## HellermannTyton



Infrastructure and Rolling Stock Solutions



## Rail Infrastructure and Rolling Stock Solutions

HellermannTyton designs and produces a comprehensive range of industrial-grade solutions for rail applications.

Material properties play a critical role in performance, durability and functionality. We have developed a series of versatile cable management products and tested them against the latest fire performance standards defined by NFPA 130.

## NFPA 130 - North American Standard

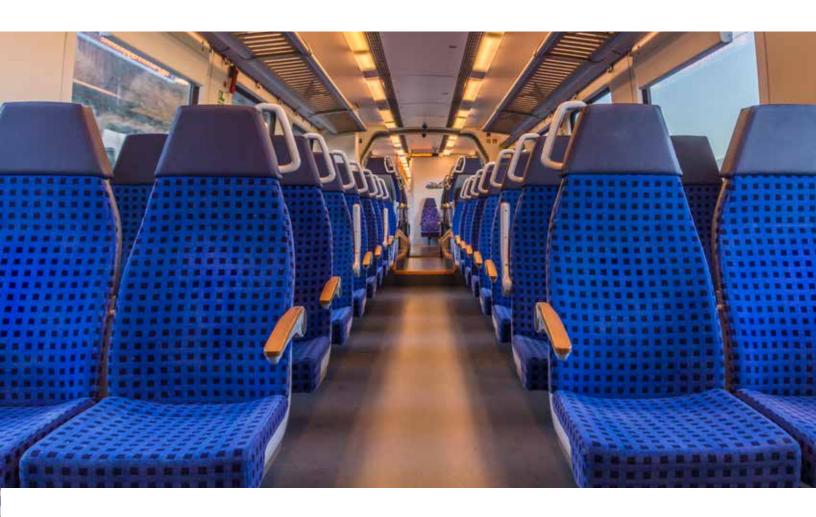
Used by U.S. Rail authorities. Tests include:

- ASTM E-162 (flame spread)
- ASTM E-662 (smoke)
- ASTM-1354 (smoke extinction)

From the engine to the signal box, our products manage and protect wires, cables and hoses with the highest quality specifications for maximum service life and performance.

## A Breakthrough Material

Our reputation as material experts is a direct result of our industry stewardship in this area. In that spirit, we have developed a material blend particularly suited for the rail industry, ushering in a new level of low-smoke, low-flame and low-toxicity performance.



## **Rolling Stock**

HellermannTyton's durable products for rolling stock applications have ensured safety and reliability while helping to improve overall operational efficiencies since the 1950s.

Our industry-specific solutions can be found in every part of a rail vehicle. The toughest requirements are on the bogeys, the roof and underbody, where vibration resistance is key. Our rigorous testing is one way we keep an eye on consistent quality.

Close relationships with rail industry leaders enable collaborative dialog and development, turning specific challenges into innovative solutions.

That's how we stand out in the rail market.

## **Bundling and Securing**

Cable Ties

## **Standard Cable Ties**

## **T-Series**

T-Series cable ties feature inside serrations to provide a positive hold on wire and cable bundles. The head design guarantees high tensile strength and a low insertion force. The bent tail design allows quick and simple installation by hand. For high-volume applications, tensioning tools are available to ensure consistent and safe installation.

### **Features and Benefits**

- Engineered and manufactured for maximum performance and quality.
- Inside serration for a strong grip onto bundles.
- Easy application either manually or with a tensioning tool.
- Bent tail allows for simpler insertion.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.





MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation



PART NO.	ТҮРЕ	Min. Tensile Strength Ibs. (N)	Length (L) in. (mm)	Max. Bundle Diameter in. (mm)	Width (W) in. (mm)	Color	Pkg. Qty.
111-02506	T50R	50.0 (225.0)	8.0 (202.0)	2.0 (50.0)	0.2 (4.6)	Black	100

## **Standard Cable Ties - Special Materials**

### **T-Series - Flame Retardant**

HellermannTyton's flame retardant cable ties meet UL 94 V0 flammability requirements. T-Series Cable Ties feature inside serrations to provide a positive hold on wire and cable bundles. The head design guarantees high tensile strength and a low insertion force. The bent tail design allows quick and simple installation by hand. For high-volume applications, tensioning tools are available to ensure consistent and safe installation.

## **Features and Benefits**

- Flame-retardant cable ties are self-extinguishing and provide low smoke emissions.
- Inside serrations allow for strong grip on cables and wire bundles.
- Head design provides high tensile strength with low insertion force.



MATERIAL	Polyamide 6.6 V0 (PA66V0)
Operating Temperature	-40°F to +212°F (-40°C to +100°C)
Flammability	UL 94 V0



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PART NO.	ТҮРЕ	Min. Tensile Strength Ibs. (N)	Length (L) in. (mm)	Max. Bundle Diameter in. (mm)	Width (W) in. (mm)	Color	Pkg. Qty.
T30R0VOC2*	T30R	30.0 (135.0)	6.0 (150.0)	1.4 (35.0)	0.1 (3.6)	Black	100
111-04935*	T50R	50.0 (225.0)	8.0 (202.0)	2.0 (50.0)	0.2 (4.6)	Black	100

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



Please note - not all products listed on this page may have this approval. Please see www.Hellermann.Tyton.com for the latest approvals.



<sup>\*</sup>This product meets UL standards.

## **Heavy Duty Cable Ties**

## **T-Series - Flame Retardant**

Heavy duty T-Series cable ties feature inside serrations to provide a positive hold on wire and cable bundles. Durable head design guarantees high tensile strength and a low insertion force. The bent tail allows quick and simple installation by hand. For high-volume applications, tensioning tools are available to ensure consistent and safe installation.

## **Features and Benefits**

- Flame-retardant cable ties are self-extinguishing and provide low smoke emissions.
- Inside serrations allow for strong grip on cables and wire bundles.
- Head design provides high tensile strength with low insertion force.



MATERIAL	Polyamide 6.6 V0 (PA66V0)
Operating Temperature	-40°F to +212°F (-40°C to +100°C)
Flammability	UL 94 V0



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PART NO.	ТҮРЕ	Min. Tensile Strength lbs. (N)	Length (L) in. (mm)	Max. Bundle Diameter in. (mm)	Width (W) in. (mm)	Color	Pkg. Qty.
111-02494*	T120R	120.0 (535.0)	15.2 (387.0)	4.1 (104.1)	0.3 (7.6)	Black	100
111-02495*	T150M	175.0 (780.0)	21.0 (530.0)	5.9 (150.0)	0.4 (8.9)	Black	25

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



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<sup>\*</sup>This product meets UL standards.

## **Wide Strap Cable Ties**

## **Heavy Duty Wide Strap Cable Ties**

The Heavy Duty Wide-Strap Cable Tie was designed to minimize the pinching of soft bundles and the potential of lateral movement along the bundle. The low-profile head and underside clamping rails increase the grip around the bundle and provide a better fit than traditional cable ties. Can be used in a wide variety of applications where strength is needed.

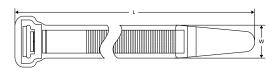
## **Features and Benefits**

- Flame-retardant cable ties are self-extinguishing and provide low smoke emissions.
- Low-profile head with clamping rails provide compact bundling with a full circumferential compression around bundles.
- Wider and thinner strap design increases flexibility, provides low insertion and minimizes pinching of bundles.
- Bent tail allows for quick insertion into head or mounts.



MATERIAL	Polyamide 6.6 V0 (PA66V0)
Operating Temperature	-40°F to +212°F (-40°C to +100°C)
Flammability	UL 94 V0





PART NO.	ТҮРЕ	Min. Tensile Strength lbs. (N)	Length (L) in. (mm)	Max. Bundle Diameter in. (mm)	Width (W) in. (mm)	Color	Pkg. Qty.
111-02496	WSI	120.0 (535.0)	12.1 (307.0)	3.3 (82.5)	0.5 (12.7)	Black	300

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. Installation tools: EVO9, EVO9HT, MK9SP, MK9HT.

## **Stainless Steel Cable Ties**

## MBT-Series in 304 Stainless Steel

HellermannTyton's stainless steel ties are designed with a ball bearing locking mechanism to assure high tensile strength and easy insertion when securing hoses, cables, pipes and more. Available in 304 or 316 grades of stainless steel, they provide protection when used in corrosive environments, fire resistance and temperature extremes.

## **Features and Benefits**

- 304-grade stainless steel offers excellent resistance to corrosion, weather and chemical resistance.
- Self-locking, ball bearing mechanism assures high tensile strength and easy insertion.
- Fully enclosed head does not allow dirt or grit to interfere with locking mechanism
- High tensile strength for dependability and safety on heavy duty applications.



MATERIAL	Stainless Steel (SS304)
Operating Temperature	-112°F to +1000°F (-80°C to +538°C)
Flammability	Non-Burning



PART NO.	ТҮРЕ	Min. Tensile Strength lbs. (N)	Length (L) in. (mm)	Max. Bundle Diameter in. (mm)	Width (W) in. (mm)	Pkg. Qty.	Drawing
MBT8S-S	MBT8SS	202.0 (900.0)	7.9 (201.0)	2.0 (50.0)	0.2 (4.6)	100	TCA-304
MBT20S-S	MBT20SS	202.0 (900.0)	20.5 (521.0)	6.0 (152.0)	0.2 (4.6)	100	TCA-304

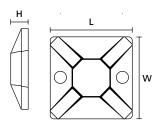
## **Screw Mounting Bases**

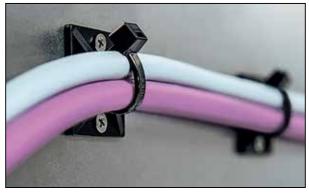
## **MB-Series Screwable Mounting Bases**

HellermannTyton screw fastened mounting bases are used with 18 through 50 lb cable ties to provide stability when securing bundles. Cable ties can be inserted parallel or perpendicular to the wire bundles. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- Compact size fits most mounting applications.
- Simple to install with screws or rivets.
- Two-hole attachment with four-way entry for cable tie.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.





MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation



PART NO.	TYPE	Cable Tie Series	Mounting Screw Type	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Color	Pkg. Qty.
151-03099	MB4	T18 - T50	#8 Screw	1.1 (28.5)	1.1 (28.5)	0.2 (4.8)	Black	100

## **Bundling and Securing**

Cable Tie Mounts

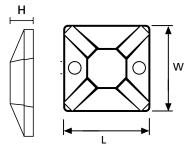
## **Adhesive Mounting Bases**

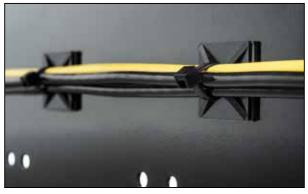
## Cable Tie Mounting Bases - High-Heat Acrylic Adhesive Mount

MB4A adhesive mounts are for use with HellermannTyton T18 - T50 Series cable ties to provide stability when securing bundles. The high-heat, high-bond acrylic adhesive-backed mounts can be used to secure a bundle and have two predrilled holes to extend mounting options.

## **Features and Benefits**

- 4-way opening allows cable ties to be installed parallel or perpendicular to bundles.
- The high-heat, high-bond adhesive is ideal for outdoor applications.
- Two predrilled holes extend mounting options and solutions.
- Extended adhesive liner is easy to remove quickly.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project (excluding adhesive).





MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation

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PART NO.	ТҮРЕ	Adhesive	Cable Tie Series	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Color	Pkg. Qty.
151-03098	MB4A	High heat high bond acrylate with base of acrylic foam	T18 - T50	1.1 (28.5)	1.1 (28.5)	0.2 (5.6)	Black	100

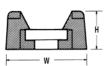
## **Screw Mounting Bases**

## Cable Tie Mounts with Curved Design

HellermannTyton cable tie mounts are designed for use with 18 through 120 pound cable ties to provide stability when securing bundles. The mounts are installed quickly and easily by securing a single screw. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- Designed for use with 18 through 120 pound cable ties to provide stability when securing bundles.
- Secures with a single screw providing quick installation.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.







MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 VO, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation

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PART NO.	TYPE	Cable Tie Series	Mounting Screw Type	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Material	Color	Pkg. Qty.
151-03102	СТМ4	T18 - T120	1/4" (M6) Screw	0.9 (21.8)	0.6 (15.8)	0.4 (9.4)	PA666V0	Black	100

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

## **Mounts Secured with Mechanical Fasteners - Single Bundles**

## **Low Profile Mount**

Low-profile mounts secure bundles close to mounting surfaces, making them ideal for applications where bundle mounting space is limited. These are secured to the mounting surface with a 0.25" mechanical fastener and feature a counter bore for easy access with a socket. The mount accommodates cable ties up to 0.5" in width. Low fire hazard material is designed specifically for rail applications.

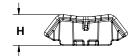
## **Features and Benefits**

- Separates bundles to help prevent chafing and wear.
- Single bundles can be mounted on top of the mount, or two bundles can be separated using the two side saddles, giving the mount versatility.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.



MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation





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

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PART NO.	ТҮРЕ	Cable Tie Series	Mounting Screw Type	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Material	Color	Pkg. Qty.
151-03101	LPM25	T50 - T250	1/4" (M6) Screw	1.8 (45.1)	1.0 (24.9)	0.7 (16.7)	PA666V0	Black	500

## **Bundling and Securing**

Heavy Duty Cable Tie Mounts

## Mounts Secured with Mechanical Fasteners - Single Bundles

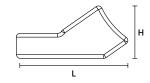
## **Heavy Duty Mounts - Medium Torque**

The arched H-profile of the saddle allows for broad surface contact with the bundle, minimizing pinching and crushing of wires, and adjusts to a wide variety of bundle diameters when used with HellermannTyton heavy duty T120, T150 or Wide Strap Cable Ties. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- Mount and tie combination makes it easy to service bundles in the field.
- Eliminates the need for multiple sized diameter clamps.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.







MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation



PART NO.	ТҮРЕ	Max. Cable Tie Width in. (mm)	Mounting Screw Type	Max. Torque lbf-ft. (kgf-cm)	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Color	Pkg. Qty.
151-03096	HDM321	0.5 (12.7)	5/16" (M8) Screw	40.0 (553.0)	1.8 (46.5)	1.0 (25.0)	0.8 (20.7)	Black	500
151-03097	HDM401	0.5 (12.7)	3/8" (M10) Screw	40.0 (553.0)	1.8 (46.5)	1.0 (25.0)	0.8 (20.7)	Black	500

## Mounts Secured with Mechanical Fasteners - Single Bundles

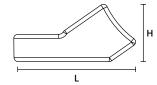
## **Heavy Duty Mounts - High Torque**

The saddle design minimizes pinching and crushing of wires and adjusts to a wide variety of bundle diameters when used with HellermannTyton heavy duty T120, T150 or Wide Strap Cable Ties. Metal bushing provides strength for high-torque applications. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- Mount and tie combination makes it easy to service bundles in the field.
- Eliminates the need for multiple sized diameter clamps.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.







MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation



PART NO.	ТҮРЕ	Max. Cable Tie Width in. (mm)	Mounting Screw Type	Max. Torque lbf-ft. (kgf-cm)	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Color	Pkg. Qty.
151-03103	HDM320	0.5 (12.7)	5/16" (M8) Screw	114.0 (1,576.1)	1.8 (46.5)	1.0 (25.0)	0.8 (20.7)	Black	500

## **Bundling and Securing**

Heavy Duty Cable Tie Mounts

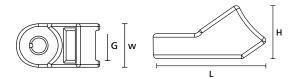
## Mounts Secured with Mechanical Fasteners - Single Bundles

## **Heavy Duty Mounts - Standard Torque**

These mounts contain a small tab inside the mounting hole to temporarily engage the threads, allowing assemblers to preinstall the mount on a stud before securing with a washer and a nut. For use with HellermannTyton heavy duty T120, T150 or Wide Strap Cable Ties. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- Mount and tie combination makes it easy to service bundles in the field.
- Eliminates the need for multiple sized diameter clamps.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.





MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation



PART NO.	ТҮРЕ	Max. Cable Tie Width (G) in. (mm)	Mounting Screw Type	Max. Torque lbf-ft. (kgf-cm)	Length (L) in. (mm)	Width (W) in. (mm)	Height (H) in. (mm)	Color	Pkg. Qty.
151-03095	HDM250	0.5 (12.7)	1/4" (M6) Screw	9.6 (132.5)	1.4 (36.3)	0.8 (19.3)	0.7 (17.0)	Black	500

## **Ratchet P-Clamps**

## PA666V0 Clamp with Steel Mounting Plate

The Ratchet P-Clamp family offers versatility when managing wires, cables and hoses. The robust design and durable materials make it ideal for heavy duty applications, both indoors and out. The one-piece adjustable clamp can be closed by hand to the desired diameter. The nondestructive release feature allows the clamp to be reused without removing or replacing any bolts or screws. The Ratchet P-Clamp is offered in four sizes and multiple mounting configurations. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- One-piece ratchet closure design allows for easy installation during preor final assembly.
- Easy release feature allows for quick adjustments and maintenance.
- Steel mounting plate tolerates high torque mounting and is treated to resist chemicals and salt spray.
- NFPA 130-compliant to streamline inspections.



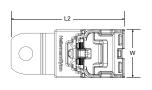
MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0), Steel (ST), Zinc plated (ZN)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation
Color	Black (BK)

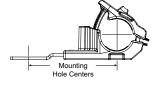




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PART NO.	TYPE	Max. Bundle Diameter in. (mm)	Angle/ Length	Length (L2) in. (mm)	Width (W) in. (mm)	Min. Tensile Strength Ibs. (N)	Mounting Hole Centers in. (mm)	Mounting Hole Dia. in. (mm)	Pkg. Qty.	Drawing
151-03012	RCA180SM8	0.54 (13.7)	180° Short	3.3 (83.1)	1.4 (34.9)	100.0 (445.0)	2.0 (50.5)	0.33 (8.4)	300	2
151-03013	RCB180SM8	0.77 (19.5)	180° Short	3.3 (83.1)	1.4 (34.9)	100.0 (445.0)	2.1 (52.8)	0.33 (8.4)	280	
151-03014	RCC180SM8	1.42 (36.0)	180° Short	4.1 (103.0)	1.4 (34.9)	100.0 (445.0)	2.5 (62.3)	0.33 (8.4)	160	
151-02877	RCD90SM8	2.0 (51.0)	90° Short	4.0 (101.2)	1.4 (34.9)	100.0 (445.0)	2.6 (66.5)	0.33 (8.4)	160	
151-02878	RCD90LM8	2.0 (51.0)	90° Long	5.1 (129.2)	1.4 (34.9)	100.0 (445.0)	3.7 (94.5)	0.33 (8.4)	160	
151-03015	RCD180SM8	2.0 (51.0)	180° Short	4.6 (115.5)	1.4 (34.9)	100.0 (445.0)	2.8 (70.0)	0.33 (8.4)	160	

## **Bundling and Securing**

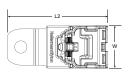
Clamps

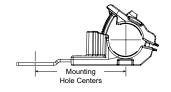
## Stainless Steel Ratchet P-Clamps PA666V0 Clamp with SS304 Mounting Plate

The Ratchet P-Clamp family offers versatility when managing wires, cables and hoses. The robust design and durable materials make it ideal for heavy duty applications, both indoors and out. The one-piece adjustable clamp can be closed by hand to the desired diameter. The release feature provides easy and nondestructive removal of cables simply by using a flat-head screwdriver. This nondestructive release allows the clamp to be reused without removing or replacing any bolts or screws. Low fire hazard material is designed specifically for rail applications.

## **Features and Benefits**

- One-piece ratchet closure design allows for easy installation during preor final assembly.
- Easy release feature allows for quick adjustments and maintenance.
- Stainless steel mounting plate tolerates high torque mounting, resists galvanic corrosion with dissimilar metals and harsh chemicals.
- Low fire hazard materials comply with stringent NFPA 130 safety standards and improve opportunities to get product specified at the engineering stage of a project.







MATERIAL	Polyamide 6.6 + Polyamide 6 V0 (PA666V0), Stainless Steel (SS304)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation
Color	Black (BK)

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PART NO.	ТҮРЕ	Max. Bundle Diameter in. (mm)	Angle/Length	Length (L2) in. (mm)	Width (W) in. (mm)	Min. Tensile Strength Ibs. (N)	Mounting Hole Centers in. (mm)	Mounting Hole Dia. in. (mm)	Pkg. Qty.	Drawing
151-03006	RCB90SM10SS	0.77 (19.5)	90° Short	2.7 (68.8)	1.4 (34.9)	100.0 (445.0)	1.9 (49.3)	0.41 (10.4)	280	
151-03005	RCB180SM10SS	0.77 (19.5)	180° Short	3.3 (83.1)	1.4 (34.9)	100.0 (445.0)	2.1 (52.8)	0.41 (10.4)	280	
151-02737	RCC180SM8SS	1.42 (36.0)	180° Short	4.1 (103.0)	1.4 (34.9)	100.0 (445.0)	2.5 (62.3)	0.33 (8.4)	160	
151-03011	RCD90SM8SS	2.0 (51.0)	90° Short	4.0 (101.2)	1.4 (34.9)	100.0 (445.0)	2.6 (66.5)	0.33 (8.4)	160	
151-03144	RCD90LM8SS	2.0 (51.0)	90 ° Long	5.1 (129.2)	1.4 (34.9)	100.0 (445.0)	3.7 (94.5)	0.33 (8.4)	140	
151-03010	RCD90LM10SS	2.0 (51.0)	90° Long	5.1 (129.2)	1.4 (34.9)	100.0 (445.0)	3.7 (94.5)	0.41 (10.4)	140	
151-02734	RCD180SM8SS	2.0 (51.0)	180° Short	4.6 (115.5)	1.4 (34.9)	100.0 (445.0)	2.8 (70.0)	0.33 (8.3)	160	
151-03008	RCD180SM10SS	2.0 (51.0)	180° Short	4.6 (115.5)	1.4 (34.9)	100.0 (445.0)	2.8 (70.0)	0.41 (10.4)	160	

## **Slotted Wall Wiring Duct**

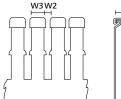
## HelaDuct Halogen-Free Wiring Duct (DIN sizes)

HellermannTyton HTWD-HF halogen-free ducts are used wherever there are high demands on personal or material safety, such as public transport, tunnels, escalators and data processing centers. Snap-on covers are included with corresponding duct sizes to ensure complete wire protection.

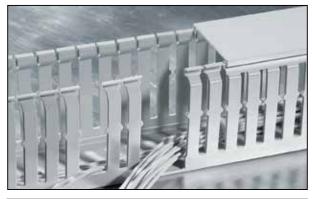
Note: Halogen-free PC+ABS is not resistant to all oils and greases.

## **Features and Benefits**

- Excellent fire-safety characteristics.
- Narrow slots suitable for small-diameter wires.
- Smooth, burr-free edges protect installers from injury and wires from damage.
- Fingers can be removed with no sharp edges at pre-notched snap-off points.
- Further pre-notched snap-off point at base of sidewall allows cutting out and removing sections of sidewall with no sharp edges.
- Duct covers hold securely even in a vertical position and under vibration.
- Cover is flush with side of duct, allowing for tight, contiguous placement of duct.
- Base perforation according to DIN EN 50085.







MATERIAL	Acrylonitrile Butadiene Styrene alloyed with Polycarbonate (PC/ABS)
Operating Temperature	-13°F to +194°F (-25°C to +90°C)
Flammability	UL 94 V0
EN 45545-2 Classification	R22 HL2, R23 HL2



DART NO	TVDF	Width (W)	Height (H)	Width (W2)	Width (W3)	Length (L)		Pkg. Qty.
PART NO.	TYPE	in. (mm)	in. (mm)	in. (mm)	in. (mm)	ft (m)	Color	ft (m)
183-12525	HTWD-HF-25X25	1.0 (25.0)	1.0 (25.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	157.5 (48)
183-12537	HTWD-HF-25X37.5	1.0 (25.0)	1.5 (37.5)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	177.2 (54)
183-12550	HTWD-HF-25X50	1.0 (25.0)	2.0 (50.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	144.4 (44)
183-22575	HTWD-HF-25X75	1.0 (25.0)	3.0 (75.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	118.1 (36)
183-13737	HTWD-HF-37.5X37.5	1.5 (37.5)	1.5 (37.5)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	131.2 (40)
183-13750	HTWD-HF-37.5X50	1.5 (37.5)	2.0 (50.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	104.9 (32)
183-13775	HTWD-HF-37.5X75	1.5 (37.5)	3.0 (75.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	78.4 (24)
183-05037	HTWD-HF-50X37.5	2.0 (50.0)	1.5 (37.5)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	104.9 (32)
183-15050	HTWD-HF-50X50	2.0 (50.0)	2.0 (50.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	137.8 (42)
183-15075	HTWD-HF-50X75	2.0 (50.0)	3.0 (75.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	91.9 (28)
183-17550	HTWD-HF-75X50	3.0 (75.0)	2.0 (50.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	65.6 (28)
183-17575	HTWD-HF-75X75	3.0 (75.0)	3.0 (75.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	78.7 (24)
183-11050	HTWD-HF-100X50	3.9 (100.0)	2.0 (50.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	65.6 (20)
183-11075	HTWD-HF-100X75	3.9 (100.0)	3.0 (75.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	52.5 (16)
183-12257	HTWD-HF-125X75	4.9 (125.0)	3.0 (75.0)	0.2 (5.0)	0.3 (7.5)	6.6 (2.0)	Gray	52.5 (16)

**Braided Sleeving** 

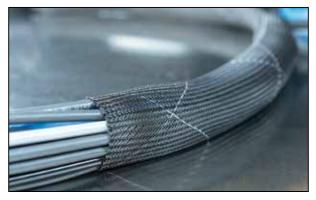
## **Braided Sleeving - Flame Retardant**

## **Fray-Resistant Expandable Sleeving**

This protective sleeving is self-extinguishing and can be cut with sharp scissors instead of a hot knife for fray-resistant ends. 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.

## **Features and Benefits**

- Provides fuller coverage and a medium to high abrasion resistance.
- Expands for ease of installation in either the shop or the field.
- Increased braid density coverage provides higher level of abrasion resistance without losing flexibility.
- Contains white tracer thread for simple identification of flame retardancy.
- Treated yarns extinguish quickly and reduce potential flame spread to surrounding components.
- Cuts with ordinary scissors without fraying ends.



MATERIAL	Polyester (PET)
Operating Temperature	-94°F to +257°F (-70°C to +125°C)
Flammability	UL VW-1, Mil-202, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation
Melting Point	+482 °F (+250 °C)
Abrasion Resistance	Medium

NFPA 130 / HF / RoHS /

PART NO.	ТҮРЕ	Nominal Dia. in. (mm)	Min. Bundle Diameter in. (mm)	Max. Bundle Diameter in. (mm)	Color	Reel Length ft. (m)	Weight lbs. (kg)
170-03116	BSSCFR180B	1/8 (3.3)	0.1 (3.2)	0.3 (6.4)	Black	1,000.0 (304.8)	4.0 (1.8)
170-03117	BSSCFR140B	1/4 (6.4)	0.2 (4.0)	0.4 (11.1)	Black	1,000.0 (304.8)	4.6 (2.1)
170-03118	BSSCFR120B	1/2 (12.7)	0.3 (6.4)	0.8 (19.1)	Black	500.0 (152.4)	4.1 (1.9)
170-03119	BSSCFR340B	3/4 (19.1)	0.6 (15.9)	1.0 (25.4)	Black	250.0 (76.2)	2.8 (1.3)
170-03120	BSSCFR100B	1 (25.4)	0.8 (19.1)	1.2 (30.5)	Black	250.0 (76.2)	3.1 (1.4)
170-03121	BSSCFR1140B	1-1/4 (31.8)	1.0 (25.4)	1.5 (38.1)	Black	250.0 (76.2)	3.9 (1.8)
170-03122	BSSCFR1120B	1-1/2 (38.1)	1.3 (31.8)	2.0 (50.8)	Black	250.0 (76.2)	4.6 (2.1)

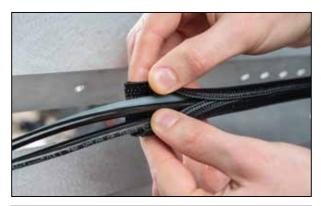
## **Braided Sleeving - Flame Retardant**

## **Split Wrap Expandable 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. The semi-rigid braid configuration simply closes around the entire installation without the need for any additional fasteners. Split wrap flame retardant braided sleeving is self-extinguishing and complies with UL VW-1 standards where cables exit a wall and need to be managed for an uncluttered, clean appearance.

### **Features and Benefits**

- Split wrap design installs quickly, saving assembly time and future accessibility without disassembly.
- Unique construction retains shape and rigidity throughout operating temperature range.
- Easy-open design allows quick assembly, future access, and ability to apply protective sleeving post assembly or post installation.
- Self-wrapping design eliminates the need for fasteners.
- Provides greater flexibility than Spiralwrap or convoluted tubing.



MATERIAL	Polyester (PET)
Operating Temperature	-94°F to +257°F (-70°C to +125°C)
Flammability	FAR 25, UL VW-1, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation
Melting Point	+446 °F (+230 °C)
Abrasion Resistance	High

NFPA 130 V HF

**RoHS** 

PART NO.	ТҮРЕ	Nominal Dia. in. (mm)	Min. Bundle Diameter in. (mm)	Max. Bundle Diameter in. (mm)	Color	Reel Length ft. (m)	Weight lbs. (kg)
170-03140	BSSWFR180B	1/8 (3.2)	0.1 (2.5)	0.1 (3.2)	Black	400.0 (121.9)	0.8 (0.4)
170-03141	BSSWFR140B	1/4 (6.4)	0.1 (2.5)	0.3 (6.4)	Black	200.0 (61.0)	1.2 (0.5)
170-03142	BSSWFR120B	1/2 (12.7)	0.5 (12.7)	0.5 (12.7)	Black	150.0 (45.7)	2.1 (1.0)
170-03143	BSSWFR340B	3/4 (19.1)	0.8 (19.1)	0.8 (19.1)	Black	100.0 (30.5)	1.6 (0.7)
170-03144	BSSWFR100B	1 (25.4)	1.0 (25.4)	1.0 (25.4)	Black	100.0 (30.5)	2.0 (0.9)
170-03145	BSSWFR1140B	1-1/4 (31.8)	0.1 (2.5)	1.3 (31.8)	Black	75.0 (22.9)	1.8 (0.8)
170-03146	BSSWFR1120B	1-1/2 (38.1)	0.1 (2.5)	1.5 (38.1)	Black	75.0 (22.9)	2.1 (1.0)
170-03147	BSSWFR200B	2 (50.8)	0.1 (2.5)	2.0 (50.8)	Black	50.0 (15.2)	1.8 (0.8)

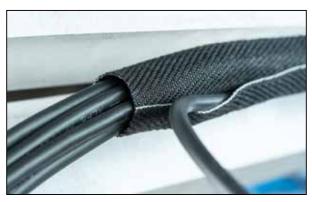
**Braided Sleeving** 

## Braided Sleeving - Flame Retardant Split Wrap Expandable Braided Sleeving

A lateral split, semi-rigid and flame retardant braided sleeving configuration used when ease of installation and repeat access to wire bundles is required. The lateral split allows the sleeving to open and accommodate a variety of bundling requirements. The 25 percent edge overlap rolls back over connectors and splices without exposing the bundled wires. 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 applications. Meets NFPA 130 rail market applications.

## **Features and Benefits**

- Split wrap design needs no fasteners and installs quickly, saving assembly time and future accessibility without disassembly.
- Bends to a tight radius without distortion or splitting open.
- Unique construction retains shape and rigidity throughout unrolling.
- Integrateded flame-inhibitor fibers extinguish quickly and reduce potential flame spread to surrounding components.
- Easy-open design allows quick access and ability to apply protective sleeving post assembly or post installation.



MATERIAL	Polyester (PET)
Operating Temperature	-94°F to +257°F (-70°C to +125°C)
Flammability	UL VW-1, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation
Melting Point	+482 °F (+250 °C)
Abrasion Resistance	Medium

NFPA 130 V

HF

**RoHS** 

PART NO.	ТҮРЕ	Nominal Dia. in. (mm)	Min. Bundle Diameter in. (mm)	Max. Bundle Diameter in. (mm)	Color	Reel Length ft. (m)	Weight lbs. (kg)
170-03216	BSSWVFR316B	3/16 (4.8)	0.1 (2.5)	0.2 (4.8)	Black	500.0 (152.4)	4.0 (1.8)
170-03217	BSSWVFR380B	3/8 (9.5)	0.1 (2.5)	0.4 (9.5)	Black	250.0 (76.2)	3.0 (1.4)
170-03218	BSSWVFR120B	1/2 (12.7)	0.1 (2.5)	0.5 (12.7)	Black	200.0 (61.0)	3.2 (1.5)
170-03219	BSSWVFR340B	3/4 (19.1)	0.1 (2.5)	0.8 (19.1)	Black	150.0 (45.7)	3.8 (1.7)
170-03220	BSSWVFR100B	1 (25.4)	0.1 (2.5)	1.0 (25.4)	Black	100.0 (30.5)	3.2 (1.5)
170-03221	BSSWVFR1140B	1-1/4 (31.8)	0.1 (2.5)	1.3 (31.8)	Black	75.0 (22.9)	2.8 (1.3)
170-03222	BSSWVFR1120B	1-1/2 (38.1)	0.1 (2.5)	1.5 (38.1)	Black	50.0 (15.2)	2.4 (1.1)

Flexible Conduit and Fittings

## **Non-Metallic Conduit**

## Flame-Retardant Standard-Weight Nylon Conduit

A standard-weight corrugated conduit made of a flame-retardant material for use in applications in which high fire protection and low flammability are primary requirements. Easy to cut and use, the material is highly resistant to solvents and oils. Combine with HelaGuard Non-Metallic Fittings for IP66 rating or greater protection against water, wind and dirt.

## **Features and Benefits**

- Flame-retardant material meets low flammability, smoke and toxicity ratings.
- Easy to use and cut; reduces installation time and labor costs.
- Flexible, abrasion resistant and durable for a variety of applications.
- Good impact strength; recovers quickly if crushed.
- UV resistant; suitable for use in outdoor applications.
- Offered in fine or course corrugated pitch for added flexibility or increased impact resistance.



MATERIAL	Polyamide 6, flame retardant (PA6FR)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Flammability	UL 94 V0, Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation
Color	Black (BK)



PART NO.	ТҮРЕ	Nominal Dia. in. (mm)	Pitch Type	Outside Diameter (D) in. (mm)	Inner Diameter (D2) in. (mm)	Inside Bend Radius in. (mm)	Color	Pkg. Qty. ft. (m)
166-90202*	HG-FR0380	3/8 (16.0)	F (Fine)	0.6 (15.8)	0.5 (11.8)	1.4 (35.0)	Black	100 (30.5)
166-90203*	HG-FR0500	1/2 (21.0)	F (Fine)	0.8 (21.2)	0.7 (16.7)	1.8 (45.0)	Black	100 (30.5)
166-90204*	HG-FR0750	3/4 (28.0)	C (Coarse)	1.1 (28.5)	0.9 (21.7)	2.0 (50.0)	Black	100 (30.5)
166-90205*	HG-FR1000	1 (34.0)	C (Coarse)	1.4 (34.5)	1.1 (28.1)	2.4 (60.0)	Black	50 (15.24)
166-90206*	HG-FR1250	1-1/4 (42.0)	C (Coarse)	1.7 (42.5)	1.4 (35.5)	2.8 (70.0)	Black	50 (15.2)
166-90207*	HG-FR1500	2-1/8 (54.0)	C (Coarse)	2.2 (54.5)	1.9 (47.2)	3.2 (80.0)	Black	50 (15.2)





<sup>\*</sup>This product meets UL standards.

Flexible Conduit and Fittings

## Straight Nylon Nickel Brass Swivel Threaded Fittings HGU-SM Ultra® Series

Straight snap-on style fittings with nickel-plated brass metric thread provides a true, one-piece component solution; seals are integrated into the fitting body. Durable nylon materials deliver high chemical resistance against salts, oils, weak acids and solvents. Designed for fast assembly and easy removal using a small screwdriver. Fittings deliver IP68 ingress protection.

## **Features and Benefits**

- Integrated Sealing Technology creates a true, one-piece component that reduces installation time and provides error-free installation.
- Nickel-plated brass metric thread provides a secure connection even under dynamic conditions.
- Swivel thread feature minimizes cable twisting and provides strain relief.
- All-around "teeth" attach firmly to corrugated conduit and deliver a high extraction force.
- Integrated design delivers IP68 ingress protection against moisture and dirt.



MATERIAL	Nickel Plated Brass (NPB), Polyamide 6.6 (PA66)
Operating Temperature	-58°F to +275°F (-50°C to +135°C)
Flammability	Self-Extinguishing
Color	Black (BK)



PART NO.	ТҮРЕ	Nominal Dia. in. (mm)	Bore Hole Diameter in. (mm)	Color	Pkg. Qty.
166-90812	HGU16-SM-M16B	3/8 (16.0)	0.4 (11.0)	Black	10
166-90813	HGU16-SM-M20B	3/8 (16.0)	0.6 (14.5)	Black	10
166-90814	HGU21-SM-M20B	1/2 (21.0)	0.6 (14.5)	Black	10
166-90815	HGU28-SM-M25B	3/4 (28.0)	0.8 (19.5)	Black	10
166-90816	HGU34-SM-M32B	1 (34.0)	1.0 (26.5)	Black	10
166-90817	HGU42-SM-M40B	1-1/4 (42.0)	1.3 (32.5)	Black	2
166-90818	HGU42-SM-M50B	1-1/4 (42.0)	1.7 (42.0)	Black	2
166-90924	HGU54-SM-M50B	2.13 (54.0)	1.7 (42.0)	Black	1

Flexible Conduit and Fittings

## 45- and 90-Degree Elbow Nylon Nickel Brass Swivel Threaded Fittings

## HGU-45M and HGU-90M Ultra® Series

45- and 90-degree elbows with nickel-plated brass metric threaded fitting provides a true, one-piece component solution; seals are integrated into the fitting body. Durable nylon materials deliver high chemical resistance against salts, oils, weak acids and solvents. Designed for fast assembly and easy removal using a small screwdriver.

## **Features and Benefits**

- Integrated Sealing Technology creates a true, one-piece component that reduces installation time and provides error-free installation.
- Nickel-plated brass metric thread provides a secure connection even under dynamic conditions.
- Swivel thread feature minimizes cable twisting and provides strain relief.
- All-around "teeth" attach firmly to corrugated conduit and deliver a high extraction force.
- Fittings deliver IP68 ingress protection against moisture and dirt.



MATERIAL	Nickel Plated Brass (NPB), Polyamide 6.6 (PA66)
Operating Temperature	-58°F to +275°F (-50°C to +135°C)
Flammability	Self-Extinguishing
Color	Black (BK)



PART NO.	ТҮРЕ	Nominal Dia. in. (mm)	Bore Hole Diameter in. (mm)	Color	Pkg. Qty.
45-Degree Fittings					
166-90819	HGU16-45M-M20B	3/8 (16.0)	0.6 (14.0)	Black	10
166-90820	HGU21-45M-M20B	1/2 (21.0)	0.6 (14.0)	Black	10
166-90821	HGU28-45M-M25B	3/4 (28.0)	0.8 (19.0)	Black	10
166-90822	HGU34-45M-M32B	1 (34.0)	1.0 (24.5)	Black	10
166-90823	HGU42-45M-M50B	1-1/4 (42.0)	1.5 (39.0)	Black	2
90-Degree Fittings					
166-90824	HGU16-90M-M16B	3/8 (16.0)	0.4 (10.5)	Black	10
166-90825	HGU16-90M-M20B	1/2 (16.0)	0.6 (14.0)	Black	10
166-90826	HGU21-90M-M20B	1/2 (21.0)	0.6 (14.0)	Black	10
166-90827	HGU28-90M-M25B	3/4 (28.0)	0.8 (19.0)	Black	10
166-90828	HGU34-90M-M32B	1 (34.0)	0.8 (19.0)	Black	10
166-90829	HGU42-90M-M50B	1-1/4 (42.0)	1.0 (24.5)	Black	2

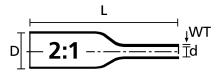
## **Heat Shrinkable Labels**

## Halogen-Free, Low Fire Hazard

ShrinkTrak DS is a halogen-free, double-sided heat shrinkable marker with a 2:1 shrink ratio. HellermannTyton's unique ladder-style design assists in removing markers off the carrier. The side slits have been designed to ensure the wire entry gap is as large as possible while remaining on the carrier strip, enabling the user to quickly insert wire and cable into the marker. For a complete labeling solution, ShrinkTrak DS can be printed using HellermannTyton's TagPrint® Pro professional label creation software and thermal transfer printers. For double-sided printing, HellermannTyton's TrakMark DS double-sided printer produces excellent results. Choose among multiple ribbon types to create a permanent print that resists most solvents when shrunk and applied.

## **Features and Benefits**

- Halogen-free, for low smoke propagation, density and toxicity.
- 50 mm, 25 mm and 16 mm pre-cut marker options as standard, for ability to get multiple labels out of one tag.
- Delivery in convenient storage boxes for protection.





Material	Polyolefin, cross-linked (PO-X)
Operating Temperature	-67°F to +221°F (-55°C to +105°C)
Min. Shrink Temperature	+212 °F (+100 °C)
Shrink Ratio	2:1
Recommended Ribbon Type	TTDTHOUT, TT822OUT, TT822OUTSM, TTDTHOUTSM
Thermal Transfer Printer	TT431, TT4030, TrakMark DS
EN 45545-2 Classification	R22 HL3, R23 HL3



PART NO.	ТҮРЕ	Outside Diameter Max. in. (mm)	Label Width in. (mm)	Label Height in. (mm)	Center Slit	Color	Qty. per Box
553-60000	TLFX24DS-1x50WH	0.09 (2.3)	2.0 (50.0)	0.19 (5.0)	Unslit	White	5000
553-60020	TLFX24DS-2x25WH	0.09 (2.3)	1.0 (25.0)	0.19 (5.0)	1-Slit	White	10000
553-60038	TLFX24DS-3x16WH	0.09 (2.3)	0.63 (16.0)	0.19 (5.0)	2-Slit	White	15000
553-60001	TLFX32DS-1x50WH	0.12 (3.0)	2.0 (50.0)	0.23 (6.0)	Unslit	White	5000
553-60021	TLFX32DS-2x25WH	0.12 (3.0)	1.0 (25.0)	0.23 (6.0)	1-Slit	White	10000
553-60040	TLFX32DS-3x16WH	0.12 (3.0)	0.63 (16.0)	0.23 (6.0)	2-Slit	White	15000
553-60002	TLFX48DS-1x50WH	0.18 (4.6)	2.0 (50.0)	0.35 (9.0)	Unslit	White	5000
553-60022	TLFX48DS-2x25WH	0.18 (4.6)	1.0 (25.0)	0.35 (9.0)	1-Slit	White	10000
553-60042	TLFX48DS-3x16WH	0.18 (4.6)	0.63 (16.0)	0.35 (9.0)	2-Slit	White	15000
553-60003	TLFX64DS-1x50WH	0.25 (6.4)	2.0 (50.0)	0.43 (11.0)	Unslit	White	3000
553-60023	TLFX64DS-2x25WH	0.25 (6.4)	1.0 (25.0)	0.43 (11.0)	1-Slit	White	6000
553-60044	TLFX64DS-3x16WH	0.25 (6.4)	0.63 (16.0)	0.43 (11.0)	2-Slit	White	9000
553-60004	TLFX95DS-1x50WH	0.37 (9.4)	2.0 (50.0)	0.62 (16.0)	Unslit	White	2500
553-60024	TLFX95DS-2x25WH	0.37 (9.4)	1.0 (25.0)	0.62 (16.0)	1-Slit	White	5000

## **Heat Shrinkable Labels**

Halogen-Free, Low Fire Hazard

PART NO.	ТҮРЕ	Outside Diameter Max. in. (mm)	Label Width in. (mm)	Label Height in. (mm)	Center Slit	Color	Qty. per Box
553-60046	TLFX95DS-3x16WH	0.37 (9.4)	0.63 (16.0)	0.62 (16.0)	2-Slit	White	7500
553-60005	TLFX127DS-1x50WH	0.5 (12.7)	2.0 (50.0)	0.86 (22.0)	Unslit	White	1500
553-60025	TLFX127DS-2x25WH	0.5 (12.7)	1.0 (25.0)	0.86 (22.0)	1-Slit	White	3000
553-60048	TLFX127DS-3x16WH	0.5 (12.7)	0.63 (16.0)	0.86 (22.0)	2-Slit	White	4500
553-60128	TLFX127DS-1X50WH	0.5 (12.7)	2.0 (50.0)	0.86 (22.0)	Unslit	White	500
553-60006	TLFX190DS-1x50WH	0.75 (19.0)	2.0 (50.0)	1.25 (32.0)	Unslit	White	1500
553-60026	TLFX190DS-2x25WH	0.75 (19.0)	1.0 (25.0)	1.25 (32.0)	1-Slit	White	3000
553-60050	TLFX190DS-3x16WH	0.75 (19.0)	0.63 (16.0)	1.25 (32.0)	2-Slit	White	4500
553-60007	TLFX254DS-1x50WH	1.0 (25.4)	2.0 (50.0)	1.69 (43.0)	Unslit	White	1000
553-60027	TLFX254DS-2x25WH	1.0 (25.4)	1.0 (25.0)	1.69 (43.0)	1-Slit	White	2000
553-60052	TLFX254DS-3x16WH	1.0 (25.4)	0.63 (16.0)	1.69 (43.0)	2-Slit	White	3000
553-60008	TLFX381DS-1x50WH	1.5 (38.1)	2.0 (50.0)	3.0 (76.2)	Unslit	White	500
553-60028	TLFX381DS-2x25WH	1.5 (38.1)	1.0 (25.0)	3.0 (76.2)	1-Slit	White	1000
553-60054	TLFX381DS-3x16WH	1.5 (38.1)	0.63 (16.0)	3.0 (76.2)	2-Slit	White	100

## **Thermal Transfer Labels**

## **Halogen-Free Limited Fire Hazard Cable Markers**

TAGLF is made of a halogen-free polyolefin and can be permanently printed using HellermannTyton thermal transfer ribbons and printers. The tag is secured to wire bundles using cable ties.

## **Features and Benefits**

- Halogen-free so that it will not release toxic fumes if exposed to fire.
- Low-smoke, low fire hazard material can be used in any confined space where cable identification is critical.



Material	Polyolefin, cross-linked (PO-X)
Operating Temperature	-40°F to +221°F (-40°C to +105°C)
Recommended Ribbon Type	TTDTHOUT, TTDTHOUTSM, TT822OUT, TT822OUTSM
Thermal Transfer Printer	TT431, TT4030
Flammability	Halogen-Free, Limited Fire Hazard, Low generation of toxic gases and corrosive acid, Low Smoke Generation, Self-Extinguishing
EN 45545-2 Classification	R22 HL3, R23 HL3



PART NO.	ТҮРЕ	Label Width (W) in. (mm)	Label Length (L) in. (mm)	Printable Area Width in. (mm)	Printable Area Length in. (mm)	Color	Pkg. Qty.
556-83013	TAGLF10X51-4	0.39 (10.4)	2.0 (51.5)	0.39	1.45 (32.7)	White	2000
556-83018	TAGLF20X51-4	0.79 (20.4)	2.0 (51.5)	0.78	1.45 (32.7)	White	1000
556-83023	TAGLF20X51-6	0.79 (20.4)	2.0 (51.5)	0.78	1.45 (32.7)	White	1000

## **Thermal Transfer Printers**

## TrakMark DS Double-Sided Printer

HellermannTyton's wireless-ready TrakMark DS thermal transfer printer is designed for medium- to high-volume users of double-sided ShrinkTrak. This printer prints on both sides of the media, supported by HellermannTyton's TagPrint® Pro label printing software. The TrakMark's user-friendly design features an LCD touch screen for simple navigation. The optional cutter can cut through the thickest identification material. The TrakMark DS is designed to handle all sizes of HellermannTyton's ShrinkTrak markers.

## **Features and Benefits**

- 300 dpi print head for high-resolution printing.
- Ethernet-ready for easy network connectivity.
- Print speeds up to 7.87 inches/second for fast label production.
- Floating print head to automatically adjust to varying media thickness such as printable heat shrink tubing.



PRINT METHOD	Thermal transfer
Print Head Type	300 dpi, flat type
Print Speed	30, 40, 50, 75, 100, 125 mm/s
Max. Print Width	105.6 mm
Label Height Max. mm	2,000 mm
Printer Interfaces	RS232 C, USB 2.0, Ethernet 10/100 Base T
Supported Barcodes	Standard, 2D
Printer Memory	64 MB RAM
Dimensions W x H x D	248 mm x 395 mm x 554 mm
Weight lbs. (kg)	21 kg



PART NO.	ТҮРЕ	Description	Color	Pkg. Qty.
556-05000*	TrakMark DS	TrakMark DS printer	Gray	1

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. TrakMark DS is not recommended for use with single sided media.



## **Thermal Transfer Printers**

### **TT4030 Thermal Transfer Printer**

HellermannTyton's TT4030 Series thermal transfer printers are designed for high-volume, industrial-grade printing of thermal transfer labels and ShrinkTrak. Their user-friendly design features an informative display for simple navigation and instructional videos. The built-in caddy allows even the largest label rolls to fit inside, and the cutter can cut through the thickest material. The TT4030's print head delivers excellent results. This printer handles all sizes of HellermannTyton's ShrinkTrak markers and can print on even the smallest labels. Use with HellermannTyton's TagPrint® Pro label printing software.

### **Features and Benefits**

- Premium-quality printer is designed for medium- and heavy-duty industrial applications.
- Print accuracy, consistency, speed and power are best in class.
- 300 dpi print head fulfills all standard requirements for printing bar codes, warning signs, logos and written information.
- Easily prints high-definition graphics such as 2D barcodes, standard bar codes, numbers, and text on adhesive labels, thermo plastics such as heat shrink and TipTags.
- Print speeds up to 11.8 in (300 mm) per second are possible depending on the material being printed.
- Standard adjustments are made with the on board tool, minimizing operator downtime.
- The exceptionally durable print head has a warranty of 24 months or 31 mi (50 km), whichever comes first, in thermal transfer mode.
- Optional premium quality accessories such as a perforator and cutter are designed to work seamlessly with the printer and will suit the most demanding needs.



PRINT METHOD	Thermal transfer
Print Head Type	300 dpi, flat type
Print Speed	up to 11.8" (300 mm)/sec.
Max. Print Width	105.70 mm
Label Height Max. mm	2,000 mm
Printer Interfaces	RS232 C, USB 2.0, Ethernet 10/100 Base T
Supported Barcodes	Standard, 2D
Printer Memory	256 MB RAM
Dimensions W x H x D	252 mm x 288 mm x 460 mm
Weight lbs. (kg)	9.98 kg



PART NO.	ТҮРЕ	Description	Color	Pkg. Qty.
556-04037	TT4030	TT4030 Printer, 300 dpi	Gray	1
556-04050	S4030 Cutter	Cutter, TT4030	Gray	1
556-04005	Printer Roller TT4030/TT4000+	Platen Roller, TT4030	Green	1
556-04041	TT4030 Printhead	Print Head, 300 dpi, TT4030	Gray	1

## **Metal Embossing Printer Systems**

## M-BOSS Compact

M-BOSS Compact is a quiet, easy-to-use metal plate embossing printer with a small production footprint. It is simple to install and operate, requiring just a standard electrical supply and a PC. Marker plates are attached to pipes and cables using 4.6 mm width MBT cable ties and an MK9SST hand tool.

## **Features and Benefits**

- Built-in storage tray for safe storage of all printing components.
- Functions with TagPrint® Pro labeling software for easy label design.
- Tested to over 1.5 million strikes without maintenance for reliable embossing.
- Fast embossing speed for high-volume marker production.





PRINT METHOD	Embossing
Printer Interfaces	USB 2.0
Dimensions W x H x D	480 mm x 353.0 mm x 570 mm
Weight lbs. (kg)	41 kg

PART NO.	ТҮРЕ	Description	Color	Pkg. Qty.
544-20000	M-BOSS Compact	M-BOSS Compact Embossing Printer	Blue	1

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

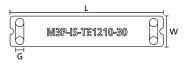
## **Metal Embossing Printer Systems**

## M-BOSS Metal Cable Markers

M-BOSS Compact Markers are used in all areas where severe mechanical or chemical conditions occur, such as offshore industry, solar industry, marine engineering, petrochemical industry, mining, underground or on radio and cellular masts where mark permanence is critical.

## **Features and Benefits**

- Raised markings ensure text visibility even when covered in dust, debris, grease and oil.
- Stainless steel grade SS316 is suited for use in harsh environments.
- Marker plates are designed for use with stainless steel cable ties with a 0.181" (4.6 mm) strap width.





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



PART NO.	ТҮРЕ	Description	Label Length (L) in. (mm)	Label Width (W) in. (mm)	Max. Cable Tie Width (G) in. (mm)	Pkg. Qty.
544-80101	MBML10X45	M-BOSS Marker	1.8 (44.5)	0.4 (9.9)	0.2 (4.6)	1000
544-80102	MBML10X90	M-BOSS Marker	3.5 (89.5)	0.4 (9.9)	0.2 (4.6)	500
544-80201	MBML20X45	M-BOSS Marker	1.8 (44.5)	0.8 (19.8)	0.2 (4.6)	1000
544-80202	MBML20X90	M-BOSS Marker	3.5 (89.5)	0.8 (19.8)	0.2 (4.6)	500



## **Application Tools**

## Cable Tie Application Tools

## **Manual Tools**

## EVO® 7 Tool

HellermannTyton's EVO 7 mechanical hand tool is ergonomically designed to reduce the risks of repetitive stress injuries to operators while simultaneously increasing productivity. The EVO 7 Tension/Lock/ Cut Technology delivers performance, safety and comfort for operators. Available in a standard grip span (EVO 7) or short grip span (EVO 7SP) for smaller hands. Additional accessories are available.

## **Features and Benefits**

- Advanced TLC technology provides operational reliability and durability resulting in fewer repairs and an extended lifespan.
- Lightweight tool with the most technologically advanced ergonomic design for reducing work-related risks such as fatigue and injury that affect productivity.
- Tension dial offers 33 precise, easy-to-read settings (with ¼" increments) that reduce subjectivity or the need for fine tuning.
- Tension lock-in mechanism prevents operator from changing tension setting during critical applications.



PART NO.	ТҮРЕ	Description	Cable Tie Series	Pkg. Qty.
110-70084	EVO7SP	EVO 7SP Mechanical Hand Tool, Short Hand Span 80	T18, T30, T40, T50, T80, IT18, IT50	1
110-70083	EVO7	EVO 7 Mechanical Hand Tool, Standard Hand Span 90	T18, T30, T40, T50, T80, IT18, IT50	1
110-70131	SP EVO7 NOSEPIECE 1MM	EVO 7 and EVO 7SP Nosepiece, 1 - 3	-	1
110-70132	SP EVO7 NOSEPIECE 2MM	EVO 7 and EVO 7SP Nosepiece, 2	-	1
110-70133	SP EVO7 NOSEPIECE 3MM	EVO 7 and EVO 7SP Nosepiece, 3	-	1
110-70106	SP EVO7 Blade Kit	EVO 7 and EVO 7SP blade replacement kit, (1) blade, (1) nosepiece screw	-	1
110-70089	<b>EVO Calibration Tool</b>	EVO 7 Calibration tool	-	1
110-70091	T8SD	EVO 7 T8 star driver	-	1

## **Application Tools**

Cable Tie Application Tools

## **Manual Tools**

## EVO® 9 Tool

HellermannTyton's EVO 9 manual cable tie application tool combines durability, precision and control with unparalleled comfort. Manufactured with high-performance materials and components, the EVO 9 cuts cable ties with up to 250 lb tensile strength. Its innovative, ergonomic design minimizes the stress on hands and wrists and "kickback" that occur with traditional tools, reducing the risk of repetitive-motion injuries. The HT model offers high tension while the SP model features a smaller grip.

## **Features and Benefits**

- Tensions and provides clean, flush cuts for 50 lb to 250 lb cable ties, including Wide Strap Cable Ties.
- Impact-resistant housing and durable components for extended service life.
- Easy-to-adjust tension knob offers 33 different settings for precise, repeatable applications.
- Advanced ergonomic design minimizes necessary hand force and "kickback" to reduce repetitive-motion injuries.



PART NO.	ТҮРЕ	Description	Cable Tie Series	Pkg. Qty.
110-80000	EVO9	EVO 9 Mechanical Hand Tool, Standard Hand Span	T50, T80, T120, T150, T250, T255, WS	1
110-80001	EVO9SP	EVO 9 Mechanical Hand Tool, Short Hand Span	T50, T80, T120, T150, T250, T255, WS, LK2, LK3, LK5, GL, ECO Series Ties	1
110-80004	EVO9HT	EVO 9HT High Tension Mechanical Hand Tool	T120, T150, T250, T255, WS	1
110-80037	SP EVO9 Blade	EVO 9 Replacement Blade	-	1
110-80018	SP EVO9 Stirnkappe Standard	EVO 9 Replacement Nosepiece, Flush Cut	-	1
110-80064	SP EVO9 NOSEPIECE 2MM	EVO 9 2mm Nosepiece, Extended Tail	-	1
110-80065	SP EVO9 NOSEPIECE 3MM	EVO 9 3mm Nosepiece, Extended Tail	-	1
110-80066	SP EVO9 NOSEPIECE 4MM	EVO 9 4mm Nosepiece, Extended Tail	-	1
110-80067	SP EVO9 NOSEPIECE 5MM	EVO 9 5mm Nosepiece, Extended Tail	-	1

## **Application Tools**

## Cable Tie Application Tools

## **Manual Tools**

## MK9SST Tool

With its lightweight, ergonomic design, the MK9SST is an ideal tool for applying MBT-series stainless steel cable ties. As tough as these ties are, the MK9SST cuts and tensions without operator fatigue and is easy on joints. Tensioning is fully adjustable using a quick, two-level control with an additional fine setting. This avoids damage to bundles. Cable ties are cut off automatically flush with the head when the preset tensioning level has been reached.

### **Features and Benefits**

- Glass fiber reinforced housing for extra durability.
- Ergonomic design protects against repetitive strain injuries.
- Consistently tensions and cuts metal ties in the MBT/MAT-series.

PART NO.	ТҮРЕ	Description	Cable Tie Series	Pkg. Qty.
MK9SST	MK9SST	Mark 9 Stainless Steel Tie Tensioning and Cut-Off Tool	All MBT Series for both 304 and 316 materials	1
110-95273	SP MK9SST replacement blade	MK9SST G2 Blade	-	1
110-95291	SP MK9SST Front Nosepiece SS SR	MK9SST Front Nosepiece	-	1



## Infrastructure

Applications for rail infrastructure require dependable cable routing and protection. Performance is paramount, and varying environments demand an understanding of materials and product design.

Welcome to your partners in the pursuit of rail-grade solutions. Identify cables in a central station or in direct sunlight. Choose fasteners made of halogen-free, flame retardant or extreme temperature range materials. Insulate connections against the elements.

It must be durable. It's got to be safe. So, choose HellermannTyton.

## Infrastructure Bundling and Securing

## **CABLE TIES**

Bundle safely and securely, with a wide selection of heavy duty cable ties designed for rail applications. Minimize chafing on sensitive bundles with outside serrated ties. Suspend a cable run with convenient solutions like our one-piece Aerial Support Ties.

## **Benefits**

- UL 94 V-2 for low flammability performance.
- UV resistant for outdoor applications.

## **Applications**

 Bundling and securing cables and hoses where low fire hazard properties are a requirement.







**Heavy Duty** 



**Aerial Support** 

## **SELF-AFFIXING TIES**

Fasten bundles to a surface without adding additional hardware. Edge clips secure to a panel edge and resist detachment due to vibration. Fir Tree Mount Cable Ties insert into common panel holes, allowing swiveling while staying put. The Wedge Clip is a proprietary, heavy duty clip that combines the power of a wedge with the locking assurance of a ratchet.

## **Benefits**

- Material options include self-extinguishing and low-smoke properties.
- Many solutions offer the convenience of all-inone bundling and securing.

## **Applications**

• Robust bundling and securing cables and hoses to an existing hole, edge or rail.



**Edge Clips** 



**Cable Tie Fir Tree Assembly** 



Wedge Clips

## **CABLE TIE MOUNTS**

Keep bundles where you need them for dependable routing support. Choose from several heavy duty mounting options. Also consider unusual applications, such as curved surfaces, which can be served by our FlexTack flexible mounts. Our high-bond adhesives are made by industry leader 3M and uniquely bonded to our products for longterm performance.

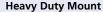
## **Benefits**

- Heat stabilized and UV-resistant materials for demanding environments.
- Cable tie saddles support a range of bundle sizes with just one mount.

## **Applications**

 Heavy duty mounting of routings, including options for surfaces with no mounting holes.







**FlexTack** 



**High-Bond Adhesive** 

## **BUNDLE SEPARATORS**

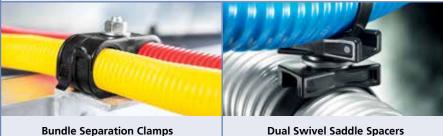
These dual routing solutions keep two bundles secured with protective space between them. For example, bundle separation clamps provide parallel routing for heavy cables. Alternatively, dual swivel saddle spacers allow rotation of the two routings for any configuration from parallel to perpendicular. Dual clamp ties provide dynamic sizing convenience.

## **Benefits**

- Eliminate destructive abrasion and rattling of adjacent bundles.
- Cable tie options support a range of bundle sizes with a single solution.

## **Applications**

• Use where two or more routings run parallel or perpendicular to one another.





**Double Head Ties** 

## **CLIPS AND CLAMPS**

These fasteners hold onto bundles while allowing easy maintenance when needed. Our size-adjustable Inline Ratchet P-Clamp family offers heavy duty bundling and fastening and can be reopened if necessary. MOCs clip to two or more routings, allowing them to rotate independently. LOCs provide a 360-degree adjustable, releasable clamp mechanism.

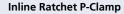
## **Benefits**

- Robust materials perform long-term in applications subject to heat, impact and UV exposure.
- Designed with maintenance in mind for future change-outs.

## **Applications**

 Heavy duty cable, hose and harness management where vibration is an issue.







MOC



LOC

## **CABLE TIE TOOLS**

Application tools simplify the tensioning and cutting of cable ties to provide consistency while reducing or eliminating repetitive strain injuries. Manual tools are highly adjustable and designed for comfortable use in moderate-use applications. Automatic tools perform faster with less effort for all-day workflows and offer reliable repeatability.

## **Benefits**

- Ergonomic designs protect operators from fatigue and injuries.
- Increase productivity and improve control over accuracy and consistency.

## **Applications**

 A tool for every workflow, large or small, wherever routings are bundled with cable ties.



EVO 7



EVO 9



AT2000 CPK



AT2060



ATS3080

## **BRAIDED SLEEVING**

Flexible and lightweight, braided sleeving provides routing and abrasion protection to wires and bundles. Available in traditional or wraparound styles. Fray-resistant material can be cut with ordinary scissors.

# NFPA 130

Flame Retardant + Fray Resistant

## NFPA 130



Split Wrap Flame Retardant

## NFPA 130

Split Wrap Woven Flame Retardant

## **Benefits**

- Overlapping wraparound design provides ease of access to wires post installation.
- Highly flame retardant.
- · Lightweight and flexible.
- Fray-resistant version can be cut with ordinary scissors without fraying ends.

## **Applications**

- Flexible bundling of wire and cables in rolling stock and infrastructure.
- Abrasion protection for hoses and tubing; routing wires within control panel boxes and other tight spaces.

## **WIRING DUCT**

A broad range of wall sizes in either standard PVC or halogen-free materials. Non-slip covers and smooth edges perform even in high-vibration applications.



PVC Slotted or Solid Wiring Duct



Halogen-Free Wiring Duct

## **Benefits**

- Slip-resistant covers remain in place even during vibration and movement.
- Smooth edges reduce likelihood of fraying wires. Halogen-free material will not release dangerous gases.

## **Applications**

- Routing and directing wires within trackside signaling control panels.
- Halogen-free control panels within rolling stock and tunnels.

## **HELAGUARD NON-METALLIC CONDUIT**

The HelaGuard Non-Metallic series includes flexible corrugated conduit options that offer high fatigue resistance and snap-on liquid-tight fittings for high ingress protection.

## **Benefits**

- Flame retardant and UV-resistant material options for safety and longevity.
- High flexibility and impact resistance provide robust protection during daily use.

## **Applications**

• Routing protection from weather elements, liquids or chemicals – particularly where flame retardance is required.



## **HELAGUARD METALLIC CONDUIT**

HelaGuard Metallic Conduit comes in a range of styles and protection levels. It features an extra-flexible galvanized steel core with specialized coatings to address a wide range of environmental conditions.



Overbraided Metallic Conduit Metallic Conduit

## **Benefits**

- Mechanical strength
- EMI / EMC screening
- Low fire hazard
- Ingress protection
- Corrosion resistance

## **Applications**

- Security systems
- Passenger information stations
- Tunnels
- Escalators

## **HELAGUARD ULTRA FITTINGS**

HelaGuard Non-Metallic Snap-on Fittings provide superior tensile strength with a simple "pushon and twist" motion. Several configurations are available to fit almost any application.



Straight, 90- and 45-Degree Elbows in Multiple Thread Options

## **Benefits**

- Ingress ratings to IP66, IP67, IP68 and IP69.
- Fast fit, one-piece assembly.
- Vibration resistant.
- Nickel-plated brass threads swivel for strain relief.

## **Applications**

- Suitable for internal or external rail carriage areas.
- Securely connects flexible conduit to panel walls.

## **HELAGUARD Y & T FITTINGS**

HelaGuard Y & T Fittings make it possible to branch one routing into two while maintaining the desired protection conduit and fittings provide.



T's and Y's

## **Benefits**

- Ingress ratings to IP66, IP67, IP68 and IP69
- High-degree pull-off strength enhances vibration resistance.

## **Applications**

- Combine conduit runs with change of direction.
- Clips firmly secure conduit to surface.

## **HELAGUARD METALLIC FITTINGS**

HelaGuard nickel-plated brass compression fittings provide rigorous protection against corrosion and are available in metric or NPT thread with IP65 ingress ratings.



Machined Parts in Nickel-Plated Brass

## **Benefits**

- Ingress rating of IP65.
- Provides EMC screening.
- Durable connection withstands vibration and movement.

## **Applications**

• Used in conjunction with overbraided conduit.

## THERMAL TRANSFER PRINTERS

Designed for high-volume, industrial-grade printing, HellermannTyton thermal transfer printers use heat and specialized ink ribbons to create long-lasting, durable labels for a variety of indoor and outdoor applications and environments.

## **Benefits**

- Flexible material handling for standard and specialty labels and markers.
- TrakMark DS is capable of printing both sides of marker in a single pass.

## **Applications**

 Medium- and high-volume printing of anything from standard cable IDs to safety warnings.



TTM430



TT4030



TrakMark DS

## **SOFTWARE AND APPS**

TagPrint® Pro software delivers easy and efficient label design and printing. Integrated Print Automation technology dramatically reduces errors and boosts productivity in any workflow. The software includes presaved, code-compliant label templates and the ability to create customized label designs. TagPrint Xpress mobile apps extend print capabilities in the field.

## **Benefits**

- No guesswork for creating code-compliant safety labels.
- The most powerful solutions in the industry for reducing errors, waste and production time.

## **Applications**

• In-house and out in the field, our software pairs with any HellermannTyton print system.



TagPrint Pro 4.0



**TagPrint Xpress Electrical** 

## THERMAL TRANSFER LABELS

A variety of label stocks are available to suit different industrial applications. Our UL-recognized thermal transfer self-laminating labels include a clear tail that protects the printed text. Solid color continuous roll labels amplify critical messaging with attention-getting, fade-resistant background colors and meet OSHA safety standards.

## **Benefits**

- UL-Recognized products can help streamline product approvals.
- Self-laminating labels extend the lifespan of critical messaging.

## **Applications**

• Thermal transfer is the preferred print technology for cost-effective, long-lasting messaging.









**Self-Laminating Labels** 

**Paint Mask Labels** 

**Solid Color Continuous Vinyl Roll** 

## **SAFETY LABELS**

Pre-printed voltage markers and signs come in a variety of messages and sizes to cover all popular safety scenarios. User-customizable labels allow users to create codecompliant, application-specific safety messaging wherever needed.

## **Benefits**

- High-grade vinyl, adhesive and inks maintain critical messaging longer.
- Code compliance is built-in, streamlines thirdparty review.

## **Applications**

• All indoor and outdoor areas where potential hazards must be marked to ensure safety.



**Safety Labels** 



Safety Signs

## Infrastructure **Network Connectivity**

## **RAPIDNET®**

RapidNet pre-terminated fiber and copper systems are highperformance data cassettes that significantly speed installation and eliminate the need to test connections prior to deployment. Customized to customer specifications, RapidNet offers increased density for optimum rack utilization.

## **Benefits**

- Plug & play simplicity for setting up networks.
- Factory-grade performance.
- Test results included.

## **Applications**

• Server Racks, Cross Connects and Access Points







**High Density** 

Interchangeable Cassettes

**Snap-in Installation** 

## **BROADBAND**

HellermannTyton's extensive portfolio of indoor and outdoor fiber closures reliably connect the digital world. Our purpose-built solutions maintain fibers in the outside plant as well as connect indoor networks. HellermannTyton supports typical WAN, MAN and access networks including FTTx and enterprise needs.

## **Benefits**

- Outdoor enclosures lock out moisture for consistent, mission-critical performance.
- Convenience features built in for faster deployment.

## **Applications**

• Fiber distribution both indoors and out, above or below ground.



## **COPPER CONNECTIVITY**

HellermannTyton supports network installers and managers with a range of dependable solutions. Our GST line of modular jacks supports high-density applications. Patch panels and cords match industry standards for trouble-free deployment. Termination tools are uniquely designed to increase productivity.

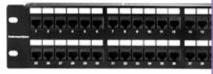
## **Benefits**

- Keystone jacks allow for modular, color-coded installation.
- Plenum-rated solutions are suitable for air handling spaces.

## **Applications**

 Server Racks, Cross Connects, Access Points and Wall Outlets







Connectivity

**Panels** 

**Plenum Surface Mount Boxes** 

## **FIBER CONNECTIVITY**

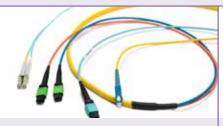
Our fiber solutions keep pace with the industry's increasing demand for innovative, durable and stable products. Network enclosures support up to 1,728 fibers and are equipped with cable management accessories to protect connections. Adapter panels, connectors, jumpers, tools and more give installers everything they need for residential, commercial and utility-scale deployment.

## **Benefits**

- Patch and Trunking cables to support any fiber network.
- Wall and rack-mount enclosures connect and protect.

## **Applications**

• Server Racks, Cross Connects, Distribution and Access Points



Fiber Assemblies



**Rack Enclosures** 



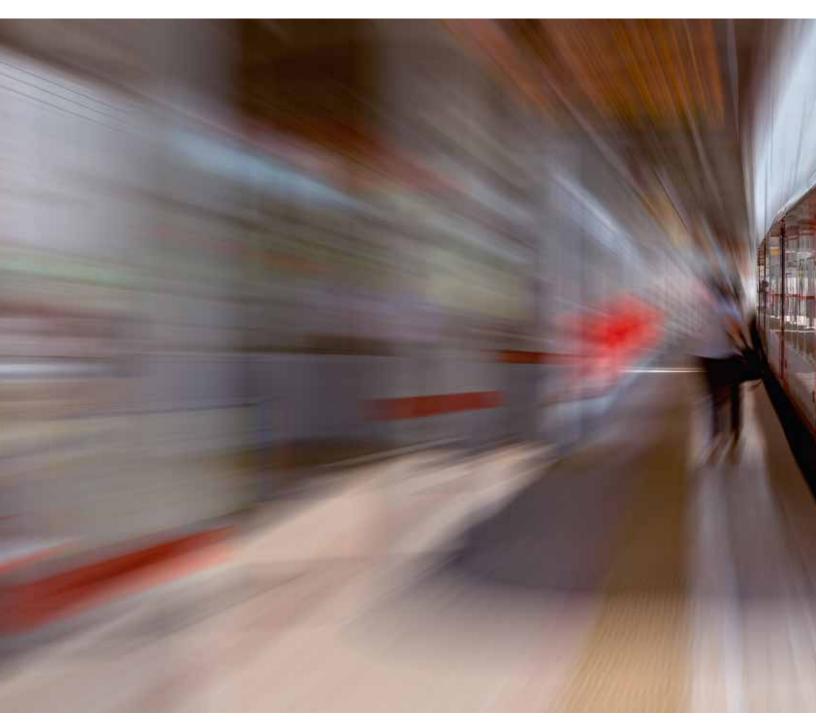
**Wall Enclosures** 

	N	ylon Cable Tie	es		Cable Tie	Clamps	Metal Cable Ties		
Description	T-Series Cable Ties	Heavy Duty Cable Ties	Low Fire Hazard Cable Ties	Adhesive Mounting Bases	Cable Tie Mounts	Low Profile Mounts	Heavy Duty Mounts	Ratchet P-Clamps	Stainless Steel Cable Ties
Product Series Name	T30-T150	WSI	T50R*	MB4A	CTM4	LPM25	HDM320	RPC Series	MBT Series
lmage	9		>				<b>6</b>		
Material	PA66V0	PA66V0	PA666V0	PA666V0	PA666V0	PA666V0	PA666V0	PA666V0	SS304 or SS316 Stainless Steel
Temperature Range	-40°C to +100°C	-40°C to +100°C	-40°C to +120°C	-40°C to +120°C	-40°C to +120°C	-40°C to +120°C	-40°C to +120°C	-40°C to +120°C	-80°C to +538°C
ASTM 1354	Х	Х							
NFPA 130			Х	Х	Х	Х	Х	Х	
EN45545 Classification Interior (R22)			HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	
EN45545 Classification Exterior (R23)			HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	
Flammability Rating	UL 94 V0	UL 94 V0	UL 94 V0	UL 94 V0	UL 94 V0	UL 94 V0	UL 94 V0	UL 94 V0	Inherently Self-Extin- guishing
Halogen Free	Х	Х	Х	Х	Х	Х	Х	Х	
UV Resistance	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	High
Rolling Stock	Х	Х	Х	Х	Х	Х	Х	Х	Х
Infrastructure	Х	Х	Х	Х	Х	Х	Х	Х	Х

<sup>\*</sup> Refer to page 4 for specific part numbers using this material.

	Flexible Conduit & Fittings			۸hr	asion Protec	tion	Wiring Duct	Identification		
	riexibi	-		Abrasion Protection			willing Duct			1
Description	PA6 Flame- Retardant Nylon	PA6 Standard Weight Nylon	Snap-On Conduit Fittings	Expand- able Braided Sleeve	Wrap Style Braided Sleeve	Wrap Style Woven Sleeve	Halogen-Free Wiring Duct	Halogen- Free ShrinkTrak Markers	Halogen Free Tip Tag Markers	Embossed Markers
Product Series Name	HG-FR Series	HG-SW Series	HGU Series Fittings	BSSCFR	BSSWFR	BSSWVFR	HTWD-HF (DIN Sizes)	TLFX DS	TAGFL	M-BOSS
Image									borrod em	B 1 CHREE
Material	PA6-FR	PA6	PA66	Polyester FR	Polyester FR	Polyester FR	Polycarbonate/ ABS Styrene (PC/ABS)	Polyolefin	Polyolefin	SS316 Stainless Steel
Temperature Range	-40°C to +120°C	-40°C to +120°C	-50°C to +135°C	-70°C to +125°C	-70°C to +125°C	-70°C to +125°C	-25°C to +85°C	-55°C to +105°C	-40°C to +90°C	-80°C to +538°C
ASTM 1354								Х	Х	
NFPA 130	X	X	X	X	X	X				
EN45545 Classification Interior (R22)	HL1, HL2 & HL3		HL1, HL2 & HL3	HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1 & HL2	HL1, HL2 & HL3	HL1, HL2 & HL3	
EN45545 Classification Exterior (R23)	HL1, HL2 & HL3		HL1, HL2 & HL3	HL1, HL2 & HL3	HL1, HL2 & HL3	HL1, HL2 & HL3	HL1 & HL2	HL1, HL2 & HL3	HL1, HL2 & HL3	
Flammability Rating	UL 94 V0	UL 94 V2	UL 94 V2	UL 94 VW-1	UL 94 VW-1	UL 94 VW-1	UL 94 V0			Inherently Self-Extin- guishing
Halogen Free	×	X	×	X	X	X	Х	Х	X	
UV Resistance	Medium	Medium	Medium	Medium	Medium	Medium	High	Low	Medium	High
Rolling Stock	×		Х	X	X	Х	Х	Х	X	Х
Infrastructure	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

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