















Inspired by design

EdgeClips were developed for a luxury car. The cables needed to be routed precisely along an edge where neither drilling nor welding was permitted. The newly developed EdgeClip solved the problem so brilliantly that this smart cable routing solution was quickly applied to other models all over the world. We now offer around 90 different versions that are used in different industries.

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1.1 Cable Ties Inside Serrated

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standard, coloured	PA66	38
for outdoor use, black	PA66, UV-resistant	40
up to +105 °C	PA66, heat stabilised	42
for higher impact resistance, scan black	PA66, high impact modified	44
for higher fire-protection	PA66V0	45
up to + 150 °C	PA46	46
for higher chemical resistance and up to +170 °C	(E/TFE)	47
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sustainable bioplastic, black	PA11	49
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standard, coloured	Q-Series, PA66	53
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up to + 105 °C, natural and black	Q-Series, PA66HS	56
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for tight applications	X-Series	57
For Hose and Gaiter		
	CTT-Series	58
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For Food Industry

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With Punch-locking Mechanism

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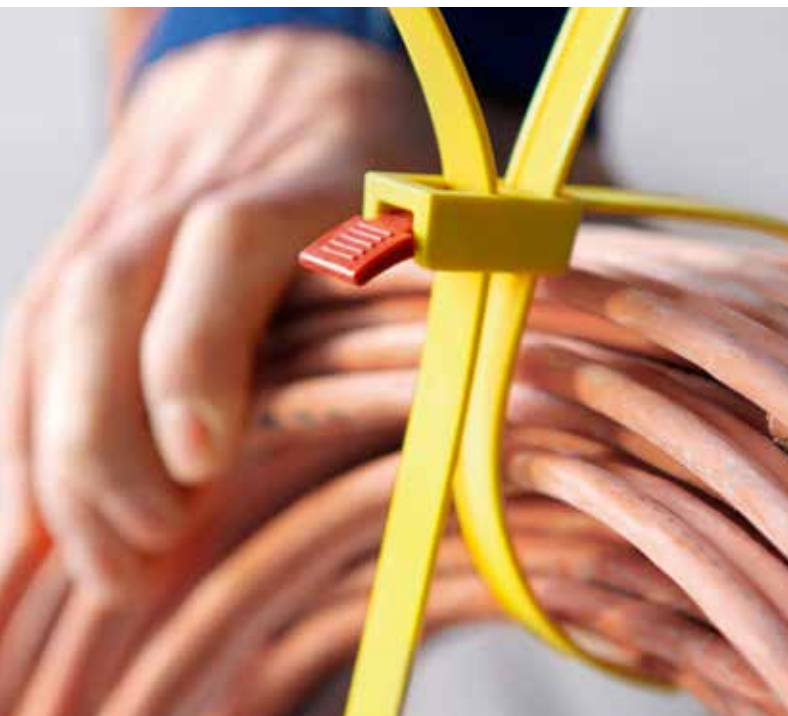
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1.9 Clips, Clamps and Plugs

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Material Specification Overview

Aluminium-alloy	AL	-40 °C to +180 °C	Natural (NA)		<ul style="list-style-type: none"> Corrosion resistant Antimagnetic 	RoHS
Chloroprene	CR	-20 °C to +80 °C	Black (BK)		<ul style="list-style-type: none"> Weather-resistant High yield strength 	RoHS
Ethylene Tetrafluoroethylene (Tefzel®)	E/TFE	-80 °C to +170 °C	Blue (BU)	UL 94 V0	<ul style="list-style-type: none"> Resistance to radioactivity UV-resistant, not moisture sensitive Good chemical resistance to: acids, bases, oxidizing agents 	RoHS
Polyacetal	POM	-40 °C to +90 °C, (+110 °C, 500 h)	Natural (NA)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Flexible at low temperature Not moisture sensitive Robust on impacts 	RoHS
Polyamide 11	PA11	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Bio-plastic, derived from vegetable oil Strong impact resistance at low temperature Very low moisture absorption Weather-resistant Good chemical resistant 	HF RoHS
Polyamide 12	PA12	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Good chemical resistance to: acids, bases, oxidizing agents UV-resistant 	HF RoHS
Polyamide 4.6	PA46	-40 °C to +150 °C (5000 h), +195 °C (500 h)	Natural (NA), Grey (GY)	UL 94 V2	<ul style="list-style-type: none"> Resistance to high temperatures Very moisture sensitive Low smoke sensitiv 	HF LFH RoHS
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL 94 V2	<ul style="list-style-type: none"> High yield strength 	RoHS
Polyamide 6, high impact modified	PA6HIR	-40 °C to +80 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature 	RoHS
Polyamide 6.6	PA66	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK), Natural (NA)	UL 94 V2	<ul style="list-style-type: none"> High yield strength 	HF RoHS
Polyamide 6.6, glass-fibre reinforced	PA66GF13, PA66GF15	-40 °C to +105 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Good resistance to: lubricants, vehicle fuel, salt water and a lot of solvent 	HF RoHS
Polyamide 6.6, heat and UV stabilised	PA66HSW	-40 °C to +105 °C	Black (BK)	UL 94 V2	<ul style="list-style-type: none"> High yield strength Modified elevated max. temperature UV-resistant 	HF RoHS
Polyamide 6.6, heat stabilised	PA66HS	-40 °C to +105 °C	Black (BK), Natural (NA)	UL 94 V2	<ul style="list-style-type: none"> High yield strength Modified elevated max. temperature 	HF RoHS
Polyamide 6.6, high impact modified	PA66HIR	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature 	RoHS
Polyamide 6.6, high impact modified, heat and UV stabilised	PA66HIRHSW	-40 °C to +110 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature Modified elevated max. temperature High yield strength, UV-resistant 	RoHS
Polyamide 6.6, high impact modified, heat stabilised	PA66HIRHS	-40 °C to +105 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature Modified elevated max. temperature 	RoHS
Polyamide 6.6, high impact modified, scan black	PA66HIR(S)	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature 	RoHS
Polyamide 6.6, UV-resistant	PA66W	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 V2	<ul style="list-style-type: none"> High yield strength UV-resistant 	HF RoHS
Polyamide 6.6, with metal particles	PA66MP	-40 °C to +85 °C, (+105 °C, 500 h)	Blue (BU)	UL 94 HB	<ul style="list-style-type: none"> High yield strength Metal and X-Ray detectable 	HF RoHS

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
Polyamide 6.6 , with metal particles	PA66MP+	-40 °C to +85 °C	Blue (BU)	not flame retardant	<ul style="list-style-type: none"> High yield strength Metal and x-ray detectable 	HF RoHS
Polyamide 6.6 V0	PA66V0	-40 °C to +85 °C	White (WH)	UL 94 V0	<ul style="list-style-type: none"> High yield strength Low smoke emission 	HF LFH RoHS
Polyester	SP	-50 °C to +150 °C	Black (BK)	halogen free	<ul style="list-style-type: none"> UV-resistant Good chemical resistance to: most acids, alkalis and oils 	HF LFH RoHS
Polyetheretherketone	PEEK	-55 °C to +240 °C	Beige (BGE)	UL 94 V0	<ul style="list-style-type: none"> Resistance to radioactivity Not moisture sensitive Good chemical resistance to: acids, bases, oxidizing agents 	HF LFH RoHS
Polyethylene	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL 94 HB	<ul style="list-style-type: none"> Low moisture absorption Good chemical oils resistance to: most acids, alcohol and oils 	HF RoHS
Polyolefin	PO	-40 °C to +90 °C	Black (BK)	UL 94 V0	<ul style="list-style-type: none"> Low smoke emissions 	HF LFH RoHS
Polypropylene	PP	-40 °C to +115 °C	Black (BK), Natural (NA)	UL 94 HB	<ul style="list-style-type: none"> Floats in water Moderate yield strength Good chemical resistance to: organic acids 	HF RoHS
Polypropylene, Ethylene-Propylene-Dien-Terpolymere-rubber free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Good resistance to high temperatures Good chemical and abrasion resistance 	HF RoHS
Polypropylene with metal particles	PPMP	-40 °C to +115 °C	Blue (BU)	UL 94 HB	<ul style="list-style-type: none"> Metal and X-Ray detectable Heat resistant Moderate yield strength Good chemical resistance 	RoHS
Polypropylene with metal particles	PPMP+	-40 °C to +85 °C	Blue (BU)	not flame retardant	<ul style="list-style-type: none"> High yield strength Metal and x-ray detectable 	HF RoHS
Polyvinylchloride	PVC	-10 °C to +70 °C	Black (BK), Natural (NA)	UL 94 V0	<ul style="list-style-type: none"> Low moisture absorption Good chemical resistance to: acids, ethanol and oil 	RoHS
Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)	non-burning	<ul style="list-style-type: none"> Corrosion resistant Antimagnetic Weather resistant Outstanding chemical resistance 	HF LFH RoHS
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> High elastic Good chemical resistance to: acids, bases and oxidizing agents 	HF RoHS

Tefzel® is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material E/TFE is Tefzel®-Tie. In addition to Tefzel® from DuPont HellermannTyton is also using equivalent E/TFE raw material from other suppliers. *These details are only rough guide values. They should not be regarded as a material specification and are no substitute for a suitability test. Please see our datasheets for further details.

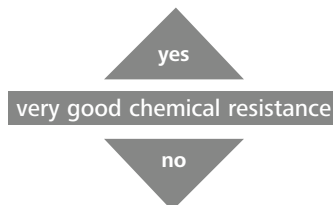
**More colours on request.

= Minimum Loop Tensile Strength for Cable Ties (Newton)

HF = Halogenfree
 LFH = Limited Fire Hazard
 RoHS = Restriction of Hazardous Substances

Indoor applications

Standard temperature up to +85 °C		Heat stabilised up to +105 °C		High temperature +150 °C and higher	
Cable tie series and length	Page	Cable tie series and length	Page	Cable tie series and length	Page
SOFTFIX-Family TPU, BK Length 180–880 mm	81	T-Series PP, NA, BK Length 100–390 mm	52	PEEK-Series, BGE Length 145–250 mm	69
SRT-Series Industrial quantities TPU, BK Length 180–880 mm	81				



Standard temperature up to +85 °C					
Cable tie series and length	Page	Cable tie series and length	Page	Cable tie series and length	Page
CTT-Series PA66, NA, BK Length 101.6–205 mm	62	MCTRELK-Series PA66MP, BU Length 250 mm	65	RT250-Series PA66, BK, NA Length 563.3–1,030 mm	78
DH-Series PA66, NA, BK Length 210–395 mm	63	MCTS-Series PA66MP+, MGN, MST, RUS, BU, Length 100–301 mm	66	SpeedyTie PA66, RD, YE Length 752 mm	83
KR-Series PA66, NA Length 210–360 mm	74	OS-Series PA66V0 BK, NA, WH, GY Length 100–385 mm	68	SpeedyTie PA66HIR(S), BK Length 752 mm	83
LK-Series PA66, BK, NA Length 270–535 mm	54	PE-Series PA66, BU, YE, GN, RD Length 400 mm	71	TEXTIE-Series PA66 and PP, BK, RD, YE, GN, BU, WH Length 150–25,000 mm	84
LK-Series PA66HIR(S), BK Length 270–535 mm	54	Q-Series PA66, GN, RD, BK, NA, BU, YE Length 105–520 mm	57	T-Series PA66, GY, GN, RD, BK, NA, OG, SR, YE, BU, BN Length 83–1,325 mm	42
LPH-Series PA66, BK Length 175 mm	72	RELK-Series to 200N PA66, NA, BK Length 200–350 mm	77	T-Series PA66HIR(S), BK Length 200–760 mm	48
LPH-Series PA66HIR(S), BK Length 265–355 mm	72	REL-Series PA66, BK, NA Length 180–250 mm	79	T-Series PA66V0, WH Length 100–387 mm	49
LR55-Series PA66, GN, RD, BK, NA, BU, YE Length 195 mm	80	REZ-Series PA66, BK, FLPK, GN, OG Length 200–305 mm	82	X-Series PA66HIR(S) BK Length 100–715 mm	61
MCT-Series PA66MP, BU Length 100–387 mm	65	RLT-Series to 670N PA66, NA, BK Length 340–770 mm	77		

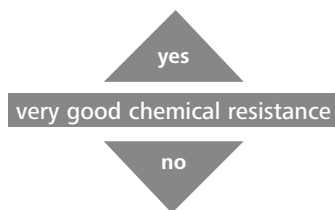
Heat stabilised up to +105 °C				High temperature +150 °C and higher	
Cable tie series and length	Page	Cable tie series and length	Page	Cable tie series and length	Page
CTT-Series PA66HS, BK Length 101.6–205 mm	62	OS-Series PA66HS, NA, BK Length 100–385 mm	68	DH-Series PA46, GY Length 210 mm	63
DH-Series PA66HS, BK Length 210–395 mm	63	Q-Series PA66HS, NA, BK Length 105–520 mm	60	T-Series PA46, NA, GY Length 100–390 mm	50
KR-Series PA66HS, NA, BK Length 210–426 mm	74	RLT-Series bis 670 N PA66HS, NA Length 770 mm	77	V-Series PA46, GY Length 102.5–150 mm	70
LK-Series PA66HS, BK, NA Length 270–535 mm	54	T-Series PA66HS, NA, BK Length 100–1,095 mm	47		
LR55-Series PA66HS, BK Length 195 mm	80	V-Series PA66HS, NA Length 102.5–150 mm	70		

Colours guide: Beige (BGE), Black (BK), Blue (BU), Brown (BN), Fluorescent Pink (FLPK), Green (GN), Grey (GY), Mint Green (MGN), Metal (ML), Mustard (MST), Natural (NA), Orange (OG), Red (RD), Russet (RUS), Silver (SR), White (WH), Yellow (YE)

Outdoor applications

Standard temperature up to +85 °C	
Cable tie series and length	Page
EL-TY-Series POM, BK Length 15.8–53.3 mm	76
Robusto-Series PA11, BK Length 123–355 mm	73
RT250, BK Length: 565,3 mm	74
T-Series PA11, BK Length 100–200 mm	53

High temperature +150 °C and higher	
Cable tie series and length	Page
MBT-FC-Series SS316, BK Length 362–1,245 mm	90
MBT-Series SS304, ML Length 127–838 mm	86
MST-Series SS304, ML Length 207–700 mm	93
MBT-Series SS316, ML Length 127–838 mm	87, 88
MBTXHD-/MBTUHD-Series SS316, ML Length 681–1,524 mm	89
MLT-Series, MLTC-Series SS316, ML, BK Length 230–630 mm	94
T-Series E/TFE, BU Length 100–387 mm	51

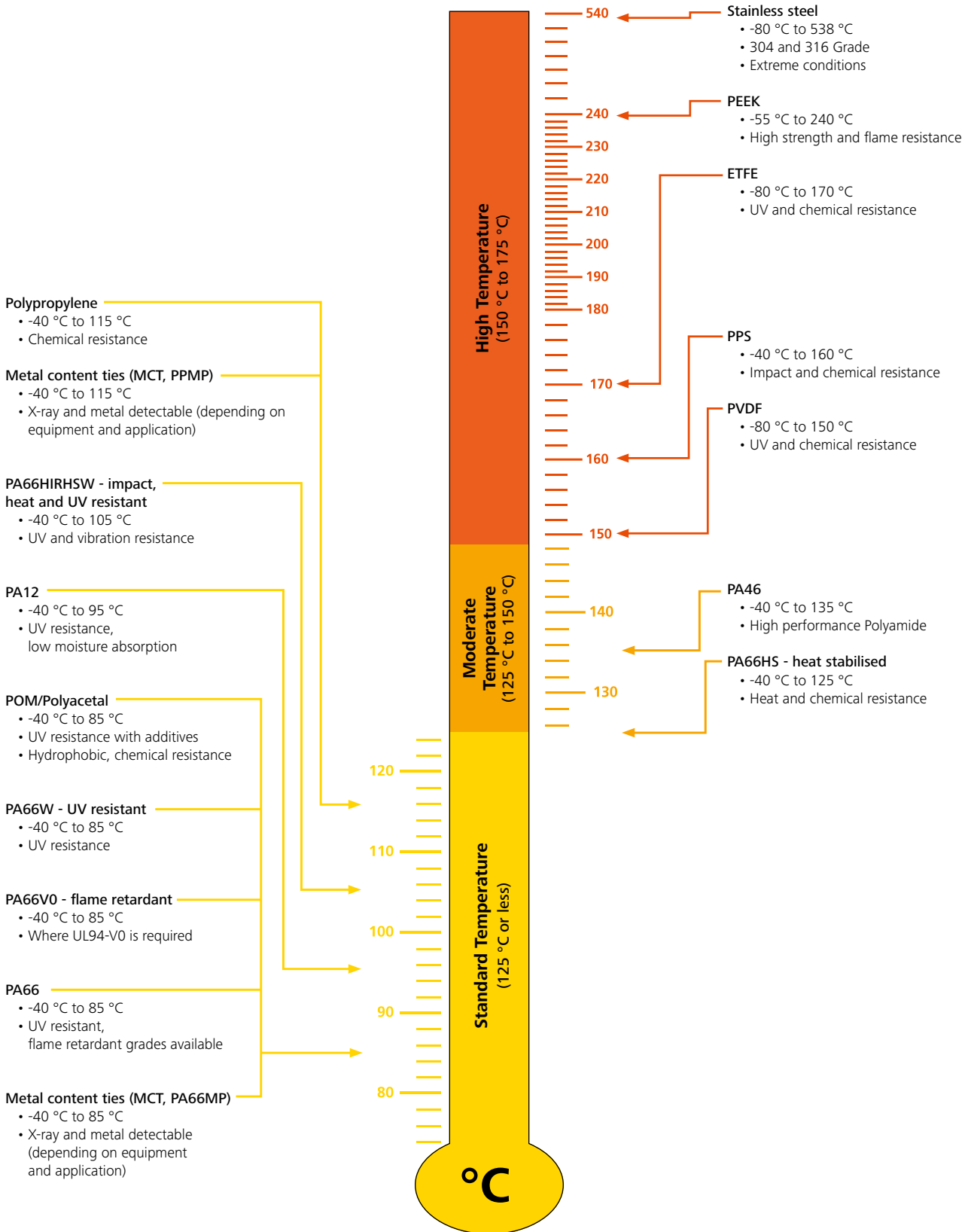


Standard temperature up to +85 °C	
Cable tie series and length	Page
DH-Series PA66W, BK Length 210–305 mm	63
KR-Series PA66W, BK Length 210–360 mm	74
LK-Series PA66W, BK Length 270–535 mm	54
Q-Series PA66W, BK Length 105–520 mm	59
REL-Series PA66W, BK Length 250 mm	79
RLT-Series to 670 N PA66W, BK Length 770 mm	77
T-Series PA66W, BK Length 100–1,325 mm	44
X-Series PA66W, BK Length 100–715 mm	61

Heat stabilised up to +105 °C	
Cable tie series and length	Page
RPE-Series PA66HSW, BK Length 275–350 mm	71

Colours Guide: Beige (BGE), Black (BK), Blue (BU), Brown (BN), Fluorescent Pink (FLPK), Green (GN), Grey (GY), Mint Green (MGN), Metal (ML), Mustard (MST), Natural (NA), Orange (OG), Red (RD), Russet (RUS), Silver (SR), White (WH), Yellow (YE)

Materials guide for cable ties series



Properties of Polyamide PA66

Polyamides are among the most important thermoplastic synthetic materials. Thermoplastics can be reshaped by heating as often as required without undergoing chemical decomposition or other negative changes. This makes polyamide ideal for processing via injection moulding into high quality products. About 90 % of cable ties and fixings from HellermannTyton are made from this material. Polyamide is also known under the brand name of Nylon®, which was introduced by the Dupont company.

The inner structure of polyamide displays a partial order of polymer chains, i.e. polyamides are partially crystalline. Due to the tighter packing of the individual molecular chains polyamide only has limited transparency to light. The plastic is therefore described as translucent.

Each base unit contains 6 carbon atoms (C). Hence the name PA66.

The polyamide PA66 has many properties which are highly advantageous for HellermannTyton cable ties and fixings, such as:

- High strength, rigidity and hardness
- High dimensional stability, even under the effect of heat
- High abrasion resistance

Having a wide range of polyamides and additives allows for an optimum adaptation of the properties of the finished product to suit the respective requirements.

The following PA66 variants are used for HellermannTyton products:

- Polyamide 6.6 standard (PA66) for temperature conditions of up to +85 °C
- Polyamide 6.6 Heat Stabilised (PA66HS) for temperature conditions of up to +105 °C
- Polyamide 6.6 UV Stabilised (PA66W) for exterior use
- Polyamide 6.6 Heat Stabilised and UV Stabilised (PA66HSW) for exterior use up to +105 °C
- Polyamide 6.6 Impact Resistant (PA66HIR) for high elasticity requirements
- Polyamide 6.6 Impact Resistant and Heat Stabilised (PA66HIRHS) for high elasticity requirements and temperatures up to +105 °C
- Polyamide 6.6 V0 for high standards of fire protection

Water content in polyamide

Polyamide is a hygroscopic material - this means that it absorbs and releases water. The mechanical properties are significantly affected by the water content – especially flexibility and minimum tensile strength.

In a standard atmosphere of 23 °C and 50 % relative humidity, the degree of water saturation of polyamide is around 2.5 %. For optimal processing of cable ties it is therefore important that the polyamide has a water content of approximately 2.5 % in a state of equilibrium.



The quality and functionality of the products are thus affected by the water content, therefore the correct storage of our products is crucial. Please read our separate instructions on storage.

Since humidity is so critical to the quality of the tie, the question arises: What happens if the tie is installed and the water content in the tie alters?

The water content determines the flexibility and strength of a tie. At a water content of approximately 2.5 % the tie has the ideal flexibility for installation. When the strap is being threaded through the head of the tie, the pawl must be flexible enough to “see-saw” over the serration of the strap without breaking. On the other hand, there must also be adequate material rigidity for the serrations of the pawl to engage with the serrations of the strap during the tying process so that a 'positive locking' action is achieved. After achieving the positive locking action the tie is in a static condition. Changes in the mechanical properties of the tie as a function of water content are insignificant during this status.

Properties of UV-stabilised Polyamide PA66W

The question constantly arises as to whether a black cable tie is suitable for use outside. This is dependant on the application of the tie, but in general the following statements can be made:

A black cable tie made of polyamide 6.6 standard (PA66) is only coloured black with a low proportion of carbon black. This is not sufficient to protect the material from damage caused by UV-radiation in the long term.

Products made from UV-stabilised polyamide PA66W are produced in accordance with ASTM standard D6779 with a higher carbon black percentage of approx. 2 %. So they resist UV-radiation in the European area for a considerably longer period than standard PA66.

This is clearly illustrated by the comparison of the two images:

After 500 hours of UV-radiation exposure

Polyamide 6.6 standard (PA66) dyed black:



The joint has been damaged throughout by UV-radiation.

Polyamide 6.6 UV-stabilised (PA66W) with approx. 2 % carbon black:



The joint has only been altered at isolated points by the UV-radiation.

For outdoor use we recommend our range of products made from UV-stabilised polyamide (PA66W).

A simple practical test: "the hammer test"

You can quickly determine whether or not a cable tie is UV stabilised. Strike with a hammer the tail of the strap on the tie. Hold up this flattened end to the light. Cable ties with a carbon black content of about 2 % allow no light through and look black throughout. Standard black ties, however, are transparent on the flattened end.

Properties of Polyamide PA11/PA12

Apart from PA66, there are polyamides which are less hygroscopic. These include PA11/PA12.

PA11/PA12 have the following advantages over PA66:

- Less hygroscopic - saturation at 23 °C and 50 % relative humidity is approximately 1 %
- Better impact performance
- Good weather resistance, even without a special additive

These three properties make PA11/PA12 ideal for use outdoors, in particular when requirements may include impact resistance.

The water absorption of PA11/PA12 is not only less than that of PA66 but also slower. This is the requirement where the mechanical properties need to remain relatively unaffected by changing environmental conditions.

Properties of Polyamide PA46

Polyamide PA66, despite the use of additives, is not suitable for long-term use in temperatures of +105 °C. Due to considerably better heat resistance, polyamide PA46 is more suitable for temperatures of up to and exceeding 150 °C (depending on the length of time of operation).

Advantages of PA46 over PA66:

- Greater rigidity, even at higher temperatures
- Higher operating temperature ranges of up to +150 °C (5,000 hours)
- Greater form stability at higher temperatures
- Excellent chemical resistance

Properties of Polyetheretherketone PEEK

PEEK, a linear aromatic polymer is semi-crystalline and is widely regarded as the highest performance thermoplastic material currently available. A summary of key physical properties is as follows:

High temperature performance

- Melting temperature of +343 °C
- Continuous use temperature of +240 °C (UL 746B)

Wear resistance

- Outstanding wear resistance over wide ranges of pressure, velocity, temperature and counter facial roughness

Chemical resistance

- Excellent resistance to a wide range of chemical environments, even at elevated temperatures
- The only common environment that dissolves it is concentrated sulfuric acid

Fire, smoke and toxicity

- Highly stable and requires no flame-retardant additives to achieve a UL94 V0 rating at 1.45 mm thickness
- The composition and inherent purity of the material results in extremely low smoke and toxic gas emission in fire situations

Hydrolysis resistance

- PEEK is not attacked by water or pressurized steam
- Components that are constructed from these materials retain a high level of mechanical properties when continuously conditioned in water at elevated temperatures and pressures

Radiation resistance

- Excellent radiation resistance due to the energetically stable chemical structure of PEEK

Purity

- PEEK materials are inherently pure with exceptionally low levels of ionic extractables
- Excellent out gassing characteristics

This makes PEEK the right choice for any high performance application in any industry with a clearly outstanding continuous use temperature of +240 °C.

Properties of Ethylene Tetrafluoroethylene (E/TFE) - Tefzel®

E/TFE can be best described as a rugged thermoplastic with an outstanding balance of properties.

Mechanically, it is tough, has medium stiffness, impact and abrasion resistance.

E/TFE can perform successfully in applications where other materials are lacking in mechanical toughness, broad thermal capability, ability to meet severe environmental conditions.

Tefzel® is a registered trademark of DuPont.

Summary of key properties:

- No load continuous use temperature of +170 °C
- Weather resistant
- Inert to most solvents and chemicals
- Hydrolytically stable
- Substantially better resistance to radiation than other plastic materials

Chemical resistance of various plastics

▲ = resistant

△ = partly resistant

○ = not resistant

These values are only rough guides. They should not be regarded as a material specification and are no substitute for a suitability test. Please see our technical datasheets for further details.

	Conc. (%)	Temp. (°C)	PA66	PA46	PA12	PA11	POM	PP	E/TFE (Tefzel®)	TPU	PEEK
Acetaldehyde, liquid	100	23 °C	▲	○		▲	▲	△	▲	○	▲
Acetowne	100	23 °C	▲	▲	▲	▲	▲	▲	▲	○	▲
Allyl chloride	100	23 °C				▲	▲	▲		○	
Aniline	100	23 °C	▲	△	△	▲	△	▲	▲	○	▲
Aromatic compounds							▲	○	▲	△	▲
Benzaldehyde		23 °C	▲	△		▲	▲	▲	▲	○	▲
Benzine/Benzol mix		23 °C	▲	▲	▲	▲	▲	△	▲	△	▲
Benzol	100	23 °C	▲		▲	▲	△	△	▲	△	▲
Bromine		23 °C		○	○	○		○		○	
Carbon bisulphide	100	23 °C	▲	○	▲	○	▲	○	▲	○	▲
Carbon tetrachloride	100	23 °C	▲	▲	△	○	▲	△	▲	○	▲
CFC								△			
Chlorine, gaeous	100	23 °C	○			○		○	▲	△	
Chlorine, liquefied	100	23 °C	○	○		○		○			
Chlorobenzene	100	23 °C			○	△	△	▲			
Chloroform	100	23 °C		○	○	▲	○	△		○	
Chromic acid 10 %	10	23 °C	○	○		○	○	▲	▲	○	▲
Chromic acid 20 %	20	20 °C	○	○		○	○	▲	▲	○	▲
Chromic acid 50 %	50	20 °C	○	○		○	○	▲	▲	○	▲
Cyclohexane	100	23 °C	▲			▲	▲	▲	▲	▲	▲
Cyclohexanone	100	23 °C	▲			▲	▲	▲	▲		▲
Decahydronaphthlene	100	23 °C	▲			▲	▲	△	▲	▲	▲
Diethyl ether	100	23 °C	▲			▲	▲	△	▲		▲
Di-isopropyl ether	100	23 °C						△			
Dimethyl formamide	100	23 °C	▲	▲		▲	▲	▲	▲		▲
Diocetyl phthalate		23 °C	▲	▲		▲	▲	▲	▲	○	▲
Engine oil	100	23 °C			▲	▲	▲	▲		▲	▲
Ethanonic acid 10 %	10	20 °C	○	△	△	▲	▲	▲	▲		
Ethanonic acid 100 %	100	23 °C	○	○		▲	△	▲	▲		
Ethanonic acid 25 %	25	20 °C	○			▲	△	▲	▲		
Ethanonic acid 50 %	50	20 °C	○			▲	△	▲	▲		
Ethyl acetate	100	23 °C		▲	▲	▲	△	△		△	▲
Formic acid	98	23 °C	○		○	▲	○	▲	▲	○	△
Freon		23 °C						▲			▲
Heptane	100	23 °C	▲	▲	▲	▲	▲	▲	▲	▲	▲
Hydrogen peroxide 10 %	10	20 °C	△			▲	▲	▲	▲	△	
Hydrogen peroxide 30 %	30	23 °C	○	○		▲	▲	▲	▲	△	
Ketone			▲	▲			▲	▲	▲		▲
Methyisobutylketone	100	23 °C	▲	▲		▲	▲	▲	▲		▲
Methylethylketone	100	23 °C	▲	▲		▲	△	▲	▲	○	▲
Nitric acid 10 %	10	20 °C	○		○	○	○	▲	▲	○	▲
Nitric acid 50 %	50	23 °C	○		○	○	○	○	▲	○	○
Nitrobenzene	100	23 °C	▲	△		▲	▲	▲	▲	○	▲
Ordinary petrol		23 °C		▲		▲	▲	▲			▲
Paraffin oil		23 °C	▲	▲	▲	▲	▲	▲	▲	▲	▲
Perchloroethylene		23 °C	▲		▲	△	▲	△	▲	○	▲
Petroleum		23 °C	▲	▲	▲	▲	▲	▲	▲	▲	▲
Phenol	65	23 °C	○	○	○	○	○	▲	▲	○	
Potass. Permanganate	6	23 °C	○	○	○	○	▲	▲	▲	△	▲
Salad oil		23 °C		△		▲	▲	▲			▲
Silicon oil		23 °C	▲	▲	▲	▲	▲	▲	▲	▲	▲
Sulphuric acid 10 %	10	20 °C	○		△	▲	○	▲	▲	○	△
Sulphuric acid 50 %	50	20 °C	○				○	▲	▲	○	○
Sulphuric acid 96 %	96	23 °C	○	○			○	○	▲	○	○
Toluol	100	23 °C	▲		▲	▲	▲	△	▲	○	▲
Trichlorethylene	100	23 °C	▲	△	△	△	△	△	▲	○	▲
Water, cold			▲		▲	▲	▲			▲	▲
Water, hot						▲	▲			△	▲
Xylene	100	23 °C	▲	▲	▲	▲	▲	△	▲	○	▲

What does flammability UL94 mean?

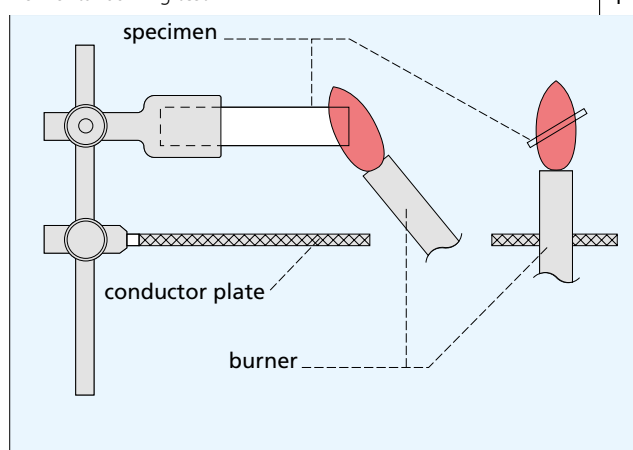
UL is the shortcut for Underwriters Laboratories. This is an independent organisation in the United States to control and certificate product safety.

Beside a lot of product standards UL also specified the flammability test UL94 for plastic materials. UL94 is a material burning test done on defined specimen of the raw material but not a test on final products. UL94 differs between a horizontal burning test UL94 HB (picture 1) and a vertical burning test UL94 V (picture 2). For the vertical test UL94 V there are three flame ratings defined: UL94 V0, UL94 V1 and UL94 V2.

In all these burning tests an open flame is applied for a certain time to the specimen. As the burning behaviour also depends on the thickness of the material it is important to classify the material not only according to HB, V0, V1 or V2 but also to mention the thickness of specimen.

UL94 HB:

Horizontal burning test



Test criteria:

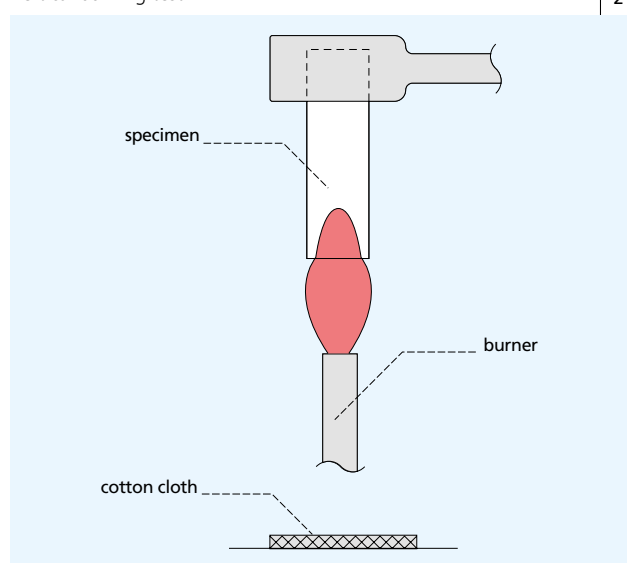
- burning rate of specimen in mm/min.

Classification:

- according to HB

UL94 V:

Vertical burning test



Test criteria:

- afterflame time of specimen
- drip of flaming particles

Classification:

- according to V0, V1 or V2

Following table is a summary of test procedures and requirements of the UL94 classification.

Classification	Horizontal Test UL94		Vertical Test UL94		
	HB	HB	V0	V1	V2
Number of specimen	3	3	5	5	5
Thickness of specimen	< 3 mm	3 to 13 mm	up to max. 13 mm		
1st flame application	30 sec.	30 sec.	10 sec.	10 sec.	10 sec.
2nd flame application	-	-	10 sec.	10 sec.	10 sec.
Burning rate	max. 75 mm/min	max. 40 mm/min	-	-	-
Afterflame time after 1st flame application for each individual specimen	-	-	max. 10 sec.	max. 30 sec.	max. 30 sec.
Afterflame time after 2nd flame application for each individual specimen	-	-	max. 30 sec.	max. 60 sec.	max. 60 sec.
Total afterflame time for all 5 specimen after 1st and 2nd flame application	-	-	max. 50 sec.	max. 250 sec.	max. 250 sec.
Afterflame or afterglow of any specimen up to its end allowed	yes	yes	no	no	no
Cotton indicator ignited by flaming particles or drops allowed	-	-	no	no	yes

Flammability behaviour on the following product pages are always related to the raw material burning rate according to UL94. Most commonly used raw materials for cable ties and fixing elements are Polyamide 6.6 standard, Polyamide 6.6 weather resistant and Polyamide 6.6 heat stabilised. These materials normally fulfill UL94 V2 requirement.

HellermannTyton cable ties conform to IEC62275 standard

HellermannTyton is a global manufacturer of cable management products who specialise in high performance fastening, connecting, routing, protecting and identifying solutions to diverse markets. The extensive product portfolio reflects our long-standing industry expertise. HellermannTyton has provided outstanding product quality and has met the high requirements of various industries for 80 years. Cable ties from the inside serrated (T-Series, Q-Series), the outside serrated (OS-Series) as well as our metal cable ties (MBT-Series and MST-Series) have been tested in accordance with the international cable tie standard IEC 62275 (Cable management systems - Cable ties for electrical installations).

Cable ties manufactured from the standard material Polyamide 6.6 (PA66), heat-stabilised Polyamide 6.6 (PA66HS), UV-stabilised Polyamide 6.6 (PA66W) and Stainless Steel grades SS304 and SS316 have been successfully tested and approved.

The standard includes the following tests:

- Installation test on minimum and maximum specified bundle diameters
- Installation test at minimum specified installation temperature
- Impact test at minimum specified operating temperature
- Minimum tensile strength (in the standard this is described as the loop test)
- Loop tensile test after heat ageing at the specified operating temperature
- Loop tensile test after heat cycling at the minimum and maximum operating temperatures
- Loop tensile test after humidity and heat cycling at the minimum and maximum operating temperatures
- Contribution to the spread of fire on both the actual product and test (tissue paper) substrate
- Loop tensile and visual tests after exposure to ultraviolet light radiation for PA66W ties
- Resistance to corrosion (dependent on material)
- Loop tensile test after vibration test for metallic cable ties

The following cable ties have been tested and certified

- T-Series inside-serrated in PA66-NA, PA66-BK, PA66HS-NA, PA66HS-BK, PA66W
- OS-Series outside-serrated in PA66-NA, PA66-BK, PA66HS-NA, PA66HS-BK, PA66W
- Q-Series inside-serrated in PA66-NA, PA66-BK, coloured PA66, PA66HS-NA, PA66HS-BK
- MBT-Series, uncoated in SS316 material grade
- MST-Series, uncoated in SS304 material grade



Material specification please see page 22.

In addition to the IEC62275, we are proud to offer our customers products which have been certified by well known and independent laboratories such as:



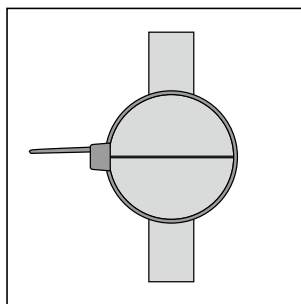
Profit from the knowledge and experience of HellermannTyton and the high-quality of our cable management solutions for your particular industry and market.

Determination of minimum tensile strength

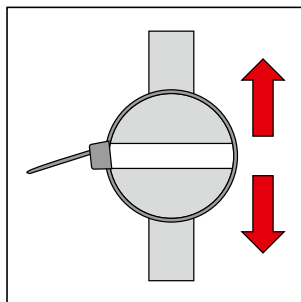
The minimum tensile strength is a critical selection criteria for cable ties. It expresses how much loading a cable tie can bear.

The test procedure to determine minimum tensile strength:

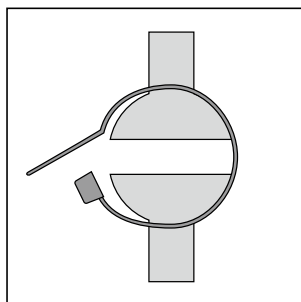
- Stabilisation to achieve equilibrium moisture content
- Set-up of the tensile test fixture
- Application of the tie on a split mandrel fixture
- Test speed



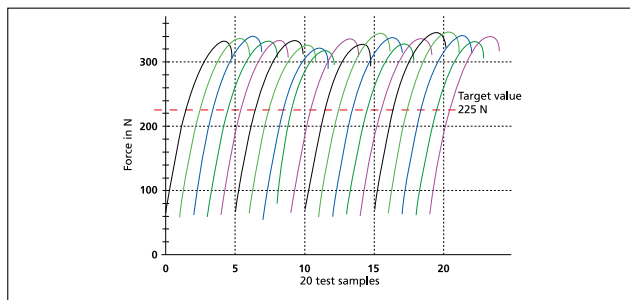
The cable tie is fixed onto a split mandrel fixture with the suitable cable tie application tool.



The mandrel is opened at a defined speed.



The loading at which the cable tie fails is determined. This value is stated in Newtons (N) and is recorded through a computer programme reading the tests. This programme produces graphs as outlined below.



Typical measurement protocol of a T50R made of PA66 with a minimum tensile strength of 225 N.

Explanation of minimum tensile strengths

What does a minimum tensile strength of 225 N (50 lbs) mean?

To explain what this value means, the mass with which the tie can be loaded is calculated. The unit of measurement of the mass is stated in kg. To do so, the unit Newton (N) is shown in the following way:

$$[N] = [kg * m/s^2]$$

The formula for calculating the mass is:

$$\text{Mass} = \text{minimum tensile strength} / \text{acceleration due to gravity}$$

The acceleration due to gravity is 9.81 m/s²

$$\text{Mass} = \text{minimum tensile strength} / [kg * m/s^2] / 9.81 [m/s^2]$$

At a minimum tensile strength of 225 N (50 lbs) the mass is:

$$\text{Mass} = 225 [kg * m/s^2] / 9.81 [m/s^2]$$

The units m/s² cancel each other out, leaving the unit [kg] for the mass. Thus:

$$\text{Mass} = 225 / 9.81 \text{ kg} = 22.9 \text{ kg}$$

Therefore, a T50R cable tie with a minimum tensile strength of 225 N (50 lbs) can be loaded with 22.9 kg.

Conversely, with the required loading capacity the minimum tensile strength can be calculated by a mass:

$$\text{Min. tensile strength} = \text{mass} * 9.81 [m/s^2]$$

If the tie is to be loaded with, for example, 53 kg this produces:

$$\text{Minimum tensile strength} = [53 \text{ kg}] * 9.81 [m/s^2] = 520 \text{ N}$$

In order to withstand a load of 53 kg, the tie must therefore have a minimum tensile strength of 520 N. In this case, select our T120R with a minimum tensile strength of 535 N (120 lbs).

$$\frac{N}{kg} \quad 225 \text{ N} / 9.81 = 22.9 \text{ kg}$$

$$\frac{kg}{N} \quad 53 \text{ kg} * 9.81 = 520 \text{ N}$$

$$\frac{N}{N} = \text{Minimum Loop Tensile Strength for Cable Ties (Newton)}$$

Introduction to the main locking technologies used for cable ties

HellermannTyton offers a wide range of cable ties for use in different applications. By constantly refining our products and satisfying the ever-changing demands of the market, various locking technologies have been developed. Below you will find a brief overview of three most common locking technologies and their characteristics.

Cable ties with plastic pawls

This technology is used in 90% of all polyamide (PA) cable ties applied by HellermannTyton. In order to cover a variety of applications, there are different variants of this system, for example: releasable versions, in-line versions, open head versions.

These are one-piece cable ties, the pawl is moulded as an integral part of the cable tie, thereby building in inherent strengths.

Locking technology

Positive locking is achieved by engaging the pawl with the strap serrations. This allows the cable tie to perform to the published minimum tensile strength, that is the loading that the cable tie can hold under application.

KR series cable ties

This cable tie is distinguished by its smooth strap and unique locking mechanism. With the KR series the chamfered head achieves an especially firm fit around the bundled material.

Locking technology

This locking technology takes advantage of the excellent deformation properties of polyamide (PA). Here, the glass fibre-reinforced locking pin (yellow) is forced into the strap by the use of an application tool - either the KR6/8 or KR8PNSE. The strap is deformed into the head of the tie by the application of the pin, thereby locking the cable tie in position and allowing the bundling of heavy loads.

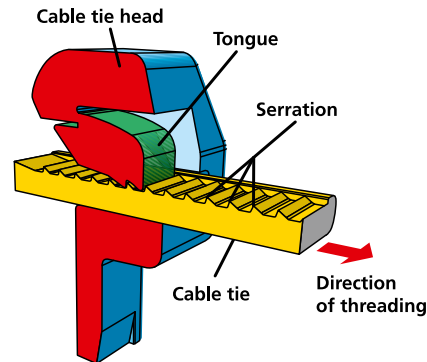
MBT series of cable ties

Made of stainless steel grade 304 or 316, the MBT range of cable ties have no serrations on the strap and are threaded parallel through the head, gliding under a metal ball-bearing locking mechanism. By using an appropriate application tool like our MK9SST the cable tie is tensioned and the strap cut to a flush finish.

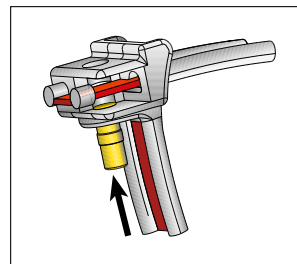
Locking technology

The strap is locked into the head by means of the small ball-bearing. The ball locks into the small end of the wedged shaped housing, forming a positive locking with the strap.

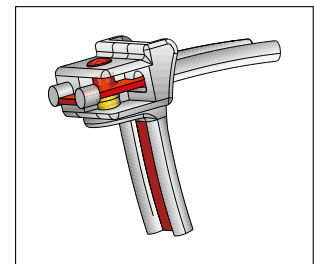
This cable tie is not suitable for rigid objects. Retraction of the ball-bearing (see drawing) is required into the small end of the wedged shaped housing to allow for a positive locking of the strap and also having a flush cut off at the end of the strap. This retraction cannot be ensured when bundling around inflexible materials such as metal pipes. The force by cutting the cable tie might end up in a rebound that could allow the ball moving back slightly. For rigid objects we therefore recommend a protective channel (LFPC) to be laid between strap and bundled object in order to compensate the rebound. The MBT locking technology allows for minimum tensile strengths of up to 7,000 Newton.



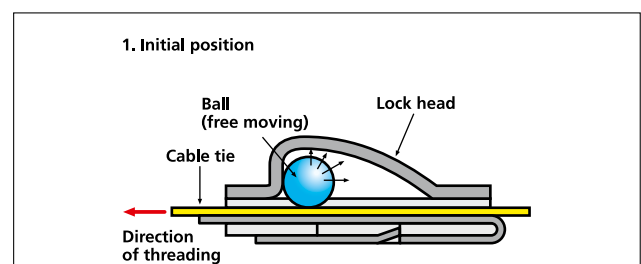
Locking technology of an outside serrated tie.



The unlocked head of a KR-tie.



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



1. Initial position

Ball (free moving)
Lock head
Cable tie
Direction of threading

2. Ball locks cable tie by wedging.

Ball (wedged)
Rebound
Lock head
Cable tie
Direction of threading

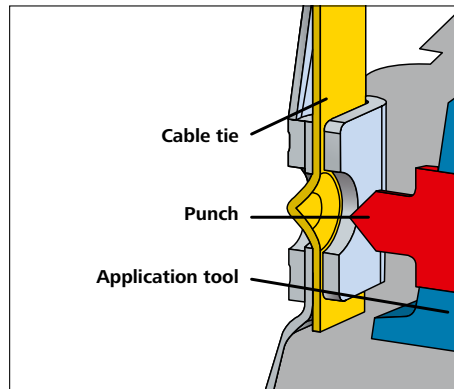
Introduction to the main locking technologies used for cable ties

MST series cable ties

MST cable ties are made of stainless steel 304. They offer similar features to MBT products but with a different head design and closure. Where space is tight the flat head allows for space savings. MST cable ties are not only weather-resistant but also highly resistant to heat, fire, and radiation. It can be used in challenging environments including indoor, outdoor and underground installations.

Locking technology

The punch-locking mechanism keeps the lock tight even in challenging areas with very high vibration such as on trains. Our MST application tools (MST6/MST9) have been specifically developed for tightening and cutting MST cable ties. This tool is mandatory to apply and lock these stainless steel cable ties properly.



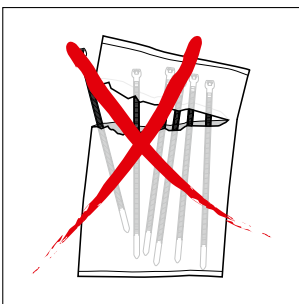
Punch-locking mechanism of the MST-Series.

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

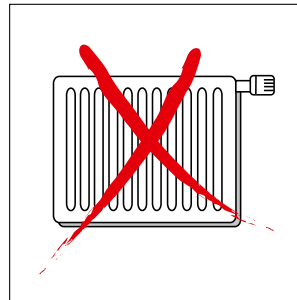
HellermannTyton cable ties, fastenings and fixings are manufactured from high-quality polyamide (PA). This industrial synthetic material is mainly processed using injection moulding, but can also be extruded. Polyamide is a hygroscopic material. This means that the material absorbs and loses moisture. For optimum handling of cable ties it is

important that the material is in a condition of equilibrium with a water content of approximately 2.5%.

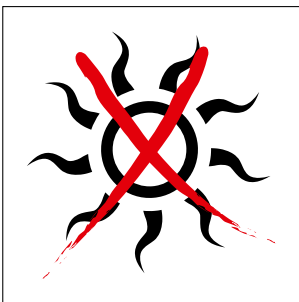
The packaging used by HellermannTyton ensures that the water content in the material remains constant. Therefore, it is important to store the products in their original packaging to preserve the quality of the ties.



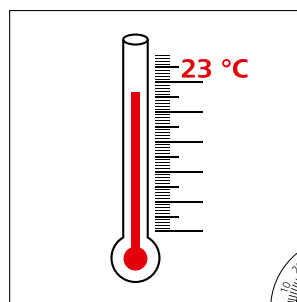
1. Once opened you should use the ties as quickly as possible.
2. Always store ties in the sealed plastic bag.



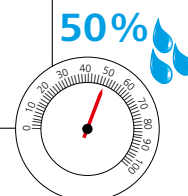
5. Store the product away from direct sources of heat.
6. Avoid contact with heat: for example, do not place on the radiators.



3. Do not expose the product to direct sunlight.
4. Do not store the product in sunlight; for example, on the windowsill.



7. The ideal storage conditions are those of the central European standard climate: 23 °C



50% relative humidity



Cable Ties Polyamide 6.6 standard

T-Series in PA66 natural and black

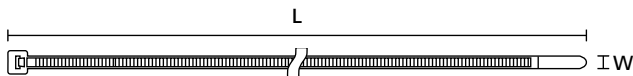
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

Features and Benefits

- Natural and black cable ties available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simply to insert due to the ergonomically bent tail



Standard T-Series cable ties – for almost any type of application (PA66).



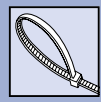
T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18S	2.3	83.0	16.0	80	PA66	Natural (NA)	1,000 pcs.	2;4-6	111-02809
	2.3	83.0	16.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02810
T18R	2.5	100.0	22.0	80	PA66	Natural (NA)	1,000 pcs.	2;4-6	111-01929
	2.5	100.0	22.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-01910
T18I	2.5	145.0	35.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02370
	2.5	145.0	35.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-02319
T18L	2.5	205.0	55.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-02119
	2.5	205.0	55.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02110
T25L	2.8	240.0	65.0	110	PA66	Black (BK)	100 pcs.	2;4-6	111-02500
	2.8	240.0	65.0	110	PA66	Natural (NA)	100 pcs.	2;4-6	111-02519
T25LL	2.8	330.0	95.0	110	PA66	Natural (NA)	100 pcs.	2;4-6	111-02619
T30R	3.5	150.0	35.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03219
	3.5	150.0	35.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03210
T30L	3.5	198.0	50.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-00946
	3.5	198.0	50.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-00945
T30LL	3.5	290.0	80.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-00982
	3.5	290.0	80.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03549
T40R	4.0	175.0	40.0	180	PA66	Natural (NA)	100 pcs.	2;4-8	111-03819
T50S	4.6	150.0	35.0	225	PA66	Black (BK)	100 pcs.	2;4-6,10	111-05810
	4.6	150.0	35.0	225	PA66	Natural (NA)	100 pcs.	2;4-6,10	111-05819
T50R	4.6	200.0	50.0	225	PA66	Black (BK)	100 pcs.	2;4-6,10	111-04810
	4.6	200.0	50.0	225	PA66	Natural (NA)	100 pcs.	2;4-6,10	111-04819
T50M	4.6	245.0	65.0	225	PA66	Natural (NA)	100 pcs.	2;4-6,10	111-00956
	4.6	245.0	65.0	225	PA66	Black (BK)	100 pcs.	2;4-6,10	111-06200
T50I	4.6	300.0	85.0	225	PA66	Black (BK)	100 pcs.	2;4-6,10	111-00950
	4.6	300.0	85.0	225	PA66	Natural (NA)	100 pcs.	2;4-6,10	111-00951
T50L	4.6	390.0	110.0	225	PA66	Natural (NA)	100 pcs.	2;4-6,10	111-05619
	4.6	390.0	110.0	225	PA66	Black (BK)	100 pcs.	2;4-6,10	111-00985
T50LL	4.6	445.0	130.0	225	PA66	Black (BK)	500 pcs.	2;4-6,10	111-06002
T80R	4.7	210.0	55.0	355	PA66	Natural (NA)	100 pcs.	2;4-6,10-12	111-05019
	4.7	210.0	55.0	355	PA66	Black (BK)	100 pcs.	2;4-6,10-12	111-08010

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

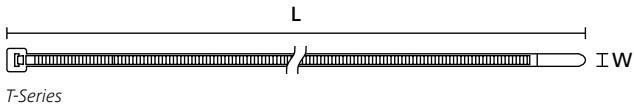


For product specific approvals and specifications please refer to the Appendix.



Cable Ties Polyamide 6.6 standard

T-Series in PA66 natural and black



Material specification
please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T80I	4.7	300.0	85.0	355	PA66	Natural (NA)	100 pcs.	2;4-6,10-12	111-08229
	4.7	300.0	85.0	355	PA66	Black (BK)	100 pcs.	2;4-6,10-12	111-08210
T80L	4.7	390.0	110.0	355	PA66	Black (BK)	100 pcs.	2;4-6,10-12	111-05410
	4.7	390.0	110.0	355	PA66	Natural (NA)	100 pcs.	2;4-6,10-12	111-05419
T120S	7.6	225.0	55.0	535	PA66	Natural (NA)	50 pcs.	3,10-12	111-12829
T120I	7.6	300.0	80.0	535	PA66	Black (BK)	100 pcs.	3,10-12	111-00958
	7.6	300.0	80.0	535	PA66	Natural (NA)	100 pcs.	3,10-12	111-12119
T150R	7.6	365.0	100.0	670	PA66	Black (BK)	100 pcs.	3,10-12	111-14810
	7.6	365.0	100.0	670	PA66	Natural (NA)	100 pcs.	3,10-12	111-14819
T120R(E)	7.6	387.0	100.0	535	PA66	Black (BK)	100 pcs.	3,10-12	111-12010
	7.6	387.0	100.0	535	PA66	Natural (NA)	100 pcs.	3,10-12	111-12019
T120M	7.6	460.0	125.0	535	PA66	Black (BK)	100 pcs.	3,10-12	111-12610
	7.6	460.0	125.0	535	PA66	Natural (NA)	100 pcs.	3,10-12	111-12619
T120XM	7.6	600.0	175.0	535	PA66	Black (BK)	50 pcs.	3,10-12	111-12701
	7.6	600.0	175.0	535	PA66	Natural (NA)	50 pcs.	3,10-12	111-12704
T120L	7.6	760.0	225.0	535	PA66	Black (BK)	50 pcs.	3,10-12	111-12403
	7.6	760.0	225.0	535	PA66	Natural (NA)	50 pcs.	3,10-12	111-12429
T150L	8.8	820.0	245.0	780	PA66	Black (BK)	25 pcs.	10-12	111-15405
	8.8	820.0	245.0	780	PA66	Natural (NA)	25 pcs.	10-12	111-15419
T150M	8.9	530.0	150.0	780	PA66	Black (BK)	25 pcs.	10-12	111-00124
	8.9	530.0	150.0	780	PA66	Natural (NA)	25 pcs.	10-12	111-15619
T150XL	8.9	1,095.0	330.0	780	PA66	Black (BK)	25 pcs.	10-12	111-15500
	8.9	1,095.0	330.0	780	PA66	Natural (NA)	25 pcs.	10-12	111-15519
T150XLL	8.9	1,325.0	405.0	780	PA66	Black (BK)	25 pcs.	10-12	111-15300
	8.9	1,325.0	405.0	780	PA66	Natural (NA)	25 pcs.	10-12	111-15304
T250S	12.5	225.0	55.0	1,115	PA66	Natural (NA)	100 pcs.	11-12	111-24705
T250X	12.5	370.0	100.0	1,115	PA66	Black (BK)	100 pcs.	11-12	111-25102
T250R	12.5	515.0	125.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-24803
T250M	12.5	565.3	150.0	1,115	PA66	Black (BK)	25 pcs.	11-12	111-25001
	12.5	565.3	150.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-25002
T250I	12.5	730.0	203.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-25219
T250L	12.5	880.0	254.0	1,115	PA66	Black (BK)	25 pcs.	11-12	111-24601
T250XL	12.5	1,030.0	305.0	1,115	PA66	Black (BK)	25 pcs.	11-12	111-25200
	12.5	1,030.0	305.0	1,115	PA66	Natural (NA)	25 pcs.	11-12	111-00466

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										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties Polyamide 6.6 standard

T-Series in PA66 coloured

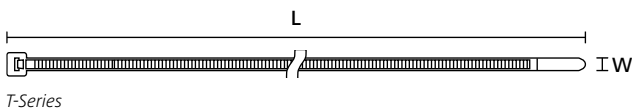
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

Features and Benefits

- Coloured cable ties available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simply to insert due to the ergonomically bent tail
- Other colours are available on request



T-Series cable ties – ideally suited for colour coding.

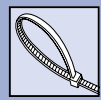


TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66	Blue (BU)	100 pcs.	2;4-6	116-01816
	2.5	100.0	22.0	80	PA66	Green (GN)	100 pcs.	2;4-6	116-01815
	2.5	100.0	22.0	80	PA66	Red (RD)	100 pcs.	2;4-6	116-01812
	2.5	100.0	22.0	80	PA66	Yellow (YE)	100 pcs.	2;4-6	116-01814
T30R	3.5	150.0	35.0	135	PA66	Blue (BU)	100 pcs.	2;4-6	111-03008
	3.5	150.0	35.0	135	PA66	Green (GN)	100 pcs.	2;4-6	111-03014
	3.5	150.0	35.0	135	PA66	Red (RD)	100 pcs.	2;4-6	111-03004
	3.5	150.0	35.0	135	PA66	Yellow (YE)	100 pcs.	2;4-6	111-03006
T50R	4.6	200.0	50.0	225	PA66	Blue (BU)	100 pcs.	2;4-6,10	111-04800
	4.6	200.0	50.0	225	PA66	Green (GN)	100 pcs.	2;4-6,10	111-04801
	4.6	200.0	50.0	225	PA66	Red (RD)	100 pcs.	2;4-6,10	111-04804
	4.6	200.0	50.0	225	PA66	Yellow (YE)	100 pcs.	2;4-6,10	111-04805
T50L	4.6	390.0	110.0	225	PA66	Blue (BU)	100 pcs.	2;4-6,10	111-05404
	4.6	390.0	110.0	225	PA66	Green (GN)	100 pcs.	2;4-6,10	111-05402
	4.6	390.0	110.0	225	PA66	Red (RD)	100 pcs.	2;4-6,10	111-05406
	4.6	390.0	110.0	225	PA66	Yellow (YE)	100 pcs.	2;4-6,10	111-05428

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

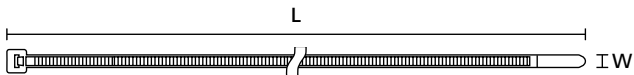


For product specific approvals and specifications please refer to the Appendix.



Cable Ties Polyamide 6.6 standard

T-Series in PA66 coloured



T-Series



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T80R	4.7	210.0	55.0	355	PA66	Blue (BU)	100 pcs.	2;4-6,10-12	116-08016
	4.7	210.0	55.0	355	PA66	Green (GN)	100 pcs.	2;4-6,10-12	116-08015
	4.7	210.0	55.0	355	PA66	Red (RD)	100 pcs.	2;4-6,10-12	116-08012
	4.7	210.0	55.0	355	PA66	Yellow (YE)	100 pcs.	2;4-6,10-12	116-08014
T80L	4.7	390.0	110.0	355	PA66	Blue (BU)	100 pcs.	2;4-6,10-12	116-05416
	4.7	390.0	110.0	355	PA66	Green (GN)	100 pcs.	2;4-6,10-12	116-05415
	4.7	390.0	110.0	355	PA66	Red (RD)	100 pcs.	2;4-6,10-12	116-05412
	4.7	390.0	110.0	355	PA66	Yellow (YE)	100 pcs.	2;4-6,10-12	116-05414
T150R(H)	7.6	365.0	100.0	670	PA66	Blue (BU)	100 pcs.	3,10-12	116-15016
	7.6	365.0	100.0	670	PA66	Red (RD)	100 pcs.	3,10-12	116-15012
	7.6	365.0	100.0	670	PA66	Yellow (YE)	100 pcs.	3,10-12	116-15014
T120R(E)	7.6	387.0	100.0	535	PA66	Green (GN)	100 pcs.	3,10-12	111-12001
	7.6	387.0	100.0	535	PA66	Red (RD)	100 pcs.	3,10-12	111-12002

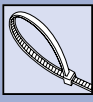
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools								
	2	3	4	5	6	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	EVO9	EVO9HT	MK9P
	595	596	596	596	598	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties for outdoor use (UV-resistant)

T-Series in PA66W black

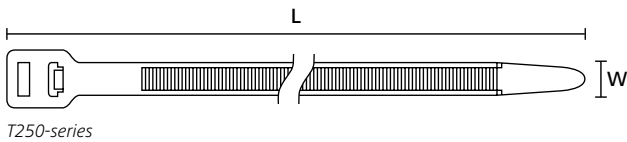
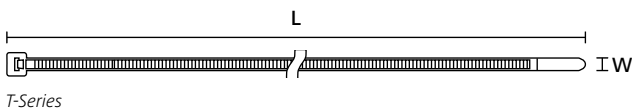
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

Features and Benefits

- Weather-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 around bundles
- Easy application either manually or with a processing tool
- Simply to insert due to the ergonomically bent tail
- UV-resistant



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



**Material specification
please see page 22.**

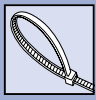
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18S	2.3	83.0	16.0	80	PA66W	Black (BK)	1,000 pcs.	2;4-6	111-02860
T18R	2.5	100.0	22.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-01960
T18I	2.5	145.0	35.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-02360
T18L	2.5	205.0	55.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	111-02160
T25L	2.8	240.0	65.0	110	PA66W	Black (BK)	100 pcs.	2;4-6	111-02560
T25LL	2.8	330.0	95.0	110	PA66W	Black (BK)	100 pcs.	2;4-6	111-02660
T30R	3.5	150.0	35.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03260
T30L	3.5	198.0	50.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-00947
T30LL	3.5	290.0	80.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03580
T40R	4.0	175.0	40.0	180	PA66W	Black (BK)	100 pcs.	2;4-8	111-03860
T50S	4.6	150.0	35.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-05860
T50R	4.6	200.0	50.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-04860
T50M	4.6	245.0	65.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-00957
T50I	4.6	300.0	85.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-00952
T50L	4.6	390.0	110.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-05710
T50LL	4.6	445.0	130.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-06000
T80R	4.7	210.0	55.0	355	PA66W	Black (BK)	100 pcs.	2;4-6,10-12	111-05060
T80I	4.7	300.0	85.0	355	PA66W	Black (BK)	100 pcs.	2;4-6,10-12	111-08290

All dimensions in mm. Subject to technical changes.

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

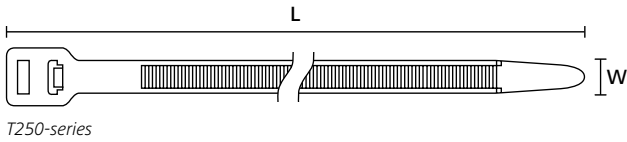
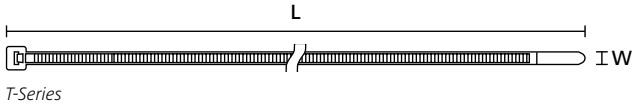


For product specific approvals and specifications please refer to the Appendix.



Cable Ties for outdoor use (UV-resistant)

T-Series in PA66W black



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T80L	4.7	390.0	110.0	355	PA66W	Black (BK)	100 pcs.	2,4-6,10-12	111-05460
T120S	7.6	225.0	55.0	535	PA66W	Black (BK)	50 pcs.	3,10-12	111-12830
T120I	7.6	300.0	80.0	535	PA66W	Black (BK)	100 pcs.	3,10-12	111-12160
T150R(H)	7.6	365.0	100.0	670	PA66W	Black (BK)	100 pcs.	3,10-12	111-14860
T120R(E)	7.6	387.0	100.0	535	PA66W	Black (BK)	100 pcs.	3,10-12	111-12060
T120M	7.6	460.0	125.0	535	PA66W	Black (BK)	100 pcs.	3,10-12	111-12660
T120L	7.6	760.0	225.0	535	PA66W	Black (BK)	50 pcs.	3,10-12	111-12430
T150L	8.8	820.0	245.0	780	PA66W	Black (BK)	25 pcs.	10-12	111-15460
T150M	8.9	530.0	150.0	780	PA66W	Black (BK)	25 pcs.	10-12	111-15660
T150XL	8.9	1,095.0	330.0	780	PA66W	Black (BK)	25 pcs.	10-12	111-15502
T150XLL	8.9	1,325.0	405.0	780	PA66W	Black (BK)	25 pcs.	10-12	111-15305
T250X	12.5	370.0	100.0	1115	PA66W	Black (BK)	25 pcs.	110-12	111-25100
T250R	12.5	515.0	125.0	1,115	PA66HIRHSUV	Black (BK)	25 pcs.	11-12	111-24805

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								
	2	3	4	5	6	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	EVO9	EVO9HT	MK9P
	595	596	596	596	598	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties for temperatures up to +105 °C (heat stabilised)

T-Series in PA66HS natural and black

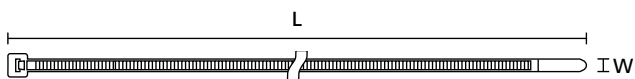
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

Features and Benefits

- Heat stabilised 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 around bundles
- Easy application either manually or with a processing tool
- Simply to insert due to the ergonomically bent tail
- Higher temperature resistance up to +105 °C



Heat stabilised T-Series cable ties up to +105 °C.



T-Series

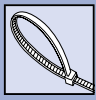
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18S	2.3	83.0	16.0	80	PA66HS	Natural (NA)	1000 pcs.	2;4-6	111-00962
	2.3	83.0	16.0	80	PA66HS	Black (BK)	1000 pcs.	2;4-6	111-00977
T18R	2.5	100.0	22.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	111-01950
	2.5	100.0	22.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-01959
	2.5	100.0	22.0	80	PA66HSW	Black (BK)	1000 pcs.	2;4-6	111-01199
T18I	2.5	145.0	35.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	111-02358
	2.5	145.0	35.0	80	PA66HS	Natural (NA)	1000 pcs.	2;4-6	111-02359
T18L	2.5	205.0	55.0	80	PA66HS	Black (BK)	1000 pcs.	2;4-6	111-01183
	2.5	205.0	55.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-02159
	2.5	205.0	55.0	80	PA66HSW	Black (BK)	100 pcs.	2;4-6	111-01274
T30R	3.5	150.0	35.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-03259
	3.5	150.0	35.0	135	PA66HS	Black (BK)	100 pcs.	2;4-6	111-03250
	3.5	150.0	35.0	135	PA66HSW	Black (BW)	100 pcs.	2;4-6	111-01211
T30L	3.5	198.0	50.0	135	PA66HS	Black (BK)	100 pcs.	2;4-6	111-03450
	3.5	198.0	50.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-03459
T30LL	3.5	290.0	80.0	135	PA66HS	Black (BK)	1,000 pcs.	2;4-6	111-03640
	3.5	290.0	80.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-01555
T40R	4.0	175.0	40.0	180	PA66HS	Black (BK)	100 pcs.	2;4-8	111-01618
	4.0	175.0	40.0	180	PA66HS	Natural (NA)	100 pcs.	2;4-8	111-03859
T50S	4.6	150.0	35.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-6,10	111-05859
	4.6	150.0	35.0	225	PA66HS	Black (BK)	100 pcs.	2;4-6,10	111-05850
T50R	4.6	200.0	50.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-6,10	111-04855
	4.6	200.0	50.0	225	PA66HSW	Black (BK)	100 pcs.	2;4-6,10	111-01278
	4.6	200.0	50.0	225	PA66HS	Black (BK)	100 pcs.	2;4-6,10	111-04940

All dimensions in mm. Subject to technical changes.

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

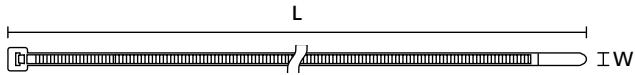


For product specific approvals and specifications please refer to the Appendix.



Cable Ties for temperatures up to +105 °C (heat stabilised)

T-Series in PA66HS natural and black



T-Series



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T50I	4.6	300.0	85.0	225	PA66HS	Black (BK)	100 pcs.	2;4-6,10	111-05250
	4.6	300.0	85.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-6,10	111-00953
	4.6	300.0	85.0	225	PA66HSW	Black (BK)	100 pcs.	2;4-6,10	111-00954
T50L	4.6	390.0	110.0	225	PA66HS	Black (BK)	100 pcs.	2;4-6,10	111-05450
	4.6	390.0	110.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-6,10	111-05655
	4.6	390.0	110.0	225	PA66HSW	Black (BK)	100 pcs.	2;4-6,10	111-01226
T80R	4.7	210.0	55.0	355	PA66HS	Black (BK)	100 pcs.	2;4-6,10,11	111-05059
	4.7	210.0	55.0	355	PA66HS	Natural (NA)	100 pcs.	2;4-6,10,11	111-05059
T80I	4.7	300.0	85.0	355	PA66HS	Black (BK)	100 pcs.	2;4-6,10,11	111-08250
	4.7	300.0	85.0	355	PA66HS	Natural (NA)	100 pcs.	2;4-6,10,11	111-08259
T80L	4.7	390.0	110.0	355	PA66HS	Black (BK)	100 pcs.	2;4-6,10,11	111-00388
	4.7	390.0	110.0	355	PA66HS	Natural (NA)	100 pcs.	2;4-6,10,11	111-05459
T120S	7.6	225.0	55.0	535	PA66HS	Black (BK)	50 pcs.	3,10,11	111-12850
	7.6	225.0	55.0	535	PA66HS	Natural (NA)	50 pcs.	3,10,11	111-12824
T150R	7.6	365.0	100.0	670	PA66HS	Black (BK)	100 pcs.	3,10,11	111-01636
T150R(H)	7.6	365.0	100.0	670	PA66HS	Black (BK)	100 pcs.	3,10,11	111-01156
	7.6	365.0	100.0	670	PA66HS	Natural (NA)	100 pcs.	3,10,11	111-15069
T120R(E)	7.6	387.0	100.0	535	PA66HS	Black (BK)	100 pcs.	3,10,11	111-12050
	7.6	387.0	100.0	535	PA66HS	Natural (NA)	100 pcs.	3,10,11	111-12059
T120M	7.6	460.0	125.0	535	PA66HS	Black (BK)	100 pcs.	3,10,11	111-00153
T120XM	7.6	600.0	175.0	535	PA66HS	Black (BK)	50 pcs.	3,10,11	111-12700
	7.6	600.0	175.0	535	PA66HS	Natural (NA)	50 pcs.	3,10,11	111-12719
T120L	7.6	760.0	225.0	535	PA66HS	Black (BK)	50 pcs.	3,10,11	111-12440
	7.6	760.0	225.0	535	PA66HS	Natural (NA)	50 pcs.	3,10,11	111-12449
T150L	8.8	820.0	245.0	780	PA66HS	Black (BK)	25 pcs.	10,11	111-15410
T150M	8.9	530.0	150.0	780	PA66HS	Black (BK)	25 pcs.	10,11	111-15609
T150XL	8.9	1,095.0	330.0	780	PA66HS	Black (BK)	25 pcs.	10,11	111-15510

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								
	2	3	4	5	6	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	EVO9	EVO9HT	MK9P
	595	596	596	596	598	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties for higher impact resistant Polyamide 6.6 ScanBlack

T-Series in PA66HIR(S) black

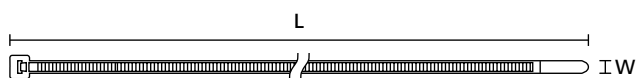
Impact resistance T-Series cable ties are manufactured from PA66HIR(S) – an impact modified material formulation. This high performance material offers limited brittleness sensitivity and a higher flexibility even at low temperatures. PA66HIR(S) cable ties meet increasing requirements like in the chemical, medical and/or automotive industry.

Features and benefits

- Impact resistant cable tie in black colour
- For bundling and securing cables, pipes and hoses
- Available in different sizes
- Higher flexibility especially in cold environments
- Limited brittleness sensitivity



Impact resistant T-Series cable tie (PA66HIR(S)).



T-Series



**Material specification
please see page 22.**

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T50R	4.6	200.0	50.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-04890
T50I	4.6	300.0	85.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-00222
T50L	4.6	390.0	110.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-05441
T120I	7.6	300.0	80.0	535	PA66HIR(S)	Black (BK)	100 pcs.	3;9-12	111-12203
T120R(E)	7.6	387.0	100.0	535	PA66HIR(S)	Black (BK)	100 pcs.	3;9-12	111-12032
T120L	7.6	760.0	225.0	535	PA66HIR(S)	Black (BK)	50 pcs.	3;9-12	111-12402

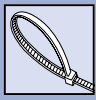
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties for higher fire-protection

T-Series in PA66V0 white

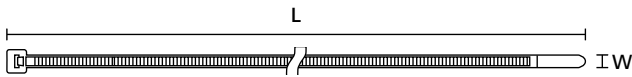
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application especially where safety regulations are high and the reduction of smoke and dangerous gases is required. PA66V0 products are most critically used within public sector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



White T-Series cable ties for higher fire protection (PA66V0).



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA66V0	White (WH)	1,000 pcs.	2;4-6	111-00961
T18L	2.5	205.0	55.0	80	PA66V0	White (WH)	1,000 pcs.	2;4-6	111-02043
T30R	3.5	150.0	35.0	135	PA66V0	White (WH)	100 pcs.	2;4-6	111-00980
T50R	4.6	200.0	50.0	225	PA66V0	White (WH)	100 pcs.	2-10	111-95019
T50I	4.6	300.0	85.0	225	PA66V0	White (WH)	100 pcs.	2-10	111-00317
T50L	4.7	390.0	110.0	225	PA66V0	White (WH)	100 pcs.	2-10	111-05438
T120R(E)	7.6	387.0	100.0	535	PA66V0	White (WH)	100 pcs.	3;9-12	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										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.

EN 45545-2



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



Cable Ties for temperatures up to +150 °C in Polyamide 4.6

T-Series in PA46 natural and grey

These inside serrated cable ties are made from Polyamide 4.6 (PA46). They can be applied in environments with continuous temperatures up to +150 °C which makes them suitable for applications where a broader temperature range is required. Polyamide 4.6 is a well known material in the automotive, railway or white goods area. An application tool is recommended to ensure greater process reliability while installing cable ties.

Features and benefits

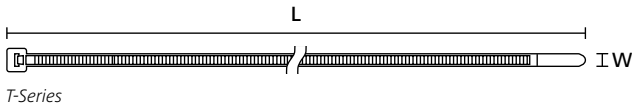
- Cable tie for high temperature applications up to +150 °C
- Available in different sizes to cover various bundle diameters
- Low smoke generation in the event of a fire
- PA46 is a moisture sensitive material
- Inside serrated cable tie offers strong hold around bundles
- Easy application either manually or with an application tool



T-Series cable ties – higher temperature resistance up to +150 °C (PA46).



Material specification please see page 22.



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18S	2.5	83.0	16.0	80	PA46	Natural (NA)	1,000 pcs.	2;4-6	111-02802
T18R	2.5	100.0	22.0	80	PA46	Natural (NA)	1,000 pcs.	2;4-6	111-00960
	2.5	100.0	22.0	80	PA46	Grey (GY)	1,000 pcs.	2;4-6	111-01617
T18I	2.5	145.0	35.0	80	PA46	Natural (NA)	1,000 pcs.	2;4-6	111-01182
T30R	3.5	150.0	35.0	135	PA46	Natural (NA)	100 pcs.	2;4-6	114-03079
	3.5	150.0	35.0	135	PA46	Grey (GY)	100 pcs.	2;4-6	111-00968
T30L	3.5	198.0	35.0	135	PA46	Grey (GY)	100 pcs.	2;4-6	111-01581
T50R	4.6	200.0	50.0	225	PA46	Black (BK)	100 pcs.	2-10	111-00969
	4.6	200.0	50.0	225	PA46	Grey (GY)	100 pcs.	2-10	111-00824
	4.6	200.0	50.0	225	PA46	Grey (GY)	1,000 pcs.	2-10	111-00983
	4.6	200.0	50.0	225	PA46	Natural (NA)	100 pcs.	2-10	111-00525
T50I	4.6	300.0	85.0	225	PA46	Natural (NA)	100 pcs.	2-10	111-05220
	4.6	300.0	85.0	225	PA46	Black (BK)	100 pcs.	2-10	111-01472
T50L	4.6	390.0	110.0	225	PA46	Natural (NA)	100 pcs.	2-10	111-00526
T120R(E)	7.6	387.0	100.0	535	PA46	Natural (NA)	100 pcs.	3;9-12	114-12179
T150R(H)	7.6	365.0	100.0	670	PA46	Grey (GY)	100 pcs.	3;9-12	111-01415

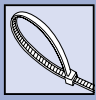
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties for higher chemical resistance and temperatures up to +170°C

T-Series in E/TFE (Tefzel®) blue

E/TFE or Tefzel® cable ties are used when higher chemical resistance and/or temperatures up to +170 °C are required. These ties are most likely chosen for challenging applications in industries like food and beverage, aerospace, automotive or railway.

Features and benefits

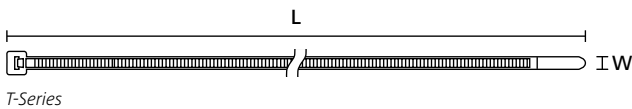
- Blue cable tie offering high chemical resistance
- Suitable for applications with temperatures up to 170 °C
- Resistant to radioactivity and UV light
- E/TFE is a non hydroscopic material, no moisture absorption
- Complying with UL94 V0 requirements



T-Series E/TFE cable ties – for higher chemical resistance up to +170 °C.



For more information on E/TFE mounts please refer to KR-Series on page 150.



TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	E/TFE	Blue (BU)	100 pcs.	2;4-6	111-00659
T30R	3.5	150.0	36.0	133	E/TFE	Blue (BU)	100 pcs.	2;4-6	111-00698
T50R	4.7	201.0	50.0	222	E/TFE	Blue (BU)	100 pcs.	2-10	111-00732
T50L	4.7	382.0	105.0	222	E/TFE	Blue (BU)	100 pcs.	2-10	111-00718
T120R	7.4	387.0	105.0	535	E/TFE	Blue (BU)	50 pcs.	3;9-12	111-01125

All dimensions in mm. Subject to technical changes.

Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available. General linguistic usage for cable ties made from raw material E/TFE is Tefzel®-Tie. In addition to Tefzel® from DuPont HellermannTyton is also using equivalent E/TFE raw material from other suppliers.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Polypropylene Cable Ties for higher chemical resistance and temperatures up to +115°C

T-Series in PP natural and black

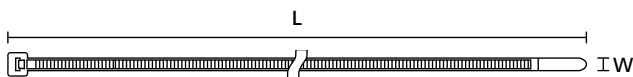
T-Series cable ties made from Polypropylene (PP) are less hydroscopic and offer a higher chemical resistance and temperature range compared to a standard Polyamide 6.6 (PA66) material. Cable ties from Polypropylene can withstand continuous operating temperatures up to +115 °C. These cable ties are used to bundle and secure cables, pipes and/or hoses.

Features and benefits

- Polypropylene cable ties for higher chemical resistance
- Can withstand continuous operating temperatures up to 115 °C
- Different sizes available in black and natural colour
- Due to its low density PP cable ties can float on water
- Less hydroscopic material, almost no water absorption



T-Series cable ties for higher chemical resistance and temperatures up to +115 °C (PP).



T-Series



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	36	PP	Black (BK)	100	2;4-6	111-01917
	2.5	100.0	22.0	36	PP	Natural (NA)	1,000 pcs.	2;4-6	111-01922
T30R	3.6	148.0	32.0	89	PP	Natural (NA)	100 pcs.	2;4-6	111-03017
T50R	4.8	202.0	44.5	111	PP	Black (BK)	100 pcs.	2-10	111-04928
	4.8	202.0	44.5	111	PP	Natural (NA)	100 pcs.	2-10	111-04931
T120S	7.6	225.0	55.0	267	PP	Black (BK)	500 pcs.	3;9-12	111-12827
T120R	7.6	390.0	105.0	267	PP	Black (BK)	500 pcs.	3;9-12	111-12066

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										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



Cable Ties made from sustainable bioplastic

T-Series in PA11 black

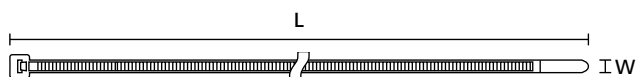
T-Series cable ties manufactured from PA11 have many technical features making them suitable for use in a variety of applications to fix and support cables, pipes and other elements. They offer an excellent resistance to chemicals in most challenging environments like offshore or on oil rigs and construction vehicles. In addition the very good UV resistance makes it a perfect choice for solar panel cable installations.

Features and benefits

- Made of Polyamide 11 – a sustainable bioplastic from vegetable oil
- Very good UV resistance and durability in outdoor applications
- Stable technical performance even at very low temperatures
- High resistance to chemicals including chlorides
- Low water absorption rate offers consistent technical performance



A sustainable T-Series cable tie with high resistance to chemicals and UV light.



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	PA11	Black (BK)	100 pcs.	2;4-6	111-01718
T30R	3.5	150.0	35.0	130	PA11	Black (BK)	100 pcs.	2;4-6	111-01719
T50S	4.6	150.0	35.0	170	PA11	Black (BK)	100 pcs.	2-10	111-01720
T50R	4.6	200.0	50.0	170	PA11	Black (BK)	100 pcs.	2-10	111-01721
T50M	4.6	245.0	65.0	225	PA11	Black (BK)	100 pcs.	2-10	111-02218
T50I	4.6	300.0	85.0	225	PA11	Black (BK)	100 pcs.	2-10	111-02217

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								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties in-between size to T-Series

LK-Series natural and black

For bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application.

Features and Benefits

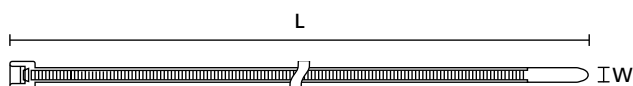
- Available in a wide range of materials and sizes
- Inside serrated ties for a strong hold around bundles
- High tensile strength with very low insertion force
- Simple and quick to install
- Easy application either manually or with a processing tool



LK-Series – in-between size to T-Series.



Material specification please see page 22.



LK-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
LK2A	4.6	270.0	73.0	225	PA66	Black (BK)	100 pcs.	2;4-6,10	111-60110
	4.6	270.0	73.0	225	PA66	Natural (NA)	100 pcs.	2;4-6,10	111-60119
	4.6	270.0	73.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2;4-6,10	111-00127
	4.6	270.0	73.0	225	PA66HS	Black (BK)	100 pcs.	2;4-6,10	111-60150
	4.6	270.0	73.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-6,10	111-60159
	4.6	270.0	73.0	225	PA66W	Black (BK)	100 pcs.	2;4-6,10	111-60160
	4.6	270.0	73.0	225	PA66HIR	Black (BK)	500 pcs.	2;4-6,10	111-00118
LK2	4.8	120.0	28.0	135	PA66	Natural (NA)	200 pcs.	2;4-6	111-60219
LK5	13.2	535.0	150.0	1,115	PA66	Black (BK)	50 pcs.	11	111-60510
	13.2	535.0	150.0	1,115	PA66	Natural (NA)	50 pcs.	11	111-60519
	13.2	535.0	150.0	1,115	PA66HIR(S)	Black (BK)	50 pcs.	11	111-60501
	13.2	535.0	150.0	1,115	PA66HS	Natural (NA)	50 pcs.	11	111-60559
	13.2	535.0	150.0	1,115	PA66W	Black (BK)	50 pcs.	11	111-60560

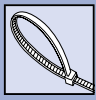
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools					
	2	3	6	10	11
	MK20	MK21	EVO7	EVO9	EVO9HT
	595	596	598	599	599

For more information on toolings please refer to the Application Tooling chapter.



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



Q-ties

Innovative – Effective – Safe!

The new Q-tie has not only innovative, but also has a revolutionary new design. The open head of the cable tie enables a simple and quick installation. Simply insert the ergonomically bent tail into the open side of the head and tighten the cable tie.

With Q-ties you can save time and money!

Easy Application for every Situation!

Q-tie provides the perfect solution for applications in difficult working conditions. It is ideal for use in applications when working with gloves is necessary or for blind applications with a limited view of the work. The new Q-tie allowing for a quick and simple installation, even with work gloves and restricted view.

Features for quick and easy application:

- Large curved tail with easy-grip ribs
- Open head with easy detectable slot

This saves time and trouble!

Integrated Pre-locking Functionality!

Due to several simultaneous working processes, it is not always possible to install all cables and conduits in one single step. Working with standard cable ties means either removing the cable tie of the first installation or applying additional cable ties. The integrated pre-locking function of the Q-tie offers both a temporary and final cable fastening solution.

This saves material and time!



Application video:
Q-Series



Even under difficult circumstances the Q-tie cable tie is very fast and easy to apply.



Please find more Q-Series products for your system solution on page 139, 149 and 530.

Application Method:



1. Insert the thin part of the cable tie into the open lock head.



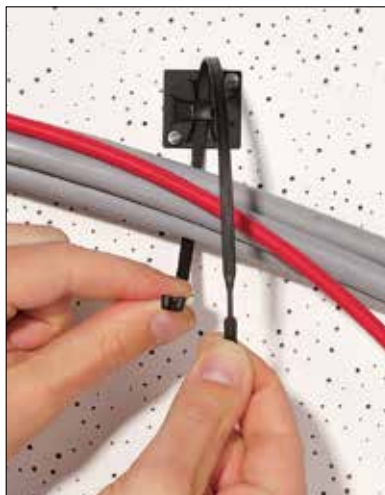
2. Pull the tie through the head until the bundle is fixed.

3. Cut off the remaining part of the tie with an application tool.

Pre-locking Function of the Q-tie:



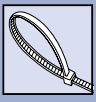
1. Insert tail into lock head and push tail partly into the head.



2. To release the tie push the tail slightly out of the head.



3. If installation is finished, Q-tie can be tightened and cut off - either manually or with an application tool.



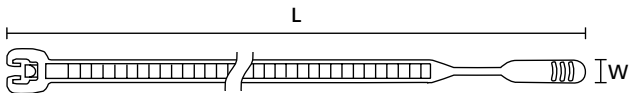
Cable Ties with open head Polyamide 6.6 standard

Q-Series in PA66 natural and black

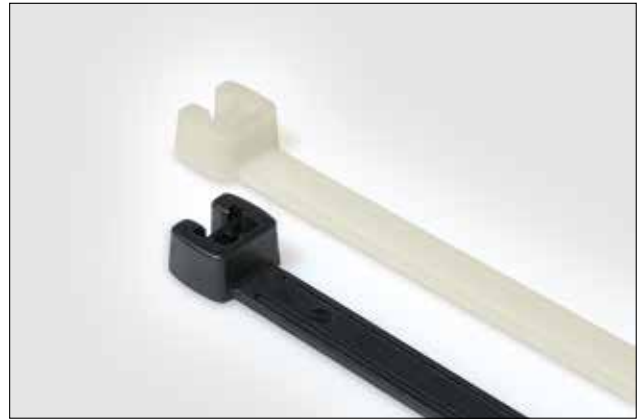
Q-Series cable ties for bundling and securing cables, pipes and hoses. These innovative and effective cable ties enable a simple and quick installation, even in difficult applications.

Features and benefits

- Open lock head for quick and easy insertion
- Integrated pre-locking function
- More than 25 % faster to apply than a standard cable tie
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool



Q-Series



Q-tie cable ties: choose from a wide product range in different sizes.

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
Q18R	2.6	105.0	24.0	80	PA66	Black (BK)	100 pcs.	2;4-6	109-00030
	2.6	105.0	24.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	109-00001
Q18I	2.6	155.0	40.0	80	PA66	Black (BK)	100 pcs.	2;4-6	109-00033
	2.6	155.0	40.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	109-00004
Q18L	2.6	195.0	50.0	80	PA66	Black (BK)	100 pcs.	2;4-6	109-00036
	2.6	195.0	50.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	109-00007
Q30R	3.6	160.0	38.0	130	PA66	Black (BK)	100 pcs.	2;4-6;8	109-00039
	3.6	160.0	38.0	130	PA66	Natural (NA)	100 pcs.	2;4-6;8	109-00010
Q30L	3.6	200.0	50.0	130	PA66	Black (BK)	100 pcs.	2;4-6;8	109-00041
	3.6	200.0	50.0	130	PA66	Natural (NA)	100 pcs.	2;4-6;8	109-00012
Q30LR	3.6	250.0	65.0	130	PA66	Black (BK)	100 pcs.	2;4-6;8	109-00043
	3.6	250.0	65.0	130	PA66	Natural (NA)	100 pcs.	2;4-6;8	109-00014
Q50R	4.7	210.0	50.0	220	PA66	Black (BK)	100 pcs.	2-12;15	109-00047
	4.7	210.0	50.0	220	PA66	Natural (NA)	100 pcs.	2-12;15	109-00018
Q50I	4.7	290.0	75.0	220	PA66	Black (BK)	100 pcs.	2-12;15	109-00049
	4.7	290.0	75.0	220	PA66	Natural (NA)	100 pcs.	2-12;15	109-00020
Q50L	4.7	410.0	110.0	220	PA66	Black (BK)	100 pcs.	2-12;15	109-00051
	4.7	410.0	110.0	220	PA66	Natural (NA)	100 pcs.	2-12;15	109-00022
Q120I	7.7	300.0	70.0	530	PA66	Black (BK)	100 pcs.	3;9-12;15	109-00053
	7.7	300.0	70.0	530	PA66	Natural (NA)	100 pcs.	3;9-12;15	109-00024
Q120R	7.7	420.0	110.0	530	PA66	Black (BK)	100 pcs.	3;9-12;15	109-00055
	7.7	420.0	110.0	530	PA66	Natural (NA)	100 pcs.	3;9-12;15	109-00026
Q120M	7.7	520.0	130.0	530	PA66	Black (BK)	100 pcs.	3;9-12;15	109-00057
	7.7	520.0	130.0	530	PA66	Natural (NA)	100 pcs.	3;9-12;15	109-00028

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											
	2	3	4	5	6	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	595	595	596	596	598	601	600	599	599	602	604

For more information on toolings please refer to the Application Tooling chapter.



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



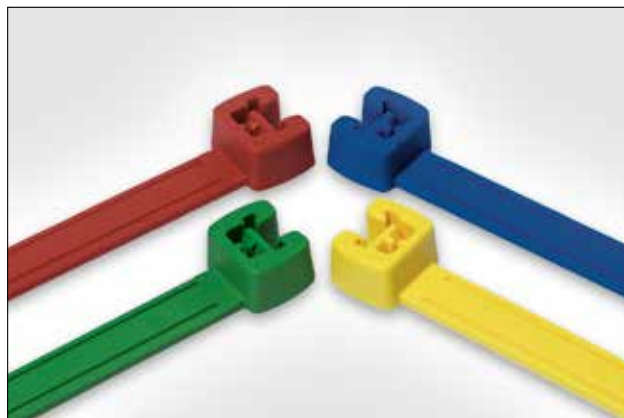
Cable Ties with open head Polyamide 6.6 standard

Q-Series in PA66 coloured

Q-Series cable ties for bundling and securing cables, pipes and hoses. These innovative and effective cable ties enable a simple and quick installation, even in difficult applications.

Features and benefits

- Coloured cable ties available in a wide range of sizes
- Open lock head for quick and easy insertion
- Integrated pre-locking function
- More than 25 % faster to apply than a standard cable tie
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool



Q-ties in different colours are ideal for marking and bundling in one step.



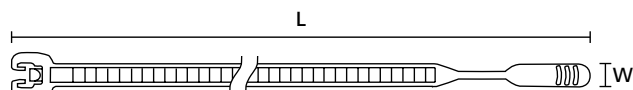
One Step to the Web!



Material specification
please see page 22.



Please find more Q-Series products for your system solution on page 139, 149 and 530.



Q-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
Q18R	2.6	105.0	24.0	80	PA66	Blue (BU)	100 pcs.	2;4-6	109-00147
	2.6	105.0	24.0	80	PA66	Green (GN)	100 pcs.	2;4-6	109-00148
	2.6	105.0	24.0	80	PA66	Red (RD)	100 pcs.	2;4-6	109-00149
	2.6	105.0	24.0	80	PA66	Yellow (YE)	100 pcs.	2;4-6	109-00150
Q18I	2.6	155.0	40.0	80	PA66	Blue (BU)	100 pcs.	2;4-6	109-00152
	2.6	155.0	40.0	80	PA66	Green (GN)	100 pcs.	2;4-6	109-00153
	2.6	155.0	40.0	80	PA66	Red (RD)	100 pcs.	2;4-6	109-00154
	2.6	155.0	40.0	80	PA66	Yellow (YE)	100 pcs.	2;4-6	109-00155
Q18L	2.6	195.0	50.0	80	PA66	Blue (BU)	100 pcs.	2;4-6	109-00157
	2.6	195.0	50.0	80	PA66	Green (GN)	100 pcs.	2;4-6	109-00158
	2.6	195.0	50.0	80	PA66	Red (RD)	100 pcs.	2;4-6	109-00159
	2.6	195.0	50.0	80	PA66	Yellow (YE)	100 pcs.	2;4-6	109-00160

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											
	2	3	4	5	6	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	595	595	596	596	598	601	600	599	599	602	604

For more information on toolings please refer to the Application Tooling chapter.

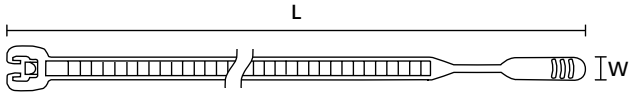


For product specific approvals and specifications please refer to the Appendix.



Cable Ties with open head Polyamide 6.6 standard

Q-Series in PA66 coloured



Q-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
Q30R	3.6	160.0	38.0	130	PA66	Blue (BU)	100 pcs.	2;4-6;8	109-00162
	3.6	160.0	38.0	130	PA66	Green (GN)	100 pcs.	2;4-6;8	109-00163
	3.6	160.0	38.0	130	PA66	Red (RD)	100 pcs.	2;4-6;8	109-00164
	3.6	160.0	38.0	130	PA66	Yellow (YE)	100 pcs.	2;4-6;8	109-00165
Q30L	3.6	200.0	50.0	130	PA66	Blue (BU)	100 pcs.	2;4-6;8	109-00167
	3.6	200.0	50.0	130	PA66	Green (GN)	100 pcs.	2;4-6;8	109-00168
	3.6	200.0	50.0	130	PA66	Red (RD)	100 pcs.	2;4-6;8	109-00169
	3.6	200.0	50.0	130	PA66	Yellow (YE)	100 pcs.	2;4-6;8	109-00170
Q30LR	3.6	250.0	65.0	130	PA66	Blue (BU)	100 pcs.	2;4-6;8	109-00172
	3.6	250.0	65.0	130	PA66	Green (GN)	100 pcs.	2;4-6;8	109-00173
	3.6	250.0	65.0	130	PA66	Red (RD)	100 pcs.	2;4-6;8	109-00174
	3.6	250.0	65.0	130	PA66	Yellow (YE)	100 pcs.	2;4-6;8	109-00175
Q50R	4.7	210.0	50.0	220	PA66	Blue (BU)	100 pcs.	2-12;15	109-00182
	4.7	210.0	50.0	220	PA66	Green (GN)	100 pcs.	2-12;15	109-00183
	4.7	210.0	50.0	220	PA66	Red (RD)	100 pcs.	2-12;15	109-00184
	4.7	210.0	50.0	220	PA66	Yellow (YE)	100 pcs.	2-12;15	109-00185
Q50I	4.7	290.0	75.0	220	PA66	Blue (BU)	100 pcs.	2-12;15	109-00187
	4.7	290.0	75.0	220	PA66	Green (GN)	100 pcs.	2-12;15	109-00188
	4.7	290.0	75.0	220	PA66	Red (RD)	100 pcs.	2-12;15	109-00189
	4.7	290.0	75.0	220	PA66	Yellow (YE)	100 pcs.	2-12;15	109-00190
Q50L	4.7	410.0	110.0	220	PA66	Blue (BU)	100 pcs.	2-12;15	109-00192
	4.7	410.0	110.0	220	PA66	Green (GN)	100 pcs.	2-12;15	109-00193
	4.7	410.0	110.0	220	PA66	Red (RD)	100 pcs.	2-12;15	109-00194
	4.7	410.0	110.0	220	PA66	Yellow (YE)	100 pcs.	2-12;15	109-00195
Q120I	7.7	300.0	70.0	530	PA66	Blue (BU)	100 pcs.	3;9-12;15	109-00197
	7.7	300.0	70.0	530	PA66	Green (GN)	100 pcs.	3;9-12;15	109-00198
	7.7	300.0	70.0	530	PA66	Red (RD)	100 pcs.	3;9-12;15	109-00199
	7.7	300.0	70.0	530	PA66	Yellow (YE)	100 pcs.	3;9-12;15	109-00200
Q120R	7.7	420.0	110.0	530	PA66	Blue (BU)	100 pcs.	3;9-12;15	109-00202
	7.7	420.0	110.0	530	PA66	Green (GN)	100 pcs.	3;9-12;15	109-00203
	7.7	420.0	110.0	530	PA66	Red (RD)	100 pcs.	3;9-12;15	109-00204
	7.7	420.0	110.0	530	PA66	Yellow (YE)	100 pcs.	3;9-12;15	109-00205
Q120M	7.7	520.0	130.0	530	PA66	Blue (BU)	100 pcs.	3;9-12;15	109-00207
	7.7	520.0	130.0	530	PA66	Green (GN)	100 pcs.	3;9-12;15	109-00208
	7.7	520.0	130.0	530	PA66	Red (RD)	100 pcs.	3;9-12;15	109-00209
	7.7	520.0	130.0	530	PA66	Yellow (YE)	100 pcs.	3;9-12;15	109-00210

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



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



Cable Ties with open head for outdoor use (UV-resistant)

Q-Series in PA66W black

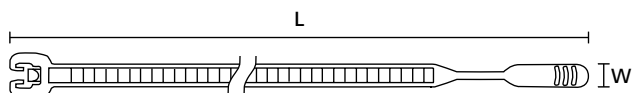
Q-Series cable ties for bundling and securing cables, pipes and hoses. These innovative and effective cable ties enable a simple and quick installation, even in difficult applications.

Features and benefits

- Weather-resistant black cable ties available in a wide range of sizes
- Open lock head for quick and easy insertion
- Integrated pre-locking function
- More than 25 % faster to apply than a standard cable tie
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- UV-resistant



Q-tie cable ties: choose from a wide product range in different sizes.



Q-Series



Material specification please see page 22.



Please find more Q-Series products for your system solution on page 139, 149 and 530.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
Q18R	2.6	105.0	24.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	109-00059
Q18I	2.6	155.0	40.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	109-00062
Q18L	2.6	195.0	50.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	109-00065
Q30R	3.6	160.0	38.0	130	PA66W	Black (BK)	100 pcs.	2;4-6;8	109-00068
Q30L	3.6	200.0	50.0	130	PA66W	Black (BK)	100 pcs.	2;4-6;8	109-00070
Q30LR	3.6	250.0	65.0	130	PA66W	Black (BK)	100 pcs.	2;4-6;8	109-00072
Q50R	4.7	210.0	50.0	220	PA66W	Black (BK)	100 pcs.	2-12;15	109-00076
Q50I	4.7	290.0	75.0	220	PA66W	Black (BK)	100 pcs.	2-12;15	109-00078
Q50L	4.7	410.0	110.0	220	PA66W	Black (BK)	100 pcs.	2-12;15	109-00080
Q120I	7.7	300.0	70.0	530	PA66W	Black (BK)	100 pcs.	3;9-12;15	109-00082
Q120R	7.7	420.0	110.0	530	PA66W	Black (BK)	100 pcs.	3;9-12;15	109-00084
Q120M	7.7	520.0	130.0	530	PA66W	Black (BK)	100 pcs.	3;9-12;15	109-00086

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											
	2	3	4	5	6	8	9	10	11	12	15
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	595	595	596	596	598	601	600	599	599	602	604

For more information on toolings please refer to the Application Tooling chapter.



Cable Ties with open head for temperatures up to +105 °C (heat stabilised)

Q-Series in PA66HS natural and black

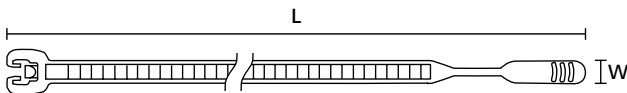
Q-Series cable ties for bundling and securing cables, pipes and hoses. These innovative and effective cable ties enable a simple and quick installation, even in difficult applications.

Features and benefits

- Heat stabilised cable ties available in a wide range of sizes
- Open lock head for quick and easy insertion
- Integrated pre-locking function
- More than 25 % faster to apply than a standard cable tie
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Higher temperature resistance up to +105 °C



Q-tie cable ties: choose from a wide product range in different sizes.



Q-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
Q18R	2.6	105.0	24.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	109-00088
	2.6	105.0	24.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	109-00117
Q18I	2.6	155.0	40.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	109-00091
	2.6	155.0	40.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	109-00120
Q18L	2.6	195.0	50.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	109-00094
	2.6	195.0	50.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	109-00123
Q30R	3.6	160.0	38.0	130	PA66HS	Black (BK)	100 pcs.	2;4-6;8	109-00097
	3.6	160.0	38.0	130	PA66HS	Natural (NA)	100 pcs.	2;4-6;8	109-00126
Q30L	3.6	200.0	50.0	130	PA66HS	Black (BK)	100 pcs.	2;4-6;8	109-00099
	3.6	200.0	50.0	130	PA66HS	Natural (NA)	100 pcs.	2;4-6;8	109-00128
Q30LR	3.6	250.0	65.0	130	PA66HS	Black (BK)	100 pcs.	2;4-6;8	109-00101
	3.6	250.0	65.0	130	PA66HS	Natural (NA)	100 pcs.	2;4-6;8	109-00130
Q50R	4.7	210.0	50.0	220	PA66HS	Black (BK)	100 pcs.	2-12;15	109-00105
	4.7	210.0	50.0	220	PA66HS	Natural (NA)	100 pcs.	2-12;15	109-00134
Q50I	4.7	290.0	75.0	220	PA66HS	Black (BK)	100 pcs.	2-12;15	109-00107
	4.7	290.0	75.0	220	PA66HS	Natural (NA)	100 pcs.	2-12;15	109-00136
Q50L	4.7	410.0	110.0	220	PA66HS	Black (BK)	100 pcs.	2-12;15	109-00109
	4.7	410.0	110.0	220	PA66HS	Natural (NA)	100 pcs.	2-12;15	109-00138
Q120I	7.7	300.0	70.0	530	PA66HS	Black (BK)	100 pcs.	3;9-12;15	109-00111
	7.7	300.0	70.0	530	PA66HS	Natural (NA)	100 pcs.	3;9-12;15	109-00140
Q120R	7.7	420.0	110.0	530	PA66HS	Black (BK)	100 pcs.	3;9-12;15	109-00113
	7.7	420.0	110.0	530	PA66HS	Natural (NA)	100 pcs.	3;9-12;15	109-00142
Q120M	7.7	520.0	130.0	530	PA66HS	Black (BK)	100 pcs.	3;9-12;15	109-00115
	7.7	520.0	130.0	530	PA66HS	Natural (NA)	100 pcs.	3;9-12;15	109-00144

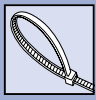
All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools											
	2	3	4	5	6	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	595	595	596	596	598	601	600	599	599	602	604

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties with smart design

X-Series

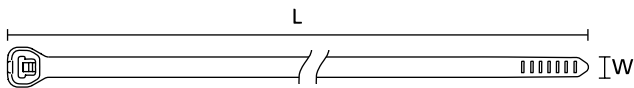
The X-series range of cable ties provides a new and improved design compared with standard cable ties, delivering a range of benefits and enhanced performance. With a new streamlined design and smaller head, the X-Series cable ties provide a superior fixing solution for tight applications, whilst also benefiting from a better grip around the bundle. This professional cable tie range is available in weather resistant and high impact / heat stabilised materials, ensuring these fixings consistently perform well at both high temperatures and in cold environments.

Features and benefits

- Inside serrated cable tie
- High tensile strength around cable bundles
- Smooth, rounded head design
- Space saving solution
- Improved ergonomic design
- Provides a secure fastening with no lateral movement



X-series provides a superior fixing solution for tight applications.



X-series



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
X20R	2.5	100.0	20.0	90	PA66HIRHS	Black (BK)	100 pcs.	2;4-6	108-00066
	2.5	100.0	20.0	90	PA66W	Black (BK)	100 pcs.	2;4-6	108-00072
X80S	4.7	150.0	35.0	355	PA66HIRHS	Black (BK)	100 pcs.	2-12	108-00001
	4.7	150.0	35.0	355	PA66W	Black (BK)	100 pcs.	2-12	108-00003
X80R	4.7	200.0	50.0	355	PA66HIRHS	Black (BK)	100 pcs.	2-12	108-00004
	4.7	200.0	50.0	355	PA66W	Black (BK)	100 pcs.	2-12	108-00010
X80I	4.7	300.0	84.0	355	PA66HIRHS	Black (BK)	100 pcs.	2-12	108-00018
	4.7	300.0	84.0	355	PA66W	Black (BK)	100 pcs.	2-12	108-00024
X80L	4.7	385.0	110.0	355	PA66HIRHS	Black (BK)	100 pcs.	2-12	108-00028
	4.7	385.0	110.0	355	PA66W	Black (BK)	100 pcs.	2-12	108-00034
X120R	7.7	369.0	100.0	535	PA66HIRHS	Black (BK)	100 pcs.	3;9-12	108-00040
	7.7	369.0	100.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	108-00042
X250R	13.0	535.0	150.0	1,115	PA66HIRHS	Black (BK)	50 pcs.	11-12	108-00050
	13.0	535.0	150.0	1,115	PA66W	Black (BK)	50 pcs.	11-12	108-00052
X250I	13.0	715.0	205.0	1,115	PA66HIRHS	Black (BK)	50 pcs.	11-12	108-00045
	13.0	715.0	205.0	1,115	PA66W	Black (BK)	50 pcs.	11-12	108-00047

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										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



Cable Ties for hose and gaiter

CTT-Series natural and black

CTT is designed to secure pipes, hoses and gaiters where low pressures are being secured. These ties can be used in many different industries including automotive, white goods manufacturing, medical, medical industry and construction.

Features and benefits

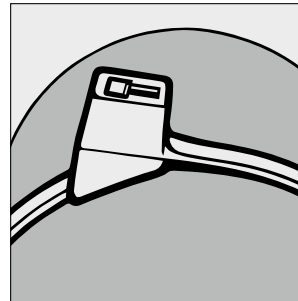
- Curved head design offers a good fit to the bundle
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool



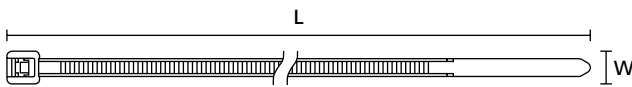
CTT ties installed on flexible gaiters.



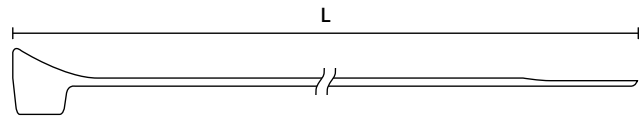
Material specification please see page 22.



For secure fixing of round and solid shapes.



CTT series



CTT Hose Ties

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
CTT20R	2.5	101.6	13.0	90	PA66	Natural (NA)	100 pcs.	2;4-6	112-51919
	2.5	101.6	13.0	90	PA66HS	Black (BK)	1,000 pcs.	2;4-6	112-51960
CTT60R	4.7	205.0	45.0	265	PA66	Black (BK)	100 pcs.	2-12	112-56019
	4.7	205.0	45.0	265	PA66HS	Black (BK)	100 pcs.	2-12	112-52112

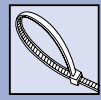
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties for parallel routing

DH-Series

Ideal for running two cables in parallel that need to be separated. These ties allow for installation of a second cable run without the need for additional cable ties.

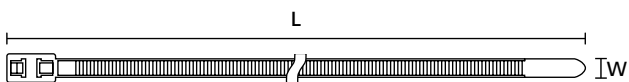
The DH ties are also widely used within the packaging industry - the first loop closes and secures the bag, whilst the second loop can be made into a carrying handle (subject to weight).

Features and Benefits

- Available in a wide range of materials
- Cable tie designed with two heads which creates an inside and outside serrated loop
- For parallel routing of two bundles with only one cable tie
- Bundles can be of different diameter
- Easy application either manually or with a processing tool



DH-Series cable ties for parallel routing.



DH-Series



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Ø max. side loops		Min. Tensile Strength 2nd loop (N)	Material	Colour	Pack Cont.	Tools	Article-No.
T50RDH	4.7	210.0	19.0	225	180 N	PA46	Grey (GY)	100 pcs.	2;4-6;8	117-05168
	4.7	210.0	19.0	225	180 N	PA66	Black (BK)	100 pcs.	2;4-6;8	117-05000
	4.7	210.0	19.0	225	180 N	PA66	Natural (NA)	100 pcs.	2;4-6;8	117-05002
	4.7	210.0	19.0	225	180 N	PA66HS	Black (BK)	100 pcs.	2;4-6;8	117-05050
	4.7	210.0	19.0	225	180 N	PA66W	Black (BK)	500 pcs.	2;4-6;8	117-05060
T50IDH	4.7	305.0	38.1	225	180 N	PA66	Natural (NA)	1,000 pcs.	2;4-6;8	117-05303
	4.7	305.0	38.1	225	180 N	PA66HS	Black (BK)	1,000 pcs.	2;4-6;8	117-05350
	4.7	305.0	38.1	225	180 N	PA66W	Black (BK)	100 pcs.	2;4-6;8	117-05360
T50LDH	4.7	395.0	50.8	225	180 N	PA66	Natural (NA)	1,000 pcs.	2;4-6;8	117-05461
	4.7	395.0	50.8	225	180 N	PA66HS	Black (BK)	100 pcs.	2;4-6;8	117-00008

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					
	2	3	6	10	11
	MK20	MK21	EVO7	EVO9	EVO9HT
	595	596	598	599	599

For more information on toolings please refer to the Application Tooling chapter.



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

We brought the first detectable metal content tie
onto the market

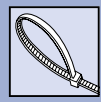


Today we are leading the next generation of solutions for a highly automated, highly competitive food and beverage industry.

Find out more about our detectable products for food processing in our brochure.

Order now!





Cable Ties for food industry, detectable

The Metal Content Tie is a cable tie specifically designed for use in the food and pharmaceutical processing industries. A unique manufacturing process, involving the inclusion of a metallic pigment, enables even small 'cut-off' sections of the tie to be detected by standard metal-detecting equipment. Ideally suited for the installation of cabling in and around the manufacturing process.

Features and Benefits

- Total metal dispersion throughout the tie
- Usable as part of HACCP process*
- Blue colour most common for easy visual detection
- Greatly reduces risk of contamination
- Magnetic and X-Ray detectable (detection level depending on specific application)
- Available in a wide range of sizes and colours



Our detectable MCT(S) cable ties used in the food and pharmaceutical industry.

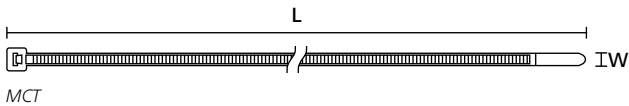


Material specification please see page 22.



Supports quality processes around the production of food stuffs, such as e.g. HACCP.

MCT-Series



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
MCT18R	2.5	100.0	22.0	80	PA66MP	Blue (BU)	100 pcs.	2;4-6	111-01225
MCT30R	3.5	150.0	35.0	135	PA66MP	Blue (BU)	100 pcs.	2;4-6	111-00829
MCT50R	4.6	202.0	50.0	225	PA66MP	Blue (BU)	100 pcs.	2;4-6,10	111-00830
MCT50L	4.7	380.0	110.0	225	PA66MP	Blue (BU)	100 pcs.	2;4-6,10	111-00831
MCT120R	7.6	387.0	100.0	535	PA66MP	Blue (BU)	100 pcs.	3,10,11	111-01136

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					
	2	3	6	10	11
	MK20	MK21	EVO7	EVO9	EVO9HT
	595	596	598	599	599

For more information on toolings please refer to the Application Tooling chapter.

MCT-Series releasable

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
MCTRELK2M	4.6	250.0	65.0	225	PA66MP	Blue (BU)	100 pcs.	2-11	111-00937

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

*HACCP stands for Hazard Analysis Critical Control Points. It is a method of identifying and eliminating potential hazards in food production. Those hazards that cannot be eliminated are controlled in such a way that the consumer is protected. These controls are known as Critical Control Points (CCPs). They are CRITICAL because if they fail or are not carried out, the risk of the product harming the customer increases.



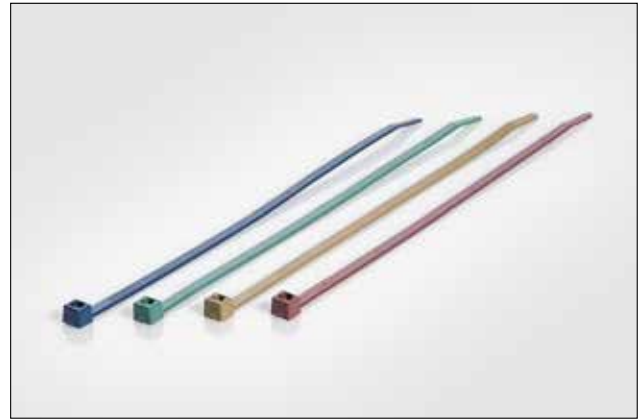
Cable Ties for food industry, detectable, corrosion resistant

MCTS-Series

Our MCTS cable ties have been specifically developed to be used in the food & beverage as well as in the pharmaceutical industry. A unique manufacturing process in combination with a unique material formulation is offering outstanding performance in line with high corrosion resistance. This makes the MCTS an ideal product even for very humid environments. In addition the MCTS ties manufactured from a polypropylene base material are offering very good chemical resistance.

Features and Benefits

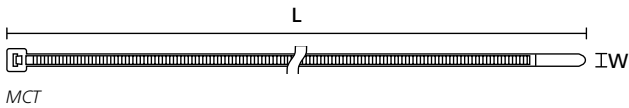
- Total metal dispersion throughout the tie
- Available in different sizes and colours
- Supports quality processes around the production of food stuffs
- Blue colour most common for easy visual detection
- Greatly reduces risk of contamination
- Magnetic and X-Ray detectable (detection level depending on specific application)
- MCTS ties have very good corrosion resistance




Our detectable MCT(S) cable ties used in the food and pharmaceutical industry.


i More colours on request. Please contact us!

i Supports quality processes around the production of food stuffs, such as e.g. HACCP.*



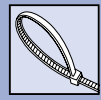
TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
MCTS100	2.5	100.0	22.0	60	PA66MP+	Blue (BU)	100 pcs.	2;4-6	111-01341
MCTS150	3.5	153.0	36.0	110	PA66MP+	Blue (BU)	100 pcs.	2;4-6	111-01342
MCTS200	4.7	203.0	50.0	150	PA66MP+	Blue (BU)	100 pcs.	2;4-6,10	111-01343
MCTS300	4.8	301.0	80.0	150	PA66MP+	Blue (BU)	100 pcs.	2;4-6,10	111-01399

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					
	2	3	6	10	11
	MK20	MK21	EVO7	EVO9	EVO9HT
	595	596	598	599	599

For more information on toolings please refer to the Application Tooling chapter.

*HACCP stands for Hazard Analysis Critical Control Points. It is a method of identifying and eliminating potential hazards in food production. Those hazards that cannot be eliminated are controlled in such a way that the consumer is protected. These controls are known as Critical Control Points (CCPs). They are CRITICAL because if they fail or are not carried out, the risk of the product harming the customer increases.



Cable Ties for food industry, detectable

MCT-Series / MCTS-Series PPMP

The Metal Content Tie is a cable tie specifically designed for use in the food and pharmaceutical processing industries. A unique manufacturing process, involving the inclusion of a metallic pigment, enables even small 'cut-off' sections of the tie to be detected by standard metal-detecting equipment. Ideally suited for the installation of cabling in and around the manufacturing process.

Features and Benefits

- High chemical and temperature resistance
- Blue color for easy visual detection
- Greatly reduces risk of contamination
- Magnetic and X-Ray detectable (detection level depending on specific application)
- MCTS ties have very good corrosion resistance
- Usable as part of HACCP process*
- PP cable ties tend to float in various liquids



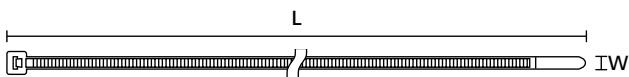
MCTPP ties will float to the surface of liquids so they can easily be seen and removed.



The MCT ties made of PA66MP are the ideal complement for MCMB mounts on page 148.



Supports quality processes around the production of food stuffs, such as e.g. HACCP.



MCT

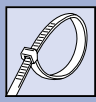
TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
MCTPP18R	2.5	100.0	22.0	85	PPMP	Blue (BU)	100 pcs.	2;4-6	111-01664
MCTPP30R	3.5	150.0	35.0	130	PPMP	Blue (BU)	100 pcs.	2;4-6	111-01665
MCTPP50R	4.6	200.0	50.0	150	PPMP	Blue (BU)	100 pcs.	2;4-6,10	111-01666
MCTPP50L	4.6	390.0	110.0	150	PPMP	Blue (BU)	100 pcs.	2;4-6,10	111-01667
MCTS200	4.7	201.0	50.0	140	PPMP+	Blue (BU)	100 pcs.	2;4-6,10	111-01386
MCTPP120R	7.6	387.0	100.0	380	PPMP	Blue (BU)	100 pcs.	3,10,11	111-01668

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					
	2	3	6	10	11
	MK20	MK21	EVO7	EVO9	EVO9HT
	595	596	598	599	599

For more information on toolings please refer to the Application Tooling chapter.

*HACCP stands for Hazard Analysis Critical Control Points. It is a method of identifying and eliminating potential hazards in food production. Those hazards that cannot be eliminated are controlled in such a way that the consumer is protected. These controls are known as Critical Control Points (CCPs). They are CRITICAL because if they fail or are not carried out, the risk of the product harming the customer increases.



Cable Ties for thin-walled bundles

OS-Series

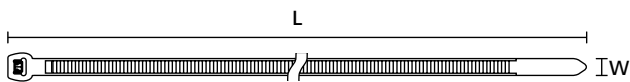
OS-Series cable ties are used in many areas where thin-walled or soft insulation wires and cable are being installed, for instance automotive and aircraft industry. OS ties manufactured from PA66V0 material are suitable for applications where safety regulations require reduction of smoke and dangerous gases.

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
- PA46 material for higher temperatures up to +150 °C
- PA66V0 cable ties fulfill Limited Fire Hazard requirements
- Easy application either manually or with a processing tool



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



OS-Series



The curved head design of the OS-Series



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18ROS	2.5	100.0	1.6	20.0	80	PA66HS	Black (BK)	500 pcs.	2;4-6	118-04701
	2.5	100.0	1.6	20.0	80	PA66HS	Natural (NA)	1,000 pcs.	2;4-6	118-00035
	2.5	100.0	1.6	20.0	80	PA66V0	White (WH)	100 pcs.	2;4-6	118-00079
	2.5	100.0	1.6	20.0	80	PA66W	Black (BK)	100 pcs.	2;4-6	118-00125
T30ROS	3.4	145.0	1.6	35.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	118-00064
	3.4	145.0	1.6	35.0	135	PA66HS	Black (BK)	100 pcs.	2;4-6	118-04800
T30LOS	3.4	200.0	1.6	50.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	118-00044
	3.4	200.0	1.6	50.0	135	PA66V0	White (WH)	100 pcs.	2;4-6	118-00080
	3.4	200.0	1.6	50.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	118-00126
	3.4	200.0	1.6	50.0	135	PA66HS	Black (BK)	100 pcs.	2;4-6	118-04900
T50SOS	4.6	150.0	1.6	35.0	225	PA66HS	Black (BK)	100 pcs.	2;4-8	118-05850
T50ROS	4.6	200.0	1.6	50.0	225	PA46	Grey (GY)	500 pcs.	2;4-8	118-05078
	4.6	200.0	1.6	50.0	225	PA66HS	Black (BK)	1,000 pcs.	2;4-8	118-00093
	4.6	200.0	1.6	50.0	225	PA66HS	Natural (NA)	1,000 pcs.	2;4-8	118-00097
	4.6	200.0	1.6	50.0	225	PA66	Natural (NA)	1,000 pcs.	2;4-8	118-00096
	4.6	200.0	1.6	50.0	225	PA66W	Black (BK)	100 pcs.	2;4-8	118-00127
T50MOS	4.6	245.0	1.6	66.0	225	PA66HS	Black (BK)	100 pcs.	2;4-8	118-00018
	4.6	245.0	1.6	66.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-8	118-00055
	4.6	245.0	1.6	66.0	225	PA66V0	White (WH)	100 pcs.	2;4-8	118-00081
	4.6	245.0	1.6	66.0	225	PA66W	Black (BK)	100 pcs.	2;4-8	118-00128
T50LOS	4.6	384.0	1.6	110.0	225	PA66HS	Black (BK)	100 pcs.	2;4-8	118-05900
T120ROS	7.6	385.0	5.0	105.0	535	PA66HS	Black (BK)	100 pcs.	3;9-12	118-00066
	7.6	385.0	5.0	105.0	535	PA66HS	Natural (NA)	100 pcs.	3;9-12	118-00067
	7.6	385.0	5.0	105.0	535	PA66V0	White (WH)	100 pcs.	3;9-12	118-00082
	7.6	385.0	5.0	105.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	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.

EN 45545-2

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



Cable Ties for high temperature applications up to +240°C

PEEK Ties have been designed for the use in hazardous environment. Their suitability for high temperature applications makes them ideal for use in the drilling industry, railway, offshore or automotive industry. The excellent chemical and radiation resistance is predestined for applications in medical engineering, chemical industry and power stations. Within the aerospace industry, PEEK ties are suitable due to their good ratio weight to tensile strength. Because of this combination of different properties, PEEK ties can replace metal solutions.

Features and benefits

- For high temperature applications from -55 °C up to +240 °C
- Outside serrated cable tie with smooth surface to the bundle
- Close fit to the cable bundle due to the deepening head shape
- Easy insertion combined with high tensile strength
- Takes up less space due to curved head design
- Combines the performance of a metal tie with the ease of use of a polyamide cable tie
- Manual and/or pneumatic tools available for greater process reliability



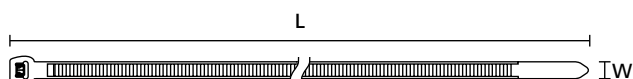
The contoured head takes up less space, gives a low insertion force and offers high strength.



Please find more PEEK products for your system solutions: Foot Part P1SFT65, see page 105. Screw Mount CTAM, see page 151.



One Step to the Web!



PEEK-Series

PEEK Ties, outside serrated

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Colour	Material	Pack Cont.	Tools	Article-No.
PT2A	3.4	145.0	4.0	35.0	230	Beige (BGE)	PEEK	100 pcs.	6-8	118-00032
PT3B	4.7	250.0	4.0	65.0	300	Beige (BGE)	PEEK	100 pcs.	6-8	118-00116

All dimensions in mm. Subject to technical changes.

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

PEEK Ties, inside serrated

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
PT220	4.7	220.0	8.0	56.0	380	PEEK	Beige (BGE)	100 pcs.	8;12;15	111-01235

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

	2	3	4	5	6	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	595	595	596	596	598	601	600	599	599	602	604

For more information on toolings please refer to the Application Tooling chapter.



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



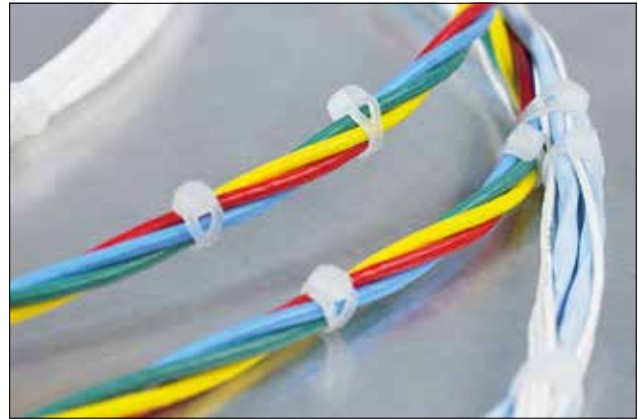
Cable Ties with 90° angled head

V-Series

Due to its low profile head, V-Series outside serrated cable ties are perfectly suited for applications with restricted space, such as camera, alarm and automation systems (Remote I/O Systems). Where bundles are fed through a grommet or ductwork, V-Series provides a practical solution due to its unique rounded design.

Features and benefits

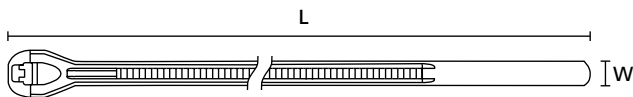
- Outside serrated cable tie with smooth surface to the bundle
- The 90° angled head perfectly fits onto the bundle
- Rounded head design minimises the risk of damage to insulation, especially of parallel routed bundles
- Low profile head takes up less space above the bundle
- Easy insertion and high tensile strength
- Easy application either manually or with a processing tool



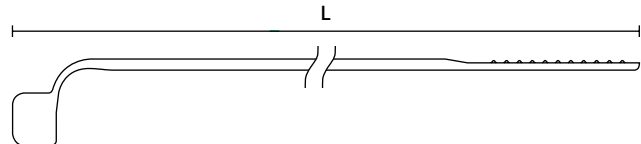
V-Series is perfect for parallel bundles.



Material specification please see page 22.



V-Series

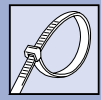


TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
V100R	2.5	102.5	20.0	100	PA46	Grey (GY)	1,000 pcs.	2;4-6	118-00109
	2.5	102.5	20.0	100	PA66HS	Natural (NA)	1,000 pcs.	2;4-6	118-00074
V150R	3.3	150.0	35.0	150	PA46	Grey (GY)	100 pcs.	2;4-6;8	118-00107
	3.3	150.0	35.0	150	PA66HS	Natural (NA)	100 pcs.	2;4-6;8	118-00089

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					
	2	4	5	6	8
	MK20	MK3SP	MK3PNSP2	EVO7	MK7P
	595	596	596	598	601

For more information on toolings please refer to the Application Tooling chapter.



Cable ties with low profile head

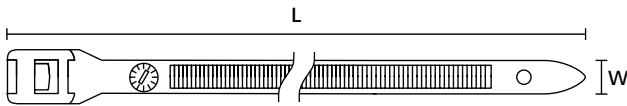
Designed primarily for use within the electrical supply industry these ties are particularly useful in areas with limited space. In addition the low profile head ensures there are no sharp edges. Coloured low profile cable ties are ideal for securing foam padding to playground equipment or for any identification purpose.

Features and benefits

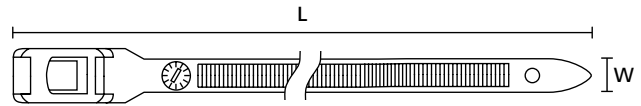
- Outside serrated cable tie with a smooth surface to bundle
- Coloured cable ties can be used for identification
- Broad contact area with cable, minimising risk of damage
- Low profile head for use in restricted area
- Parallel entry for enhanced fit around circular bundles



Low profile cable ties, RPE- and PE-Series.



PE-Series



RPE-Series

PE-Series coloured

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
PE180	9.0	180.0	42.0	445	PA66HSW	Black (BK)	100 pcs.	1;3;9-12	112-18060
PE400	9.0	400.0	116.0	445	PA66	Blue (BU)	100 pcs.	1;3;9-12	112-18101
	9.0	400.0	116.0	445	PA66	Green (GN)	100 pcs.	1;3;9-12	112-18100
	9.0	400.0	116.0	445	PA66	Red (RD)	100 pcs.	1;3;9-12	112-18102
	9.0	400.0	116.0	445	PA66	Yellow (YE)	100 pcs.	1;3;9-12	112-18103
PE530	9.0	535.0	146.0	445	PA66HSW	Black (BK)	100 pcs.	1;3;9-12	112-53060

All dimensions in mm. Subject to technical changes.

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

RPE-Series releasable

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
RPE275	9.0	275.0	69.0	445	PA66HSW	Black (BK)	100 pcs.	112-27560
RPE350	9.0	350.0	92.0	445	PA66HSW	Black (BK)	100 pcs.	112-35060

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	3	9	10	12
	MK10-SB	MK21	MK6	EVO9	MK9P
	595	595	600	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable ties with low profile head

LPH-Series

LPH cable ties are made of Polyamide 6.6 materials. The design with its serration on the outside provides a smooth surface to the cable bundle. Any damage to the insulation can be avoided. The flat head design offers additional benefit in areas with restricted space. They are mainly used within the electrical supply industry but perfectly suited for construction, heavy duty applications or the automotive industry.

Features and benefits

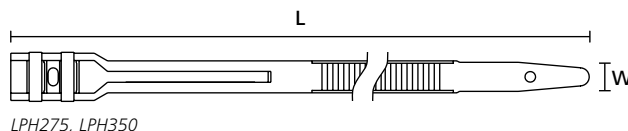
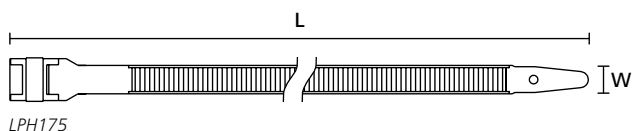
- For more flexibility high impact modified cable ties are available
- Good tensile strength with a single or a double bridged head
- Outside serration allows for a smooth surface to bundle
- Design protects against damage to cable insulation
- Low profile head for optimized use especially in restricted areas
- Strap is threaded parallel through the low profile head



Low profile cable tie, LPH-Series.



Material specification
please see page 22.



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
LPH175	9.0	175.0	40.0	310	PA66	Black (BK)	100 pcs.	1;3;9-12	112-00203
LPH275	9.0	265.0	62.0	480	PA66HIR(S)	Black (BK)	100 pcs.	1;3;9-12	112-00303
LPH350	9.0	355.0	92.0	480	PA66HIR(S)	Black (BK)	100 pcs.	1;3;9-12	112-00403
LPH500	9.0	505.0	140.0	540	PA66HIR(S)	Black (BK)	100 pcs.	1;3;9-12	112-00033
LPH750	9.0	752.0	220.0	540	PA66HIR(S)	Black (BK)	100 pcs.	1;3;9-12	112-00034

All dimensions in mm. Subject to technical changes.

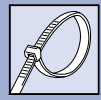
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools					
	1	3	9	10	12
	MK10-SB	MK21	MK6	EVO9	MK9P
	595	595	600	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Cable ties with low profile head

Robusto-Series

Robusto cable ties manufactured from PA11 have many technical features making them suitable for use in a variety of applications to fix and support cables, pipes and other elements. They offer an excellent resistance to chemicals in most challenging environments like offshore or on oil rigs and construction vehicles. In addition the very good UV resistance makes it a perfect choice for solar panel cable installations.

Features and benefits

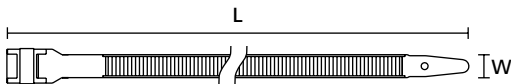
- Made of Polyamide 11 – a sustainable bioplastic from vegetable oil
- Outside serrated cable tie with an innovative rounded head design
- Low insertion force for tool-free application
- High tensile strength with a single or a double bridged head
- Soft material for easy handling without damaging cables
- Very good UV resistance and durability in outdoor applications
- Stable technical performance even at very low temperatures
- High resistance to chemicals including chlorides
- Low water absorption rate for consistent technical performance and high durability
- Prelocking function by simply pushing the strap through the eyelet provided



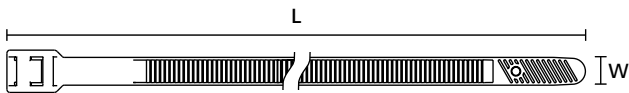
Flat head cable tie from sustainable bioplastic, Robusto-Series.



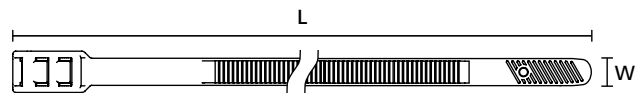
Application video:
Robusto



Robusto (LPH922)



Robusto (LPH942)



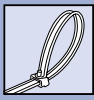
Robusto (LPH962, LPH992)

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
Robusto (LPH922)	9.0	123.0	22.0	310	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00025
Robusto (LPH942)	9.0	180.0	42.0	360	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00011
Robusto (LPH962)	9.0	260.0	62.0	530	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00012
Robusto (LPH992)	9.0	355.0	92.0	530	PA11	Black (BK)	100 pcs.	1;3;9-12	112-00013

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	3	9	10	12
	MK10-SB	MK21	MK6	EVO9	MK9P
	595	595	600	599	602

For more information on toolings please refer to the Application Tooling chapter.



Cable Tie locked by glass fibre pin

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

- 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
- Available in various materials, colours and almost every length
- Cable ties from PA12 are highly resistant to chemicals, impact and UV light
- KR-ties up to 426 mm are made as one piece
- For assembly a special KR-tool is needed



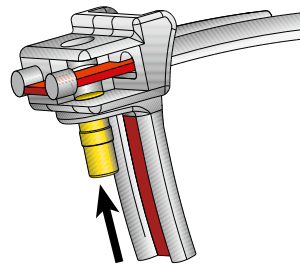
The KR-Series has been repeatedly proven in high vibration applications.



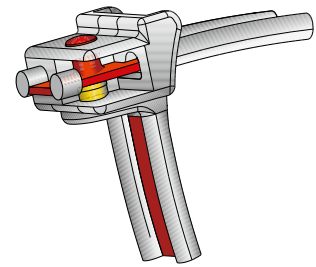
Specific part numbers according to EN45545 available on request.



Material specification please see page 22.

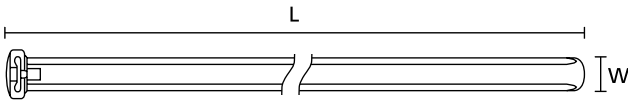


The unlocked head of a KR-tie.



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

KR-Series, 1-Piece



Cable tie KR-Series

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	PA66	Natural (NA)	50 pcs.	13	121-63519
	6.1	360.0	93.0	490	PA66HS	Natural (NA)	50 pcs.	13	121-63555
	6.1	360.0	93.0	490	PA66W	Black (BK)	50 pcs.	13	121-63560
KR8/21	8.0	210.0	47.0	785	PA66HS	Natural (NA)	50 pcs.	13-14	121-82155
	8.0	210.0	47.0	785	PA66	Natural (NA)	50 pcs.	13-14	121-82119
	8.0	210.0	47.0	785	PA66W	Black (BK)	50 pcs.	13-14	121-82160

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

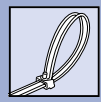
	13	14
	KR6/8	KR8PNSE
	603	603

For more information on toolings please refer to the Application Tooling chapter.

EN 45545-2

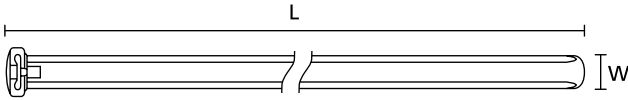


For product specific approvals and specifications please refer to the Appendix.



Cable Tie locked by glass fibre pin

KR-Series, 1-Piece



Cable tie KR-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
KR8/33	8.0	337.0	86.0	390	PA12	Black (BK)	50 pcs.	13-14	121-83380
	8.0	337.0	86.0	785	PA66	Natural (NA)	50 pcs.	13-14	121-83319
	8.0	337.0	86.0	785	PA46	Grey (GY)	50 pcs.	13-14	121-83378
	8.0	337.0	86.0	785	PA66HS	Natural (NA)	50 pcs.	13-14	121-83355
	8.0	337.0	86.0	785	PA66W	Black (BK)	50 pcs.	13-14	121-83360
KR8/43	8.0	426.0	105.0	785	PA66HS	Black (BK)	50 pcs.	13-14	121-74360
	8.0	426.0	105.0	785	PA66HS	Natural (NA)	50 pcs.	13-14	121-74359

All dimensions in mm. Subject to technical changes.

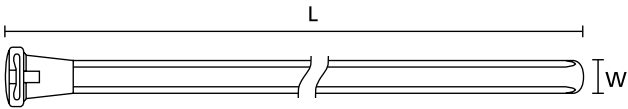
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

EN 45545-2



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

KR-Series, ultrasonic welded



Cable tie KR-Series, ultrasonic welded

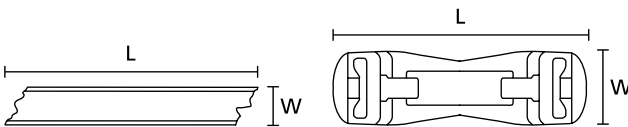
i Other dimensions are available on request.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
KR8/50	8.0	500.0	152.0	785	PA66	Natural (NA)	50 pcs.	13-14	121-05019
KR8/60	8.0	600.0	184.0	785	PA66W	Black (BK)	50 pcs.	13-14	121-06060

All dimensions in mm. Subject to technical changes.

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

KR-Series, endless



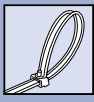
Cable tie KR8S1

Double-head KR8C5

TYPE	Width (W)	Length (L)	N	Material	Colour	Pack Cont.	Tools	Article-No.
KR8/S1	8.0	50.0 m	785	PA66HS	Natural (NA)	50.0 m	13-14	121-98151
	8.0	50.0 m	785	PA66W	Black (BK)	50.0 m	13-14	121-98160
KR8/C5	11.7	38.0	-	PA66HS	Natural (NA)	200 pcs.	13-14	121-58551
	11.7	38.0	-	PA66W	Black (BK)	200 pcs.	13-14	121-58560

All dimensions in mm. Subject to technical changes.

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



Endless cable ties with separate head and spacer

EL-TY-Series

These robust cable ties are particularly suitable for use with larger diameter cables, pipes and hoses. Designed originally for securing overhead, catenary and cables they are now used in many industries from the building sector, through to the chemical industry, to the installation of signs for traffic management. Separate spacers allow for a defined distance when bundling in parallel.

Features and benefits

- Made of very strong Polyacetal (POM)
- System consists of endless strap, spacers and heads
- Head includes stainless steel pawls for a proper fixation
- Very secure fixing and good resistance to ageing and UV light
- Suits any bundle diameter and reduces inventory

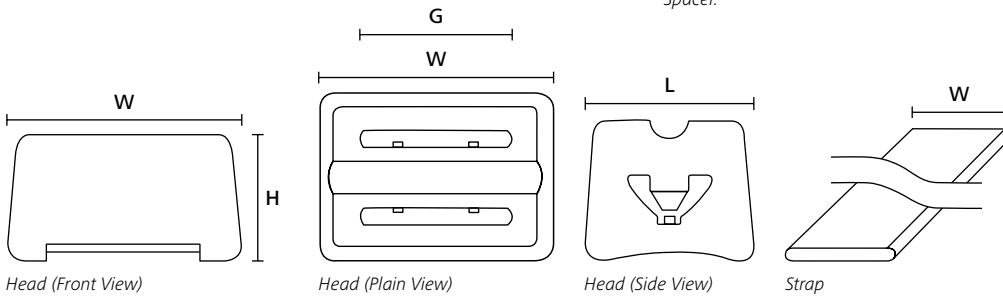
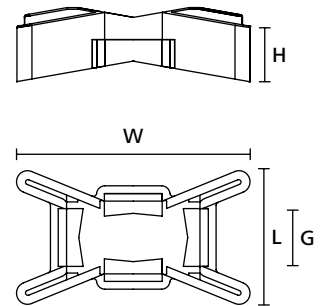


The EL-TY strap can be cut to suit any bundle.

Material specification please see page 22.



Spacer.



TYPE	Width (W)	Length (L)	Height (H)		Strap Width max. (G)	Material	Colour	Content	Tools	Article-No.
EL-TY (TELS1)	12.7	15.2 m	-	1,112	-	POM	Black (BK)	15m Strap, 30 Heads	11	111-30000
EL-TY (TELSH)	20.3	15.8	12.4	-	12.7	POM	Black (BK)	25 Heads	-	111-31000
EL-TY (TELS-SPK2)	53.3	30.5	17.0	-	12.7	PP	Black (BK)	50 Spacer	-	111-32000

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 EVO9HT
	599

For more information on toolings please refer to the Application Tooling chapter.



Cable Ties inside serrated

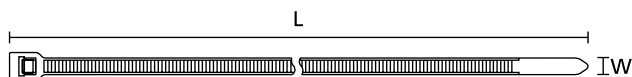
Used in a wide range of industries these releasable and reusable ties are ideal where changes are anticipated. This includes temporary installation and the addition or removal of elements. These releasable cable ties are commonly used to fix stage equipment, for cable management at outdoor events or prototype harnessing work. The extended pawl is simply pushed down with a finger to release the strap.

Features and benefits

- Releasable and reusable cable tie
- Multiple grades of PA66 for indoors, outdoors or at high temperatures
- Available in black and natural colour
- Extended trigger for simple and quick release of ties
- Inside serrated cable tie
- Different lengths available



RELK releasable cable ties for temporary bundling.



RELK-, RLT-Series



Application video:
RELK

RELK-Series up to 200 N loop tensile strength

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
RELK2R	4.6	200.0	50.0	200	PA66	Natural (NA)	100 pcs.	115-02202
RELK2M	4.6	250.0	65.0	200	PA66	Black (BK)	100 pcs.	115-02000
	4.6	250.0	65.0	200	PA66	Natural (NA)	100 pcs.	115-06729
RELK2I	4.6	300.0	81.0	200	PA66	Black (BK)	100 pcs.	115-06760
	4.6	300.0	81.0	200	PA66	Natural (NA)	100 pcs.	115-02101
RELK2L	4.6	350.0	95.0	200	PA66	Black (BK)	100 pcs.	115-02300
	4.6	350.0	95.0	200	PA66	Natural (NA)	100 pcs.	115-06919

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

RLT-Series up to 670 N loop tensile strength

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
RLT120	7.6	340.0	90.0	535	PA66	Black (BK)	100 pcs.	111-70361
	7.6	340.0	90.0	535	PA66	Natural (NA)	100 pcs.	111-70319
RLT150	8.9	770.0	225.0	670	PA66	Black (BK)	50 pcs.	111-70110
	8.9	770.0	225.0	670	PA66	Natural (NA)	50 pcs.	111-70119
	8.9	770.0	225.0	670	PA66HS	Natural (NA)	50 pcs.	111-70159
	8.9	770.0	225.0	670	PA66W	Black (BK)	50 pcs.	111-70160

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



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



Cable Ties inside serrated

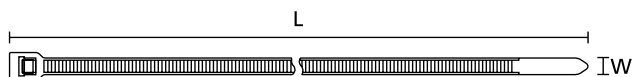
Used in a wide range of industries these releasable and reusable ties are ideal where changes are anticipated. This includes temporary installation and the addition or removal of elements. These releasable cable ties are commonly used to fix stage equipment, for cable management at outdoor events or prototype harnessing work. The extended pawl is simply pushed down with a finger to release the strap.

Features and benefits

- Releasable and reusable cable tie
- Multiple grades of PA66 for indoors, outdoors or at high temperatures
- Available in black and natural colour
- Extended trigger for simple and quick release of ties
- Inside serrated cable tie
- Different lengths available



RELK releasable cable ties for temporary bundling.



RELK-, RLT-Series



Application video:
RELK

RELK-Series up to 200 N loop tensile strength

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
RELK2R	4.6	200.0	50.0	200	PA66	Natural (NA)	100 pcs.	115-02202
RELK2M	4.6	250.0	65.0	200	PA66	Black (BK)	100 pcs.	115-02000
	4.6	250.0	65.0	200	PA66	Natural (NA)	100 pcs.	115-06729
RELK2I	4.6	300.0	81.0	200	PA66	Black (BK)	100 pcs.	115-06760
	4.6	300.0	81.0	200	PA66	Natural (NA)	100 pcs.	115-02101
RELK2L	4.6	350.0	95.0	200	PA66	Black (BK)	100 pcs.	115-02300
	4.6	350.0	95.0	200	PA66	Natural (NA)	100 pcs.	115-06919

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

RLT-Series up to 670 N loop tensile strength

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
RLT120	7.6	340.0	90.0	535	PA66	Black (BK)	100 pcs.	111-70361
	7.6	340.0	90.0	535	PA66	Natural (NA)	100 pcs.	111-70319
RLT150	8.9	770.0	225.0	670	PA66	Black (BK)	50 pcs.	111-70110
	8.9	770.0	225.0	670	PA66	Natural (NA)	50 pcs.	111-70119
	8.9	770.0	225.0	670	PA66HS	Natural (NA)	50 pcs.	111-70159
	8.9	770.0	225.0	670	PA66W	Black (BK)	50 pcs.	111-70160

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



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



Cable Ties inside serrated with tuckaway

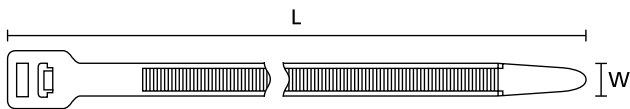
The RT250 is a releasable cable tie. Due to its minimum loop tensile strength of 1,115 N the cable tie is perfectly suited to fix larger and/or heavier bundles. RT250 can be opened and re-used. UV resistant cable ties manufactured from PA66W are recommended for outdoor applications. For shorter lengths REL250-Series can be offered.

Features and benefits

- Releasable and reusable cable tie
- Suitable for larger and/or heavier bundles
- Eyelet allows excess tail to be tucked neatly away
- Available in black and natural colour
- Extended trigger for simple and quick release of ties
- Protected trigger to avoid accidental release
- RT250 cable ties are inside serrated



Ideal for larger or heavier bundles these ties can be opened and reused.

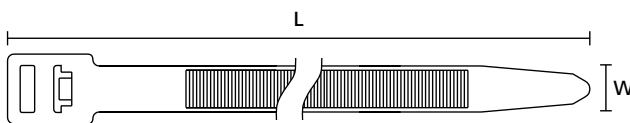


RT250-Series

RT250-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
RT250XL	12.5	1,030.0	305.0	1,115	PA66	Black (BK)	25 pcs.	131-75510
	12.5	1,030.0	305.0	1,115	PA66	Natural (NA)	25 pcs.	131-75519
RT250M	12.5	565.3	150.0	1,115	PA66	Black (BK)	25 pcs.	131-75610
	12.5	565.3	150.0	1,115	PA66	Natural (NA)	25 pcs.	131-75619
	12.5	565.3	150.0	1,115	PA66W	Black (BK)	25 pcs.	131-75620

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



Releasable cable tie REL250-Series

REL250-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
REL250S	12.2	230.0	50.0	1,115	PA66HIR(S)	Black (BK)	50 pcs.	111-00074
REL250X	12.2	385.0	100.0	1,115	PA66HIR(S)	Black (BK)	50 pcs.	111-00075

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



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



Cable Ties inside serrated with kickdown lever

REL-Series

The REL-Series is ideally used in applications where changes are anticipated and a tie need to be opened and closed repeatedly. The release mechanism of an REL cable tie allows simple and quick opening with only one hand. UV resistant cable ties manufactured from PA66W are recommended for outdoor applications.

Features and benefits

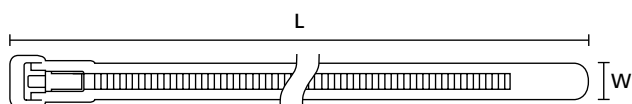
- Releasable and reusable cable tie for medium-weight loads
- Extremely easy-to-operate release mechanism
- Opens simply and quickly with only one hand
- Also available in PA66W for outdoor applications
- REL cable ties have their serration on the inside



Releasable and reusable cable tie, REL-Series.



Material specification please see page 22.



REL-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
REL180	6.5	180.0	46.0	150	PA66	Black (BK)	100 pcs.	115-00027
REL100	6.7	100.0	21.0	180	PA66	Black (BK)	100 pcs.	131-21010
	6.7	100.0	21.0	180	PA66	Natural (NA)	100 pcs.	131-21019
REL140	7.6	150.0	35.0	200	PA66	Black (BK)	100 pcs.	131-21410
	7.6	150.0	35.0	200	PA66	Natural (NA)	100 pcs.	131-21419
REL250	7.6	250.0	68.0	200	PA66	Black (BK)	100 pcs.	131-22510
	7.6	250.0	68.0	200	PA66	Natural (NA)	100 pcs.	131-22519
	7.6	250.0	68.0	200	PA66W	Black (BK)	100 pcs.	131-22560

All dimensions in mm. Subject to technical changes.

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



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



Cable Ties inside serrated with one-hand release mechanism

REZ-Series

Perfect for use in the packaging industry as a bag closure where access to part of the bag content may be needed but the bag need to be re-sealed later. Something that often occurs for instance in the catering or service industry. In addition the cable tie can be opened easily with only two fingers by simply pushing the wings of the unique head.

Features and benefits

- REZ-Series can be released and reused
- Unique head design for simple and rapid use
- Quick-release mechanism for one-hand operation
- Cable tie can be opened even when under tension
- Can still be released when working with gloves



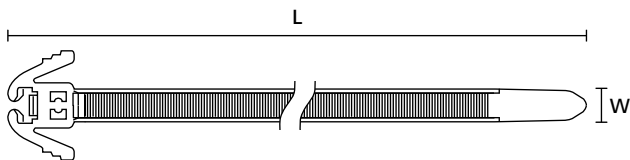
The REZ ties have a one-hand, simple release mechanism.



Material specification please see page 22.



Application video:
REZ



REZ-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
REZ200	4.7	200.0	50.0	135	PA66	Black (BK)	100 pcs.	115-40200
	4.7	200.0	50.0	135	PA66	Fluorescent Pink (FLPK)	100 pcs.	115-00147
	4.7	200.0	50.0	135	PA66	Green (GN)	100 pcs.	115-00106
	4.7	200.0	50.0	135	PA66	Orange (OG)	100 pcs.	115-00132
REZ300	4.7	305.0	80.0	135	PA66	Black (BK)	100 pcs.	115-40300
	4.7	305.0	80.0	135	PA66	Fluorescent Pink (FLPK)	100 pcs.	115-00138

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



Cable Ties outside serrated for marking

LR55-Series

Releasable cable ties of our LR55-Series offer some extra benefits. Their serration is on the outside of the cable tie. This will minimise the risk of damage to cables or other elements. Additionally LR55 cable ties are available in different colours – optimally suited for temporary identification within logistic, packaging, cable harness production or for testing purposes. The strap is released when pushing the extended pawl upwards. The risk of opening the cable tie accidentally is minimised.

Features and benefits

- Releasable and reusable cable tie
- Various colours for applications needing colour coding
- Extended trigger for simple and quick release of ties
- Risk of accidental release is minimised
- Outside serration prevents damage to cable insulation



Releasable and outside serrated LR55 cable ties are ideal suited for colour coding.



Application video:
LR55



**Material specification
please see page 22.**



LR55-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
LR55R	4.7	195.0	50.0	245	PA66	Blue (BU)	25 pcs.	115-00006
	4.7	195.0	50.0	245	PA66	Green (GN)	25 pcs.	115-00005
	4.7	195.0	50.0	245	PA66	Natural (NA)	25 pcs.	115-00008
	4.7	195.0	50.0	245	PA66	Red (RD)	25 pcs.	115-00003
	4.7	195.0	50.0	245	PA66	Yellow (YE)	25 pcs.	115-00004
	4.7	195.0	50.0	245	PA66HS	Black (BK)	25 pcs.	115-00002

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



Cable Ties without serration in flexible TPU

The soft, flexible material makes these ties particularly suitable for use on sensible wires for instance fibre-optic cables. Additionally they are suitable for moving elements and vibrating applications. The double slotted head allows for parallel bundling.

Features and benefits

- Elastic and flexible cable ties with rounded and smooth edges
- Releasable and reusable
- Double slotted head with fixation pawl
- Flexibility ensures steady and evenly distributed pressure
- Tight fixation even in vertical position: prevent sliding down or loosening bundle
- Suitable for moving elements and vibrating applications like windmills, machines, robotics, pulsating tubing and conduits
- Ideal use for temporarily fixation for presentations, concerts, theatres, exhibitions
- Long lifetime when used indoor
- Remains flexible even at cold temperatures (-20°C)

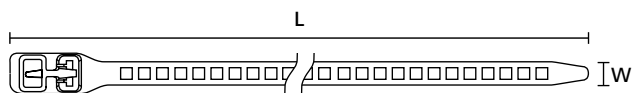


The elasticity of the SOFTFIX ties makes them suitable for use in many applications.

i With 2nd loop to run bundles in parallel!



Application video: SOFTFIX



SRT- and SOFTFIX-Series



SOFTFIX ties available in small packaging units.

SRT-Series for industry quantities

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Article-No.
SRT1807	7.0	180.0	45.0	57	TPU	Black (BK)	50 pcs.	115-07189
SRT2607	7.0	260.0	79.0	57	TPU	Black (BK)	50 pcs.	115-07269
SRT26011	11.0	260.0	55.0	123	TPU	Black (BK)	50 pcs.	115-11269
SRT34011	11.0	340.0	90.0	123	TPU	Black (BK)	50 pcs.	115-11349
SRT58028	28.0	580.0	150.0	360	TPU	Black (BK)	10 pcs.	115-28589
SRT88028	28.0	880.0	240.0	360	TPU	Black (BK)	180 pcs.	115-28889

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

SOFTFIX-Family

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Article-No.
SOFTFIX XS	7.0	180.0	45.0	57	TPU	Black (BK)	16 pcs.	115-07190
SOFTFIX S	7.0	260.0	79.0	57	TPU	Black (BK)	12 pcs.	115-07270
SOFTFIX M	11.0	260.0	55.0	123	TPU	Black (BK)	8 pcs.	115-11270
SOFTFIX L	11.0	340.0	90.0	123	TPU	Black (BK)	6 pcs.	115-11350
SOFTFIX XL	28.0	580.0	150.0	360	TPU	Black (BK)	3 pcs.	115-28590
SOFTFIX XXL	28.0	880.0	240.0	360	TPU	Black (BK)	3 pcs.	115-28898

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



Cable Tie with quick release mechanism Speedy-Click

SpeedyTie

The versatility of the SpeedyTie means that it is suitable for a multitude of applications like electro installations, heating and ventilation, construction, exhibitions and trade fairs. Whether it is used for permanent or temporarily solutions the SpeedyTie is a very strong helping hand in every situation.

Features and benefits

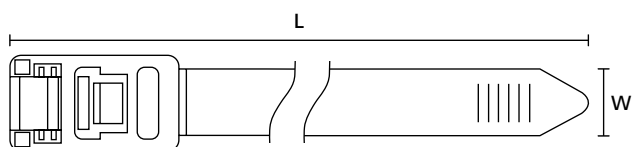
- Releasable and reusable cable tie
- Bears loads of up to 888 N (approx. 90 kg)
- 750 mm long for use in a wide variety of applications
- Can be used for parallel bundling
- Easy to handle when wearing work gloves
- Available in signal yellow and in black



Excess tails can be neatly tucked away.



Application video:
SpeedyTie



SpeedyTie

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
SpeedyTie (RTT750HR)	13.0	752.0	210.0	888	PA66	Yellow (YE), Red (RD)	5 pcs.	115-00001
	13.0	752.0	210.0	888	PA66	Yellow (YE), Red (RD)	25 pcs.	115-00000
	13.0	752.0	210.0	888	PA66HIR(S)	Black (BK)	5 pcs.	115-00030

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



Hook and Loop Ties

TEXTIE-Series

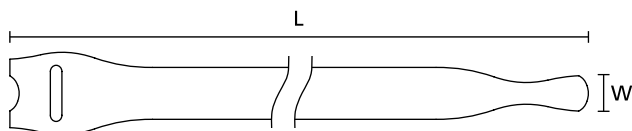
The TEXTIE-Series offers a soft bundling method and is ideal for use on telephone cables, optical fibre and network cables. These cable ties can be reopened and reused up to 400 times. A perfect solution for temporary installations and cable management for stage equipment, at outdoor events or for prototype harnessing. Maybe it is simply used in private or office applications. TEXTIE cable ties are available in various colours and can be used to colour-code cables and/or wires.

Features and benefits

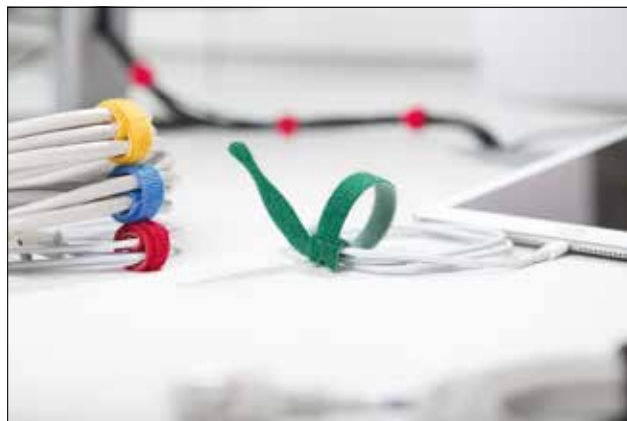
- Quick and simple to use without tools
- Re-usable up to 400 times
- Various colours for easy identification
- For indoor and outdoor use
- Can be attached to the bundle permanently
- Resistant to ageing, no corrosion



Application video:
TEXTIE



TEXTIE-Series



Due to the functional cable tie design the TEXTIE is fixed on the cable and cannot get lost.



The TEXTIE-Series is available in different colours and lengths.



**Material specification
please see page 22.**

TYPE	Width (W)	Length (L)	Bundle Ø max.	Material Loop	Material Hook	Colour	Pack Cont.	Article-No.
TEXTIE 5M	12.5	5,000.0	-	Polyamide 6.6 (PA66)	Polypropylene (PP)	Black (BK)	1 pc.	130-00020
TEXTIE S	12.5	150.0	45.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Black (BK)	10 pcs.	130-00012
TEXTIE M	12.5	200.0	60.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Black (BK)	10 pcs.	130-00013
	12.5	200.0	60.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Blue (BU)	10 pcs.	130-00018
	12.5	200.0	60.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Green (GN)	10 pcs.	130-00017
	12.5	200.0	60.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Red (RD)	10 pcs.	130-00014
	12.5	200.0	60.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	White (WH)	10 pcs.	130-00021
	12.5	200.0	60.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Yellow (YE)	10 pcs.	130-00016
TEXTIE L	12.5	330.0	100.0	Polyamide 6.6 (PA66)	Polypropylene (PP)	Black (BK)	10 pcs.	130-00019
TEXTIE 25M	13.0	25,000.0	-	Polyamide 6.6 (PA66)	Polypropylene (PP)	Black (BK)	1 pc.	130-00022

All dimensions in mm. Subject to technical changes.

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

Short Circuit Test (SCT)

The alternative to cable cleats

HellermannTyton's single and double wrap Metal Ball (MBT) and Buckle Ties (AMT) fully withstand the maximum force of short circuits in trefoil formation according to the results of laboratory tests performed using the parameters outlined in the IEC 61914:2009 cable cleat standard.

The tests conducted by the NEFI High Power Laboratory in Norway – a member of the Scandinavian Association for Testing of Electric Power Equipment (SATS) – demonstrated that our MBT and AMT stainless steel cable ties resist the huge forces unleashed by power cables in the event of a short circuit, even when they are installed in a 'worst case' trefoil formation scenario (see drawing below).

Construction of the HellermannTyton SCT

The MBT and AMT metal ties were insulated from the cable jackets with LFPC polyolefin protective channels as an added layer of protection. Two different cable sizes, \varnothing 36 mm (300 mm²) and \varnothing 13 mm (50 mm²), each with 3 cables 8 m in length in trefoil formation, were tested with short circuit times between 0.2 and 0.5 seconds at various current levels.

Advantages of using HellermannTyton stainless steel cable ties over cable cleats:

- Suitable for indoor and outdoor environments
- Very good heat and chemical resistance
- Due to the range of strap lengths and widths it is easy to choose a solution for every application
- Only one cable tie for many different cable diameters
- Lower installation costs
- Low inventory value

Conclusion

- With the SCT we have proven that our MBT and AMT cable ties are suitable for low and medium voltage cable and withstand a certain level of short circuit currents.

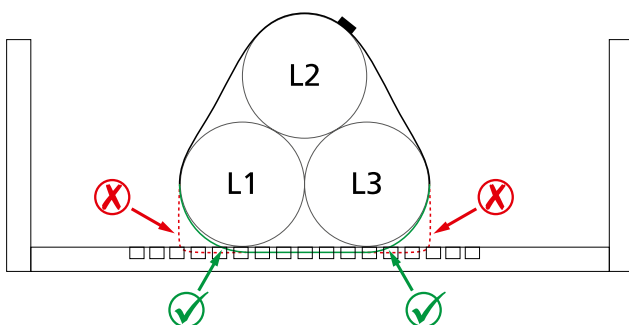
The stainless steel cable ties from HellermannTyton are a time saving solution with a low price and low installation cost.



Double wrap stainless steel cable ties, uncoated, MBT_UHD.



AMT Ties with and without protective profile.



Best practice for installation in trefoil formation. Ties should be bundled as closely as possible to the cables for a smooth loop and to avoid sharp edges.



One Step to the Web!

Please note that the information provided here is no substitute for a suitability test of your individual application.



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.



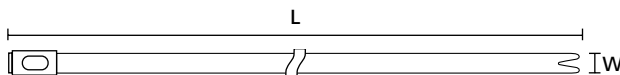
Stainless Steel Cable Ties, uncoated, MBT_XHS.



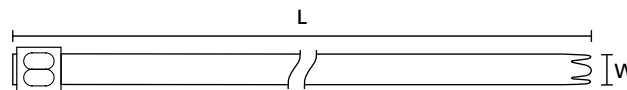
Can support quality assurance in the production of food stuffs, for example HACCP.



The MBT-Series (up to 7.9 mm) can be used in combination with the stainless steel P-Mount. The mount is simple to install with a screw or bolt and ensures a durable fixing solution. Please see page 163.



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.		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
MBT27SS	4.6	685.0	17.0	203.0	900	SS304	100 pcs.	15-18	111-93278
MBT33SS	4.6	838.0	17.0	254.0	900	SS304	100 pcs.	15-18	111-93338
MBT8HS	7.9	201.0	17.0	50.0	2,000	SS304	50 pcs.	15-18	111-94088
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
MBT27HS	7.9	685.0	17.0	203.0	2,000	SS304	50 pcs.	15-18	111-94278
MBT33HS	7.9	838.0	17.0	254.0	2,000	SS304	50 pcs.	15-18	111-94338
MBT14XHS	12.3	362.0	17.0	102.0	2,700	SS304	50 pcs.	15-18	111-95148
MBT20XHS	12.3	521.0	17.0	152.0	2,700	SS304	50 pcs.	15-18	111-95208
MBT27XHS	12.3	681.0	17.0	203.0	2,700	SS304	50 pcs.	15-18	111-95278
MBT33XHS	12.3	838.0	17.0	254.0	2,700	SS304	50 pcs.	15-18	111-95338

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
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.



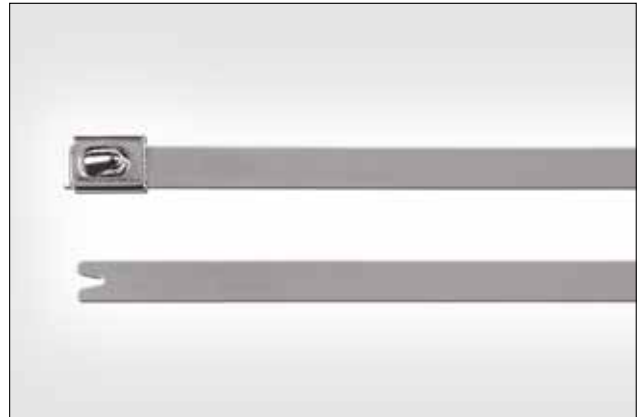
Cable ties with ball-lock

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.

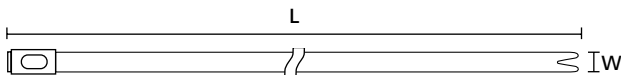
Features and benefits

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



Stainless steel cable ties, uncoated, MBT_S, MBT_H.

Material specification please see page 23.



MBT-Series 4.6 mm and 7.9 mm width

Can support quality assurance in the production of food stuffs, for example HACCP.

The MBT-Series (up to 7.9 mm) can be used in combination with the stainless steel P-Mount. The mount is simple to install with a screw or bolt and ensures a durable fixing solution. Please see page 163.

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		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
MBT27S	4.6	685.0	12.0	203.0	900	SS316	100 pcs.	15-18	111-93279
MBT33S	4.6	838.0	12.0	254.0	900	SS316	100 pcs.	15-18	111-93339
MBT8H	7.9	201.0	12.0	50.0	2,000	SS316	50 pcs.	15-18	111-94089
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

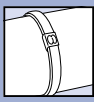
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools				
	15	16	17	18
	MK9SST	MK9PSST	HDT16	KST-STG200
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.

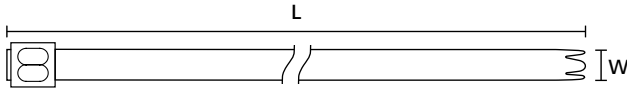


For product specific approvals and specifications please refer to the Appendix.

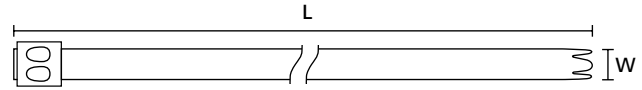


Cable ties with ball-lock

MBT-Series, stainless steel 316



MBT-Series 12.3 mm width



MBT-Series 16.0 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MBT14XH	12.3	362.0	12.0	102.0	2,700	SS316	50 pcs.	15-18	111-95149
MBT20XH	12.3	521.0	12.0	152.0	2,700	SS316	50 pcs.	15-18	111-95209
MBT27XH	12.3	681.0	12.0	203.0	2,700	SS316	50 pcs.	15-18	111-95279
MBT33XH	12.3	838.0	12.0	254.0	2,700	SS316	50 pcs.	15-18	111-95339
MBT43UH	16.0	1,092.0	12.0	330.0	4,100	SS316	25 pcs.	15;17	111-01305
MBT49UH	16.0	1,245.0	12.0	380.0	4,100	SS316	25 pcs.	15;17	111-01306
MBT14UH	16.0	362.0	12.0	102.0	4,100	SS316	50 pcs.	15;17	111-01301
MBT20UH	16.0	521.0	12.0	152.0	4,100	SS316	50 pcs.	15;17	111-01302
MBT27UH	16.0	681.0	12.0	203.0	4,100	SS316	50 pcs.	15;17	111-01303
MBT33UH	16.0	838.0	12.0	254.0	4,100	SS316	50 pcs.	15;17	111-01304
MBT43UH	16.0	1092.0	12.0	330.0	4,100	SS316	25 pcs.	15; 17	111-01305
MBT49UH	16.0	1245.0	12.0	380.0	4,100	SS316	25 pcs.	15; 17	111-01306

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
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.



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



Double wrap cable ties with ball-lock

MBTXHD- / MBTUHD-Series, stainless steel 316

The double wrap ties of the MBT-series are used in applications where a fixing requires an extraordinary high tensile strength.

Features and benefits

- Stainless steel MBT ties with double wrap operation
- Wraps around the bundle and passes through the head twice
- Very high tensile strength to carry enormous applied loads
- Head with two locking balls
- Resistant to arduous conditions and environments



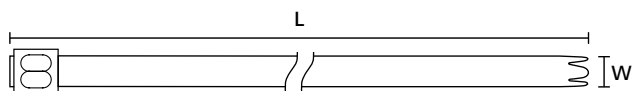
Can support quality assurance in the production of food stuffs, for example HACCP.



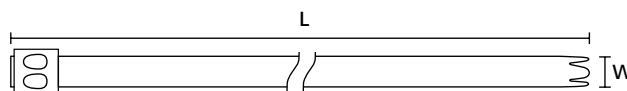
Material specification please see page 23.




Double wrap stainless steel cable ties, uncoated, MBT_UHD.



MBT-Series 12.3 mm width




MBT-Series 16.0 mm width

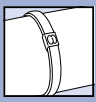
TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	 N	Material	Pack Cont.	Tools	Article-No.
MBT27XHD	12.3	681.0	17.0	100.0	5,000	SS316	50 pcs.	15-18	111-01307
MBT33XHD	12.3	838.0	17.0	120.0	5,000	SS316	50 pcs.	15-18	111-01308
MBT43XHD	12.3	1,092.0	17.0	160.0	5,000	SS316	25 pcs.	15-18	111-01309
MBT49XHD	12.3	1,245.0	17.0	180.0	5,000	SS316	25 pcs.	15-18	111-01310
MBT60XHD	12.3	1,524.0	17.0	230.0	5,000	SS316	25 pcs.	15-18	111-01311
MBT27UHD	16.0	681.0	25.0	100.0	7,000	SS316	50 pcs.	15;17	111-01312
MBT33UHD	16.0	838.0	25.0	120.0	7,000	SS316	50 pcs.	15;17	111-01313
MBT43UHD	16.0	1,092.0	25.0	160.0	7,000	SS316	25 pcs.	15;17	111-01314
MBT49UHD	16.0	1,245.0	25.0	180.0	7,000	SS316	25 pcs.	15;17	111-01315
MBT60UHD	16.0	1,524.0	25.0	230.0	7,000	SS316	25 pcs.	15;17	111-01316

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
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.



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



The MBT-Series (up to 7.9 mm) can be used in combination with the stainless steel P-Mount. The mount is simple to install with a screw or bolt and ensures a durable fixing solution. Please see page 163.



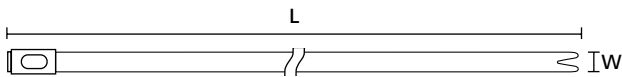
Material specification please see page 23.




Stainless steel cable ties, coated, MBT_SFC, MBT_HFC.




Stainless steel cable ties, coated, MBT_XHFC.



MBT-Series 4.6 mm and 7.9 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MBT5SFC	4.6	127	15	25	540	SS316, SP	100 pcs.	15-18	111-00288
MBT8SFC	4.6	201	17	50	540	SS316, SP	100 pcs.	15-18	111-00289
MBT14SFC	4.6	362	17	102	540	SS316, SP	100 pcs.	15-18	111-00290
MBT20SFC	4.6	521	17	152	540	SS316, SP	100 pcs.	15-18	111-00291
MBT27SFC	4.6	681	17	203	540	SS316, SP	100 pcs.	15-18	111-00292
MBT33SFC	4.6	838	17	254	540	SS316, SP	100 pcs.	15-18	111-00293
MBT8HFC	7.9	201	17	50	1,020	SS316, SP	50 pcs.	15-18	111-00294
MBT14HFC	7.9	362	17	102	1,020	SS316, SP	50 pcs.	15-18	111-00295
MBT20HFC	7.9	521	17	152	1,020	SS316, SP	50 pcs.	15-18	111-00296
MBT27HFC	7.9	681	17	203	1,020	SS316, SP	50 pcs.	15-18	111-00297
MBT33HFC	7.9	838	17	254	1,020	SS316, SP	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
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.

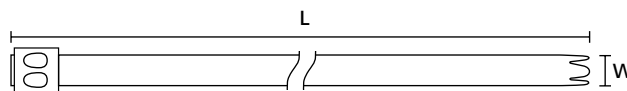


Cable ties with ball-lock and coating

MBT-FC-Series, stainless steel 316



MBT-Series 12.3 mm width



MBT-Series 16.0 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MBT14XHFC	12.3	362	17	102	1,620	SS316, SP	50 pcs.	15-18	111-00299
MBT20XHFC	12.3	521	17	152	1,620	SS316, SP	50 pcs.	15-18	111-00300
MBT27XHFC	12.3	681	17	203	1,620	SS316, SP	50 pcs.	15-18	111-00301
MBT33XHFC	12.3	838	17	254	1,620	SS316, SP	50 pcs.	15-18	111-00302
MBT17XHFC	12.3	434	17	125	1,620	SS316, SP	50 pcs.	15-18	111-01500
MBT23XHFC	12.3	575	17	168	1,620	SS316, SP	50 pcs.	15-18	111-01501
MBT30XHFC	12.3	754	17	225	1,620	SS316, SP	50 pcs.	15-18	111-01502
MBT43XHFC	12.3	1,092.00	17	330	1,620	SS316, SP	25 pcs.	15-18	111-01503
MBT49XHFC	12.3	1,245.00	17	380	1,620	SS316, SP	25 pcs.	15-18	111-01504
MBT14UHFC	16	362	25	102	2,500	SS316, SP	50 pcs.	15;17	111-01512
MBT17UHFC	16	434	25	125	2,500	SS316, SP	50 pcs.	15;17	111-01513
MBT20UHFC	16	521	25	152	2,500	SS316, SP	50 pcs.	15;17	111-01514
MBT23UHFC	16	575	25	168	2,500	SS316, SP	50 pcs.	15;17	111-01515
MBT27UHFC	16	681	25	203	2,500	SS316, SP	50 pcs.	15;17	111-01516
MBT30UHFC	16	754	25	225	2,500	SS316, SP	50 pcs.	15;17	111-01517
MBT33UHFC	16	838	25	254	2,500	SS316, SP	50 pcs.	15;17	111-01518
MBT43UHFC	16	1,092.00	25	330	2,500	SS316, SP	25 pcs.	15;17	111-01519
MBT49UHFC	16	1,245.00	25	380	2,500	SS316, SP	25 pcs.	15;17	111-01520

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
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.



Double wrap cable ties with ball-lock and coating

MBTXHDFC- / MBTUHDFC-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

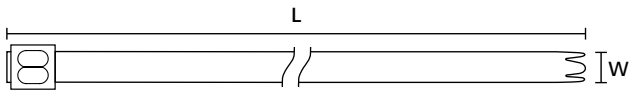
- MBT cable ties, made from stainless steel SS316 with a polyester coating
- Non-releasable locking feature
- Double wrap operation
- Corrosion resistant
- Weather resistant
- Outstanding chemical resistance
- Antimagnetic
- High temperature resistant
- Non-burning



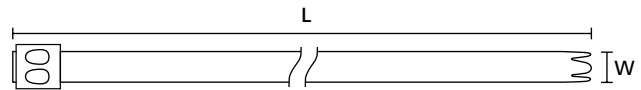
Stainless Steel Cable Ties, coated, MBT_UHDFC.



Material specification please see page 23.



MBT-Series 12.3 mm width



MBT-Series 16.0 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Pack Cont.	Tools	Article-No.
MBT27XHDFC	12.3	681	17	100	2,500	SS316, SP	50 pcs.	15-18	111-01505
MBT33XHDFC	12.3	838	17	120	2,500	SS316, SP	50 pcs.	15-18	111-01506
MBT43XHDFC	12.3	1,092.00	17	160	2,500	SS316, SP	25 pcs.	15-18	111-01507
MBT49XHDFC	12.3	1,245.00	17	180	2,500	SS316, SP	25 pcs.	15-18	111-01508
MBT60XHDFC	12.3	1,524.00	17	230	2,500	SS316, SP	25 pcs.	15-18	111-01509
MBT27UHDFC	16	681	25	100	5,000	SS316, SP	50 pcs.	15;17	111-01521
MBT33UHDFC	16	838	25	120	5,000	SS316, SP	50 pcs.	15;17	111-01522
MBT43UHDFC	16	1,092.00	25	160	5,000	SS316, SP	25 pcs.	15;17	111-01523
MBT49UHDFC	16	1,245.00	25	180	5,000	SS316, SP	25 pcs.	15;17	111-01524
MBT60UHDFC	16	1,524.00	25	230	5,000	SS316, SP	25 pcs.	15;17	111-01525

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
	604	604	605	605

For more information on toolings please refer to the Application Tooling chapter.



Cable Ties with punch-locking mechanism

MST-Series, stainless steel 304

Stainless steel cable ties are designed for fixing loads and cables securely in hazardous industrial environments such as railway carriages, jet engines, inside power plants or on offshore drilling platforms, where exposure to extremes of weather, saltwater and temperature are common. The MST-Series tie with its new punch-locking mechanism is an excellent choice especially for environments which require high resistance to vibrations.

Features and benefits

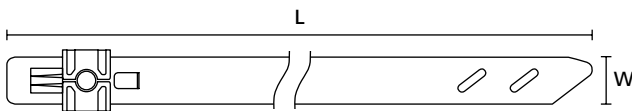
- MST-Series cable ties are made from stainless steel 304
- No loosening after bundling
- Corrosion and weather resistant
- Significantly improved vibration resistance
- Outstanding chemical resistance
- Space saving solution
- Safe cut-off (no sharp edges)
- High temperature resistant
- Non-burning



Stainless Steel Cable Ties MST-Series.



One Step to the Web!



MST tie

i The MST-Series (up to 8.9 mm) can be used in combination with the stainless steel P-Mount. The mount is simple to install with a screw or bolt and ensures a durable fixing solution. Please see page 163.

i Can support quality assurance in the production of food stuffs, for example HACCP.

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Pack Cont.	Tools	Article-No.
MST200S	5.9	207.0	5.0	50.0	900	SS304	100 pcs.	19	111-01549
MST360S	5.9	360.0	5.0	100.0	900	SS304	100 pcs.	19	111-01550
MST500S	5.9	500.0	5.0	145.0	900	SS304	100 pcs.	19	111-01551
MST700S	5.9	700.0	5.0	205.0	900	SS304	100 pcs.	19	111-01552
MST360M	8.9	369.0	8.0	100.0	1,500	SS304	50 pcs.	20	111-01631
MST500M	8.9	509.0	8.0	145.0	1,500	SS304	50 pcs.	20	111-01632
MST700M	8.9	700.0	8.0	205.0	1,500	SS304	50 pcs.	20	111-01633

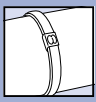
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools		
	19	20
	MST6	MST9
	606	606

For more information on toolings please refer to the Application Tooling chapter.



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



Cable Ties with fold locking

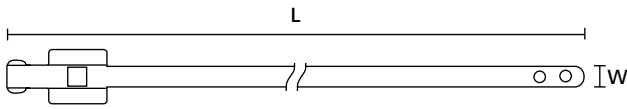
The MLT range of stainless steel cable ties can be used in the most arduous of conditions or where the additional security, strength and fire resistance of a metal fixing is required. Used in all industries from mass transit, ship building, oil rigs, mining and chemical industry, theatres and exhibition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

Features and benefits

- Releasable stainless steel buckle tie
- Heavy duty type in stainless steel 316
- Can be re-opened and re-used
- Available also with polyester coating which prevents corrosion between dissimilar materials



MLT-Series. Releasable Stainless Steel buckle tie with and without coating.



MLT tie

i The MLT-Series (up to 10 mm) can be used in combination with the stainless steel P-Mount. The mount is simple to install with a screw or bolt and ensures a durable fixing solution. Please see page 163.

MLT-Series, stainless steel 316

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MLT8SS5	5.0	230.0	20.0	60.0	420	SS316	100 pcs.	17;21	111-94080
MLT12SS5	5.0	330.0	20.0	90.0	420	SS316	100 pcs.	17;21	111-94120
MLT16SS5	5.0	430.0	20.0	120.0	420	SS316	100 pcs.	17;21	111-94161
MLT24SS5	5.0	630.0	20.0	180.0	420	SS316	100 pcs.	17;21	111-91400
MLT8SS10	10.0	230.0	25.0	60.0	850	SS316	100 pcs.	17;21	111-95080
MLT12SS10	10.0	330.0	25.0	90.0	850	SS316	100 pcs.	17;21	111-95120
MLT16SS10	10.0	430.0	25.0	120.0	850	SS316	100 pcs.	17;21	111-91300
MLT24SS10	10.0	630.0	25.0	180.0	850	SS316	100 pcs.	17;21	111-95241

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

MLT-C-Series coated, stainless steel 316

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MLT8SSC5	5.3	230.0	20.0	60.0	420	SS316, SP	100 pcs.	17;21	111-91000
MLT12SSC5	5.3	330.0	20.0	90.0	420	SS316, SP	100 pcs.	17;21	111-91121
MLT16SSC5	5.3	430.0	20.0	120.0	420	SS316, SP	100 pcs.	17;21	111-91161
MLT24SSC5	5.3	630.0	20.0	180.0	420	SS316, SP	100 pcs.	17;21	111-91180
MLT8SSC10	10.3	230.0	25.0	60.0	850	SS316, SP	100 pcs.	17;21	111-91001
MLT12SSC10	10.3	330.0	25.0	90.0	850	SS316, SP	100 pcs.	17;21	111-91123
MLT16SSC10	10.3	430.0	25.0	120.0	850	SS316, SP	100 pcs.	17;21	111-91163
MLT24SSC10	10.3	630.0	25.0	180.0	850	SS316, SP	100 pcs.	17;21	111-91181

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		
	17	21
	HDT16	MTT4
	605	607

For more information on toolings please refer to the Application Tooling chapter.



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



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



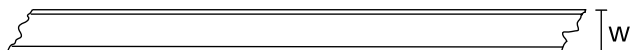
Protective channel LFPC, polyolefin, black.



Material specification please see page 23.



The fire protection properties of the material relate to the test performed on defined test samples. This is a test under laboratory conditions and not directly transferable to the product made from this material.



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	50 m	111-00253
LFPC132	13.2	MBTXH	PO	25 m	111-00254
LFPC150	15.0	MBTXH	PO	25 m	111-95000
LFPC163	16.3	AMT, MBTUH	PO	50 m	111-00255

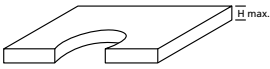
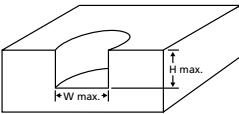
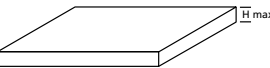
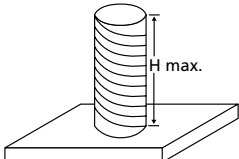
All dimensions in mm. Subject to technical changes.

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



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

User guide for fixing ties

Application	Arrowhead	Fir Tree Mount	Rivet Wall Plug	Screw Mount	EdgeClip	Weld Stud Mount
	●	●		●		
		●	●	●		
					●	
						●



Arrowhead

This fixing tie is based on an arrowhead offering high extraction forces. The arrowhead is securely in place when a click can be heard and felt by the user.



Arrowhead with disc

The disc minimises the ingress of dust, dirt and water. Furthermore a safe fixation inside the drill hole is assured that withstands pressure from various directions.



Arrowhead with supporting legs

Arrowhead fixings with supporting legs offer good and stable fixation in drilled holes. The supporting legs generate additional pressure to assure a firm and secure fixing while taking up any variation in panel thickness. These ties are also suitable in high vibration applications.



Arrowhead without supporting legs

The arrowhead design assures good fixation while utilising lowest possible space.



Fir Tree Mount

Fir Tree Mounts can be pushed into pre-punched holes easily in panels or threaded, blind holes based on the low insertion forces. The design is ideally suited for a wide range of sheet thicknesses. The disc on top of the fir tree covers the hole and minimises the ingress of dust, dirt and water.



Weld Stud Mount

Many of the HellermannTyton weld stud mounts can easily be attached by hand ("soft push"). The design offers very low insertion forces that require no tools. The mounts can be removed by twisting to the left.



Weld Stud Fixings with Lateral Adjustment

The special oval shape of these mounts provides a 5 - 6 mm lateral adjustment to cater for any misalignment of the stud or incorrect positioning of ties on the cables. The bundle can therefore be moved when mounted.



EdgeClip

The EdgeClips are specifically designed to bundle and guide cable and wires on edges. Cost intensive drill holes for fixing are no longer required. EdgeClips are easily mounted by hand, the integrated metal clamp, securely keeping the clips on the edge.



EdgeClip Twistable

Ideally suited for fixations where bundles need to be flexibly guided. These EdgeClips are available with facilities for 90° or 360° rotation.



Cable and Hose Attachment

Excellent solution for subsequent attachment of pipes and wires to installed tubes.



Heavy Duty Application

These sturdy fixing ties can withstand vibrations. They are easy to apply and give a secure alignment to the bundle. There will be high tightening torque through metal bushing.



Two Piece Fixing Ties with Clip Coupler

The Coupler is an article to connect two cable ties for parallel bundling of tubes, harnesses or cables. Its design enables the cable ties to rotate up to 90° and allows flexible installations.



1-Piece Fixing Ties with Arrowhead, with Disc

With a diverse range of fixing possibilities these ties are ideal for use in many different industries, including automotive, aerospace, white goods manufacture and panel building.

Features and benefits

- Easy to install without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressures from various directions and minimises access of dust, dirt and water
- Cable tie head always situated in a defined position
- KSFT-types with specially rounded arrowhead minimise the assembly height

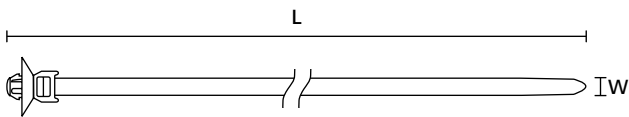


The Disc at the head of the T50SOSSFT6.5E protects the bore against dirt and splashes.

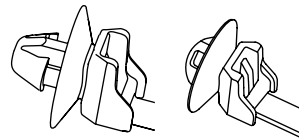


Material specification please see page 22.

1-Piece Fixing Ties with Arrowhead, with Disc, for round holes



T50SOSKSFT5.4E

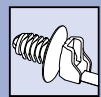


T50SOSSFT6.5E

T50SOSKSFT6.5E

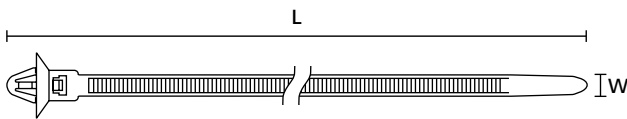
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
PT2ASFT6.5PT0.7-1.5-E	3.4	112.7	20.0	230	16.0	6.3 - 6.7	0.7 - 1.5	PEEK	Beige (BGE)	2;4-6	126-00183
T30SOS-AS-SFT6.5-E	3.5	126.4	25.0	200	16	6.5 - 7.0	0.8 - 1.5	PA66HS	Black (BK)	2;4-6	126-00255
T50SOSAH7S-E	4.6	161.6	35.0	180	16.0	7.0	0.6 - 3.2	PA66HS	Black (BK)	2-10	126-00249
T50SOSKSFT5SE	4.6	156.0	35.0	180	16.0	4.8 - 5.2	0.7 - 1.3	PA66HS	Natural (NA)	2-10	126-00111
	4.6	156.0	35.0	180	16.0	4.8 - 5.2	0.7 - 1.3	PA66HS	Black (BK)	2-10	126-00099
T50SOSKSFT5.4E	4.6	156.0	35.0	180	16.0	5.2 - 5.6	0.7 - 1.3	PA66HS	Black (BK)	2-10	126-00075
T50SOSKSSFT5.4E-MD	4.6	156.0	35.0	180	16.0	5.4	0.7 - 1.3	PA66HS	Black (BK)	2-10	126-00180
T50SOSKSFT6.5E	4.6	156.0	35.0	180	16.0	6.3 - 6.7	0.7 - 1.3	PA66HS	Black (BK)	2-10	126-00081
T50SOSKSFT6.5S2-E	4.6	157.5	35.0	225	16.0	6.3 - 6.7	1.7 - 2.3	PA66HS	Black (BK)	2-10	126-00219
T50SOSSFT6.5E	4.6	158.8	30.0	225	16.0	6.3 - 6.7	1.9 - 2.5	PA66HS	Black (BK)	2-10	126-03102
T50SOSSFT6.5E-MD	4.6	158.8	30.0	180	16.0	6.3 - 6.7	0.6 - 1.8	PA66HS	Green (GN)	2-10	126-00216
	4.6	158.8	30.0	180	16.0	6.3 - 6.7	0.6 - 1.8	PA66HS	Black (BK)	2-10	126-00215
	4.6	158.8	30.0	180	16.0	6.3 - 6.7	0.6 - 1.8	PA66HS	Natural (NA)	2-10	126-00242
T50SL8	4.6	165.0	35.0	225	20.0	8.0	0.8 - 1.5	PA66	Black (BK)	2;4-6;8	126-01900
T50SST5	4.6	170.0	31.0	225	16.2	6.1 - 6.5	0.7 - 1.5	PA66	Natural (NA)	2-10	126-02300
	4.6	170.0	31.0	225	16.2	6.1 - 6.5	0.7 - 1.5	PA66HS	Black (BK)	2-10	126-00017
T50SD6	5.0	160.0	31.0	200	18.0	6.3 - 7.5	0.6 - 1.8	PA66HS	Black (BK)	2-10	111-85350
T50MD7	5.0	225.0	59.0	225	16.0	6.8 - 7.2	0.8 - 2.0	PA66HS	Black (BK)	2-10	111-85850
	5.0	225.0	59.0	225	16.0	6.8 - 7.2	0.8 - 2.0	PA66	Black (BK)	2-10	126-00181
OS180AH7S-LH-E	5.3	178.4	30.0	180	16.0	6.8 - 7.2	0.6 - 3.2	PA66HS	Black (BK)	2-10	126-00310

All dimensions in mm. Subject to technical changes.

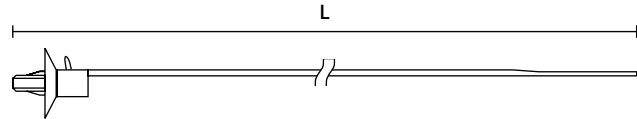


1-Piece Fixing Tie with Arrowhead, with Disc

1-Piece Fixing Tie with Arrowhead, with Disc, releasable



RT50SD6

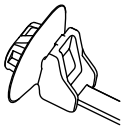


RT50SD6

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
RT50SD6	5.0	160.0	31.0	225	18.0	6.3 - 7.5	0.6 - 1.8	PA66HS	Black (BK)	2-10	111-85480

All dimensions in mm. Subject to technical changes.

1-Piece Fixing Tie with Arrowhead, with Disc, for oval holes



T50SOSKSFT62x122PT0.7-1.3

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Panel Thickness	Material	Colour	Tools	Article-No.
T50SOSKSFT62x122 PT0.7-1.3	4.6	153.5	35.0	225	16.0 x 21.0	0.7 - 1.3	PA66HS	Black (BK)	2-10	126-00141
T50SOSKSFT62x122 PT0.7-1.3 90°	4.6	158.0	35.0	225	16.0 x 21.0	0.7 - 1.3	PA66HS	Black (BK)	2-10	126-00143
T50SOSKSFT62x122 PT1.7-2.3 90°	4.6	159.0	35.0	225	16.0 x 21.0	1.5 - 2.3	PA66HS	Black (BK)	2-10	126-00144
T50SOSKSFT62x122 PT1.7-2.3	4.6	159.0	35.0	225	16.0 x 21.0	1.7 - 2.3	PA66HS	Black (BK)	2-10	126-00142
T50SDOR	5.0	160.0	30.0	225	22.0	0.5 - 1.5	PA66HS	Black (BK)	2-10	126-01600
T50SDOP	5.0	160.0	30.0	225	22.0	1.0 - 1.9	PA66HS	Black (BK)	2-10	126-00015
T60XSOSFT62X122-E	5.5	133.6	25.0	300	16.0 x 21.0	2.0 - 3.0	PA66HS	Black (BK)	3;8-12	126-00254
T60SOSSFT712S-E	5.5	158.0	30.0	300	16.0 x 22.0	0.6 - 3.2	PA66HS	Black (BK)	2-12	126-00207
T60SOSSFT712S-E1	5.5	158.0	30.0	300	16.0 x 22.0	0.6 - 3.2	PA66HS	Black (BK)	2-12	126-00281
T60XSOSFT712S-E	5.5	120.0	20.0	300	16.0 x 22.0	0.6 - 3.2	PA66HS	Black (BK)	2-12	126-00259
T60XSOSFT712S-E1	5.5	120.0	20.0	300	16.0 x 22.0	0.6 - 3.2	PA66HS	Black (BK)	2-12	126-00298
T60SOSSFT65x130-E	5.5	157.6	30.0	300	16.0 x 22.0	2.4 - 3.3	PA66HS	Natural (NA)	2-12	126-00157
T60SOSSFT70X120-E	5.5	157.7	30.0	300	16.0 x 22.0	2.4 - 3.3	PA66HS	Black (BK)	2-12	126-00210
T60SOSSFT62x122-E	5.5	158.0	30.0	300	16.0 x 22.0	2.4 - 3.3	PA66HS	Black (BK)	2-12	126-00191

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	12	
	MK20	MK21	MK3SP	MK3PNPSP2	EVO7	MK7P	MK6	EVO9	MK9P	
	595	595	596	596	598	601	600	599	602	

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Arrowhead, with disc, sealed

The parts are mainly used in the automotive industry, e.g. for door harnesses.

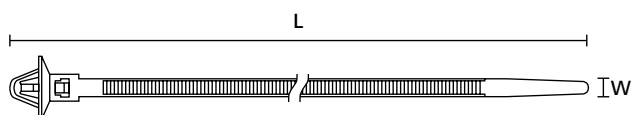
Features and benefits

- One-piece fixing ties with cellular rubber disc
- Especially suitable for door and tailgate harnesses used for car body applications
- Made from PA66 heat-stabilised material
- Cellular rubber disc minimises access of dust, dirt and water

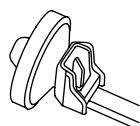


The additional seal protects against the ingress of moisture.

Fixing Ties, sealed, for Round Holes



One piece fixing tie with arrowhead and disc, standard design

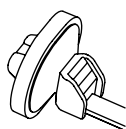


T50SOSSFT6.5E-MDL

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T50SOSSFT6.5E-MDL	4.6	158.8	30.0	225	16.0	6.3 - 6.7	0.6 - 1.8	PA66HS	Green (GN)	2-10	126-03100
	4.6	158.8	30.0	225	16.0	6.3 - 6.7	0.6 - 1.8	PA66HS	Black (BK)	2-10	156-00264
	4.6	158.8	30.0	225	16.0	6.3 - 6.7	0.6 - 1.8	PA66HS	Natural (NA)	2-10	156-00271
T50SOSSFT6.5E-MS-MD	4.6	163.0	35.0	180	16.0	6.35 - 6.5	0.7 - 1.6	PA66HS	Natural (NA)	2-10	126-00217
T50XCROSSFT6.5-E-MDL	4.6	200.0	45.0	200	16.0	6.25 - 6.75	1.2 - 2.1	PA66HS	Black (BK)	2-10	156-00379

All dimensions in mm. Subject to technical changes.

Fixing Ties, sealed, oval holes



T60SOSSFT6.5x130E-MD



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T60XSOSST62X122EMD	5.5	133.6	25.0	300	16.0 x 22.0	6.2 x 12.2	0.7 - 2.0	PA66HS	Black (BK)	2-12	126-00256
T60SOSSFT62x122-E-MD	5.5	157.5	30.0	300	16.0 x 22.0	6.2 x 12.2	0.6 - 2.0	PA66HS	Black (BK)	2-12	126-00080
T60SOSSFT70x120-E-MD	5.5	157.5	30.0	300	16.0 x 22.0	7.0 x 12.0	0.7 - 2.0	PA66HS	Black (BK)	2-12	126-00079
T60SOSSFT65x130-E-MD	5.5	157.6	30.0	300	16.0 x 22.0	6.5 x 13.0	0.6 - 2.0	PA66HS	Natural (NA)	2-12	126-00076
T60SOSSFT65x130-E-MS-MD	5.5	158.0	30.0	300	16.0 x 22.0	6.5 x 13.0	0.6 - 2.0	PA66HS	Black (BK)	2-12	126-00186

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Arrowhead, with Disc in the strap, for Round Holes

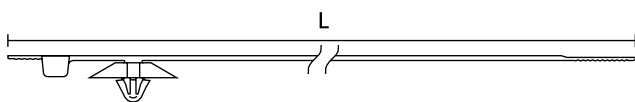
These fixing ties are ideal for use in many different industries, including automotive, aerospace, rail and panel building.

Features and Benefits

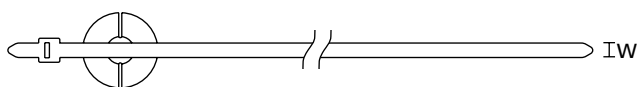
- Easy to assemble without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressures from various directions and minimises access of dust, dirt and water
- Cable tie head always situated in defined position
- Bundle runs directly across fixing point
- Simple assembly due to tab at the end of the head



The 'tab' on the head of the tie makes it easy to locate and lift the head for assembly.



T80RSFT



T80RSFT with flexible disc.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Panel Thickness	Material	Colour	Tools	Article-No.
T80RSFT	4.6	190.0	45.0	355	24,4	1.0 - 3.5	PA46	Grey (GY)	2;4-6;8	150-15498
	4.6	190.0	45.0	355	24,4	1.0 - 3.5	PA66HS	Black (BK)	2;4-6;8	150-15493

All dimensions in mm. Subject to technical changes.

Recommended Tools					
	2	4	5	6	8
	MK20	MK3SP	MK3PNSP2	EVO7	MK7P
	595	596	596	598	601

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Arrowhead, with Wings

For bundling and fixing of cable harnesses, pipes and hoses in many different industries, including automotive, aerospace, white goods manufacturing and panel building.

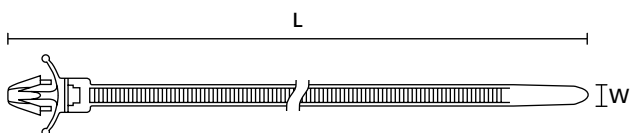
Features and benefits

- Easy to assemble without the need for a tool
- Cable tie head always situated in defined position
- Arrowhead simply locks into place
- Supporting legs provide a secure and firm fixing in areas where space is limited



A wide range of arrowhead fixing ties which are suitable for different panel thicknesses and hole diameters.

1-Piece Fixing Ties with Arrowhead, with Wings, for Round Holes



T50SSL5

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T18RWPM		2.5	113.0	22.0	80	4.8 - 5.6	1.5 - 2.2	PA66	Black (BK)	2;4-6	126-00077
		2.5	113.0	22.0	80	4.8 - 5.6	1.5 - 2.2	PA66	Natural (NA)	2;4-6	126-00078
		2.5	113.0	22.0	80	4.8 - 5.6	1.5 - 2.2	PA66HS	Black (BK)	2;4-6	126-00232
T18RSF		2.5	100.0	16.0	80	4.6 - 4.8	0.8 - 3.0	PA66HS	Natural (NA)	2;4-6	111-85519
		2.5	100.0	16.0	80	4.6 - 4.8	0.8 - 3.0	PA66W	Black (BK)	2;4-6	111-85560
		2.5	100.0	16.0	80	4.6 - 4.8	1.0 - 3.0	PA46	Grey (GY)	2;4-6	126-00275
T50SSL5		4.6	135.0	27.0	200	6.1 - 6.5	0.5 - 2.7	PA66HS	Black (BK)	2-10	126-02204
		4.6	135.0	27.0	225	6.1 - 6.5	0.5 - 2.7	PA46	Grey (GY)	2-10	111-85395
		4.6	135.0	27.0	225	6.1 - 6.5	0.5 - 2.7	PA66	Natural (NA)	2-10	111-85339
T50SL5		4.6	163.0	34.0	222	6.1 - 6.5	0.8 - 2.7	PA66HIRHS	Black (BK)	2-10	126-00005
		4.6	163.0	34.0	222	6.1 - 6.5	0.8 - 2.7	PA66HS	Black (BK)	2-10	126-00001
		4.6	165.0	34.0	222	6.1 - 6.5	0.8 - 2.7	PA66	Natural (NA)	2-10	111-85369
T50SL6		4.6	165.0	34.0	225	6.3 - 7.5	0.5 - 2.5	PA66	Black (BK)	2-10	111-85460
T50SL7		4.6	165.0	34.0	225	6.9 - 7.1	0.8 - 2.5	PA66	Natural (NA)	2-10	111-85479
T50SSFPM			4.6	160.0	35.0	222	6.0 - 6.6	0.7 - 3.0	PA66	Natural (NA)	2-10
	4.6		160.0	35.0	222	6.0 - 6.6	0.7 - 3.0	PA66HS	Black (BK)	2-10	126-00125
T50RSFM		4.6	160.0	35.0	222	6.0 - 6.6	0.7 - 3.0	PA66HS	Natural (NA)	2-10	126-01104
4.6		205.0	45.0	225	6.0 - 6.6	0.7 - 3.0	PA66HS	Natural (NA)	2-10	111-85720	
OS130		5.0	130.0	20.0	147	6.8 - 7.2	0.6 - 2.6	PA66W	Black (BK)	2-10	126-00060
T50SAH		4.6	160.0	25.0	225	6.0 - 6.6	0.7 - 3.0	PA66HS	Natural (NA)	2-10	155-41102
	4.6	160.0	25.0	225	6.0 - 6.6	0.7 - 3.0	PA66HS	Black (BK)	2-10	126-00163	

All dimensions in mm. Subject to technical changes.



1-Piece Fixing Ties with Arrowhead, with Wings

1-Piece Fixing Ties with Arrowhead, with wings, releasable

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
RT18RSF		3.0	132.0	27.0	80	3.8 - 4.2	0.6 - 2.3	PA66	Natural (NA)	2;4-6	115-01900
RT30SSF5		3.3	130.0	27.0	196	4.7 - 5.0	0.5 - 2.3	PA66V0	White (WH)	2-10	115-00068
YQR10016		4.6	165.0	34.0	225	6.9 - 7.1	1.6 - 4.0	PA66	Grey (GY)	2-10	126-03000
RT50RSF		4.8	200.0	48.0	225	6.3 - 7.5	0.8 - 2.6	PA66W	Black (BK)	2-10	115-00076
RT50SFK		5.0	225.0	50.0	225	6.4 - 7.0	0.8 - 3.0	PA66	Black (BK)	2-10	115-06960

All dimensions in mm. Subject to technical changes.

1-Piece Fixing Ties with Arrowhead, with wings, for oval holes

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T80RFT6X12		4.6	228.0	45.0	222	6.3 x 12.3	0.6 - 3.0	PA46	Grey (GY)	2-12	150-48397
		4.6	228.0	45.0	222	6.3 x 12.3	0.6 - 3.0	PA66	Black (BK)	2-12	150-48396

All dimensions in mm. Subject to technical changes.

Recommended Tools									
	2	3	4	5	6	8	9	10	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	MK9P
	595	595	596	596	598	601	600	599	602

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Arrowhead, with Wings in the strap

This range of fixing ties are ideal for use in many different industries, for example: automotive, aerospace, rail and panel building.

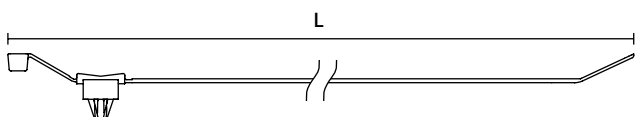
Features and Benefits

- Easy to assemble without the need for a tool
- Arrowhead simply locks into place
- Supporting legs provide a secure and firm fixing in areas where space is limited
- Bundle runs central across fixing point
- Cable tie head always situated in defined position
- For parallel routing of two bundles



Designed to secure battery cables the T80RSF6.5F offers a simple and secure fixing.

T80RSF6.5F



T80RSF6.5F

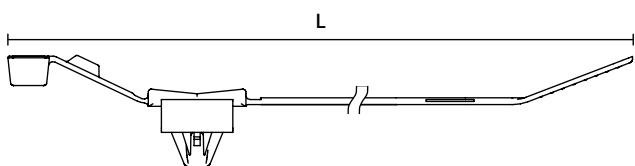


Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T80RSF6.5F	4.7	209.0	50.0	355	6.3 - 6.5	0.6 - 3.0	PA46	Grey (GY)	2;4-6;8	150-39395
	4.7	209.0	50.0	355	6.3 - 6.5	0.6 - 3.0	PA66HS	Black (BK)	2;4-6;8	126-02600
T80RSF6.5FW	4.7	209.0	50.0	355	6.3 - 6.5	0.6 - 3.0	PA66HS	Black (BK)	2;4-6;8	150-39385

All dimensions in mm. Subject to technical changes.

T80RSF6.5FW with rib for convoluted tubes



T80RSF6.5FW

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T80RSF6.5FW	4.7	209.0	50.0	355	6.3 - 6.5	0.6 - 3.0	PA66HS	Black (BK)	2;4-6;8	150-39385

All dimensions in mm. Subject to technical changes.

Recommended Tools					
	2	4	5	6	8
	MK20	MK3SP	MK3PNSP2	EVO7	MK7P
	595	596	596	598	601

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Arrowhead

1-Piece Fixing Ties with Arrowhead, without Wings and Disc

The arrowhead design allows these ties to be used in areas with limited space.

Features and benefits

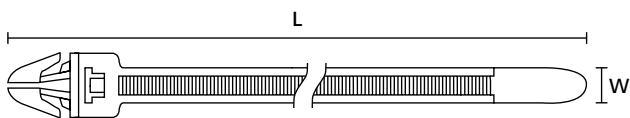
- Easy to assemble without the need for a tool
- Fixing tie with arrowhead without legs
- Arrowhead simply locks into place
- Cable tie head always situated in defined position



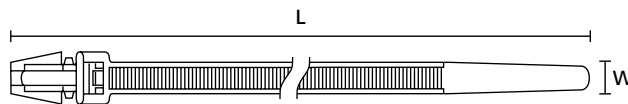
The arrowhead design allows these fixing ties to be used in areas with limited space.



Material specification please see page 22.



T30RSF(U)



T50RSF(E)

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T30RSF(U)	3.6	158.0	31.0	136	4.7 - 5.5	0.8 - 2.1	PA66HS	Black (BK)	2;4-6	111-85610
	3.6	158.0	32.0	136	4.7 - 5.5	0.8 - 2.1	PA66	Natural (NA)	2;4-6	111-85603
T50RSF(E)	4.6	210.0	44.0	225	6.2 - 6.4	2.9 - 3.0	PA66	Natural (NA)	2-10	111-85799
	4.6	210.0	44.0	225	6.2 - 6.4	2.9 - 3.0	PA66	Black (BK)	2-10	126-01001

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



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



1-Piece Fixing Ties with Arrowhead, with Disc

For temperatures up to +240 °C

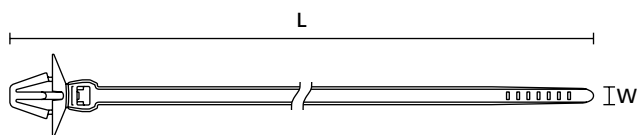
With a diverse range of fixing possibilities these ties are ideal for use in many different industries, including automotive, aerospace, white goods manufacture and panel building.

Features and benefits

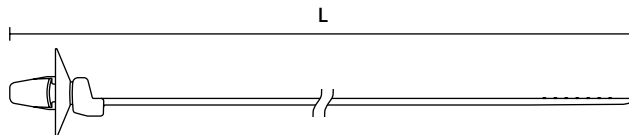
- Easy to install without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressures from various directions and minimises access of dust, dirt and water
- Cable tie head always situated in a defined position
- Features Material PEEK
- -55 °C to +240 °C operating temperature
- Excellent resistance against chemicals and gamma radiation



One piece fixing tie with arrowhead, outside serrated.



PT2ASFT6.5PT0.7-1.5E



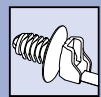
PT2ASFT6.5PT0.7-1.5E

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
PT2ASFT6.5PT0.7-1.5-E	3.4	112.7	20.0	230	16.0	6.3 - 6.7	0.7 - 1.5	PEEK	Beige (BGE)	2;4-6	126-00183

All dimensions in mm. Subject to technical changes.

Recommended Tools				
	2	4	5	6
	MK20	MK3SP	MK3PNSP2	EVO7
	595	596	596	598

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties with Arrowhead, with Disc

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 and white goods manufacturing.

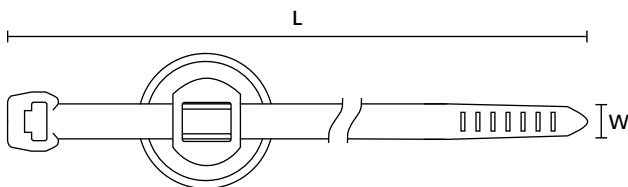
Features and Benefits

- 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
- Disc adjusts tie for pressure from various directions

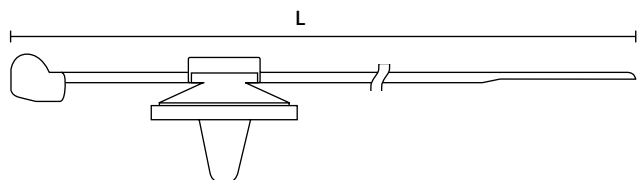


Being a two piece assembly allows the tie head to be located in the most convenient position.

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



T50ROSSFT6.5-16-2MOD-MD

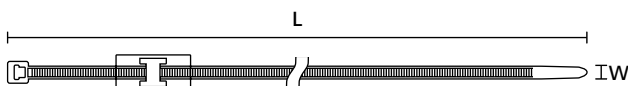


T50ROSSFT6.5-16-2MOD-MD

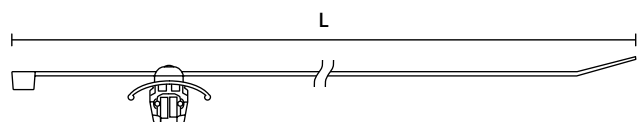
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30RAHD6-MD	3.5	150.0	35.0	135	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66HS	Natural (NA)	2-10	156-01186
	3.5	150.0	35.0	135	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66HS	Black (BK)	2-10	156-01187
T50ROSSFT 6.5-16-2-MD	4.6	200.0	45.0	225	16.0	6.3 - 6.7	0.7 - 1.2	PA66HS	PA66HIRHS	Black (BK)	2-10	155-42002
T50ROSSFT 6.5 16-3MD	4.6	200.0	45.0	225	16.0	6.3 - 6.7	2.5 - 3.5	PA66HS	PA66HIRHS	Black (BK)	2-10	150-37799
T50ROSSFT 6.5ZD16-2	4.6	200.0	45.0	225	16.0	6.3 - 6.7	0.7 - 1.8	PA66HS	PA66HIRHS	Black (BK)	2-10	156-01221
T50ROSA HD6-MS-MD	4.6	200.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66	Natural (NA)	2-10	156-01302
	4.6	200.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66	Black (BK)	2-10	156-01299
T50ROSA HD6-MD	4.6	200.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66	Natural (NA)	2-10	156-01298
	4.6	200.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66	Black (BK)	2-10	156-01297
T50RAHD6-MD	4.6	202.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66HS	Black (BK)	2-10	156-01188
	4.6	202.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66HS	Black (BK)	2-10	156-01189

All dimensions in mm. Subject to technical changes.

2-Piece Fixing Ties with Arrowhead, for oval holes



T50RFT62x122



T50RFT62x122

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30RSFT712	3.5	150.0	34.0	133	7.0 x 12,0	0.6 - 1.5	PA66HS	PA66HIRHS	Black (BK)	2,4-6	156-01460
T30RKSFT65x13	3.5	150.0	36.0	135	6.5 x 13,0	1.0 - 1.7	PA66HS	PA66HIRHS	Black (BK)	2,4-6	156-01235
T50RFT62x122HR	4.6	202.0	45.0	225	6.3 x 12,2	0.6 - 3.0	PA46	PA46	Grey (GY)	2-10	156-00446
T50RFT6OVAL	4.6	202.0	45.0	355	6.3 x 12,2	0.6 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-37591
T80RFT62x122	4.7	205.0	45.0	355	6.3 x 12,2	0.6 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-12	156-01521

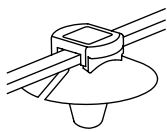
All dimensions in mm. Subject to technical changes.



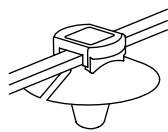
Cable Ties and Fixings

Cable Ties With Fixing Elements

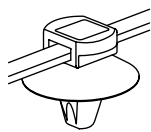
2-Piece Fixing Ties with Arrowhead, with Disc, for round holes



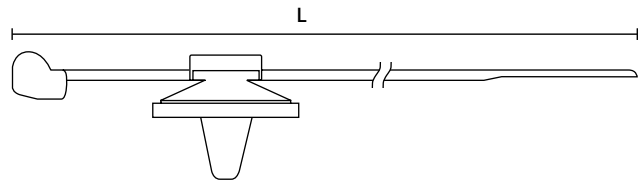
T50SSFT6.5



T50SSFT6.5



T50RSFT6.5D18



T50ROSSFT6.5-16-2MOD-MD

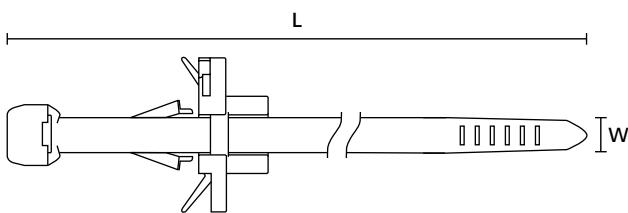
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30RSFT7H	3.5	150.0	36.0	135	16,0	6.8 - 7,2	0.8 - 1.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01044
T50SOSSFT 651620D	4.6	150.0	35.0	225	16,0	6.3 - 6.7	1.5 - 2.2	PA66HS	PA66HIRHS	Black (BK)	2-10	150-93130
T50SSFT6.5	4.6	150.0	35.0	225	22,4	6.3 - 6.7	0.7 - 2.0	PA66HS	PA66HS	Black (BK)	2-10	150-13593
T50RSFT 6.5D18	4.6	200.0	45.0	200	18,0	6.5 - 6.8	0.4 - 1.6	PA66HS	PA66HIRHS	Black (BK)	2-10	150-37691
T50ROS-SFT 6.5 16-3	4.6	200.0	45.0	225	16,0	6.3 - 6.7	2.5 - 3.5	PA66HS	PA66HIRHS	Black (BK)	2-10	150-37791
T50RSFT6.5	4.6	200.0	45.0	225	22,4	6.3 - 6.7	0.7 - 2.0	PA66HS	PA66HS	Black (BK)	2-10	150-13591
T50RSFT 6.5 16-3	4.6	200.0	49.0	222	16,0	6.3 - 6.7	2.5 - 3.5	PA66HS	PA66HIRHS	Black (BK)	2-10	150-37792
T50ROS P1SFT6.5	4.6	200.0	45.0	225	16,0	6.3 - 6.7	0.7 - 1.3	PA46	PEEK	Grey (GY), Beige (BGE)	2;4-8	156-00455
T50ROS P2SFT6.5	4.6	200.0	45.0	225	16,0	6.3 - 6.7	1.7 - 2.3	PA46	PEEK	Grey (GY), Beige (BGE)	2;4-8	156-00456
T80ISFT6.5	4.6	300.0	81.0	355	22,4	6.3 - 6.7	0.7 - 2.0	PA66HS	PA66HS	Black (BK)	2-12	150-13596
T50RDHSFT6.5	4.7	210.0	38.0	178	22,4	6.4 - 6.8	0.7 - 2.0	PA66HS	PA66HS	Black (BK)	2-10	117-05160

All dimensions in mm. Subject to technical changes.

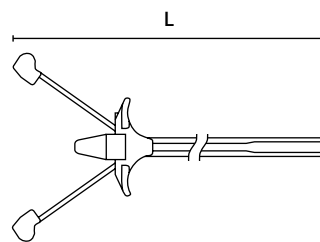
2-Piece Fixing Ties with Arrowhead, for parallel routing



Material specification please see page 22.



T50SOSDSFT6.5



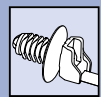
T50SOSDSFT6.5

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50SOSDSFT6.5	4.6	150.0	35.0	225	6.3 - 6.7	0.7 - 1.5	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00133

All dimensions in mm. Subject to technical changes.

Recommended Tools									
	2	3	4	5	6	8	9	10	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	MK9SST
	595	595	596	596	598	601	600	599	560

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties with Arrowhead, with Disc

For temperatures up to +240 °C

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 and white goods manufacturing.

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
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Features Material PEEK
- -55 °C to +240 °C operating temperature
- Excellent resistance against chemicals and gamma radiation



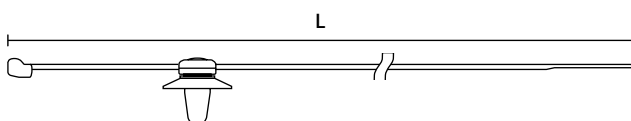
PEEK Fixing Ties can be used for small diameters from 1.0 mm.



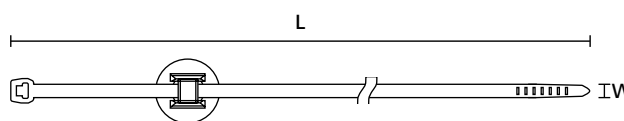
Please find more PEEK products for your system solutions: PEEK Ties, see page 65. Screw Mount CTAM, see page 151.



One Step to the Web!



PT2AP1SFT6.5



PT2AP1SFT6.5

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T50ROSP1SFT6.5	4.6	200.0	45.0	225	16.0	6.3 - 6.7	0.7 - 1.3	PA46, PEEK	Grey (GY), Beige (BGE)	2;4-8	156-00455
T50ROSP2SFT6.5	4.6	200.0	45.0	225	16.0	6.3 - 6.7	1.7 - 2.3	PA46, PEEK	Grey (GY), Beige (BGE)	2;4-8	156-00456
PT2AP1SFT6.5	3.4	145.0	35.0	230	16.0	6.3 - 6.7	0.7 - 1.3	PEEK	Beige (BGE)	2;4-6	156-01090
PT2AP2SFT6.5	3.4	145.0	35.0	230	16.0	6.3 - 6.7	1.7 - 2.3	PEEK	Beige (BGE)	2;4-6	156-01091
PT2AP3SFT6.5	3.4	145.0	32.0	230	16.0	6.3 - 6.7	1.2 - 1.8	PEEK	Beige (BGE)	2;4-6	156-01146

All dimensions in mm. Subject to technical changes.

Recommended Tools					
	2	4	5	6	8
	MK20	MK3SP	MK3PNSP2	EVO7	MK7P
	595	595	596	598	601

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Fir Tree, with Disc

1-Piece Fixing Ties with Fir Tree, with Disc, for Round 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

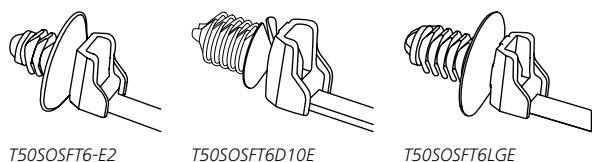
- Cable tie head always situated in defined position
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes



Fir tree foot parts can be used for a variety of panel thicknesses.



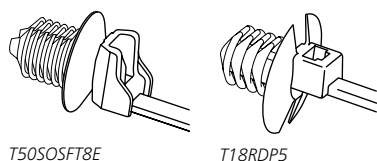
Material specification please see page 22.



T50SOSFT6-E2

T50SOSFT6D10E

T50SOSFT6LGE

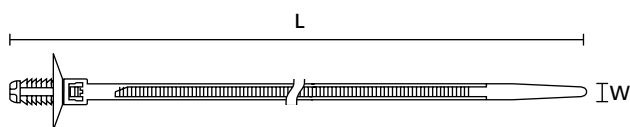


T50SOSFT8E

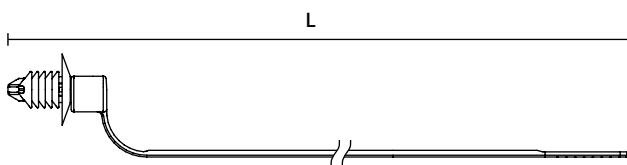
T18RDP5



T50SOSFT6D10E - One piece fixing tie with fir tree foot part.



Fir tree foot part can be used for a variety of panel thicknesses

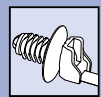


Special design without a gap between head and bundle; FT220DP7

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T18RDP5	2.5	110.0	20.0	80	13.0	4.9 - 5.1	3.0 - 4.0	PA66	Black (BK)	2;4-6	150-55610
T30SOS-AS-FT6-E	3.5	126.4	25.0	200	16	6.3 - 6.7	0.6 - 4.0	PA66HS	Black (BK)	2;4-6	157-00243
T50SOSFT6-E2	4.6	161.0	35.0	180	16.0	6.3 - 7.0	0.6 - 4.2	PA66HS	Black (BK)	2-10	157-00136
	4.6	160.0	35.0	180	16.0	6.3 - 7.0	0.6 - 4.2	PA66HS	Grey (GY)	2-10	157-00198
T50SOSFT6D10E	4.6	163.0	32.0	225	9.8	5.8 - 6.2	0.8 - 5.5	PA46	Grey (GY)	2-10	157-00028
	4.6	163.0	32.0	225	9.8	5.8 - 6.2	0.8 - 5.5	PA66HS	Black (BK)	2-10	157-00045
T50SOSFT8E	4.6	163.0	35.0	225	16.0	8.0 - 8.5	0.6 - 6.0	PA46	Grey (GY)	2-10	157-00115
	4.6	163.0	35.0	225	16.0	8.0 - 8.5	0.6 - 6.0	PA66HS	Black (BK)	2-10	157-00072
T50SOSFT6LGE	4.6	165.0	35.0	180	16.0	6.3 - 7.0	0.7 - 7.0	PA66HS	Black (BK)	2-10	157-00137
T50SOSFT6LG-E2	4.6	167.0	35.0	180	16.0	6.1 - 7.0 Round Hole 6.35	0.6 - 8.3	PA66HS	Black (BK)	2-10	157-00182
T50SOSFT6E	4.6	160.0	35.0	150	16.0	6.5 - 7.0	0.75 - 3.0	PA66HIRHS	Black (BK)	2-10	155-05800
T50SOSFT6-E3	4.7	161.0	35.0	150	16	6.1 - 6.9	0.7 - 3.5	PA66HIRHS	Black (BK)	2-10	157-00241

All dimensions in mm. Subject to technical changes.





1-Piece Fixing Ties with Fir Tree, with Disc

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

TYPE	Width (W)	Length (L)	Bundle Ø max.		Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T50SOSFT6E1	4.7	161.4	35.0	150	16.0	6.3 - 7.0	0.7 - 3.0	PA66HS	Black (BK)	2-10	157-00126
	4.7	161.4	35.0	150	16.0	6.3 - 7.0	0.7 - 3.0	PA66	Natural (NA)	2-10	157-00147
T50ROSFT6LG-E2	4.6	217.0	50.0	180	16.0	6.1 - 7.0 Round Hole 6.35	0.6 - 8.3	PA66HS	Black (BK)	2-10	157-00190
T50ROSFTQM6	5.08	203.2	50.0	225	7.9	6.1	0.6 - 7.0	PA66HIRHSUV	Black (BK)	2-10	157-00112
FT220DP7	4.7	232.0	40.0	225	16.0	6.8 - 7.2	0.8 - 5.0	PA66	Black (BK)	2-12	150-01700
OS180FT62122	5.1	180.0	33.0	225	16 x 21	6.2 - 12.2	0.7 - 5.2	PA46	Grey (GY)	2-10	157-00262
	5.1	180.0	33.0	225	16 x 21	6.2 - 12.2	0.7 - 5.2	PA66HS	Black (BK)	2-10	157-00088
OS180FT6513	5.1	180.0	33.0	225	16 x 21	6.5 - 13.0	0.7 - 5.2	PA66HS	Grey (GY)	2-10	157-00162
	5.1	180.0	33.0	225	16 x 21	6.5 - 13.0	0.7 - 5.2	PA66HS	Black (BK)	2-10	157-00087
OS180FT62122A	5.1	180.0	33.0	225	16 x 26	6.2 - 12.2	0.7 - 3.0	PA66	Black (BK)	2-10	157-00103
OS160FT6	5.3	170.0	30.0	200	16.0	6.3 - 6.7	0.7 - 5.0	PA66HS	Black (BK)	3;9-12	157-00096
	5.3	170.0	30.0	200	16.0	6.3 - 6.7	0.7 - 5.0	PA66	Black (BK)	3;9-12	157-00095
OS160FT6HEX	5.3	170.0	30.0	200	16.0	6.35	0.7 - 5.0	PA66	Grey (GY)	3;9-12	157-00098
	5.3	170.0	30.0	200	16.0	6.35	0.7 - 5.0	PA66	Black (BK)	3;9-12	157-00080
	5.3	170.0	30.0	200	16.0	6.5	0.7 - 5.0	PA66HS	Black (BK)	3;9-12	157-00081
OS170-FT7	5.3	170.0	30.0	147	16.0	6.8 - 7.2	0.6 - 4.5	PA66	Black (BK)	3;9-12	157-00017
OS180FT7LH	5.3	180.0	30.0	200	16.0	6.5 - 7.0. 6.35	0.6 - 4.5	PA66	Natural (NA)	3;9-12	157-00071
	5.3	180.0	30.0	200	16.0	6.5 - 7.0. 6.35	0.6 - 4.5	PA66	Black (BK)	3;9-12	157-00070
	5.3	180.0	30.0	200	16.0	6.5 - 7.0. 6.35	0.6 - 4.5	PA66HS	Black (BK)	3;9-12	157-00079

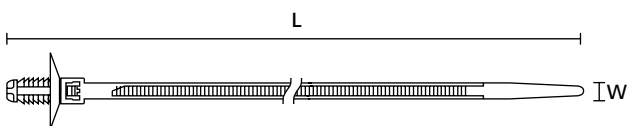
All dimensions in mm. Subject to technical changes.

1-Piece Fixing Ties with Fir Tree, with Disc

1-Piece Fixing Ties with Fir Tree, with Disc, releasable



Material specification please see page 22.



Fir tree foot part can be used for a variety of panel thicknesses

TYPE	Width (W)	Length (L)	Bundle Ø max.		Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
REL30SDP6	5.0	170.0	31.0	135	22.0	6.3 - 7.1	3.0 - 7.0	PA66	Black (BK)	2;4-6	150-55500

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Fir Tree and Disc, with Stand-off, for Round Holes

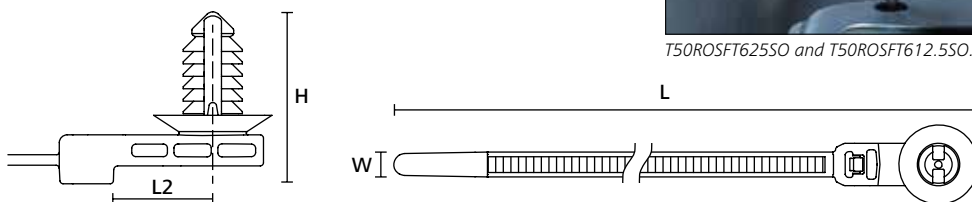
With Offset 12.5 and 25.0 mm

Features and benefits

- Bundling and fixing solution
- Ideal combination of materials and design
- Different positions of the fixing anchor are available to fit installation space
- 1-Piece Fixing Tie with defined offset 12.5 and 25.0 mm



T50ROSFT625SO and T50ROSFT612.5SO.

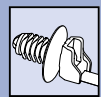


TYPE	Drawing	Width (W)	Length (L)	Length (L2)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.	
T50ROSFT 612.5SO		5.1	234.2	12.5	50.0	222	6.1 - 6.9	0.6 - 6.0	PA66HIRHS	Black (BK)	2-10	157-00216	
T50ROSFT 6525SO		5.1	242.2	25.0	50.0	220	6.1 - 6.9	0.6 - 3.8	PA66HIRHS	Black (BK)	2-10	157-00195	
T50ROSFT 825SO		5.1	245.1	25.0	50.0	220	7.6 - 8.4	0.6 - 6.0	PA66HIRHS	Black (BK)	2-10	157-00196	
T50ROSFT 65O12.5A		5.1	215.5	12.5	50.0	222	6.1 - 7.0	0.6 - 6.7	PA66HIRHS	Grey (GY)	2-10	157-00130	
		5.1	215.5	12.5	50.0	222	6.1 - 7.0. 6.35 (hexagonal)	0.6 - 6.7	PA66HIRHS	Black (BK)	2-10	157-00145	
T50ROSFT M6SO12.5A		5.1	215.5	12.5	50.0	222	M6	0.6 - 5.5	PA66HIRHS	Grey (GY)	2-10	157-00118	
T50ROSFT 85O25A		5.1	230.0	25.0	50.0	222	7.6 - 8.4	0.6 - 6.7	PA66HIRHS	Grey (GY)	2-10	157-00120	
T50ROSFT 65O25A		5.1	230.0	25.0	50.0	222	6.1 - 7.0	0.6 - 6.7	PA46	Brown (BN)	2-10	157-00158	
		5.1	230.0	25.0	50.0	222	6.1 - 7.0	0.6 - 6.7	PA66HIRHS	Grey (GY)	2-10	157-00119	
T50ROSFT 65O12.5B			5.1	215.5	12.5	50.0	222	6.1 - 7.0	0.6 - 6.7	PA66HIRHS	Black (BK)	2-10	157-00171
T50ROSFT 65O25B			5.1	230.0	25.0	50.0	222	6.1 - 7.0	0.6 - 6.7	PA66HIRHS	Black (BK)	2-10	157-00169
T50ROSFT M6SO12.5B			15.0	215.5	12.5	50.0	225	M6	0.6 - 5.5	PA66HIRHS	Black (BK)	2-10	157-00131
T50ROSFT M6SO25B			19.0	230.0	25.0	50.0	220	M6	0.5 - 6.5	PA66HIRHS	Black (BK)	2-10	157-00172
T50ROSFT 85O25B	19.0		230.0	25.0	50.0	225	7.6 - 8.4	0.6 - 5.0	PA66HIRHS	Black (BK)	2-10	157-00170	
T50ROSFT 65O12.5R			5.1	223.1	12.5	50.0	222	6.1 - 7.0	0.6 - 8.3	PA66HIRHS	Black (BK)	2-10	157-00165
T50ROSFT 65O25R			5.1	237.7	25.0	50.0	222	6.1 - 7.0	0.6 - 8.3	PA66HIRHS	Black (BK)	2-10	157-00164

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties with Fir Tree, with Disc, for Oval Holes

1-Piece Fixing Ties with Fir Tree, with Disc, for Oval Holes

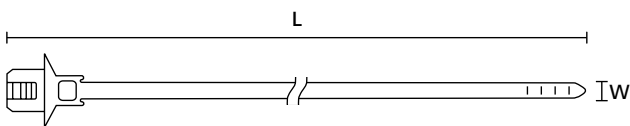
Primarily designed for fixing cable harnesses in the automotive industry their simplicity, and ease of use, has seen these parts used in everything from aircraft, to switch-gear, to washing machines.

Features and Benefits

- Cable tie head always situated in defined position
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes
- DOP versions for oval holes feature anti-twist protection.



The DOP versions for oval holes feature anti-twist protection.



T50SOS2DOP



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Material	Colour	Tools	Article-No.
T50SOS2DOP	4.6	164.0	35.0	200	6.2 x 12.2	PA46	Grey (GY)	2-10	157-00069
	4.6	164.0	35.0	200	6.2 x 12.2	PA66HS	Black (BK)	2-10	157-00183
T50SOS2DOP7X12-E	4.6	164.0	35.0	225	7.0 x 12.0	PA66HS	Black (BK)	2-10	157-01105
T50SOS3DOP65X130E	4.6	165.0	35.0	180	6.5 x 13.0	PA66HS	Black (BK)	2-10	157-00184
T50SOSFT7X12U	5.1	165.0	35.0	225	7.0 x 12.0	PA66HS	Black (BK)	2-10	157-00053
T50SOSFTOVALU	5.1	174.2	35.0	222	6,2 x 12.2	PA66HS	Black (BK)	2-10	157-00253
T50ROSFT7X12U	5.1	216.0	50.0	225	7.0 x 12.0	PA66HS	Black (BK)	2-10	157-00054
T50ROSFTOVALU	5.1	225.0	50.0	222	6.2 x 12.2	PA66HIRHS	Black (BK)	2-10	157-00142
T50ROSFTOVAL25A	4.7	229.3	50.0	225	6.2 x 12.2	PA66HIRHS	Black (BK)	2-10	157-00222
T50ROSFTOVAL12.5B	4.7	215.9	50.0	225	6.5 x 12.5 6.5 x 13.0 7.0 x 12.0	PA66HIRHS	Black (BK)	2-10	157-00249

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



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

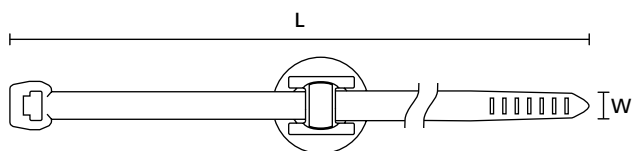
Primarily designed for fixing cable harnesses in the automotive industry, their simplicity and ease of use has resulted in these parts being used in other industries, for example aviation, switch gear manufacturer, white goods manufacturer.

Features and benefits

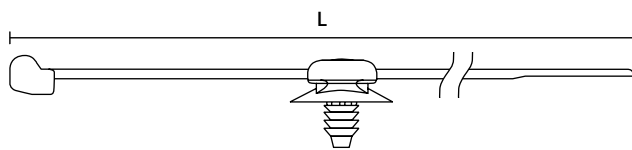
- Pre-assembled 2-piece fixing tie with fir tree foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Fir tree foot part can be used for a variety of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



These Fir-Tree fixings can also be used in threaded, blind holes.



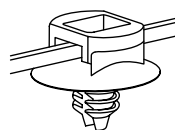
T50SOSFT5SD



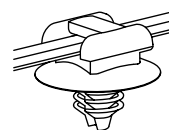
T50SOSFT5SD

i Other dimensions are available on request.

d Material specification please see page 22.



T30RFT5



T50SOSFT5SD

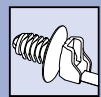
Fir Tree Parts FT3 - FT5

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T18RFT3	2.5	100.0	20.0	80	13	M3	1.5 - 3.0	PA66HSUV	PA66HSW	Black (BK)	2;4-6	156-00338
T18RFT5	2.5	100.0	22.0	80	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01225
T30RFT5	3.5	150.0	34.0	135	16.0	4.5 - 5.0	0.7 - 3.0	PA46	PA46	Grey (GY)	2;4-6	156-01019
	3.5	150.0	34.0	135	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-00460
T40RFT5	4.0	180.0	40.0	180	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-00518
T50SOSFT5	4.6	150.0	31.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-06200
T50SOSFT5SD	4.6	150.0	35.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00432
T50RFT5	4.6	202.0	45.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00569
	4.6	202.0	45.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66	Black (BK), Grey (GY)	2-10	156-00571
	4.6	202.0	45.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA46	Black (BK), Grey (GY)	2-10	156-00535

All dimensions in mm. Subject to technical changes.

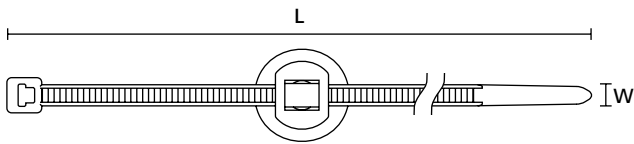
Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.

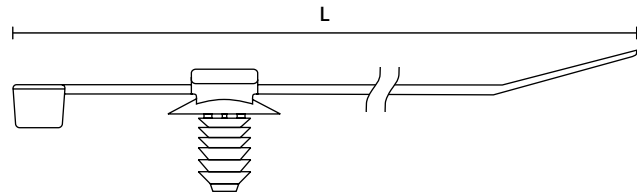


2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

Fir Tree Parts FT6



T50RFT6LG



T50RFT6LG

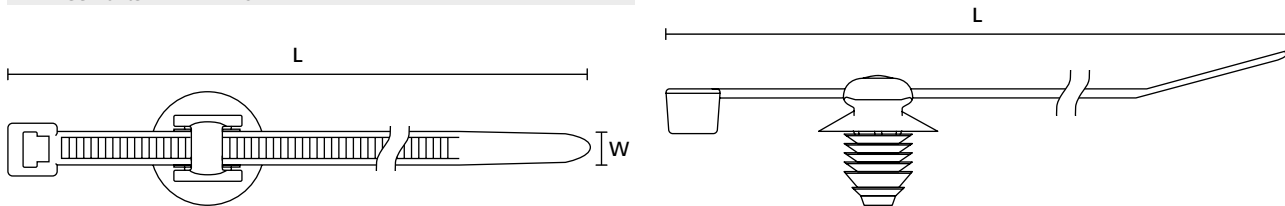
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
PT2AFT6	3.4	145	35.0	230	16	6.4 - 7.1	0.8 - 3.0	PEEK	PA46	Beige (BGE), Grey (GY)	2;4-6	156-00890
PT2AFT6LG	3.4	145	35.0	230	16	6.4 - 7.1	0.8 - 6.0	PEEK	PA46	Beige (BGE), Grey (GY)	2;4-6	156-01336
T18RFT6	2.5	100	20.0	80	16	6.4 - 7.1	0.8 - 3.0	PA66UV	PA66	Black (BK)	2;4-6	150-77935
T18RFT6LG1SD	2.5	100	18.0	80	16	6.4 - 7.1	0.6 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01256
T18RFT6SD	2.5	100	20.0	80	16	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-00517
T18RFT6SDSET	2.5	100	22.0	80	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01260
T30RFT6	3.5	150	30.0	135	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-77950
	3.5	150	34.0	135	16	6.5 - 7.0	0.8 - 3.0	PA46	PA46	Grey (GY)	2;4-6	156-01068
T30RFT6LG	3.5	150	35.0	133	16	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-31090
T30RFT6LG1SDSET	3.5	150	30.0	135	16	6.5 - 7.0	0.6 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01265
T30RFT6SD	3.6	148	35.0	135	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-52690
T50SFT6	4.6	160	35.0	225	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00156
T50SFT6LG	4.6	160	36.0	225	16	6.5 - 7.0	0.8 - 6.0	PA66HS	PA66HS	Black (BK)	2-10	156-00053
T50SFT6LG1SD	4.6	160	30.0	225	16	6.5 - 7.0	0.6 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00154
T50ROSFT6	4.6	200	45.0	225	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00076
T50ROSFT6SD	4.6	200	46.0	225	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIR	Black (BK)	2-10	156-05902
T50ROSFT6LG	4.6	200	45.0	225	16	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-8	150-31099
T50RFT6	4.6	202	45.0	225	16	6.5 - 7.0	0.75 - 3.0	PA46	PA46	Grey (GY)	2-10	156-00466
	4.6	202	45.0	225	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66	Black (BK)	2-10	150-77941
	4.6	202	45.0	225	16	6.5 - 7.0	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-00157
T50RFT6SD	4.6	202	45.0	225	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-01246
T50RFT6LG	4.6	202	44.0	225	16	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-31091
	4.6	202	45.0	225	16	6.5 - 7.0	0.8 - 6.0	PA66	PA66	Natural (NA)	2-10	156-01278
T50RFT6LG1SD	4.6	202	45.0	225	16	6.5 - 7.0	0.6 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-01391
T50RTC40 FT635	4.6	202	45.0	225	-	6.25 - 6.75	0.7 - 4.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00969
	4.6	202	45.0	225	-	6.25 - 6.75	0.7 - 4.0	PA66	PA66	Natural (NA), Black (BK)	2-10	156-00516
T50RFT6LGSD-HEX	4.6	202	45.0	225	16	6.25 - 6.75, 6.1 - 6.6 (hexagonal)	0.7 - 5.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00892
T50RDHFT6	4.7	210	19.0	180	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-77936
T50IFT6LG	4.6	305	85.0	225	16	6.5 - 7.0	0.8 - 6.0	PA66HS	PA66HIR	Black (BK)	2-10	156-00054
T50LFT6	4.6	390	110	225	16	6.6 - 7.0	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00066
T80LFT	5.0	390	108	355	16	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-77934
T80IFT6LG	4.6	300	81.0	356	16	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-12	150-31096

All dimensions in mm. Subject to technical changes.



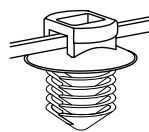
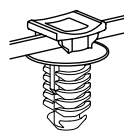
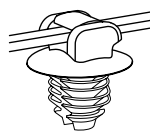
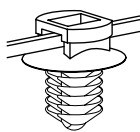
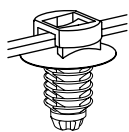
2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

Fir Tree Parts FT7 - FT10



T50RFT8GSD

T50RFT8GSD



T50IFT7

T50RFT8


T50RFT8GSD

T120IFT9


T50RFT10



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.		Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
V150RFT10	3.3	150.0	35.0	150	18	9.7 - 10.0	0.8 - 5.0	PA66	PA66HS	Black (BK)	2;4-6	156-01233
T30RFT7	3.5	150.0	35.0	135	16	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2;4-6;8	156-00057
	3.5	150.0	35.0	135	16	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66	Black (BK)	2;4-6;8	156-01476
T30RFT8	3.5	150.0	35.0	135	16	7.7 - 8.0	0.8 - 6.0	PA66HS	PA66HS	Black (BK)	2;4-6;8	156-00058
T30RFT10	2.5	150.0	31.0	135	18	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2;4-6;8	156-00062
T40RFT8GSD	4.0	180.0	40.0	180	16	8.0 - 8.5	1.5 - 4.0	PA66HS	PA66HIRHS	Black (BK)	2;4-8	156-00104
T50RFT7	4.6	200.0	44.0	225	16	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	111-85871
T50RFT8	4.6	202.0	44.0	225	16	7.7 - 8.0	0.8 - 6.0	PA66HIRHS	PA66HIRHS	Black (BK)	2-10	156-00158
T50RFT10	4.6	202.0	45.0	225	18	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	156-00523
T50ROSFT7	4.6	200.0	45.0	225	16	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	156-01056
T50ROSFT10	4.6	200.0	45.0	225	18	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	156-00120
T50RFT7	4.6	202.0	45.0	225	16	6.5 - 7.0	0.8 - 7.0	PA66HSW	PA66HS	Black (BK)	2-10	156-00587
	4.6	202.0	45.0	225	16	6.5 - 7.0	0.8 - 7.0	PA46	PA66HS	Natural (NA)	2-10	156-00465
T50RFT8GSD	4.6	200.0	45.0	225	16	8.0 - 8.5	1.5 - 4.0	PA66HS	PA66HIRHS	Black (BK)	2-10	133-00034
	4.6	200.0	45.0	225	16	8.0 - 8.5	1.5 - 4.0	PA46	PA46	Grey (GY)	2-10	156-00235
T50SFT7	4.6	160.0	35.0	225	16	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	156-00056
T50SFT10	4.6	160.0	31.0	225	18	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	156-00063
T50IFT8	4.6	305.0	81.0	225	16	7.7 - 8.0	0.8 - 6.0	PA66HS	PA66HS	Black (BK)	2-10	150-00060
T50IFT10	4.6	305.0	81.0	225	18	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	150-00064
T50LFT7	4.6	390.0	110.0	225	16	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	156-00055
T50LFT8	4.6	390.0	110.0	225	16	7.7 - 8.0	0.8 - 6.0	PA66HS	PA66HS	Black (BK)	2-10	156-00061
T50LFT10	4.6	390.0	106.0	225	18	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	156-00065
T150RFT9	7.6	365.0	100.0	670	20	9.0 - 10.6	5.0 - 11.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00845
T150RFT9B	7.6	365.0	100.0	670	21.6	8.75 - 9.25	1.0 - 15.8	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00985

All dimensions in mm. Subject to technical changes.

Recommended Tools											
	2	3	4	5	6	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	595	595	596	596	598	601	600	599	599	602	560

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties for Weld Studs

For cable routing above the stud

Primarily designed for use in the automotive industry, these parts can be used in a wide variety of applications where weld studs or ISO bolts are used and cables need to be bundled and secured (WS series, T120RSM, DCT9 & DCT 11 are for 1/4" bolts).

Features and benefits

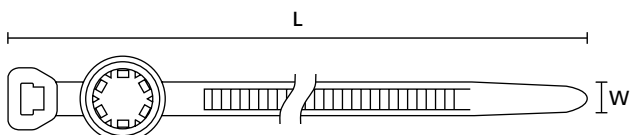
- Cable tie head always situated in defined position
- Easy to assemble without the need for a tool
- Bundle runs directly above weld stud with defined stand-off from the panel



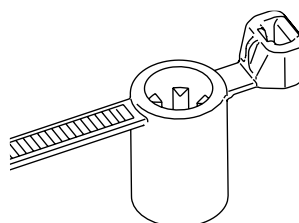
The T50SSBS50TE / T50SSBS60T-E allows very precise routing of cable bundles.



Material specification please see page 22.



T50SSBS60T-E



T50SSBS50TE

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
T50SSBS50T-E	4.6	160.0	35.0	200	5.0	PA66HS	Black (BK)	2-10	155-30602
T50SSBS60T-E	4.6	160.0	35.0	200	6.0	PA66HS	Black (BK)	2-10	157-00083
T50SOSSBH5E	4.6	166.4	35.0	225	5.0	PA66HS	Black (BK)	2-10	155-05701

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



1-Piece Fixing Ties for Weld Studs

For cable routing alongside the stud

Features and benefits

- Cable tie head always situated in defined position
- Easy to install without the need for a tool
- Bundles are routed very close to stud



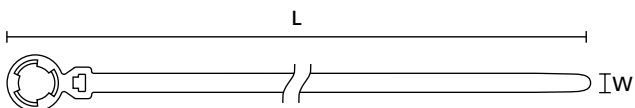
T50SOSSBD-M8/10.



T50SOSSBU-M8/10 for bundles which run below the stud.



This outside serrated cable tie with weld stud mounting keeps the cables close to the fixing stud.



T50SOSSBD-M8/M10

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
T50SOSSBD-M10		5.7	175.0	30.0	150	10.0	PA66HSW	Black (BK)	2-10	157-00040
T50SOSSBU-M6		5.7	175.0	30.0	150	M6	PA66HSW	Grey (GY)	2-10	157-00065
T50SOSSBD-M8		5.7	175.0	30.0	150	8.0	PA66HSW	Black (BK)	2-10	157-00039
T50SOSSBU-M10		5.7	175.0	30.0	150	10.0	PA66HSW	Grey (GY)	2-10	157-00067
T50SOSSBU-M8		5.7	175.0	30.0	150	8.0	PA66HSW	Grey (GY)	2-10	157-00066
T50SOSSBSSE		4.7	161.0	35.0	225	5.0	PA66HS	Black (BK)	2-10	155-12300

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.

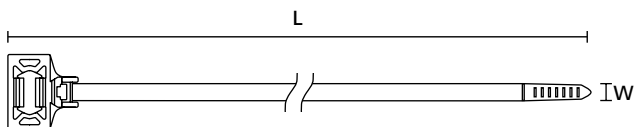


1-Piece Fixing Ties for Weld Studs, moveable

T50SOSWSP5E-2 for 5 mm studs, retainer height 3.5 mm

Features and Benefits

- Cable tie head always situated in defined position
- Easy to install without the need for a tool
- Provides 5 - 6 mm lateral adjustment
- Very low profile, stackable design
- For parallel routing of several bundles



T50SOSWSP5E-2



T50SOSWSP5E, parallel installation using two fixing ties.

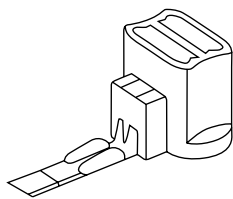
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
T50SOSWSP5E-2	4.6	162.6	35.0	225	5.0	PA66HS	Black (BK)	2-10	133-01553
T50SOSWSP5E	4.6	163.0	35.0	200	5.0	PA66HS	Black (BK)	2-10	157-00226

All dimensions in mm. Subject to technical changes.

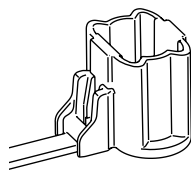
T50SOSSB5-High-E-C-CC for 5 and 6 mm studs

Features and Benefits

- Cable tie head always situated in defined position
- Easy to install without the need for a tool
- Provides a 5 – 6 mm lateral adjustment possibility



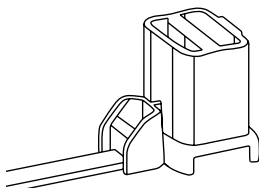
FixingTie_T50SOSSB5-High-E-C-CC



T50SOSSB6HE



T50SOSSB5-High-E-C-CC.



T60ROSSB6HEC

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
T50SOSSB6HE	4.7	160.0	35.0	170	6.0	PA66HS	Black (BK)	2-10	155-46302
HT160SB6HE	5.0	167.0	35.0	200	6.0	PA66	Black (BK)	2-10	157-00094
	5.0	167.0	35.0	200	6.0	PA66HS	Black (BK)	2-10	157-00090
HT160SB5HE	5.0	167.0	35.0	200	6.0	PA66	Black (BK)	2-10	157-00093
	5.0	167.0	35.0	200	6.0	PA66HS	Black (BK)	2-10	157-00089
T50SOSSB5-High-E-C-CC	5.0	167.0	35.0	225	5.0	PA66HS	Black (BK)	2-10	157-00227
T60ROSSB6HEC	5.5	227.4	55.0	300	6.0	PA66HS	Black (BK)	3;9-12	157-00101

All dimensions in mm. Subject to technical changes.

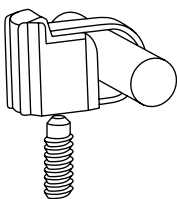


1-Piece Fixing Ties for Weld Studs

LFC-Series for routing close to the stud

Features and Benefits

- 1-piece fixing tie for 5 mm studs
- Cable tie head always situated in defined position
- Easy to install without the need for a tool
- Bundle runs very close next to stud
- Closed stud retainer protects the bundle against damage
- Contact surface allows secure bundling with tensioning tool



LFC165-2 can be put on by hand.



LFC165-2 for bundle diameters up to 35.0 mm



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
LFC155	4.6	163.0	26.0	160	5.0	PA66	Black (BK)	2-10	131-60070
LFC165(PSA)	4.7	165.0	35.0	90	5.0	PA66HS	Black (BK)	2-10	155-34202
LFC165-2	4.7	165.0	35.0	150	5.0	PA66HS	Black (BK)	2-10	157-00047

All dimensions in mm. Subject to technical changes.

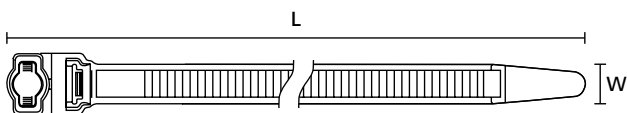
1-Piece Fixing Ties for Weld Studs, for Heavy Duty Applications

WS-Series for threaded studs

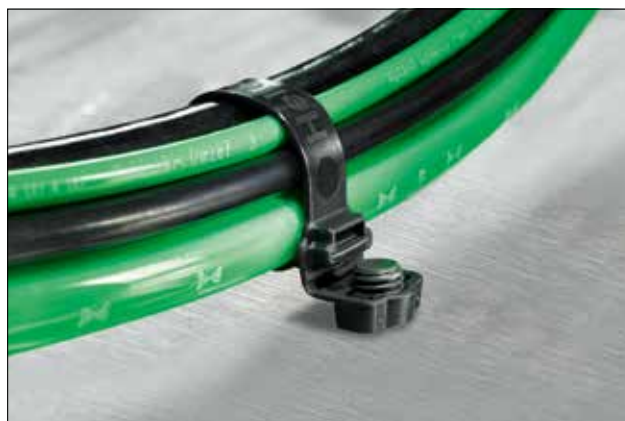
Wide strap stud-mounted cable ties are primarily designed for use in the automotive or truck industry.

Features and Benefits

- Very flexible strap provides minimum pinching of soft hoses and convoluted tubing
- Low profile head for compact bundling
- Clamping rails to increase grip on round bundles
- Flexible hinge



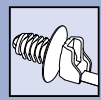
Wide Strap Heavy Duty Stud Mount Cable Ties



The wide strap stud mount cable tie minimizes pinching on soft bundles.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
WSS25	12.7	236.0	57.0	534	6.35	PA66HIRHSUV	Black (BK)	11-12	157-00400
WSI25	12.7	322.6	82.5	534	6.35	PA66HIRHSUV	Black (BK)	11-12	157-00401
WSI38	12.7	322.6	82.5	534	9.52	PA66HIRHSUV	Black (BK)	11-12	157-00404
WSR25	12.7	389.0	104.1	534	6.35	PA66HIRHSUV	Black (BK)	11-12	157-00402

All dimensions in mm. Subject to technical changes.



2-Piece Fixing Ties for Weld Studs, for parallel routing

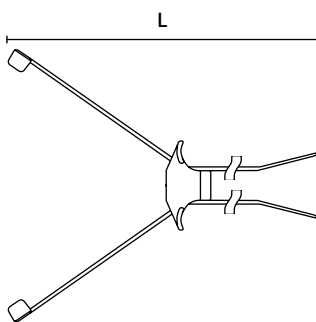
Many applications require cables to be run parallel to each other but separated to avoid abrasion. The double mounting base, when used with two cable ties allows this to be achieved simply and quickly.

Features and benefits

- Pre-assembled 2-piece fixing tie with stud retainer
- For parallel routing of cables, hoses or harnesses
- Cable tie head can be moved after bundling
- Easy to install without the need for a tool
- For 5 mm studs or 5 mm ISO threaded studs



Parallel fixation of two cables.




DSBS5

i Other dimensions are available on request.

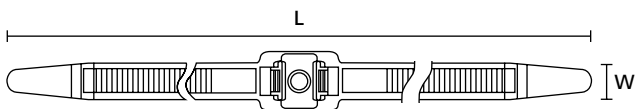
d Material specification please see page 22.

2-Piece Fixing Ties for Weld Studs

TYPE	Width (W)	Length (L)	Bundle Ø max.		Stud Ø	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50SDSBS5	4.6	150.0	35.0	225	5.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-56193
T50ROSDSBS5	4.6	200.0	45.0	222	5.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-56199

All dimensions in mm. Subject to technical changes.


1-Piece Fixing Ties for Weld Studs for Heavy Duty Applications



Dual Clamp Ties (DCT)

TYPE	Width (W)	Length (L)	Bundle Ø max.	Stud Ø	Material	Colour	Tools	Article-No.
DCT11	12.7	489.0	58.0	6.35	PA66HIRHSUV	Black (BK)	3;9-12	115-31100
DCT9	12.8	331.0	33.0	6.35	PA66HIRHS	Black (BK)	2-11	115-00034

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for Weld Studs

Series SBH5 and SBH5SD are used mainly in the automotive industry. The SD variant is for the smallest bundle diameters from 1.0 mm. Series SB5 and SBS5 are suitable for bundling and fastening cable looms and pipes in switch cabinet construction and automotive and construction machine industry.

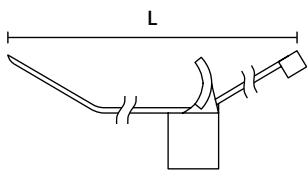
Features and Benefits

- Pre-assembled 2-piece fixing tie with stud retainer
- Cable tie head can be moved after bundling
- Easy to install without the need for a tool
- SB5-types for 5 mm studs or 5 mm ISO threaded studs
- Types with discs can retain insulation materials while fixing a cable bundle
- Oval shape can be adjusted in a lateral position
- GB58C for 8 mm retainer enables parallel routing



Cable ties illustrating the variety of application methods for weld stud fixing.

2-Piece Fixing Ties for Weld Studs, moveable, oval hole



TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30RSB5		3.5	150.0	32.0	135	PA66HS	POM	Black (BK)	2;4-6	150-10140
T50SSB5		4.6	150.0	32.0	225	PA6HS	PA66HS	Black (BK)	2-10	150-10144
T50SOSSB5		4.6	150.0	35.0	225	PA66HS	POM	Black (BK)	2-10	156-00080
T50RSB5		4.6	200.0	45.0	225	PA66HS	POM	Black (BK)	2-10	150-10141
T50ROSSB5		4.6	200.0	45.0	225	PA66HS	POM	Black (BK)	2-10	156-00916
T50ROSSB5SET		4.6	200.0	45.0	225	PA66HS	POM	Black (BK)	2-10	150-05005
T50RSB5		4.6	202.0	45.0	225	PA46	PA46	Grey (GY)	2-10	156-00084
T50RSB5CSD		4.6	200.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	156-00083
T50ROSSB5CSD		4.6	200.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	156-05906

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for Weld Studs, moveable, round hole

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30RSBS5		3.5	150.0	35.0	135	PA66HS	PA66HS	Black (BK)	2;4-6	150-21290
T50SOSSBS5		4.6	150.0	31.0	225	PA66HS	PA66	Black (BK)	2-10	156-00079
T50SSBS5		4.6	150.0	35.0	225	PA66HS	PA66HS	Black (BK)	2-10	150-21293
T50RSBS5		4.6	200.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	150-21291
T50ROSSBS5		4.6	200.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	150-21299
T80ISBS5		4.7	305.0	80.0	355	PA66HS	PA66HS	Black (BK)	2-12	150-21297
T50ROSGBS8CA		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00251
T50ROSGBS8CB		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00252
T50ROSGBS8CC		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00116

All dimensions in mm. Subject to technical changes.



Material specification please see page 22.

2-Piece Fixing Ties for Weld Studs, with disc

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50RSBH5-10		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00536
T50RSBH5		4.6	202.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	150-16943
T80ISBH5		5.0	300.0	80.0	355	PA66HS	PA66HS	Black (BK)	2-12	150-16945
T50RSBH5-SD		4.6	200.0	45.0	222	PA66HS	PA66HS	Black (BK)	2-10	156-00522
T50ROSSBH5SD		4.6	200.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	156-05905
T80ISBH5SD		4.6	300.0	78.0	356	PA66HS	PA66HS	Black (BK)	2-12	150-92905
T50R-SBH5SD-14		4.6	200.0	45.0	222	PA66HS	PA66HS	Black (BK)	2-10	150-77591
T50RSBH6SD		4.6	200.0	45.0	225	PA66HS	PA66HS	Black (BK)	2-10	156-00819

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



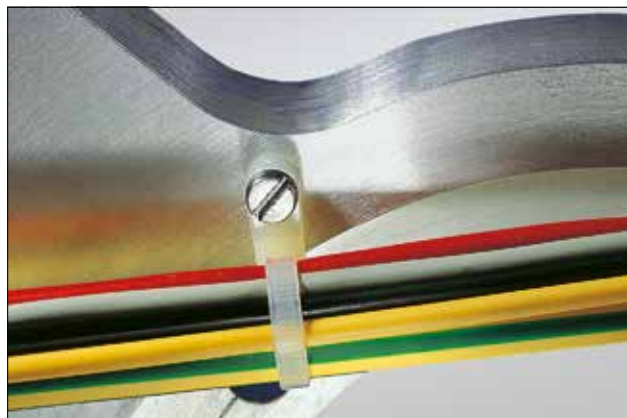
1-Piece Fixing Ties with Mounting Head for Screws

This range of one piece cable ties have a built in mounting hole and once fastened around the cables the bundle can be simply secured to the panel with a screw or bolt.

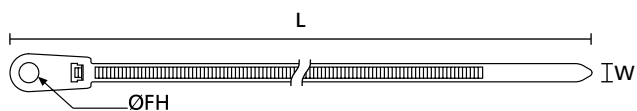
The tie is fitted to the panel first and then the cables can be added.

Features and benefits

- One-piece bundling and fixing tie
- Quick and easy installation



The mounting head ties can be easily screwed onto a panel.



T()MR Series with Mounting Head for Screw fixing



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Material	Colour	Tools	Article-No.
T18MR	2.5	110.0	20.0	80	3.1	PA66	Black (BK)	2;4-6	113-01810
	2.5	110.0	20.0	80	3.1	PA66	Natural (NA)	2;4-6	113-01819
T30MR	3.5	160.0	32.0	135	4.3	PA66	Black (BK)	2;4-6	113-03010
	3.5	160.0	32.0	135	4.3	PA66	Natural (NA)	2;4-6	113-03019
T50MS	4.6	165.0	32.0	225	5.3	PA66	Natural (NA)	2-10	113-05819
	4.6	165.0	32.0	225	5.3	PA66	Black (BK)	2-10	113-05820
T50MR	4.7	215.0	45.0	225	5.4	PA66	Black (BK)	2-10	113-05010
	4.7	215.0	45.0	225	5.4	PA66	Natural (NA)	2-10	113-05019
	4.7	215.0	45.0	225	5.4	PA66W	Black (BK)	2-10	113-05060
T50ML	4.7	390.0	100.0	225	5.5	PA66	Natural (NA)	2-10	113-05419
T120MR	7.6	395.0	102.0	535	6.5	PA66	Black (BK)	3;9-12	113-12020
	7.6	395.0	102.0	535	6.5	PA66	Natural (NA)	3;9-12	113-12029
	7.6	395.0	102.0	535	6.5	PA66HIRHSUV	Black (BK)	3;9-12	113-12060

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



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



Fixing Ties for Edges

EdgeClip-Family

These cable ties and EdgeClip assemblies are ideal for use where holes are not acceptable or where, due to temperature problems, adhesives will fail. Once the cable tie is fastened around the cables the EdgeClip is presented ready for attaching to the panel. Widely used within the automotive and panel building industries these cable ties and EdgeClips save time and money.

Features and Benefits

- Easy assembly by hand
- For edges of 1 – 3 mm or 3 – 6 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



One Step to the Web!



T50ROSEC10 fitted onto a plastic panel to hold a Ø 6 mm harness.



1-Piece-Fixing Tie T50SOSEC12 can be pushed easily on edges.



Pre-assembled 2-Piece Fixing Tie with Edge Clip for edges of 1-3 mm.

The silver-grey clamp, the heart of our EdgeClips, consists of double-tempered spring steel in accordance with DIN EN 10132-4 C75S. The spring steel gives the clamp both the necessary rigidity to provide high pull-off forces and also sufficient flexibility for various possible applications.

The double coating is applied initially with a zinc plate system followed by inorganic surface sealing. Naturally, no chromium (VI) is used in this process. The clamp therefore complies with the current

EU Directive 200/53/EC on end of life vehicles and the prohibition on heavy metals. The refined spring-steel clamp also fulfils the requirements for resistance to salt spray stipulated in DIN EN ISO 9227 NSS (min. 840 h without corrosion of base metal) and DIN EN ISO 6270-Z-CH (min. 720 h without corrosion of base material). This solution has therefore been approved by many OEMs for exposed installation locations, e.g. in engine compartments and the running-gear area.

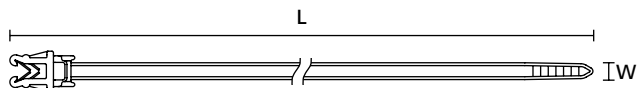


Fixing Ties for Edges

EdgeClip-Family



Material specification please see page 22.



T50SOSEC12E



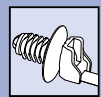
EdgeClips are also available on request for panel thickness from 4 - 7 mm.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Panel Thickness	Material	Colour	Tools	Article-No.
T50SOSEC12E		4.6	160.0	35.0	150	1.0 - 3.0	PA66HS	Black (BK)	2-10	148-00200
		4.6	160.0	35.0	150	1.0 - 3.0	PA46	Grey (GY)	2-10	126-00253
T50SOSEC13E		4.6	160.0	35.0	180	1.0 - 3.0	PA66HS	Black (BK)	2-10	126-00000
T40XEC5SP-E		4.0	85.0	15.0	178	1.0 - 3.0	PA66HS	Black (BK)	2;4-8	133-00059
T50SOSEC34E		4.6	155.0	35.0	180	1.0 - 3.0	PA66HS	Black (BK)	2-10	126-00036
T50SOSEC20-E		4.6	161.0	35.0	180	3.0 - 6.0	PA66HS	Black (BK)	2-10	126-00235

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.

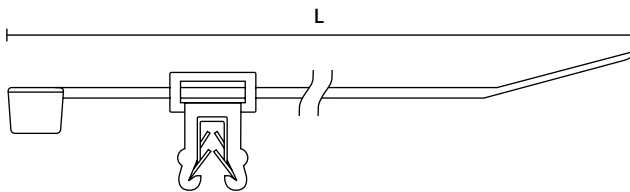


2-Piece Fixing Ties for Edges, 1.0 - 3.0 mm, Top Fixing

EdgeClip-Family

Features and Benefits

- Pre-assembled 2-piece fixing tie with EdgeClip
- Cable tie head can be moved after bundling
- EC9, EC10, EC21 and EC22 are for minimum bundle diameters of 1 mm
- For edges of 1 – 3 mm



Fixing Tie with EC4



T50ROSEC10 fitted onto a plastic panel to hold a Ø 6 mm harness.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30REC4A		3.6	148.0	33.0	135	PA66HS	PA66HIRHS	Black (BK)	2,6	156-00811
T50SOSEC4A		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	150-76093
T50ROSEC4A		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00461
T50ROSEC4A-W		4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2,6,10	156-00570
T50REC4A		4.6	202.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-01114
T30REC4B		3.6	148.0	35.0	135	PA66HS	PA66HIRHS	Black (BK)	2,6	156-00893
T50SOSEC4B		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00109
T50ROSEC4B		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00462
T18REC10SD		2.5	100.0	22.0	80	PA66HS	PA66HIRHS	Black (BK)	2,6	156-01253
T50SOSEC10		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00015
T50ROSEC10		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-05904
T18REC9SD		2.5	100.0	22.0	80	PA66HS	PA66HIRHS	Black (BK)	2,6	156-01255
T18REC9SDSET		2.45	100.0	20.0	80	PA66HS	PA66HIRHS	Black (BK)	2,6	156-01262
T50SOSEC9SD		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00019
T50ROSEC9		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-05903
T50REC9SD		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-01280
Q50REC4A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2,6,10	156-01085
Q50REC4B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2,6,10	156-01086

All dimensions in mm. Subject to technical changes.



2-Piece Fixing Ties for Edges, 1.0 - 3.0 mm, Side Fixing

EdgeClip-Family

Features and Benefits

- Pre-assembled 2-piece fixing tie with EdgeClip
- Cable tie head can be moved after bundling
- EC9, EC10, EC21 and EC22 are for minimum bundle diameters of 1 mm
- For edges of 1 – 3 mm



T50ROSEC23 - the cable bundle runs parallel with the edge.



Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30REC5A		3.6	148.0	33.0	135	PA66HS	PA66HIRHS	Black (BK)	2,6	156-00003
T40REC5A		4.0	175.0	45.0	180	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00559
T50SOSEC5A		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00788
T50ROSEC5A		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00463
T50REC5A		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-01037
T50SOSEC5B		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00789
T50REC5B		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	150-40582
T50ROSEC5B		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00464
T18REC21		2.5	100.0	18.0	80	PA66W	PA66HIRHS	Black (BK)	2,6	156-01258
T50SOSEC21		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00017
T50ROSEC21		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00951
T18REC21		2.5	100.0	20.0	80	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-01254
T50ROSEC22		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00011
T50REC22		4.6	200.0	45.0	225	PA66W	PA66HIRHS	Black (BK)	2,6,10	156-00576
Q50REC5A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2,6,10	156-01087
Q50REC5B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2,6,10	156-01088

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for Edges, 3.0 - 6.0 mm, Top Fixing

EdgeClip-Family

Features and Benefits

- Pre-assembled 2-piece fixing tie with EdgeClip
- Cable tie head can be moved after bundling
- For minimum bundle diameters of 1 mm
- For edges of 3 – 6 mm



Material specification please see page 22.



Pre-assembled 2-piece fixing tie with EdgeClip.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T18ROSEC19		2.5	100.0	20.0	80	PA66HS	PA66HIRHS	Black (BK)	2,6	156-04600
T50SOSEC19		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-01309
T50REC19		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00907
T50ROSEC19		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-01038
T50SOSEC20		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00016
T50ROSEC20		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00834

All dimensions in mm. Subject to technical changes.



Other combinations between cable tie and foot part available on request.

2-Piece Fixing Ties for Edges, 3.0 - 6.0 mm, Side Fixing

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50ROSEC23		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00774
T50ROSEC24		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2,6,10	156-00775

All dimensions in mm. Subject to technical changes.

Recommended Tools

	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for Edges, 0.5 - 2.5 mm, Top Fixing

Edge Clip Family for flat and thin edges

These cable ties and EdgeClip assemblies are ideal for use where holes are not acceptable or where due to temperature problems adhesives will fail. These assemblies are widely used for fixing and bundling cables, pipes and hoses within the automotive industry, harness making, panel building and electrical industry. These EdgeClips are specially designed for applications where space is limited such as in mirrors and headlights.

Features and benefits

- For flat edges
- For thin edges 0.5 - 2.5 mm
- Small housing for limited space
- Pre-assembled 2-piece fixing tie with EdgeClip
- Cable tie head can be moved after bundling



T30ROSECO,5-2,5SPV for application on thin edges.



The capabilities of our popular Edge Clip family have been enhanced with the introduction of new, smaller clips. These smaller clips allow bundles to run more safely on thin or flat edges.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30ROSECO.5-2.5TP-SD		3.4	145.0	35.0	135	0.5 - 2.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01543
T30ROSECO.5-2.5TV-SD		3.4	145.0	35.0	135	0.5 - 2.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01545
T30ROSECO.5-2.5TPVA		3.4	145.0	35.0	135	0.5 - 2.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01542

All dimensions in mm. Subject to technical changes.

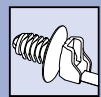
2-Piece Fixing Ties for Edges, 0.5 - 2.5 mm, Side Fixing

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T30ROSECO.5-2.5SP-SVB		3.4	145.0	35.0	135	0.5 - 2.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01546
T30ROSEC05-2.5SPSVA		3.4	145.0	35.0	133	0.5 - 2.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01797
T30ROSECO.5-2.5SPVA		3.4	145.0	35.0	135	0.5 - 2.5	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01544

All dimensions in mm. Subject to technical changes.

Recommended Tools				
	2	4	5	6
	MK20	MK3SP	MK3PNP2	EVO7
	595	596	596	598

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for Edges, twistable

EdgeClip-Family

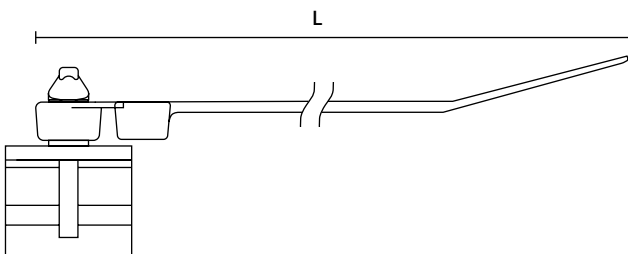
These cable ties and Edge Clip assemblies are ideal for use where holes are not acceptable or where due to temperature problems adhesives will fail. These assemblies are widely used for fixing and bundling cables, pipes and hoses within the automotive industry, harness making, panel building and electrical industry.

Features and benefits

- Pre-assembled 2-piece fixing tie with EdgeClip
- Easy to assemble by hand
- Cable tie head can be moved after bundling
- For edges of 1 – 2.5 mm or 1 – 3 mm
- Can be rotated to the desired position during mounting




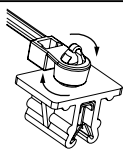
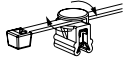
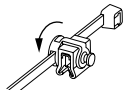
EdgeClip CBTO50R, rotatable 90°.




CBT30MR



Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.		Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
CBT30MR		3.5	160.0	32.0	135	2.5	PA66HS	POM	Black (BK)	2;5-6	156-00049
CBTO50R		4.6	202.0	47.0	225	3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-01601
CBTOS50RSTUDS		4.6	200.0	47.0	225	3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00380

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.

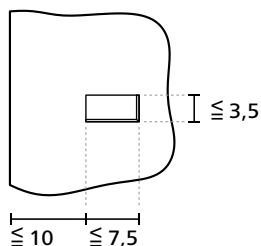


2-Piece Fixing Ties for Edges, for Holes

Due to the tie's reduced installation height it is ideal for use wherever space is at a premium.

Features and Benefits

- Pre-assembled 2-piece fixing tie with EdgeClip
- Easy to assemble by hand
- Cable tie head can be moved after bundling
- For edges of 1.0 - 3.0 mm
- Secure fixing of the EdgeClip into drill hole
- Ideal for use wherever space is at its premium



Position of the drill hole for the holding tab



The holding tab increases the tensile strength additionally.



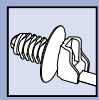
Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50REC2.5B		4.6	202.0	40.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-45292
T50ROSEC2.5A		4.6	200.0	50.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-45299

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



Heavy Duty Harness Clips

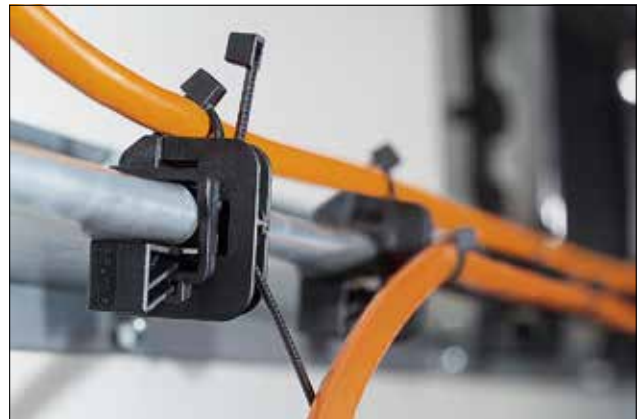
Beam Clamps

Primarily designed for use in the automotive/truck industry, these parts can be used in a wide variety of industries and applications where bundles need mounting.

These heavy duty harness clips help to fix and secure cables, lines and hydraulic lines in truck, agriculture and railway vehicle construction, as well as in the ship building industry and industrial buildings.

Features and Benefits

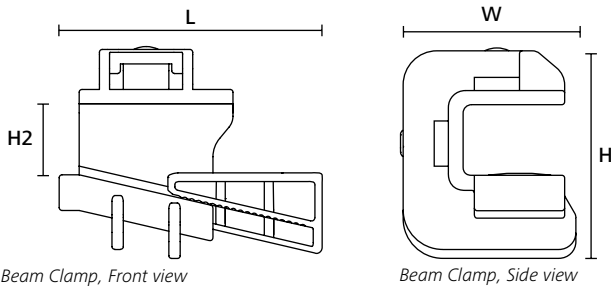
- Easy to install
- No damage to surfaces
- Easy maintenance of bundle by simply changing cable tie
- Cable tie head can be moved after bundling
- Applicable to a wide range of panel thicknesses



The Beam Clamp can be fixed onto a beam with a wedge. Up to two bundles can be routed on the top or rear side of the clamp.



Our two Beam Clamps with 3 different wedges for diverse sheet thicknesses.



TYPE	Drawing	Width (W)	Length (L)	Height (H)	Height (H2)	Material	Colour	Article-No.
Beam Clamp B-PA6GF30-BK		28.6	46.2	36.7	12.5	PA6GF30	Black (BK)	151-00822
Beam Clamp C-PA6GF30-BK		28.6	46.2	36.7	12.5	PA6GF30	Black (BK)	151-00823
Beam Clamp D-PA6GF30-BK		28.6	46.2	36.7	12.5	PA6GF30	Black (BK)	151-00886
Beam Clamp B with foam-PA6GF30-BK		28.6	46.2	36.7	12.5	PA6GF30	Black (BK)	151-01186
Beam Clamp C with foam-PA6GF30-BK		28.6	46.2	36.7	12.5	PA6GF30	Black (BK)	151-01187
Beam Clamp D with foam-PA6GF30-BK		28.6	46.2	36.7	12.5	PA6GF30	Black (BK)	151-01188

All dimensions in mm. Subject to technical changes.




2-Piece Fixing Ties with Pipe Clip, twistable 360°

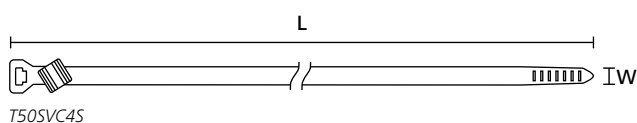
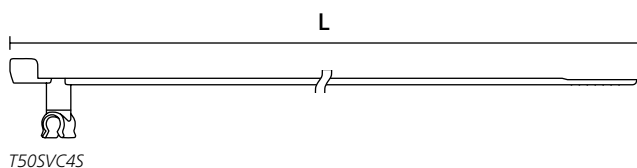
Features and Benefits

- Simply clip onto a wire or hose
- Fixing clip offers full 360° rotation
- Routed cable can move in any direction in relation to the fixing point
- Inside serrated cable tie
- Ideally used in the Automotive Industry




T50SVC5 rotates in any direction.

 **Material specification please see page 22.**



TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Attach to Ø	Material	Colour	Tools	Article-No.
T50SVC3.5		4.7	155.0	35.0	3.45 - 3.55	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01579
T50SVC4		4.7	155.0	35.0	3.8 - 4.2	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01375
T50SVC5		4.7	155.0	35.0	4.5 - 5.2	PA66HS	Black (BK)	2-10	156-01366
T50SVC4S		4.7	155.0	35.0	3.8 - 4.2	PA66HS, PP	Black (BK), Natural (NA)	2-10	156-01374
T50SVC6.5		4.7	155.0	35.0	6.5 - 8.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01371
T50SVCOC10-14		4.7	155.0	35.0	10.0 - 14.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-02004
T50SVCOC15-18		4.7	155.0	35.0	15.0 - 18.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-02002
T50SVCOC19-24,5		4.7	155.0	35.0	19.0 - 24.5	PA66HS, PA66HIRHS	Black (BK)	2-10	156-02005
T50SVCOC25-31		4.7	155.0	35.0	25.0 - 31.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01230
T50SVCOC31-39		4.7	155.0	35.0	31.0 - 39.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-02000
T50SVCOC39-45		4.7	155.0	35.0	39.0 - 45.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01334
T50SVCOC9-11A		4.7	155.0	35.0	9.0 - 11.0	PA66HIRHS, PA66HS	Black (BK)	2-10	156-01419
T50SVCOC9-11B		4.7	155.0	35.0	9.0 - 11.0	PA66HIRHS, PA66HS	Black (BK)	2-10	156-01237
T50SVCOC14		4.7	155.0	35.0	14.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01318
T50SVCOC18-20A		4.7	155.0	35.0	18.0 - 20.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01190
T50SVCOC18-20B		4.7	155.0	35.0	18.0 - 20.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01194
T50SVCOC28		4.7	155.0	35.0	28.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01239
T50SMVOC28		4.7	210.0	50.0	28.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01268

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.





2-Piece Fixing Ties with Pipe Clip, twistable 360°

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Attach to Ø	Material	Colour	Tools	Article-No.
T50SVC3.5		4.7	155.0	35.0	3.45 - 3.55	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01376
T50SMVCO1014		4.7	210.0	50.0	10.0 - 14.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-02003
T50SMVCO15-18		4.7	210.0	50.0	15.0 - 18.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01365
T50SMVCO19-24.5		4.7	210.0	50.0	19.0 - 24.5	PA66HS, PA66HIRHS	Black (BK)	2-10	156-02001
T50SMVCO19-24,5		4.7	210.0	50.0	19.0 - 24.5	PA46	Grey (GY)	2-10	156-00577
T50SMVCO25-31		4.7	210.0	50.0	25.0 - 31.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01250
T50SMVCO31-39		4.7	210.0	50.0	31.0 - 39.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00304
T50SMVCO39-45		4.7	210.0	50.0	39.0 - 45.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00131

All dimensions in mm. Subject to technical changes.

1-Piece Fixing Ties with Wire Clip

Features and Benefits

- Cable tie head always in defined position
- Easy to close by simply pressing the cover
- Firm fit around wires
- Suitable for post-installation of bundles
- Available in a range of sizes



T50SOSWA - The easy way for parallel guidance of cables next to a wire.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Tools	Article-No.
T50SOSWA1.8E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00089
T50SOSWA2.0E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00088
T50SOSWA3.4E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00095
T50SOSWA4.3E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00092
T50SOSWB1.8E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00090
T50SOSWB2.0E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00093
T50SOSWB3.4E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00096
T50SOSWB4.3E		4.6	150.0	35.0	225	PA66HS	Black (BK)	2-10	148-00091

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties with Pipe Clip

Features and Benefits

- For post-installation of additional cables for pre-assembled cable looms
- Variety of twist angles and even different loop directions provide flexibility for cable routing
- For OC1 and 2A additional cable tie dimensions are available
- CBTO-series for cable ties up to 5 mm



EdgeClip CBTO50R, verdrehbar um 90°.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Attach to Ø	Material	Colour	Tools	Article-No.
T30ROC2A		3.6	148.0	31.0	6.5 - 7,5	PA46	Grey (GY)	2;4-6	156-00014
		3.6	148.0	31.0	6.5 - 7,5	PA66HS, PA66HIRHS	Black (BK)	2;4-6	156-00013
T30ROC1A		3.6	148.0	31.0	4,0 - 10,0	PA66HS, PA66HIRHS	Black (BK)	2;4-6	156-00950
T50ROC1A		4.6	202.0	45.0	4,0 - 10,0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01141
T30ROC1B		3.6	148.0	30.0	4,0 - 10,0	PA66HS, PA66HIRHS	Black (BK)	2;4-6	156-00505
T50ROC1B		4.6	202.0	45.0	4,0 - 10,0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01247
T30ROC2B		3.6	150.0	31.0	6.5 - 7,5	PA46, PA66HIRHS	Natural, Black (BK)	2;4-6	156-00936

All dimensions in mm. Subject to technical changes.

2-Piece Fixing Ties with Pipe Clip, twistable 90°

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Attach to Ø	Material	Colour	Tools	Article-No.
T50ROC10		4.6	202.0	45.0	10,0 - 14,0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01180
T50ROC15-18CBTO-SD-SET		4.6	202.0	45.0	15,0 - 18,0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00419
T50ROC19-24.5CBTO-SD-SET		4.6	202.0	45.0	19,0 - 24,5	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00422

All dimensions in mm. Subject to technical changes.

Recommended Tools								
	2	3	4	5	6	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7P	MK6	EVO9
	595	595	596	596	598	601	600	599

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for parallel separation

Features and benefits

- Pre-assembled 2-piece fixing tie with coupler
- Cable tie head can be moved after bundling
- Easy addition of cables after assembly
- For parallel routing of bundles that can be twisted 90° even after installation



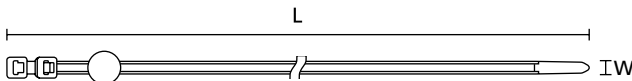
Material specification please see page 22.



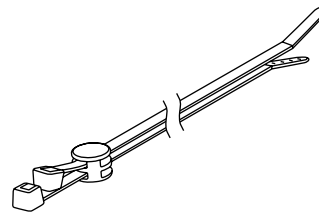
T120RCOUPLER can be used for parallel routing of two cable ties.



The second tie can be used for post-installations.



Two Cable Ties with Coupler



T120RCOUPLER



Fixing Element - COUPLER

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50RCOUPLER	4.6	202.0	47.0	225	PA46	PA46	Grey (GY)	2-10	156-00382
	4.6	202.0	47.0	225	PA66HIR(S)	PA66HIRHS	Black (BK)	2-10	156-00276
T50RSINGLECOUPLER	4.6	202.0	47.0	225	PA66HIRHS	PA66HIRHS	Black (BK)	2-10	156-01134
T120RCOUPLER	7.6	390.0	105.0	535	PA66HIR(S)	PA66HIRHS	Black (BK)	3;9-12	156-00275
T120RSINGLECOUPLER	7.6	390.0	105.0	535	PA66HIR(S)	PA66HIRHS	Black (BK)	3;9-12	156-00550

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	8	9	10	11	12
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7P	MK6	EVO9	EVO9HT	MK9P
	595	595	596	596	598	601	600	599	599	602

For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties for Heavy Duty Applications, for Screws

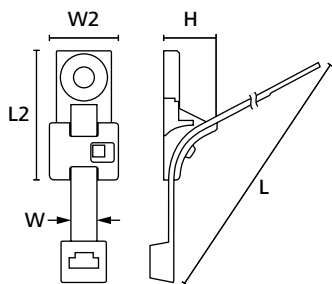
Used in the automotive and truck industry for harness fixing in the engine body, these parts offer solutions in many other industrial applications with difficult environment.

Features and benefits

- Pre-assembled 2-piece fixing tie
- Cable tie head can be moved after bundling
- Secure alignment to the bundle due to H-design
- A suitable alternative for metal clamps
- Withstands vibrations and displacement forces
- High tightening torque through metal bushing



These HDM are suitable for assembling on screws.



HDM with cable tie (L = length of the tie "flat")



DHDM for parallel routing of bundles.

HDM-Series

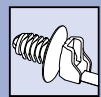
TYPE	Width (W)	Width (W2)	Length (L)	Length (L2)	Height (H)	Bundle Ø max.	Mounting Screw Type	Material	Colour	Tools	Article-No.
T50RHDM6	4.6	20.0	200.0	37.5	16.0	50.0	M6	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00918
	4.6	20.0	200.0	37.5	16.0	50.0	M6	PA46	Grey (GY)	2-10	156-00919
T50RHDM8	4.6	20.0	200.0	37.5	16.0	50.0	M8	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00920
	4.6	20.0	200.0	37.5	16.0	50.0	M8	PA46	Grey (GY)	2-10	156-01251
X80RHDM60	4.6	26.0	200.0	34.7	15.5	23.0	M6	PA66HS, PA66HIRHS	Black (BK)	2-12	156-01425
T120SHDM8	7.6	20.0	225.0	38	15.6	55.0	-	PA46	Grey (GY)	9-10;12;15	156-00429
T120RHDM6	7.6	20.0	390.0	37.5	16.0	105.0	M6	PA46	Grey (GY)	3;9-12	156-00407
	7.6	20.0	390.0	37.5	16.0	105.0	M6	PA66HIRHS	Black (BK)	3;9-12	156-00406
T120RHDM8	7.6	20.0	390.0	37.5	16.0	105.0	M8	PA46	Grey (GY)	3;9-12	156-00409
	7.6	20.0	390.0	37.5	16.0	105.0	M8	PA66HIRHS	Black (BK)	3;9-12	156-00408
X120RHDM 65x160	7.7	32.0	369.0	40.2	15.5	100.0	M6	PA66HIRHS	Black (BK)	3;9-12	156-01466

All dimensions in mm. Subject to technical changes.

DHDM-Series

TYPE	Width (W)	Width (W2)	Length (L)	Length (L2)	Height (H)	Bundle Ø max.	Mounting Screw Type	Material	Colour	Tools	Article-No.
T120ROSDHDM6	7.6	25.4	385.0	59.4	15.5	105.0	M6	PA66W, PA66HS	Black (BK)	3;9-12	156-01485
X120RDHDM6	7.7	25.4	369.0	59.4	15.5	100.0	M6	PA66HIRHS	Black (BK)	3;9-12	156-01096
X120RDHDM8	7.7	25.4	369.0	59.4	15.5	100.0	M8	PA66HIRHS	Black (BK)	3;9-12	156-01097

All dimensions in mm. Subject to technical changes.



Cable Ties for single hole application (Chassis Tie)

Using a single hole these 'chassis ties' are widely used in the automotive, truck and heavy equipment markets. Ideal for applications which have access to both sides of the hole - for example truck frames.

Features and Benefits

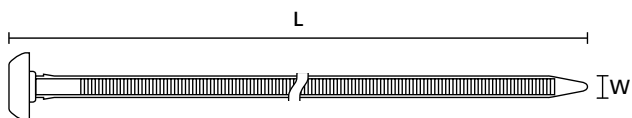
- Both sides of the cable tie serrated
- BHT-Series with round head for larger bearing area
- BHT375 for centred position
- CT- and DE-Series with small squared head for restricted space areas
- Tensioning with application tool



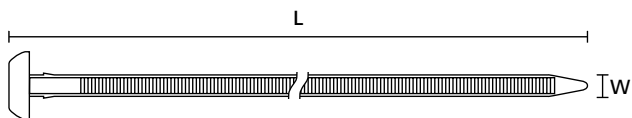
BHT375 - used for mounting cables via a single hole.



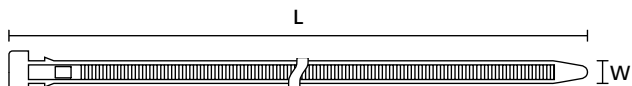
For your system solutions we offer suitable fixing elements: MSBT120, page 161.



BHT375



BHT375M



CT375, DE863220

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Tools	Article-No.
BHT375		7.6	375.0	100.0	700	PA66HS	Black (BK)	3;9-11	150-37595
BHT375M		7.6	375.0	100.0	700	PA66HS	Black (BK)	3;9-11	150-47595
DE863220		6.0	300.0	80.0	135	PA66HS	Black (BK)	3;9-11	132-00200
CT375		7.6	375.0	100.0	700	PA66HS	Black (BK)	3;9-11	132-37540

All dimensions in mm. Subject to technical changes.

Recommended Tools				
	3	9	10	11
	MK21	MK6	EVO9	EVO9HT
	595	600	599	599

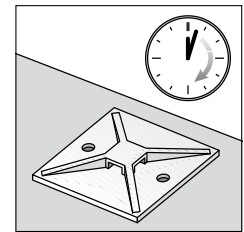
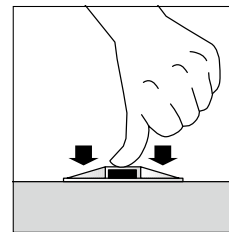
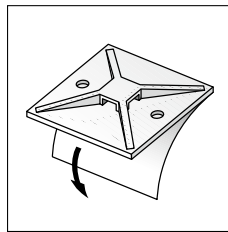
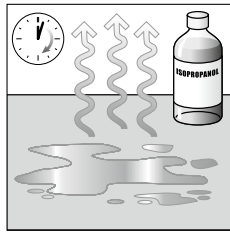
For more information on toolings please refer to the Application Tooling chapter.

Information and installation instructions for self-adhesive mounting bases

HellermannTyton uses different types of adhesives for self-adhesive bases: acrylate and synthetic rubber. These differ in the operating temperature range and the 'pull off' force of the adhesive. Synthetic rubber has an excellent initial grip, allowing for almost immediate use. Acrylate adhesive has less initial grip, so there is a need to wait for a few hours before use, but has a higher 'pull off' force than synthetic rubber. This enables a permanent fixing lasting months or even years.

Synthetic rubber with base of polyethylene foam	Synthetic rubber T50	-20 °C to +50 °C
	Synthetic rubber T60	-40 °C to +60 °C
Acrylate with base of polyurethane foam	Acrylate	to +105 °C
Acrylate with base of acrylic foam	mod. Acrylate	-30 °C to +120 °C

Instructions for use



1. The surface must be dry, free from dust, oil, oxides, parting agents and other impurities. The surface to be glued should be cleaned using a clean cloth and isopropanol / water (50/50). When using other appropriate cleaning agents, ensure that they do not attack the surface nor leave any residues. After cleaning allow the surface to air-dry completely.

2. Peel off protective backing and ensure the adhesive area is not touched.

3. Press down firmly on the base with the thumbs for several seconds.

4. Depending on the type of adhesive, wait for several minutes (synthetic rubber) or hours (acrylate) so that the adhesive can bond completely with the surface.

Advantages of our self-adhesive mounts with mod. Acrylate (SolidTack / FlexTack)

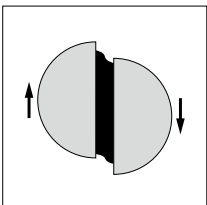
- Acrylic Foam Tape is made from a homogeneous system of high performance acrylic adhesive
- Very good initial bond
- High temperature resistance
- Adhesive offers design freedom, no need for bolts or screws
- Reduces the risk of corrosion, no need for boreholes



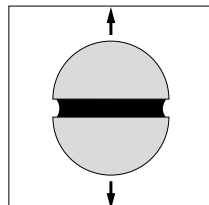
We will be happy to send you on request an up-to-date technical datasheet for whichever adhesive you are using.

- Weight reduction compared to mechanical mounting
- Possibility to optimize production processes and to reduce production cost (bonding vs. screwing)
- Can compensate unevenness up to a certain degree
- Specially developed for low energy surfaces

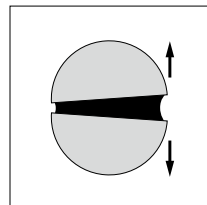
Load types on adhesive bonds



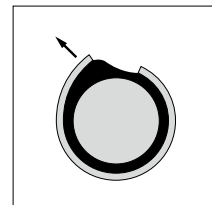
Shear resistance.
Shear force pulls the adhesive surfaces in opposite directions along a parallel line.



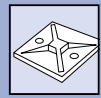
Tensile strength.
Tension force pulls surfaces apart perpendicular to the adhesive bond.



Cleavage resistance.
Cleavage can occur where forces acting on bonded surfaces are not evenly spread but concentrated along a single line.



Peel adhesion.
Peeling force acts on a small amount of adhesive at the edge of the tape and weakens the adhesive bond. At least one adherend is flexible.



Cable Tie Mounts with high performance adhesive

FlexTack-Series FMB for round and angled surfaces

FlexTack cable tie mounts can be successfully applied to a variety of high- and low-energy surfaces such as glass, metals (including painted, varnished or powder-coated surfaces) as well as plastics. FlexTack provides a reliable fixing solution where it is impractical to use screws or bolts. The unique design in combination with the special acrylate adhesive makes professional cable management easy.

Features and benefits

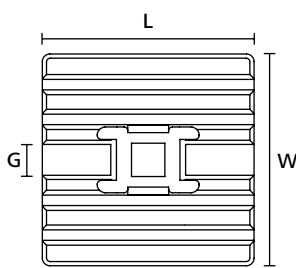
- Flexible Mount for round and angled surfaces
- FMB mounts with homogeneous system of acrylic adhesive
- Allows greater design freedom and offers uniform stress distribution along with weight reduction
- Adhesive with high cohesive strength combined with good weathering resistance
- Innovative fixing solution for high and low energy surfaces
- Protection foil with finger lift for easy peel off
- Temperature resistance up to +105 °C
- 4-way entry for cable tie for quicker and more flexible installation
- FMB4APT-I is also suitable for high energy surfaces like metal or glass



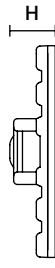
Flexible cable tie mount (FlexTack) in a concave application.



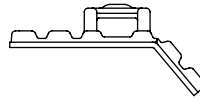
Material specification please see page 22.



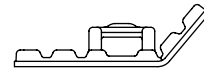
Flexible Adhesive Mount FMB4APT-I (plan view)



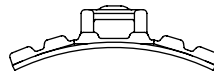
Flexible Adhesive Mount FMB4APT-I (side view)



Flexible Adhesive Mount FMB4APT-I (down angled, side view)



Flexible Adhesive Mount FMB4APT-I (up angled, side view)



Flexible Adhesive Mount FMB4APT-I (convex, side view)

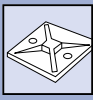


Flexible Adhesive Mount FMB4APT-I (concave, side view)

TYPE	Width (W)	Length (L)	Height (H)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
FMB4APT	28.0	28.0	6.3	5.4	PA66HS	Black (BK)	mod. Acrylate	100 pcs.	151-01527
	28.0	28.0	6.3	5.4	PA66HS	White (WH)	mod. Acrylate	100 pcs.	151-01528

All dimensions in mm. Subject to technical changes.

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



Cable Tie Mounts with high performance adhesive

SolidTack-Series QM

Q-mounts are ideally suited for holding our innovative Q-ties in place. They would perfectly fit to all applications where a reliable and durable fixation is required. With its SolidTack adhesive Q-mounts offer an innovative fixing solution especially for low energy surfaces or if drilling a hole is not possible. Suitable for a wide range of applications on varnished or plastic or metal surfaces in many areas like electrical cabinet, railway, aerospace, automotive and agriculture machinery.

Features and benefits

- Q-mounts with homogeneous system of acrylic adhesive
- Perfect for combination with Q-ties
- Very good initial adhesion, increases with time
- Adhesive with high cohesive strength combined with good weathering resistance
- Innovative fixing solution for high and low energy surfaces
- Q-Mount base locks Q-tie in vertical position, means the hands are free to apply cables



Mounting bases Q-Mount.



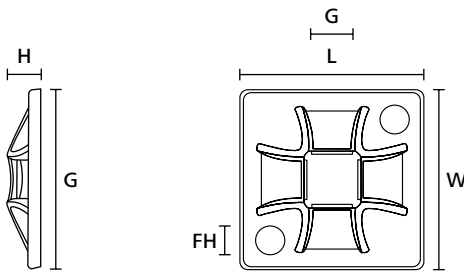
Please find more Q-Series products for your system solution on page 139, 149 and 530.



For more information on the types of adhesive please see page 136.



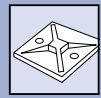
Material specification please see page 22.



Q-Mount (side view) Q-Mount (plan view)

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
QM20APT-I	20.0	20.0	3.7	3.1	4.0	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-01592
	20.0	20.0	3.7	3.1	4.0	PA66	Natural (NA)	mod. Acrylate	100 pcs.	151-01591
QM30APT-I	30.0	30.0	4.5	4.1	5.1	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-01594
	30.0	30.0	4.5	4.1	5.1	PA66	Natural (NA)	mod. Acrylate	100 pcs.	151-01593
QM40APT-I	40.0	40.0	5.5	4.1	8.4	PA66	Black (BK)	mod. Acrylate	50 pcs.	151-01596
	40.0	40.0	5.5	4.1	8.4	PA66	Natural (NA)	mod. Acrylate	50 pcs.	151-01595

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



Cable Tie Mounts Q-Series

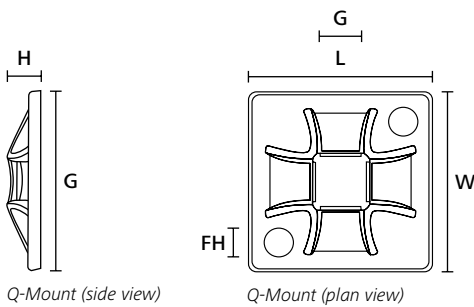
Q-mounts are ideally suited for holding our innovative Q-ties in place. They would perfectly fit to all applications where a reliable and durable fixation is required. Self adhesive versions of our Q-Mounts are suitable for applications where using screws, nuts, bolts or drilling holes to fix cables is problematic, or not the first choice.

Features and benefits

- Screwable or self adhesive versions
- Perfect for combination with Q-ties
- 4-way entry for cable ties
- Adhesive with high pull-off force
- Locks cable tie in vertical position, means the hands are free to apply cables



Q-ties can be used for both temporary and final cable installation.



Q-Mount (side view)

Q-Mount (plan view)



Application video:
Q-Series

Q-Mount Series QMA, self adhesive, screwable

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
QM20A	20.0	20.0	3.7	3.1	4.0	PA66	Black (BK)	Synthetic rubber T60	100 pcs.	151-10914
	20.0	20.0	3.7	3.1	4.0	PA66	Natural (NA)	Synthetic rubber T60	100 pcs.	151-10904
QM30A	30.0	30.0	4.5	4.1	5.1	PA66	Black (BK)	Synthetic rubber T60	100 pcs.	151-10915
	30.0	30.0	4.5	4.1	5.1	PA66	Natural (NA)	Synthetic rubber T60	100 pcs.	151-10905
QM40A	40.0	40.0	5.5	4.1	8.4	PA66	Black (BK)	Synthetic rubber T60	50 pcs.	151-10916
	40.0	40.0	5.5	4.1	8.4	PA66	Natural (NA)	Synthetic rubber T60	50 pcs.	151-10906

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

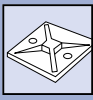
Q-Mount Series QM, screwable

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
QM20	20.0	20.0	3.7	3.1	4.0	PA66	Natural (NA)	100 pcs.	151-10901
	20.0	20.0	3.7	3.1	4.0	PA66	Black (BK)	100 pcs.	151-10911
QM30	30.0	30.0	4.5	4.1	5.1	PA66	Natural (NA)	100 pcs.	151-10902
	30.0	30.0	4.5	4.1	5.1	PA66	Black (BK)	100 pcs.	151-10912
QM40	40.0	40.0	5.5	4.1	8.4	PA66	Natural (NA)	50 pcs.	151-10903
	40.0	40.0	5.5	4.1	8.4	PA66	Black (BK)	50 pcs.	151-10913

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



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



Cable Tie Mounts with high performance adhesive

SolidTack-Series MB

SolidTack MB Series mounts do have a square design and are fairly common in areas like electrical cabinet, railway, aerospace, automotive and agriculture machinery. The premium self-adhesive bonds well on high and low-energy surfaces like plastics, metal, varnish or paint and is suitable for a wide range of applications.

Features and benefits

- MB mounts with homogeneous system of acrylic adhesive
- Very good initial adhesion, increases with time
- Adhesive with high cohesive strength combined with good weathering resistance
- Innovative fixing solution for high and low energy surfaces
- Protection foil with finger lift for easy peel off



SolidTack products work on varnished and powder coated surfaces.



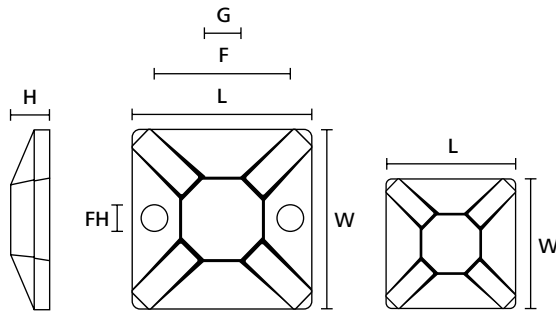
For more information on the types of adhesive please see page 136.



Material specification please see page 22.



One Step to the Web!



MB3-MB5 (side view)

MB3-MB5 (plan view)

Cable Tie Mount MB2A (plan view)

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Fixing Hole Centres (F)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
MB2APT-I	13.0	13.0	4.1	-	-	2.7	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-01556
MB3APT	19.0	19.0	3.8	3.1	13.2	4.1	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-00432
MB3APT-I	19.0	19.0	3.8	3.1	13.2	4.4	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-01557
	19.0	19.0	3.8	3.1	13.2	4.4	PA66	White (WH)	mod. Acrylate	100 pcs.	151-01558
MB4APT-I	28.0	28.0	4.7	4.0	20.2	5.6	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-01559
	28.0	28.0	4.7	4.0	20.2	5.6	PA66	White (WH)	mod. Acrylate	100 pcs.	151-01560
MB5APT-I	38.0	38.0	6.3	4.7	25.3	10.0	PA66	Black (BK)	mod. Acrylate	100 pcs.	151-01561

All dimensions in mm. Subject to technical changes.

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



Flat ribbon cable mounts

FKH mounts are designed to retain flat ribbon cables commonly used in information technology applications, in entertainment electronics or for connecting sensors. As each installation scenario is individual, FKH mounts are available in different dimensions and can be supplied as self adhesive and/or screwable versions.

Features and benefits

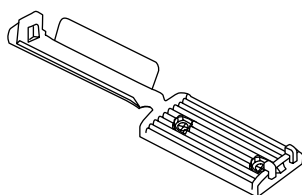
- One-piece fixing mount for flat ribbon cables
- Increased mounting area ensures proper bonding
- Quick and easy installation
- Can be released and re-used easily
- Flat cable is gently fastened due to soft wings



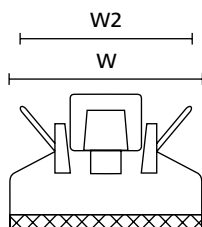
Based on extremely soft wings any flat cable is gently fastened.



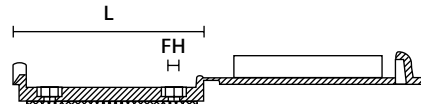
Material specification please see page 22.



Fixing can be realised with M3 screws or acrylic adhesive backing



Flat Ribbon Cable Mount (front view)



Flat Ribbon Cable Mount (side view)

SolidTack-Series FKH, high performance adhesive

TYPE	Width (W)	Width (W2)	Length (L)	Hole Ø (FH)	For Cable Width max.	Material	Colour	Adhesive	Pack Cont.	Article-No.
FKH50APT-I	25.0	22.0	56.5	3.1	50.0	PA66HIR	Black (BK)	mod. Acrylate	100 pcs.	151-01562
FKH80APT-I	25.0	22.0	86.0	3.1	80.0	PA66HIR	Black (BK)	mod. Acrylate	100 pcs.	151-01563

All dimensions in mm. Subject to technical changes.

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

FKH-Series, self adhesive, screw fixing

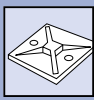
TYPE	Width (W)	Length (L)	Width (W2)	Hole Ø (FH)	Material	Colour	Adhesive	Article-No.
FKH25A	25.0	31.0	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15250
FKH30A	25.0	35.0	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15300
FKH50A	25.0	56.5	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15500
FKH80A	25.0	86.0	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15800

All dimensions in mm. Subject to technical changes.

FKH-Series, screw fixing

TYPE	Width (W)	Length (L)	Width (W2)	Hole Ø (FH)	Material	Colour	Article-No.
FKH25	25.0	31.0	22.0	3.1	PA66HIR	Black (BK)	151-16250
FKH30	25.0	35.0	22.0	3.1	PA66HIR	Black (BK)	151-16300
FKH50	25.0	56.5	22.0	3.1	PA66HIR	Black (BK)	151-16500
FKH80	25.0	86.0	22.0	3.1	PA66HIR	Black (BK)	151-16800

All dimensions in mm. Subject to technical changes.



Self Adhesive, Screw Fixing Cable Tie Mounts

Where speed, simplicity and a firm fixing base are required these self adhesive clips are ideal. Particularly suitable for use in control cabinets, telecoms equipment or domestic appliances where the use of holes, screws, or nuts and bolts is impractical or undesirable.

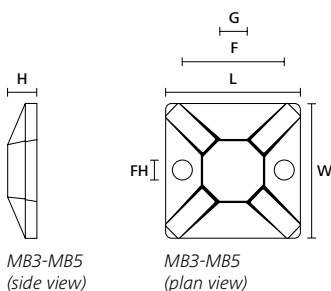
Features and benefits

- Screwable or self-adhesive versions
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration
- Maximum surface area with adhesive to achieve high pull-off force
- 4-way entry for cable tie for quicker and more flexible installation

MB-Series square design, screwable



MB-Series Mounts with square design / screwable, self adhesive.



MB3-MB5 (side view)

MB3-MB5 (plan view)

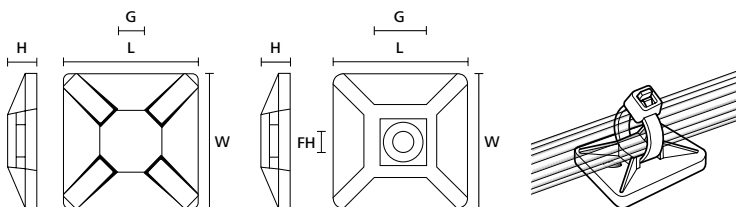


For more information on the types of adhesive please see page 136.

TYPE	Width (W)	Length (L)	Height (H)	Fixing Hole Centres (F)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
MB3	19.0	19.0	3.8	13.2	3.1	4.1	PA66	White (WH)	100 pcs.	151-28359
MB4	28.0	28.0	4.7	20.0	4.0	5.4	PA66	White (WH)	100 pcs.	151-28479
MB5	37.7	37.7	6.2	25.3	4.8	8.9	PA66	White (WH)	100 pcs.	151-00324

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

MB-Series square design, self adhesive, screwable



Cable Tie Mount MB2A (side and plan view)

Cable Tie Mount MB4CA (side and plan view)

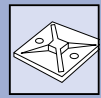
Cable Tie Mount MB3A in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
MB2A	13.0	13.0	4.1	-	2.7	PA66	Black (BK)	Synthetic rubber T60	50 pcs.	151-01800
	13.0	13.0	4.1	-	2.7	PA66	White (WH)	Synthetic rubber T60	100 pcs.	151-01802
MB3A	19.0	19.0	3.8	3.1	4.1	PA66	Black (BK)	Synthetic rubber T60	100 pcs.	151-28320
	19.0	19.0	3.8	3.1	4.1	PA66	White (WH)	Synthetic rubber T60	100 pcs.	151-28349
MB4A3	28.0	28.0	4.7	4.0	5.4	PA66	Black (BK)	Acrylate	100 pcs.	151-28430
MB4A	28.0	28.0	4.7	4.0	5.4	PA66	Black (BK)	Synthetic rubber T60	100 pcs.	151-28412
	28.0	28.0	4.7	4.0	5.4	PA66	White (WH)	Synthetic rubber T60	100 pcs.	151-28469
MB4CA*	29.0	29.0	5.7	4.2	5.4	PA66	Natural (NA)	Synthetic rubber T60	100 pcs.	151-28459
MB4CAS	29.0	29.0	5.7	4.2	5.4	PA66	Natural (NA)	Synthetic rubber T60	100 pcs.	151-28449
MB5A	37.7	37.7	7.1	4.8	8.9	PA66	Black (BK)	Synthetic rubber T50	100 pcs.	151-28602
	37.7	37.7	7.1	4.8	8.9	PA66	White (WH)	Synthetic rubber T50	100 pcs.	151-28529
MB5A3	38.0	38.0	6.4	4.7	10.0	PA66	Black (BK)	Acrylate	100 pcs.	151-28530

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



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

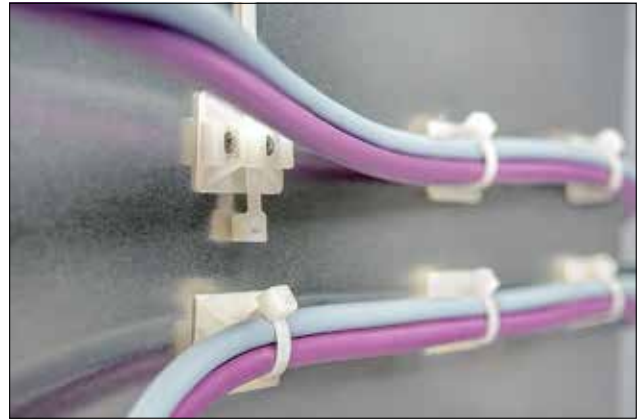


Screw Fixing Cable Tie Mounts

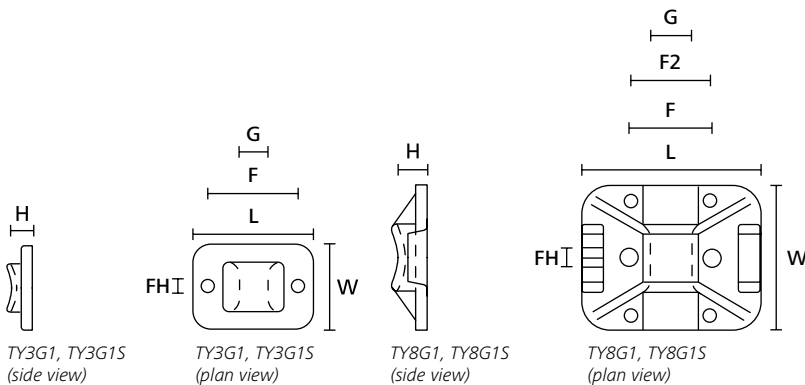
These products are designed for simple yet robust installation in a wide variety of applications. TY-Series mounts with rectangled design are particularly used in telecoms equipment, switchgear and control cabinets. With its small and compact design TY3G1 offers an easy and rapid assembly for many different applications.

Features and benefits

- Screwable or self-adhesive versions
- Concave design to support larger diameter cables and bundles
- 2-way mounting base for safe guiding of cables and conduits
- Suitable for applications with minimal space
- Mounted before cable installation
- Usable with standard cable ties



TY-Series mounts with rectangle design / screwable, self adhesive.



For more information on the types of adhesive please see page 136.

TY-Series Rectangle Design, screwable

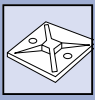
TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Fixing Hole Centres (F)	Fixing Hole Centres (F2)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
TY3G1	14.0	20.0	3.7	2.2	15.0	-	4.0	PA66	Natural (NA)	100 pcs.	151-21319
TY8G1	25.0	32.0	5.5	3.2	15.0	14.0	8.0	PA66	Natural (NA)	100 pcs.	151-21819

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

TY-Series Rectangle Design, self adhesive, screwable

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Fixing Hole Centres (F)	Fixing Hole Centres (F2)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
TY3G1S	14.0	20.0	3.7	2.2	15.0	-	4.0	PA66	Natural (NA)	Acrylate	100 pcs.	151-11319
	14.0	20.0	3.7	2.2	15.0	-	4.0	PA66W	Black (BK)	Acrylate	100 pcs.	151-11310
TY8G1S	25.0	32.0	5.5	3.2	15.0	14.0	8.0	PA66	Natural (NA)	Acrylate	100 pcs.	151-11819
	25.0	32.0	5.5	3.2	15.0	14.0	8.0	PA66W	Black (BK)	Acrylate	100 pcs.	151-11810

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



Paste Adhesive Mount

PMB5 mount for uneven surfaces

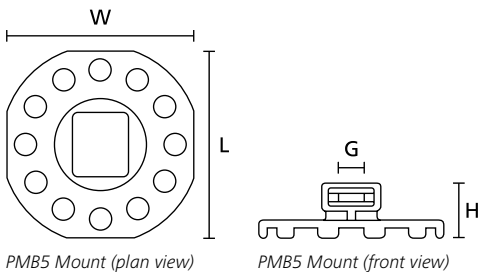
PMB5 pasty mount offers a fixing solution wherever screw fixing is not allowed. Due to a larger diameter the mount can even be installed onto uneven surfaces. PMB5 pasty mount is used in the railway industry as well as in the renewable energy industry. Further applications are in the ship building industry, in the electrical industry and the production of switching cabinets.

Features and benefits

- PMB5 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 due to large diameter
- Can also be applied in combination with hot-melt adhesive, as mount is made of heat resistant PA66



PMB5 mount with paste adhesive.



PMB5 Mount (plan view)

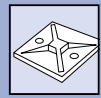
PMB5 Mount (front view)



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Height (H)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
PMB5	36.0	36.0	10.7	4.8	PA66HS	Black (BK)	100 pcs.	151-00498

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



Mounts with round design, self adhesive

RA-Series

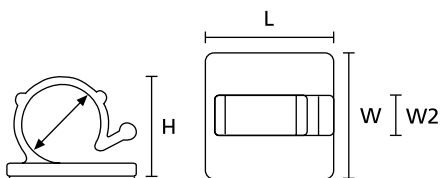
These mounts are ideal for use in applications which are difficult to access or for areas where self adhesive is the only possible fixing method and fixing holes would be unacceptable. The round self adhesive mounts can be used without cable ties. Offering process optimization in industries like automotive, bus and truck, construction vehicles or industrial building.

Features and benefits

- One-piece self adhesive mount for quick and easy installation
- Can be used without cable ties offering process optimization
- Designed to hold wires, cables or hoses
- Different sizes for various bundle diameters available
- Two types of adhesive can be offered



Self adhesive one piece fixing mounts RA6 (l) and RB5 (r).



RA3-18 Series (side view)

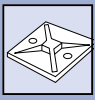
RA3-18 Series (plan view)



For more information on the types of adhesive please see page 136.

TYPE	Width (W)	Width (W2)	Length (L)	Height (H)	Bundle Ø max.	Material	Colour	Adhesive	Article-No.
RA3	13.0	5.0	13.0	5.0	3.0	PA66	Natural (NA)	Synthetic rubber T60	151-13018
RA6APT-I	19.0	5.0	19.0	9.0	6.0	PA66	Natural (NA)	mod. Acrylate	151-01635
RA6	19.0	5.0	19.0	9.0	6.0	PA66	Natural (NA)	Synthetic rubber T60	151-13019
RA9	19.0	7.5	19.0	12.5	9.0	PA66	Natural (NA)	Synthetic rubber T60	151-13020
RA13APT-I	25.0	10.0	25.0	16.5	13.0	PA66	Natural (NA)	mod. Acrylate	151-01636
RA13	25.0	10.0	25.0	16.5	13.0	PA66	Natural (NA)	Synthetic rubber T60	151-13021
RA18	28.5	10.0	28.5	23.0	18.0	PA66	Natural (NA)	Synthetic rubber T60	151-13119

All dimensions in mm. Subject to technical changes.



Mounts with flat and round design, self adhesive

RB-Series

RB-Series self adhesive mounts offer greater routing freedom and also reduce the risk of corrosion compared to screw fixing mounts. They are ideally suited for tool-free installation and can be re-opened and reused easily when cables need to be replaced. These mounts can be used without the need for additional cable ties. Offering process optimization in a variety of applications.

Features and benefits

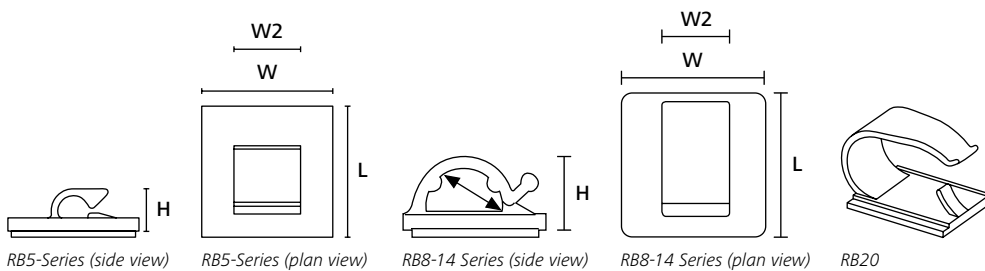
- Flat design to use in applications with limited space
- One-piece self adhesive mount for quick and easy installation
- Can be used without cable ties offering process optimization
- Different sizes for various bundle diameters available
- Cost effective with easy application on smooth, clean surfaces



Self adhesive one piece fixing mounts RB20 (l) and RB14 (r).

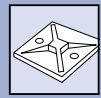


Material specification
please see page 22.



TYPE	Width (W)	Width (W2)	Length (L)	Height (H)	Bundle Ø max.	Material	Colour	Adhesive	Article-No.
RB5	19.0	9.7	19.0	6.0	5.0	PA66	Black (BK)	Synthetic rubber T60	151-14000
	19.0	9.7	19.0	6.0	5.0	PA66	Natural (NA)	Synthetic rubber T60	151-14059
RB8	25.0	12.7	25.0	11.5	8.0	PA66	Black (BK)	Synthetic rubber T60	151-13601
	25.0	12.7	25.0	11.5	8.0	PA66	Natural (NA)	Synthetic rubber T60	151-13606
RB20	27.0	18.0	33.0	25.0	20.0	PA66HIRHS	Black (BK)	Synthetic rubber T60	151-00831
RB14	27.4	23.0	33.2	16.0	14.0	PA66	Black (BK)	Synthetic rubber T60	151-00502
	27.4	23.0	33.2	16.0	14.0	PA66	Natural (NA)	Synthetic rubber T60	151-00505

All dimensions in mm. Subject to technical changes.



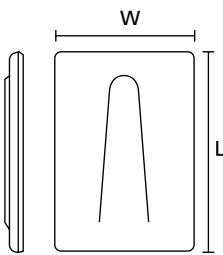
Mounts with flexible flat design

SAC-Series

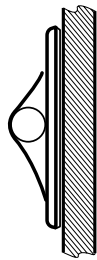
These clips are ideal for use in applications which are difficult to access, or for areas where a self adhesive solution is the only possible fixing method and holes would be unacceptable. Typical applications include domestic appliances and trailers.

Features and benefits

- Bendable metal tongue for any shape or configuration of wires or cables
- Cost effective with easy application on smooth, clean surfaces



SAC-Series Self Adhesive Clip



SAC-Series in application



Malleable tongue allows for a variety of sizes per clip.



For more information on the types of adhesive please see page 136.

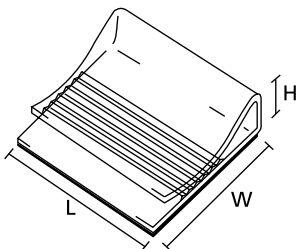
TYPE	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Adhesive	Article-No.
SAC0	15.0	20.0	3.0	ST	White (WH)	Acrylate	151-00033
SAC1	20.0	30.0	4.0	ST	White (WH)	Acrylate	151-00100
SAC2	25.0	35.0	8.0	ST	White (WH)	Acrylate	151-00200
SAC3	31.0	43.0	12.0	ST	White (WH)	Acrylate	151-00300
SAC4	38.0	51.0	16.0	ST	White (WH)	Acrylate	151-00400

All dimensions in mm. Subject to technical changes.

Type 130100

Features and benefits

- Self adhesive mount with integrated clamp for holding flat cables
- Manufactured from PVC



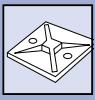
130100 Self Adhesive Clip



130100 self adhesive mount for flat cables.

TYPE	Width (W)	Length (L)	Height (H)	Material	Colour	Adhesive	Article-No.
130100	25.0	25.0	9.1	PVC	White (WH)	Acrylate	154-01119

All dimensions in mm. Subject to technical changes.



Cable Tie Mounts for food industry, detectable

MCMB-Series, screwable

MCMB mounts are ideally suited for holding MCT-Series cable ties in position, even in areas of high vibration such as food manufacturing equipment and automated packaging machines.

Features and benefits

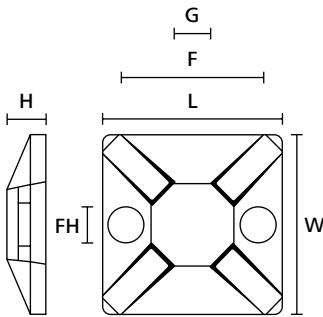
- Distinctive blue colour for easy visual detection
- Simple to install with a screw or bolt
- Provides a secure fixing solution for routing cables, tubes and hoses
- 4-way entry for the cable tie leads to a quicker and more flexible installation
- Magnetic and X-Ray detectable – perfect for use with food and pharmaceutical grade detection equipment
- Total metal dispersion provides consistent detectability, even for small cut-off pieces
- Greatly reduced risk of contamination within food products
- Can support quality assurance in the production of food stuffs, for example HACCP



Detectable fixing solution containing of MCMB mount and MCT cable tie.



One Step to the Web!



MCMB Mount (side and plan view)



Can support quality assurance in the production of food stuffs, for example HACCP.



The MCMB mount can ideally be combined with MCT cable ties on page 63.

TYPE	Width (W)	Length (L)	Height (H)	Fixing Hole Centres (F)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
MCMB3	19.0	19.0	3.8	13.2	3.1	3.5	PA66MP	Blue (BU)	100 pcs.	151-01169
MCMB4	28.0	28.0	4.7	20.0	4.0	4.7	PA66MP	Blue (BU)	100 pcs.	151-01170

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

*HACCP stands for Hazard Analysis Critical Control Points. It is a method of identifying and eliminating potential hazards in food production. Those hazards that cannot be eliminated are controlled in such a way that the consumer is protected. These controls are known as Critical Control Points (CCPs). They are CRITICAL because if they fail or are not carried out, the risk of the product harming the customer increases.



Screw Fixing Cable Tie Mounts CTQM

Q-Mount Series CTQM

CTQM mounts are ideally suited for holding our innovative Q-ties in place. They would perfectly fit to all applications where a reliable and durable fixation is required and where space is limited.

Features and benefits

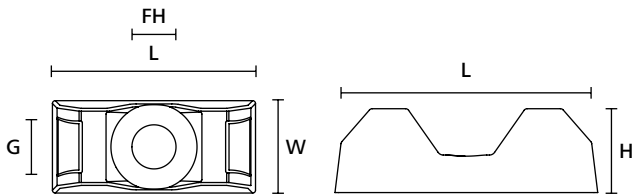
- 2-way mounting base for safe guiding of cables and conduits
- For cable ties up to 5 mm width
- Uses screw with countersunk head (max. \varnothing of head: 8.0 mm)
- Perfect for combination with Q-ties
- Pre-assembly feature in combination with cable tie
- Holds the cable tie in vertical mounting position



Q-Mount, CTQM 2-way entry, screwable.



Application video:
Q-Series



CTQM-Series (plan view)

CTQM-Series (side view)



**Material specification
please see page 22.**



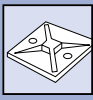
**Please find more Q-Series products
for your system solution on page
51, 139 and 530.**

TYPE	Width (W)	Length (L)	Height (H)	Hole \varnothing (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
CTQM5	9.5	21.0	6.7	4.5	5.0	PA66	Natural (NA)	100 pcs.	151-10920
	9.5	21.0	6.7	4.5	5.0	PA66	Black (BK)	100 pcs.	151-10930

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



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



Screw Fixing Mounts

Cable Tie Mounts with curved design

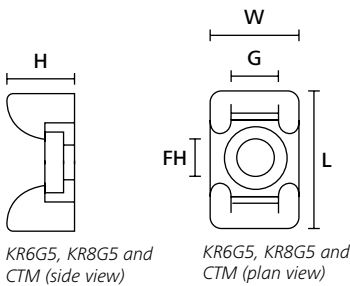
Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacture. They offer a very secure fixing and can be used with a wide variety of heavy duty cable ties up to 8.3 mm width.

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



Cable Tie Mounts KR6G5, KR8G5 and CTM.



KR6G5, KR8G5 and CTM (side view)

KR6G5, KR8G5 and CTM (plan view)



The KR-E/TFE mounts can ideally be combined with the E/TFE-cable ties on page 47.



Can support quality assurance in the production of food stuffs, for example HACCP.

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
CTM0	9.4	14.7	6.9	3.8	5.0	PA66	Black (BK)	100 pcs.	151-30300
	9.4	14.7	6.9	3.8	5.0	PA66	White (WH)	100 pcs.	151-30303
CTM1	9.4	14.7	6.9	4.8	5.0	PA66	Black (BK)	100 pcs.	151-30400
	9.4	14.7	6.9	4.8	5.0	PA66	White (WH)	100 pcs.	151-30404
KR6G5	11.8	17.8	8.8	4.5	6.4	E/TFE	Blue (BU)	100 pcs.	151-00653
MCKR6G5	11.8	17.8	8.8	4.5	6.4	PA66MP+	Blue (BU)	100 pcs.	151-00950
KR6G5	12.0	18.0	9.0	4.5	6.0	PA66	Natural (NA)	100 pcs.	151-24619
	12.0	18.0	9.0	4.5	6.0	PA66W	Black (BK)	100 pcs.	151-24660
MCKR8G5-5	14.3	24.8	12.0	5.2	8.3	PA66MP+	Blue (BU)	100 pcs.	151-01020
KR8G5	14.3	24.8	12.1	6.5	8.3	E/TFE	Blue (BU)	100 pcs.	151-00654
	14.5	25.0	12.0	6.5	8.0	PA66	Natural (NA)	100 pcs.	151-24819
	14.5	25.0	12.0	6.5	8.0	PA66HS	Black (BK)	100 pcs.	151-24850
CTM2	15.5	21.8	9.4	4.6	7.9	PA66	Black (BK)	100 pcs.	151-30500
	15.5	21.8	9.4	4.6	7.9	PA66	White (WH)	100 pcs.	151-30504
CTM3	15.5	21.8	9.4	5.1	7.9	PA66	Black (BK)	100 pcs.	151-30600
	15.5	21.8	9.4	5.1	7.9	PA66	White (WH)	100 pcs.	151-30605
CTM4	15.8	21.8	9.4	6.4	7.9	PA66	Black (BK)	100 pcs.	151-30700
	15.8	21.8	9.4	6.4	7.9	PA66	White (WH)	100 pcs.	151-30703

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



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



Screw Fixing Mounts

CTAM-Series for applications where space is limited

Each of these products offers particular benefits, but all are designed for simple yet robust installation in a wide variety of applications. Particularly used in telecoms equipment, switchgear and control cabinets these cable tie mounts are also used within the aerospace and railway industry.

Features and benefits

- Suitable for applications with minimal space
- Mounted before cable installation and in line with cable
- CTAM has 4-way entry design for use in line or at 90° angle to cable run
- CTAM mounts are available in different sizes and materials



CTAM mounts for applications with limited space.



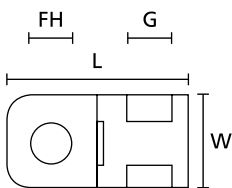
The CTAM mounts made of PEEK are the ideal complement for the PEEK tie on page 65.



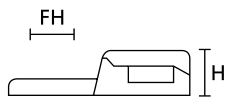
The CTAM mounts made of PA66MP+ are the ideal complement for MCTS ties on page 63.



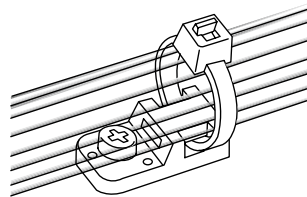
Can support quality assurance in the production of food stuffs, for example HACCP.



CTAM-Series (plan view)



CTAM-Series (side view)



CTAM-Series in application



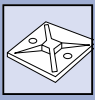
One Step to the Web!

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
CTAM1	10.2	20.4	5.1	4.3	5.0	PA66	White (WH)	100 pcs.	151-31109
CTAM2	10.2	20.4	5.1	5.2	5.0	PA66	White (WH)	100 pcs.	151-31203
CTAM1	10.2	20.5	5.5	4.3	5.0	PEEK	Beige (BGE)	100 pcs.	151-00757
CTAM2	10.2	20.5	5.5	5.2	5.0	PEEK	Beige (BGE)	100 pcs.	151-00758
MCCTAM1	10.3	20.7	5.1	4.3	5.0	PA66MP+	Blue (BU)	100 pcs.	151-00997

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



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



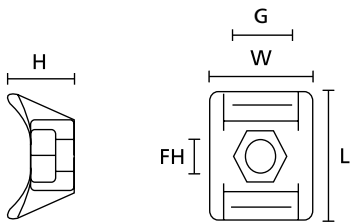
Screw Fixing Mounts

LKC- and NY-Series with overlapping 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 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 LKC Series.



**Material specification
please see page 22.**

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
LKC		17.0	25.0	13.5	5,5	8.0	PA66	Black (BK)	100 pcs.	151-27010
		17.0	25.0	13.5	5,5	8.0	PA66	Natural (NA)	100 pcs.	151-27019
LKCSF1		19.0	40.0	16.0	6,0	13.0	PA66W	Black (BK)	100 pcs.	151-01683
		19.0	40.0	16.8	6,0	13.0	PA66	Natural (NA)	100 pcs.	151-27219
		19.0	40.0	16.8	6,0	13.0	PA66	Black (BK)	100 pcs.	151-27202
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.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.



Screw Fixing Mounts

These cable tie mounts are very small in their overall size. They are designed for simple yet robust installation particularly in areas with high vibrations and/or limited space. They are a common fixing method for telecoms equipment, switchgear and control cabinets.

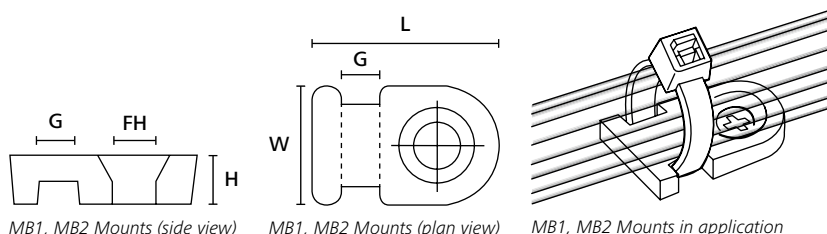
Features and benefits

- Small overall size for areas with limited mounting space
- Simple to install with a screw, bolt or rivet
- Excellent security, particularly in areas of high vibration
- Single hole fixing with two-way entry for cable tie



TY- (l) and MB-Series (r) with curved design, screwable.

MB-Series Curved Design, screwable



MB1, MB2 Mounts (side view)

MB1, MB2 Mounts (plan view)

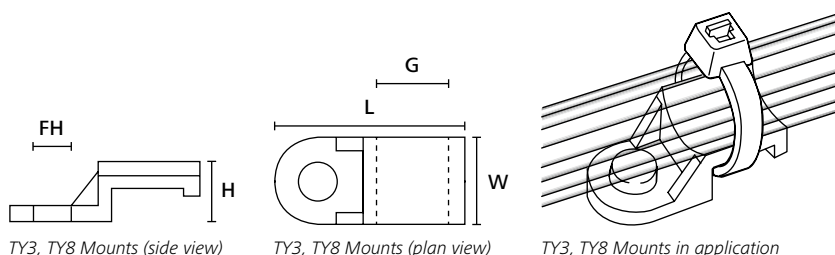
MB1, MB2 Mounts in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
MB1	8.0	12.5	3.5	2.9	2.6	PA66	Natural (NA)	100 pcs.	151-28119
MB2	12.5	20.5	3.3	5.0	5.0	PA66	Black (BK)	100 pcs.	151-28210
	12.5	20.5	3.3	5.0	5.0	PA66	White (WH)	100 pcs.	151-28219

All dimensions in mm. Subject to technical changes.

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

TY-Series Curved Design, screwable



TY3, TY8 Mounts (side view)

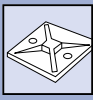
TY3, TY8 Mounts (plan view)

TY3, TY8 Mounts in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
TY3F1	8.0	19.0	5.7	3.5	5.0	PA66	Natural (NA)	1,000 pcs.	151-02156
TY8F1	10.0	22.5	7.2	4.5	8.0	PA66	Natural (NA)	1,000 pcs.	151-02157

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

LKM / CL / FH with curved design for sideways fixing

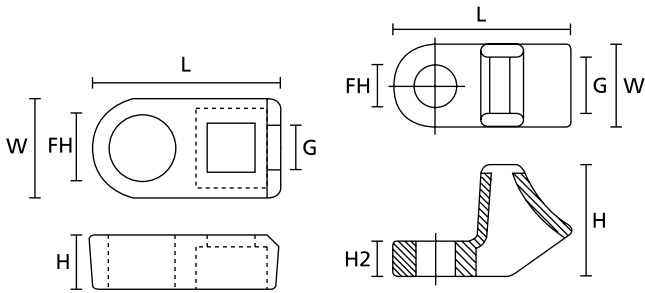
In areas with limited space these mounting bases allow the cable to be offset from the fixing hole, and can be installed in the equipment prior to the cable installation. A major cost saving can be made using these products as they will allow the use of many different sizes of standard cable ties without the need to stock a wide range of specific fixing ties.

Features and benefits

- Small overall size for areas with limited mounting space
- Screwable mounts for fixing cable sideways
- Ideal for securing large, heavier bundles
- Suitable for cable ties up to 8 mm width

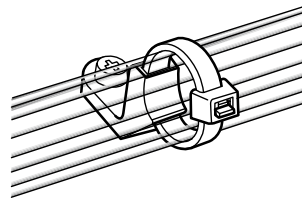


LKM, CL8 and FH cable tie mounts for applications with limited space.



FH cable tie mounts (plan and side view)

LKM, CL8 cable tie mounts (plan and side view)



CL8 cable tie mount in application

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
FH18	7.1	13.3	4.0	-	3.7	2.5	PA66	Natural (NA)	500 pcs.	151-61119
FH30	9.5	17.9	4.7	-	5.5	3.5	PA66	Natural (NA)	500 pcs.	151-61319
FH50	11.3	22.2	6.2	-	7.1	4.6	PA66	Natural (NA)	500 pcs.	151-61519
LKM	12.0	27.0	16.0	5.0	6.0	7.6	PA66	Black (BK)	100 pcs.	151-26301
	12.0	27.0	16.0	5.0	6.0	7.6	PA66	Natural (NA)	100 pcs.	151-26304
CL8	12.5	27.3	16.0	5.0	6.5	8.0	PA66	Natural (NA)	100 pcs.	151-26819
	12.5	27.3	16.0	5.0	6.5	8.0	PA66W	Black (BK)	100 pcs.	151-26860

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



Fixing Base

LOK02

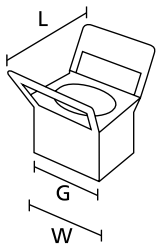
Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacture. LOK cable tie mounts offer a very secure fixing and can be used in combination with cable ties up to 9 mm width.

Features and benefits

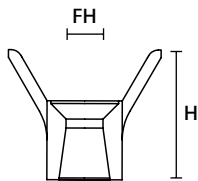
- Special design of fixing base gives additional support to cables
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration



LOK02 fixing base application.



LOK02 Fixing Base



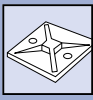
LOK02 Fixing Base
(front view)



**Material specification
please see page 22.**

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Article-No.
LOK02	14.0	21.0	18.0	5.1	9.0	PAGHIR	Black (BK)	151-80210

All dimensions in mm. Subject to technical changes.



Clips with elasticated loop

Cradle clamp

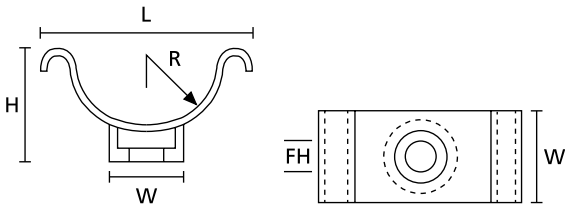
Simple and versatile method of bundling cables. These clamps consist of two parts. The clamping base for mounting onto a panel and the elastical loop.

Features and benefits

- 2-piece fixing part consists of clamp and retaining ring
- Suitable for pre-assembly and prototyping
- Useful for applications requiring addition or removal of cables
- Simply stretch loop over clip for simple and quick cable containment



2-Piece fixing cradle clamp.

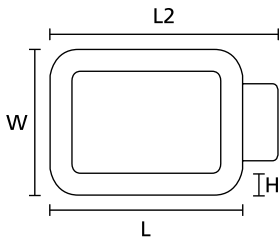


Cradle Clip (front view)

Cradle Clip (plan view)

TYPE	Width (W)	Length (L)	Height (H)	Radius (R)	Hole Ø (FH)	Material	Colour	Article-No.
C1	12.7	22.0	14.0	6.3	4.8	PA6HIR	Black (BK)	201-10010
C2	12.7	35.0	18.0	11.0	4.8	PA6HIR	Black (BK)	201-10020
C3	12.7	48.0	25.0	17.5	4.8	PA6HIR	Black (BK)	201-10030

All dimensions in mm. Subject to technical changes.



Retaining Ring R1 - 3

TYPE	Width (W)	Length (L)	Length (L2)	Height (H)	Material	Colour	Article-No.
R1	23.8	16.0	22.0	3.2	PVC	Black (BK)	201-20010
R2	23.8	22.0	29.0	3.2	PVC	Black (BK)	201-20020
R3	23.8	33.0	39.0	3.2	PVC	Black (BK)	201-20030

All dimensions in mm. Subject to technical changes.



Strain Relief Clips

Klam-Klip (KK)

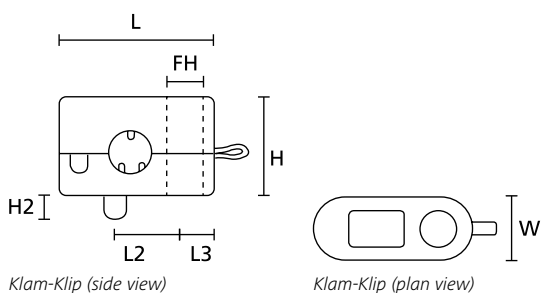
Strain relief clips for gripping cables up to 8.5 mm bundle diameter. Strain relief clip is simply attached to mounting surface with an M4 fixing screw.

Features and benefits

- Simple 1-screw fixing to guide and secure leads
- Two halves of the clip are linked to ensure no loss of parts during re-wiring
- Anti-rotation pin prevents leads from twisting



Strain relief Klam-Klip in application.



Klam-Klip (side view)

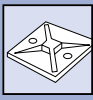
Klam-Klip (plan view)



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Hole Ø (FH)	Bundle Ø min.	Bundle Ø max.	Material	Colour	Article-No.
KK1	8.8	22.0	14.0	3.5	5.0	4.5	5.7	PA6HIR	Black (BK)	234-10100
KK2	8.8	22.0	14.0	3.5	5.0	5.5	6.7	PA6HIR	Black (BK)	234-10200
KK3	8.8	22.0	14.0	3.5	5.0	6.5	7.7	PA6HIR	Black (BK)	234-10300
KK4	8.8	22.0	14.0	3.5	5.0	7.5	8.5	PA6HIR	Black (BK)	234-10400

All dimensions in mm. Subject to technical changes.



Harness Clip for Heavy Duty Applications, for Screws or threaded Bolts

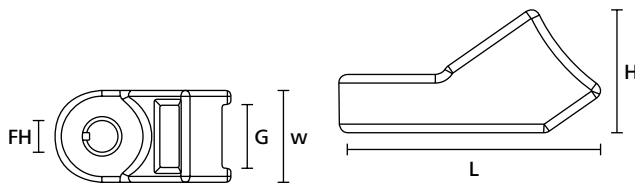
These heavy duty mounts (HDM) have been primarily designed for use in the automotive and truck industry. Nowadays they can be found in a variety of applications requiring heavy duty mounting in areas like the railway, defence and/or agriculture industry.

Features and benefits

- Design offers secure alignment to the bundle
- Possible replacement of cushion clamps and/or metal clamps
- Eliminates the needs for multiple sized fix diameter clamps
- For heavy duty cable ties up to 12.7 mm width
- High tightening torque through metal bushing
- Easy maintenance of bundle by simply changing the cable tie



Heavy Duty Mounts HDM-Series, Patent Number US5820083.



HDM19, 25, 312

Material specification please see page 22.

Standard Torque Mounts

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
HDM25		19.0	35.8	16.7	6.2	12.7	PA66HIR	Black (BK)	100 pcs.	151-00437
HDM19		19.3	36.3	16.7	4.7	12.7	PA66HIRHS	Black (BK)	100 pcs.	151-00134
HDM312		19.3	36.3	16.7	7.8	12.7	PA66HIRHSW	Black (BK)	100 pcs.	151-00439

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

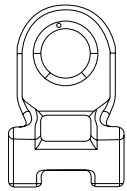
Medium Torque Mounts

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
HDM321		24.0	46.0	20.7	8.31	12.7	PA66HSW	Black (BK)	500 pcs.	151-07100
HDM401		24.0	46.0	20.7	9.5	12.7	PA66HIRHSW	Black (BK)	100 pcs.	151-00442
HDM501		24.0	46.0	20.7	12.7	12.7	PA66HIRHS	Black (BK)	500 pcs.	151-07500

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



High Torque Mounts (metal bushing)

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
HDM400BR		25.0	47.0	20.7	10,29	12.7	PA66HIRHSUV	Black (BK)	500	151-01224

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

Two Way Saddle Mount for heavy duty applications, for parallel separation

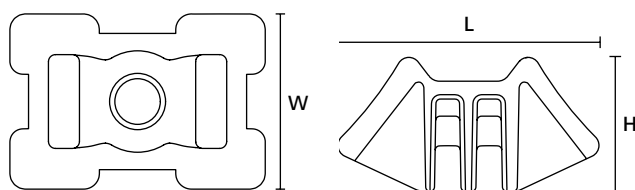
Heavy duty saddle mounts can be installed between two bundles to separate them and prevent chafing and wear. Fastened to a frame rail or mounting bracket, the special profile on the saddle mount provides a tight circumferential loop on large and small bundles. The saddle mount is an ideal assistant in many applications within the railway, truck and agricultural vehicle construction as well as in the ship building industry.

Features and benefits

- For parallel routing of different bundles to avoid wear and chafing
- Offers secure alignment to the bundle
- Can be used in combination with heavy duty cable ties
- Easy maintenance of bundle by simply changing the cable tie
- Made from impact modified, heat stabilized material



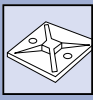
This saddle mount is installed between two bundles to separate them and prevent chafing and wear.



S2CM25

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Bundle Ø max.	Material	Colour	Pack Cont.	Article-No.
S2CM25	30.0	45.0	23.0	6.0	12.5	89.0	PA66HIRHS	Grey (GY)	500 pcs.	151-29400
S2HM25	30.0	45.0	23.0	6.0	13.5	89.0	PA66HIRHSW	Black (BK)	500 pcs.	151-29403

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



Harness Clip for Heavy Duty Applications, for Screws or threaded Bolts for Edges

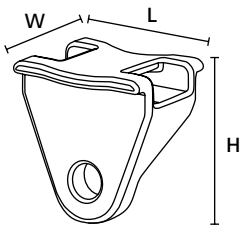
This heavy duty harness clip helps to fix and secure cables and wires in railway, truck and agricultural vehicle construction, and is also used in the ship building industry.

Features and Benefits

- Guides bundles securely above sharp edges
- For bolts or screws of D = 8 mm
- Cable tie head can be moved after bundling
- Secure alignment to the bundle due to H-design
- For cable ties up to 12.7 mm wide



Axial oval mounts stand off bundles from frame rails and cross members to prevent them from rubbing and chafing.



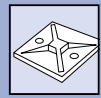
SAM83



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Material	Colour	Pack Cont.	Article-No.
SAM83	26.0	34.0	35.0	8,0	PA66HIRHS	Grey (GY)	500 pcs.	151-29600
SAOM82	26.0	34.3	35.0	8,0	PA66HIRHSW	Black (BK)	500 pcs.	151-29701

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



Fixing Elements with Fir Tree, for Distance Routing

Saddle Mount

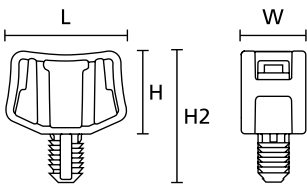
These heavy duty fixing offers excellent performance for ship building and the truck and construction vehicle industries.

Features and Benefits

- For parallel routing of four bundles
- Secure alignment to the bundle due to H-design
- For cable ties up to 12.7 mm wide
- Pre-fixing of tie with integrated nose



The mount can secure up to four separate bundles, providing parallel spacing between the frame rail and adjacent bundles.



Fir Tree Saddle Mounts

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Hole Ø (FH)	Panel Thickness	Bundle Ø max.	Material	Colour	Pack Cont.	Article-No.
S3STM50	22.0	50.0	35.0	55.0	12,7 - 13,7	1.9 - 13.0	127.0	PA66HIRHS	Black (BK)	100 pcs.	151-29500

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

Fixing Elements for BHT-Ties for Distance Routing

MSBT120

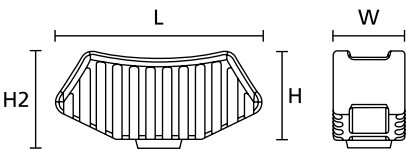
These heavy duty fixing offers excellent performance for ship building and the truck and construction vehicle industries.

Features and Benefits

- For parallel routing of three bundles
- Retainer is fixed in the hole with BHT-tie
- Socket centres retainer in the hole and can protect tie from sharp edges



Saddle Mount MSBT120.



MSBT120

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Hole Ø (FH)	Panel Thickness	Material	Colour	Pack Cont.	Article-No.
MSBT120	16.5	48.3	20.6	22.2	11,2 - 20,8	2.7	PA66HIRHSW	Black (BK)	500 pcs.	151-29301

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



Heavy Duty Mounts for 3-way routing

Primarily designed for use in the automotive/truck industry, these parts can be used in a wide variety of industries and applications where bundles need mounting.

These heavy duty harness clips helps to fix and secure cable, lines and hydraulic lines in truck, agriculture and railway vehicle construction, as well as in ship building.

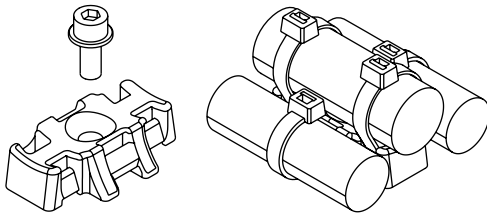
Features and benefits

- For parallel routing of bundles
- Secure alignment to the bundle due to H-design
- Easy maintenance of bundle by simply changing cable tie
- Cable tie head can be moved after bundling



S3CBM8 in combination with our X-Series.

S3CBM8



Suitable for external cylindrical hexagonal bolts M8

Exemplary illustration of a possible 3-way transfer

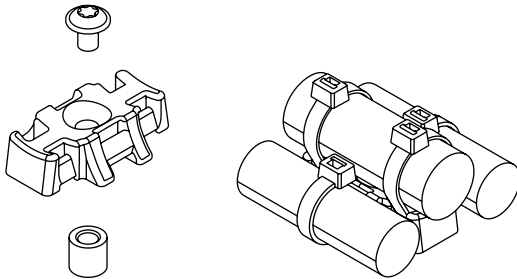


S3SB15CBM8 and S3CBM8.

TYPE	Width (W)	Length (L)	Height (H)	Bundle Ø max.	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
S3CBM8	46.0	70.0	18.6	100.0	9.0	PA6GF30	Black (BK)	500 pcs.	151-01040

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

S3SB15CBM8

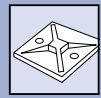


Suitable for welding studs (M8 internal bore & outer diameter 15 mm)

Exemplary illustration of a possible 3-way transfer

TYPE	Width (W)	Length (L)	Height (H)	Bundle Ø max.	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
S3SB15CBM8	46.0	70.0	18.6	100.0	9.0	PA6GF30	Black (BK)	500 pcs.	151-01010

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

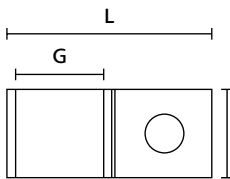
Suitable for the secure fixing of cables, tubing, conduits and pipes within the most arduous of environments. Providing a complete fastening and fixing solution when used in conjunction with stainless steel ties up to 10.0 mm width. SSPC metal cable tie mounts are ideal for use within shipbuilding, oil 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



One Step to the Web!



SSPC Series (plan view)



SSPC-Series (side view)



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

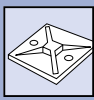
i The SSPC-Mounts can ideally be combined with the MBT cable ties on page 82–88 and with the MST and MLT cable ties on page 89, 90.

i Can support quality assurance in the production of food stuffs, for example HACCP.

i Material specification please see page 23.

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



Ratchet P-Clamp

For bundle diameters from 6.2 mm 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

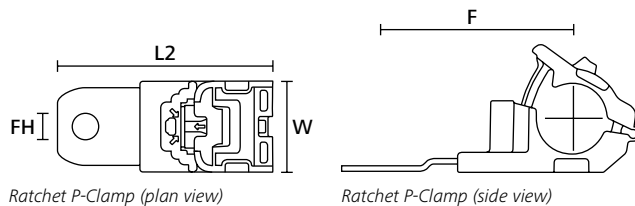
- One-piece ratchet closure design allows for easy installation during pre- or final assembly
- Multiple configurations handle a wide range of diameters and applications, reducing part inventory
- Clamp interior is designed to guide and center bundle to reduce pinching
- Easy release feature allows for 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-Clamps in multiple configurations to handle a wide range of diameters and applications.



One Step to the Web!



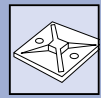
Ratchet P-Clamp (plan view)

Ratchet P-Clamp (side view)

For bundle diameters from 6.2 mm to 13.7 mm

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	Hole Ø (FH)	Fixing Hole Centres (F)	Variant	Material	Colour	Article-No.
RCA90SM6	34.9	101.9	6.2	13.7	M6	24.9	90° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01643
RCA180SM6	34.9	116.2	6.2	13.7	M6	50.5	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01637
RCA180SM8	34.9	116.2	6.2	13.7	M8	50.5	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01416
RCA180SM10	34.9	116.2	6.2	13.7	M10	50.5	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01417
RCA180SM12	34.9	116.2	6.2	13.7	M12	50.5	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01418
RCA90LM6	34.9	129.9	6.2	13.7	M6	24.9	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01644
RCA90LM8	34.9	129.9	6.2	13.7	M8	24.9	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01437
RCA180MM6	34.9	138.2	6.2	13.7	M6	72.5	180° Medium	PA66HIRHSUV, ST, ZN	Black (BK)	151-01638
RCA180MM8	34.9	138.2	6.2	13.7	M8	72.5	180° Medium	PA66HIRHSUV, ST, ZN	Black (BK)	151-01419
RCA180LM6	34.9	167.2	6.2	13.7	M6	101.5	180° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01639

All dimensions in mm. Subject to technical changes.



Ratchet P-Clamp

For bundle diameters from 12.7 mm to 19.5 mm

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	Hole Ø (FH)	Fixing Hole Centres (F)	Variant	Material	Colour	Article-No.
RCB90SM6	34.9	101.9	12.7	19.5	M6	26.7	90° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01651
RCB90SM8	34.9	101.9	12.7	19.5	M8	26.7	90° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01457
RCB180SM6	34.9	116.2	12.7	19.5	M6	52.8	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01645
RCB180SM8	34.9	116.2	12.7	19.5	M8	52.8	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01440
RCB180SM10	34.9	116.2	12.7	19.5	M10	52.8	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01390
RCB180SM12	34.9	116.2	12.7	19.5	M12	52.8	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01441
RCB90LM6	34.9	129.9	12.7	19.5	M6	26.7	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01652
RCB90LM8	34.9	129.9	12.7	19.5	M8	26.7	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01460
RCB180MM6	34.9	138.2	12.7	19.5	M6	74.8	180° Medium	PA66HIRHSUV, ST, ZN	Black (BK)	151-01646
RCB180LM6	34.9	167.2	12.7	19.5	M6	103.8	180° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01647

All dimensions in mm. Subject to technical changes.

For bundle diameters from 19.4 mm to 36.0 mm

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	Hole Ø (FH)	Fixing Hole Centres (F)	Variant	Material	Colour	Article-No.
RCC90SM6	34.9	141.8	19.4	36.0	M6	39.9	90° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01659
RCC90SM8	34.9	141.8	19.4	36.0	M8	39.9	90° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01492
RCC180SM6	34.9	156.1	19.4	36.0	M6	62.3	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01653
RCC180SM8	34.9	156.1	19.4	36.0	M8	62.3	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01474
RCC180SM10	34.9	156.1	19.4	36.0	M10	62.3	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01475
RCC180SM12	34.9	156.1	19.4	36.0	M12	62.3	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01476
RCC90LM6	34.9	169.8	19.4	36.0	M6	39.9	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01660
RCC90LM8	34.9	169.8	19.4	36.0	M8	39.9	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01495
RCC180MM6	34.9	178.1	19.4	36.0	M6	84.3	180° Medium	PA66HIRHSUV, ST, ZN	Black (BK)	151-01654
RCC180LM6	34.9	207.1	19.4	36.0	M6	113.3	180° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01655

All dimensions in mm. Subject to technical changes.

For bundle diameters from 36.0 mm to 51.0 mm

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	Hole Ø (FH)	Fixing Hole Centres (F)	Variant	Material	Colour	Article-No.
RCD180SM8	34.9	181.5	36.0	51.0	M8	70.0	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01499
RCD180SM10	34.9	181.5	36.0	51.0	M10	70.0	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01501
RCD180SM12	34.9	181.5	36.0	51.0	M12	70.0	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01502
RCD90LM8	34.9	195.2	36.0	51.0	M8	42.4	90° Long	PA66HIRHSUV, ST, ZN	Black (BK)	151-01521

All dimensions in mm. Subject to technical changes.

Accessories

TYPE	Variant	Material	Colour	Article-No.
RCTT	No Serration	PA66HIRHSUV	Black (BK)	151-01529
RCINSERTA	Rubber profile	TPE	Black (BK)	151-01530
RCINSERTB	Rubber profile	TPE	Black (BK)	151-01531
RCINSERTC	Rubber profile	TPE	Black (BK)	151-01532
RCINSERTD	Rubber profile	TPE	Black (BK)	151-01533

All dimensions in mm. Subject to technical changes.



Aluminium P-Clamps

Alu-P-Clamp with / without chloroprene insert

Manufactured from a high quality aluminium, these metal P-Clamps provide flexibility whilst providing a permanent fixing in the most arduous of environments. The addition of a chloroprene insert provides the cable or pipe bundle with a high degree of protection against vibration, reducing noise and also providing electrical isolation. They are commonly used in caravan construction, the defence and railway industry as well as in the renewable energy sector.

Features and benefits

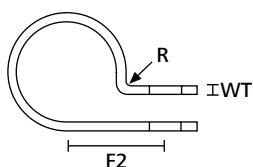
- Simple and secure pipe or cable fixation
- Can be combined with chloroprene rubber for vibration resistance
- Ideal for use in high temperature applications
- Suitable for applications needing strength of metal components



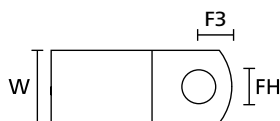
P-Clamps manufactured in polyamide, aluminium or aluminium with a chloroprene insert.



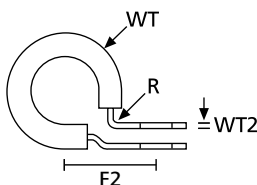
Material specification please see page 22.



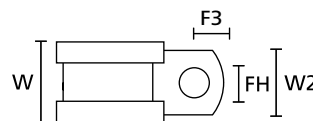
ALU P-Clamp (side view)



ALU P-Clamp (plan view)



ALU_C P-Clamp with chloroprene insert (side view)

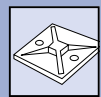


ALU_C P-Clamp with chloroprene insert (plan view)

TYPE	Width (W)	Width (W2)	Wall (WT)	Wall (WT2)	Hole Ø (FH)	Fixing Hole Centres (F2)	Fixing Hole Centres (F3)	Bundle Ø max.	Radius (R)	Material	Colour	Article-No.
ALU4	12.7	-	0.80	-	5.2	11.6	5.5	6.4	1.6	AL	Natural (NA)	211-10040
ALU5	12.7	-	0.80	-	5.2	12.6	5.5	8.0	1.6	AL	Natural (NA)	211-10050
ALU6	12.7	-	0.80	-	5.2	13.4	5.5	9.5	1.6	AL	Natural (NA)	211-10060
ALU7	12.7	-	0.80	-	5.2	14.2	5.5	11.1	1.6	AL	Natural (NA)	211-10070
ALU8	12.7	-	0.80	-	5.2	15.0	5.5	12.7	1.6	AL	Natural (NA)	211-10080
ALU10	12.7	-	0.80	-	5.2	16.6	5.5	15.9	1.6	AL	Natural (NA)	211-10100
ALU11	12.7	-	1.30	-	5.2	19.1	5.5	17.5	2.8	AL	Natural (NA)	211-10110
ALU12	12.7	-	1.30	-	5.2	19.9	5.5	19.1	2.8	AL	Natural (NA)	211-10120
ALU13	12.7	-	1.30	-	5.2	20.7	5.5	20.6	2.8	AL	Natural (NA)	211-10130
ALU4C	16.3	12.7	3.70	0.8	5.2	11.6	5.5	3.2	1.6	AL, CR	Black (BK)	211-15040
ALU5C	16.3	12.7	3.70	0.8	5.2	12.6	5.5	4.8	1.6	AL, CR	Black (BK)	211-15050
ALU6C	16.3	12.7	3.70	0.8	5.2	13.4	5.5	6.4	1.6	AL, CR	Black (BK)	211-15060
ALU7C	16.3	12.7	3.70	0.8	5.2	14.2	5.5	8.0	1.6	AL, CR	Black (BK)	211-15070
ALU8C	16.3	12.7	3.70	0.8	5.2	15.0	5.5	9.5	1.6	AL, CR	Black (BK)	211-15080
ALU9C	16.3	12.7	3.70	0.8	5.2	15.8	5.5	11.1	1.6	AL, CR	Black (BK)	211-15090
ALU10C	16.3	12.7	3.70	0.8	5.2	16.6	5.5	12.7	1.6	AL, CR	Black (BK)	211-15100

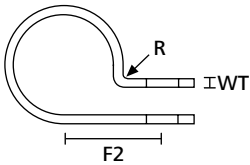
All dimensions in mm. Subject to technical changes.



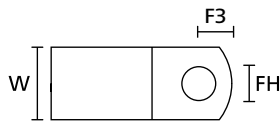


Aluminium P-Clamps

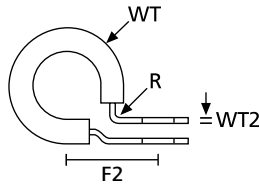
Alu-P-Clamp with / without chloroprene insert



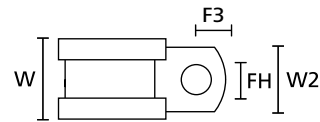
ALU P-Clamp (side view)



ALU P-Clamp (plan view)



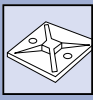
ALU_C P-Clamp with chloroprene insert (side view)



ALU_C P-Clamp with chloroprene insert (plan view)

TYPE	Width (W)	Width (W2)	Wall (WT)	Wall (WT2)	Hole Ø (FH)	Fixing Hole Centres (F2)	Fixing Hole Centres (F3)	Bundle Ø max.	Radius (R)	Material	Colour	Article-No.
ALU11C	16.3	12.7	4.50	1.3	5.2	19.1	5.5	14.3	2.8	AL, CR	Black (BK)	211-15110
ALU12C	16.3	12.7	4.50	1.3	5.2	19.9	5.5	15.9	2.8	AL, CR	Black (BK)	211-15120
ALU13C	16.3	12.7	4.50	1.3	5.2	20.7	5.5	17.5	2.8	AL, CR	Black (BK)	211-15130
ALU14C	16.3	12.7	4.50	1.3	5.2	21.5	5.5	19.1	2.8	AL, CR	Black (BK)	211-15140
ALU15C	16.3	12.7	4.50	1.3	5.2	22.3	5.5	20.6	2.8	AL, CR	Black (BK)	211-15150
ALU16C	16.3	12.7	4.50	1.3	5.2	23.1	5.5	22.2	2.8	AL, CR	Black (BK)	211-15160
ALU17C	16.3	12.7	4.50	1.3	5.2	23.9	5.5	23.8	2.8	AL, CR	Black (BK)	211-15170
ALU18C	16.3	12.7	4.50	1.3	5.2	24.6	5.5	25.4	2.8	AL, CR	Black (BK)	211-15180
ALU19C	16.3	12.7	4.50	1.3	5.2	25.5	5.5	27.0	2.8	AL, CR	Black (BK)	211-15190
ALU20C	16.3	12.7	4.50	1.6	5.2	27.0	5.5	28.6	3.2	AL, CR	Black (BK)	211-15200
ALU22C	16.3	12.7	4.50	1.6	5.2	28.6	5.5	31.8	3.2	AL, CR	Black (BK)	211-15220
ALU23C	16.3	12.7	4.50	1.6	5.2	29.4	5.5	33.3	3.2	AL, CR	Black (BK)	211-15230
ALU24C	16.3	12.7	4.50	1.6	5.2	30.2	5.5	34.9	3.2	AL, CR	Black (BK)	211-15240
ALU25C	16.3	12.7	4.50	1.6	5.2	30.8	5.5	36.5	3.2	AL, CR	Black (BK)	211-15250
ALU26C	16.3	12.7	4.50	1.6	5.2	31.7	5.5	38.1	3.2	AL, CR	Black (BK)	211-15260
ALU28C	16.3	12.7	4.50	1.6	5.2	33.3	5.5	41.3	3.2	AL, CR	Black (BK)	211-15280
ALU29C	16.3	12.7	4.50	1.6	5.2	34.1	5.5	42.9	3.2	AL, CR	Black (BK)	211-15290
ALU30C	16.3	12.7	4.50	1.6	5.2	34.9	5.5	44.5	3.2	AL, CR	Black (BK)	211-15300
ALU34C	16.3	12.7	4.50	1.6	5.2	38.1	5.5	50.8	3.2	AL, CR	Black (BK)	211-15340

All dimensions in mm. Subject to technical changes.



Plastic P-Clamps

HP-Series

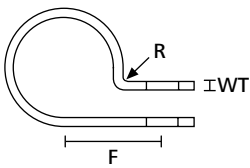
For permanent or semi-permanent cable fixings this range of plastic P-Clamps can be used in many industries. Their light weight makes them particularly suitable for use in areas such as aircraft and aerospace where minimising weight, but retaining a strong fixing, is vitally important.

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.



P-Clamp H1P - H18P (side view)

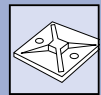
P-Clamp H1P - H18P (plan view)



Material specification please see page 22.

TYPE	Width (W)	Wall (WT)	Hole Ø (FH)	Bundle Ø max.	Fixing Hole Centres (F)	Radius (R)	Material	Colour	Article-No.
H1P	10.0	0.80	4.2	3.2	8.5	0.5	PA66	Natural (NA)	211-60019
	10.0	0.80	4.2	3.2	8.5	0.5	PA66HS	Black (BK)	211-60000
H2P	10.0	1.00	4.2	5.0	9.5	1.0	PA66	Natural (NA)	211-60029
	10.0	1.00	4.2	5.0	9.5	1.0	PA66HS	Black (BK)	211-60001
H3P	10.0	1.00	4.2	6.5	10.0	1.0	PA66	Natural (NA)	211-60039
	10.0	1.00	4.2	6.5	10.0	1.0	PA66HS	Black (BK)	211-60002
H4P	10.0	1.20	4.2	8.0	10.0	1.0	PA66	Natural (NA)	211-60049
	10.0	1.20	4.2	8.0	10.0	1.0	PA66HS	Black (BK)	211-60003
H5P	10.0	1.20	4.2	9.5	11.0	1.0	PA66	Natural (NA)	211-60059
	10.0	1.20	4.2	9.5	11.0	1.0	PA66HS	Black (BK)	211-60004
H6P	10.0	1.20	4.2	11.0	13.0	1.0	PA66	Natural (NA)	211-60069
	10.0	1.20	4.2	11.0	13.0	1.0	PA66HS	Black (BK)	211-60005
H7P	10.0	1.20	4.2	12.5	14.0	1.5	PA66	Natural (NA)	211-60079
	10.0	1.20	4.2	12.5	14.0	1.5	PA66HS	Black (BK)	211-60006
H8P	10.0	1.50	4.2	14.0	15.0	1.5	PA66	Natural (NA)	211-60089
	10.0	1.50	4.2	14.0	15.0	1.5	PA66HS	Black (BK)	211-60007
H9P	10.0	1.50	4.2	16.0	16.0	1.5	PA66	Natural (NA)	211-60099
	10.0	1.50	4.2	16.0	16.0	1.5	PA66HS	Black (BK)	211-60008
H10P	10.0	1.50	4.2	17.5	17.0	1.5	PA66	Natural (NA)	211-60109
	10.0	1.50	4.2	17.5	17.0	1.5	PA66HS	Black (BK)	211-60009
H11P	10.0	1.50	4.2	19.0	18.0	2.0	PA66	Natural (NA)	211-60119
H12P	10.0	1.50	4.2	20.5	19.0	2.0	PA66	Natural (NA)	211-60129
H13P	12.0	1.50	5.2	22.0	20.5	2.0	PA66	Natural (NA)	211-60139
H14P	12.0	1.50	5.2	24.0	21.5	2.0	PA66	Natural (NA)	211-60149
H15P	12.0	1.50	5.2	25.5	23.0	2.5	PA66	Natural (NA)	211-60159
H16P	12.0	1.50	5.2	28.5	24.0	2.5	PA66	Natural (NA)	211-60169
H17P	12.0	1.50	5.2	31.5	26.0	2.5	PA66	Natural (NA)	211-60179
H18P	12.0	1.50	5.2	35.0	27.5	2.5	PA66	Natural (NA)	211-60189

All dimensions in mm. Subject to technical changes.



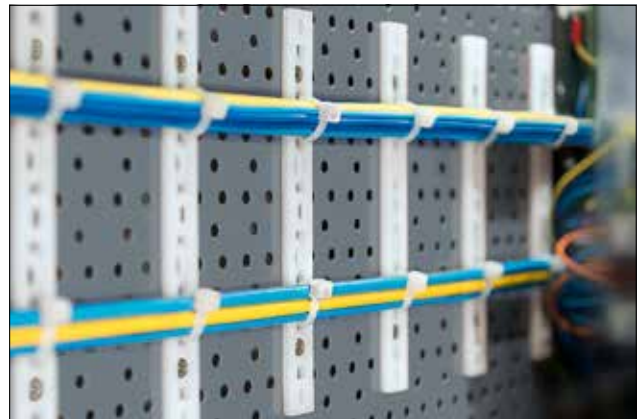
Mounting Plates for Screw Fixing

MP-Series for parallel bundling

Many applications require each cable run to be firmly held in place but to be held separately from adjacent cable runs (example - control cabinets, machinery and military systems). The MP series of mounts can achieve this.

Features and benefits

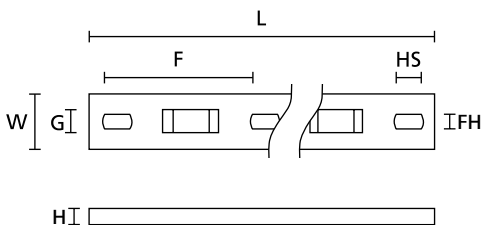
- Allow multiple cables to run in parallel
- Simple to fix with two screws
- Cables are fixed by using a cable tie through any combination of the available slots



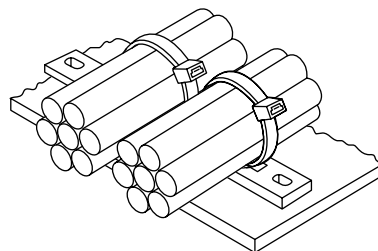
MSMP mounting plates, screwable.



Material specification please see page 22.



Mounting plates MP and MSMP (plan and side view)



Mounting plates in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	No. of bundles	Material	Colour	Pack Cont.	Article-No.
MP2M3	12.7	76.2	3.2	3.7	5.2	2	PA66	Natural (NA)	100 pcs.	151-24219
MP3M3	12.7	108.0	3.2	3.7	5.2	3	PA66	Natural (NA)	100 pcs.	151-24319
MP4M3	12.7	139.8	3.2	3.7	5.2	4	PA66	Natural (NA)	100 pcs.	151-24419
MP5M3	12.7	171.6	3.2	3.7	5.2	5	PA66	Natural (NA)	100 pcs.	151-24519
MSMP5/10	15.8	204.5	5.3	5.1	7.6	5	PA66	Natural (NA)	100 pcs.	151-25519
MSMP6/6	15.8	244.0	5.3	3.8	7.6	6	PA66	Natural (NA)	100 pcs.	151-25619
MSMP4	15.9	167.0	5.2	5.1	8.2	4	PA66	Natural (NA)	500 pcs.	150-83499

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



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



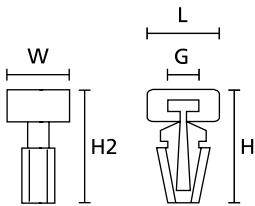
Cable Fixing Cradle

TM1SF for cable ties width up to 5.0 mm

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

- Ideal mount for space-saving applications with restricted access
- Arrowhead for very secure fixing



TM1SF Fixing Base



TM1SF Fixing Base for pre-drilled or pre-punched holes.



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Hole Ø (FH)	Panel Thickness	Strap Width max. (G)	Material	Colour	Article-No.
TM1SF	10.2	15.8	4.6	4.6	6.35	3.3 - 3.4	5.0	PA66	White (WH)	151-40119

All dimensions in mm. Subject to technical changes.

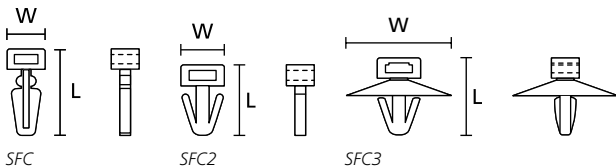
Arrowhead Cradle

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
- SFC and SFC2 for ties up to 5.3 mm wide
- SFC3 for ties up to 8.6 mm wide



SFC

SFC2

SFC3



Securely fix and route cables and pipes with SFC3.

TYPE	Width (W)	Length (L)	Hole Ø (FH)	Panel Thickness	Strap Width max. (G)	Material	Colour	Article-No.
SFC2	6.0	14.5	6.0	0.8 - 1.0	5.3	PA66	Natural (NA)	151-02000
SFC	11.0	18.0	6.0	3.0 - 3.2	5.3	PA66	Natural (NA)	151-01600
SFC3	22.0	15.5	6.3	0.8 - 1.8	8.6	PA66	Black (BK)	151-01906
	22.0	15.5	6.3	0.8 - 1.8	8.6	PA66	Natural (NA)	151-01909

All dimensions in mm. Subject to technical changes.



Bundling Clips with Arrowhead

Bundling Clips with Arrowhead

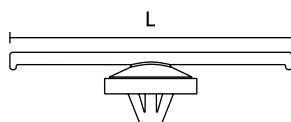
Originally designed for the Automotive industry, these clips offer simple and easy methods of securing cables, hoses or pipes. They have many applications within a wide range of industries.

Features and Benefits

- Easy to install without the need for a tool
- Cable tie head always situated in defined position
- Arrowhead simply locks into place
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- ATS fixing elements can be tied automatically with the ATS3080 tool
- Variants with pipe clips allow the addition of cables after installation



BundlingClip with OmegaClip, BundlingClip with foam, BundlingClip LRJ1



BCSFT6.5 16-3MD



**Material specification
please see page 22.**

TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
LRJ1		55.0	6,2 - 6,7	0,7 - 2,0	PA6	Black (BK)	151-08101
BCSFT6.5 16-3		55.0	6,3 - 6,7	2,3 - 3,5	PA66HIRHS	Black (BK)	151-00431
ATSBCSFT6.5		39.0	6,3 - 6,7	2,3 - 3,3	PA66HIRHS	Black (BK)	102-69066
ATSBCSFT6.5		39.0	6,3 - 6,7	0,7 - 1,3	PA66HIRHS	Black (BK)	102-69067
ATSBC2KSFT6.5		39.0	6,3 - 6,7	1,7 - 2,3	PA66HIRHS	Black (BK)	102-69068
ATSBCOWSFT6.5		39.0	6,3 - 6,7	2,3 - 3,3	PA46	Grey (GY)	102-69070
ATSBCSFT 6.5PT2,3-3,3		39.0	6,3 - 6,7	2,3 - 3,3	PA46	Grey (GY)	102-69069
BC70SFT712-MD		70.0	7,0 x 12,0	0,7 - 1,8	PA66HIRHS	Black (BK)	151-01094
BC70SFT712		70.0	7,0 x 12,0	0,7 - 3,2	PA66HIRHS	Black (BK)	151-01036
BCHSFT712-MD		42.0	7,0 x 12,0	0,7 - 1,8	PA66HIRHS	Black (BK), Natural (NA)	151-01301
BCHSFT712		40.0	7,0 x 12,0	0,7 - 1,8	PA66HIRHS	Black (BK)	151-01037
BCLSFT712		64.5	7,0 x 12,0	0,8 - 2,0	PPT20	Black (BK)	151-01014

All dimensions in mm. Subject to technical changes.



Bundling Clips with Arrowhead, sealed

TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
BCSFT6.5 16-3MD		55.0	6.3 - 6.7	1.5 - 3.0	PA66HIRHS	Black (BK)	155-11601
ATSBCSFT6.5-MD		39.0	6.3 - 6.7	2.0 - 3.0	PA66HIRHS	Black (BK)	102-69065

All dimensions in mm. Subject to technical changes.

Bundling Clips with additional Harness Clip

TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
OCTC1		60.0	-	-	PA66HIRHS	Black (BK)	151-00447
Halter SFT6.5		60.0	6.3 - 6.7	0.6 - 1.5	PA66HIRHS	Black (BK)	133-00067

All dimensions in mm. Subject to technical changes.

Bundling Clips, moveable

An easy means of routing and securing cable sets in various parts of cars.

Features and Benefits

- Easy to install without the need for a tool
- Horizontal length tolerance compensation
- Ideal if holes do not fit registration or bundles need to be routed around corners



The CHA2 with fir tree base and length tolerance compensation for precise cable routing even in difficult conditions.

CHA1 with arrowhead

TYPE	Drawing	Width (W)	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CHA1		6.0	54.0	6.3 - 7.0	0.5 - 1.2	PA66HS	Black (BK)	150-08110

All dimensions in mm. Subject to technical changes.

CHA2 with fir tree

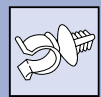
TYPE	Drawing	Width (W)	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CHA2		6.0	54.0	6.5 - 7.0	0.8 - 2.0	PA66	Black (BK)	151-02901

All dimensions in mm. Subject to technical changes.

TCSFT6.5CHAMD with arrowhead, sealed

TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
TCSFT6.5S-CHA-MD		54.0	6.5 - 6.7	0.6 - 1.8	PA66HS	Green (GN)	156-01238

All dimensions in mm. Subject to technical changes.



Bundling Clips with Arrowhead for Distance Routing

SOC for distance routing 31.0 mm

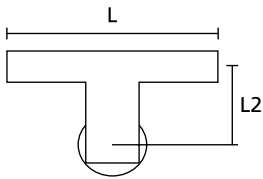
Originally designed for the Automotive industry, these clips offer simple and easy methods of securing cables, hoses or pipes. They have many applications within a wide range of industries.

Features and Benefits

- Easy to install without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Versions for oval holes feature anti-twist protection



StandOff Clips allow cable looms to be routed at a set distance from the punched holes.



Material specification please see page 22.

TYPE	Drawing	Length (L)	Length (L2)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
SOC30D6MD		50.0	36.0	6.4 - 7.0	0.7 - 1.2	PA66HIRHS	Black (BK)	151-01360
		50.0	36.0	6.4 - 7.0	0.7 - 1.2	PA66	Natural (NA)	151-01159
CH20D6		50.0	20.0	6.4 - 7.0	0.6 - 1.4	PA66HS	Black (BK)	151-00077
CH20D7		50.0	20.0	7.0	0.8 - 1.6	PA66	Black (BK)	151-02600
STAND-OFF-CLIP-2		40.0	25.0	6.5 - 6.8	0.4 - 1.6	PA66HIRHS	Black (BK)	155-01600
STAND OFF CLIP		40.0	31.0	6.5 - 6.8	0.4 - 1.6	PA46	Grey (GY)	150-45398
		40.0	31.0	6.5 - 6.8	0.4 - 1.6	PA66HIRHS	Black (BK)	150-45397
BC20KSFT6.5		50.0	19.2	6.25 - 6.75	0.7 - 1.3	PA66HIRHS	Black (BK)	151-01070
BC20SFT6.5-MD		50.0	24.0	6.25 - 6.75	0.7 - 1.6	PA66HIRHS, EPDM	Black (BK)	151-01067
SOC20SFT712-MD		50.0	20.0	7.0 x 12.0	0.6 - 2.0	PA66HIRHS, EPDM	Black (BK)	151-01255
SOC32SFT65X130-MD		50.0	32.0	6.5 x 13.0	0.6 - 2.0	PA66HIRHS	Black (BK)	151-01331

All dimensions in mm. Subject to technical changes.



Bundling Clips with Fir Tree, for Round Holes

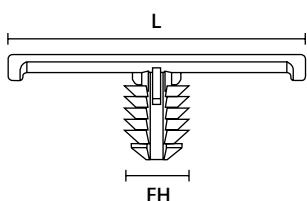
Widespread use in cable harness production; a quick and easy means of fixing cables and lines securely in various parts of cars.

Features and Benefits

- Easy to install without the need for a tool
- One fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes
- Holding tabs prevent the tie slipping sideways
- Versions for oval holes feature anti-twist protection



BundlingClips with fir tree bases for a variety of applications with a wide range of metal thicknesses and drill holes.



TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
TC5FT6S		37.0	6.4 - 7.1	0.8 - 1.5	PA66HIRHS	Black (BK)	150-95500
TC3FT6S		37.0	6.5 - 7.0	0.8 - 1.5	PA66HIRHS	Black (BK)	151-00028
TC4FT6LG		37.0	6.3 - 7.0	0.6 - 5.1	PA66HIRHS	Black (BK)	151-00215
TC4FT6LG-A		37.0	6.3 - 7.0	0.6 - 5.1	PA66HIRHS	Natural (NA)	151-00467
TCDSFT6-HEX		40.0	6.3	0.8 - 4.5	PA66HIRHS	Black (BK)	155-39002
BCFT6XL56		56.0	6.3 - 7.0	0.7 - 9.0	PA66HIRHS	Black (BK)	151-00662
ATSBCFT6LG		39.0	6.3 - 7.0	0.6 - 5.1	PA66HIRHS	Black (BK)	102-67065
BCOWFT6M		27.3	6.5 - 7.0	0.6 - 3.5	PA66HIRHS	Natural (NA)	151-00790
BCOWFT5		24.9	4.9 - 5.1	2.9 - 3.1	PA66HIRHS	Black (BK)	151-00904
BC13FT6.35		40.0	6.25 - 6.75	1.1 - 5.0	PA66HIRHS	Black (BK)	151-01335
BC37FT7LG		37.0	6.3 - 6.7	0.5 - 2.8	PA66HIRHS	Black (BK)	151-01262
TC2FT6LG		55.0	6.3 - 7.0	0.6 - 5.1	PA66HIRHS	Black (BK)	155-30802
		55.0	6.3 - 7.0	0.6 - 5.1	PA66HIRHS	Natural (NA)	151-00020

All dimensions in mm. Subject to technical changes.



Bundling Clips with Fir Tree, for Oval Holes

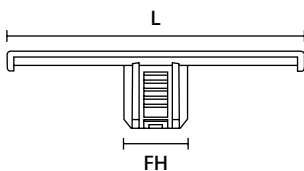
Originally designed for the Automotive industry, these clips offer simple and easy methods of securing cables, hoses or pipes. They have many applications within a wide range of industries.

Features and Benefits

- Especially for banding of cables and cable looms
- Fastened onto winding bar with binding twine, adhesive tape or cable ties
- Manually or automatic application with Autotool 2000 or ATS3080
- Various base geometries for wide variety of metal gauges and bore diameters



BundlingClips with fir tree bases for a variety of applications with a wide range of metal thicknesses and drill holes.



Material specification please see page 22.

TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
TC50FT62122		50.0	6.2 x 12.2	0.7 - 3.0	PA66	Black (BK)	151-00883
TCOP62x122		55.0	6.2 x 12.2	0.6 - 6.0	PA66HIRHS	Black (BK)	151-00605
TCOP70x120		55.0	7.0 x 12.0	0.6 - 6.0	PA66HIRHS	Black (BK)	151-00029
WICKELCLIP-VDS		40.0	6.3 x 9.0	0.6 - 2.5	PA66HIRHS	Black (BK)	155-16301
BCFT63x100S		40.0	6.5 x 10.2	0.6 - 2.5	PA66HIRHS	Black (BK)	151-00759
BC70LFT712		81.3	7.0 x 12.0	0.9 - 5.5	PA66HIRHS	Black (BK)	151-01217

All dimensions in mm. Subject to technical changes.



Bundling Clips with Fir Tree, for Distance Routing

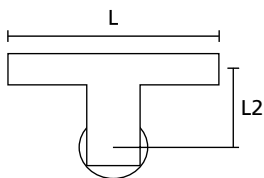
Originally designed for the Automotive industry, these clips offer simple and easy methods of securing cables or pipes and have many applications within a wide range of industries.

Features and Benefits

- Easy to install without the need for a tool
- One fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes
- Disc covers the hole to prevent dirt and water gaining access
- Bundle runs in a set distance to the hole



COW Clip used as tape-on clip.

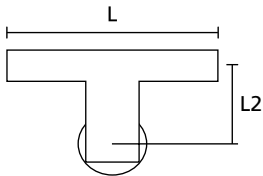


TYPE	Drawing	Length (L)	Length (L2)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
COW20SFT7		42.0	20.0	6.35	0.7 - 1.6	PA66HS	Black (BK)	151-01570
COW20DP7		42.0	20.0	6.3 - 7.0	0.8 - 4.5	PA66HS	Brown (BN)	151-03100
		42.0	20.0	6.3 - 7.0	0.8 - 4.5	PA66	Brown (BN)	151-01095
		202.0	20.0	6.3 - 7.0	0.8 - 4.5	PA66HS	Black (BK)	156-00581
COW30DP7		42.0	30.0	6.3 - 7.0	0.8 - 4.5	PA66	Black (BK)	151-03200
COW30T50R		202.0	30.0	6.3 - 7.0	0.8 - 4.5	PA66, PA66HS	Black (BK)	156-00641
SOC4 M.FT6		55.0	20.0	6.5 - 7.0	0.7 - 5.1	PA66HIRHS	Black (BK)	155-30902
SOC5FT6LG		55.0	13.0	6.5 - 7.0	0.7 - 5.1	PA66HIRHS	Black (BK)	151-00074
SOC5FT6S		55.0	13.0	6.5 - 7.0	0.8 - 2.5	PA66HIRHS	Black (BK)	151-01329
SOC6		55.0	22.0	6.3 - 7.0	0.8 - 3.5	PA66HIRHS	Black (BK)	151-00023
SOC10405		55.0	20.0	6.3 - 6.7	0.7 - 3.5	PA66HIRHS	Black (BK)	151-00282
SOC3-FT6-LG.		12.0	30.0	6.4 - 7.1	0.8 - 6.0	PA66HIRHS	Black (BK)	155-19001
SOC7FT6		56.0	42.5	6.25 - 6.75	0.7 - 5.7	PA66HIRHSW	Black (BK)	151-00629

All dimensions in mm. Subject to technical changes.

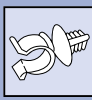


Bundling Clips with Fir Tree, for Distance Routing



TYPE	Drawing	Length (L)	Length (L2)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
SOC8FT6		61.0	42.5	6.2 - 6.8	0.7 - 5.5	PA66HIRHS	Natural (NA)	151-00650
SOC8FT6LG		40.0	30.0	6.5 - 7.0	0.7 - 5.8	PA66HIRHS	Black (BK)	151-00665
CH20FT6		50.0	20.0	6.5 - 7.0	0.8 - 2.5	PA66HIRHS	Black (BK)	151-00830
SOC11FTOVAL		50.0	20.0	6.2 x 12.2	0.6 - 6.8	PA66HIRHS	Black (BK)	151-00992
		50.0	20.0	6.2 x 12.2	0.6 - 6.8	PA66HIRHS	Natural (NA)	151-00932
SOC13FTOVAL		50.0	20.0	6.5 x 12.5	0.6 - 4.0	PA66HIRHS	Black (BK)	151-01018
SOC20FT5		50.0	20.0	4.5 - 5.0	0.7 - 3.0	PA66HIRHS	Black (BK)	151-00970
SOC25FT63x100		42.0	18.0	6.3 x 10.0	0.6 - 2.5	PA66HIRHS	Black (BK)	133-00824
SOC25FT712		50.0	25.0	7.0 x 12.0	1.1 - 6.1	PA66HIRHS	Black (BK)	151-01213

All dimensions in mm. Subject to technical changes.



Bundling Clips for Weld Studs, moveable

Originally designed for the Automotive industry, these clips offer simple and easy methods of securing cables, hoses or pipes. They have many applications within a wide range of industries.

Features and Benefits

- Easy assembly without the need for a tool
- Horizontal length tolerance compensation up to 4.0 mm
- BCUWS5-D5-25: for coarse thread studs
- If connector retainer is a request: TCSB5CYCC
- If post-installation of cables is needed: Bundling clip SB5
- For defined distance of bundles to surface: BCOS variants



TCSB5CYCC: Tapebar, Stud Retainer and ConnectorClip in just one article.



Material specification
please see page 22.

Bundling Clips for Weld Studs, moveable

TYPE	Drawing	Stud Ø	Length (L)	Material	Colour	Article-No.
WICKELCLIP-SB5		5.0	60.0	POM	Black (BK)	155-23701
TC-SB5C		5.0	55.0	PA66HS	Black (BK)	151-26101
TCSB5CYCC		5.0	55.0	PA66HIRHS	Black (BK)	151-00484
BCUWS5-D5-25		5.0	50.0	PA66HIRHS	Natural (NA)	151-00851

All dimensions in mm. Subject to technical changes.

Bundling Clips for Weld Studs

TYPE	Drawing	Stud Ø	Length (L)	Material	Colour	Article-No.
BCOS5		5.0	59.0	PA66HIRHS	Black (BK)	151-00664
BCOS6		6.0	59.0	PA66HIRHS	Black (BK)	151-00281

All dimensions in mm. Subject to technical changes.



Bundling Clips for Weld Studs, moveable

The BC series is proving very popular in the automotive industry as a means of installing cable sets easily in various areas of the vehicle.

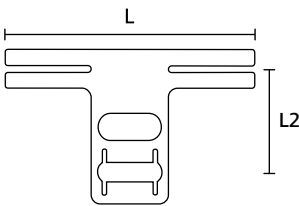
Features and Benefits

- Very flat bundling clip for 5.0 mm weld stud
- Horizontal length tolerance compensation
- Suitable for cables of reduced weight and diameter

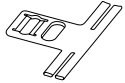


The slim line BC series is particularly compact and flexible.

BC2212 for distance routing 12.0 and 22.0 mm

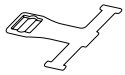


Material specification please see page 22.

TYPE	Drawing	Length (L)	Length (L2)	Stud Ø	Material	Colour	Article-No.
BC2212		55.0	22.0	5.0	PA66HIRHS	Black (BK)	151-00017

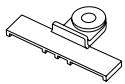
All dimensions in mm. Subject to technical changes.

BC30 for distance 30.0 mm

TYPE	Drawing	Length (L)	Length (L2)	Stud Ø	Material	Colour	Article-No.
BC30		55.0	30.0	5.0	PA66HIRHS	Black (BK)	151-00016

All dimensions in mm. Subject to technical changes.

BC-SCR6

TYPE	Drawing	Length (L)	Length (L2)	Hole Ø (FH)	Material	Colour	Article-No.
BC-SCR6		60.0	20.0	6.5	PA66GF60, PA66HIRHS	Black (BK)	156-00390

All dimensions in mm. Subject to technical changes.



Bundling Clips for Edges

EdgeClip-Family

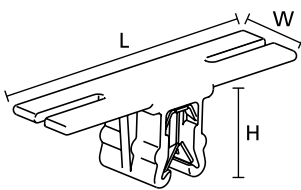
EdgeClips are used in the automotive and electrical industries and are ideal when it is impossible to drill holes or no other fixing points are available.

Features and Benefits

- Easy assembly without the need for a tool
- Designed for edges of 1 - 3 resp. 1.5 - 4.5 mm
- Integrated metal clamp holds clip firmly in place
- Clamp consists of double tempered steel spring
- ATS fixing elements can be tied automatically with tools ATS3080 and AT2000



Cables and leads can be fastened with a cable tie or adhesive tape to the bars of the mounting element.



EC15

One Step to the Web!

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Panel Thickness	Material	Colour	Article-No.
EC14		10.0	40.0	12.4	1.0 - 3.0	PA66HIRHS	Black (BK)	151-03404
EC15		10.0	40.0	12.4	1.0 - 3.0	PA66HIRHS	Black (BK)	151-03401
EC16		10.0	40.0	13.0	1.0 - 3.0	PA66HIRHS	Black (BK)	151-03402
EC17		10.0	46.5	13.0	1.0 - 3.0	PA46	Grey (GY)	151-00819
		10.0	46.5	13.0	1.0 - 3.0	PA66HIRHS	Black (BK)	151-03403
ATSBCEC35		9.0	39.0	13.2	1.5 - 4.0	PA66HIRHS	Black (BK)	102-68355
ATSBCEC36		9.0	39.0	16.0	1.5 - 4.0	PA66HIRHS	Black (BK)	102-68365
ATSBCEC37		9.0	39.0	14.2	1.5 - 4.0	PA66HIRHS	Black (BK)	102-68375
ATSBCEC38		2.5	39.0	14.2	1.5 - 4.0	PA66HSW	Black (BK)	102-68385

All dimensions in mm. Subject to technical changes.

Bundling Clips for Edges, 1.0 - 3.0 mm, for Distance Routing

TYPE	Drawing	Width (W)	Length (L)	Length (L2)	Height (H)	Panel Thickness	Material	Article-No.
EC30		9.0	50.0	65.0	13.5	1.0 - 3.0	PA66HIRHS	151-00022

All dimensions in mm. Subject to technical changes.



Bundling Clips for Connectors

Originally designed for the Automotive industry, these clips offer simple and easy methods of securing cables, hoses or pipes. They have many applications within a wide range of industries.

Features and Benefits

- Bundles are guided above connector plug
- Secure fixing of connector
- For horizontal length tolerance compensation up to 5.0 mm:
CONNECTOR CLIP



ConnectorClips designed for cables and cable sets used in the automotive industry.



**Material specification
please see page 22.**

Bundling Clips for Connectors

TYPE	Drawing	Length (L)	Material	Colour	Article-No.
YAZ-CONN-TAPE-CLIP		55.0	PA66HS	Black (BK)	155-31102

All dimensions in mm. Subject to technical changes.

Bundling Clips for Connectors, moveable

TYPE	Drawing	Length (L)	Material	Colour	Article-No.
CONNECTOR CLIP		55.0	PA66HIRHS	Black (BK)	150-41397

All dimensions in mm. Subject to technical changes.



Connector Clips for round holes

The connector clips used here have been designed for electronic cables and cable sets used in the automotive industry.

Features and Benefits

- Connector easily installed by simply pushing into place
- Connection can be released (non-destructive)
- One fir tree foot part can be used for a variety of panel thicknesses
- Arrowhead simply locks into place
- Disc covers the hole to prevent dirt and water gaining access
- For twist protection: Variants with additional stick or for oval holes



ConnectorClips are available for many different connector types and fixing varieties.

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
Big YCC TS		6.4 - 7,1	0.7 - 5.1	PA66HIRHS	Black (BK)	151-00235
FT6LG.JAE. CONNECT.TS		6.5 - 7.0	0.7 - 5.1	PA66HIRHS	Black (BK)	151-00459
FT6LG.M.St.Aufn.II		6.5 - 7.0	0.8 - 5.0	PA66HIRHS	Black (BK)	155-32602
FT6LG.M. STECKERAUFN.		6.4 - 7,1	0.8 - 6.0	PA66HIRHS	Black (BK)	155-18901
FT6LG.YAZ. Connect.TS		6.4 - 7,1	0.7 - 5.1	PA66HIRHS	Black (BK)	155-30702
FT6S-Y-CONN-TS		6.5 - 7.0	0.8 - 1.5	PA66HIRHS	Black (BK)	155-43702
STECKERHALTER SITZ		6.5 - 7.0	0.6 - 3.0	PA66HIRHS	Black (BK)	155-36002
YCC-FT6-S		6.5 - 7.0	0.8 - 1.5	PA66HIRHS	Black (BK)	155-38102
YCCFT6S-2		6.5 - 7.0	0.8 - 1.5	PA66HIRHS	Black (BK)	151-00606

All dimensions in mm. Subject to technical changes.





Connector Clips for round holes

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
BIG CONNECTOR CLIP		6.3 - 6.7	0.7 - 2.7	PA66HIRHS	Black (BK)	150-54498
CCFT6LG		6,0 - 6.7	0.7 - 4.0	PA66HIRHS	Black (BK)	151-00785
CCSFT5		4,8 - 5,2	0.7 - 2.3	PA66HIRHS	Black (BK)	151-00980
CCSFT6.5		6.3 - 6.7	1.7 - 2.3	PA66HIRHS	Black (BK)	151-00775
CP6FT6		6,2 - 6.5	0.7 - 5.0	PA6HIR	Black (BK)	151-00162
CP2FT6		6,2 - 6.5	0.7 - 5.0	PA66HIRHS	Black (BK)	151-00216
CP3FT6		6,2 - 6.5	0.7 - 5.0	PA66HIRHS	Black (BK)	151-00163
YCKSFT6.5		6.3 - 6.7	0.7 - 1.3	PA66HIRHS	Black (BK)	151-00675
CC-PAEKSFT6.5PT1.7-2.3		6.3 - 6.7	1.7 - 2.3	PA66HIRHS	Black (BK)	151-00840
YCKSFT6.5-PT1.7-2.3		6.5	1.7 - 2.3	PA66HIRHS	Black (BK)	151-00792
CC1SFT7-MD		6.8 - 7,2	0.7 - 2.0	PA66HIRHS	Black (BK)	151-01336
CC2SFT7-MD		6.8 - 7,2	0.7 - 2.0	PA66HIRHS	Black (BK)	151-01337
CCFT6TSS11		6.3 - 7.0	0.6 - 4.0	PA46	Grey (GY)	151-01294
CCSFT6.5-MOD		6.5 - 7.0	1.7 - 2.3	PA66HIRHS	Black (BK)	151-01323
CCFT6LG-TS		6.4 - 7,1	0.7 - 5.1	PA66HIRHS	Black (BK)	151-01141

All dimensions in mm. Subject to technical changes.



Connector Clips for oval holes

Features and Benefits

- Connector easily installed by simply pushing into place
- Connection can be released (non-destructive)
- Easy to assemble without the need for a tool
- Oval connectors offer twist protection



Material specification please see page 22.



For a secure fixing simply push the connector by hand (ConnectorClip YCCFT62x122).

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CCSFT7x12		7.0 x 12,0	0.8 - 2.0	PA66HIRHS	Black (BK)	151-00194
		7.0 x 12,0	0.8 - 2.0	PA66HIRHS	Blue (BU)	151-00595
		7.0 x 12,0	0.8 - 2.0	PA66HIRHS	Grey (GY)	151-00222
YCCFT82x185		8.2 x 18.5	1.5 - 4.5	PA66HIRHS	Black (BK)	151-00704
YCCSFT62122		6.2 x 12.2	0.6 - 1.0	PA66HIRHS	Black (BK)	151-00513
YCCFT62x122		6.2 x 12.2	0.6 - 6.0	PA66HIRHS	Black (BK)	151-00180
YCCSFT6.5x13PT2.5-3.5		6.5 x 13,0	2.5 - 3.5	PA66HIRHS	Black (BK)	151-01356
CP21DOP		6,2 x 12,2	0.6 - 5.0	PA66HIRHS	Black (BK)	151-00465
CP31DOP		6.2 x 12.2	0.6 - 5.0	PA66HIRHS	Black (BK)	151-00214
CP61DOP		6.2 x 12.2	0.6 - 5.0	PA66HIRHS	Black (BK)	151-00466
CCIISFT6.5x13		6.5 x 13.0	0.7 - 3.0	PA66HIRHS	Black (BK)	151-00620
CCIVSFT6.5x130		6.5 x 13.0	0.7 - 3.0	PA66HIRHS	Black (BK)	133-00392
YCCKSFT62x122PT0.7-1.3 90°		6.2 x 12.2	0.7 - 1.3	PA66HIRHS	Black (BK)	151-00833
YCCKSFT62x122PT0.7-1.3		6.2 x 12,2	0.7 - 1.3	PA66HIRHS	Black (BK)	151-00835
YCCKSFT62x122PT1.7-2.3 90°		6.2 x 12.2	1.7 - 2.3	PA66HIRHS	Black (BK)	151-00834

All dimensions in mm. Subject to technical changes.



Connector Clips for oval holes

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
YCKSFT 62x122PT1.7-2.3		6.2 x 12.2	1.7 - 2.3	PA66HIRHS	Black (BK)	151-00836
CCFT8X15		8.0 x 15.0	0.7 - 6.4	PA66HIRHS	Black (BK)	151-01358
CCSFT6.5X12.5-MD		6.5 x 12.5	0.6 - 1.5	PA66HIRHS	Black (BK)	151-01312
CCSFT8.5X16		8.5 x 16.0	0.7 - 1.5	PA66HIRHS	Black (BK)	151-01004
TCCSFT6.2x12.2-MD		6.2 x 12.2	0.6 - 2.0	PA66HIRHS, EPDM	Black (BK)	151-01254
TCCSFT 6.5X13PT0.6-2.0-MD		6.5 x 13.0	0.6 - 2.0	PA66HIRHS, EPDM	Black (BK)	151-01272
YCCSFT 6.5X13PT0.6-2.0-MD		6.5 x 13.0	0.6 - 2.0	PA66HIRHS, EPDM	Black (BK)	151-01273
CCOVAL		6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	0.6 - 6.0	PA66HIRHS	Black (BK)	151-00925
CCOVAL2			0.6 - 6.0	PA66HIRHS	Black (BK)	151-01108

All dimensions in mm. Subject to technical changes.

Connector Clips for Weld Studs

TYPE	Drawing	Stud Ø	Material	Colour	Article-No.
CCSB55		5.0	PA66HIRHS	Black (BK)	151-01196

All dimensions in mm. Subject to technical changes.



Connector Clips for Edges

EdgeClip-Family

Edge Clips are used in the automotive and electrical industries for applications where it is impossible to drill holes or no other fixing points are available.

Features and Benefits

- Connectors are mounted simply by pushing them into retainer
- Connector can be removed without damage
- Fastened to an edge, the EdgeClip ensures a snug fit on almost all types of connector



Material specification please see page 22.



EdgeClip EC6mod.

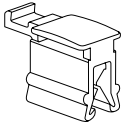
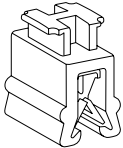
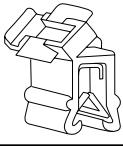
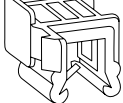
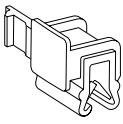

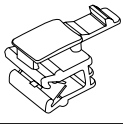
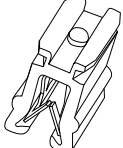
TYPE	Drawing	Panel Thickness	Material	Colour	Article-No.
Edge-Clip25		1.0 - 3.0	PA66HIRHS	Black (BK)	133-00075
EC28		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00151
EC32		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00173
EC33		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00192
EC42		1.5 - 4.0	PA66HIRHS	Black (BK)	151-00429
EC43		1.5 - 4.0	PA66HIRHS	Black (BK)	151-00430
EC45		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00460

All dimensions in mm. Subject to technical changes.





Connector Clips for Edges

TYPE	Drawing	Panel Thickness	Material	Colour	Article-No.
EC6mod		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00464
EC JAE CC		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00472
CCEC3.0TP		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00611
ECC1CPT		3.0 - 6.0	PA66HIRHS	Black (BK)	151-00499
EC11		1.0 - 3.0	PA66HIRHS	Black (BK)	155-40602
CONNECTOR-CLIP EC6		1.0 - 3.0	PA66HIRHS	Black (BK)	150-92600
CCEC3.0SV		1.0 - 3.0	PA66HIRHS	Black (BK)	151-01058
CCIIEC6mod		1.0 - 3.0	PA66HIRHS	Black (BK)	151-01124

All dimensions in mm. Subject to technical changes.



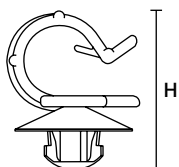
Fixing Elements for Tubes and Harnesses

KSFT6.5OC with low Arrowhead

This fixing elements can be used ideally everywhere where space saving work is necessary.

Features and benefits

- Fixing part with rounded arrowhead to minimise assembly height
- Ideal for applications where space is limited
- Simply clip on a wire or hose
- Bundle diameter is defined
- Suitable for post-installation of bundles



KSFT6.5 OC 7-9



The very low arrowhead is specially designed for narrow installation spaces.

TYPE	Drawing	Height (H)	Attach to Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
KSFT6.5OC1-3		14.4	1.0 - 3.0	6.3 - 6.7	2.3 - 2.7	PA66HIRHS	Black (BK)	151-01843
KSFT6.5OC7-9		21.6	7.0 - 9.0	6.3 - 6.7	2.3 - 2.7	PA66HIRHS	Black (BK)	151-01844

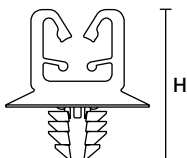
All dimensions in mm. Subject to technical changes.

Fixing Elements with Fir Tree

HC48FT6 with Firtree for bundle diameter 4.8 mm

Features and benefits

- Easy to install without the need for a tool
- Disc covers the hole to prevent dirt and water gaining access
- Bundle diameter is defined
- Clips to be attached into bore hole
- Suitable for post-installation of bundles



HC48FT6



The HC48FT6 is designed for Bundle diameter 4.3 - 5.2 mm.

TYPE	Drawing	Height (H)	Attach to Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
HC48FT6		20.8	4.3 - 5.2	6.5 - 7.0	0.7 - 2.8	PA66HIRHS	Black (BK)	151-00680
HC48FT5		20.8	4.5 - 5.2	4.5 - 5.0	0.7 - 3.0	PA66HIRHS	Black (BK)	151-01405

All dimensions in mm. Subject to technical changes.



Fixing Elements for Tubes and Harnesses with Automatic Locking Feature

AHC-Series

Offering a simple and secure method of attaching cables to panels. Originally designed for the automotive industry, these products are used in a wide range of applications with sheet metal panels across various industries.

Features and benefits

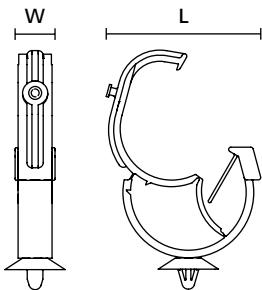
- Push and click closure for fixation of wires
- Clip is clicked into a specific hole
- AHC()SS und AHC()SB can be pushed onto a 5.0 mm stud



Automatic Harness Clip open.



Automatic Harness Clip closed.



AHC()AH



Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Hole Ø (FH)	Stud Ø	Panel Thickness	Material	Colour	Article-No.
AHC2SS		10.0	29.0	20.0	-	5.0	-	PA66HIRHS	Black (BK)	151-00368
AHC1AH		10.0	24.0	13.0	6.2 - 6.7	-	0.5 - 2.0	PA66HIRHS	Black (BK)	151-00366
AHC2AH		10.0	29.5	20.0	6.2 - 6.7	-	0.5 - 3.0	PA66HIRHS	Black (BK)	151-00367
AHC4AH		13.5	57.6	41.5	6.2 - 6.7	-	0.8 - 2.7	PA66HIRHS	Black (BK)	151-00374
AHC3SB		10.0	43.0	28.0	-	5.0	-	PA66HIRHS	Black (BK)	151-00373
AHC3DH		10.0	66.0	28.0	6.2 x 12.2	-	0.5 - 2.0	PA66HIRHS	Black (BK)	151-00181

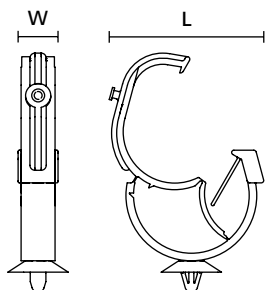
All dimensions in mm. Subject to technical changes.





Fixing Elements for Tubes and Harnesses with Automatic Locking Feature

AHC-Series



AHC()AH



Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Hole Ø (FH)	Stud Ø	Panel Thickness	Material	Colour	Article-No.
AHC3EH2		11.0	44.2	28.0	6.2 x 12.2	-	1.8 - 4.8	PA66HIRHS	Black (BK)	151-00928
AHC2BH		10.0	31.5	20.0	6.2 x 12.2	-	0.5 - 3.0	PA66HIRHS	Black (BK)	151-00208
AHC3BHR		10.0	40.0	28.0	6.2 x 12.2	-	0.7 - 3.0	PA66HIRHS	Black (BK)	151-00370
AHC45BHG2		14.0	50.0	36.0	6.2 x 12.2	-	1.0 - 3.0	PA46	Grey (GY)	151-01197
AHC25FT6LG		10.0	34.0	22.0	6.4 - 7.0	-	0.7 - 4.0	PA66HIRHS	Black (BK)	151-01198
AHC223FT6LG		10.0	35.0	23.0	6.4 - 7.0	-	0.7 - 4.0	PA66HIRHS	Black (BK)	151-01078
AHC336FT6LG		14.0	50.0	36.0	6.4 - 7.0	-	0.7 - 4.0	PA66HIRHS	Black (BK)	151-01302
AHC3CHR		10.0	40.0	28.0	6.2 x 12.2	-	1.0 - 2.7	PA6HIR	Black (BK)	151-00371

All dimensions in mm. Subject to technical changes.



Fixing Elements for Tubes and Harnesses with Automatic Locking Feature, connectable

Offering a simple and secure method of attaching cables to panels. Originally designed for the automotive industry, these products are used in a wide range of applications with sheet metal panels across various industries.

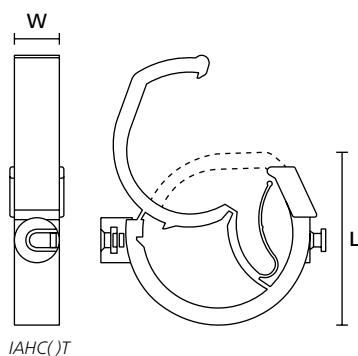
Features and benefits

- Push and click closure
- Coupling elements of the IAHC variants allow parts to connect
- Clip is clicked into a specific hole
- IAHC()T can only be connected with another IAHC element



IAHC()AH in combination with an IAHC()T.

IAHC-Series, Connectable



IAHC()T

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Article-No.
IAHC1T		10.0	23.0	13.0	PA66HIRHS	Black (BK)	151-00223
IAHC2T		10.0	30.0	20.0	PA66HIRHS	Black (BK)	151-00199
IAHC3T		10.0	40.0	28.0	PA66HIRHS	Black (BK)	151-00213
IAHC4T		13.5	47.0	36.0	PA66HIRHS	Black (BK)	151-00207
IAHC5T		13.5	57.0	45.0	PA66HIRHS	Black (BK)	151-00195

All dimensions in mm. Subject to technical changes.



Fixing Elements for Tubes and Harnesses with Automatic Locking Feature, connectable

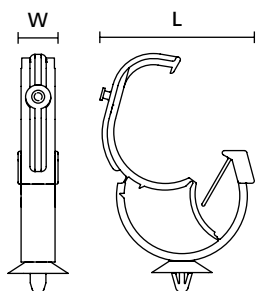
IAHC-Serie, Connectable, with Arrowhead



Material specification please see page 22.



IAHC elements can be connected.



AHC()AH

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Hole Ø (FH)	Material	Colour	Article-No.
IAHC3AH		13.5	40.0	28.0	6.2 - 6.7	PA66HIRHS	Black (BK)	151-00378
IAHC4AH		13.5	53.0	36.0	6.2 - 6.7	PA6HIRHS	Black (BK)	151-00211
		13.5	53.0	36.0	6.2 - 6.7	PA66HIRHS	Black (BK)	151-00382
IAHC5BH		13.5	57.0	45.0	6.2 x 12.2	PA66HIRHS	Black (BK)	151-00384
IAHC3CH		10.0	47.0	28.0	6.2 x 12.2	PA66HIRHS	Black (BK)	151-00381
IAHC4CH		13.5	53.0	36.0	6.2 x 12.2	PA6HIRHS	Black (BK)	151-00383
IAHC3EH		13.5	44.5	28.0	6.2 x 12.2	PA66HIRHS	Black (BK)	151-00489
IAHC5FH		13.5	61.5	45.0	6.2 x 12.2	PA66HIRHS	Black (BK)	151-00787

All dimensions in mm. Subject to technical changes.



Fixing Elements for Tubes and Harnesses, for Edges

EdgeClip-Family

EdgeClips are used in the automotive industries and electrical industries and when it is impossible to drill holes or no other fixing points are available.

Features and benefits

- Releasable fixing elements with EdgeClip
- Low-vibration routing of bigger bundle diameters
- Clips to be pushed onto an edge
- To be closed single handed, a snap can be felt
- Bundles can be released at any time
- EC27: fixing element enables usage of smaller bundle diameter
- EC41: for parallel guidance of two bundles



EdgeClip cable and tube clips are suitable for the low-vibration routing of cables and tubes with larger bundle diameters.

TYPE	Drawing	Panel Thickness	Attach to Ø	Material	Colour	Article-No.
EC27		1.0 - 3.0	15.0 - 22.0	PA66HIRHS	Black (BK)	151-00161
EC39		1.0 - 3.0	15.3 - 15.9	PA6HIR	Black (BK)	151-00174
EC41		3.0 - 6.0	2 x 8.0	PA66HIR	Black (BK)	151-00234
HCEC3.0SP-C		1.0 - 3.0	12.0 - 15.0	PA66HIRHS	Black (BK)	151-01863
HCEC3.0TPS		1.0 - 3.0	4.5 - 5.0	PA66HIRHS	Black (BK)	151-00645

All dimensions in mm. Subject to technical changes.



Fixing Elements for Corrugated Tubing, with Fir Tree

CTC-Series

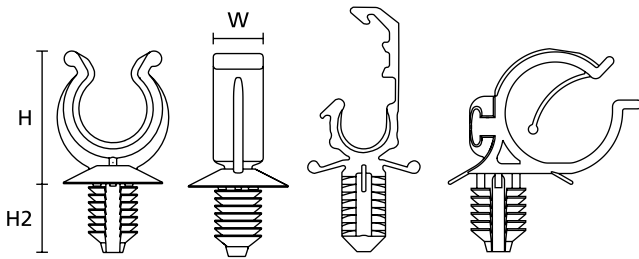
CTC clamps are used for example in the automotive, harness making, electrical industry and wherever corrugated tubing has to be quickly and firmly fixed.

Features and benefits

- CTC clamps for a variety of nominal diameters
- Fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded holes
- Tube is guided accurately by clicking
- Axial slipping is prevented by the inside profile of the clamp



The tubing is clicked into the CTC clamp and is held firmly.



CTC-Series

CNCTC8FT6.5LG CTCFT6



CNCT8FT6.5LG Clamps

TYPE	Width (W)	Height (H)	Height (H2)	Nominal Ø	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CTC4.5FT6LG	8.0	16.1	11.1	4.5	16.0	6.5 - 7.0	0.8 - 6.0	PA66HIRHS	Black (BK)	151-14314
CTC7.5FT6LG	8.0	18.6	11.1	7.5	16.0	6.5 - 7.0	0.8 - 6.0	PA66HIRHS	Black (BK)	151-14313
CTC7.5FT9	8.0	19.9	12.2	7.5	23.0	8.7 - 9.0	3.0 - 5.0	PA66HIRHS	Black (BK)	155-31602
CTC10FT6	8.0	21.4	7.5	10.0	16.0	6.5 - 7.0	0.8 - 3.0	PA66HIRHS	Black (BK)	151-14311
CTC10FT6LG	8.0	21.4	11.1	10.0	16.0	6.5 - 7.0	0.8 - 6.0	PA66HIRHS	Black (BK)	151-00018
CTC10FT9	8.0	22.7	12.2	10.0	23.0	8.7 - 9.0	3.0 - 5.0	PA66HIRHS	Black (BK)	155-17801
CTC13FT6	8.0	25.2	7.5	13.0	16.0	6.5 - 7.0	0.8 - 3.0	PA66HIRHS	Black (BK)	151-14312
CTC13FT6LG	8.0	25.2	11.1	13.0	16.0	6.5 - 7.0	0.8 - 6.0	PA66HIRHS	Black (BK)	151-00019
CTC22FT9	8.0	37.7	12.2	22.0	23.0	8.7 - 9.0	3.0 - 5.0	PA66HIRHS	Black (BK)	155-25201
CTCL4.5FT6LG	10.0	14.3	10.7	4.5	16.0	6.5 - 7.0	0.8 - 6.0	PA66HIRHS	Black (BK)	151-01115

All dimensions in mm. Subject to technical changes.

TYPE	Width (W)	Height (H)	Height (H2)	Nominal Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CTCFT6	11.0	18.5	9.3	15.0	6.3 - 6.7	0.7 - 4.5	PA66HIRHS	Black (BK)	151-00783

All dimensions in mm. Subject to technical changes.

CNCTC-Series with cover

TYPE	Width (W)	Height (H)	Height (H2)	Nominal Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CNCTC8FT6.5LG	10.0	11.0	11.4	7.0	6.5 - 6.7	1.0 - 6.0	PA66HIRHS	Black (BK)	151-01038
	10.0	11.0	11.4	7.0	6.5 - 6.7	1.0 - 6.0	PA66HIRHS	Blue (BU)	151-01177
LC9FTOVAL	10.0	37.7	13.2	-	6.2 x 12.2	0.6 - 6.8	PA66HIRHS	Black (BK)	151-01880

All dimensions in mm. Subject to technical changes.



Fixing Elements for Corrugated Tubing, for Weld Studs

CTC-Series for Weld Studs

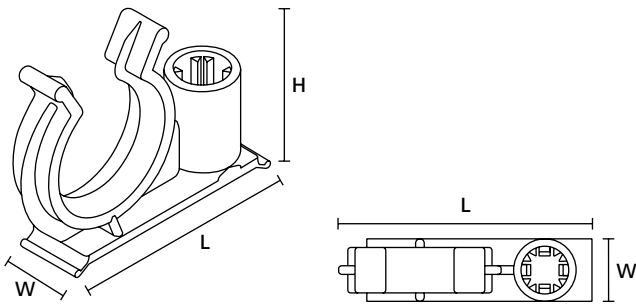
These holders are used in the automotive industry, in the production of cable harnesses and in the electrical industry. Their quick and easy mounting is the reason for their universal success wherever corrugated tubing and pipes have to be fixed quickly and securely.

Features and benefits

- Fixing elements for corrugated tubing for nominal diameters from 4.5 - 17.0 mm
- For M6 weld studs
- Soft-Push mechanic for simple assembly, without tool
- Tube is guided accurately by clicking
- Axial slipping is prevented by the inside profile of the clamp
- Clamp can be unscrewed and removed from the weld stud



The tubing is clicked into the CTC clamp and is held firmly.



CTC(S)BS6



Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Nominal Ø	Stud Ø	Material	Colour	Article-No.
CTC4.5BS6		11.0	28.6	18.7	4.5	6.0	PA66HIRHS	Black (BK)	151-00700
CTC7.5BS6		11.0	31.8	19.4	7.5	6.0	PA66HIRHS	Black (BK)	151-00701
CTC10BS6		11.0	35.3	22.2	10.0	6.0	PA66HIRHS	Black (BK)	151-00702
CTC13BS6		11.0	37.0	26.5	13.0	6.0	PA66HIRHS	Black (BK)	151-00703
CTC17BS6		11.0	44.6	33.2	17.0	6.0	PA66HIRHS	Black (BK)	151-00010

All dimensions in mm. Subject to technical changes.



Fixing Elements for Corrugated Tubing, with Arrowhead

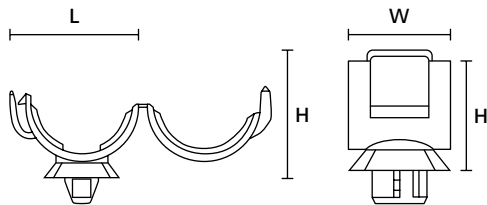
These clamps are used in the automotive industry, in the production of cable harnesses and in the electrical industry. Their quick and easy mounting is the reason for their universal success wherever corrugated tubing and pipes have to be fixed quickly and securely.

Features and benefits

- Clamps for corrugated tubing for a variety of nominal diameters
- Arrowhead simply locks into place
- Tube is guided accurately by clicking
- Axial slipping is prevented by the inside profile of the clamp
- CTCLPROFILE clamp can also fastened to a metal edge



Simple and secure installation of pipes or hoses to panels.



RCC D21, D24, D28

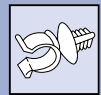
RCC D21, D24, D28



Material specification please see page 22.

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Nominal Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
RCC D21		22.0	31.0	30.0	21.0	6.2 x 12.2	0.7 - 2.5	PA66HIRHS	Black (BK)	150-92300
RCC D24		22.0	33.0	33.0	24.0	6.2 x 12.2	0.7 - 2.5	PA66HIRHS	Black (BK)	155-04000
RCC D28		22.0	37.0	37.0	28.0	6.75 x 13.25	0.7 - 3.0	PA66HIRHS	Black (BK)	151-00598
CTCLPROFILE		12.0	64.5	59.5	31.2	7.8 - 8.2	2.3 - 2.7	PA66HIRHS	Black (BK)	151-00026

All dimensions in mm. Subject to technical changes.



Fixing Elements for Weld Studs

Many industries (but specifically the automotive market) are using weld studs as the standard method of attaching components. Simply hammered onto the stud these parts provide ideal fixing bases for attaching cables, pipes or hose.

The use of weld studs avoids the problems with holes (ingress of moisture, corrosion etc).

Features and benefits

- Simple and quick method of fixing
- SBH types simply hammered onto the stud
- SBH1 and SBH3 allow cables to run across the panel
- SBH2 allow cables to run at 90° to the panel

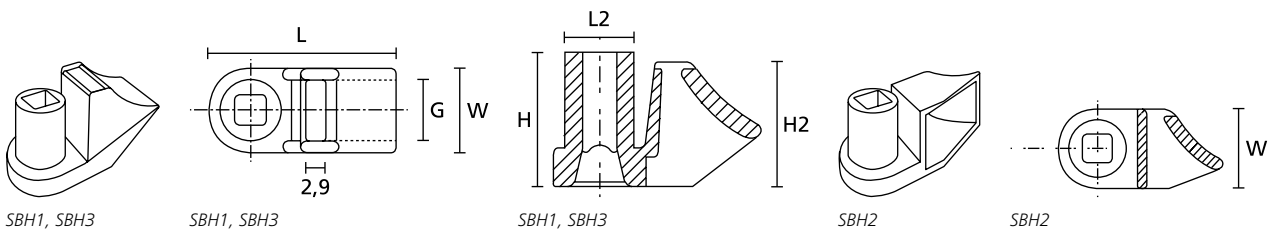


SBH2 allow cables to run at 90° to the panel.



Material specification
please see page 22.

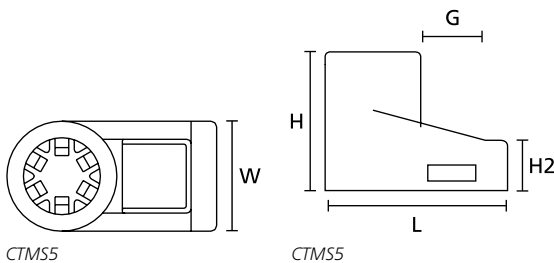
SB-Series



TYPE	Width (W)	Length (L)	Length (L2)	Height (H)	Height (H2)	Stud Ø	Strap Width max. (G)	Material	Colour	Article-No.
SBH1	12.5	26.8	9.0	13.9	15.9	5.0	8.5	PA66	Black (BK)	151-26150
SBH2	12.5	26.8	9.0	14.0	12.5	5.0	8.5	PA66	Black (BK)	151-26250
SBH3	12.5	26.8	9.0	18.0	15.9	5.0	8.5	PA66	Black (BK)	150-18900

All dimensions in mm. Subject to technical changes.

CT-Series



TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Stud Ø	Strap Width max. (G)	Material	Colour	Article-No.
CTM55	10.0	19.0	14.5	5.3	5.0	5.0	PA66	Black (BK)	151-03301

All dimensions in mm. Subject to technical changes.



Fixing Elements for Weld Studs

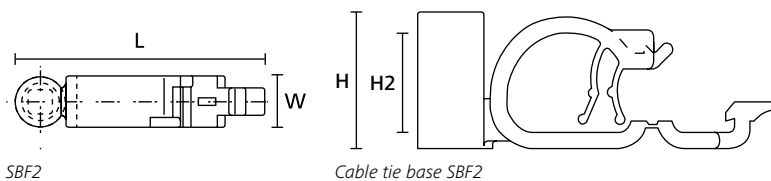
SBF-Clips

Many industries (but specifically the automotive market) are using 'weld studs' as the standard method of attaching components. Simply hammered onto the stud these parts provide ideal fixing bases for attaching cables, pipes or hose.

The use of weld studs avoids the problems with 'holes' (ingress of moisture, corrosion etc).

Features and Benefits

- One-piece fixing and retainer
- For bundles of up to 13.5 mm



SBF2

Cable tie base SBF2

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Stud Ø	Bundle Ø max.	Material	Colour	Article-No.
SBF2	10.0	47.7	18.2	13.5	5.0	13.5	PA66	Black (BK)	150-47700

All dimensions in mm. Subject to technical changes.

Fixing elements for Parallel Routing, twistable

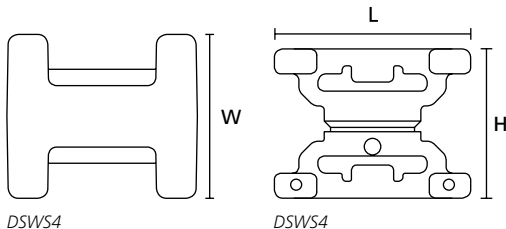
These fixing element for parallel routing can be used where bundles need separation from each other combined with the necessary functionality to support moving harnesses.

Features and benefits

- For parallel routing of bundles that can be twisted 360° even after setting
- Secure alignment to the bundle due to H-design
- Cable tie head can be moved after bundling
- For cable ties up to 12.7 mm wide
- For post-installation of bundles



The spacers can be easily rotated by hand, allowing the bundles to be crossed and rotated at any angle.



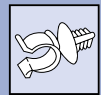
DSWS4

DSWS4

TYPE	Width (W)	Length (L)	Height (H)	Bundle Ø min.	Bundle Ø max.	Material	Colour	Pack Cont.	Article-No.
DSWS4	20.3	23.6	18.0	6.0	76.0	PA66HS, POM	Black (BK)	50	151-00644
	20.3	23.6	18.0	6.0	76.0	PA66HS, POM	Black (BK)	2,200 pcs.	151-06500
DSWS5	25.4	40.6	23.6	16.0	152.0	PA66HS	Black (BK)	50 pcs.	151-06502

All dimensions in mm. Subject to technical changes.

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



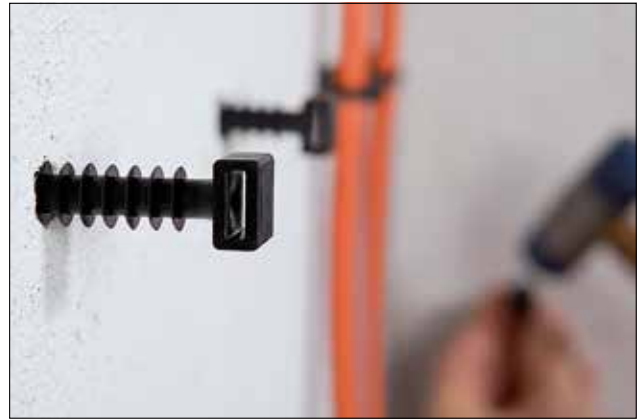
Fixing Base

LOK-Series

The LOK mounts, in conjunction with a cable tie, can be used either indoors or outdoors for a diverse range of applications from holding climbing plants, to securing cables running between buildings.

Features and Benefits

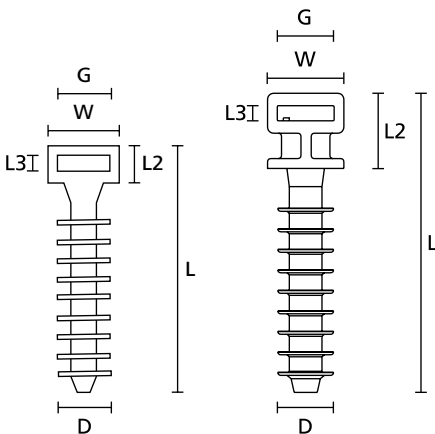
- LOK01 - LOK05 usable with any cable ties up to 9 mm wide
- Suitable for a wide range of materials, including concrete, brick, block and wood
- Installed by knocking into 7 mm or 8 mm diameter hole
- LOK01B is designed for soft brickwork and 6 mm holes
- Elongated head of LOK05 for setting bundles at a distance from brickwork



LOK01 fixing bases for indoor and outdoor use.

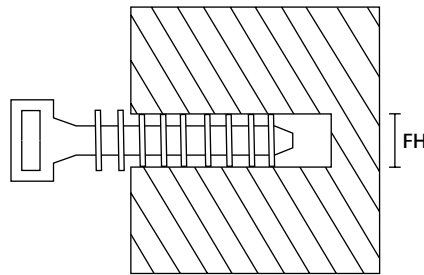


The whole LOK-Series can ideally be combined with cable ties up to 9 mm cable tie width.



LOK01 fixing base (front view)

LOK05 fixing base (front view)



LOK01 pushed into a wall bore hole.

TYPE	Width (W)	Length (L)	Length (L2)	Length (L3)	Ø D	Strap Width max. (G)	Hole Ø (FH)	Material	Colour	Article-No.
LOK01B	12.0	30.0	6.5	2.5	7.2	9.0	6,0	PA6HIR	Black (BK)	151-80500
LOK01S	12.0	34.0	6.5	2.5	9.2	9.0	7.0 - 8,0	PA6HIR	Black (BK)	151-80600
LOK01	12.0	44.0	6.5	2.5	9.2	9.0	7.0 - 8,0	PA11	Black (BK)	151-01277
	12.0	44.0	6.5	2.5	9.2	9.0	7.0 - 8,0	PA6HIR	Black (BK)	151-80110
LOK05	12.0	49.0	12.5	2.5	9.2	9.0	7.0 - 8,0	PA6HIR	Black (BK)	151-80700

All dimensions in mm. Subject to technical changes.



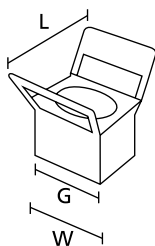
Fixing Base

LOK02

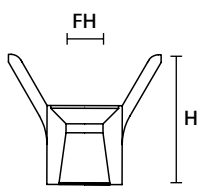
Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacture, they offer a very secure fixing and can be used with a wide variety of cable ties up to 9 mm wide.

Features and Benefits

- Special design of fixing base gives additional support to cables
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration



LOK02 Fixing Base



LOK02 Fixing Base (front view)



LOK02 fixing base application.



Material specification please see page 22.

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	E-number	Article-No.
LOK02	14.0	21.0	18.0	5,1	9.0	PA6HIR	Black (BK)	00 000 00	151-80210

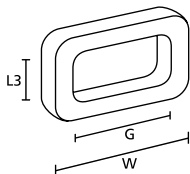
All dimensions in mm. Subject to technical changes.

LOK04

Whenever there is a need of running two or more cables in parallel the LOK04 fixing base would be an ideal and simple solution.

Features and Benefits

- LOK04 for running bundles with a distance in parallel
- Can be used with cable ties up to 9 mm cable tie width



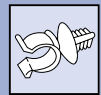
LOK04



LOK04 ring for parallel routing.

TYPE	Width (W)	Length (L3)	Strap Width max. (G)	Material	Colour	E-number	Article-No.
LOK04	16.0	4.0	9.0	PA66	Black (BK)	00 000 00	151-80400

All dimensions in mm. Subject to technical changes.



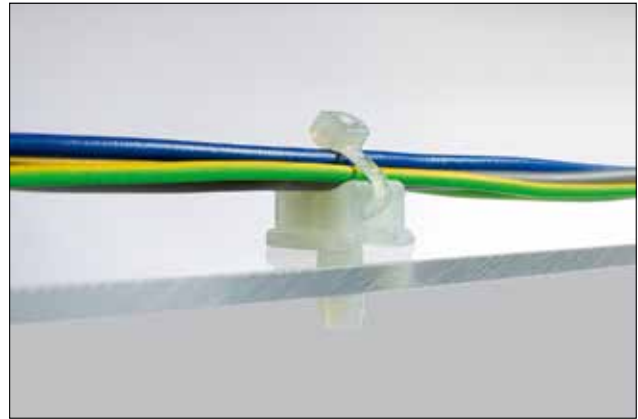
Rivet Mount

TY5-Series

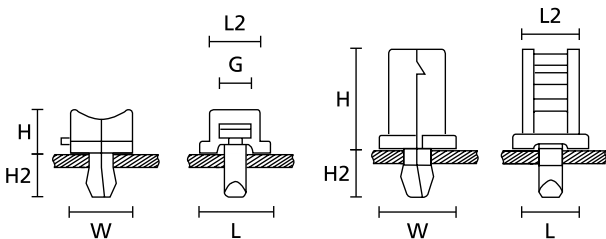
The TY Fixings are ideal for use where a high pull out force is required (eg. in the aircraft industry). The two piece 'wedge' ensures that once installed the mounts will not come away from the panel. Particularly designed for areas with restricted access.

Features and benefits

- Quick installation
- Two-piece wedge
- Easy insertion
- Firmly fixes wide variety of cable ties

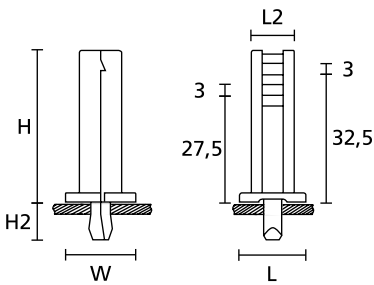


TY5 Wedge Base Socket.

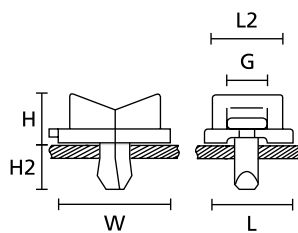


TY5K2 Rivet Mount

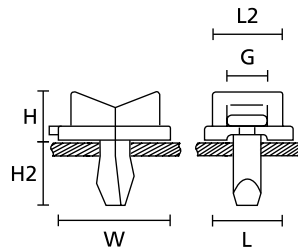
TY5K1 Rivet Mount



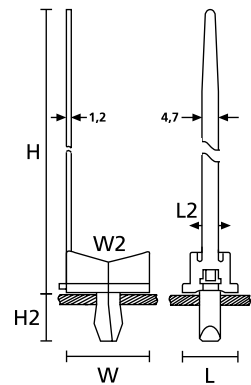
TY5K5 Rivet Mount



TY5K3/5 Rivet Mount



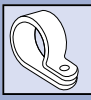
TY5K3 Rivet Mount



TY5K4 Rivet Mount

TYPE	Width (W)	Length (L)	Length (L2)	Height (H)	Height (H2)	Strap Width max. (G)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
TY5K2	12.0	14.0	10.0	7.8	9.5	5.5	4.9 - 5.3	1.0 - 5.0	PA66HS	Natural (NA)	152-11209
TY5K1	14.8	15.0	11.0	18.3	9.5	5.4	5.0 - 5.3	1.0 - 3.0	PA66HS	Natural (NA)	152-51059
TY5K5	17.8	18.0	11.0	38.3	9.5	5.8	5.0 - 5.3	1.0 - 3.0	PA66HS	Natural (NA)	152-55059
TY5K4	22.0	14.0	10.0	175.0	12.5	-	5.9 - 6.4	2.0 - 8.0	PA66HS	Natural (NA)	152-11409
TY5K3/5	22.0	18.0	14.0	10.0	9.5	9.3	4.9 - 5.3	1.0 - 5.0	PA66HS	Natural (NA)	152-11359
TY5K3	22.0	18.0	14.0	10.0	12.5	9.3	5.9 - 6.4	2.0 - 8.0	PA66HS	Natural (NA)	152-11309

All dimensions in mm. Subject to technical changes.



Blind Plugs

Products were developed especially for the automotive industry. Application in trunks, doors, wheel housing and dash panels. Parts are even used for optical reasons.

Features and benefits

- Easy assembly without the need of a tool
- Disc of the part covers the hole and minimises ingress of dust, dirt and water
- Standard geometry for example fir tree or arrowhead



Blindplugs are available in different dimensions and materials.



**Material specification
please see page 22.**

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
TRIM PLUG 5		5.0	4.0 - 4.5	PA66HIR	Natural (NA)	151-00333
PLUG11		11.0	4.0 - 6.0	PA66HIRHS	Natural (NA)	151-00485
		11.0	4.0 - 6.0	POM	Black (BK)	151-00360
PLUG5.5		5.0 - 5.5	2.5 - 26.0	PA6HIR	Black (BK)	151-00399
		5.0 - 5.5	2.5 - 26.0	PA6HIR	Grey (GY)	151-00401
PLUG SQ8x8		7.6 - 8.0	1.0 - 3.0	PA66HIR	Black (BK)	151-00415
PLUG5 WITH OPENING		5.05 - 5.25	4.8 - 5.2	PA66HIRHS	Black (BK)	151-00419
PLUG10		10.2	2.0 - 12.0	PE	Black (BK)	151-00426
		10.2	2.0 - 12.0	PE	Grey (GY)	151-00488
BPFT6XXL		6.3 - 7.0	6.0 - 17.0	PA66HIRHS	Natural (NA)	151-01160
PLUGFT6XL		6.5 - 7.0	0.7 - 18.0	PA46	Brown (BN)	151-00428
		6.5 - 7.0	0.7 - 18.0	PA66HIR	Black (BK)	241-00002
		6.5 - 7.0	0.7 - 18.0	PA66HIR	Grey (GY)	241-00001
PLUGFT7		7.05 - 7.25	2.5 - 8.0	PA6HIR	Black (BK)	151-00414

All dimensions in mm. Subject to technical changes.



Snapper Hose Clips for Tubes and Harnesses

SNP-Series

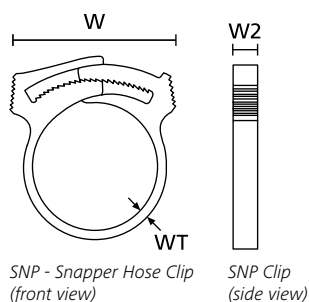
SNP range may replace metal hose clamps. Snapper can be used in markets as diverse as automotive, agriculture, white goods, venting systems, pumps and hydraulic systems to medical engineering.

Features and benefits

- Releasable and reusable plastic hose clamps
- Self-locking
- Releasable by giving a lateral movement to the 'head'
- Installation by hand possible
- Installation with processing tool for a secure tensioning
- For higher operating temperatures: Glass Filled PA66



SNP - Snapper Hose Clips range.



SNP - Snapper Hose Clip (front view)

SNP Clip (side view)



Material specification please see page 22.

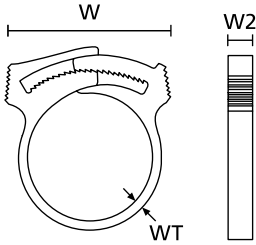
TYPE	Bundle Ø min.	Bundle Ø max.	Width (W) min.	Width (W) max.	Width (W2)	Wall (WT)	Material	Colour	Article-No.
SNP1	6.0	6.5	8.33	11.73	3.8	1.00	POM	White (WH)	190-00022
	6.0	6.8	8.40	11.70	3.8	1.00	PA66GF13	Black (BK)	192-10010
SNP1.25	7.1	7.7	10.57	12.62	3.8	1.10	PA66GF13	Black (BK)	190-00029
SNP2(E)	8.7	10.0	17.00	21.00	6.0	1.50	POM	Natural (NA)	191-10029
SNP2	9.3	10.5	12.20	17.60	5.9	1.70	PA66GF13	Black (BK)	192-10020
SNP3(E)	10.0	11.4	19.00	25.00	6.0	1.80	POM	Natural (NA)	191-10039
SNP4	10.4	11.7	13.30	19.20	5.9	1.70	PA66GF13	Black (BK)	192-10040
SNP4(E)	10.8	12.3	19.00	23.00	6.0	1.80	POM	Natural (NA)	191-10049
SNP7	11.4	13.7	18.40	28.50	5.9	1.70	PA66GF13	Black (BK)	192-10070
SNP6	11.7	13.3	14.70	21.60	5.9	1.70	PA66GF13	Black (BK)	192-10060
SNP6(E)	12.0	13.7	19.00	24.00	6.0	1.80	POM	Natural (NA)	191-10069
SNP8	13.1	15.0	16.70	24.90	5.7	1.70	PA66GF13	Black (BK)	192-10080
SNP8(E)	13.7	15.3	19.00	24.00	6.0	1.80	POM	Natural (NA)	191-10089
SNP10	14.5	16.6	17.60	26.90	5.9	1.80	PA66GF13	Black (BK)	192-10100
SNP10(E)	15.0	16.8	19.00	24.00	6.0	1.80	POM	Natural (NA)	191-10109
SNP12A	15.6	18.3	21.00	29.90	5.9	1.80	PA66GF13	Black (BK)	190-00254
SNP12(E)	16.8	18.4	19.00	24.00	6.0	1.80	POM	Natural (NA)	191-10129
SNP14(E)	18.1	19.9	19.00	24.00	6.0	1.80	POM	Natural (NA)	191-10149
SNP14A	18.5	21.0	20.90	30.10	5.9	1.80	PA66GF13	Black (BK)	190-00300
SNP16	19.1	21.7	19.90	30.80	5.8	1.50	PA66GF13	Black (BK)	192-10160
SNP16(E)	19.9	21.7	19.00	24.00	6.0	1.90	POM	Natural (NA)	191-10169
SNP18A	19.9	23.6	24.00	35.50	5.9	1.80	PA66GF13	Black (BK)	190-00258
SNP18(E)	21.4	23.0	16.00	22.00	6.0	1.90	POM	Natural (NA)	191-10189
SNP19	22.3	25.3	24.40	36.10	5.9	1.70	PA66GF13	Black (BK)	190-00090

All dimensions in mm. Subject to technical changes.



Snapper Hose Clips for Tubes and Harnesses

SNP-Series



SNP - Snapper Hose Clip
(front view)

SNP Clip
(side view)



SNP Snapper are also available on request in material PA66HS and PA46.



Snapper tools please see page 609.

TYPE	Bundle Ø min.	Bundle Ø max.	Width (W) min.	Width (W) max.	Width (W2)	Wall (WT)	Material	Colour	Article-No.
SNP20(E)	22.7	24.7	20.00	26.00	6.0	1.80	POM	Natural (NA)	191-10209
SNP22	23.7	27.4	23.90	37.70	6.0	1.80	PA66GF13	Black (BK)	192-10220
SNP22(E)	25.3	27.3	20.00	26.00	6.0	1.60	POM	Natural (NA)	191-10229
SNP24	25.8	29.2	26.50	39.40	7.3	1.70	PA66GF13	Black (BK)	192-10240
SNP24(E)	26.5	28.6	20.00	26.00	6.0	2.00	POM	Natural (NA)	191-10249
SNP28	28.8	33.2	26.00	42.10	7.3	1.70	PA66GF13	Black (BK)	190-00127
SNP32(E)	30.3	33.1	27.00	34.00	7.5	2.00	POM	Natural (NA)	191-10329
SNP32	31.2	35.8	27.30	44.40	7.3	1.80	PA66GF13	Black (BK)	192-10320
SNP34(E)	32.5	35.1	27.00	34.00	7.5	2.00	POM	Natural (NA)	191-10349
SNP36(E)	34.8	37.1	27.00	34.00	7.5	2.00	POM	Natural (NA)	191-10369
SNP38(E)	36.7	38.9	27.00	34.00	7.5	2.00	POM	Natural (NA)	191-10389
SNP36	37.8	44.0	32.41	53.80	7.3	1.70	PA66GF13	Black (BK)	192-10360
SNP42(E)	41.0	44.2	32.00	45.00	7.5	2.00	POM	Natural (NA)	191-10429
SNP38	41.0	48.1	35.60	57.50	7.3	1.80	PA66GF13	Black (BK)	192-10380
SNP42N	44.5	52.2	35.70	59.80	7.3	1.70	PA66GF13	Black (BK)	191-00005
SNP50(E)	48.8	52.0	32.00	45.00	7.5	2.00	POM	Natural (NA)	191-10509
SNP50	52.2	58.6	36.50	60.40	7.3	1.70	PA66GF13	Black (BK)	192-10500
SNP58(E)	56.7	59.2	31.00	39.00	7.5	2.00	POM	Natural (NA)	191-10589

All dimensions in mm. Subject to technical changes.



Plastic Rivets

TY-Series

These simple-to-use plastic rivets are ideal for improving productivity in the working environment, saving time and money over more conventional fixing methods - ideal for fixing panels or components to panels in a wide range of industries from automotive to panel building.

Features and benefits

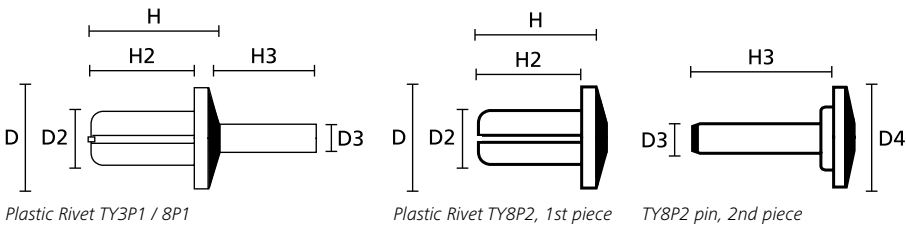
- One Piece
- Simply push pin into body of rivet
- TY3P1 and TY8P1 pins inserted using rivet placement tool
- TY8P2 has 'mushroom' head so pin is simply hammered in
- TY8P2 consists of two unattached parts



Plastic Rivet TY8P1 in application.



Material specification please see page 22.



TYPE	Height (H)	Height (H2)	Height (H3)	Ø (D)	Ø (D2)	Ø (D3)	Ø (D4)	Material	Colour	Article-No.
TY3P1	7.5	6.0	5.3	6.0	3.0	1.7	-	PA66	Black (BK)	241-11310
	7.5	6.0	5.3	6.0	3.0	1.7	-	PA66	Natural (NA)	241-11319
TY8P1	10.0	8.0	7.5	8.0	4.0	2.6	-	PA66	Black (BK)	241-11810
	10.0	8.0	7.5	8.0	4.0	2.6	-	PA66	Natural (NA)	241-11819
TY8P2	10.0	8.0	11.5	8.0	4.0	2.6	8.0	PA66	Black (BK)	241-11820
	10.0	8.0	11.5	8.0	4.0	2.6	8.0	PA66	Natural (NA)	241-11829

All dimensions in mm. Subject to technical changes.