGH51-100	223	593-05994	TAG5J-994	220
251-21209	FHB	165	553-50085	553-50085	208	557-00028	TAGH95-100	223	593-09994	TAG9J-994	220
251-21309	FHC	165	553-50086	553-50086	208	557-00075	HHDT	222	593-11450	TAG11J-450	218
251-21409	FHD	165	553-50087	553-50087	208	557-00085	HT2100	222	593-13450	TAG13J-450	218
251-21509	FHE	165	553-50088	553-50088	207	557-00092	HHST	222	593-14450	TAG14J-450	218
251-21609	FHF	165	553-50089	553-50089	208	557-00112	557-00112	227	593-15450	TAG15J-450	218
251-21709	FHG	165	553-50176	553-50176	207	557-00113	557-00113	227	593-19450	TAG19J-450	218
251-21809	FHH	165	553-50177	553-50177	207	558-00006	558-00006	204	593-21450	TAG21J-450	218
251-30109	FTA	166	553-50192	553-50192	208	558-00045	558-00045	190	593-22994	TAG22J-994	220
251-30209	FTB	166	553-50209	553-50209	208	558-00046	558-00046	190	593-26994	TAG26J-994	220
251-30309	FTC	166	553-50225	553-50225	208	558-00047	558-00047	190	593-28450	TAG28J-450	218
251-30409	FTD	166	553-50226	553-50226	208	558-00052	558-00052	190	593-51994	TAG51J-994	218
251-30509	FTE	166	553-50227	553-50227	208	558-00053	558-00053	190	593-56108	TAG56J-108	218
251-30609	FTF	166	553-50231	553-50231	208	558-00056	558-00056	190	593-57108	TAG57J-108	218
251-30709	FTG	166	553-50232	553-50232	208	558-00057	558-00057	190	593-59108	TAG59J-108	218
251-30809	FTH	166	556-00035	556-00035	187	558-00058	558-00058	190	593-64994	TAG64J-994	220
500-50820	T82-S	232	556-00036	556-00036	187	558-00059	558-00059	190	593-65108	TAG65J-108	218
500-50822	T82-R	232	556-00037	556-00037	187	558-00060	558-00060	188	594-00001	TAGPP2-788	212
553-50001	553-50001	207	556-00038	556-00038	187	558-00061	558-00061	190	594-00002	TAGPP2-788C	212
553-50002	553-50002	207	556-00039	556-00039	187	558-00063	558-00063	190	594-01105	TAG1L-105	215
553-50003	553-50003	207	556-00042	556-00042	187	558-00065	558-00065	188	594-01788	TAGPP1-788	212
553-50004	553-50004	207	556-00101	TT822OUT	193	558-00066	558-00066	188	594-02105	TAG2L-105	215
553-50005	553-50005	207	556-00104	TT100OUT	193	558-00069	558-00069	190	594-02788	TAGPP1-788C	212
553-50006	553-50006	207	556-00106	TT900OUT	193	558-00071	558-00071	190	594-05105	TAG5L-105	215
553-50007	553-50007	207	556-00143	TTDTHOUTSM	192	558-00179	558-00179	190	594-09105	TAG9L-105	215

Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page	Article No.	Part No.	Page
594-10105	TAG10L-105	215	596-00204	596-00204	231	598-00259	WMT0-9	233	854-44373	GT.75X152C2	74
594-11789	TAG11L-789	212	596-00206	596-00206	229	598-00260	TCWM1	233	854-44374	GT.75X152P2	74
594-13789	TAG13L-789	212	596-00207	596-00207	229	598-00261	TCWM2	233	854-44375	GT.75X153C2	74
594-14789	TAG14L-789	212	596-00208	596-00208	229	598-00262	TCWM3	233	854-44376	GT.75X153P2	74
594-15789	TAG15L-789	212	596-00231	596-00231	228	598-00263	TCWM4	233	854-44377	GT.75X154P2	74
594-26105	TAG26L-105	215	596-00232	596-00232	228	598-00264	TCWM5	233	854-44378	GT.75X154C2	74
594-45789	TAG45L-789	212	596-00233	596-00233	228	598-00265	TCWM6	233	854-44379	GT.75X155C2	74
594-49105	TAG49L-105	215	596-00234	596-00234	228	598-00266	TCWM7	233	854-44380	GT.75X155P2	74
594-50105	TAG50L-105	215	596-00235	596-00235	228	598-00267	TCWM8	233	854-44381	GT.75X156C2	74
594-51105	TAG51L-105	215	596-00236	596-00236	228	598-00268	TCWM9	233	854-44382	GT.75X156P2	74
594-52105	TAG52L-105	215	596-00237	596-00237	230	598-00269	TCWM10	233	854-44384	GT.75X1800	74
594-53788	TAG53L-788	212	596-00238	596-00238	230	598-00270	TCWM11	233	854-44386	GT.75X1800W	75
594-54788	TAG54L-788	212	596-00239	596-00239	230	598-00271	TCWM12	233	854-44388	GT.75X1802	74
594-55788	TAG55L-788	212	596-00240	596-00240	230	598-00272	TCWM13	233	854-44389	GT.75X1803	74
594-56788	TAG56L-788	212	596-00241	596-00241	230	598-00273	TCWM14	233	854-44390	GT.75X1804	74
594-57788	TAG57L-788	212	596-00242	596-00242	230	598-00274	TCWM15	233	854-44391	GT.75X1805	74
594-58788	TAG58L-788	212	596-00243	596-00243	229	598-00275	TCWM16	233	854-44392	GT.75X1806	74
594-59788	TAG59L-788	212	596-00244	596-00244	229	598-00277	TYHCT-250	198	854-44394	GT.75X180MV2	75
594-60788	TAG60L-788	212	596-00245	596-00245	229	598-11250	TAG11T4-250	198	854-44395	GT.75X6000	74
594-61788	TAG61L-788	212	596-00246	596-00246	229	598-15250	TAG15T3-250	198	854-44396	GT.75X9000	74
594-62788	TAG62L-788	212	596-00247	596-00247	229	598-15795	TAG15T3-795	198	854-44397	GT.75X9004	74
594-63105	TAG63L-105	215	596-00249	596-00249	229	598-21250	TAG21T6-250	198	854-90272	WMBH	115
594-64105	TAG64L-105	215	596-00251	596-00251	229	598-27795	TAG27T1-795	198	904-00006	ETSB210	167
594-65105	TAG65L-105	215	596-00252	596-00252	230	598-28250	TAG28T4-250	198	904-00007	ET330	167
594-66789	TAG66L-789	212	596-00253	596-00253	230	598-72795	TAG72T1-795	198	904-00008	ET660	167
594-67789	TAG67L-789	212	596-00255	596-00255	229	598-73795	TAG73T1-795	198	904-00010	ETCW660	167
594-68789	TAG68L-789	212	596-00257	596-00257	228	598-75795	TAG75T1-795	198	904-00011	ETST661	167
594-69789	TAG69L-789	212	596-00258	596-00258	228	598-76795	TAG76T1-795	198	904-00012	ETST6610	167
594-96789	TAG96L-789	212	596-00323	596-00323	202	598-78795	TAG78T1-795	198	904-00014	ETST662	167
596-00001	TAG15T3-822C10M	199	596-00371	596-00371	231	598-79795	TAG79T1-795	198	904-00016	ETST663	167
596-00002	TAG10T2-100B	196	596-00375	596-00375	231	598-80795	TAG80T1-795	198	904-00018	ETST664	167
596-00003	TAG11T4-822C	199	596-00376	596-00376	231	800-00004	SM1BK75MT	166	904-00020	ETST665	167
596-00005	TAG1T1-100B	196	596-00377	596-00377	231	854-44316	GT.375X60C2	73	904-00022	ETST666	167
596-00006	TAG2T2-100B	196	596-00378	596-00378	231	854-44317	GT.50X110C2	74	904-00024	ETST667	167
596-00007	TAG2T3-100B	196	596-00379	596-00379	231	854-44319	GT.50X110C2W	75	904-00026	ETST668	167
596-00008	TAG24T1-100B	196	596-00380	596-00380	198	854-44320	GT.50X110P2	74	904-00284	904-00284	103
596-00009	TAG26T6-100B	196	596-00381	596-00381	198	854-44321	GT.50X110P2W	75	904-00295	904-00295	113
596-00010	TAG2T5-100B	196	596-00382	596-00382	198	854-44322	GT.50X112C2	74	904-00296	904-00296	113
596-00011	TAG38T4-100B	196	596-00383	596-00383	198	854-44323	GT.50X112P2	74	904-00297	904-00297	113
596-00013	TAG3T3-100B	196	596-00386	596-00386	231	854-44324	GT.50X113C2	74			
596-00014	TAG51T3-100B	196	596-00387	596-00387	231	854-44325	GT.50X113P2	74			
596-00016	TAG6T1-100B	196	596-00388	596-00388	231	854-44326	GT.50X114C2	74			
596-00017	TAG74T2-PAP	199	596-00389	596-00389	231	854-44327	GT.50X114P2	74			
596-00019	TAG75T1-822	199	596-00404	596-00404	202	854-44328	GT.50X115C2	74			
596-00021	TAG7T1-100B	196	596-00405	596-00405	202	854-44329	GT.50X115P2	74			
596-00022	TAG81T8-822	199	596-00406	596-00406	202	854-44330	GT.50X116C2	74			
596-00023	TAG83T1-822	199	596-00407	596-00407	202	854-44331	GT.50X116P2	74			
596-00024	TAG82T1-PAP	199	596-00412	596-00412	202	854-44334	GT.50X12MP2V2	75			
596-00025	TAG82T2-PAP	199	596-00413	596-00413	202	854-44336	GT.50X60C2	73			
596-00027	TAG9T3-100B	196	596-00414	596-00414	202	854-44338	GT.50X60C2W	75			
596-00028	TAGPP1T6-822	199	596-00415	596-00415	202	854-44339	GT.50X60P2	73			
596-00029	TAGPP1T6-822C	199	596-00417	596-00417	202	854-44340	GT.50X60P2W	75			
596-00030	TAGPP1T6-822C10M	199	596-00418	596-00418	203	854-44341	GT.50X62C2	73			
596-00033	TAG13T4-DTH	199	596-00419	596-00419	203	854-44342	GT.50X62P2	73			
596-00034	TAG16T3-DTH	199	596-00420	596-00420	203	854-44343	GT.50X63C2	73			
596-00035	TAG15T3-DTH	199	596-00424	596-00424	231	854-44344	GT.50X63P2	73			
596-00036	TAG27T2-DTH	199	596-00425	596-00425	231	854-44345	GT.50X64C2	73			
596-00037	TAG99T1-DTH	199	596-00426	596-00426	231	854-44346	GT.50X64P2	73			
596-00038	TAG73T1-DTH	199	596-00427	596-00427	231	854-44347	GT.50X65C2	73			
596-00039	TAG33T1-DTH	199	596-00500	596-00500	202	854-44348	GT.50X65P2	73			
596-00043	TAG27T1-822C	199	596-00503	596-00503	202	854-44349	GT.50X66C2	73			
596-00045	TAG53T2-100B	196	596-00504	596-00504	202	854-44350	GT.50X66P2	73			
596-00046	TAGPP2T6-822	199	596-00507	596-00507	202	854-44352	GT.50X6MP2V2	75			
596-00047	TAGPP2T6-822C	199	596-11822	TAG11T4-822	199	854-44353	GT.50X80C2	73			
596-00082	TAGPP1T6-82210M	199	596-13822	TAG13T4-822	199	854-44354	GT.50X80C2W	75			
596-00083	TAGPP3T4-822	199	596-15822	TAG15T3-822	199	854-44355	GT.50X80P2	73			
596-00084	TAGPP3T4-822C	199	596-16822	TAG16T3-822	199	854-44356	GT.50X80P2W	75			
596-00183	596-00183	203	596-17822	TAG17T2-822	199	854-44357	GT.50X82C2	73			
596-00184	596-00184	203	596-27822	TAG27T1-822	199	854-44358	GT.50X82P2	73			
596-00185	596-00185	203	596-42822	TAG72T1-822	199	854-44359	GT.50X83C2	73			
596-00189	596-00189	203	596-70822	TAG70T12-822	199	854-44360	GT.50X83P2	73			
596-00190	596-00190	203	596-71822	TAG71T5-822	199	854-44361	GT.50X84C2	73			
596-00191	596-00191	203	596-73822	TAG73T1-822	199	854-44362	GT.50X84P2	73			
596-00192	596-00192	203	596-82822	TAG82T2-822	199	854-44363	GT.50X85C2	73			
596-00193	596-00193	203	596-84822	TAG84T3-822	199	854-44364	GT.50X85P2	73			
596-00194	596-00194	203	598-00026	TAG96T1-336	198	854-44365	GT.50X86C2	73			
596-00195	596-00195	203	598-00040	TAG68T1-336	198	854-44366	GT.50X86P2	73			
596-00196	596-00196	203	598-00041	TAG69T1-336	198	854-44368	GT.50X8MP2V2	75			
596-00202	596-00202	202	598-00044	TAG35T2-250	198	854-44369	GT.75X150C2	74			
596-00203	596-00203	231	598-00256	WMTD0-9	233	854-44371	GT.75X150P2	74			

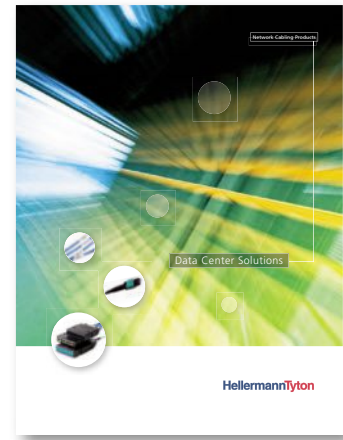
HellermannTyton's product line extends beyond cable management and identification solutions. Visit our website or reference these other catalogs to see our products for transportation and heavy equipment (Engineered Fastening Solutions) or network connectivity applications (Network Connectivity Solutions and Data Center Solutions).



Engineered Fastening Solutions
LITPDEFS



Network Connectivity Solutions
LITPDNCS



Data Center Solutions
LITPDCCS

HellermannTyton North American Facilities



Corporate Headquarters and Manufacturing
Faulkner Road, Milwaukee, WI



Manufacturing
Good Hope Road, Milwaukee, WI



Offices and Manufacturing
87th Street, Milwaukee, WI



Distribution
Bolingbrook, IL



Sales, Distribution and Assembly
Tlaquepaque, Jalisco Mexico



Sales and Distribution
Aurora, Ontario Canada

Located in 34 countries, HellermannTyton brings the best to its customers through global resources channeled to local implementations. Flexibility, agility, and ability to create value-added, market driven solutions are the hallmarks of every HellermannTyton company across the world.



ARGENTINA | AUSTRALIA | AUSTRIA | BELGIUM | BRAZIL | CANADA | CHINA
CZECH REPUBLIC | DENMARK | FINLAND | FRANCE | GERMANY | HONG KONG
HUNGARY | IRELAND | ITALY | JAPAN | KOREA | MEXICO | NETHERLANDS | NORWAY | PHILIPPINES
POLAND | PORTUGAL | ROMANIA | RUSSIAN FEDERATION | SINGAPORE | SLOVENIA | SOUTH AFRICA |
SPAIN | SWEDEN | THAILAND | UNITED KINGDOM | UNITED STATES

HellermannTyton

HellermannTyton North American Corporate Headquarters

7930 N. Faulkner Rd, PO Box 245017
Milwaukee, WI 53224-9517
Phone: (414) 355-1130, (800) 537-1512
Fax: (414) 355-7341, (800) 848-9866
email: corp@htamericas.com
www.hellermann.tyton.com

TS16949, ISO 9001, and ISO14001 certified

HellermannTyton Canada

Unit #4, 205 Industrial Parkway North
Aurora, Ontario L4G 4C4 Canada
Phone: (800) 661-2461
Fax: (800) 390-3904
email: sales@hellermanntyton.ca

HellermannTyton Mexico

Anillo Periférico Sur 7980 Edificio 6A
Parque Industrial Tecnológico II
Santa María Tequepexpan
Tlaquepaque, Jalisco, Mexico 45601
Phone: 011-52-33-3-133-9880
Fax: 011-52-33-3-133-9861
email: info@htamericas.com.mx

ISO 9001 certified

Warranty Policy

HellermannTyton products are warranted to be free from defects in material and workmanship at the time sold by us; but our obligation under this warranty and that of the seller is limited to the replacement of the product, and neither we nor the seller are bound by any other warranty, expressed, implied or statutory. Under no circumstances are we or the seller liable for any loss, damage, expenses or consequential damages of any kind arising out of the use or inability to use these products. All are sold with the understanding that the user will test them in actual use and determine their adaptability for the intended uses.

The above warranties and remedies are exclusive and in lieu of all other warranties and remedies whatsoever, express or implied, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose which HellermannTyton expresses disclaims.