

**HellermannTyton**

A full-page background image showing a male worker in a blue short-sleeved shirt, blue cap, and safety glasses. He is wearing grey work gloves and is reaching up with both hands to adjust or connect a bundle of thick, grey, corrugated cables. The cables are part of a large, complex industrial machine, possibly a train or heavy machinery, with various metal components, pipes, and structural elements visible. The scene is set in an industrial environment with a focus on cable management.

**Certified cable management –  
from rolling stock to infrastructure**

**MADE FOR REAL<sup>®</sup>**



## Your partner with over 80 years' experience in cable management solutions for the rail industry

There is hardly any other industrial sector that puts such high demands on components and solutions as modern rail vehicle construction. The highest quality, maximum service life and compliance with the strictest safety criteria are absolute requirements.

More than 75,000 products, many years of **industry know-how** and a high degree of **development competence** make HellermannTyton one of the leading companies for sophisticated solutions in bundling, fastening, identifying, protecting and processing cables and wires in rail vehicle construction.

We're at home in 38 countries and speak your language.





## Global expertise: Find your local contact here

If you have any questions on specific solutions or would just like to receive more information, we are happy to help – with all our experience and with technical know-how.

**Europe and France** | Paul Cocheril  
paul.cocheril@HellermannTyton.com  
+33 6 71 30 14 94

**Austria** | Andreas Hochfelsner  
Andreas.Hochfelsner@HellermannTyton.at  
+43 12 59 99 55 0

**Belgium and Netherlands** | Paul Baars  
Paul.Baars@HellermannTyton.nl  
+31 33 460 06 90

**Denmark** | Jakob Degn  
Jakob.Degn@HellermannTyton.dk  
+45 20 84 91 92

**Finland** | Martin Silfverberg  
Martin.Silfverberg@HellermannTyton.fi  
+358 504 644 841

**Germany** | Frank Heinze  
Frank.Heinze@HellermannTyton.de  
+49 38 43 82 281

**Great Britain** | Kevin Pryce  
Kevin.Pryce@HellermannTyton.com  
+44 79 80 87 33 72

**Italy** | Marco Benato  
Marco.Benato@HellermannTyton.it  
+39 (0) 49 76 78 70

**Norway** | Arnfinn Alexandersen  
Arnfinn.Alexandersen@HellermannTyton.no  
+47 97 77 81 41

**Poland** | Karolina Wolszczak  
Karolina.Wolszczak@HellermannTyton.pl  
+48 602 605 020

**Russia** | Dmitri Tovstopiat  
Dmitri.Tovstopiat@HellermannTyton.ru  
+7 812 386 00 09

**Spain** | Juan Lopez  
Juan.Lopez@HellermannTyton.es  
+34 91 66 12 835

**Sweden** | Peter Sandberg  
Peter.Sandberg@HellermannTyton.se  
+46 8 58089074

**Turkey** | Yavuz Ozdemir  
Yavuz.Ozdemir@HellermannTyton.com.tr  
+90 0216 687 03 40

**Middle East** | Shatadru Bhattacharya  
SB@HellermannTyton.ae  
+97 1556 145 453

**South Africa** | Lee Vermeulen  
Lee.Vermeulen@Hellermann.co.za  
+27 11 879 66 00





## Reliability and safety in rail vehicles

**EN 45545-2**

The classification system defined in EN 45545-2 specifies requirements for the fire behaviour of materials and products used in rolling stock.

The thresholds for oxygen index, smoke density and toxicity are outlined in the requirement sets R22, R23 and R24.

HL3 – the most stringent of three Hazard Levels – indicates where material behaviour gives rail passengers the greatest chance of orientating themselves and not suffocating from toxic fumes in the event of fire.

To meet HL3, the oxygen index of a tested material must be above 32 percent, smoke density 300DS or lower and toxicity index of smoke below 0.75 CIT NLP.

CATEGORIES	Test method	Parameter and unit	Max or Min	Level		
				HL1	HL2	HL3
R22	EN ISO 4589-2	Oxygen index %	Min	28	28	32
	ISO 5659-2: 25 kW/m <sup>2</sup>	Ds max. (smoke opacity)	Max	600	300	150
	NF X 70-100-1 & -2, 600 °C	CIT (toxicity)	Max	1.2	0.9	0.75
R23	EN ISO 4589-2	Oxygen index %	Min	28	28	32
	ISO 5659-2: 25 kW/m <sup>2</sup>	Ds max. (smoke opacity)	Max	-	600	300
	NF X 70-100-1 & -2, 600 °C	CIT (toxicity)	Max	-	1.8	1.5
R24	EN ISO 4589-2	Oxygen index %	Min	28	28	32





## Our tailor-made cable tie solutions for the special needs of the railway industry – certified according to EN 45545-2 and International Railway Industry Standard (IRIS)



In the rail industry, stringent safety legislation is decisive in terms of marketability. International certification is key in this regard. The IRIS (International Railway Industry Standard) is already firmly enshrined in HellermannTyton's procurement guidelines. As a long-standing manufacturer for the rail industry, we meet all requirements in this area and tailor our services to the needs of railway suppliers. In particular, the harmonious interplay between project management, configuration management and obsolescence management boosts the safety and efficiency of your operations.

As one of the world's leading manufacturers of products for fastening, fixing, installing, connecting, insulating, protecting and identifying electrical cables and data network infrastructure, HellermannTyton offers a wide range of fixing solutions for the railway business. Not only do we offer different raw materials. We also offer different designs that serve the special needs of the railway market.

### Available products and designs:

- T-Series cable ties available in a wide range of sizes made of Polyamide 6.6 weather resistant and Polyamide 6.6 V0 (PA66W+PA66V0)
- KR-Series cable ties with its unique locking system. Very secure and vibration resistant fixing solution made of Polyamide 6.6 and Polyamide 6.6 weather resistant (PA66 NA+PA66W)
- OS-Series cable ties with smooth surface to the bundle made of Polyamide 6.6 weather resistant (PA66W) and Polyamide V0 (PA66V0) for low smoke emission or limited fire hazard
- Other series and materials like PA46, PA66HS, Tefzel® and PEEK and others available upon request



**Are you looking for the right solution? We have it – quickly, easily and individually. Our product range.**

**Intensive analyses of the market and the competition** make it possible for us to recognise processing and market trends at an early stage. The current result: more than 75000 items you can choose from today. As an IRIS development partner, HellermannTyton also offers you bespoke solutions specifically for your needs in rail vehicle construction.

**Our team of experts is happy to help out at any time.**

## Customer-specific product development

HellermannTyton is on the spot whenever new solutions are required. We develop products tailored to your specifications. To do this we rely on state-of-the-art CAD and rapid prototyping systems. Through the use of advanced development tools, our experienced designers guarantee a high level of quality in all our products.

The result: innovative solutions and the chance for you to benefit from these advantages.



- Save development time
- Reduce weight
- Reduce component diversity
- Choose the right material



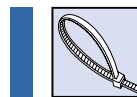
## Product overview

We have a solution for all parts of rail vehicles. The toughest requirements are on the bogies, on the roof and underbody. Vibration resistance is key. We conduct vibration tests on our products to make sure that they conform to the requirements (CEI 61373(1999 cat 2). We have been supplying products to the railway sector since the 1950's. We have a long experience in fastening, protecting and identify cables with plastic or metal solutions.

We are conscious of the high standards that the railway industry needs to achieve. With a strong emphasis on quality, we can help you find the product or service need.

HellermannTyton has been serving leading rolling stock players for a long time. Our close relationship enable us to work together easily on specific challenges and we regularly develop innovative product solutions.

It is in our genes to create customised solutions for our customers. We adapt to your needs.



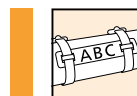
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# Cable Ties and Fixings

Cable ties, inside serrated

## Cable ties for outdoor use (UV-resistant)

### T-Series in PA66W/UV black

These inside serrated cable ties are made of UV-resistant Polyamide 6.6 (PA66W/UV) and thus suitable for outdoor applications. UV stabilised cable ties resist UV radiation for a considerably longer period compared to standard PA66 cable ties. They can easily be used for bundling and securing cables, pipes and hoses especially in outdoor areas.

#### Features and benefits

- UV-resistant black cable tie available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool
- Simple to insert due to bent tail



UV-resistant T-Series cable ties (PA66W/UV).

<b>MATERIAL</b>	Polyamide 6.6, UV-resistant (PA66W)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2



T-Series



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	101.6	22.0	80	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01692
T18I	2.5	139.7	35.0	80	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01972
T18L	2.5	203.2	55.0	80	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01973
T30R	3.5	150.0	35.0	135	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01974
T30L	3.5	198.0	50.0	135	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01962
T30LL	3.5	290.0	80.0	135	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01963
T50R	4.6	200.0	50.0	225	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01964
T50I	4.6	300.0	85.0	225	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01975
T50L	4.6	390.0	110.0	225	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01965
T80R	4.7	210.0	55.0	355	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01695
T80I	4.7	305.0	85.0	355	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01694
T80L	4.7	390.0	110.0	355	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	111-01693
T120I	7.6	301.6	80.0	535	PA66W	Black (BK)	100 pcs.	1;3;9-10;25	111-01968
T150R	7.6	365.0	100.0	670	PA66W	Black (BK)	100 pcs.	1;3;9-10;25	111-01696
T120R(E)	7.6	387.0	100.0	535	PA66W	Black (BK)	100 pcs.	1;3;9-10;25	111-01966
T120M	7.6	460.0	125.0	535	PA66W	Black (BK)	100 pcs.	1;3;9-10;25	111-01967
T120L	7.6	760.0	225.0	535	PA66W	Black (BK)	50 pcs.	1;3;9-10;25	111-01701

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

#### Recommended Tools

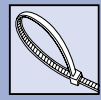
1	2	3	4	5	6	9	10	25
MK10-SB	MK20	MK21	MK3PNSP2	EVO7i	MK7P	EVO9HT	MK9P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



## Cable ties for higher fire-protection

### T-Series in PA66V0 white

T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application especially where safety regulations are high and the reduction of smoke and dangerous gases is required. PA66V0 products are most critically used within public sector areas – particularly in the rail, construction and defence industry.

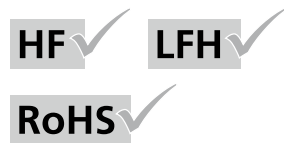
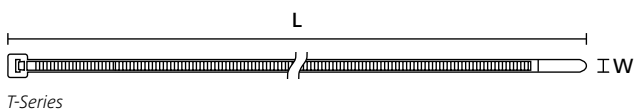
#### Features and benefits

- White cable tie for higher fire-protection
- Conform to low smoke generation requirements (UL94 V0)
- Low evolution of toxic gases and corrosive acids in event of a fire
- PA66V0 cable ties are available in different sizes
- High safety rating due to low fire hazard



Flame retardant Cable Tie made from PA66V0 material.

<b>MATERIAL</b>	Polyamide 6.6 V0 (PA66V0)
<b>Operating Temperature</b>	-40 °C to +85 °C, (+105 °C, 500 h)
<b>Flammability</b>	UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL3



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	111-91819
T18L	2.5	205.0	55.0	80	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	111-01557
T30R	3.6	150.0	35.0	135	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	111-93019
T50R	4.6	200.0	50.0	225	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	111-95019
T50I	4.6	300.0	85.0	225	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	111-00317
T50L	4.7	390.0	110.0	225	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	111-05438
T120R(E)	7.6	387.0	100.0	535	PA66V0	White (WH)	100 pcs.	1;3;9-10;25	111-91210

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools								
1	2	3	4	5	6	9	10	25
MK10-SB	MK20	MK21	MK3PNSP2	EVO7i	MK7P	EVO9HT	MK9P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

EN 45545-2



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# Cable Ties and Fixings

Cable ties, outside serrated

## Cable ties for thin-walled bundles

### OS-Series

OS-Series cable ties are used in many areas where thin-walled or soft insulation wires and cable are being installed. Despite the railway industry these cable ties are used in the automotive and aircraft industry. OS ties made from material PA66V0 are suitable for applications where safety regulations, e. g. reduction of smoke and dangerous gases, are required.

### Features and benefits

- Outside serrated cable tie with smooth surface to the bundle
- Tie follows the contours of the cable bundle perfectly
- Takes up less space due to curved head
- Easy insertion and high tensile strength
- For limited fire hazard demand: Material PA66V0
- Easy application either manually or with a processing tool



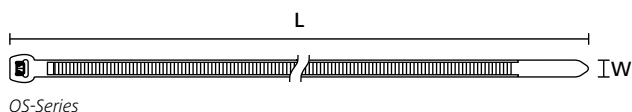
Cable Tie T120ROS.

<b>MATERIAL</b>	Polyamide 6.6 V0 (PA66V0)
<b>Operating Temperature</b>	-40 °C to +85 °C, (+105 °C, 500 h)
<b>Flammability</b>	low generation of toxic gases and corrosive acid, low smoke generation, UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL3

HF

LFH

RoHS



OS-Series



The curved head design of the OS-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18ROS	2.5	100.0	20.0	80	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	118-00079
T30LOS	3.4	200.0	50.0	135	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	118-00080
T50ROS	4.6	200.0	50.0	225	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	118-00065
T50MOS	4.6	245.0	66.0	225	PA66V0	White (WH)	100 pcs.	1-2;4-6;25	118-00081
T120ROS	7.6	385.0	105.0	535	PA66V0	White (WH)	100 pcs.	1;3;9-10;25	118-00082

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

### Recommended Tools

1	2	3	4	5	6	9	10	25
MK10-SB	MK20	MK21	MK3PNSP2	EVO7i	MK7P	EVO9HT	MK9P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**

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### Cable ties for thin-walled bundles

#### OS-Series

OS-Series cable ties are used in many areas where thin-walled or soft insulation wires and cable are being installed. Despite the railway industry these cable ties are used in the automotive and aircraft industry. OS ties made from material PA66W are suitable for indoor and outdoor applications.

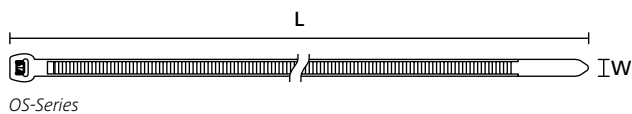
#### Features and benefits

- Outside serrated cable tie with smooth surface to the bundle
- Tie follows the contours of the cable bundle perfectly
- Takes up less space due to curved head design
- Easy insertion combined with high tensile strength
- PA66W material is perfectly suited for outdoor applications
- Easy application either manually or with a processing tool



Outside serrated OS-Series cable tie with smooth surface to the bundle.

<b>MATERIAL</b>	Polyamide 6.6, UV-resistant (PA66W)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2



The curved head design of the OS-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18ROS	2.5	100.0	20.0	80	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	118-00125
T30LOS	3.4	200.0	50.0	135	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	118-00126
T50ROS	4.6	200.0	50.0	225	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	118-00127
T50MOS	4.6	245.0	66.0	225	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	118-00128
T50LOS	4.6	384.0	110.0	225	PA66W	Black (BK)	100 pcs.	1-2;4-6;25	118-00129
T120ROS	7.6	385.0	105.0	535	PA66W	Black (BK)	100 pcs.	1;3;9-10;25	118-00130

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

#### Recommended Tools

1	2	3	4	5	6	9	10	25
MK10-SB	MK20	MK21	MK3PNSP2	EVO7i	MK7P	EVO9HT	MK9P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**

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# Cable Ties and Fixings

Cable ties without serration

## Cable tie locked by glass fibre pin

### KR-Series

This cable tie is distinguished by its smooth strap and unique locking mechanism. The chamfered head of the KR-Series allows for a firm fit around the bundled element. Due to its special design KR-Series cable ties can be used as a safety method to bundle any cable and to also secure bellows on steering racks, water hoses or vacuum lines. The endless strap version is fairly flexible and can be cut to any length required. Separate heads are available to fix the strap.

### Features and benefits

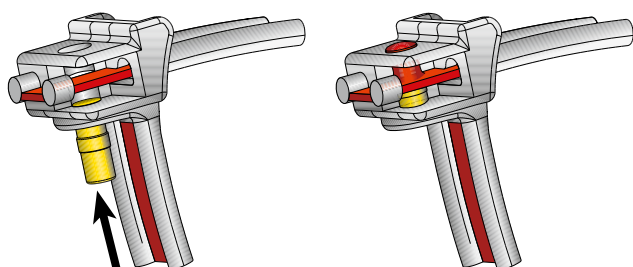
- Unique cable tie system
- Cable tie without serration to avoid any damage to cables
- Strap is locked into place with a glass-fibre reinforced pin
- Very secure and vibration resistant fixing
- KR-ties up to 426 mm are made as one piece
- For assembly a special KR-tool is needed



The KR-Series has been repeatedly proven in high vibration applications.

<b>MATERIAL</b>	Polyamide 6.6, UV-resistant (PA66W)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2

**RoHS** ✓

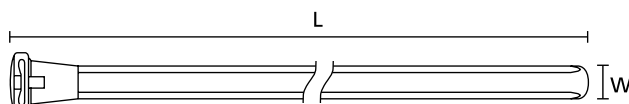


The unlocked head (yellow) of a KR-tie.

The cable tie (red) is locked into place with the pin.



Cable tie KR-Series



Cable tie KR-Series, ultrasonic welded

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
KR6/35	6.1	360.0	93.0	490	PA66W	Black (BK)	50 pcs.	11	121-63580
KR8/21	8.0	210.0	47.0	785	PA66W	Black (BK)	50 pcs.	11;13	121-82180
KR8/33	8.0	337.0	86.0	785	PA66W	Black (BK)	50 pcs.	11;13	121-83310
KR8/43	8.0	426.0	105.0	785	PA66W	Black (BK)	50 pcs.	11;13	121-84310
KR8/70	8.0	700.0	216.0	785	PA66W	Black (BK)	50 pcs.	11;13	121-07060
KR8/C5	11.7	38.0	-	-	PA66W	Black (BK)	200 pcs.	11;13	121-58570

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

### Recommended Tools

11	13
KR6/8	KR8PNSE

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**



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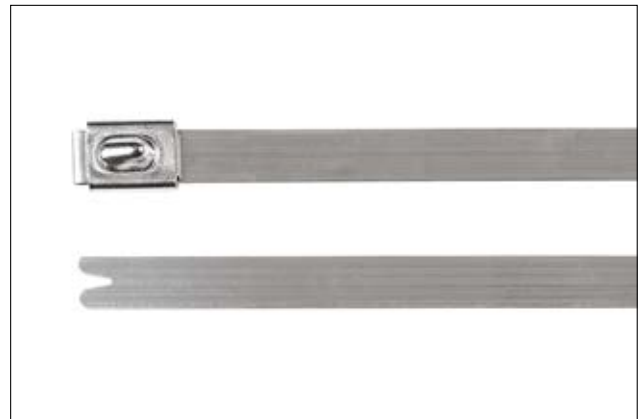
## Cable ties with ball-lock

### MBT-Series, stainless steel 304

Metal ties are ideal for all applications that require high strength, reliability and fire resistance. The MBT range of stainless steel cable ties can be used in chemical industries and on oil platforms as well as in mass transit, shipbuilding and mining industries. MBT ties are also suitable for machine building, construction and in the outside area of radio technology. Additionally MBT ties are ideal for securing lighting in theatres and exhibition halls.

#### Features and benefits

- Cable ties MBT, made from stainless steel 304
- Non-releasable locking feature
- Corrosion resistant
- Weather resistant
- Outstanding chemical resistance
- High temperature resistant
- Non-burning



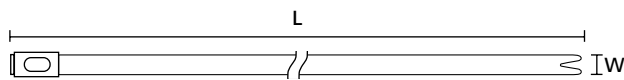
Stainless steel cable ties, uncoated, MBT\_SS, MBT\_HS.

<b>MATERIAL</b>	Stainless Steel (SS304)
<b>Operating Temperature</b>	-80 °C to +538 °C
<b>Flammability</b>	non-burning

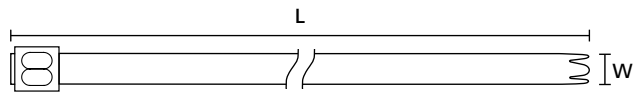
HF ✓

LFH ✓

RoHS ✓



MBT-Series 4.6 mm and 7.9 mm width



MBT-Series 12.3 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Pack Cont.	Tools	Article-No.
MBT5SS	4.6	127.0	12.0	25.0	900	SS304	100 pcs.	15-18	111-93058
MBT8SS	4.6	201.0	17.0	50.0	900	SS304	100 pcs.	15-18	111-93088
MBT14SS	4.6	362.0	17.0	102.0	900	SS304	100 pcs.	15-18	111-93148
MBT20SS	4.6	521.0	17.0	152.0	900	SS304	100 pcs.	15-18	111-93208
MBT14HS	7.9	362.0	17.0	102.0	2,000	SS304	50 pcs.	15-18	111-94148
MBT20HS	7.9	521.0	17.0	152.0	2,000	SS304	50 pcs.	15-18	111-94208
MBT33HS	7.9	838.0	17.0	254.0	2,000	SS304	50 pcs.	15-18	111-94338

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

#### Recommended Tools

15	16	17	18
MK9SST	MK9PSST	HDT16	KST-STG200

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.





# Cable Ties and Fixings

Cable ties, stainless steel

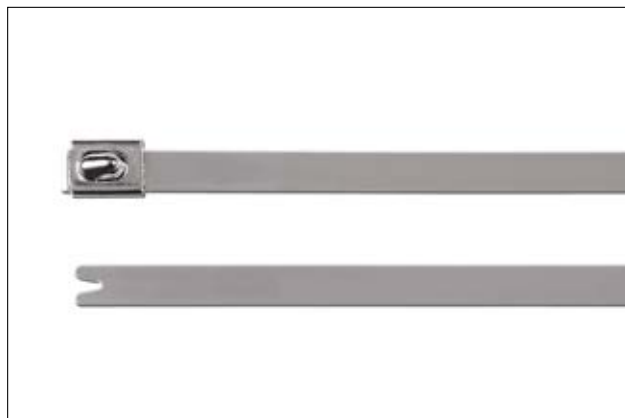
## Cable ties with ball-lock

### MBT-Series, stainless steel 316

Metal ties are predestined for all areas with requirements for high holding force, reliability and fire resistance. The MBT range of stainless steel cable ties can be used in chemical industry and on oil platform as well as in mass transit, shipbuilding and mining industry. MBT ties are also suitable for machine building, apparatus construction and in the outside area of radio technology. Additionally MBT ties are a good solution to fix lighting in theatres and exhibition halls.

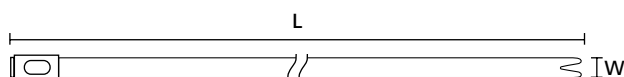
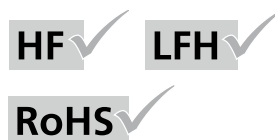
### Features and benefits

- MBT cable ties made from stainless steel 316
- Non-releasable locking feature
- Corrosion resistant
- Weather resistant
- Outstanding chemical resistance
- High temperature resistant
- Non-burning

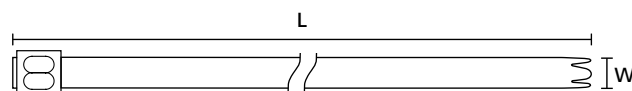


Stainless steel cable ties, uncoated, MBT\_S, MBT\_H.

<b>MATERIAL</b>	Stainless Steel (SS316)
<b>Operating Temperature</b>	-80 °C to +538 °C
<b>Flammability</b>	non-burning



MBT-Series 4.6 mm and 7.9 mm width



MBT-Series 12.3 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Pack Cont.	Tools	Article-No.
MBT5S	4.6	127.0	12.0	25.0	900	SS316	100 pcs.	15-18	111-93059
MBT8S	4.6	201.0	12.0	50.0	900	SS316	100 pcs.	15-18	111-93089
MBT14S	4.6	362.0	12.0	102.0	900	SS316	100 pcs.	15-18	111-93149
MBT20S	4.6	521.0	12.0	152.0	900	SS316	100 pcs.	15-18	111-93209
MBT14H	7.9	362.0	12.0	102.0	2,000	SS316	50 pcs.	15-18	111-94149
MBT20H	7.9	521.0	12.0	152.0	2,000	SS316	50 pcs.	15-18	111-94209
MBT27H	7.9	685.0	12.0	203.0	2,000	SS316	50 pcs.	15-18	111-94279
MBT33H	7.9	838.0	12.0	254.0	2,000	SS316	50 pcs.	15-18	111-94339
MBT14XH	12.3	362.0	12.0	102.0	2,700	SS316	50 pcs.	15-18	111-95149

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

### Recommended Tools

15	16	17	18
MK9SST	MK9PSST	HDT16	KST-STG200

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



## Cable ties with ball-lock and coating

### MBT-FC-Series, stainless steel 316

The MBT range of stainless steel cable ties can be used in the most arduous of conditions or where the additional security, strength and fire resistance of a metal fixing is required. Used in all industries from mass transit, ship building, oil rigs, mining and chemical industry, theatres and exhibition halls. In the event of a fire, cables will remain securely held in place and will not fall to block emergency exits. Fully coated ties can also be used to avoid any reflection. An important consideration for instance in the defence industry.

#### Features and benefits

- Fully coated MBT, made from type 316 stainless steel with polyester coating
- Non-releasable locking feature
- Coated cable tie with smooth edges
- Comfortable handling and installation
- Eliminates contact corrosion between dissimilar materials during application



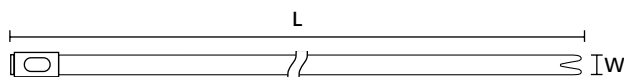
Stainless steel cable ties, coated, MBT\_SFC, MBT\_HFC.

<b>MATERIAL</b>	Polyester (SP), Stainless Steel (SS316)
<b>Operating Temperature</b>	-80 °C to +538 °C
<b>Operating Temperature Coating</b>	-50 °C to +150 °C
<b>Flammability</b>	non-burning (except coating)

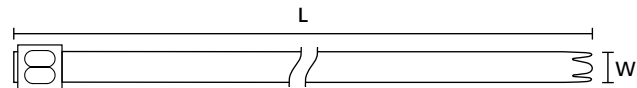
HF ✓

LFH ✓

RoHS ✓



MBT-Series 4.6 mm and 7.9 mm width



MBT-Series 12.3 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Pack Cont.	Tools	Article-No.
MBT5SFC	4.6	127.0	15.0	25.0	540	SP, SS316	100 pcs.	15-18	111-00288
MBT8SFC	4.6	201.0	17.0	50.0	540	SP, SS316	100 pcs.	15-18	111-00289
MBT14SFC	4.6	362.0	17.0	102.0	540	SP, SS316	100 pcs.	15-18	111-00290
MBT20SFC	4.6	521.0	17.0	152.0	540	SP, SS316	100 pcs.	15-18	111-00291
MBT8HFC	7.9	201.0	17.0	50.0	1,020	SP, SS316	50 pcs.	15-18	111-00294
MBT14HFC	7.9	362.0	17.0	102.0	1,020	SP, SS316	50 pcs.	15-18	111-00295
MBT20HFC	7.9	521.0	17.0	152.0	1,020	SP, SS316	50 pcs.	15-18	111-00296
MBT27HFC	7.9	681.0	17.0	203.0	1,020	SP, SS316	50 pcs.	15-18	111-00297
MBT33HFC	7.9	838.0	17.0	254.0	1,020	SP, SS316	50 pcs.	15-18	111-00298

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

#### Recommended Tools

15	16	17	18
MK9SST	MK9PSST	HDT16	KST-STG200

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



# Cable Ties and Fixings

Cable ties, stainless steel

## Protective channel for stainless steel ties

### LFPC-Series

When used in conjunction with the MBT, MST, MLT and AMT range of stainless steel cable ties this channel gives the cable protection against chafing, vibration and shock. Ideal for use in arduous conditions such as those found on board ships, oil rigs or in nuclear power stations.

### Features and benefits

- LFPC channel, manufactured from Polyolefin
- Works with MBT-, MST-, MLT- and AMT-Series
- Smooth surface protects bundle against chafing caused by vibrations and shocks
- Can be cut from roll to any length
- Halogenfree
- Flame retardant



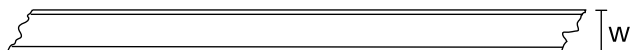
Protective channel LFPC, polyolefin, black.

<b>MATERIAL</b>	Polyolefin (PO)
<b>Colour</b>	Black (BK)
<b>Operating Temperature</b>	-40 °C to +90 °C, (+160 °C, for 200 h)
<b>Flammability</b>	UL 94 V0

HF ✓

LFH ✓

RoHS ✓



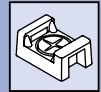
LFPC

TYPE	Width (W)	For Ties	Material	Pack Cont.	Article-No.
LFPC70	7.0	MBTS	PO	25 m	111-93000
LFPC83	8.3	MBTH	PO	25 m	111-00257
LFPC103	10.3	MBTH	PO	25 m	111-94000
LFPC129	12.9	MBTXH	PO	25 m	111-00253
LFPC132	13.2	MBTXH	PO	25 m	111-00254
LFPC150	15.0	MBTXH	PO	25 m	111-95000

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.





## Screw fixing mounts

### Stainless steel 316 mounts

Suitable for the secure fixing of cables, tubing, conduits and pipes within the most arduous of environments. Providing a complete fastening and fixing solution when used in conjunction with stainless steel ties up to 10.0 mm width. SSPC metal cable tie mounts are ideal for use within shipbuilding, oil and gas (offshore), industrial machinery and vehicles, food and beverage, power, renewable energy or process industries.

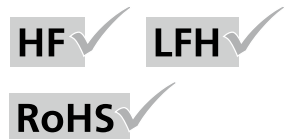
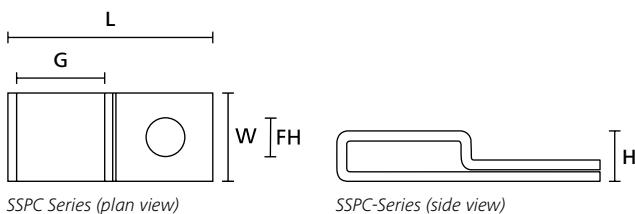
#### Features and benefits

- 2-way fixing for metal cable ties
- High performance stainless steel 316 material
- Heavy duty design
- Robust and durable solution
- Resistant to a range of chemicals in challenging environments
- Quick and easy to install
- Safe and secure solution for cables, tubing, conduits and pipes



Stainless Steel P-Mount SSPC for use in arduous environments.

<b>MATERIAL</b>	Stainless Steel (SS316)
<b>Operating Temperature</b>	-80 °C to +538 °C
<b>Flammability</b>	non-burning



TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
<b>SSPC4</b>	10.2	23.0	4.5	4.2	10.0	SS316	Metal (ML)	100 pcs.	151-00837
<b>SSPC5</b>	10.2	23.0	4.5	5.3	10.0	SS316	Metal (ML)	100 pcs.	151-00838
<b>SSPC6</b>	10.2	23.0	4.5	6.3	10.0	SS316	Metal (ML)	100 pcs.	151-00839

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

## Manual tensioning tool for metal ties MBT-Series

### MK9SST up to 16.0 mm strap width

The MK9SST is constructed with heavy duty parts to ensure optimum performance. It is designed to apply our MBT cable ties with a strap width of up to 16 mm. The tool is ideally suited for use in most arduous environments such as found on board ships, oil rigs, constructions or in nuclear power stations.

#### Features and benefits

- Glass-fibre-reinforced housing
- Ergonomic design
- Consistent tensioning and automatic cutting of metal ties MBT-Series
- Infinitely adjustable tension force combined with two-step quick adjustment



MK9SST.

TYPE	Description	Strap Width max.	Strap Thickness max.	Weight	Article-No.
<b>MK9SST</b>	MK9SST	16.0	0.5	0.508 kg	110-95000
<b>SP MK9SST replacement blade</b>	Replacement Blade	-	-	0.004 kg	110-95273

All dimensions in mm. Subject to technical changes.



# Cable Ties and Fixings

Fixing products for holes

## 2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

### Fir Tree Parts FT8

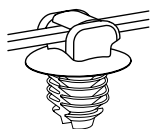
Primarily designed for fixing cable harnesses in the automotive industry their simplicity, and ease of use, has seen these parts used in everything from aircraft, to switch-gear, to washing machines.

#### Features and benefits

- Pre-assembled 2-piece fixing tie with fir tree foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust and dirt
- Fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes



*These fir tree fixings can also be used in threaded, blind holes.*



T50RFT8GSD

<b>MATERIAL</b>	Polyamide 6.6, heat stabilised (PA66HS), Polyamide 6.6, UV-resistant (PA66W)
<b>EN 45545-2 Classification Footpart</b>	R22 HL2, R23 HL2

**RoHS** ✓

TYPE	Hole Ø (FH)	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Material	Colour	Tools	Article-No.
<b>T50ROSFT8GSD</b>	8.0 - 8.5	1.1 - 1.5	4.6	200.0	45.0	225	16	PA66HS, PA66W	Black (BK)	1-2;4-6;25	156-01484

All dimensions in mm. Subject to technical changes.

Recommended Tools					
1	2	4	5	6	25
MK10-SB	MK20	MK3PNSP2	EVO7i	MK7P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



## 2-Piece Fixing Ties with Arrowhead, with Disc

### 2-Piece Fixing Ties with Arrowhead, with Disc for Oval Holes

Primarily designed for fixing cable harnesses in the automotive industry, their simplicity and ease of use has resulted in these parts being used in other industries, for example aviation, switch gear manufacturer, white goods manufacturer.

#### Features and benefits

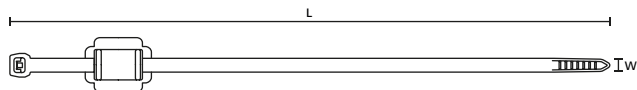
- Pre-assembled 2-piece fixing tie with arrowhead foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Arrowhead simply locks into place
- Versions for oval holes feature anti-twist protection



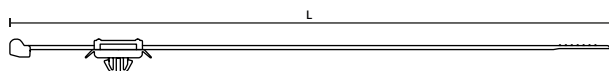
Our 2-Piece Fixing Tie T50RSFT725 is specially designed for railway application with an fixing hole of 7 x 25 mm.

<b>MATERIAL</b>	Polyamide 6.6, heat stabilised (PA66HS), Polyamide 6.6, UV-resistant (PA66W)
<b>Operating Temperature</b>	-40 °C to +85 °C, (+105 °C, 500 h)
<b>EN 45545-2 Classification Footpart</b>	R22 HL2, R23 HL2

RoHS



One Click FERRO (top view)



One Click FERRO (side view)

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.		Colour	Tools	Article-No.
<b>One Click FERRO-T50ROSSFT725</b>		7.0 x 50.0	1.0 - 2.0	4.6	200.0	50.0	225	Black (BK)	1-2;4-6;25	156-01577

All dimensions in mm. Subject to technical changes.

#### Recommended Tools

1	2	4	5	6	25
MK10-SB	MK20	MK3PNSP2	EVO7i	MK7P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



# Cable Ties and Fixings

Cable ties with fixing elements

## 2-Piece Fixing Ties with EdgeClip

### EdgeClip 1-3 mm

Many applications require cables to be run parallel to each other but separated to avoid abrasion. These cable ties and EdgeClip assemblies are ideal for use where holes are not acceptable or where due to temperature problems adhesives will fail.

#### Features and benefits

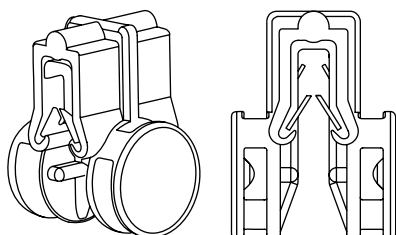
- For parallel routing of cables, hoses or harnesses
- Easy assembly, just clip on per hand
- For edges of 1-3 mm
- Integrated metal clamp holds clip firmly in place
- Clamp consists of double tempered steel spring
- Ideal for applications where holes or adhesives are not suitable



T50ROSCBT02SET for parallel bundling.

<b>MATERIAL</b>	Polyamide 6.6, heat stabilised (PA66HS), Polyamide 6.6, UV-resistant (PA66W)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification Footpart</b>	R22 HL2, R23 HL2

**RoHS** ✓



TYPE	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.	N	Cable Tie	Foot Part	Colour	Tools	Article-No.
T50ROSCBT02SET	1.0	4.6	200.0	45.0	225	Polyamide 6.6, heat stabilised (PA66HS)	Polyamide 6.6, UV-resistant (PA66W)	Black (BK)	1-2;4-6;25	156-00805

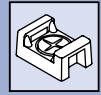
All dimensions in mm. Subject to technical changes.

#### Recommended Tools

1	2	4	5	6	25
MK10-SB	MK20	MK3PNSP2	EVO7i	MK7P	EVOcut

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.





## Ratchet P-Clamp

For bundle diameters from 6.2 mm up to 51.0 mm

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 in- and outdoors. 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. The Ratchet P-Clamp is offered in four sizes and multiple mounting configurations.

### Features and benefits

- One-piece ratchet closure design allows for easy installation during pre- or final assembly
- Multiple configurations handle a wide range of diameters and applications, reducing part inventory
- Clamp interior is designed to guide and center bundle to reduce pinching
- Easy release feature allows for quick adjustments and maintenance
- Impact modified, heat and UV stabilized PA66 provides long-term durability, in- and outdoors
- Steel mounting plate tolerates high torque mounting and is treated to resist chemicals and salt spray



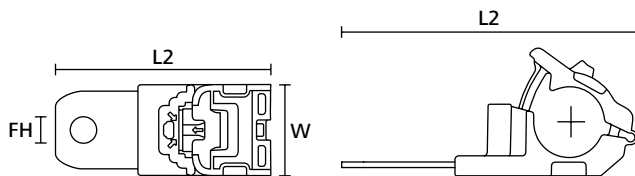
Ratchet P-Clamp - A more versatile way to mount and clamp cables.

<b>MATERIAL</b>	Polyamide 6.6 + Polyamide 6 V0 (PA66/6V0), Stainless Steel (SS304)
<b>Operating Temperature</b>	-40 °C to +120 °C
<b>Flammability</b>	UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL3

HF ✓

LFH ✓

RoHS ✓



Ratchet P-Clamp (plan view)



[www.HellermannTyton.com/PClamp-rail21](http://www.HellermannTyton.com/PClamp-rail21)

TYPE	Drawing	Width (W)	Length (L2)	Bundle Ø min.	Bundle Ø max.	Hole Ø (FH)	Fixing Hole Centres (F)	Variant	Material	Colour	Article-No.
RCB180SM6SS		34.9	83.1	12.7	19.5	6.6	52.8	Short	PA666V0, SS304	Black (BK)	151-02736
RCC180SM8SS		34.9	103.0	19.4	36.0	8.4	62.3	Short	PA666V0, SS304	Black (BK)	151-02737
RCD180SM8SS		34.9	115.5	36.0	51.0	8.31	70.0	Short	PA666V0, SS304	Black (BK)	151-02734
RCD180LM8SS		34.9	166.5	36.0	51.0	8.31	121.0	Long	PA666V0, SS304	Black (BK)	151-02735

All dimensions in mm. Subject to technical changes.

EN 45545-2

ASTM

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# Cable Ties and Fixings

Fixing products for self-adhesive fixing

## Paste adhesive mount

### PMB-Series

PMB3 paste mount offers a fixing solution wherever screw fixing is not allowed. Due to the design the mount can even be installed onto uneven surfaces. PMB3 paste mount is used in the railway industry as well as in the renewable energy industry. Further applications are in the electrical industry and the production of switching cabinets. The PMB3 paste adhesive mount is suitable for fixings with paste/liquid adhesive.

### Features and benefits

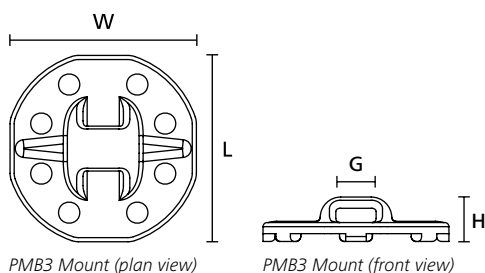
- PMB3 paste adhesive mount for fixings with paste / liquid adhesive
- Mount geometry offers a good form closure with cured adhesive
- Can even be installed onto uneven surfaces
- Designed for use in confined spaces
- Made of flame-retardant material PA666V0
- Cost efficiency through reduced use of paste adhesive



PMB3 paste adhesive mount for fixing with paste/liquid adhesive.

<b>MATERIAL</b>	Polyamide 6.6 + Polyamide 6 V0 (PA66/6V0)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL3

RoHS



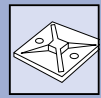
TYPE	Width (W)	Length (L)	Height (H)	Strap Width max. (G)	Material	Colour	Article-No.
PMB3	22.6	22.6	5.4	4.7	PA666V0	Black (BK)	151-02575

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

EN 45545-2

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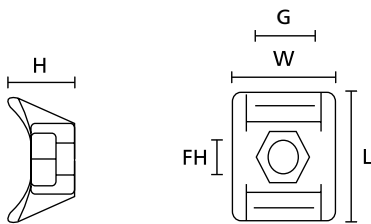
## Screw Fixing Mounts

### NY with curved design

Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacture, they offer a very secure fixing and can be used with a wide variety of heavy duty cable ties up to 13 mm width.

#### Features and benefits

- Curved design for additional cable support
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration



NY3256 (side view) NY3256 (plan view)



Cable Tie Mounts NY Series.

<b>MATERIAL</b>	Polyamide 6.6 (PA66)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2

RoHS

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
NY3256	12.0	13.5	7.8	3.1	8.0	PA66	Natural (NA)	1,000 pcs.	151-25219

All dimensions in mm. Subject to technical changes.

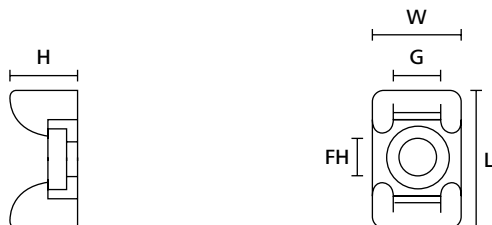
## Screw fixing mounts

### Cable tie mounts with curved design

Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacturing. They offer a very secure fixing and can be used with a wide variety of heavy duty cable ties up to 8.3 mm width.

#### Features and benefits

- Curved design for additional cable support
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration
- Mounts are available in various sizes and materials



KR6G5, KR8G5 and CTM (side view) KR6G5, KR8G5 and CTM (plan view)



Cable Tie Mounts KR6G5, KR8G5 and CTM.

<b>MATERIAL</b>	Polyamide 6.6 (PA66)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2

RoHS

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
KR6G5	12.0	18.0	9.0	4.5	6.0	PA66	Natural (NA)	100 pcs.	151-24619
KR8G5	14.5	25.0	12.0	6.5	8.0	PA66	Natural (NA)	100 pcs.	151-24819

All dimensions in mm. Subject to technical changes.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



# Cable Ties and Fixings

Fixing products for screws

## Plastic P-Clamps

### HP-Series

For permanent or semi-permanent cable fixings this range of plastic P-Clamps can be used in many industries. Their light weight makes them particularly suitable for use in areas such as aircraft and aerospace where minimising weight, but retaining a strong fixing, is vitally important.

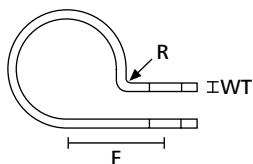
#### Features and benefits

- Manufactured from Polyamide
- Good temperature resistance and high strength
- Wide range of sizes for every application
- Can be used without cable ties



P-Clamps H1P - H18P in different dimensions.

<b>MATERIAL</b>	Polyamide 6.6 (PA66)
<b>Operating Temperature</b>	-40 °C to +85 °C
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2



P-Clamp H1P - H18P (side view)



P-Clamp H1P - H18P (plan view)

TYPE	Hole Ø (FH)	Bundle Ø max.	Fixing Hole Centres (F)	Material	Colour	Article-No.
H6P	4.2	11.0	13.0	PA66	Natural (NA)	211-60069

All dimensions in mm. Subject to technical changes.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.





### Arrowhead Cradle

#### SFC

Offering simple and easy methods of securing cables or pipes, these fixing accessories have many applications within a wide range of industries.

#### Features and benefits

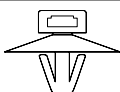
- Arrowhead fixing for use in pre-drilled or punched holes
- Ideal for applications with limited space and restricted access
- Parts with disc protect against dirt and dust



The SFC3 series for securely fixing and to route cables and pipes.

<b>MATERIAL</b>	Polyamide 6.6, UV-stabilised (PA66UV)
<b>Operating Temperature</b>	-40 °C to +85 °C, (+105 °C, 500 h)
<b>Flammability</b>	UL 94 V2
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2

**RoHS** ✓

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Strap Width max. (G)	Material	Colour	Width (W)	Length (L)	Article-No.
SFC3-F		6.4	2.0 - 3.3	6.5	PA66UV	Black (BK)	12.0	16.8	151-00340

All dimensions in mm. Subject to technical changes.



### Heat shrinkable tubing 2:1 - Flame retardant

#### TR27

TR27 is used in applications where toxic emissions evolved in a fire must be minimised, e.g. for heavily populated buildings or safety sensitive areas like tunnels, hospitals, schools, theatres, mass transit vehicles and computer centres.

#### Features and benefits

- Thin wall, flexible polyolefin tubing
- Optional available with adhesive or as thick wall version (SR27)
- Halogen free and excellent flame-retardant properties
- Meets various industrial standards

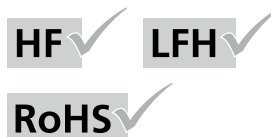


TR27 is ideal for safety sensitive areas.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Shrink Ratio</b>	2:1
<b>Operating Temperature</b>	-40 °C to +105 °C
<b>Min. Shrink Temperature</b>	+115 °C
<b>Longitudinal Change After Shrinkage</b>	+5 %/-10 % max.
<b>Dielectric Strength</b>	15 kV/mm
<b>Flammability</b>	Limited Fire Hazard, halogen free, low generation of toxic gases and corrosive acid, low smoke generation
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



Heat Shrinkable Tubing 2:1



TYPE	Supplied Ø D min.	Size (imperial)	Recov. Ø d max.	Wall (WT)	Reel Length	Colour	Tools	Article-No.
TR27-3.2/1.6	3.2	1/8 "	1.6	0.51	150 m	Black (BK)	30	315-50320
TR27-4.8/2.4	4.8	3/16 "	2.4	0.51	60 m	Black (BK)	30	315-50480
TR27-6.4/3.2	6.4	1/4 "	3.2	0.64	60 m	Black (BK)	30	315-50640
TR27-9.5/4.8	9.5	3/8 "	4.8	0.64	60 m	Black (BK)	30	315-50950
TR27-12.7/6.4	12.7	1/2 "	6.4	0.64	60 m	Black (BK)	30	315-51270
TR27-19.1/9.5	19.1	3/4 "	9.5	0.76	60 m	Black (BK)	30	315-51900
TR27-25.4/12.7	25.4	1 "	12.7	0.51	60 m	Black (BK)	30	315-52540
TR27-38.1/19.1	38.1	1-1/2 "	19.1	1.02	60 m	Black (BK)	30	315-53810
TR27-50.8/25.4	50.8	2 "	25.4	1.14	60 m	Black (BK)	30	315-55100

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.

#### Recommended Tools

30  
H6100

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Heat shrinkable tubing 3:1 - Flame retardant

#### TA37 – thin wall adhesive lined

TA37 shrink tubing has a low smoke index and excellent flame retardant properties to meet strict fire security standards in electrical insulation.

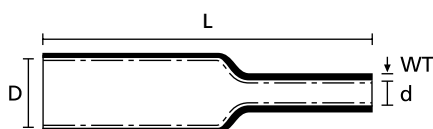
#### Features and benefits

- Thin wall adhesive lined heat shrink tubing
- Halogen free
- Flame retardant
- Combination of these three (halogen free, adhesive lined and flame retardant) product properties is unique

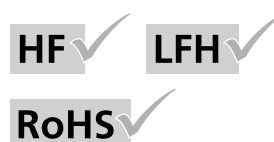


TA37 - Halogenfree and self-extinguishing 3:1 Thin Dual Wall Heat Shrink Tubing.

<b>MATERIAL</b>	Polyolefin, chemically cross-linked (PO-X)
<b>Shrink Ratio</b>	3:1
<b>Operating Temperature</b>	-40 °C to +105 °C
<b>Min. Shrink Temperature</b>	+120 °C
<b>Softening Point Adhesive</b>	+85 °C
<b>Longitudinal Change After Shrinkage</b>	+3 %/-15 %
<b>Dielectric Strength</b>	19.7 kV/mm
<b>Flammability</b>	self-extinguishing, low smoke generation, low generation of toxic gases and corrosive acid
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



Heat Shrinkable Tubing 3:1 with adhesive



TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Length (L)	Colour	Tools	Article-No.
TA37 3-1	3.2	1.0	0.95	1.2 m	Black (BK)	30	315-13000
TA37 4.5-1.5	4.8	1.5	1.10	1.2 m	Black (BK)	30	315-13001
TA37 6-2	6.4	2.0	1.20	1.2 m	Black (BK)	30	315-13002
TA37 9-3	9.5	3.0	1.30	1.2 m	Black (BK)	30	315-13003
TA37 12-4	12.7	4.0	1.40	1.2 m	Black (BK)	30	315-13004
TA37 19-6	19.1	6.0	2.20	1.2 m	Black (BK)	30	315-13005
TA37 24-8	24.0	8.0	2.50	1.2 m	Black (BK)	30	315-13006
TA37 40-13	40.0	13.0	2.50	1.2 m	Black (BK)	30	315-13007
TA37 50-19	50.0	19.0	4.00	1.2 m	Black (BK)	30	315-13008
TA37 75-25	75.0	25.0	3.00	1.2 m	Black (BK)	30	315-13009
TA37 120-45	120.0	45.0	4.00	1.2 m	Black (BK)	30	315-13011

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.

#### Recommended Tools

30  
H6100

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**

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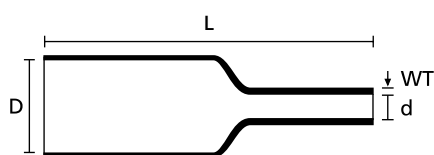
### Heat shrinkable tubing up to 4:1, self-extinguishing, halogen-free – 1 m lengths

#### HR47 – thick-walled

The thick-walled heat shrinkable tubing HR47 is halogen-free, selfextinguishing and has a low smoke index. Therefore the product is extremely suitable for mechanical protection (e.g. anti-kink and abrasion protection) in public transportation applications such as trains, busses, planes, tunnels and elevators.

#### Features and benefits

- Thick-walled, rigid polyolefin heat shrinkable tubing
- Halogen-free
- Self-extinguishing
- Low smoke index
- DIN EN 45545-2 (HL3) approved
- High shrink ratio up to 4:1



Heat Shrinkable Tubing 4:1



The thick-walled HR47 has low smoke and toxic gas emissions.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Shrink Ratio</b>	up to 4:1
<b>Operating Temperature</b>	-55 °C to +110 °C
<b>Min. Shrink Temperature</b>	+120 °C
<b>Longitudinal Change After Shrinkage</b>	10 % max.
<b>Dielectric Strength</b>	15 kV/mm
<b>Flammability</b>	self-extinguishing
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3

HF ✓

RoHS ✓

TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Colour	Tools	Article-No.
HR47-9/3	9.00	3.00	2.00	Black (BK)	32	321-40000
HR47-13/4	13.00	4.00	2.40	Black (BK)	32	321-40001
HR47-22/6	22.00	6.00	2.70	Black (BK)	32	321-40002
HR47-33/8	33.00	8.00	3.20	Black (BK)	32	321-40003
HR47-40/12	40.00	12.00	4.00	Black (BK)	32	321-40004
HR47-55/16	55.00	16.00	4.00	Black (BK)	32	321-40005
HR47-75/22	75.00	22.0	4.00	Black (BK)	32	321-40006
HR47-85/25	85.00	25.00	4.20	Black (BK)	32	321-40007
HR47-95/29	95.00	29.00	4.20	Black (BK)	32	321-40008
HR47-105/30	105.0	30.0	4.20	Black (BK)	32	321-40009
HR47-115/34	115.00	34.00	4.20	Black (BK)	32	321-40010
HR47-130/36	130.00	36.00	4.20	Black (BK)	32	321-40011
HR47-180/50	180.0	50.0	4.20	Black (BK)	32	321-40012

All dimensions in mm. Subject to technical changes.

#### Recommended Tools

32

CHG900

For detailed information on  
Application Tooling please refer to  
our Main Catalogue or the Internet.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.





### Heat shrinkable tubing 2:1 – self-extinguishing, halogen-free and diesel resistant

#### TU28 - thin-walled

The thin-walled heat shrinkable tubing TU28 is halogen-free, self-extinguishing, has a low smoke index and therefore is extremely suitable for installation in public transportation applications such as trains, busses, planes, tunnels and elevators.

#### Features and benefits

- Thin-walled, flexible polyolefin heat shrinkable tubing
- Halogen-free
- Self-extinguishing
- Low smoke index
- DIN EN 45545-2 (HL3) approved
- Diesel resistant



More colours on request.  
Please contact us.



Heat Shrinkable Tubing 2:1



TU28 meets highest safety standards.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Shrink Ratio</b>	2:1
<b>Operating Temperature</b>	-55 °C to +125 °C
<b>Min. Shrink Temperature</b>	+120 °C
<b>Longitudinal Change After Shrinkage</b>	+/- 5 %
<b>Dielectric Strength</b>	19.7 kV/mm
<b>Flammability</b>	self-extinguishing
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Colour	Tools	Article-No.
TU28-2.4/1.2	2.59	1.20	0.49	Black (BK)	30	300-06001
TU28-3.2/1.6	3.64	1.59	0.51	Black (BK)	30	300-06002
TU28-4.8/2.4	5.26	2.36	0.54	Black (BK)	30	300-06003
TU28-6.4/3.2	6.92	3.18	0.56	Black (BK)	30	300-06004
TU28-9.5/4.8	10.2	4.75	0.59	Black (BK)	30	300-06005
TU28-12.7/6.4	13.5	6.35	0.60	Black (BK)	30	300-06006
TU28-19.1/9.5	20.1	9.53	0.62	Black (BK)	30	300-06007
TU28-25.4/12.7	26.7	12.70	0.63	Black (BK)	30	300-06008
TU28-38.1/19.1	39.8	19.10	0.64	Black (BK)	30	300-06009
TU28-50.8/25.4	53.0	25.40	0.64	Black (BK)	30	300-06010

All dimensions in mm. Subject to technical changes.

#### Recommended Tools

30

H6100

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**

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### Standard polyester braided sleeving

#### Helagaine HEGP

Helagaine HEGP braided sleeving is made of polyester provides superior abrasion protection in the rail, automotive and machine building industries.

#### Features and benefits

- Made of sturdy polyester
- Highly flexible
- High abrasion resistance
- Very high surface coverage



Helagaine HEGP braided sleeving.

<b>MATERIAL</b>	Polyester (PET)
<b>Operating Temperature</b>	-50 °C to +150 °C
<b>Melting Point</b>	+250 °C
<b>Flammability</b>	UL 94 V2, FMVSS 302
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Tools	Article-No.
HEGP03	1	5	Black (BK)	200 m	45	170-10300
HEGP04	2	7	Black (BK)	200 m	45	170-10400
HEGP05	3	9	Black (BK)	200 m	45	170-10500
HEGP06	4	11	Black (BK)	100 m	45	170-10600
HEGP08	5	12	Black (BK)	100 m	45	170-10800
HEGP10	7	15	Black (BK)	100 m	45	170-11000
HEGP12	8	17	Black (BK)	100 m	45	170-11200
HEGP15	10	20	Black (BK)	100 m	45	170-11500
HEGP20	14	26	Black (BK)	50 m	45	170-12000
HEGP25	18	34	Black (BK)	50 m	45	170-12500
HEGP30	20	40	Black (BK)	50 m	45	170-13000
HEGP40	30	50	Black (BK)	50 m	45	170-14000
HEGP50	40	66	Black (BK)	50 m	45	170-15000

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.

#### Recommended Tools

45

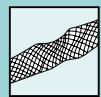
HSG0

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**

**ECE R-118**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### High-expansion polyester braided sleeving

#### Helagaine HEGPX

Helagaine HEGPX is used wherever a higher expansion rate is required. It is particularly suitable for use in the rail, automotive and machine building industries.

#### Features and benefits

- Made of sturdy polyester
- Highly flexible
- High rate of expansion
- Easy to apply over irregular shapes
- Good abrasion resistance



HEGPX - Expandable abrasion protection sleeve.

<b>MATERIAL</b>	Polyester (PET)
<b>Operating Temperature</b>	-50 °C to +150 °C
<b>Melting Point</b>	+250 °C
<b>Flammability</b>	UL 94 V2, FMVSS 302
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2

HF

RoHS

TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Tools	Article-No.
HEGPX06	3	9	Black (BK)	200 m	45	170-00060
HEGPX09	5	16	Black (BK)	100 m	45	170-00090
HEGPX12	6	19	Black (BK)	100 m	45	170-00120
HEGPX20	12	32	Black (BK)	100 m	45	170-00200
HEGPX30	19	45	Black (BK)	50 m	45	170-00300
HEGPX40	32	70	Black (BK)	50 m	45	170-00400

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.

#### Recommended Tools

45

HSG0

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

EN 45545-2



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Flame-retardant polyester braided sleeving

#### Helagaine HEGPETFR

HEGPETFR has excellent flame-retardant properties. It is particularly recommended for applications for instance in public transport, aircraft and telecommunications.

#### Features and benefits

- Made of sturdy polyester
- Self-extinguishing according to UL94 V0 for enhanced fire protection
- Highly flexible
- Easy to apply over irregular shapes
- Good abrasion resistance



Helagaine HEGPETFR braided sleeving.

<b>MATERIAL</b>	Polyester (PET)
<b>Operating Temperature</b>	-50 °C to +150 °C, intermittent +220 °C
<b>Melting Point</b>	+250 °C
<b>Flammability</b>	FMVSS 302, Type B, halogen free
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL3



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Tools	Article-No.
HEGPETFR03	2	5	Black with Grey Identification Yarn (BKIDGY)	100 m	45	170-81000
HEGPETFR04	3	7	Black with Grey Identification Yarn (BKIDGY)	100 m	45	170-81001
HEGPETFR05	4	9	Black with Grey Identification Yarn (BKIDGY)	200 m	45	170-81002
HEGPETFR06	5	11	Black with Grey Identification Yarn (BKIDGY)	100 m	45	170-81003
HEGPETFR08	7	13	Black with Grey Identification Yarn (BKIDGY)	100 m	45	170-81004
HEGPETFR10	9	15	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81005
HEGPETFR12	11	17	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81006
HEGPETFR15	13	20	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81007
HEGPETFR20	18	25	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81008
HEGPETFR25	22	30	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81009
HEGPETFR30	27	40	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81010
HEGPETFR40	35	50	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81011
HEGPETFR50	45	60	Black with Grey Identification Yarn (BKIDGY)	50 m	45	170-81012

All dimensions in mm. Subject to technical changes.

#### Recommended Tools

45

HSG0

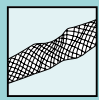
For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

**EN 45545-2**



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.





### Abrasion-resistant polyamide braided sleeving

#### Helagaine HEGPA66

Helagaine HEGPA66 offers especially high abrasion resistance and surface coverage.

#### Features and benefits

- Made from heavy-duty polyamide yarn
- Excellent abrasion resistance
- Highly flexible
- Easy to apply over irregular shapes
- Eases application by expanding when compressed
- Very high surface covering



Helagaine HEGPA66 braided sleeving.

<b>MATERIAL</b>	Polyamide 6.6 (PA66)
<b>Operating Temperature</b>	-60 °C to +150 °C
<b>Melting Point</b>	+255 °C
<b>Flammability</b>	UL 94 V2, FMVSS 302
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3

HF

RoHS

TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Tools	Article-No.
HEGPA6604	3	6	Black (BK)	200 m	45	170-40400
HEGPA6606	4	8	Black (BK)	100 m	45	170-40600
HEGPA6608	5	10	Black (BK)	100 m	45	170-40800
HEGPA6610	7	12	Black (BK)	100 m	45	170-41000
HEGPA6612	8	14	Black (BK)	100 m	45	170-41200
HEGPA6616	12	18	Black (BK)	50 m	45	170-41600
HEGPA6620	15	23	Black (BK)	50 m	45	170-42000
HEGPA6625	18	28	Black (BK)	50 m	45	170-42500
HEGPA6630	25	32	Black (BK)	50 m	45	170-43000
HEGPA6640	30	44	Black (BK)	50 m	45	170-44000
HEGPA6650	40	55	Black (BK)	50 m	45	170-45000
HEGPA6660	50	65	Black (BK)	50 m	45	170-46000

All dimensions in mm. Subject to technical changes.

Colour grey available on request. Cuts in any lengths. Minimum Order Quantity (MOQ) may differ from package content.

#### Recommended Tools

45

HSG0

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

EN 45545-2

ECE R-118

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



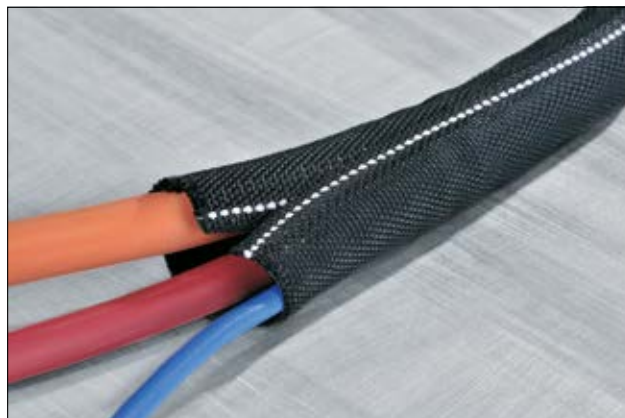
### Self-closing, flame-retardant polyester sleeving

#### Helagaine Twist-In-FRX

Helagaine Twist-In-FRX is used wherever fire protection is essential, such as in the railway, aerospace and shipbuilding industries.

#### Features and benefits

- Self-closing sleeve made from polyester
- Optimal fire protection
- Easy and quick installation and removal
- Ideal for retro-fitting
- Allows access to bundle for assembly, inspection and maintenance



*Helagaine Twist-In-FRX is used wherever fire safety is important.*



[www.HellermannTyton.com/Twist-In-rail21](http://www.HellermannTyton.com/Twist-In-rail21)

<b>MATERIAL</b>	Polyester (PET)
<b>Operating Temperature</b>	-50 °C to +150 °C
<b>Melting Point</b>	+240 °C
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3

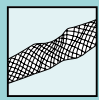


TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
<b>Twist-In-FRX 05</b>	5	6	Black with White Identification Yarn (BKIDWH)	100 m	170-01150
<b>Twist-In-FRX 08</b>	8	9	Black with White Identification Yarn (BKIDWH)	100 m	170-01151
<b>Twist-In-FRX 13</b>	13	14	Black with White Identification Yarn (BKIDWH)	50 m	170-01153
<b>Twist-In-FRX 19</b>	19	20	Black with White Identification Yarn (BKIDWH)	25 m	170-01154
<b>Twist-In-FRX 25</b>	25	26	Black with White Identification Yarn (BKIDWH)	25 m	170-01155
<b>Twist-In-FRX 29</b>	29	30	Black with White Identification Yarn (BKIDWH)	25 m	170-01156
<b>Twist-In-FRX 32</b>	32	34	Black with White Identification Yarn (BKIDWH)	25 m	170-01157
<b>Twist-In-FRX 38</b>	38	40	Black with White Identification Yarn (BKIDWH)	25 m	170-01158
<b>Twist-In-FRX 50</b>	50	52	Black with White Identification Yarn (BKIDWH)	25 m	170-01159

All dimensions in mm. Subject to technical changes.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Rodent repellent self-closing sleeving

#### Helagaine Twist-In RR

Helagaine Twist-In RR is used to bundle and protect cables and hoses against rodents in demanding areas such as automotive, railways, telecoms, underground, sewage system.

#### Features and benefits

- Self-wrapping woven sleeving made of glass-fibre and PET polyester
- Rodent repellent
- Provides very good protection against abrasion, UV, vibrations and impacts
- Quick and easy installation and removal, ideal for retro-fitting
- Lightweight
- Very good resistance to acids and solvents
- Very good resistance to UV and weathering
- Very good resistance to micro-organisms



Rodent repellent self-closing sleeving in application with fibre optic cable.

<b>MATERIAL</b>	Glass-fibre (GF), Polyester (PET)
<b>Operating Temperature</b>	-70 °C to +125 °C
<b>Melting Point</b>	+225 °C
<b>Flammability</b>	self-extinguishing, FMVSS 302
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3

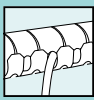
**RoHS** ✓

TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
<b>Twist-In RR 13</b>	10	13	White (WH), Black (BK)	50 m	170-01161
<b>Twist-In RR 19</b>	16	19	White (WH), Black (BK)	25 m	170-01162
<b>Twist-In RR 29</b>	25	29	White (WH), Black (BK)	15 m	170-01163
<b>Twist-In RR 32</b>	29	32	White (WH), Black (BK)	15 m	170-01164

All dimensions in mm. Subject to technical changes.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



# Cable Protection Systems

## Protective Tubing and Spiral Binding

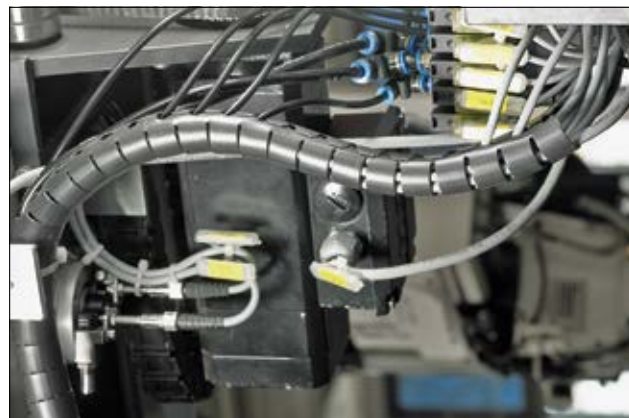
### Helawrap cable cover

#### HWPAV0 flame-retardant and abrasion-resistant

Helawrap HWPAV0 is easily and rapidly applied over pre-mounted cables. It has excellent flame-retardant properties and is halogen-free.

#### Features and benefits

- Ideal solution for bundling, protecting and fixing cables
- Quick and effortless to apply
- Self-extinguishing according to UL94 V0
- Very good abrasion protection
- Special profile enables branching off cable at any point
- Can be removed and reapplied often
- Handy applicator tool included



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



[www.HellermannTyton.com/Helawrap-rail21](http://www.HellermannTyton.com/Helawrap-rail21)

<b>MATERIAL</b>	Polyamide 6 V0 (PA6V0)
<b>Operating Temperature</b>	-40 °C to +90 °C, intermittent +120 °C
<b>Flammability</b>	UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2



TYPE	Bundle Ø max.	Colour	Reel Length	Application Tool	Article-No.
HWPAV08	9	Black (BK)	25 m	HAT8	161-63101
HWPAV016	16	Black (BK)	25 m	HAT16	161-63201
HWPAV020	21	Black (BK)	25 m	HAT20	161-63301
HWPAV025	27	Black (BK)	25 m	HAT25	161-63401
HWPAV030	32	Black (BK)	25 m	HAT30	161-63501

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.



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



Place the HAT applicator tool in one end of the Helawrap cable cover.

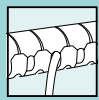


Simply slide the HAT applicator tool through the Helawrap cover.

**EN 45545-2**



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### PA Flame-retardant Spiral Binding

#### SBPAV0

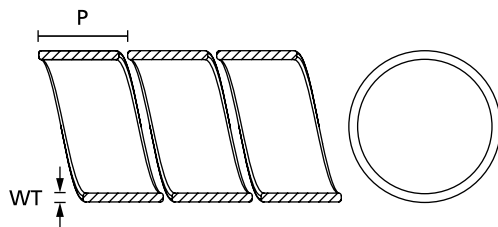
Due to its excellent flame protection properties, SBPAV0 spiral binding is particularly suitable for the rail and aviation industries as well as public buildings.

#### Features and benefits

- Organises and protects cables and hoses
- Self-extinguishing according to UL94 V0
- Very good protection against abrasion
- Suitable for retro-fitting
- Cables branch out at any point
- Wide range of diameters



Spiral binding SBPAV0.



Spiral binding

<b>MATERIAL</b>	Polyamide 6 V0 (PA6V0)
<b>Operating Temperature</b>	-60 °C to +95 °C, intermittent +130 °C
<b>Flammability</b>	UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL2, R23 HL2



TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPAV01.5	1.5	0.4	6.0	1.6	8	Black (BK)	30 m	161-44000
SBPAV04	4	0.6	7.8	5	20	Black (BK)	30 m	161-44100
SBPAV09	9	1.0	12.5	10	100	Black (BK)	30 m	161-44200
SBPAV016	16	1.2	16.0	20	150	Black (BK)	30 m	161-44300

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.





# Cable Protection Systems

## Non-Metallic Conduit Systems

### Non-Metallic Conduits

#### HG-FR PA6 Flame Retardant

Flame-retardant standard weight corrugated flexible conduit is used where high fire-protection is required, including railway vehicles, tunnels and underground stations as well as public buildings.

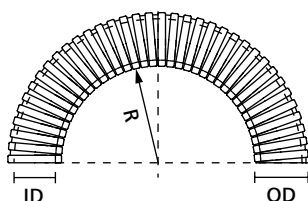
#### Features and benefits

- Highly flame retardant (UL94 V0)
- Low smoke, low toxicity
- Very flexible and high fatigue life
- High impact strength, recovers if crushed
- Abrasion resistant
- Highly resistant to solvents and oils
- Free of halogen, sulphur and phosphorus
- Colour: black



*HelaGuard HG-FR offers excellent fire protection properties.*

<b>MATERIAL</b>	Polyamide 6, flame retardant (PA6FR)
<b>Operating Temperature</b>	-40 °C to +120 °C
<b>Operating Temperature Moving</b>	-20 °C to +100 °C
<b>Flammability</b>	UL 94 V0
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



*HelaGuard non-metallic conduit*

TYPE	Nominal Ø	NW Ø	Outside Ø (OD)	Inside Ø (ID)	Min. Bending Radius (R)	Weight	Reel Length	Colour	Article-No.
HG-FR10	10	7.5	10.0	6.3	15	19 g/m	50 m	Black (BK)	166-11400
HG-FR13	13	10	13.0	9.8	25	28 g/m	50 m	Black (BK)	166-11401
HG-FR16	16	12	15.8	11.8	35	38 g/m	50 m	Black (BK)	166-11402
HG-FR21	21	17	21.2	16.7	45	60 g/m	50 m	Black (BK)	166-11403
HG-FR28	28	23	28.5	21.7	50	100 g/m	50 m	Black (BK)	166-11404
HG-FR34	34	29	34.5	28.1	60	135 g/m	50 m	Black (BK)	166-11405
HG-FR42	42	36	42.5	35.5	70	165 g/m	25 m	Black (BK)	166-11406
HG-FR54	54	48	54.5	47.2	80	235 g/m	25 m	Black (BK)	166-11407

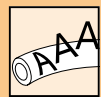
All dimensions in mm. Subject to technical changes.

Other reel lengths available on request. Minimum Order Quantity (MOQ) may differ from package content.

EN 45545-2



For product specific approvals and specifications please refer to the Appendix.



### Shrinkable markers "Continuous Tube", thermal transfer

#### TLFX – 2:1 Rail Limited Fire Hazard

TLFX is a halogen free European rail approved 2:1 heat shrink marker material supplied as a continuous tube and printable on both sides. Special material properties show low smoke propagation, density and toxicity. The tubing has been especially prepared so that print performance is excellent at all times. HellermannTyton's printer range allow users to create a high quality print. In addition it is possible to either perforate the tubing at pre-determined lengths or fully sever the markers.

#### Features and benefits

- Shrink ratio 2:1
- Halogen Free
- Low smoke propagation, density and toxicity
- Available in yellow or white
- Cable range 50.8 mm to 1.2 mm
- Delivery in convenient storage boxes



TLFX- high performance halogen free heat shrink tube.



TLFX – European rail approved heat shrink marker material.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Operating Temperature</b>	-55 °C to +125 °C
<b>Min. Shrink Temperature</b>	+70 °C
<b>Shrink Ratio</b>	2:1
<b>Recommended Ribbon Type</b>	TTDTHOUT
<b>Thermal Transfer Printer</b>	TT431, TT4030, TrakMark DS
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



HF ✓

LFH ✓

RoHS ✓

TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Pack Cont.	Colour	Article-No.
TLFX24WH	2.4	1.2	0.57	144 m	White (WH)	554-51000
TLFX24YE	2.4	1.2	0.57	144 m	Yellow (YE)	554-51001
TLFX32WH	3.2	1.6	0.58	126 m	White (WH)	554-51100
TLFX32YE	3.2	1.6	0.58	126 m	Yellow (YE)	554-51101
TLFX48WH	4.8	2.4	0.61	108 m	White (WH)	554-51200
TLFX48YE	4.8	2.4	0.61	108 m	Yellow (YE)	554-51201

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.



**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Shrinkable markers "Continuous Tube", thermal transfer

TLFX – 2:1 Rail Limited Fire Hazard



TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Pack Cont.	Colour	Article-No.
TLFX64WH	6.4	3.2	0.61	90 m	White (WH)	554-51300
TLFX64YE	6.4	3.2	0.61	90 m	Yellow (YE)	554-51301
TLFX95WH	9.5	4.8	0.66	72 m	White (WH)	554-51400
TLFX95YE	9.5	4.8	0.66	72 m	Yellow (YE)	554-51401
TLFX127WH	12.7	6.4	0.68	54 m	White (WH)	554-51500
TLFX127YE	12.7	6.4	0.68	54 m	Yellow (YE)	554-51501
TLFX190WH	19.0	9.5	0.69	30 m	White (WH)	554-51600
TLFX190YE	19.0	9.5	0.69	30 m	Yellow (YE)	554-51601
TLFX254WH	25.4	12.7	0.69	30 m	White (WH)	554-51700
TLFX254YE	25.4	12.7	0.69	30 m	Yellow (YE)	554-51701
TLFX381WH	38.1	19.0	0.70	13 m	White (WH)	554-51800
TLFX381YE	38.1	19.0	0.70	13 m	Yellow (YE)	554-51801
TLFX508WH	50.8	25.4	0.73	10 m	White (WH)	554-50900
TLFX508YE	50.8	25.4	0.73	10 m	Yellow (YE)	554-50901

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.

### Shrinkable markers "Ladder Style", thermal transfer

#### TLFX DS – 2:1 Rail Limited Fire Hazard "Ladder Style"

TLFX DS is a halogen free European rail approved 2:1 heat shrink marker material supplied pre-cut and formatted into a convenient "ladder" system. Special material properties show low smoke propagation, density and toxicity. This pre-cut format not only allows printing on both sides of the marker but the user can also easily choose and pick each required marker. Special material properties show low smoke propagation, density and toxicity. The tubing has been especially prepared so that the print performance is excellent at all times using HellermannTyton's printer range.

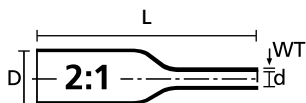
#### Features and benefits

- Shrink ratio 2:1
- Halogen Free
- Low smoke propagation, density and toxicity
- 50 mm, 25 mm and 16 mm pre-cut marker options as standard, other lengths available on request
- Available in yellow or white
- Cable range 38.1 mm to 1.2 mm
- Delivery in convenient storage boxes



Shrinkable rail approved markers TLFX DS.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Operating Temperature</b>	-55 °C to +105 °C
<b>Min. Shrink Temperature</b>	+100 °C
<b>Shrink Ratio</b>	2:1
<b>Recommended Ribbon Type</b>	TTDTHOUT
<b>Thermal Transfer Printer</b>	TT431, TT4030, TrakMark DS
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



HF ✓

LFH ✓

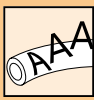
RoHS ✓

TYPE	Supplied Ø D min.	Recov. Ø d max.	Length (L)	Wall (WT)	Pack Cont.	Colour	Article-No.
TLFX24DS-2x25YE	2.4	1.2	25.0	0.52	10,000 pcs.	Yellow (YE)	553-60029
TLFX24DS-1x50YE	2.4	1.2	50.0	0.52	5,000 pcs.	Yellow (YE)	553-60010
TLFX32DS-2x25YE	3.2	1.6	25.0	0.64	2,000 pcs.	Yellow (YE)	553-60121
TLFX32DS-2x25YE	3.2	1.6	25.0	0.64	10,000 pcs.	Yellow (YE)	553-60030
TLFX32DS-1x50YE	3.2	1.6	50.0	0.64	1,000 pcs.	Yellow (YE)	553-60125
TLFX32DS-1x50YE	3.2	1.6	50.0	0.64	5,000 pcs.	Yellow (YE)	553-60011
TLFX48DS-2x25YE	4.8	2.4	25.0	0.64	10,000 pcs.	Yellow (YE)	553-60031
TLFX48DS-1x50YE	4.8	2.4	50.0	0.64	5,000 pcs.	Yellow (YE)	553-60012
TLFX64DS-2x25YE	6.4	3.2	25.0	0.73	6,000 pcs.	Yellow (YE)	553-60032
TLFX64DS-1x50YE	6.4	3.2	50.0	0.73	3,000 pcs.	Yellow (YE)	553-60013
TLFX95DS-2x25YE	9.5	4.8	25.0	0.70	5,000 pcs.	Yellow (YE)	553-60033
TLFX95DS-1x50YE	9.5	4.8	50.0	0.70	2,500 pcs.	Yellow (YE)	553-60014
TLFX127DS-2x25YE	12.7	6.4	25.0	0.70	3,000 pcs.	Yellow (YE)	553-60034
TLFX127DS-1x50YE	12.7	6.4	50.0	0.70	1,500 pcs.	Yellow (YE)	553-60015
TLFX190DS-2x25YE	19.0	9.5	25.0	0.78	3,000 pcs.	Yellow (YE)	553-60035
TLFX190DS-1x50YE	19.0	9.5	50.0	0.78	1,500 pcs.	Yellow (YE)	553-60016
TLFX254DS-2x25YE	25.4	12.7	25.0	0.93	2,000 pcs.	Yellow (YE)	553-60036
TLFX254DS-1x50YE	25.4	12.7	50.0	0.93	1,000 pcs.	Yellow (YE)	553-60017
TLFX381DS-2x25YE	38.1	19.1	25.0	0.98	1,000 pcs.	Yellow (YE)	553-60037
TLFX381DS-1x50YE	38.1	19.1	50.0	0.98	500 pcs.	Yellow (YE)	553-60018

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Shrinkable markers "Ladder Style", thermal transfer

**TLFD DS – 2:1 Rail Limited Fire Hazard,  
fluid resistant "Ladder Style"**

TLFD DS is an innovative 2:1 heat shrink marker which is halogen free, low fire hazard and fluid resistant. This rail and EN approved material is supplied pre-cut and formatted into a convenient "ladder" system.

The TLFD DS marker's material properties are ideal for applications where fire protection is of great importance. TLFD DS shows low smoke propagation, density and toxicity and is also ideal for applications where resistance to organic fluids, common fuels, lubricants and solvents properties are required.

The pre-cut format not only allows printing on both sides of the marker but the user can also easily choose and pick each required marker. The tubing has been especially prepared so that the print performance is excellent at all times using HellermannTyton's printer range.

#### Features and benefits

- Shrink ratio 2:1
- Halogen free and fluid resistant
- Low smoke propagation and toxicity
- Fluid resistant
- "Ladder Style" format for ease of use
- Available in yellow and white
- 50 mm and 25 mm pre-cut markers as standard

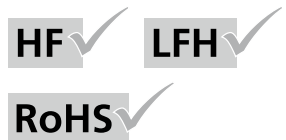
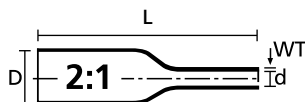


TLFD DS shrinkable markers – halogen-free and fluid resistant.



TLFD DS shrinkable markers for more safety and clarity in the switchboard.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Operating Temperature</b>	-55 °C to +125 °C
<b>Min. Shrink Temperature</b>	+120 °C
<b>Shrink Ratio</b>	2:1
<b>Recommended Ribbon Type</b>	TTDTHOUT
<b>Thermal Transfer Printer</b>	TT431, TT4030, TrakMark DS
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



TYPE	Supplied Ø D min.	Recov. Ø d max.	Length (L)	Wall (WT)	Pack Cont.	Colour	Article-No.
TLFD24DS-2X25WH	2.59	1.2	25.0	0.49	10,000 pcs.	White (WH)	533-65001
TLFD24DS-2X25YE	2.59	1.2	25.0	0.49	10,000 pcs.	Yellow (YE)	533-65019
TLFD24DS-1X50WH	2.59	1.2	50.0	0.49	5,000 pcs.	White (WH)	533-65000
TLFD24DS-1X50YE	2.59	1.2	50.0	0.49	5,000 pcs.	Yellow (YE)	533-65018

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.

**EN 45545-2**

**EN 50343**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Shrinkable markers "Ladder Style", thermal transfer

TLFD DS – 2:1 Rail Limited Fire Hazard,  
fluid resistant "Ladder Style"

TYPE	Supplied Ø D min.	Recov. Ø d max.	Length (L)	Wall (WT)	Pack Cont.	Colour	Article-No.
TLFD32DS-2X25WH	3.41	1.6	25.0	0.51	10,000 pcs.	White (WH)	533-65003
TLFD32DS-2X25YE	3.41	1.6	25.0	0.51	10,000 pcs.	Yellow (YE)	533-65021
TLFD32DS-1X50WH	3.41	1.6	50.0	0.51	5,000 pcs.	White (WH)	533-65002
TLFD32DS-1X50YE	3.41	1.6	50.0	0.51	5,000 pcs.	Yellow (YE)	533-65020
TLFD48DS-2X25WH	5.01	2.4	25.0	0.54	10,000 pcs.	White (WH)	533-65005
TLFD48DS-2X25YE	5.01	2.4	25.0	0.54	10,000 pcs.	Yellow (YE)	533-65023
TLFD48DS-1X50WH	5.01	2.4	50.0	0.54	5,000 pcs.	White (WH)	533-65004
TLFD48DS-1X50YE	5.01	2.4	50.0	0.54	5,000 pcs.	Yellow (YE)	533-65022
TLFD64DS-2X25WH	6.64	3.2	25.0	0.56	6,000 pcs.	White (WH)	533-65007
TLFD64DS-2X25YE	6.64	3.2	25.0	0.56	6,000 pcs.	Yellow (YE)	533-65025
TLFD64DS-1X50WH	6.64	3.2	50.0	0.56	3,000 pcs.	White (WH)	533-65006
TLFD64DS-1X50YE	6.64	3.2	50.0	0.56	3,000 pcs.	Yellow (YE)	533-65024
TLFD95DS-2X25WH	9.88	4.8	25.0	0.59	5,000 pcs.	White (WH)	533-65009
TLFD95DS-2X25YE	9.88	4.8	25.0	0.59	5,000 pcs.	Yellow (YE)	533-65027
TLFD95DS-1X50WH	9.88	4.8	50.0	0.59	2,500 pcs.	White (WH)	533-65008
TLFD95DS-1X50YE	9.88	4.8	50.0	0.59	2,500 pcs.	Yellow (YE)	533-65026
TLFD127DS-2X25WH	13.14	6.4	25.0	0.60	3,000 pcs.	White (WH)	533-65011
TLFD127DS-2X25YE	13.14	6.4	25.0	0.60	3,000 pcs.	Yellow (YE)	533-65029
TLFD127DS-1X50WH	13.14	6.4	50.0	0.60	1,500 pcs.	White (WH)	533-65010
TLFD127DS-1X50YE	13.14	6.4	50.0	0.60	1,500 pcs.	Yellow (YE)	533-65028
TLFD190DS-2X25WH	19.70	9.6	25.0	0.62	3,000 pcs.	White (WH)	533-65013
TLFD190DS-2X25YE	19.70	9.6	25.0	0.62	3,000 pcs.	Yellow (YE)	533-65031
TLFD190DS-1X50WH	19.70	9.6	50.0	0.62	1,500 pcs.	White (WH)	533-65012
TLFD190DS-1X50YE	19.70	9.6	50.0	0.62	1,500 pcs.	Yellow (YE)	533-65030
TLFD254DS-2X25WH	26.25	12.7	25.0	0.63	2,000 pcs.	White (WH)	533-65015
TLFD254DS-2X25YE	26.25	12.7	25.0	0.63	2,000 pcs.	Yellow (YE)	533-65033
TLFD254DS-1X50WH	26.25	12.7	50.0	0.63	1,000 pcs.	White (WH)	533-65014
TLFD254DS-1X50YE	26.25	12.7	50.0	0.63	1,000 pcs.	Yellow (YE)	533-65032
TLFD381DS-2X25WH	39.29	19.1	25.0	0.64	1,000 pcs.	White (WH)	533-65017
TLFD381DS-2X25YE	39.29	19.1	25.0	0.64	1,000 pcs.	Yellow (YE)	533-65035
TLFD381DS-1X50WH	39.29	19.1	50.0	0.64	500 pcs.	White (WH)	533-65016
TLFD381DS-1X50YE	39.29	19.1	50.0	0.64	500 pcs.	Yellow (YE)	533-65034

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.

EN 45545-2

EN 50343

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.





### Identification tags for cable bundle, thermal transfer

#### TIPTAG HF – Rail Limited Fire Hazard, Halogen free

The Tiptag HF cable markers have been designed to identify larger wires and cable bundles not only in the electronics and general cabling environments but also in the railway industry. Tiptag HF is halogen free and its material properties show low smoke propagation, density and toxicity. Tiptags are presented in a special perforated format which include fastening slots for easy fitting with cable ties. They are also suitable for retrofit purposes.

Print from the reel with HellermannTyton's premium range of thermal transfer printers and ribbons for optimum print quality and longevity.

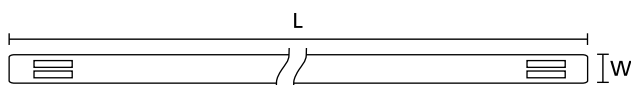
#### Features and benefits

- Ideal for marking larger wire and cable bundles
- Halogen free
- Low smoke propagation and toxicity
- Perforated format that includes fastening slots for cable ties
- Available in various colours



TIPTAG - high performance cable bundle marking.

<b>MATERIAL</b>	Polyolefin (PO)
<b>Operating Temperature</b>	-40 °C to +90 °C, (+160 °C, for 200 h)
<b>Flammability</b>	Limited Fire Hazard, low generation of toxic gases and corrosive acid, low smoke generation, halogen free
<b>Recommended Ribbon Type</b>	TTDTHOUT
<b>Thermal Transfer Printer</b>	TT431, TT4030
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



HF ✓

LFH ✓

RoHS ✓

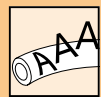
TYPE	Length (L)	Width (W)	Pack Cont.	Colour	Article-No.
TIPTAG11X65BU	65.0	11.0	190 pcs.	Blue (BU)	556-20066
TIPTAG11X65GN	65.0	11.0	190 pcs.	Green (GN)	556-20065
TIPTAG11X65OG	65.0	11.0	190 pcs.	Orange (OG)	556-20063
TIPTAG11X65RD	65.0	11.0	190 pcs.	Red (RD)	556-20062
TIPTAG11X65WH	65.0	11.0	190 pcs.	White (WH)	556-20069
TIPTAG11X65YE	65.0	11.0	190 pcs.	Yellow (YE)	556-20064
TIPTAG15X65WH	65.0	15.0	190 pcs.	White (WH)	556-21069
TIPTAG15X65YE	65.0	15.0	190 pcs.	Yellow (YE)	556-21064
TIPTAG11X100BU	100.0	11.0	120 pcs.	Blue (BU)	556-20080
TIPTAG11X100RD	100.0	11.0	120 pcs.	Red (RD)	556-20091
TIPTAG11X100WH	100.0	11.0	120 pcs.	White (WH)	556-20079
TIPTAG11X100YE	100.0	11.0	120 pcs.	Yellow (YE)	556-20074
TIPTAG15X100RD	100.0	15.0	120 pcs.	Red (RD)	556-21096
TIPTAG15X100WH	100.0	15.0	120 pcs.	White (WH)	556-21079
TIPTAG15X100YE	100.0	15.0	120 pcs.	Yellow (YE)	556-21074
TIPTAG11X105RD	105.0	11.0	115 pcs.	Red (RD)	556-20072
TIPTAG15BUX105S	105.0	15.0	115 pcs.	Blue (BU)	556-21076
TIPTAG15X105GN	105.0	15.0	115 pcs.	Green (GN)	556-21075

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available. More colours on request.

**EN 45545-2**

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Identification tags for cable bundle "Ladder Style", thermal transfer

#### TAGLF – Rail - Limited Fire Hazard Tiptags

TAGLF is a halogen free cable marker for mass transit applications specifically in the railway industry or for all areas where limited fire hazard material is needed. TAGLF's material properties show low smoke propagation, density and toxicity. They are supplied pre-cut and have been formatted into a convenient "ladder" system. Simply print and press out the required TAGLF and apply with cable ties, they are also suitable for retrofit purposes.

Print with HellermannTyton's premium range of thermal printers and ribbons or a laser beam marking device.

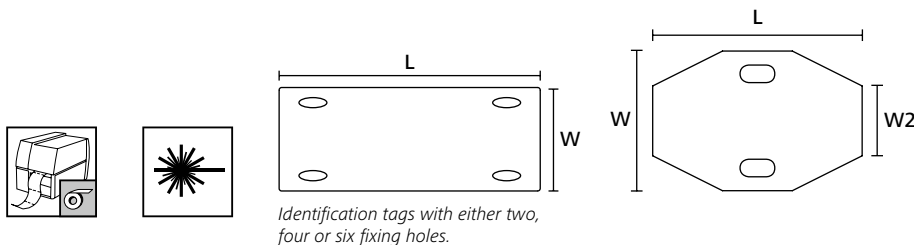
#### Features and benefits

- Limited fire hazard cable marker
- Halogen free
- For larger cables and wires, bundles
- Thermal transfer or laser beam printable
- Good mechanical strength and highly flexible
- Delivered on reel in convenient storage boxes



Limited fire hazard cable marker TAGLF.

<b>MATERIAL</b>	Polyolefin, cross-linked (PO-X)
<b>Operating Temperature</b>	-40 °C to +105 °C
<b>Flammability</b>	self-extinguishing
<b>Recommended Ribbon Type</b>	TTDTHOUT
<b>Thermal Transfer Printer</b>	TT431, TT4030
<b>EN 45545-2 Classification</b>	R22 HL3, R23 HL3



TYPE	Drawing	Length (L)	Width (W)	Width (W2)	Pack Cont.	Colour	Article-No.
TAGLF20X51-6		51.5	20.4	-	1,000 pcs.	White (WH)	556-83023
		51.5	20.4	-	1,000 pcs.	Yellow (YE)	556-83024
TAGLF10X51-4		51.5	10.4	-	2,000 pcs.	White (WH)	556-83013
		51.5	10.4	-	2,000 pcs.	Yellow (YE)	556-83014
TAGLF20X51-4		51.5	20.4	-	1,000 pcs.	White (WH)	556-83018
		51.5	20.4	-	1,000 pcs.	Yellow (YE)	556-83019
TAGLF20X30-2		30.0	20.0	11.0	1,000 pcs.	Blue (BU)	556-83054
		30.0	20.0	11.0	1,000 pcs.	Red (RD)	556-83055
TAGLF20x30-2		30.0	20.0	11.0	1,000 pcs.	White (WH)	556-83038
		30.0	20.0	11.0	1,000 pcs.	Yellow (YE)	556-83012

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.

EN 45545-2

ASTM

MIL

SAE

Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Stainless steel embossing system

#### 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 and only needs a standard electrical supply and a PC. Texts are created with TagPrint Pro 4.0. Simply open the easy to use program to create print lists. Improved cooling system now ensures a continuous operation between 8-10 hours. Marker plates are attached to pipes and cables using 4.6 mm width MBT cable ties and a MK9SST hand tool.

#### Features and benefits

- Small and easy to use metal plate embosser
- Quiet embossing mechanism suited to production and office environments
- Embossed characters have been tested to withstand 1.5 million strikes each
- Improved cooling systems allows 8-10 hours continuous printing
- Use Tagprint Pro labelling software with pre-loaded templates to simplify print jobs
- 42 piece character set as standard - can be upgraded to 60 characters  
Letters: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
Numbers: 0 1 2 3 4 5 6 7 8 9  
Symbols: & - / . , '   
Other symbols available on request



**For problem-free printing we recommend TagPrint Pro, page 51.**



*A quiet, durable, and easy to use metal plate embossing printer.*

<b>Print Method</b>	Embossing
<b>Power Supply</b>	AC 110V-240V, 45/65 Hz, 1.5A-3A
<b>Cycle Time</b>	1 second per character
<b>Interfaces</b>	USB 2.0
<b>System Requirements</b>	MS Windows XP SP3, Vista SP1, Win 7, 8, 10
<b>Dimensions W x H x D</b>	480 mm x 353 mm x 570 mm
<b>Weight</b>	41.0 kg

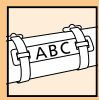
**RoHS** ✓

TYPE	Article-No.
M-BOSS Compact	544-20000

Subject to technical changes.



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### Stainless steel embossing system

#### M-BOSS Compact including Organiser

The M-BOSS Compact with included Organiser system gives the added advantage of a self-contained storage system within the print unit. The organiser is a 10 container carousel storage system that can be programmed to hold either an individual or a pre-defined set of marker plates. This means that users have the flexibility to manage how they work with the printed output. A simple input screen on the top of the machine is used to specify the quantity per container within the carousel. The carousel drawer when opened extends 430 mm from the front of the printer.

#### Features and benefits

- Ability to manage how the printed marker plates are organised
- Carousel system under the printer has 10 removable marker plate containers
- Flexible output means all marker plates or a set amount can be sent to each container
- Carousel system will hold up to 400 markers
- Each container can hold 40 marker plates



*A simple solution to managing your printer output.*



**1.5 million strikes per character without maintenance**

TYPE	Article-No.
M-BOSS Compact Organiser	544-21000

Subject to technical changes.



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### Thermal transfer printer

#### TrakMark DS, Double Sided

The TrakMark DS is a high-performance printer for double-sided printing. This printer is perfect for double-sided printing on HellermannTyton shrinkable tubing. With two print heads mounted one on top of the other, the TrakMark DS prints onto both sides of the material at the same time. High reliability and multiple peripherals enable applications and solutions tailored to specific customer requirements. It is easy to use thanks to its display and clear status messages which can be shown in multiple languages. 300 dpi resolution ensures that barcodes, warning symbols, logos and text are as sharp as they can be.

#### Features and benefits

- High volume double sided printing
- Prints perfectly on HellermannTyton heat shrink ladder style products
- Uses standard 300 m ribbons
- Barcodes: standard and 2D
- Print speed up to 125 mm/s (30 mm/s recommended for ladder style products and tubing)
- Multiple language selection
- Windows drivers: 32/64 bit for Windows XP, Windows Vista, Windows 7, 8, 10



[www.HellermannTyton.com/TrakMark-rail21](http://www.HellermannTyton.com/TrakMark-rail21)

TYPE	Article-No.
TrakMark DS	556-05000

Subject to technical changes.

TYPE	Description	Article-No.
S4000 Cutter	S4000 Cutter for TT4000+ and TrakMark DS	556-04025
P4000 Perforator	Perforator for TT4000+ and TrakMark DS	556-04024
TT External Reel Holder	External Reel Holder	556-00451

Subject to technical changes.



TrakMark DS printer – for double sided printing.

<b>Print Method</b>	Thermal transfer printing
<b>Print Head Type</b>	300 dpi, flat type
<b>Print Speed</b>	30, 40, 50, 75, 100, 125 mm/s
<b>Max. Print Width</b>	105.6 mm
<b>Label Height Max (metric)</b>	2,000 mm
<b>Interfaces</b>	RS232 C, USB 2.0, Ethernet 10/100 Base T
<b>Supported Barcodes, Printer</b>	Standard, 2D
<b>Printer Memory</b>	64 MB RAM
<b>Dimensions W x H x D</b>	248 mm x 395 mm x 554 mm
<b>Weight</b>	21.0 kg



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## Thermal printer ribbons for

### Heatshrink and TipTags

The thermal transfer print technology is based on heating up certain dots in the print head. This transfers the ink very precisely from the ribbon onto the surface of the printed material. All HellermannTyton ribbons consist of a special resin composition to maximise print performance. In combination with HellermannTyton printers the ribbons ensure the highest of print quality on all HellermannTyton thermal printable identification materials.

### Features and benefits

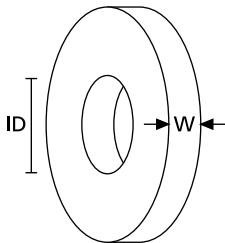
- Thermal transfer ribbons for high quality print results on heat shrink tubing and Tiptag identification tags
- Ribbons are specifically designed to maximize print performance for the recommended material



Ribbons for printing on tubes and Tiptags.



**ID: The standard inside core diameter is 25.4 mm.**



TYPE	Recommended Material	Colour	Width (W)	Reel Length	Article-No.
<b>TT822OUT8 110MM</b>	TCGT/TULT	Silver (SR)	110.0	300 m	556-00161
<b>TTDTHOUT 40MM</b>	TCGT/TULT/TLFX/TLFD/TIPTAG	Black (BK)	40.0	300 m	556-00139
<b>TTDTHOUT 60MM</b>	TCGT/TULT/TLFX/TLFD/TIPTAG	Black (BK)	60.0	300 m	556-00140
<b>TTDTHOUT 100MM</b>	TCGT/TULT/TLFX/TLFD/TIPTAG	Black (BK)	100.0	300 m	556-00141

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.







# Identification Systems

## Hazardous Area Identification

### Stainless steel printing system

#### M-BOSS Compact Markers

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

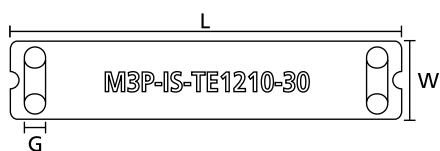
The raised surface of the embossed print ensures that the text remains visible even with dirt, grease, and paint cover the marker. The physical characteristics of the metal and the height of the embossed mark allows users to apply a stiff or metallic brush to the surface and remove excess layers of paint or grease without damaging the integrity of the text.

#### Features and benefits

- Raised marking 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 4.6 mm strap width
- Apply ties with a MK9SST



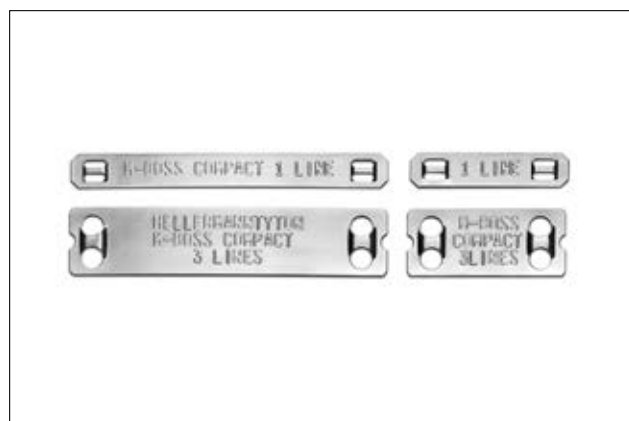
[www.HellermannTyton.com/M-BOSS-rail21](http://www.HellermannTyton.com/M-BOSS-rail21)



MBML



Marker plates designed to survive the harshest environments.



A range of metal plate sizes to suit your needs.

<b>MATERIAL</b>	Stainless Steel (SS316)
<b>Operating Temperature</b>	-80 °C to +538 °C

HF ✓

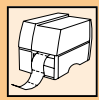
LFH ✓

RoHS ✓

TYPE	Strap Width max. (G)	Number of lines	Characters per line	Number of characters	Width (W)	Length (L)	Pack Cont.	Article-No.
MBML10X45	4.6	1	8	8	10.0	44.5	1,000 pcs.	544-80101
MBML10X90	4.6	1	23	23	10.0	89.5	500 pcs.	544-80102
MBML20X45	4.6	3	8	24	20.0	44.5	1,000 pcs.	544-80201
MBML20X90	4.6	3	23	69	20.0	89.5	500 pcs.	544-80202

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.



## Labelling software

### TagPrint Pro 4.0

TagPrint Pro 4.0 is the easy-to-use label/marker design and printing software in the HellermannTyton printing world. Compatible with Windows® 7, 8.1 and 10, TagPrint Pro 4.0 delivers an individualised, task-based experience that enables a user to easily develop print templates including bar codes, text and graphics to meet numerous applications. TagPrint Pro 4.0 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.

### Features and benefits

- TagPrint Pro 4.0 runs on Windows 7, 8.1 and 10, allowing full compatibility and error-free operation with the most widely used systems
- Print automation allows one-step printing of label jobs – even multi-label groups – to one or more printers simultaneously
- Visual preview allows users to see label designs before opening them
- Single-user and network-user versions accommodate the needs of any size operation
- Select saved labels visually or by part number
- Convert existing XMT files to the TagPrint data table
- Allows devmode printing to the TT4030 thermal transfer printer, for the ultimate in printer control
- Includes pre-saved designs for all common ANSI/OSHA compliant safety labels and pre-made solar installation labels



*The easy to use software speeds up production of markers, labels and identification tags.*

### System Requirements

Operating system: Microsoft Windows 7, 8.1 and 10 (32/64 bit)  
Random Access Memory: 1.0 GB RAM  
Hard disk space: 500 MB  
Microsoft .NET Framework 4 or higher

**RoHS** ✓

TYPE	Article-No.
TagPrintPro4.0-EMEA	556-00059

Subject to technical changes.



### Thermal transfer printer

#### TT431, Small to medium volume printing

The TT431 thermal transfer printer is perfect for printing on HellermannTyton materials such as self-adhesive labels, shrinkable tubing and identification tags. Thanks to its low weight and compact construction, the TT431 integrates seamlessly into any workstation. It is easy to use due to its intuitive colour LCD touch display and clear status messages which can be shown in multiple languages. The optional cutter and perforator make this printer ideal for a wide range of applications. 300 dpi resolution ensures that barcodes, warning symbols, logos and text are as sharp as they can be.

#### Features and benefits

- Small to medium volume single sided printing
- Print on HellermannTyton cable markers and labels
- Uses standard ribbons
- Barcodes: standard and 2D
- Print speed up to 150 mm/s
- Adjustable label sensor
- Multiple language selection
- Windows drivers: 32/64 Bit Windows Vista, 7, 8, 10, Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016, 2019



[www.HellermannTyton.com/TT431-rail21](http://www.HellermannTyton.com/TT431-rail21)



TT431 thermal transfer printer designed for ease of operation.

<b>Print Method</b>	Thermal transfer printing
<b>Print Head Type</b>	300 dpi, flat type
<b>Print Speed</b>	up to 150 mm/s
<b>Max. Print Width</b>	105.70 mm
<b>Label Height Max (metric)</b>	4,000 mm
<b>Interfaces</b>	USB 2.0, Ethernet 10/100 Base T, RS232
<b>Supported Barcodes, Printer</b>	Standard and 2D
<b>Printer Memory</b>	256 MB RAM
<b>Dimensions W x H x D</b>	253 mm x 189 mm x 322 mm
<b>Weight</b>	4.0 kg



TYPE	Pack Cont.	Article-No.
TT431	1 pc.	556-00400

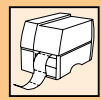
All dimensions in mm. Subject to technical changes.

TYPE	Description	Article-No.
TT430/TT431 300dpi Printhead	Printhead for TT430/TT431	556-00453
TT430/TT431 Print Roller	Print Roller for TT430/TT431	556-00454
S430 Cutter	Cutter for TT430/TT431	556-00452
P430 Perforator	Perforator for TT430/TT431	556-00456
TT External Reel Holder	External Reel Holder	556-00451

Subject to technical changes.



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## Thermal transfer printer

### TT4030, High volume printing

HellermannTyton's premium printer TT4030 is specifically designed for medium and heavy duty industrial applications. The 300 dpi print head fulfils all standard requirements for printing bar codes, warning signs, logos and written information. 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.

Printing high definition graphics such as 2d barcodes, standard bar codes, numbers and text on adhesive labels, thermo plastics such as heat shrink and cable markers (Tiptags) is easily done.

A colour LCD Touchscreen with modern user interface helps intuitive operation.

Creation of professional looking industrial identification is simplified by the use of HellermannTyton's label creation software TagPrint Pro.

Whether in stand-alone mode, as a PC application or in a network - the robust TT4030 printers can meet every requirement.

### Features and benefits

- High volume single sided printing
- Print on HellermannTyton heatshrink tubing, cable markers and labels
- Uses standard 300 m ribbons
- Barcodes: standard and 2D
- Print speed up to 300 mm/s (30 mm/s recommended for ladder style products and tubing)
- Multiple language selection
- Windows drivers: 32 / 64 bit for Windows XP, Windows Vista, Windows 7, 8, 10



TT4030 thermal transfer printer for high volumes.

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



[www.HellermannTyton.com/TT4030-rail21](http://www.HellermannTyton.com/TT4030-rail21)



TYPE	Article-No.
TT4030	556-04037

Subject to technical changes.

TYPE	Description	Article-No.
TT4030 Printhead	Printhead for TT4030	556-04041
Printer Roller TT4030/TT4000+	Printer Roller for TT4030/TT4000+	556-04005
S4030 Cutter	S4030 Cutter for TT4030	556-04050
P4030 Perforator	Perforator for TT4030	556-04051
TT External Reel Holder	External Reel Holder	556-00451

Subject to technical changes.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



### Thermal transfer ribbons for

#### Adhesive Labels

The thermal transfer print technology is based on heating up certain dots in the print head. This transfers the ink very precisely from the ribbon onto the surface of the printed material. All HellermannTyton ribbons consist of a special resin composition to maximise print performance. In combination with HellermannTyton printers the ribbons ensure the highest of print quality on all HellermannTyton thermal printable identification materials.

#### Features and benefits

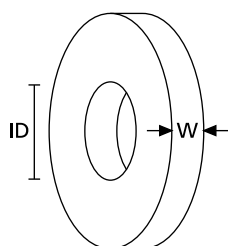
- Thermal transfer ribbons for highest quality and performance of printed labels
- Ribbons are specifically designed to maximise print performance for the recommended material



Ribbons for printing on adhesive labels.



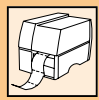
**ID: The standard inside core diameter is 25.4 mm.**



TYPE	Recommended Material	Colour	Width (W)	Reel Length	Article-No.
<b>TT822OUT 60MM</b>	323/823/880/892/1203/1204/1206/1208/1210/1211/1213/1216/1220/1221/1232/1251	Black (BK)	60.0	300 m	556-00111
<b>TT822OUT 110MM</b>	323/823/880/892/1203/1204/1206/1208/1210/1211/1213/1216/1220/1221/1232/1251	Black (BK)	110.0	300 m	556-00101
<b>TT932DOUT 85MM</b>	323/1209	Black (BK)	85.0	300 m	556-00117
<b>TT932DOUT 110MM</b>	323/1209	Black (BK)	110.0	300 m	556-00118
<b>TT122OUT 60MM</b>	1220/1221	Black (BK)	60.0	300 m	556-00060
<b>TT122OUT 110MM</b>	1220/1221	Black (BK)	110.0	300 m	556-00061
<b>TTRR 110</b>	Labels/1220/1221	Red (RD)	110.0	300 m	556-00208
<b>TT822OUT8 110MM</b>	TCGT/TULT	Silver (SR)	110.0	300 m	556-00161

All dimensions in mm. Subject to technical changes.





## Thermal transfer ribbons for heat shrink

**TTRC+: Smudge, Scratch, Oil, Benzene and Alcoholic Solvent Resistant**

TTRC+ is a unique printer ribbon which has been specially formulated to penetrate the surface of printable substrates, including heat shrink marker sleeves and tie on marker tags. With the application of heat or after the duration of seven days, TTRC+ will produce a 'tattoo' effect, making an excellent permanent mark.

### Features and benefits

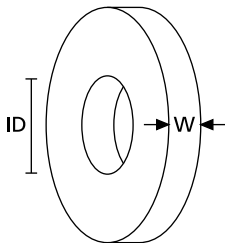
- Thermal transfer ribbons for high quality print results on heat shrink tubing and Tiptag identification tags
- Ribbons are specifically designed to maximize print performance for the recommended material



*Ribbons for printing on tubes and Tiptags.*



**ID: The standard inside core diameter is 25.4 mm.**



TYPE	Recommended Material	Colour	Width (W)	Reel Length	Article-No.
<b>TTRC+ 30MM</b>	TIPTAG PU/TAGPU	Black (BK)	30.0	300 m	556-00114
<b>TTRC+ 60MM</b>	TIPTAG PU/TAGPU	Black (BK)	60.0	300 m	556-00115
<b>TTRC+ 100MM</b>	TIPTAG PU/TAGPU	Black (BK)	100.0	300 m	556-00103

All dimensions in mm. Subject to technical changes.  
Minimum Order Quantity (MOQ) may differ from package content.

**RoHS** ✓





# Application Tooling

## Application Tooling for Cable Ties

### Manual tensioning tool plastic housing

#### EVO7i up to 4.8 mm strap width

HellermannTyton's EVO7i mechanical hand tool was ergonomically designed to reduce the risks of repetitive stress injuries to operators while concurrently increasing productivity. The EVO7i Tension/Lock/Cut Technology delivers performance, safety and comfort for the operators. Available in a standard grip span (EVO7i) or short grip span (EVO7SP), for smaller hands. Additional accessories are available.

#### Features and benefits

- Ergonomic, slip-proof handle for a comfortable and secure grip
- Extremely low-maintenance
- Fast and precise application with minimum effort (TLC mechanism)
- Convenient and simple tension adjustment
- Extended, slim nose for use in narrow spaces
- Housing made of resilient and lightweight glass fibre-reinforced polyester
- Standard grip span (90 mm) and short grip span (80 mm) available



The EVO7i: Maximum performance with minimum effort.



[www.HellermannTyton.com/EVO7-rail21](http://www.HellermannTyton.com/EVO7-rail21)

TYPE	Description	Strap Width max.	Strap Thickness max.	Weight	Article-No.
EVO7i	EVO7i	4.8	1.5	0.281 kg	110-77001
EVO7SP	EVO7SP	4.8	1.5	0.275 kg	110-70130
SP EVO7 Blade Kit	Blade-Kit	-	-	0.002 kg	110-70106

All dimensions in mm. Subject to technical changes.

### Manual tensioning tool plastic housing

#### EVO9 up to 13.5 mm strap width

The EVO9 is available in a standard grip span 90 mm (EVO9) or short grip span 80 mm (EVO9SP), for smaller hands. Both tools perform between 53 N and 307 N. The EVO9HT (high tension) was designed to apply HellermannTyton cable ties from 120 N until 516 N with a maximum width of 13.5 mm.

#### Features and benefits

- Standard grip span (90 mm) and short grip span (80 mm) available
- Ergonomic, slip-proof handle for a comfortable and secure grip
- Extremely low-maintenance
- Fast and precise application with minimum effort (TLC-technology)
- Convenient and simple tension adjustment
- Integrated 3 position quick adjustment override (EVO9/EVO9SP/EVO9HT)
- Housing made of resilient and lightweight glass fibre-reinforced polyester



The EVO9 with TLC technology.

TYPE	Description	Strap Width max.	Strap Thickness max.	Weight	Article-No.
EVO9	EVO9	13.5	2.0	0.357 kg	110-80002
EVO9SP	EVO9SP	13.5	2.0	0.361 kg	110-80003
EVO9HT	EVO9HT	13.5	2.0	0.364 kg	110-80017
SP EVO9 Blade	EVO9 Blade	-	-	0.002 kg	110-80037

All dimensions in mm. Subject to technical changes.



### Manual tensioning tool for KR-Series

#### KR6/8

Application tool KR6/8 crimps the glass-fibre-reinforced locking pin of the KR seal and leads to plastic deformation of the tie ends. This produces a very proof permanent connection. In combination with KR cable ties this system offers high vibration resistance. One reason for customers in the railway and automotive industry to take this system as a preferred solution.

#### Features and benefits

- Tough metal tool for applying KR cable ties only
- For tensioning, fixing and cutting KR cable ties
- Simply change the front plate to apply 6 mm or 8 mm straps



The manual tensioning tool KR6/8 for KR-Series cable ties.

TYPE	Description	For Ties	Strap Width max.	Weight	Article-No.
KR6/8	KR6/8	KR6, KR8	8.0	0.69 kg	121-00680
SP KR6/8 replacement blade	Replacement blade	KR6, KR8	-	0.002 kg	122-68019

All dimensions in mm. Subject to technical changes.

### Manual tensioning tool for KR-Series

#### EVO KR

Application tool EVO KR crimps the glass-fibre-reinforced locking pin of the KR seal and leads to plastic deformation of the tie ends. This produces a very proof permanent connection. In combination with KR cable ties this system offers high vibration resistance. One reason for customers in the railway and automotive industry to take this system as a preferred solution.

#### Features and benefits

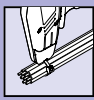
- One-handed operation
- Sideways insertion
- Durable plastic housing
- Tension adjustment
- Calibration of the EVO KR tool



The manual tensioning tool EVO KR for KR-Series cable ties.

TYPE	Description	For Ties	Weight	Article-No.
EVO-KR	EVO KR	KR6, KR8	0.523 kg	121-68000
SP EVO KR Blade Kit	EVO KR Blade Kit	KR-Series	0.005 kg	121-68110

All dimensions in mm. Subject to technical changes.



# Application Tooling

## Application Tooling for Cutting Plastic Ties

### Manual cutting tool for plastic ties

#### EVO cut

The EVO cut is a cutting tool for plastic ties, which ensures the cut of the strap while preserving wires and harnesses from being damaged. This applies to flexible cables, bundles and lines as well as rigid bundled goods. Its use is recommended in many applications for which wires and harnesses have a high value added. Especially for sensitive cable harnesses the use of the EVO cut is recommended.

The cutting tool is made of a lightweight plastic housing and an ergonomic, non-slip handle for a comfortable and secure grip.

The tool includes three interchangeable nosepieces for plastic cable ties of varying widths and thicknesses.

#### Features and benefits

- Cutting tool for plastic ties
- Tie can be cut off at any part of the strap
- Ensures the cable isolation from being damaged
- Light-weighting plastic housing, ergonomic design
- Single-handed operation
- Includes three interchangeable nosepieces for respective cable tie width and thickness



EVO cut – Cutting tool for plastic ties.



Tie can be cut off at any part of the strap.



[www.HellermannTyton.com/EVOcut-rail21](http://www.HellermannTyton.com/EVOcut-rail21)



Single-handed operation.

TYPE	Description	Strap Width max.	Strap Thickness max.	Weight	Article-No.
EVOcut	EVO cut	7.8	1.8	0.14 kg	110-05005

All dimensions in mm. Subject to technical changes.



### Cordless Heat Gun - Gas powered

#### CHG900

The HellermannTyton CHG900 Cordless Heat Gun is powered by P445 gas cartridges, providing autonomous working of 90 minutes in one go. The tool is designed to produce flameless heat which makes it the ideal hot-air gun to apply a huge variety of heat shrink tubing and heat shrink wire markers as well as molded shapes or heat shrink boots, transition shapes, end caps and cable repair sleeves especially in harsh outdoor conditions covering freezing temperatures as low as -8 °C.

#### Features and benefits

- Cordless heat gun powered by P445 gas cartridges
- Flameless heat - no direct flame outlet
- 90 min autonomy per cartridge
- Qualified for harsh outdoor conditions (-8 °C)
- Lightweight 440 g tool (555 g incl. cartridge)
- Hands-free operation due to integrated standing pod
- Quick start piezo ignition
- Instant turnaround due to antifiare feature
- Precise gas flow adjustment
- Ergonomic rugged design
- Quick gas cartridge exchange
- Tool-free maintenance



HellermannTyton Cordless Heat Gun Kit - CHG900.



Gas Nozzle for CHG900 Heat Gun.



Piezo Ignition Trigger for CHG900 Heat Gun.



[www.HellermannTyton.com/CHG900-rail21](http://www.HellermannTyton.com/CHG900-rail21)

TYPE	Description	Article-No.
<b>CHG900</b>	Cordless Heat Gun - CHG900 Set incl. P445 Gas Cartridge and 2 nozzles.	391-90010
<b>Piezo CHG900</b>	CHG900 Spare Part - Piezo Ignition Trigger.	391-90011
<b>Gas Nozzle</b>	CHG900 Spare Part - Gas Nozzle.	391-90012
<b>P445</b>	P445 Gas Cartridge (Butane, Propane, Propene).	391-90101

Subject to technical changes.



# Application Tooling

## Application Tooling for Heat Shrinkable Tubing

### Electrical Hot Air Tool

#### H6100

H6100 Electrical Hot Air Tool is designed for shrinking thin to medium wall heat shrink tubing, end caps and molded shapes.

#### Features and benefits

- Ergonomic and light weight hand tool
- Fatigue-free working due to low weight less than 1 kg
- Powerful 1600 W motor
- Non-slip rubber ring for safe work bench application
- Infinitely variable temperature setting up to +700 °C
- Ceramic heating element
- Integrated easy to clean air filter
- Heavy duty H07RN-F power cord
- Sturdy tool case incl. 3 push-on nozzles for precise heat shrink applications



H6100 Electrical Hot Air Gun.



H6100 comes in carrying case incl. push-on nozzles.



Adjusting H6100 operation temperature.

TYPE	Air Flow l/min	Operating Temperature	Standby Temp. °C	Wattage	Operational Voltage	Weight	Article-No.
H6100	240 l/min	+40 °C to +700 °C	40 °C	1,600 W	230 V	0.99 kg	391-00110

Subject to technical changes.



### Hot cutting tool

#### HSG0

The HSG0 hand tool is used to cut braided sleeving cleanly and without fraying.

#### Features and benefits

- Light and sturdy
- Heats up quickly with the press of button and cuts in seconds
- The yarn melts and fuses together
- No fraying of the sleeving



[www.HellermannTyton.com/HSG0-rail21](http://www.HellermannTyton.com/HSG0-rail21)



*The HSG0 hot cutting tool prevents the braided sleeving from fraying.*


TYPE	Description	Weight	Colour	Article-No.
HSG0	Hot cutting tool	1.15 kg	Blue (BU)	170-99001

Subject to technical changes.





## Europe

 **HellermannTyton GmbH – Austria**  
Rennbahnweg 65  
1220 Vienna  
Tel.: +43 12 59 99 55-0  
Fax: +43 12 59 99 11  
Email: office@HellermannTyton.at  
www.HellermannTyton.at

 **HellermannTyton – Bulgaria**  
Email: officeBG@HellermannTyton.at  
www.HellermannTyton.bg


 **HellermannTyton – Czech Republic**  
Email: officeCZ@HellermannTyton.at  
www.HellermannTyton.cz

 **HellermannTyton – Denmark**  
Industrivej 44A, 1.  
4000 Roskilde  
Tel.: +45 702 371 20  
Email: htdk@HellermannTyton.dk  
www.HellermannTyton.dk

 **HellermannTyton – Finland**  
Äyritie 12 B  
01510 Vantaa  
Tel.: +358 9 8700 450  
Email: myynti@HellermannTyton.fi  
www.HellermannTyton.fi

 **HellermannTyton S.A.S. – France**  
2 rue des Hêtres - CS 80543  
78197 Trappes Cedex  
Tel.: +33 1 30 13 80 00  
Fax: +33 1 30 13 80 60  
Email: info.htf@HellermannTyton.com  
www.HellermannTyton.fr

 **HellermannTyton GmbH – Germany**  
Großer Moorweg 45  
25436 Tornesch  
Tel.: +49 4122 701-0  
Fax: +49 4122 701-400  
Email: info@HellermannTyton.de  
www.HellermannTyton.de

 **HellermannTyton KFT – Hungary**  
Kisfaludy u. 13  
1044 Budapest  
Tel.: +36 1 369 4151  
Fax: +36 1 369 4151  
Email: officeHU@HellermannTyton.at  
www.HellermannTyton.hu

 **HellermannTyton Ltd – Ireland**  
Unit A5 Cherry Orchard  
Business Park  
Ballyfermot, Dublin 10  
Tel.: +353 1 626 8267  
Fax: +353 1 626 8022  
Email: sales@HellermannTyton.ie  
www.HellermannTyton.co.uk


 **HellermannTyton S.r.l. – Italy**  
Via Visco, 3/5  
35010 Limena (PD)  
Tel.: +39 049 767 870  
Fax: +39 049 767 985  
Email: info@HellermannTyton.it  
www.HellermannTyton.it

 **HellermannTyton B.V. – Belgium/Netherlands**  
Vanadiumweg 11-C  
3812 PX Amersfoort  
Tel.: +31 33 460 06 90  
Email (NL): info@HellermannTyton.nl  
Email (BE): info@HellermannTyton.be  
www.HellermannTyton.nl  
www.HellermannTyton.be

 **HellermannTyton AS – Norway**  
Nils Hansens vei 13  
0667 Oslo  
Tel.: +47 23 17 47 00  
Email: firmapost@HellermannTyton.no  
www.HellermannTyton.no

 **HellermannTyton Sp. z o.o. – Poland**  
Kotunia 111  
62-400 Ślipca  
Tel.: +48 63 2237 111  
Fax: +48 63 2237 110  
Email: info@HellermannTyton.pl  
www.HellermannTyton.pl

 **HellermannTyton – Romania**  
Email: officeRO@HellermannTyton.at  
www.HellermannTyton.ro

 **OOO HellermannTyton – Russia**  
40/4, Pulkovskoe road  
BC Technopolis Pulkovo, office A 8081  
196158, St. Petersburg  
Tel.: +7 812 386 00 09  
Fax: +7 812 386 00 08  
Email: info@HellermannTyton.ru  
www.HellermannTyton.ru

 **HellermannTyton – Slovenia**  
Branch Office Ljubljana  
Podružnica Ljubljana, Ukmarjeva 2  
1000 Ljubljana  
Tel.: +386 1 433 70 56  
Fax: +386 1 433 63 21  
Email: officeSI@HellermannTyton.at  
www.HellermannTyton.si

 **HellermannTyton España s.l. – Spain / Portugal**  
Avda. de la Industria 37 2º 2  
28108 Alcobendas, Madrid  
Tel.: +34 91 661 2835  
Fax: +34 91 661 2368  
Email: HellermannTyton@HellermannTyton.es  
www.HellermannTyton.es

 **HellermannTyton AB – Sweden**  
Isafjordsgatan 5  
16440 Kista  
Tel.: +46 8 580 890 00  
Fax: +46 8 580 348 02  
Email: kundsupport@HellermannTyton.se  
www.HellermannTyton.se

 **HellermannTyton Engineering GmbH – Turkey**  
Saray Mah Dr. Adnan Büyükdere Cad. No:4  
Akkom Office Park 2. Blok Kat: 10  
34768 Ümraniye-Istanbul  
Tel.: +90 216 687 03 40  
Fax: +90 216 250 32 32  
Email: info@HellermannTyton.com.tr  
www.HellermannTyton.com.tr

 **HellermannTyton Ltd – UK**  
William Prance Road  
Plymouth International Medical  
and Technology Park  
Plymouth, Devon PL6 5WR  
Tel.: +44 1752 701 261  
Fax: +44 1752 790 058  
Email: uk-pt@HellermannTyton.com  
www.HellermannTyton.co.uk

 **HellermannTyton Ltd – UK**  
Sharston Green Business Park  
1 Robeson Way  
Altrincham Road, Wythenshawe  
Manchester M22 4TY  
Tel.: +44 161 947 2200  
Fax: +44 161 947 2220  
Email: uk-pt@HellermannTyton.com  
www.HellermannTyton.co.uk

 **HellermannTyton Ltd – UK**  
Cley Road, Kingswood Lakeside  
Cannock, Staffordshire  
WS11 8AA  
Tel.: +44 1543 728282  
Fax: +44 1543 728284  
Email: uk-pt@HellermannTyton.com  
www.HellermannTyton.co.uk


 **HellermannTyton Data Ltd – UK**  
Waterside House, Edgar Mobbs Way  
Northampton NN5 5JE  
Tel.: +44 1604 707 420  
Fax: +44 1604 705 454  
Email: sales@htdata.co.uk  
www.htdata.co.uk

## Middle East

 **HellermannTyton – UAE**  
Email: info@HellermannTyton.ae  
www.HellermannTyton.ae


## North America

 **HellermannTyton – Canada**  
Tel.: +1 905 726 1221  
Fax: +1 905 726 8538  
Email: sales@HellermannTyton.ca  
www.HellermannTyton.ca

 **HellermannTyton – Mexico**  
Tel.: +52 333 133 9880  
Fax: +52 333 133 9861  
Email: info@HellermannTyton.com.mx  
www.HellermannTyton.us


 **HellermannTyton – USA**  
Tel.: +1 414 355 1130  
Fax: +1 414 355 7341  
Email: corp@htamericas.com  
www.HellermannTyton.us

## South America


 **HellermannTyton – Argentina**  
Tel.: +54 11 4754 5400  
Fax: +54 11 4752 0374  
Email: ventas@HellermannTyton.com.ar  
www.HellermannTyton.com.ar


 **HellermannTyton – Brazil**  
Tel.: +55 11 4815 9000  
Fax: +55 11 4815 9030  
Email: vendas@HellermannTyton.com.br  
www.HellermannTyton.com.br


## Asia-Pacific


 **HellermannTyton – Australia**  
Tel.: +61 2 9525 2133  
Fax: +61 2 9526 2495  
Email: cservice@HellermannTyton.com.au  
www.HellermannTyton.com.au


 **HellermannTyton – China**  
Tel.: +86 510 8528 2536  
Fax: +86 510 8528 2731  
Email: cservice@HellermannTyton.com.cn  
www.HellermannTyton.com.cn


 **HellermannTyton – Hong Kong**  
Tel.: +852 2831 9090  
Fax: +852 2832 9381  
Email: cservice@HellermannTyton.com.hk  
www.HellermannTyton.com.sg


 **HellermannTyton – India**  
Tel.: +91 120 413 3384  
Email: cservice@HellermannTyton.co.in  
www.HellermannTyton.co.in

 **HellermannTyton – Japan**  
Tel.: +81 3 5790 3111  
Fax: +81 3 5790 3112  
Email: mkt@hellermannTyton.co.jp  
www.HellermannTyton.co.jp


 **HellermannTyton – Republic of Korea**  
Tel.: +82 32 833 8012  
Fax: +82 32 833 8013  
Email: mkt@hellermannTyton.co.kr  
www.HellermannTyton.co.kr

 **HellermannTyton – Philippines**  
Tel.: +63 2 752 6551  
Fax: +63 2 752 6553  
Email: cservice@HellermannTyton.com.ph  
www.HellermannTyton.com.ph

 **HellermannTyton – Singapore**  
Tel.: +65 6 586 1919  
Fax: +65 6 752 2527  
Email: cservice@HellermannTyton.sg  
www.HellermannTyton.com.sg

 **HellermannTyton – Thailand**  
Tel.: +662 237 6702 / 266 0624  
Fax: +662 266 8664  
Email: cservice@HellermannTyton.co.th  
www.HellermannTyton.com.sg

## Africa

 **HellermannTyton – South Africa**  
Tel.: +27 11 879 6600  
Fax: +27 11 879 6603  
Email: jhb.sales@HellermannTyton.co.za  
www.HellermannTyton.co.za

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