




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.

	1.0 Technical Information	26
	1.1 Cable Ties Inside Serrated	40
	1.2 Cable Ties Outside Serrated	68
	1.3 Cable Ties Without Serration	74
	1.4 Cable Ties, Releasable	77
	1.5 Cable Ties, Stainless Steel	85
	1.6 Cable Ties With Fixing Elements	96
	1.7 Cable Tie Mounts	134
	1.8 Fixing Elements	169
	1.9 Clips, Clamps and Plugs	191





1.0 Technical Information

Material specification overview	26
Chemical resistance for indoor and outdoor applications	28
Materials guide for cable ties series	30
Properties of polyamide PA66	31
Properties of polyamide PA66W, PA11/PA12, PA46	32
Properties of polyamide PEEK and E/TFE (Tefzel®)	33
Chemical resistance of various plastics	34
Flammability test according UL94	35
Conformity to IEC 62275 standards for cable ties	36
Determination of minimum tensile strength	37
Locking technologies for cable ties	38
Optimum storage conditions for cable ties	39



1.1 Cable Ties Inside Serrated

T-Series		
standard, natural and black	PA66	40
standard, coloured	PA66	42
for outdoor use, black	PA66W, UV-resistant	44
temperatures up to +105 °C	PA66HS, heat stabilised	46
for higher impact resistance, ScanBlack	PA66HIR(S), high impact modified	48
for higher fire-protection	PA66V0, flame-retardant	49
temperatures up to + 150 °C	PA46	50
for higher chemical resistance and temperatures up to +170 °C	E/TFE	51
for higher chemical resistance and temperatures up to +115 °C	Polypropylene (PP)	52
sustainable bioplastic, black	PA11	53
In-between size to T-Series		
natural and black	LK-Series	54
With open head		
standard, natural and black	Q-Series, PA66	56
standard, coloured	Q-Series, PA66	57
for outdoor use, black	Q-Series, PA66W	59
up to + 105 °C, natural and black	Q-Series, PA66HS	60
With smart design		
for tight applications	X-Series	61
For hose and gaiter		
natural and black	CTT-Series	62

For parallel routing

various materials, natural and black	DH-Series	63
--------------------------------------	-----------	----

For food industry

detectable	MCT-Series, PA66MP	65
detectable, releasable	MCT-Series, PA66MP	65
detectable, corrosion resistant	MCTS-Series, PA66MP+	66
detectable	MCT-Series, PPMP	67
detectable, corrosion resistant	MCTS-Series, PPMP+	67



1.2 Cable Ties Outside Serrated

For thin-walled bundles

OS-Series	68
-----------	----

For temperatures up to +240 °C

PEEK-Ties	69
-----------	----

With 90° angled head

V-Series	70
----------	----

With low profile head

coloured	PE-Series	71
releasable	RPE-Series	71
standard and high impact modified	LPH-Series	72
sustainable bioplastic, black	Robusto-Series	73



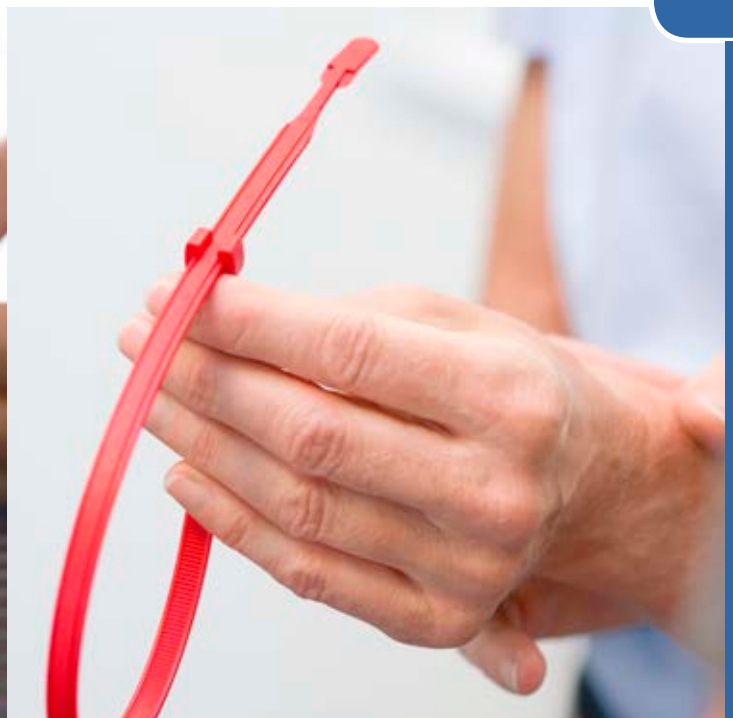
1.3 Cable Ties Without Serration

Locked by glass fibre pin

1-piece	KR-Series	74
ultrasonic welded	KR-Series	75
endless	KR-Series	75

With separate head and spacer

endless	EL-TY-Series	76
---------	--------------	----



1.4 Cable Ties, Releasable

Inside serrated		
with extended pawl, up to 200 N	RELK-Series	77
with extended pawl, up to 670 N	RLT-Series	77
with tuckaway	RT250-Series	78
	REL250-Series	78
with kickdown lever	REL-Series	79
Outside serrated		
for marking purposes, coloured	LR55-Series	80
Without serration		
flexible at low temperatures	SOFTFIX-Family	81
	SRT-Series for industry quantities	81
Inside serrated		
one-hand release mechanism	REZ-Series	82
With quick release mechanism		
up to 888 N	SpeedyTie	83
With hook and loop		
for identification purposes, coloured	TEXTIE-Series	84



1.5 Cable Ties, Stainless Steel

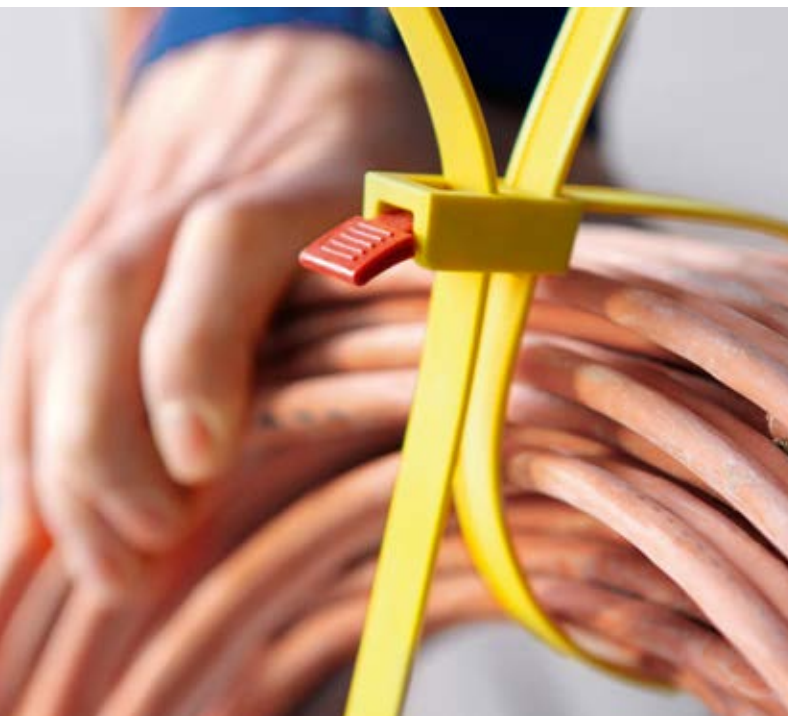
Technical Information		
Short circuit test (SCT)		85
with ball-lock		
standard metal ties	MBT-Series SS304	86
	MBT-Series SS316	87
double wrapped	MBTXHD- and MBTUHD-Series SS316	89
coated	MBT-FC-Series SS316	90
double wrapped, coated	MBTXHDFC- and MBTUHDFC-Series SS316	92
With punch-locking mechanism		
high vibration resistance	MST-Series SS304	93
With fold locking		
uncoated	MLT-Series SS316	94
coated	MLT-C-Series SS316	94
Protective channel for stainless steel ties		
endless	LFPC-Series	95



1.6 Cable Ties With Fixing Elements

Product Selection		
Selection guide for fixing ties		96
1-Piece Fixing Ties		
	for round holes	98
	releasable	99
with arrowhead and disc	for round holes, sealed	100
	for oval holes, sealed	100
	for round holes	101
with arrowhead and wings	releasable	102
	for oval holes	102
with arrowhead	without wings and disc	103
with arrowhead and disc	for temperatures up to +240 °C	104
	for round holes	109
with fir tree and disc	releasable	110
	with Stand-off, for round holes	111
	for cable routing above the stud	116
	for cable routing alongside the stud	117
for weld studs	moveable	118
	for heavy duty applications	118
for heavy duty applications	for parallel routing	119
with mounting head	for screws	120
for edges	EdgeClip-Family	121
2-Piece Fixing Ties		
	for round holes	105
	for round holes, sealed	106
	for oval holes	106
with arrowhead and disc	for parallel routing	107
	for temperatures up to +240 °C, PEEK	108
	FT3	112
	FT5	112
with fir tree and disc for round holes	FT6	113
	FT7 - FT10	114





2-Piece Fixing Ties

with deep hole anchor for round holes	DHA5.5-DAH8.4	115
for weld studs	for parallel routing	119
	1.0 - 3.0 mm, top fixing	123
	1.0 - 3.0 mm, side fixing	124
	3.0 - 6.0 mm, top fixing	125
for edges	3.0 - 6.0 mm, side fixing	125
EdgeClip-Family	0.5 - 2.5 mm, top fixing	126
	0.5 - 2.5 mm, side fixing	126
	twistable	127
with pipe clip	Overview	130
with coupler	for parallel separation	132
for heavy duty applications	HDM-Series	133
	DHDM-Series	133
Heavy Duty Harness Clips		
Beam clamps		128



1.7 Cable Tie Mounts

Technical Information		
Installation of self adhesive mounts		134
With high performance adhesive		
for round and angled surfaces, self adhesive	FlexTack-Series FMB	135
screwable, self adhesive	SolidTack-Series QM	136
	SolidTack-Series MB	138
Square-Cut		
screwable, self adhesive	Q-Mount-Series QMA	137
screwable	Q-Mount-Series QM	137
Square base mount		
screwable, self adhesive	MB-Series	139
screwable	MB-Series	139
For flat ribbon cables		
screwable	FKH-Series	140
self adhesive	FKH-Series	140
screwable, self adhesive	SolidTack-Series FKH	140
flexible flat design, self adhesive	Type 130100	145

Rectangular base mount

screwable	TY-Series	141
screwable, self adhesive	TY-Series	141
Paste adhesive mount		
for fixing with paste / liquid adhesive	PMB5	142
With round design		
self adhesive	RA-Series	143
With flat, round design		
self adhesive	RB-Series	144
With flexible flat design		
self adhesive	SAC-Series	145
For food industry		
square-cut, screwable, detectable	MCMB-Series	146
For limited space		
screwable	Q-Mount-Series CTQM	147
	CTAM-Series	149
Curved design		
screwable	CTM-, KR-, MCKR-Series	148
	MB-Series	151
	TY-Series	151
Overlapping curved design		
screwable	LKC-, NY-Series	150
Curved design, for sideways fixing		
screwable	LKM-, CL-, FH-Series	152
Fixing base mount		
screwable	LOK02	153
Clamps with elasticated loop		
	Cradle Clamp	154
Strain relief clips		
	Klam-Klip (KK)	155
Harness clips for heavy duty applications		
	Standard torque mounts	156
	Medium torque mounts	156
for screws or studs	High torque mounts (metal bushing)	157
Two way saddle mount for heavy duty applications		
for screws or threaded bolts	for parallel separation	157
Axial oval mount for heavy duty applications		
for screws or threaded bolts	for edges	158



Heavy duty mounts		
for 3-way routing	S3CBM8	159
	S3SB15CBM8	159
Stainless steel mounts		
screwable	SSPC-Series SS316	160
Heavy duty cable clamps		
	A-Series	161
	B-Series	162
for screw fixing, Ratchet P-Clamps	C-Series	162
	D-Series	162
	Accessories	162
Aluminium P-Clamps		
	Alu-P-Series	163
Plastic P-Clamp		
	HP-Series	165
Fixing elements with fir tree		
for distance routing	Saddle mount	166
Fixing elements for BHT-ties		
for distance routing	MSBT120	166
Mounting plates		
screwable	MP-Series	167



1.8 Fixing Elements

Cable fixing cradle		
	TM1SF	169
Arrowhead cradle		
	SFC-Series	169
Bundling clips		
	Overview	170
Connector clips		
	Overview	172
For automatic cable tying systems		
Bundling clips		174
Edge clips		175
Fir tree clips		175

Fixing elements for tubes and harnesses		
with arrowhead		176
with fir tree		176
	AHC-Series	177
with automatic locking feature	IAHC-Series, connectable	179
	IAHC-Series, connectable, with arrowhead	180
rotatable 360°	DTC - Double Tube Clip	181
Wire push in clips		
	WPC-Series	182
Fixing elements for tubes and harnesses		
for edges	EdgeClip-Family	183
Fixing elements for corrugated tubing		
with fir tree	CTC-Series	184
with fir tree and cover	CNCTC-Series	184
for weld studs	CTC-Series for weld studs	185
with arrowhead		186
Fixing elements		
for weld studs	SB-Series	187
	CT-Series	187
	twistable	188
for parallel routing	LOK04	188
Fixing base		
	LOK-Series	189
Rivet mount		
	TY5-Series	190



1.9 Clips, Clamps and Plugs

Blind plugs		
		191
Snapper hose clips		
for tubes and harnesses	SNP-Series	192
Plastic rivets		
	TY-Series	194

Material Specification Overview

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
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 resistance 	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, ScanBlack	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

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
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
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 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)

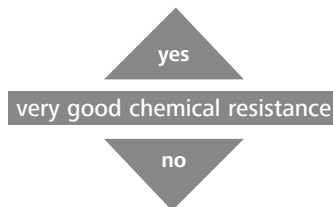
HF = Halogenfree

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	REL-Series PA66, BK, NA Length 180–250 mm	79	T-Series PA66HIR(S), BK Length 200–760 mm	48
LPH-Series PA66HIR(S), BK Length 265–355 mm	72	RELK-Series to 200N PA66, NA, BK Length 200–350 mm	77	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		

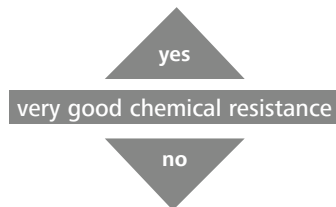
Heat stabilised up to +105 °C				High temperature +150 °C and higher	
Cable tie series and length	Page	Cable tie series and length	Page	Cable tie series and length	Page
CTT-Series PA66HS, BK Length 101.6–205 mm	62	OS-Series PA66HS, NA, BK Length 100–385 mm	68	DH-Series PA46, GY Length 210 mm	63
DH-Series 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 PA66W, BK Length: 565.3 mm	78
T-Series PA11, BK Length 100–200 mm	53

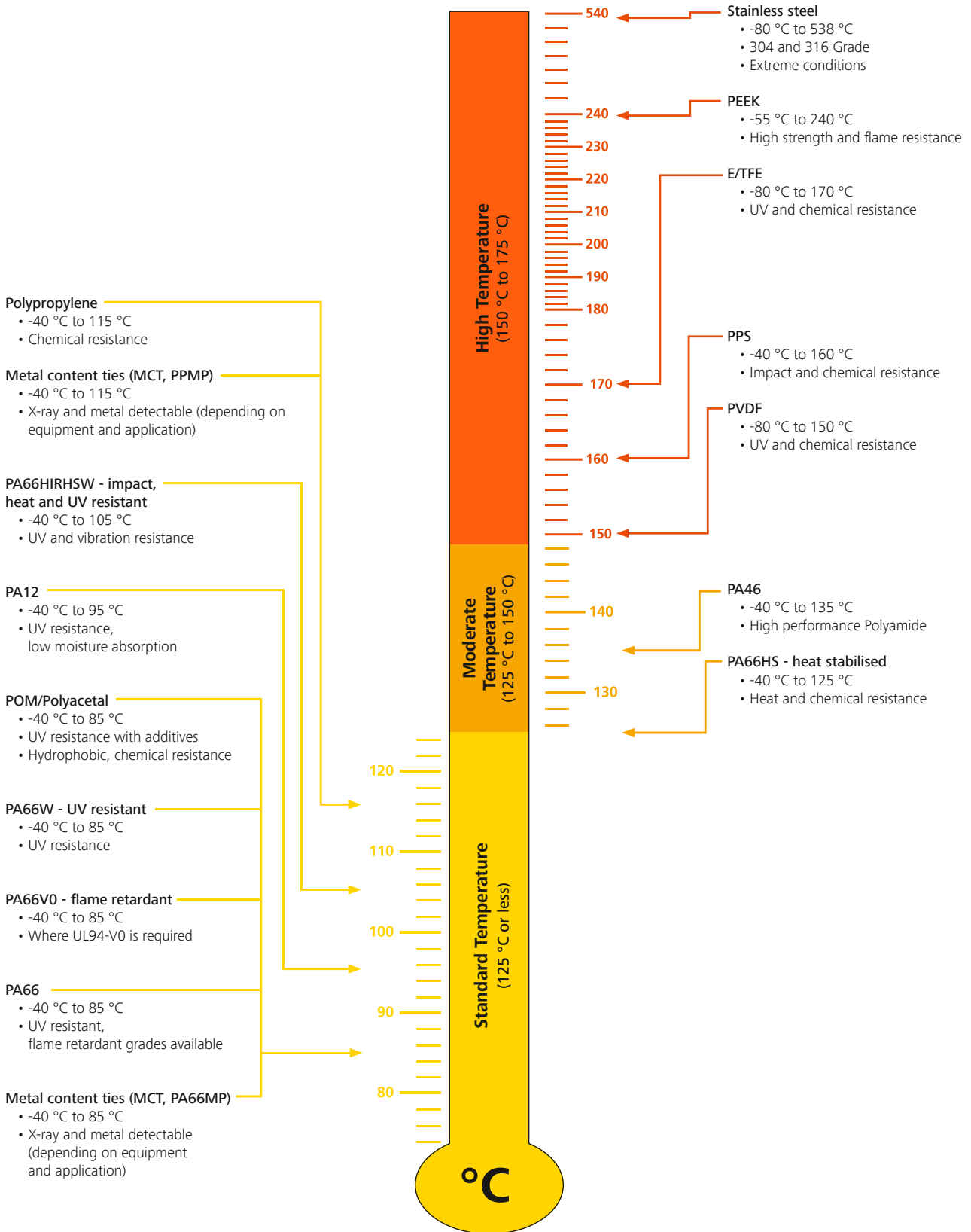
High temperature +150 °C and higher	
Cable tie series and length	Page
MBT-FC-Series SS316, BK Length 362–1,245 mm	90
MBT-Series SS304, ML Length 127–838 mm	86
MBT-Series SS316, ML Length 127–838 mm	87
MBTXHD-/MBTUHD-Series SS316, ML Length 681–1,524 mm	89
MBTXHDFC-/MBTUHDFC-Series SS316, ML Length 681–1,524 mm	92
MLT-Series, MLTC-Series SS316, ML, BK Length 230–630 mm	94
MST-Series SS304, ML Length 207–700 mm	93
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

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:

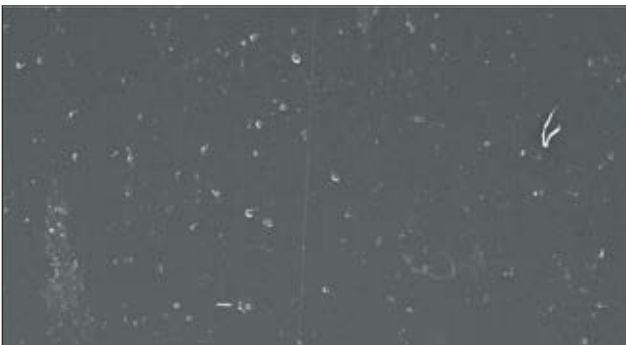
After 500 hours of UV-radiation exposure

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	▲	▲	▲	▲	▲	△	▲	○	▲

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.

What does flammability UL94 mean?

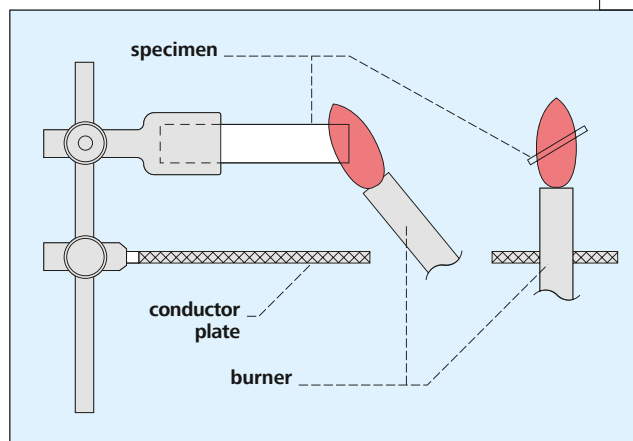
UL is the shortcut for Underwriters Laboratories. This is an independent organisation in the United States to control and certificate product safety. Beside a lot of product standards UL also specified the flammability test UL94 for plastic materials. UL94 is a material burning test done on defined specimen 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

1



Test criteria:

- burning rate of specimen in mm/min.

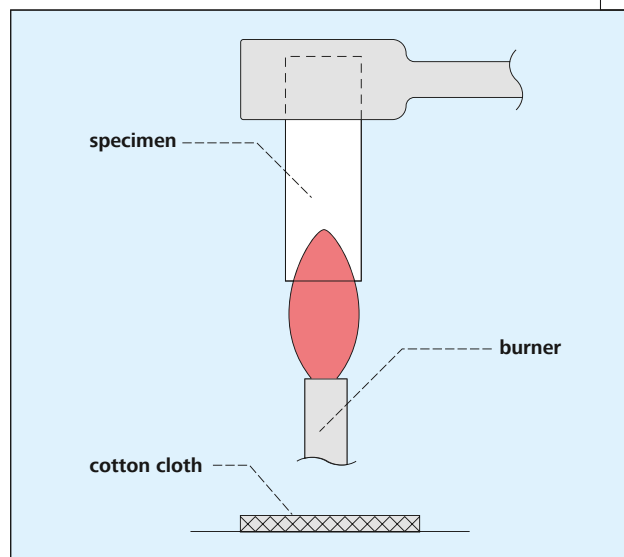
Classification:

- according to HB

UL94 V:

Vertical burning test

2



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 26.

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:



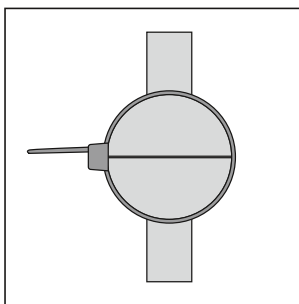
Profit from the knowledge and experience of HellermannTyton and the high-quality of our cable management solutions for your particular industry and market.

Determination of minimum tensile strength

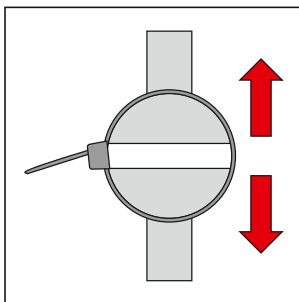
The minimum tensile strength is a critical selection criteria for cable ties. It expresses how much loading a cable tie can bear.

The test procedure to determine minimum tensile strength:

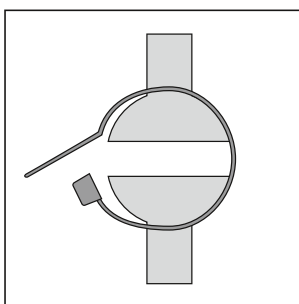
- Stabilisation to achieve equilibrium moisture content
- Set-up of the tensile test fixture
- Application of the tie on a split mandrel fixture
- Test speed



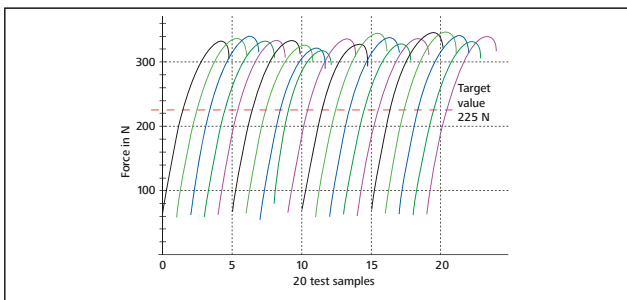
The cable tie is fixed onto a split mandrel fixture with the suitable cable tie application tool.



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/s^2

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

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/s^2 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.

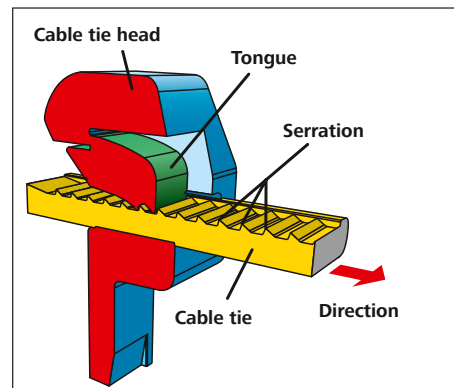
MBT series of cable ties

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.

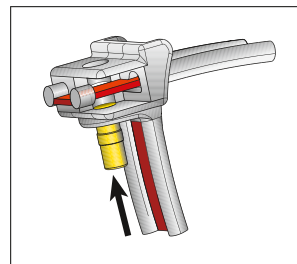
Locking technology

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.

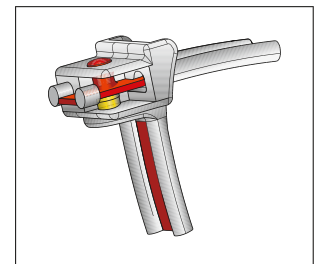
This cable tie is not suitable for rigid objects. Retraction of the ball-bearing (see drawing) is required into the small end of the wedged shaped housing to allow for a positive locking of the strap and also having a flush cut off at the end of the strap. This retraction cannot be ensured when bundling 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.



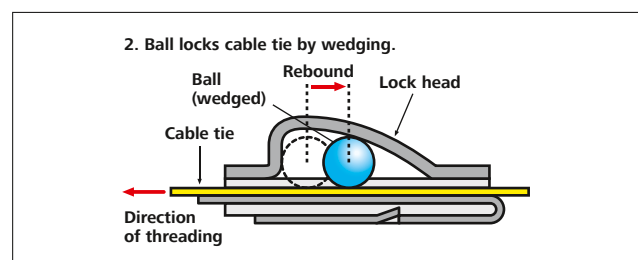
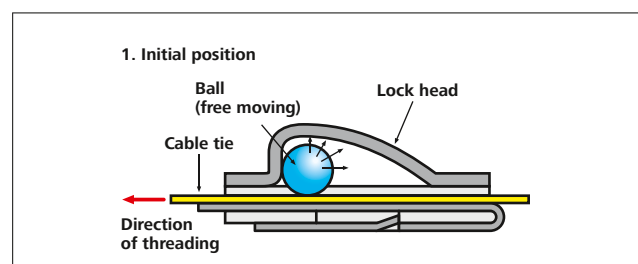
Locking technology of an outside serrated tie.



The unlocked head of a KR-tie.



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



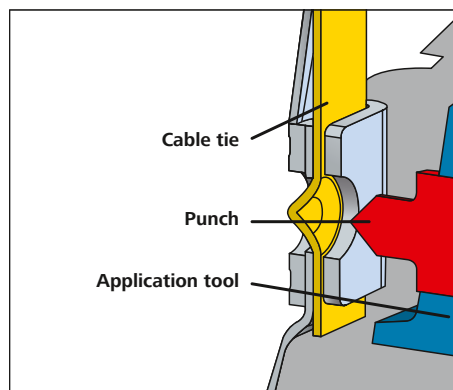
Introduction to the main locking technologies used for cable ties

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.



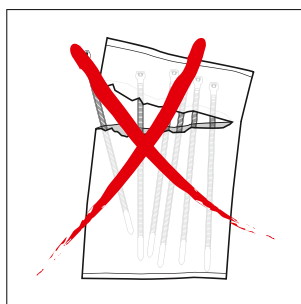
Punch-locking mechanism of the MST-Series.

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

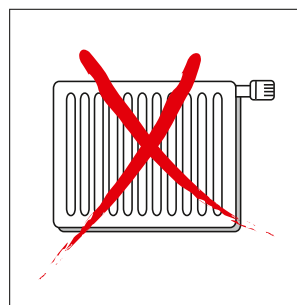
HellermannTyton cable ties, fastenings and fixings are manufactured from high-quality polyamide (PA). This industrial synthetic material is mainly processed using injection moulding, but can also be extruded. Polyamide is a hygroscopic material. This means that the material absorbs and loses moisture.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

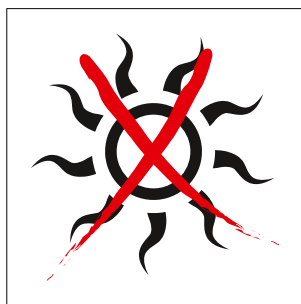
The packaging used by HellermannTyton ensures that the water content in the material remains constant. Therefore, it is important to store the products in their original packaging to preserve the quality of the ties.



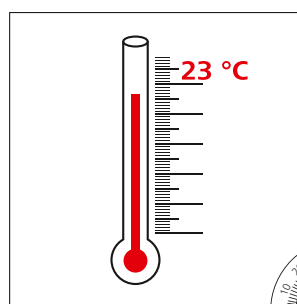
1. Once opened you should use the ties as quickly as possible.
2. Always store ties in the sealed plastic bag.



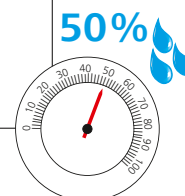
5. Store the product away from direct sources of heat.
6. Avoid contact with heat: for example, do not place on the radiators.



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

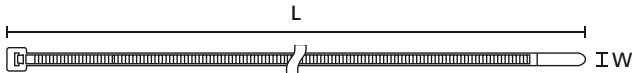
T-Series cable ties for bundling and securing of cables, pipes and hoses. These cable ties can be used for nearly all kind of applications.

Features and benefits

- Available in a wide range of materials and sizes
- High tensile strength with very low insertion force
- Only high quality plastic is used meeting recycling targets
- Inside serrated cable ties for a strong hold onto bundles
- Ergonomic bent tail offers quick and simple installation
- Easy application either manually or with an application tool



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
T18R	2.5	100.0	22.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-01919
	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	111-03419
	3.5	198.0	50.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03410
T30LL	3.5	290.0	80.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03500
	3.5	290.0	80.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03529
T40R	4.0	175.0	40.0	180	PA66	Natural (NA)	100 pcs.	2;4-8	111-01626
T50S	4.6	150.0	35.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05810
	4.6	150.0	35.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05819
T50R	4.6	200.0	50.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05000
	4.6	200.0	50.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05013
T50M	4.6	245.0	65.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-06201
	4.6	245.0	65.0	225	PA66	Black (BK)	100 pcs.	2-10	111-06200
T50I	4.6	300.0	85.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05210
	4.6	300.0	85.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05219
T50L	4.6	390.0	110.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05409
	4.6	390.0	110.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05400
T50LL	4.6	445.0	130.0	225	PA66	Black (BK)	500 pcs.	2-10	111-06002
T80R	4.7	210.0	55.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-05019
	4.7	210.0	55.0	355	PA66	Black (BK)	100 pcs.	2-12	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.

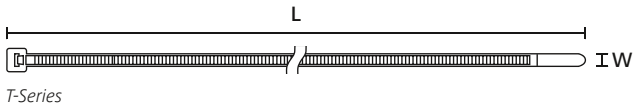


For product specific approvals and specifications please refer to the Appendix.



Cable Ties Polyamide 6.6 standard

T-Series in PA66 natural and black



Material specification please see page 26.

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
T80I	4.7	300.0	85.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-08229
	4.7	300.0	85.0	355	PA66	Black (BK)	100 pcs.	2-12	111-08210
T80L	4.7	390.0	110.0	355	PA66	Black (BK)	100 pcs.	2-12	111-05410
	4.7	390.0	110.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-05419
T120S	7.6	225.0	55.0	535	PA66	Natural (NA)	50 pcs.	3;9-12	111-12829
T120I	7.6	300.0	80.0	535	PA66	Black (BK)	100 pcs.	3;9-12	111-12210
	7.6	300.0	80.0	535	PA66	Natural (NA)	100 pcs.	3;9-12	111-12219
T150R	7.6	365.0	100.0	670	PA66	Black (BK)	100 pcs.	3;9-12	111-14810
	7.6	365.0	100.0	670	PA66	Natural (NA)	100 pcs.	3;9-12	111-14819
T120R(E)	7.6	387.0	100.0	535	PA66	Black (BK)	100 pcs.	3;9-12	111-12010
	7.6	387.0	100.0	535	PA66	Natural (NA)	100 pcs.	3;9-12	111-12019
T120M	7.6	460.0	125.0	535	PA66	Black (BK)	100 pcs.	3;9-12	111-12610
	7.6	460.0	125.0	535	PA66	Natural (NA)	100 pcs.	3;9-12	111-12619
T120XM	7.6	600.0	175.0	535	PA66	Black (BK)	50 pcs.	3;9-12	111-12701
	7.6	600.0	175.0	535	PA66	Natural (NA)	50 pcs.	3;9-12	111-12704
T120L	7.6	760.0	225.0	535	PA66	Black (BK)	50 pcs.	3;9-12	111-12403
	7.6	760.0	225.0	535	PA66	Natural (NA)	50 pcs.	3;9-12	111-12429
T150L	8.8	820.0	245.0	780	PA66	Black (BK)	25 pcs.	9-12	111-15405
	8.8	820.0	245.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15419
T150M	8.9	530.0	150.0	780	PA66	Black (BK)	25 pcs.	9-12	111-00124
	8.9	530.0	150.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15619
T150XL	8.9	1,095.0	330.0	780	PA66	Black (BK)	25 pcs.	9-12	111-15500
	8.9	1,095.0	330.0	780	PA66	Natural (NA)	25 pcs.	9-12	111-15519
T150XLL	8.9	1,325.0	405.0	780	PA66	Black (BK)	25 pcs.	9-12	111-15300
	8.9	1,325.0	405.0	780	PA66	Natural (NA)	25 pcs.	9-12	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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

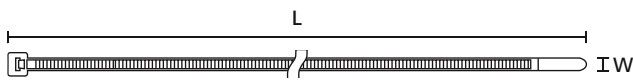
Coloured T-Series cable ties are ideally suited for marking purposes. They can be used to secure and/or identify different kind of bundles at the same time.

Features and benefits

- Available in a wide range of colours and sizes
- Strong cable tie to permanently mark or identify bundles
- Easy application either manually or with a processing tool
- Coloured T-Series cable ties provide an inside serration



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



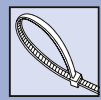
T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18R	2.5	100.0	22.0	80	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.	2-10	111-04800
	4.6	200.0	50.0	225	PA66	Green (GN)	100 pcs.	2-10	111-04801
	4.6	200.0	50.0	225	PA66	Red (RD)	100 pcs.	2-10	111-04804
	4.6	200.0	50.0	225	PA66	Yellow (YE)	100 pcs.	2-10	111-04805
T50L	4.6	390.0	110.0	225	PA66	Blue (BU)	100 pcs.	2-10	111-05404
	4.6	390.0	110.0	225	PA66	Green (GN)	100 pcs.	2-10	111-05402
	4.6	390.0	110.0	225	PA66	Red (RD)	100 pcs.	2-10	111-05406
	4.6	390.0	110.0	225	PA66	Yellow (YE)	100 pcs.	2-10	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.

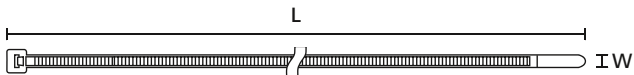


For product specific approvals and specifications please refer to the Appendix.



Cable Ties Polyamide 6.6 standard

T-Series in PA66 coloured



T-Series



Material specification please see page 26.

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.	2-12	116-08016
	4.7	210.0	55.0	355	PA66	Green (GN)	100 pcs.	2-12	116-08015
	4.7	210.0	55.0	355	PA66	Red (RD)	100 pcs.	2-12	116-08012
	4.7	210.0	55.0	355	PA66	Yellow (YE)	100 pcs.	2-12	116-08014
T80L	4.7	390.0	110.0	355	PA66	Blue (BU)	100 pcs.	2-12	116-05416
	4.7	390.0	110.0	355	PA66	Green (GN)	100 pcs.	2-12	116-05415
	4.7	390.0	110.0	355	PA66	Red (RD)	100 pcs.	2-12	116-05412
	4.7	390.0	110.0	355	PA66	Yellow (YE)	100 pcs.	2-12	116-05414
T150R(H)	7.6	365.0	100.0	670	PA66	Blue (BU)	100 pcs.	3;9-12	116-15016
	7.6	365.0	100.0	670	PA66	Red (RD)	100 pcs.	3;9-12	116-15012
	7.6	365.0	100.0	670	PA66	Yellow (YE)	100 pcs.	3;9-12	116-15014
T120R(E)	7.6	387.0	100.0	535	PA66	Green (GN)	100 pcs.	3;9-12	111-12001
	7.6	387.0	100.0	535	PA66	Red (RD)	100 pcs.	3;9-12	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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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



Cable Ties for outdoor use (UV-resistant)

T-Series in PA66W black

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

Features and benefits

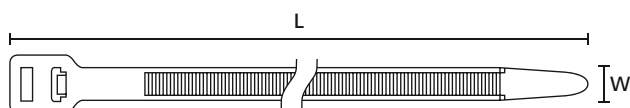
- UV resistant black cable tie available in a wide range of sizes
- Made from 100 % high quality plastic, allows for good recycling
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool
- Simply to insert due to bent tail



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



T-Series



T250-series

i Specific part numbers according to EN45545 available on request.

d Material specification please see page 26.

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
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
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	111-03460
T30LL	3.5	290.0	80.0	135	PA66W	Black (BK)	100 pcs.	2;4-6	111-03570
T40R	4.0	175.0	40.0	180	PA66W	Black (BK)	100 pcs.	2;4-8	111-01625
T50S	4.6	150.0	35.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-05860
T50R	4.6	200.0	50.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-04889
T50M	4.6	245.0	65.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-06206
T50I	4.6	300.0	85.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-05260
T50L	4.6	390.0	110.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-05440
T50LL	4.6	445.0	130.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-06000
T80R	4.7	210.0	55.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-05060
T80I	4.7	300.0	85.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-08290
T80L	4.7	390.0	110.0	355	PA66W	Black (BK)	100 pcs.	2-12	111-05460
T120S	7.6	225.0	55.0	535	PA66W	Black (BK)	50 pcs.	3;9-12	111-12830
T120I	7.6	300.0	80.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12230
T150R(H)	7.6	365.0	100.0	670	PA66W	Black (BK)	100 pcs.	3;9-12	111-14860

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

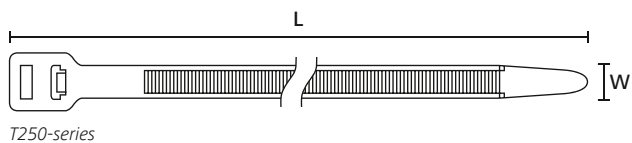
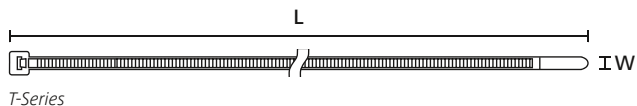


For product specific approvals and specifications please refer to the Appendix.



Cable Ties for outdoor use (UV-resistant)

T-Series in PA66W black



TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
T120R(E)	7.6	387.0	100.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12060
T120M	7.6	460.0	125.0	535	PA66W	Black (BK)	100 pcs.	3;9-12	111-12660
T120L	7.6	760.0	225.0	535	PA66W	Black (BK)	50 pcs.	3;9-12	111-12430
T150L	8.8	820.0	245.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15460
T150M	8.9	530.0	150.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15660
T150XL	8.9	1,095.0	330.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15502
T150XLL	8.9	1,325.0	405.0	780	PA66W	Black (BK)	25 pcs.	9-12	111-15305
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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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



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

T-Series in PA66HS natural and black

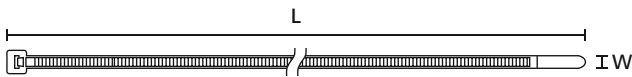
These inside serrated cable ties are made from heat stabilised Polyamide 6.6 (PA66HS). They can be applied in environments with continuous temperatures up to +105 °C. T-Series cable ties can be easily installed by hand or using an application tool to ensure consistency of installation.

Features and benefits

- Heat stabilised cable ties (PA66HS) for temperatures up to +105 °C
- Available in a wide range of sizes to cover almost every application
- Inside serration provides a strong hold onto bundles
- Manual and/or pneumatic tools available for greater process reliability
- Commonly offered in natural and black, other colours available on request



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.
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
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)	1,000 pcs.	2;4-6	111-02359
T18L	2.5	205.0	55.0	80	PA66HS	Black (BK)	100 pcs.	2;4-6	111-02049
	2.5	205.0	55.0	80	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-02159
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	111-03050
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	111-03660
	3.5	290.0	80.0	135	PA66HS	Natural (NA)	100 pcs.	2;4-6	111-03569
T40R	4.0	175.0	40.0	180	PA66HS	Black (BK)	100 pcs.	2;4-8	111-01623
	4.0	175.0	40.0	180	PA66HS	Natural (NA)	100 pcs.	2;4-8	111-01627
T50S	4.6	150.0	35.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-05859
	4.6	150.0	35.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-05850
T50R	4.6	200.0	50.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-04950
T50I	4.6	300.0	85.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-05250
	4.6	300.0	85.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-05259
T50L	4.6	390.0	110.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-05450
	4.6	390.0	110.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-05436
T80R	4.7	210.0	55.0	355	PA66HS	Black (BK)	1,000 pcs.	2-12	117-08070
	4.7	210.0	55.0	355	PA66HS	Natural (NA)	100 pcs.	2-12	111-05059
T80I	4.7	300.0	85.0	355	PA66HS	Black (BK)	100 pcs.	2-12	111-08250
	4.7	300.0	85.0	355	PA66HS	Natural (NA)	100 pcs.	2-12	111-08259

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

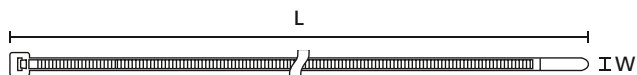


For product specific approvals and specifications please refer to the Appendix.



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

T-Series in PA66HS natural and black



T-Series



Material specification
please see page 26.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T80L	4.7	390.0	110.0	355	PA66HS	Black (BK)	100 pcs.	2-12	111-00388
	4.7	390.0	110.0	355	PA66HS	Natural (NA)	100 pcs.	2-12	111-05459
T120S	7.6	225.0	55.0	535	PA66HS	Black (BK)	50 pcs.	3;9-12	111-12850
	7.6	225.0	55.0	535	PA66HS	Natural (NA)	50 pcs.	3;9-12	111-12824
T150R(H)	7.6	365.0	100.0	670	PA66HS	Black (BK)	100 pcs.	3;9-12	111-15050
	7.6	365.0	100.0	670	PA66HS	Natural (NA)	100 pcs.	3;9-12	111-15069
T120R(E)	7.6	387.0	100.0	535	PA66HS	Black (BK)	100 pcs.	3;9-12	111-12050
	7.6	387.0	100.0	535	PA66HS	Natural (NA)	100 pcs.	3;9-12	111-12059
T120M	7.6	460.0	125.0	535	PA66HS	Black (BK)	100 pcs.	3;9-12	111-00153
T120XM	7.6	600.0	175.0	535	PA66HS	Black (BK)	50 pcs.	3;9-12	111-12700
	7.6	600.0	175.0	535	PA66HS	Natural (NA)	50 pcs.	3;9-12	111-12719
T120L	7.6	760.0	225.0	535	PA66HS	Black (BK)	50 pcs.	3;9-12	111-12440
	7.6	760.0	225.0	535	PA66HS	Natural (NA)	50 pcs.	3;9-12	111-12449
T150L	8.8	820.0	245.0	780	PA66HS	Black (BK)	25 pcs.	9-12	111-15410
T150M	8.9	530.0	150.0	780	PA66HS	Black (BK)	25 pcs.	9-12	111-15609
T150XL	8.9	1,095.0	330.0	780	PA66HS	Black (BK)	25 pcs.	9-12	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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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



Cable Ties for higher impact resistant Polyamide 6.6 ScanBlack

T-Series in PA66HIR(S) black

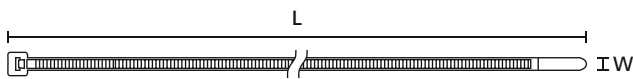
Impact resistance T-Series cable ties are manufactured from PA66HIR(S) – an impact modified material formulation. This high performance material offers limited brittleness sensitivity and a higher flexibility even at low temperatures. PA66HIR(S) cable ties meet increasing requirements like in the chemical, 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 26.

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

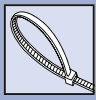
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

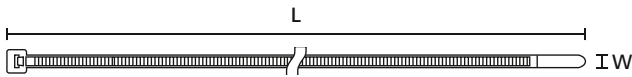
T-Series cable ties for bundling and securing cables, pipes and hoses. These cable ties can be used for almost any type of application especially where safety regulations are high and the reduction of smoke and dangerous gases is required. PA66V0 products are most critically used within public sector 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)	100 pcs.	2;4-6	111-91819
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	111-93019
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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

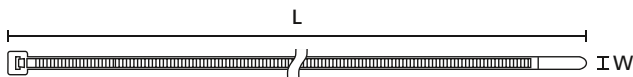
- Cable tie for high temperature applications up to +150 °C
- Available in different sizes to cover various bundle diameters
- Low smoke generation in the event of a fire
- PA46 is a moisture sensitive material
- Inside serrated cable tie offers strong hold around bundles
- Easy application either manually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



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



Material specification please see page 26.



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	PA46	Natural (NA)	1,000 pcs.	2;4-6	114-01879
T30R	3.5	150.0	35.0	135	PA46	Natural (NA)	100 pcs.	2;4-6	114-03079
T50R	4.6	200.0	50.0	225	PA46	Grey (GY)	100 pcs.	2-10	111-00824
	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
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

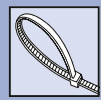
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

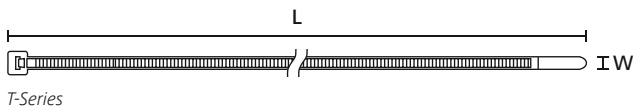
- Blue cable tie offering high chemical resistance
- Suitable for applications with temperatures up to 170 °C
- Resistant to radioactivity and UV light
- E/TFE is a non hydroscopic material, no moisture absorption
- Complying with UL94 V0 requirements



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 148.



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

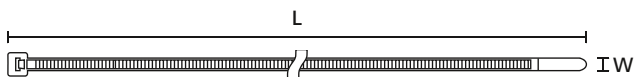
T-Series cable ties made from Polypropylene (PP) are less hydroscopic and offer a higher chemical resistance and temperature range compared to a standard Polyamide 6.6 (PA66) material. Cable ties from Polypropylene can withstand continuous operating temperatures up to +115 °C. These cable ties are used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



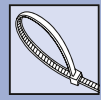
Material specification please see page 26.

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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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



Cable Ties made from sustainable bioplastic

T-Series in PA11 black

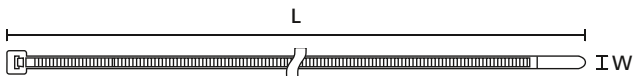
T-Series cable ties manufactured from PA11 have many technical features making them suitable for use in a variety of applications to fix and support cables, pipes and other elements. They offer an excellent resistance to chemicals in most challenging environments like offshore or on oil rigs and construction 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.		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	7	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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, hoses and other elements. These cable ties can be used for a countless number of applications. The LK-Series is similar to T-Series but offers in-between sizes to fit individual customer needs.

Features and benefits

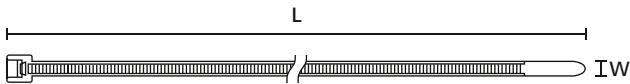
- Inside serrated cable ties for a strong hold around bundles
- Various materials and sizes are available
- High tensile strength with very low insertion force
- Easy application either manually or with an application tool



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



Material specification please see page 26.



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.	2-10	111-60110
	4.6	270.0	73.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-60119
	4.6	270.0	73.0	225	PA66HIR(S)	Black (BK)	100 pcs.	2-10	111-00127
	4.6	270.0	73.0	225	PA66HS	Black (BK)	100 pcs.	2-10	111-60150
	4.6	270.0	73.0	225	PA66HS	Natural (NA)	100 pcs.	2-10	111-60159
	4.6	270.0	73.0	225	PA66W	Black (BK)	100 pcs.	2-10	111-60160
LK2	4.8	120.0	28.0	135	PA66	Natural (NA)	200 pcs.	2;4-8	111-60219
LK5	13.2	535.0	150.0	1,115	PA66	Black (BK)	50 pcs.	11-12	111-60510
	13.2	535.0	150.0	1,115	PA66	Natural (NA)	50 pcs.	11-12	111-60519
	13.2	535.0	150.0	1,115	PA66HIR(S)	Black (BK)	50 pcs.	11-12	111-60501
	13.2	535.0	150.0	1,115	PA66HS	Natural (NA)	50 pcs.	11-12	111-60559
	13.2	535.0	150.0	1,115	PA66W	Black (BK)	50 pcs.	11-12	111-60560

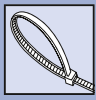
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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!



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 137, 147 and 492.

Application Method:



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



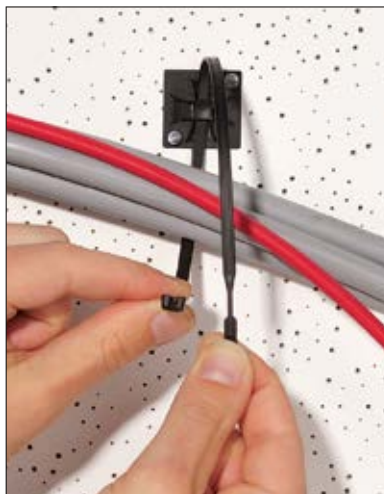
2. Pull the tie through the head until the bundle is fixed.

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 in 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

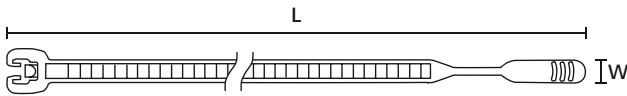
Q-Series cable ties for bundling and securing cables, pipes and hoses. These innovative and effective cable ties enable a simple and quick installation, even in difficult applications.

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



Q-Series

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

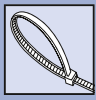
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools												
	2	3	4	5	6	7	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	551	551	552	552	554	555	556	557	554	554	558	560

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



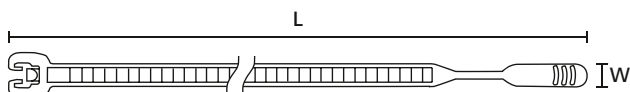
Q-ties in different colours are ideal for marking and bundling in one step.



Material specification
please see page 26.



Please find more Q-Series products for your system solution on page 137, 147 and 492.



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	7	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	551	551	552	552	554	555	556	557	554	554	558	560

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

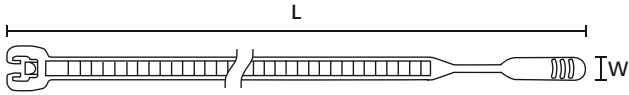


For product specific approvals and specifications please refer to the Appendix.



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.



Material specification please see page 26.



Please find more Q-Series products for your system solution on page 137, 147 and 492.



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	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	7	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	551	551	552	552	554	555	556	557	554	554	558	560

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

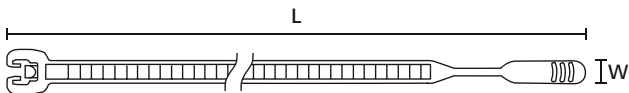
Q-Series cable ties for bundling and securing cables, pipes and hoses. These innovative and effective cable ties enable a simple and quick installation, even in difficult applications.

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

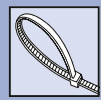
All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools												
	2	3	4	5	6	7	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	551	551	552	552	554	555	556	557	554	554	558	560

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

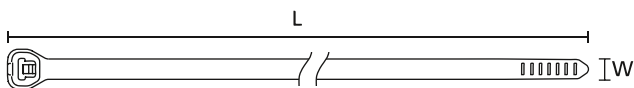
The X-series range of cable ties provides a new and improved design compared with standard cable ties, delivering a range of benefits and enhanced performance. With a new streamlined design and smaller head, the X-Series cable ties provide a superior fixing solution for tight applications, whilst also 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 26.

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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

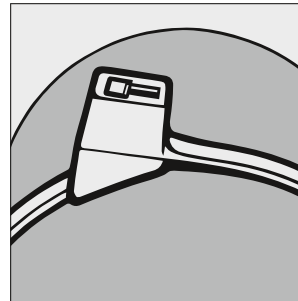
- Curved head design offers a good fit to the bundle
- Inside serration for a strong hold onto bundles
- Easy application either manually or with a processing tool



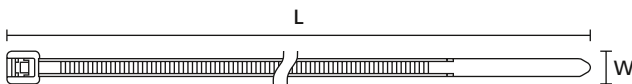
CTT ties installed on flexible gaiters.



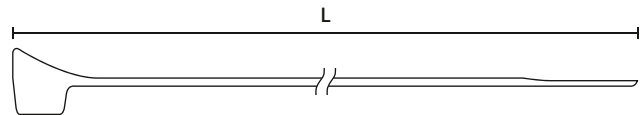
Material specification please see page 26.



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.

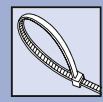
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

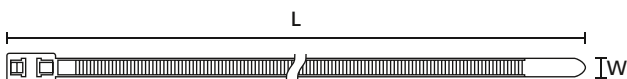
Double loop head ties are ideal for separation of two cable runs without the need for additional cable ties. Additionally these ties are widely used within the packaging industry. The first loop closes and secures the bag whilst the second loop can be made into a carrying handle (subject to weight).

Features and benefits

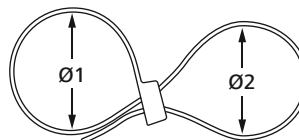
- Possibility to separate bundles with only one cable tie
- Cable tie with two heads creating an inside and outside serrated loop
- Available in a wide range of materials
- Bundles can be of different diameter
- Maximum bundle diameter is a maximum combined bundle
- Easy application either manually or with a processing tool



DH-Series cable ties for parallel routing.



DH-Series



DH-Series maximum combined bundle diameter

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Min. Tensile Strength 2nd loop	Material	Colour	Pack Cont.	Tools	Article-No.
T50RDH	4.7	210.0	38.0	225	180 N	PA46	Grey (GY)	100 pcs.	2;4-6;8	117-05168
	4.7	210.0	38.0	225	180 N	PA66	Black (BK)	100 pcs.	2;4-6;8	117-05000
	4.7	210.0	38.0	225	180 N	PA66	Natural (NA)	100 pcs.	2;4-6;8	117-05002
	4.7	210.0	38.0	225	180 N	PA66HS	Black (BK)	100 pcs.	2;4-6;8	117-05050
	4.7	210.0	38.0	225	180 N	PA66W	Black (BK)	500 pcs.	2;4-6;8	117-05060
T50IDH	4.7	305.0	76.0	225	180 N	PA66	Natural (NA)	1,000 pcs.	2;4-6;8	117-05303
	4.7	305.0	76.0	225	180 N	PA66HS	Black (BK)	1,000 pcs.	2;4-6;8	117-05350
	4.7	305.0	76.0	225	180 N	PA66W	Black (BK)	100 pcs.	2;4-6;8	117-05360
T50LDH	4.7	395.0	100.0	225	180 N	PA66	Natural (NA)	1,000 pcs.	2;4-6;8	117-05461
	4.7	395.0	100.0	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	4	5	6	8
	MK20	MK3SP	MK3PNSP2	EVO7	MK7P
	551	552	552	554	556

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

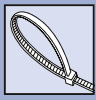
We brought the first detectable metal content tie onto the market



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
- Can support quality assurance in the production of food stuffs, for example HACCP
- Blue colour for easy visual detection
- Greatly reduces risk of contamination
- Magnetic and X-Ray detectable (detection level depending on specific application and equipment)

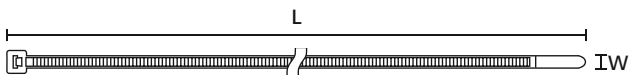


Our detectable MCT(S) cable ties used in the food and pharmaceutical industry.



Material specification please see page 26.

MCT-Series, PA66MP



MCT(S)



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

TYPE	Width (W)	Length (L)	Bundle Ø max.		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.	2-10	111-00830
MCT50L	4.7	380.0	110.0	225	PA66MP	Blue (BU)	100 pcs.	2-12	111-00831
MCT120R	7.6	387.0	100.0	535	PA66MP	Blue (BU)	100 pcs.	3;9-12	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	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

MCT-Series releasable, PA66MP

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



Cable ties for food industry, detectable, corrosion resistant

MCTS-Series, PA66MP+

Our MCTS cable ties have been specifically developed to be used in the food and 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
- Can support quality assurance in the production of food stuffs, for example HACCP
- Blue colour for easy visual detection
- Greatly reduces risk of contamination
- Magnetic and X-Ray detectable (detection level depending on specific application and equipment)
- MCTS ties have very good corrosion resistance



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



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



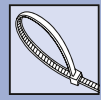
MCT(S)

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	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
	2.5	100.0	22.0	60	PA66MP+	Mint Green (MGN)	100 pcs.	2;4-6	111-01377
	2.5	100.0	22.0	60	PA66MP+	Mustard (MST)	100 pcs.	2;4-6	111-01380
	2.5	100.0	22.0	60	PA66MP+	Russet (RUS)	100 pcs.	2;4-6	111-01383
MCTS150	3.5	153.0	36.0	110	PA66MP+	Blue (BU)	100 pcs.	2;4-6	111-01342
	3.5	153.0	36.0	110	PA66MP+	Mint Green (MGN)	100 pcs.	2;4-6	111-01378
	3.5	153.0	36.0	110	PA66MP+	Mustard (MST)	100 pcs.	2;4-6	111-01381
	3.5	153.0	36.0	110	PA66MP+	Russet (RUS)	100 pcs.	2;4-6	111-01384
MCTS200	4.7	203.0	50.0	150	PA66MP+	Blue (BU)	100 pcs.	2-10	111-01343
	4.7	203.0	50.0	150	PA66MP+	Mint Green (MGN)	100 pcs.	2-10	111-01379
	4.7	203.0	50.0	150	PA66MP+	Mustard (MST)	100 pcs.	2-10	111-01382
	4.7	203.0	50.0	150	PA66MP+	Russet (RUS)	100 pcs.	2-10	111-01385
MCTS300	4.8	301.0	80.0	150	PA66MP+	Blue (BU)	100 pcs.	2-10	111-01399
	4.8	301.0	80.0	150	PA66MP+	Mint Green (MGN)	100 pcs.	2-10	111-01400
	4.8	301.0	80.0	150	PA66MP+	Mustard (MST)	100 pcs.	2-10	111-01401
	4.8	301.0	80.0	150	PA66MP+	Russet (RUS)	100 pcs.	2-10	111-01402

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	7	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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



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

- Manufactured from metal content Polypropylene
- 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 and equipment)
- MCTS ties have very good corrosion resistance
- Can support quality assurance in the production of food stuffs, for example HACCP



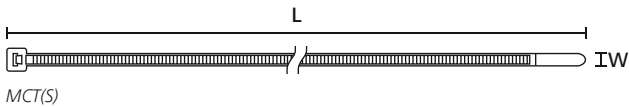
MCTPP ties have a high chemical and temperature resistance.



The MCT ties made of PA66MP are the ideal complement for MCMB mounts on page 146.



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



MCT-Series / MCTS-Series PPMP

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.	2-10	111-01666
MCTPP50L	4.6	390.0	110.0	150	PPMP	Blue (BU)	100 pcs.	2-12	111-01667
MCTPP120R	7.6	387.0	100.0	380	PPMP	Blue (BU)	100 pcs.	3;9-12	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.

MCTS-Series, PPMP+

TYPE	Width (W)	Length (L)	Bundle Ø max.		Material	Colour	Pack Cont.	Tools	Article-No.
MCTS200	4.7	201.0	50.0	140	PPMP+	Blue (BU)	100 pcs.	2-10	111-01386

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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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



Cable Ties for thin-walled bundles

OS-Series

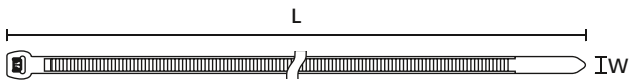
OS-Series cable ties are used in many areas where thin-walled or soft insulation wires and cable are being installed, for instance automotive and aircraft industry. OS ties manufactured from PA66V0 material are suitable for applications where safety regulations require reduction of smoke and dangerous 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 26.

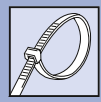
TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18ROS	2.5	100.0	1.6	20.0	80	PA66HS	Black (BK)	500 pcs.	2;4-6	118-04701
	2.5	100.0	1.6	20.0	80	PA66HS	Natural (NA)	1,000 pcs.	2;4-6	118-00035
	2.5	100.0	1.6	20.0	80	PA66V0	White (WH)	100 pcs.	2;4-6	118-00079
	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)	500 pcs.	2;4-8	118-05040
	4.6	200.0	1.6	50.0	225	PA66HS	Natural (NA)	100 pcs.	2;4-8	118-05059
	4.6	200.0	1.6	50.0	225	PA66V0	White (WH)	100 pcs.	2;4-8	118-00065
	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

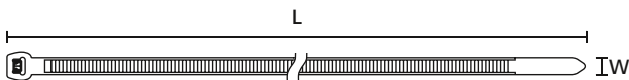
- For high temperature applications from -55 °C up to +240 °C
- Outside serrated cable tie with smooth surface to the bundle
- Close fit to the cable bundle due to the deepening head shape
- Easy insertion combined with high tensile strength
- Takes up less space due to curved head design
- Combines 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 108. Screw Mount CTAM, see page 149.



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	7	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	551	551	552	552	554	555	556	557	554	554	558	560

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



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



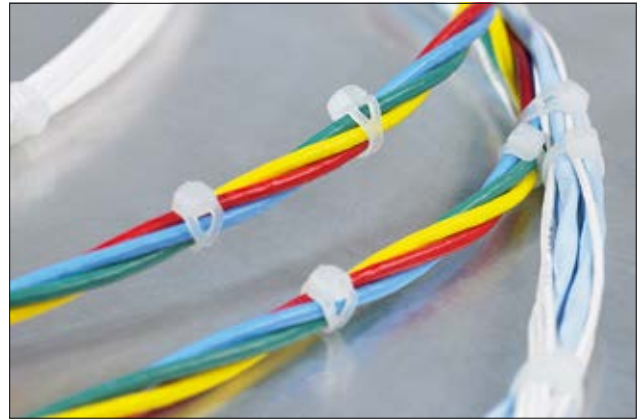
Cable Ties with 90° angled head

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

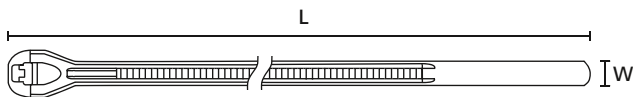
- Outside serrated cable tie with smooth surface to the bundle
- The 90° angled head perfectly fits onto the bundle
- Rounded head design minimises the risk of damage to insulation, especially of parallel routed bundles
- Low profile head takes up less space above the bundle
- Easy insertion and high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



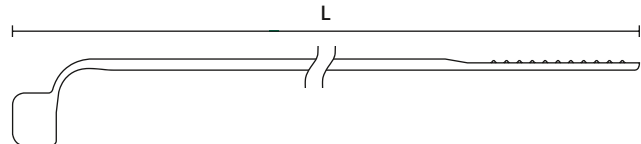
V-Series is perfect for parallel bundles.



Material specification
please see page 26.



V-Series

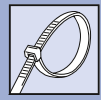


TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
V100R	2.5	102.5	20.0	100	PA46	Grey (GY)	1,000 pcs.	2;4-6	118-00109
	2.5	102.5	20.0	100	PA66HS	Natural (NA)	1,000 pcs.	2;4-6	118-00074
V150R	3.3	150.0	35.0	150	PA46	Grey (GY)	100 pcs.	2;4-6;8	118-00107
	3.3	150.0	35.0	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
	551	552	552	554	556

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



Cable ties with low profile head

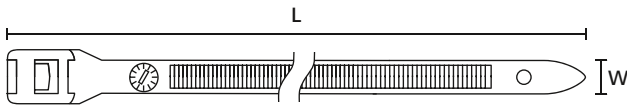
Designed primarily for use within the electrical supply industry these ties are particularly useful in areas with limited space. In addition the low profile head ensures there are no sharp edges. Coloured low profile cable ties are ideal for securing foam padding to playground equipment or for any identification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

Features and benefits

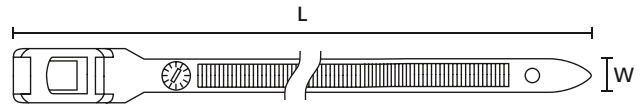
- Outside serrated cable tie with a smooth surface to bundle
- Coloured cable ties can be used for identification
- Broad contact area with cable, minimising risk of damage
- Low profile head for use in restricted area
- Parallel entry for enhanced fit around circular bundles



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	11	12
	MK10-SB	MK21	MK6	EVO9	EVO9HT	MK9P
	551	551	557	554	554	558

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

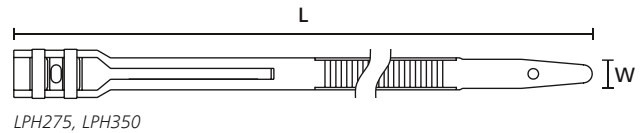
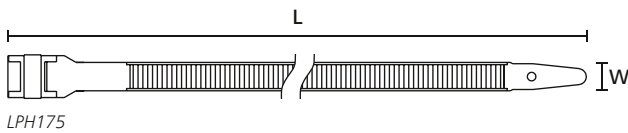
- For more flexibility high impact modified cable ties are available
- Good tensile strength with a single or a double bridged head
- Outside serration allows for a smooth surface to bundle
- Design protects against damage to cable insulation
- Low profile head for optimized use especially in restricted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



Low profile cable tie, LPH-Series.



Material specification
please see page 26.



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

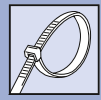
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

Recommended Tools						
	1	3	9	10	11	12
	MK10-SB	MK21	MK6	EVO9	EVO9HT	MK9P
	551	551	557	554	554	558

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

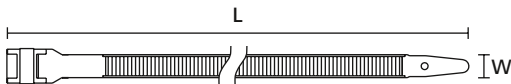
Robusto cable ties manufactured from PA11 have many technical features making them suitable for use in a variety of applications to fix and support cables, pipes and other elements. They offer an excellent resistance to chemicals in most challenging environments like offshore or on oil rigs and construction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

Features and benefits

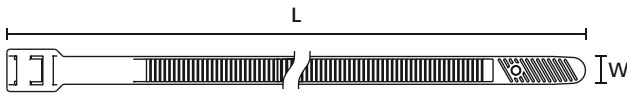
- Made of Polyamide 11 – a sustainable bioplastic from vegetable oil
- Outside serrated cable tie with an innovative rounded head design
- Low insertion force for tool-free application
- High tensile strength with a single or a double bridged head
- Soft material for easy handling without damaging cables
- 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



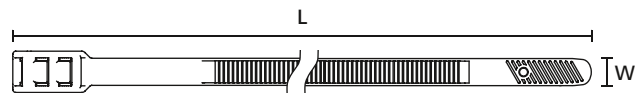
Flat head cable tie from sustainable bioplastic, Robusto-Series.



Robusto (LPH922)



Robusto (LPH942)



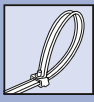
Robusto (LPH962, LPH992)

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	11	12
	MK10-SB	MK21	MK6	EVO9	EVO9HT	MK9P
	551	551	557	554	554	558

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



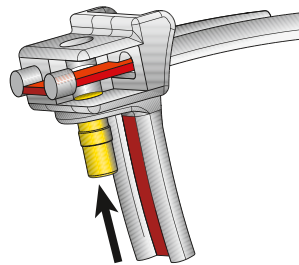
The KR-Series has been repeatedly proven in high vibration applications.



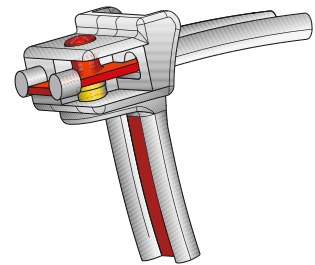
Specific part numbers according to EN45545 available on request.



Material specification please see page 26.

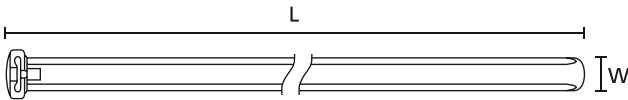


The unlocked head of a KR-tie.




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.		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

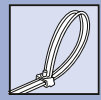
	13	14
	KR6/8	KR8PNSE
	559	559

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

EN 45545-2

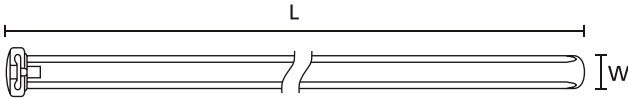


For product specific approvals and specifications please refer to the Appendix.



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

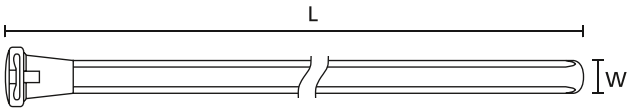
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

EN 45545-2



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

KR-Series, ultrasonic welded



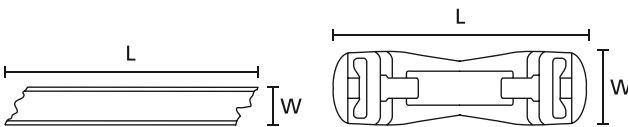
Cable tie KR-Series, ultrasonic welded

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

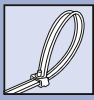


Cable tie KR8S1

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

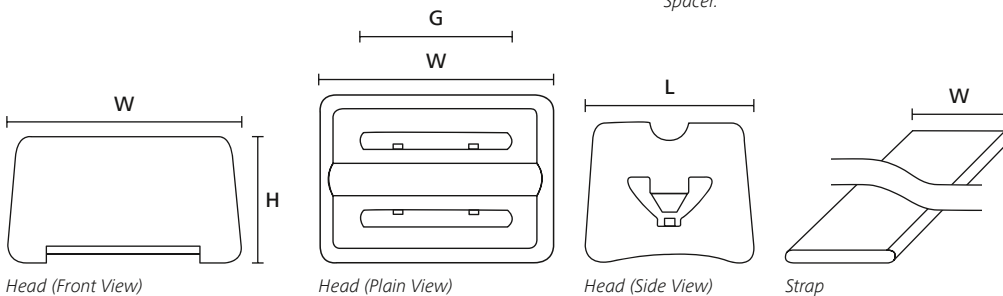
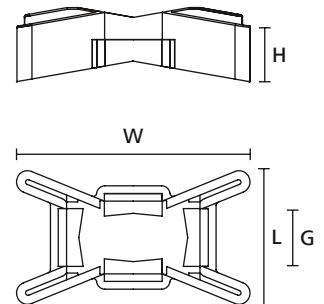


The EL-TY strap can be cut to suit any bundle.

Material specification please see page 26.



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
	554

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



Cable Ties inside serrated

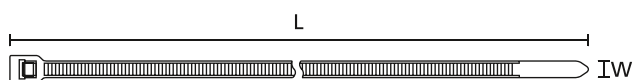
Used in a wide range of industries these releasable and reusable ties are ideal where changes are anticipated. This includes temporary installation and the addition or removal of elements. These releasable cable ties are commonly used to fix stage equipment, for cable management at outdoor events or 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

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

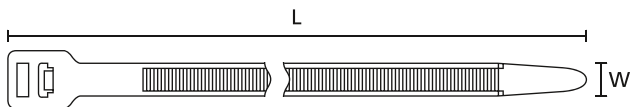
The RT250 is a releasable cable tie. Due to its minimum loop tensile strength of 1,115 N the cable tie is perfectly suited to fix larger and/or heavier bundles. RT250 can be opened and re-used. UV resistant cable ties manufactured from PA66W are recommended for outdoor applications. For shorter lengths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

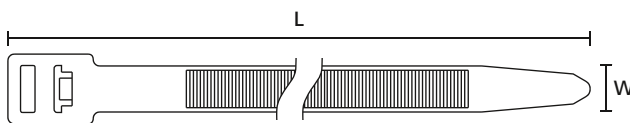


RT250-Series

RT250-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Article-No.
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
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

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

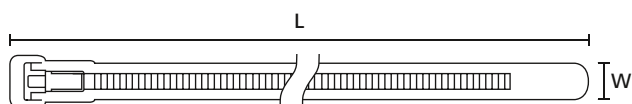
- Releasable and reusable cable tie for medium-weight loads
- Extremely easy-to-operate release mechanism
- Opens simply and quickly with only one hand
- Also available in PA66W for outdoor applications
- REL cable ties have their serration on the inside



Releasable and reusable cable tie, REL-Series.



Material specification please see page 26.



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.



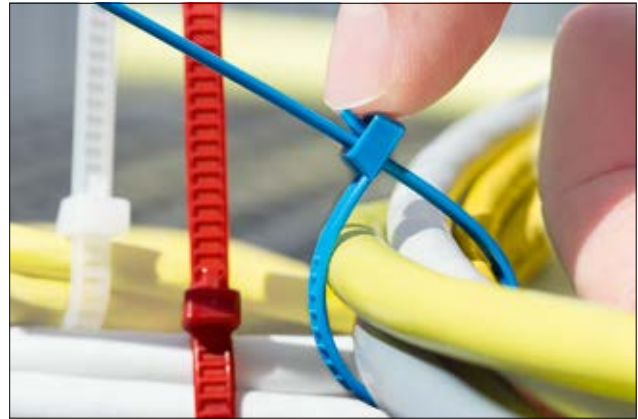
Cable Ties outside serrated for marking

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

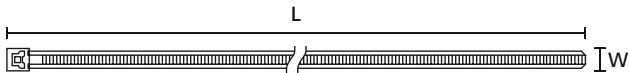
- Releasable and reusable cable tie
- Various colours for applications needing colour coding
- Extended trigger for simple and quick release of ties
- Risk of accidental release is minimised
- Outside serration prevents damage to cable insulation



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



**Material specification
please see page 26.**



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.

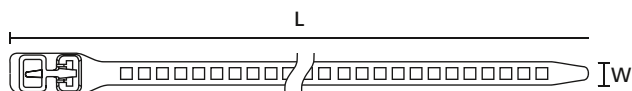
Features and benefits

- 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 SOFTIX ties makes them suitable for use in many applications.

i With 2nd loop to run bundles in parallel!




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.



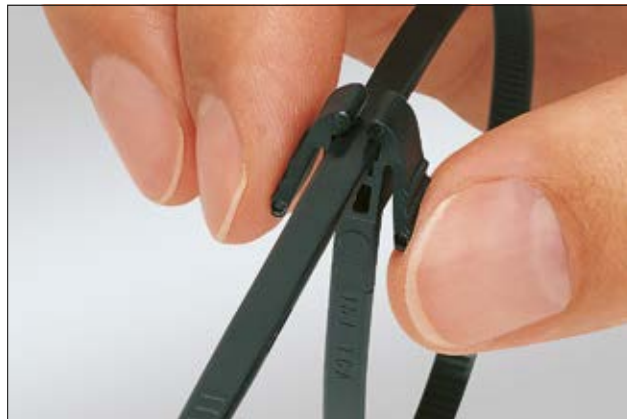
Cable Ties inside serrated with one-hand release mechanism

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

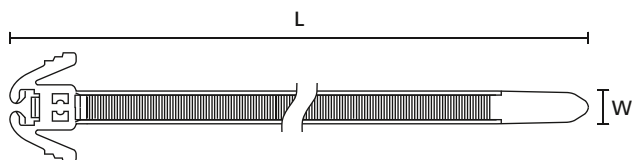
- REZ-Series can be released and reused
- Unique head design for simple and rapid use
- Quick-release mechanism for one-hand operation
- Cable tie can be opened even when under tension
- Can still be released when working with gloves



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



Material specification please see page 26.



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.



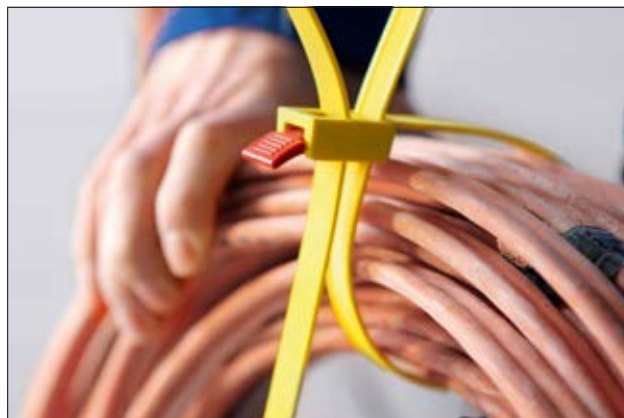
Cable Tie with quick release mechanism

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

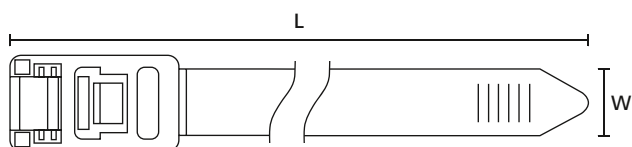
- Releasable and reusable cable tie
- Bears loads of up to 888 N (approx. 90 kg)
- 750 mm long for use in a wide variety of applications
- Can be used for parallel bundling
- Easy to handle when wearing work gloves
- Available in signal yellow and in black



Excess tails can be neatly tucked away.



Patented



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

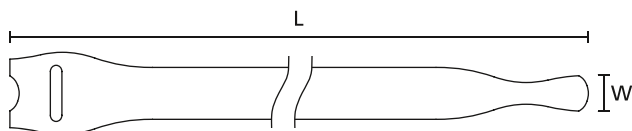
- Quick and simple to use without tools
- Re-usable up to 400 times
- Various colours for easy identification
- For indoor and outdoor use
- Can be attached to the bundle permanently
- Resistant to ageing, no corrosion



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.



TEXTIE-Series



Material specification please see page 26.

TYPE	Width (W)	Length (L)	Bundle Ø max.	Material Loop	Material Hook	Colour	Pack Cont.	Article-No.
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 5M	12.5	5,000.0	-	Polyamide 6.6 (PA66)	Polypropylene (PP)	Black (BK)	1 pc.	130-00020
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, Ø 36 mm (300 mm²) and Ø 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.

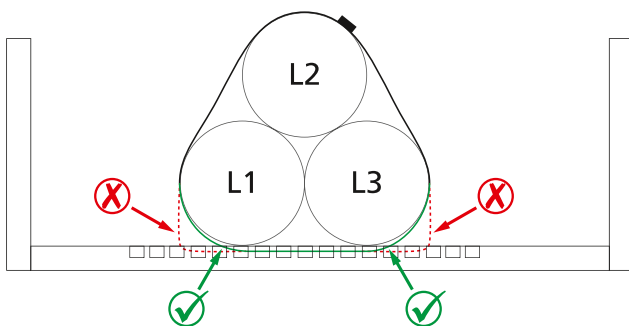
The stainless steel cable ties from HellermannTyton are a time saving solution with a low price and low installation cost.



Double wrap stainless steel cable ties, uncoated, MBT_UHD.

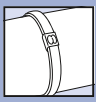


AMT Ties with and without protective profile.



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.

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.



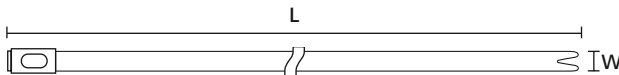
Stainless Steel Cable Ties, uncoated, MBT_XHS.



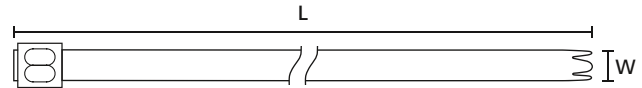
Can support quality assurance in the production of food stuffs, for example HACCP.



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 160.



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
	560	560	561	561

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.

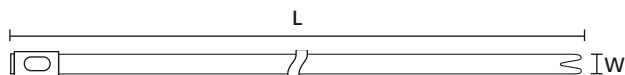
Features and benefits

- 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 26.



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 160.

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
	560	560	561	561

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

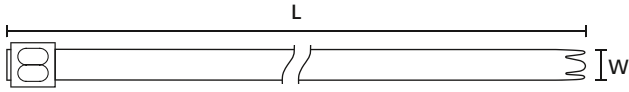


For product specific approvals and specifications please refer to the Appendix.

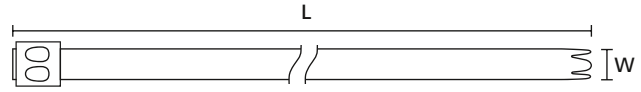


Cable ties with ball-lock

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
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	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

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
	560	560	561	561

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



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



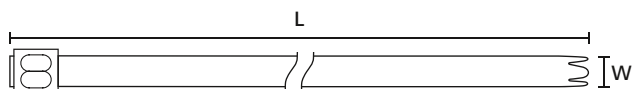
Double wrap stainless steel cable ties, uncoated, MBT_UHD.



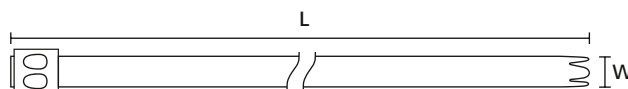
Can support quality assurance in the production of food stuffs, for example HACCP.




Material specification please see page 26.



MBT-Series 12.3 mm width




MBT-Series 16.0 mm width

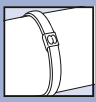
TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MBT27XHD	12.3	681.0	17.0	100.0	5,000	SS316	50 pcs.	15-18	111-01307
MBT33XHD	12.3	838.0	17.0	120.0	5,000	SS316	50 pcs.	15-18	111-01308
MBT43XHD	12.3	1,092.0	17.0	160.0	5,000	SS316	25 pcs.	15-18	111-01309
MBT49XHD	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
	560	560	561	561

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 160.



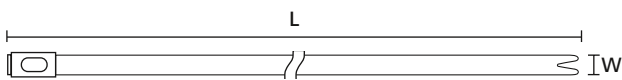
Material specification please see page 26.




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	127.0	15.0	25.0	540	SS316, SP	100 pcs.	15-18	111-00288
MBT8SFC	4.6	201.0	17.0	50.0	540	SS316, SP	100 pcs.	15-18	111-00289
MBT14SFC	4.6	362.0	17.0	102.0	540	SS316, SP	100 pcs.	15-18	111-00290
MBT20SFC	4.6	521.0	17.0	152.0	540	SS316, SP	100 pcs.	15-18	111-00291
MBT27SFC	4.6	681.0	17.0	203.0	540	SS316, SP	100 pcs.	15-18	111-00292
MBT33SFC	4.6	838.0	17.0	254.0	540	SS316, SP	100 pcs.	15-18	111-00293
MBT8HFC	7.9	201.0	17.0	50.0	1,020	SS316, SP	50 pcs.	15-18	111-00294
MBT14HFC	7.9	362.0	17.0	102.0	1,020	SS316, SP	50 pcs.	15-18	111-00295
MBT20HFC	7.9	521.0	17.0	152.0	1,020	SS316, SP	50 pcs.	15-18	111-00296
MBT27HFC	7.9	681.0	17.0	203.0	1,020	SS316, SP	50 pcs.	15-18	111-00297
MBT33HFC	7.9	838.0	17.0	254.0	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.

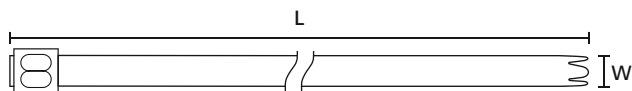
Recommended Tools				
	15	16	17	18
	MK9SST	MK9PSST	HDT16	KST-STG200
	560	560	561	561

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

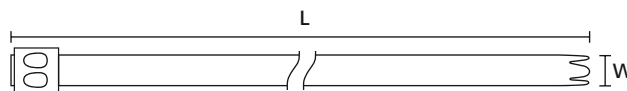


Cable ties with ball-lock and coating

MBT-FC-Series, stainless steel 316




MBT-Series 12.3 mm width



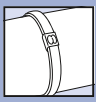
MBT-Series 16.0 mm width

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		Material	Pack Cont.	Tools	Article-No.
MBT14XHFC	12.3	362.0	17.0	102.0	1,620	SS316, SP	50 pcs.	15-18	111-00299
MBT17XHFC	12.3	434.0	17.0	125.0	1,620	SS316, SP	50 pcs.	15-18	111-01500
MBT20XHFC	12.3	521.0	17.0	152.0	1,620	SS316, SP	50 pcs.	15-18	111-00300
MBT23XHFC	12.3	575.0	17.0	168.0	1,620	SS316, SP	50 pcs.	15-18	111-01501
MBT27XHFC	12.3	681.0	17.0	203.0	1,620	SS316, SP	50 pcs.	15-18	111-00301
MBT30XHFC	12.3	754.0	17.0	225.0	1,620	SS316, SP	50 pcs.	15-18	111-01502
MBT33XHFC	12.3	838.0	17.0	254.0	1,620	SS316, SP	50 pcs.	15-18	111-00302
MBT43XHFC	12.3	1,092.0	17.0	330.0	1,620	SS316, SP	25 pcs.	15-18	111-01503
MBT49XHFC	12.3	1,245.0	17.0	380.0	1,620	SS316, SP	25 pcs.	15-18	111-01504
MBT14UHFC	16.0	362.0	25.0	102.0	2,500	SS316, SP	50 pcs.	15;17	111-01512
MBT17UHFC	16.0	434.0	25.0	125.0	2,500	SS316, SP	50 pcs.	15;17	111-01513
MBT20UHFC	16.0	521.0	25.0	152.0	2,500	SS316, SP	50 pcs.	15;17	111-01514
MBT23UHFC	16.0	575.0	25.0	168.0	2,500	SS316, SP	50 pcs.	15;17	111-01515
MBT27UHFC	16.0	681.0	25.0	203.0	2,500	SS316, SP	50 pcs.	15;17	111-01516
MBT30UHFC	16.0	754.0	25.0	225.0	2,500	SS316, SP	50 pcs.	15;17	111-01517
MBT33UHFC	16.0	838.0	25.0	254.0	2,500	SS316, SP	50 pcs.	15;17	111-01518
MBT43UHFC	16.0	1,092.0	25.0	330.0	2,500	SS316, SP	25 pcs.	15;17	111-01519
MBT49UHFC	16.0	1,245.0	25.0	380.0	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
	560	560	561	561

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

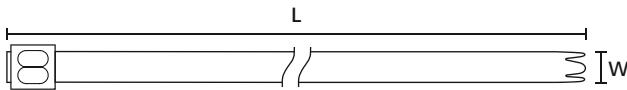
- MBT cable ties, made from stainless steel SS316 with a polyester coating
- Non-releasable locking feature
- Double wrap operation
- Corrosion resistant
- Weather resistant
- Outstanding chemical resistance
- Antimagnetic
- High temperature resistant
- Non-burning



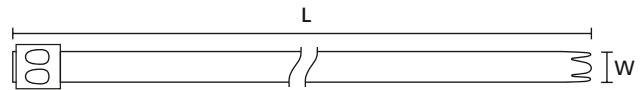
Stainless Steel Cable Ties, coated, MBT_UHDFC.



Material specification please see page 26.



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	681.0	17.0	100.0	2,500	SS316, SP	50 pcs.	15-18	111-01505
MBT33XHDFC	12.3	838.0	17.0	120.0	2,500	SS316, SP	50 pcs.	15-18	111-01506
MBT43XHDFC	12.3	1,092.0	17.0	160.0	2,500	SS316, SP	25 pcs.	15-18	111-01507
MBT49XHDFC	12.3	1,245.0	17.0	180.0	2,500	SS316, SP	25 pcs.	15-18	111-01508
MBT60XHDFC	12.3	1,524.0	17.0	230.0	2,500	SS316, SP	25 pcs.	15-18	111-01509
MBT27UHDFC	16.0	681.0	25.0	100.0	5,000	SS316, SP	50 pcs.	15;17	111-01521
MBT33UHDFC	16.0	838.0	25.0	120.0	5,000	SS316, SP	50 pcs.	15;17	111-01522
MBT43UHDFC	16.0	1,092.0	25.0	160.0	5,000	SS316, SP	25 pcs.	15;17	111-01523
MBT49UHDFC	16.0	1,245.0	25.0	180.0	5,000	SS316, SP	25 pcs.	15;17	111-01524
MBT60UHDFC	16.0	1,524.0	25.0	230.0	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
	560	560	561	561

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

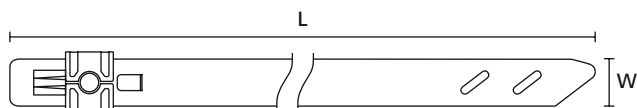
- MST-Series cable ties are made from stainless steel 304
- No loosening after bundling
- Corrosion and weather resistant
- Significantly improved vibration resistance
- Outstanding chemical resistance
- Space saving solution
- Safe cut-off (no sharp edges)
- High temperature resistant
- Non-burning



Stainless Steel Cable Ties MST-Series.

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 160.

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



MST tie

TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.		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
	562	562

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

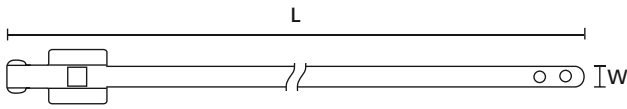
The MLT range of stainless steel cable ties can be used in the most arduous of conditions or where the additional security, strength and fire resistance of a metal fixing is required. Used in all industries from mass transit, ship building, oil rigs, mining and chemical industry, theatres and exhibition 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 160.

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	MIT4
	561	563

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



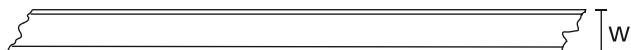
Protective channel LFPC, polyolefin, black.



Material specification please see page 26.



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

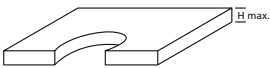
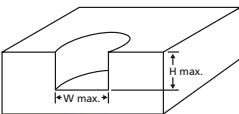

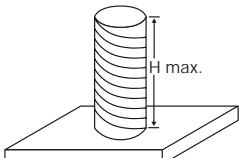
All dimensions in mm. Subject to technical changes.

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.

Selection 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

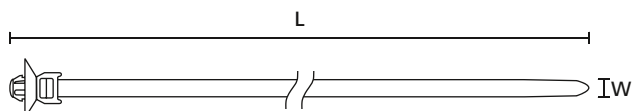


The Disc at the head of the T50SOSSFT6.5E protects the bore against dirt and splashes.

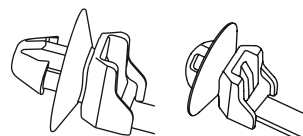


Material specification please see page 26.

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



T50SOSKSFT5.4E



T50SOSSFT6.5E

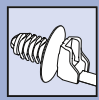
T50SOSKSFT6.5E

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
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
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	126-00086
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
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

All dimensions in mm. Subject to technical changes.

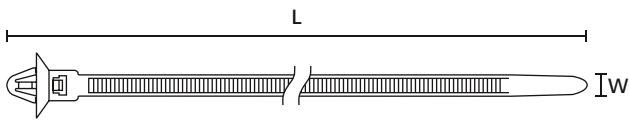
Recommended Tools										
	2	3	4	5	6	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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

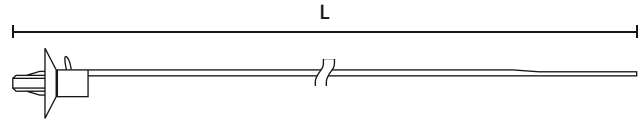


1-Piece Fixing Tie with Arrowhead, with Disc

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.

Recommended Tools										
	2	3	4	5	6	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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.

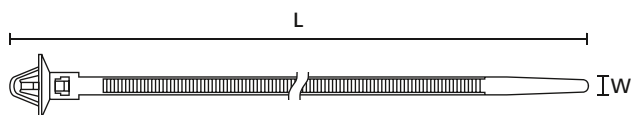
Features and benefits

- 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

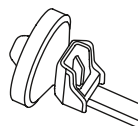


The additional seal protects against the ingress of moisture.

Fixing Ties, sealed, for Round Holes



One piece fixing tie with arrowhead and disc, standard design

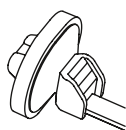


T50SOSSFT6.5E-MDL

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	6.25 - 6.75. 6.1 - 6.6 (hexagonal)	0.7 - 1.6	PA66HS	Natural (NA)	2-10	126-00065
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 26.

TYPE	Width (W)	Length (L)	Bundle Ø max.	Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T60XSOSST62X122EMD	5.5	133.6	25.0	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	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	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	16.0 x 22.0	6.5 x 13.0	0.6 - 2.0	PA66HS	Natural (NA)	2-12	126-00076

All dimensions in mm. Subject to technical changes.

Recommended Tools

	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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.

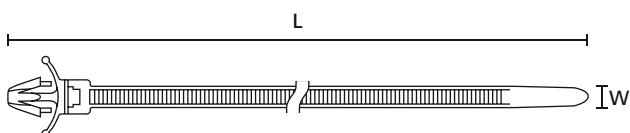
Features and benefits

- 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



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

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



T50SSL5

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
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-MOD		4.6	165.0	34.0	225	6.1	0.5 - 2.7	PA66HIRHS	Black (BK)	2-10	126-00293
T50SL6		4.6	165.0	34.0	225	6.3 - 7.5	0.5 - 2.5	PA66HS	Black (BK)	2-10	111-85360
T50SL7		4.6	165.0	34.0	225	6.9 - 7.1	0.8 - 2.5	PA66	Natural (NA)	2-10	111-85479
T50SSF		4.6	160.0	35.0	222	6.0 - 6.6	0.7 - 3.0	PA66	Natural (NA)	2-10	111-85739
		4.6	160.0	35.0	222	6.0 - 6.6	0.7 - 3.0	PA66HS	Black (BK)	2-10	126-00032
		4.6	160.0	35.0	222	6.0 - 6.6	0.7 - 3.0	PA66HS	Natural (NA)	2-10	126-01104
T50RSFM		4.6	205.0	45.0	225	6.0 - 6.6	0.7 - 3.0	PA66	Natural (NA)	2-10	111-85729
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.


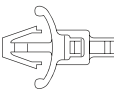
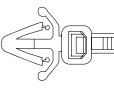
Recommended Tools										
	2	3	4	5	6	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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




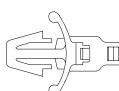
1-Piece Fixing Ties with Arrowhead, with Wings

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.
YQR10016		4.6	165.0	34.0	225	6.9 - 7.1	1.6 - 4.0	PA66	Grey (GY)	2-10	126-03000
RT50RSF		4.6	215.0	50.0	225	7.8 - 8.2	0.8 - 2.5	PA66	Black (BK)	2-10	115-07010
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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

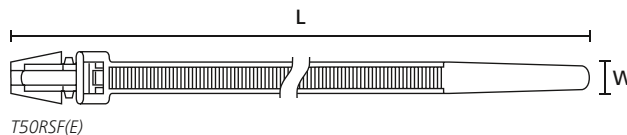
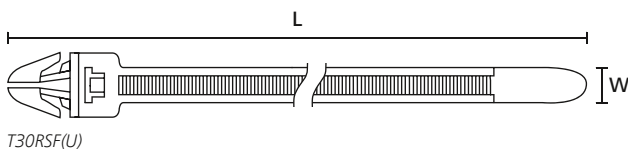
- Easy to assemble without the need for a tool
- Fixing tie with arrowhead without legs
- Arrowhead simply locks into place
- Cable tie head always situated in defined position



Material specification please see page 26.



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



TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T30RSF	3.6	158.0	31.0	135	4.8 - 5.6	0.9 - 2.4	PA66	Natural (NA)	2;4-6	126-00213
	3.6	158.0	32.0	135	4.7 - 5.5	0.9 - 2.4	PA66HS	Black (BK)	2;4-6	126-00211
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	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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

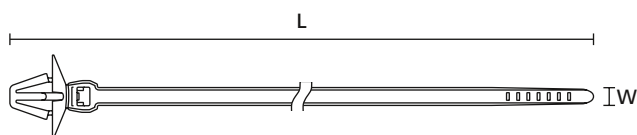
With a diverse range of fixing possibilities these ties are ideal for use in many different industries, including automotive, aerospace, white goods manufacture and panel building.

Features and benefits

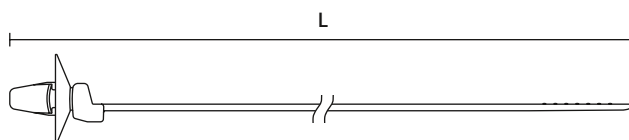
- Easy to install without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressures from various directions and minimises access of dust, dirt and water
- Cable tie head always situated in a defined position
- Features Material PEEK
- -55 °C to +240 °C operating temperature
- 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
	551	552	552	554

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 manufacturer, white goods manufacturer.

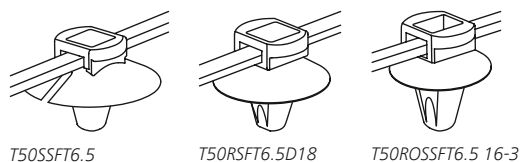
Features and benefits

- Pre-assembled 2-piece fixing tie with arrowhead foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressure from various directions



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

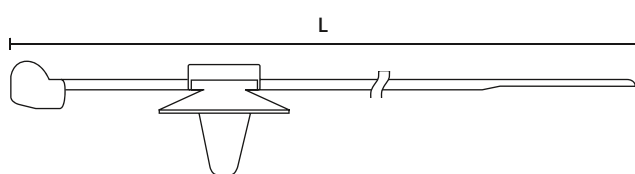
Being a two-piece assembly allows the tie head to be located in the most convenient position.



T50SSFT6.5

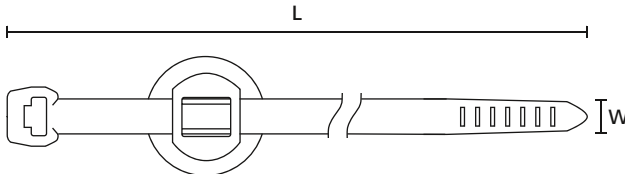
T50RSFT6.5D18

T50ROSSFT6.5 16-3



T50ROSSFT6.5-16-3

Material specification please see page 26.



T50ROSSFT6.5-16-3

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.
T50SOSSFT651620D	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
T50RSFT6.5D18	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
T50ROSSFT6.5 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	156-01697
T50RSFT6.5 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
T50RDHSFT6.5D18	4.7	210.0	45.0	225	18.0	6.5 - 6.8	0.4 - 1.6	PA66	PA46	Natural (NA), Grey (GY)	2-11;15	156-01720

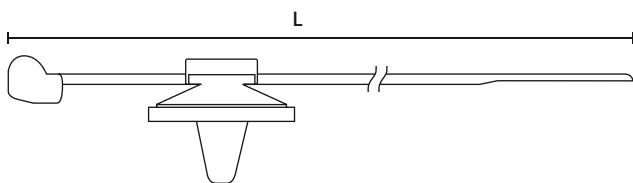
All dimensions in mm. Subject to technical changes.

Recommended Tools												
	2	3	4	5	6	7	8	9	10	11	15	
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9SST	
	551	551	552	552	554	555	556	557	554	554	560	

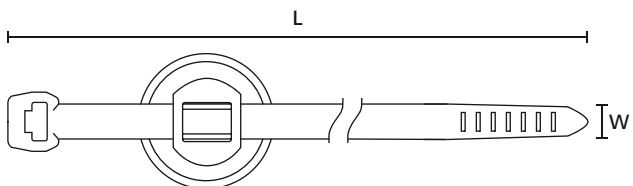
For more information on toolings please refer to the Application Tooling chapter.



2-Piece Fixing Ties with Arrowhead, with Disc



T50ROSSFT6.5-16-2MOD-MD



T50ROSSFT6.5-16-2MOD-MD



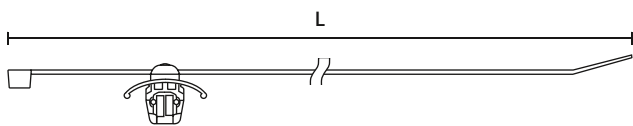
The additional seal protects against the ingress of moisture.

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

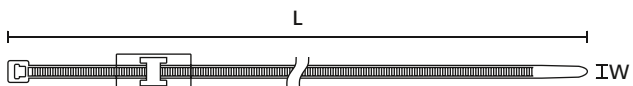
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50ROSS FT6.5-D16-2 MD	4.6	200.0	45.0	222	22.4	6.4 - 6.6	0.7 - 2.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-93100
T50ROSS FT6.5-16-2-MD	4.6	200.0	45.0	225	16.0	6.3 - 6.7	0.7 - 1.2	PA66HS	PA66HIRHS	Black (BK)	2-10	155-42002
T50ROSS FT6.5 16-3MD	4.6	200.0	45.0	225	16.0	6.1 - 7.0	2.5 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-37799
T50RAHD6-MS-MD	4.6	202.0	50.0	225	18.0	6.5 - 7.0	0.7 - 1.2	PA66HS	PA66HS	Natural (NA)	2-10	156-01193

All dimensions in mm. Subject to technical changes.

2-Piece Fixing Ties with Arrowhead, with disc for oval holes



T50RFT62x122



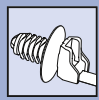
T50RFT62x122



T50RFT6OVAL for oval holes 6.3 x 12.2 mm.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
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

All dimensions in mm. Subject to technical changes.



2-Piece Fixing Ties with Arrowhead, with Disc

2-Piece Fixing Ties with Arrowhead, for parallel routing

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
- DSFT-version for parallel routing of two bundles



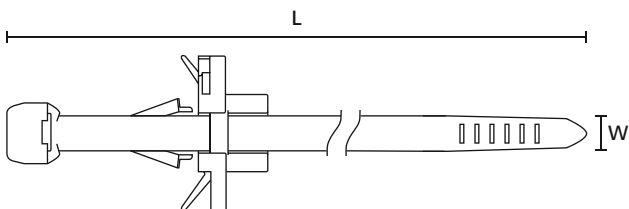
Other dimensions are available on request.



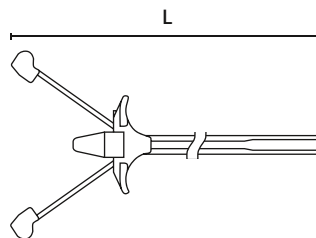
Material specification please see page 26.



T50SOSDSFT6.5 for parallel routing.



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	15.0	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	7	8	9	10	
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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, PEEK

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

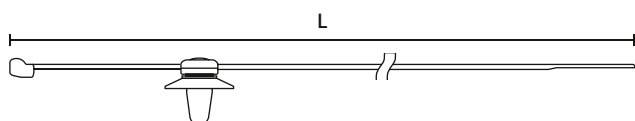
- Pre-assembled 2-piece fixing tie with arrowhead foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Arrowhead simply locks into place
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Features Material PEEK
- -55 °C to +240 °C operating temperature
- Excellent resistance against chemicals and gamma radiation



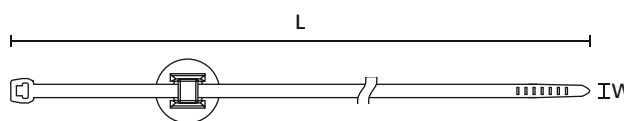
PEEK Fixing Ties can be used for small diameters from 1.0 mm.



Please find more PEEK products for your system solutions: PEEK Ties, see page 69. Screw Mount CTAM, see page 149.



PT2AP1SFT6.5



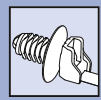
PT2AP1SFT6.5

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	7	8
	MK20	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P
	551	552	552	554	555	556

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

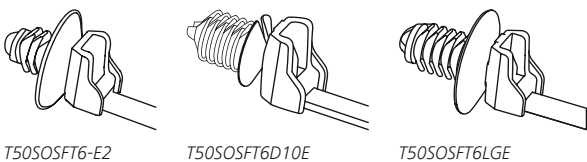
- Cable tie head always situated in defined position
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Fir tree foot part can be used for a variety of panel thicknesses
- Suitable for use within threaded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



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



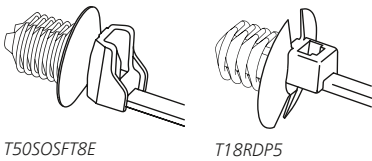
Material specification please see page 26.



T50SOSFT6-E2

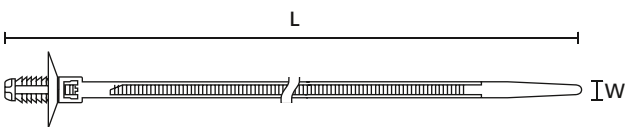
T50SOSFT6D10E

T50SOSFT6LGE



T50SOSFT8E

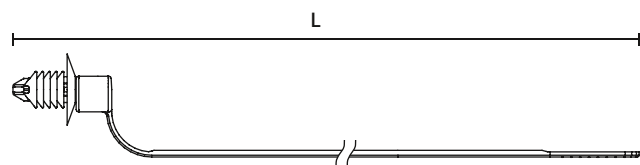
T18RDP5



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



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



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	160.0	35.0	180	16.0	6.3 - 7.0	0.6 - 4.2	PA66HS	Black (BK)	2-10	157-00085
	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

All dimensions in mm. Subject to technical changes.


Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

TYPE	Width (W)	Length (L)	Bundle Ø max.		Disc Ø	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
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	157-00228
T50SOSFT6LG-E2	4.6	167.0	35.0	180	16.0	6.1 - 6.9. 6.1 - 6.6 (hexagonal)	0.6 - 8.3	PA66HIRHS	Black (BK)	2-10	157-00242
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
T50SOSFT6E1	4.7	161.4	35.0	150	16.0	6.3 - 7.0	0.7 - 3.0	PA66HIRHS	Black (BK)	2-10	157-00033
	4.7	161.4	35.0	225	16.0	6.3 - 7.0	0.7 - 3.0	PA46	Grey (GY)	2-10	157-00059
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
T50SOSFT6LG-E4	4.9	165.0	31.0	200	22.0	6.3 - 7.0	6.3 - 7.0	PA66HS	Black (BK)	2-10	157-00237
T50ROSFTQM6	5.1	203.2	50.8	222	7.874	6.1	0.5 - 7.1	PA66HIRHS	Black (BK)	2-10	157-00112
T50ROSFT6LGU	5.1	220.0	50.0	225	15.9	6.5 - 7.2	0.6 - 8.5	PA66HS	Black (BK)	2-10	157-00052
OS170FT7LH	5.3	170.0	30.0	147	16.0	6.8 - 7.2	0.6 - 4.5	PA66	Black (BK)	3;9-12	157-00019
OS160FT6HEX	5.3	170.0	30.0	200	16.0	6.35 (hexagonal)	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
OS180FT7LH	5.3	180.0	30.0	200	16.0	6.5 - 7.0. 6.35	0.6 - 4.5	PA66	Grey (GY)	3;9-12	157-00068
	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

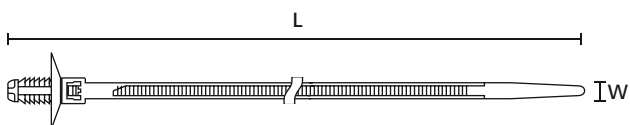
All dimensions in mm. Subject to technical changes.

1-Piece Fixing Ties with Fir Tree, with Disc


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




Material specification please see page 26.



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	7	8	9	10	11	12	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9HT	MK9P	
	551	551	552	552	555	556	557	554	554	558	

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

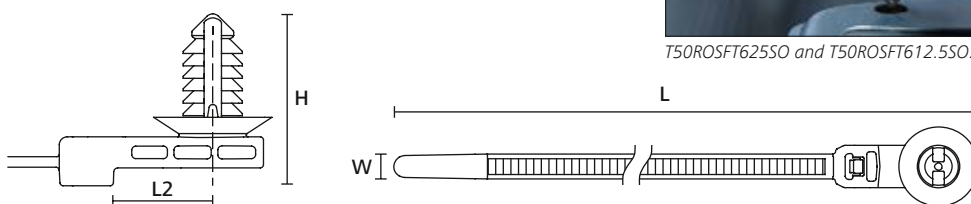
With Offset 12.5 and 25.0 mm

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	157-00197
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	7	8	9	10
	MK20	MK21	MK3SP	MK3PN5P2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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



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

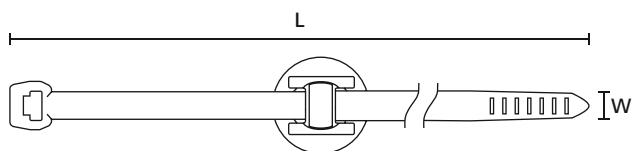
Primarily designed for fixing cable harnesses in the automotive industry, their simplicity and ease of use has resulted in these parts being used in other industries, for example aviation, switch gear manufacturer, white goods manufacturer.

Features and benefits

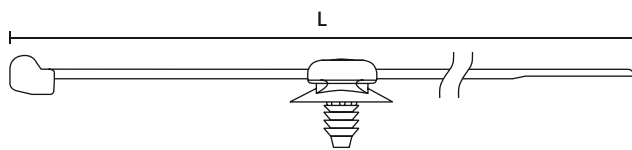
- Pre-assembled 2-piece fixing tie with fir tree foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Fir tree foot part can be used for a variety of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



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



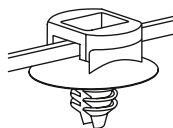
T50SOSFT5SD



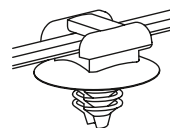
T50SOSFT5SD

i Other dimensions are available on request.

d Material specification please see page 26.



T30RFT5



T50SOSFT5SD

Fir Tree Parts FT3

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.
T18RFT3	2.5	100.0	20.0	80	13	M3	1.5 - 3.0	PA66HSUV	PA66HSW	Black (BK)	2;4-6	156-00338

All dimensions in mm. Subject to technical changes.

Fir Tree Parts FT5

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.
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	156-01316
	3.5	150.0	34.0	135	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-55850
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	200.0	45.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00025

All dimensions in mm. Subject to technical changes.

Recommended Tools

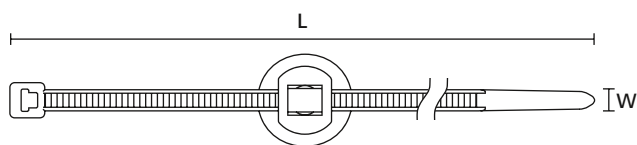
	2	3	4	5	6	7	8	9	10
	MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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

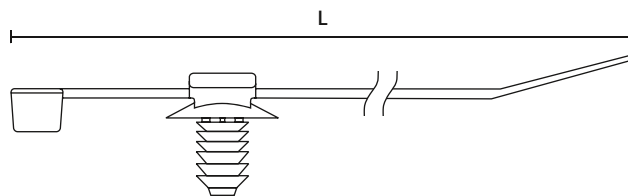


2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

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	145.0	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	145.0	35.0	230	16.0	6.4 - 7.1	0.8 - 6.0	PEEK	PA46	Beige (BGE), Grey (GY)	2;4-6	156-01336
T30RFT6	3.5	150.0	30.0	135	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-77950
T30RFT6LG	3.5	150.0	35.0	133	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-31090
T30RFT6SD	3.6	148.0	35.0	135	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-52690
T50SFT6LG1SD	4.6	160.0	30.0	225	16.0	6.5 - 7.0	0.6 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00154
T50ROSFT6	4.6	200.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00076
T50ROSFT6SD	4.6	200.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA46	PA46	Grey (GY)	2-10	156-00085
T50ROSFT6LG	4.6	200.0	45.0	225	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-8	150-31099
T50ROSFT6SD	4.6	200.0	46.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIR	Black (BK)	2-10	156-05902
T50RFT6LGS-D-HEX	4.6	202.0	45.0	225	16.0	6.25 - 6.75, 6.1 - 6.6 (hexagonal)	0.7 - 5.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-01705
T50RFT6	4.6	202.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA46	PA46	Grey (GY)	2-10	150-77938
	4.6	202.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66	Black (BK)	2-10	150-77941
T50RFT6LG	4.6	202.0	44.0	225	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-31091
T80IFT6LG	4.6	300.0	81.0	356	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-12	150-31096
T50RDHFT6	4.7	210.0	19.0	180	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-77936

All dimensions in mm. Subject to technical changes.

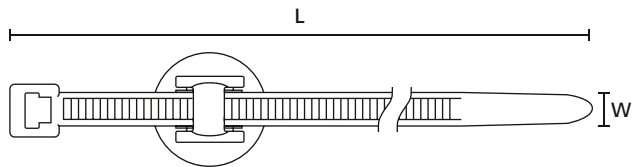
Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

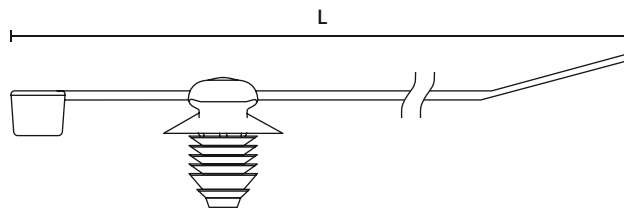


2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

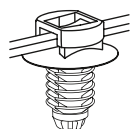
Fir Tree Parts FT7 - FT10



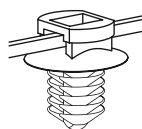
T50RFT8GSD



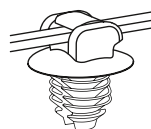
T50RFT8GSD



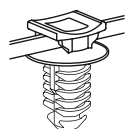
T50IFT7



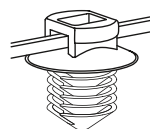
T50RFT8



T50RFT8GSD




T120IFT9



T50RFT10



Material specification please see page 26.

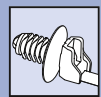
TYPE	Width (W)	Length (L)	Bundle Ø max.	 N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
V150RFT10	3.3	150.0	35.0	150	18.0	9.7 - 10.0	0.8 - 5.0	PA66	PA66HS	Black (BK)	2;4-6	156-01233
T30RFT7	3.5	150.0	35.0	135	16.0	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2;4-6;8	156-00057
T40RFT8GSD	4.0	180.0	40.0	180	16.0	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	16.0	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	111-85871
T50RFT10	4.6	200.0	45.0	225	18.0	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	111-85810
T50ROSFT10	4.6	200.0	45.0	225	18.0	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	156-00120
T50ROSFT8 GSD	4.6	200.0	45.0	225	16	M10	1.1 - 1.5	PA66	PA66	Black (BK)	2-10	156-01484
T50RFT7HD	4.6	200.0	45.0	225	21.6	6.2 - 7.2	0.8 - 7.0	PA46	PA46	Brown (BN)	2-10	156-00457
T50RFT8	4.6	202.0	45.0	225	16.0	7.7 - 8.0	0.8 - 6.0	PA66HS	PA66HS	Black (BK)	2-10	111-85880
T50RFT8GSD	4.6	202.0	45.0	225	16.0	8.0 - 8.5	1.5 - 4.0	PA66HS	PA66HIRHS	Black (BK)	2-10	133-00034
	4.6	202.0	45.0	225	16.0	8.0 - 8.5	1.5 - 4.0	PA46	PA46	Grey (GY)	2-10	156-00235
T50IFT7	4.6	300.0	81.0	225	16.0	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	150-00700
T50RDHFT8	4.7	210.0	19.0	-	16	7.7 - 8.0	180.0 - 6.0	PA66	PA66	Black (BK)	2-10	156-01612
T120IFT9	7.6	300.0	80.0	535	20.0	9.0 - 10.6	5.0 - 11.0	PA66HIR(S)	PA66HIR(S)	Black (BK)	3;9-12	156-00200
T120RFT9B	7.6	380.0	100.0	535	21.6	8.7 - 9.2	1.0 - 15.8	PA66HS	PA66HIRHSUV	Black (BK)	3;9-11;15	156-00071
T120RFT9A	7.6	380.0	100.0	535	21.6	8.7 - 9.2	1.0 - 6.5	PA66HS	PA66HIRHSUV	Black (BK)	3;9-11;15	156-00067
WSSFT9A	12.7	228.0	57.0	534	21.6	8.75 - 9.25	1.0 - 6.5	PA66HIRHSUV	PA66HIRHSUV	Black (BK)	3;9-12	156-00068

All dimensions in mm. Subject to technical changes.

Recommended Tools

	2	3	4	5	6	7	8	9	10	11	12	15
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P	MK9SST
	551	551	552	552	554	555	556	557	554	554	558	560

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



2-Pieces Fixing Ties with Deep Hole Anchor, with Disc, for Round Holes

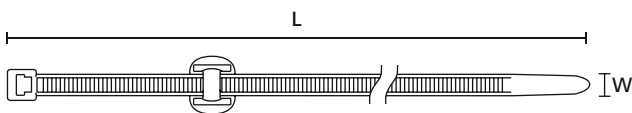
Deep Hole Anchor DHA5.5 - DHA8.4

Features and benefits

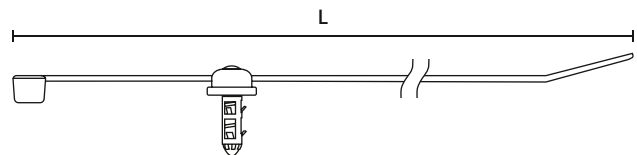
- Pre-assembled 2-piece fixing tie with deep hole anchor
- The high 'pull off' forces are due to the integrated metal clamp
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Suitable for use within blind holes with or without thread



DHA5.5x15 and DHA8.4x20 for blind hole applications.



Fixing tie with deep hole anchor



Fixing tie with deep hole anchor

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T50RDHA5.5x15		4.6	202.0	45.0	225	5.4 - 5.6	15.0	PA46	Grey (GY)	2-10	156-01203
T50RDHA8.4x20		4.6	202.0	45.0	225	8.3 - 8.5	20.0	PA46	Grey (GY)	2-10	156-01155

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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, DCT9 & DCT 11 are for 1/4" bolts).

Features and benefits

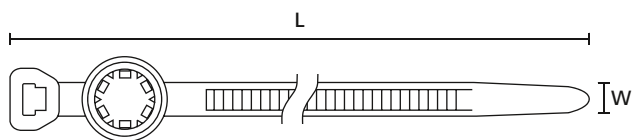
- Cable tie head always situated in defined position
- Easy to assemble without the need for a tool
- Bundle runs directly above weld stud with defined stand-off from the panel



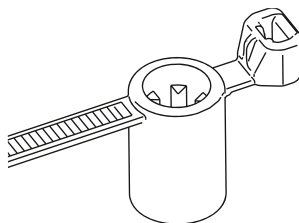
The T50SSBS50TE / T50SSBS60T-E allows very precise routing of cable bundles.



Material specification please see page 26.



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

All dimensions in mm. Subject to technical changes.

Recommended Tools									
	2	3	4	5	6	7	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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



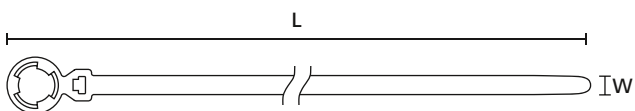
T50SOSSBD-M8/10.



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
T50SOSSBS5E-2		4.7	161.0	35.0	225	5.0	PA66HS	Black (BK)	2-10	157-00252

All dimensions in mm. Subject to technical changes.



1-Piece Fixing Ties for Weld Studs, moveable

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

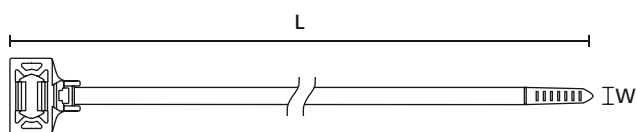
Primarily designed for use in the automotive industry, these parts can be used in a wide variety of applications, e. g. where weld studs or ISO bolts are used and cables need to be bundled and secured. (WS series, T120RSM, DCT9 & DCT 11 are for 1/4" bolts)

Features and benefits

- Cable tie head always situated in defined position
- Easy to 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, parallel installation using two fixing ties.



T50SOSWSP5E-2

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

All dimensions in mm. Subject to technical changes.

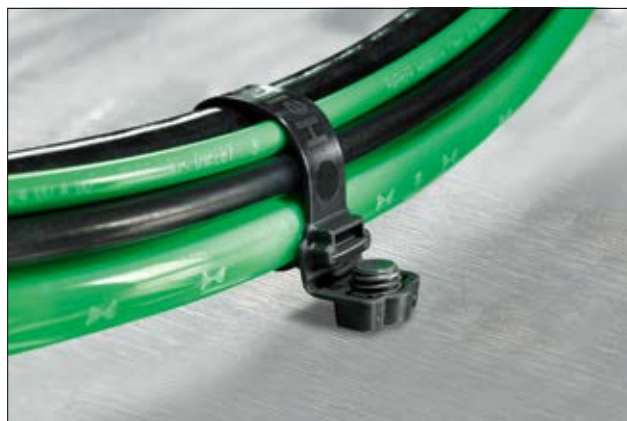
1-Piece Fixing Ties for Weld Studs, for Heavy Duty Applications

WS-Series for threaded studs

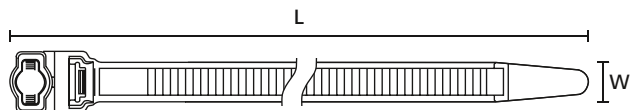
Wide strap stud-mounted cable ties are primarily designed for use in the automotive or truck industry.

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



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



Wide strap heavy duty stud mount cable ties.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Stud Ø	Material	Colour	Tools	Article-No.
WSS8MM	12.7	246.4	57.1	534	8.0	PA66HIRHSUV	Black (BK)	11-12	157-00034
WSI8MM	12.7	322.6	82.5	534	8.0	PA66HIRHSUV	Black (BK)	11-12	157-00035
WSR8MM	12.7	398.8	104.1	534	8.0	PA66HIRHSUV	Black (BK)	11-12	157-00036

All dimensions in mm. Subject to technical changes.

Recommended Tools											
	2	3	4	5	6	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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

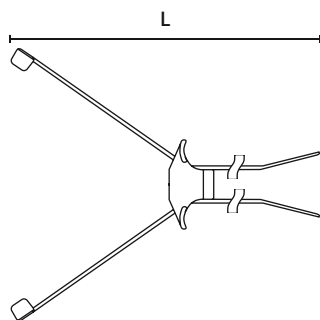


Fixing Ties for Weld Studs, for parallel routing

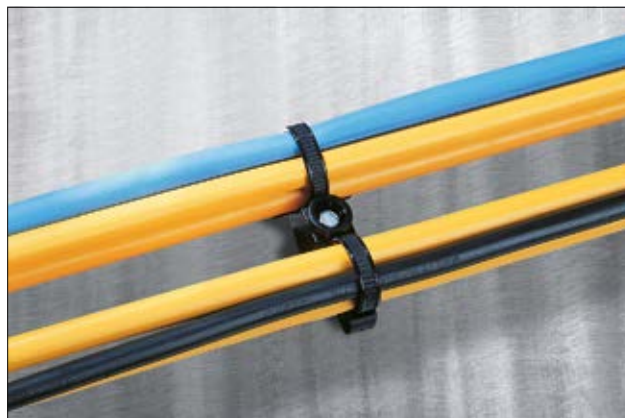
Many applications require cables to be run parallel to each other but separated to avoid abrasion. The double mounting base, when used with two cable ties allows this to be achieved simply and quickly.

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



DSBS5



Parallel fixation of two cables.




Other dimensions are available on request.



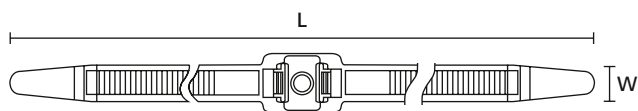
Material specification please see page 26.

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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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.

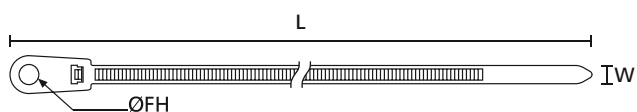
The tie is fitted to the panel first and then the cables can be added.

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 26.

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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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, just clip on per 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



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



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

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.

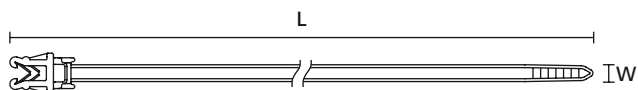
The double coating is applied initially with a zinc plate system followed by inorganic surface sealing. Naturally, no chromium (VI) is used in this

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 26.

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	7	8	9	10
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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

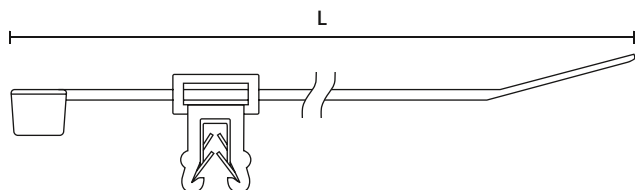


2-Piece Fixing Ties for Edges, 1.0 - 3.0 mm, Top Fixing

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;4-6	150-76090
T50SOSEC4A		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-76093
T50ROSEC4A		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-76099
T50ROSEC4A-W		4.6	200.0	45.0	225	PA66W	PA66W	Black (BK)	2-10	156-00570
T50REC4A		4.6	202.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-76091
T50RDHEC4A		4.7	210.0	19.0	225	PA66	PA66HIRHS	Natural (NA), Black (BK)	2-10	156-01721
T30REC4B		3.6	148.0	35.0	135	PA66HS	PA66HIRHS	Black (BK)	2;4-6;8	150-76080
T50SOSEC4B		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00109
T50ROSEC4B		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-76079
T18REC10SD		2.5	100.0	22.0	80	PA66HS	PA66HIRHS	Black (BK)	2;4-6;8	155-38304
T50SOSEC10		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00015
T50ROSEC10		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-05904
T18REC9SD		2.5	100.0	22.0	80	PA66HS	PA66HIRHS	Black (BK)	2;4-6;8	155-37104
T50SOSEC9SD		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00019
T50ROSEC9		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-05903
T50REC9SD		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-01280
Q50REC4A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01085
Q50REC4B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	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



Material specification please see page 26.



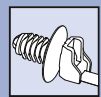
T50ROSEC23 - the cable bundle runs parallel with the edge.

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;4-6	156-00003
T50SOSEC5A		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-40593
T50ROSEC5A		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-40591
T50SOSEC5B		4.6	150.0	31.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-40583
T50REC5B		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-40582
T50ROSEC5B		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	150-40581
T18REC21		2.5	100.0	18.0	80	PA66W	PA66HIRHS	Black (BK)	2;4-6	156-01231
T50SOSEC21		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00017
T50ROSEC21		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00010
T80REC21		4.7	205.0	55.0	355	PA66HS	PA66HIRHS	Natural (NA), Black (BK)	2-10	156-01728
T50ROSEC22		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00011
T50REC22		4.6	200.0	45.0	225	PA66W	PA66HIRHS	Black (BK)	2-10	156-00576
Q50REC5A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01087
Q50REC5B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01088

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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



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;4-6	156-04600
T50SOSEC19		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-04601
T50ROSEC19		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-04602
T50SOSEC20		4.6	150.0	35.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00016
T50ROSEC20		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00020

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)	2-10	156-00006
T80REC23		4.7	205.0	55.0	355	PA66HS	PA66HIRHS	Natural (NA), Black (BK)	2-10	156-01729
T50ROSEC24		4.6	200.0	45.0	225	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00007

All dimensions in mm. Subject to technical changes.

Recommended Tools

	2	3	4	5	6	7	8	9	10
	MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9
	551	551	552	552	554	555	556	557	554

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

EdgeClip-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
T30ROSECO.5-2.5SPSVA		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	MK3PNSP2	EVO7
	551	552	552	554

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



2-Piece Fixing Ties for Edges, twistable

EdgeClip-Family

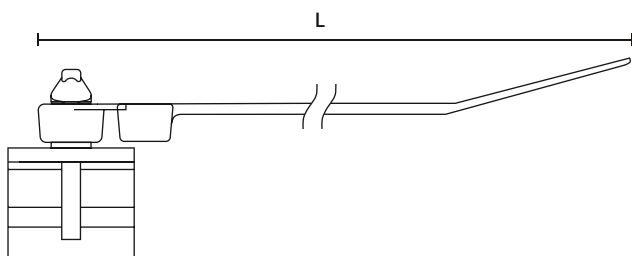
These cable ties and Edge Clip assemblies are ideal for use where holes are not acceptable or where due to temperature problems adhesives will fail. These assemblies are widely used for fixing and bundling cables, pipes and hoses within the automotive industry, harness making, panel building and electrical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




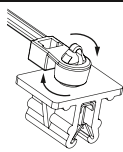
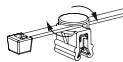
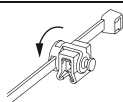
EdgeClip CBTO50R, rotatable 90°.




CBT30MR



Material specification
please see page 26.

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
CBTOS50RSTUD5		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	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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



Heavy Duty Harness Clips

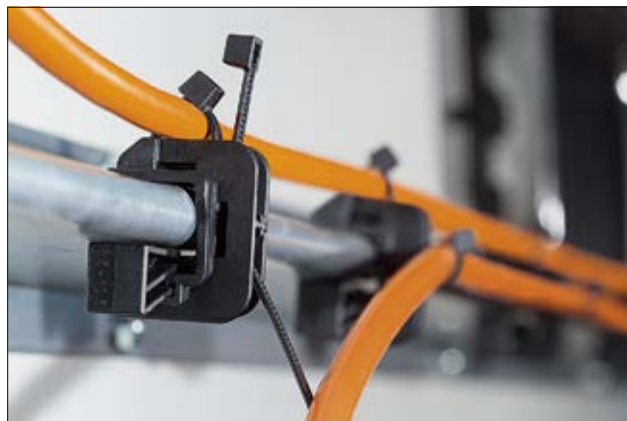
Beam Clamps

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.

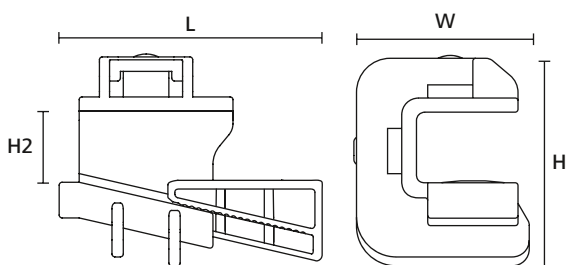
These heavy duty harness clips help to fix and secure cables, lines and hydraulic lines in truck, agriculture and railway vehicle construction, as well as in the ship building industry and industrial buildings.

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.



Beam Clamp, Front view

Beam Clamp, Side view



**Material specification
please see page 26.**

TYPE	Drawing	Width (W)	Length (L)	Height (H)	Height (H2)	Panel Thickness	Material	Colour	Article-No.
Beam Clamp D		28.6	46.2	36.7	12.5	5.5 - 7.0	PA6GF30	Black (BK)	151-00886
Beam Clamp B		28.6	46.2	36.7	12.5	7.0 - 8.5	PA6GF30	Black (BK)	151-00822
Beam Clamp C		28.6	46.2	36.7	12.5	8.5 - 10.5	PA6GF30	Black (BK)	151-00823
Beam Clamp D with foam		28.6	46.2	36.7	12.5	5.5 - 7.0	PA6GF30	Black (BK)	151-01188
Beam Clamp B with foam		28.6	46.2	36.7	12.5	7.0 - 8.5	PA6GF30	Black (BK)	151-01186
Beam Clamp C with foam		28.6	46.2	36.7	12.5	8.5 - 10.5	PA6GF30	Black (BK)	151-01187

All dimensions in mm. Subject to technical changes.

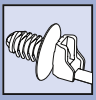
Little Newcomer Joins the EdgeClip-Family



We developed the first EdgeClip over 15 years ago for the automotive industry.



The newest member of the steadily growing EdgeClip-Family is the ideal fixing solution on edges. It can be used wherever space is limited and only a narrow or flat edge is available, or whenever gluing or drilling is not possible. Specially designed for all industries, for example white goods or solar.



2-Piece Fixing Ties with Pipe Clip

These fasteners interconnect two different bundles of goods, of various size and type. The mobility of the fixing tie provides a secure grip and protects the cables or bundles, even in difficult conditions.

Features and benefits

- Easy to assemble
- For routing of two different bundles
- For post-installation of additional cables for pre-assembled cable looms
- Ideally used in the automotive industry, but also in all industries where bundles, cables have to be routed and connected

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

Features and benefits

- Simply clip on 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



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





Other product variants are available in our Automotive catalogue.



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.
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	PA46	Grey (GY)	2-10	156-01385
T50SVCOC19-24.5		4.7	155.0	35.0	19.0 - 24.5	PA66HS, PA66HIRHS	Black (BK)	2-10	156-01369

All dimensions in mm. Subject to technical changes.

2-Piece Fixing Ties with Pipe Clip

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Attach to Ø	Material	Colour	Tools	Article-No.
T50ROC1B		4.6	202.0	45.0	4.0 - 10.0	PA66HS, PA66HIRHS	Black (BK)	2-10	156-00306

All dimensions in mm. Subject to technical changes.

2-Piece Fixing Ties with Pipe, twistable 90°

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	Attach to Ø	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T50RIAHC1TICR		4.6	200.0	50.0	3.0 - 13.0	225	PA66HIR(S)	PA66HIRHS	Black (BK)	2-10	156-05331
T50RIAHC2TICR		4.6	200.0	50.0	11.0 - 20.0	225	PA66HIR(S)	PA66HIRHS	Black (BK)	2-10	156-05330

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	2	3	4	5	6	7	8	9	10	
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	
	551	551	552	552	554	555	556	557	554	

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



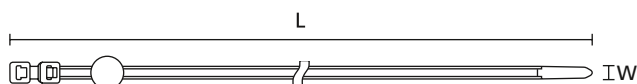
Material specification please see page 26.



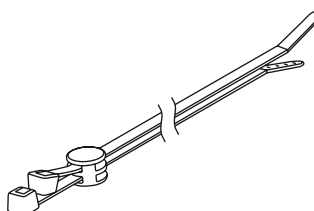
T120RCOUPLER can be used for parallel routing of two cable ties.



The second tie can be used for post-installations.



Two Cable Ties with Coupler



T120RCOUPLER



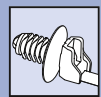
Fixing Element - COUPLER

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	7	8	9	10	11	12
	MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	EVO9	EVO9HT	MK9P
	551	551	552	552	554	555	556	557	554	554	558

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



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

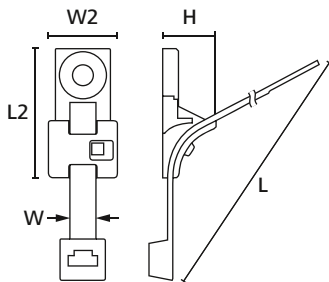
Used in the automotive and truck industry for harness fixing in the engine body, these parts offer solutions in many other industrial applications with difficult environment.

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	PA66HIRHS	Black (BK)	2-10	156-00410
T50RHDM8	4.6	20.0	200.0	37.5	16.0	50.0	M8	PA66HIRHS	Black (BK)	2-10	156-00412
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

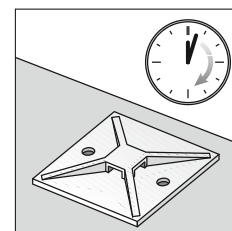
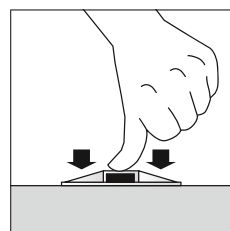
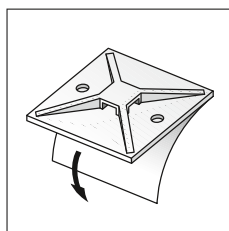
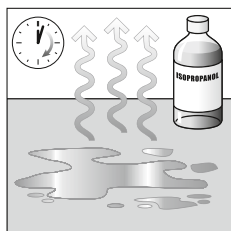
All dimensions in mm. Subject to technical changes.

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.

ADHESIVE		Adhesive Operating Temperature
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)

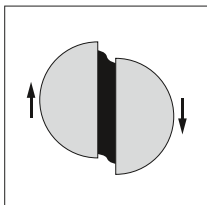
- Acrylic Foam Tape is made from a homogeneous system of high performance acrylic adhesive
- Very good initial bond
- High temperature resistance
- Adhesive offers design freedom, no need for bolts or screws
- Reduces the risk of corrosion, no need for boreholes



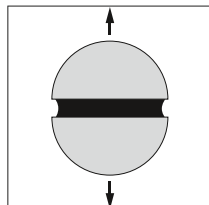
We will be happy to send you on request an up-to-date technical datasheet for whichever adhesive you are using.

- 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

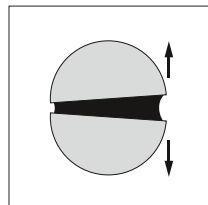
Load types on adhesive bonds



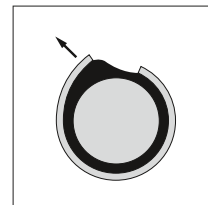
Shear resistance.
Shear force pulls the adhesive surfaces in opposite directions along a parallel line.



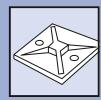
Tensile strength.
Tension force pulls surfaces apart perpendicular to the adhesive bond.



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

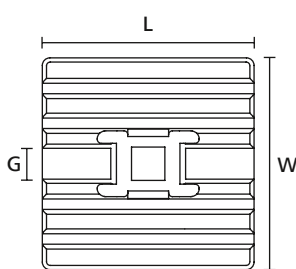
- Flexible Mount for round and angled surfaces
- FMB mounts with homogeneous system of acrylic adhesive
- Allows greater design freedom and offers uniform stress distribution along with weight reduction
- Adhesive with high cohesive strength combined with good weathering resistance
- Innovative fixing 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



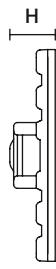
Flexible cable tie mount (FlexTack) in a concave application.



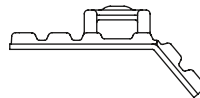
Material specification please see page 26.



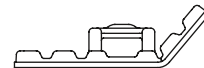
Flexible Adhesive Mount FMB4APT-I (plan view)



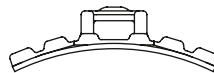
Flexible Adhesive Mount FMB4APT-I (side view)



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)

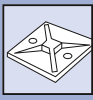


Flexible Adhesive Mount FMB4APT-I (concave, side view)

TYPE	Width (W)	Length (L)	Height (H)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
FMB4APT-I	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.



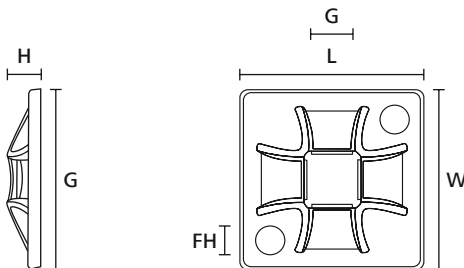
Please find more Q-Series products for your system solution on page 137, 147 and 492.



For more information on the types of adhesive please see page 134.



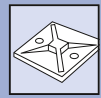
Material specification please see page 26.



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

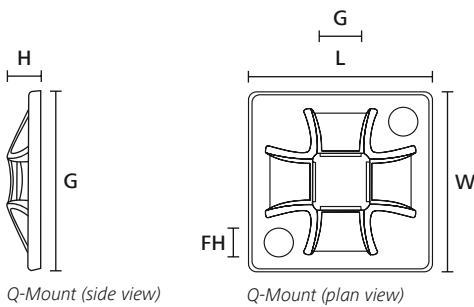
Q-mounts are ideally suited for holding our innovative Q-ties in place. They would perfectly fit to all applications where a reliable and durable fixation is required. Self adhesive versions of our Q-Mounts are suitable for applications where using screws, nuts, bolts or drilling holes to fix cables 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.

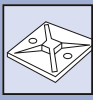
Q-Mount Series QM, screwable

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



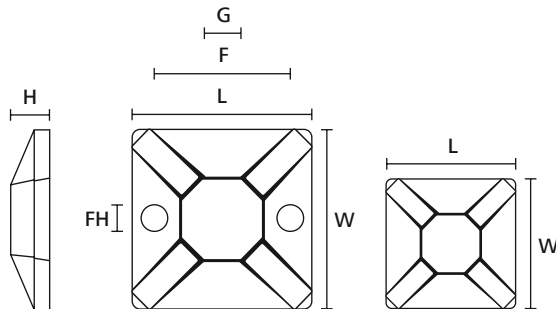
SolidTack products work on varnished and powder coated surfaces.



For more information on the types of adhesive please see page 134.



Material specification please see page 26.



MB3-MB5 (side view)

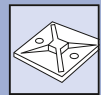
MB3-MB5 (plan view)

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-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.



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.

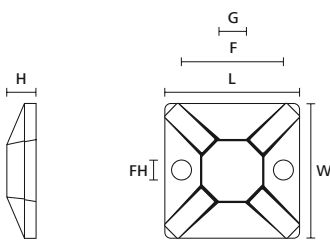
Features and benefits

- 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 Mounts with square design / screwable, self adhesive.

MB-Series square design, screwable



MB3-MB5
(side view)

MB3-MB5
(plan view)

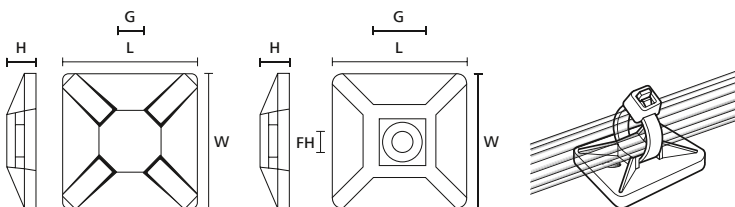


For more information on the types of adhesive please see page 134.

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)

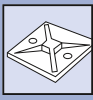
Cable Tie Mount MB3A in application

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.

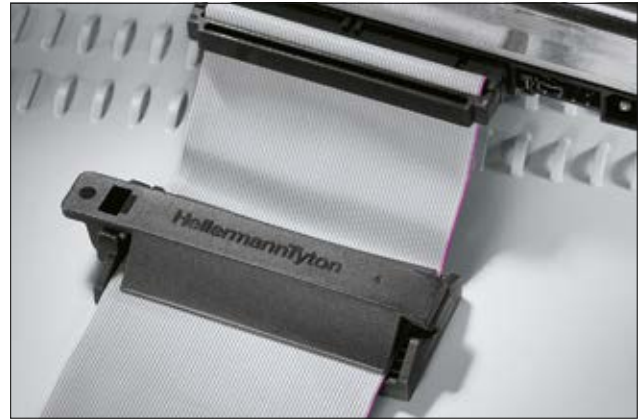


Flat ribbon cable mounts

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

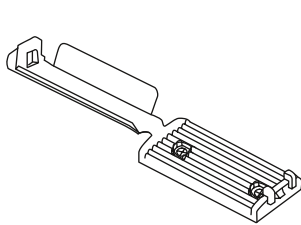
- One-piece fixing mount for flat ribbon cables
- Increased mounting area ensures proper bonding
- Quick and easy installation
- Can be released and re-used easily
- Flat cable is gently fastened due to soft wings



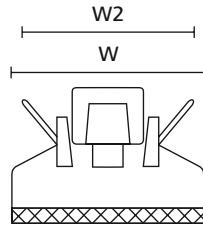
Based on extremely soft wings any flat cable is gently fastened.



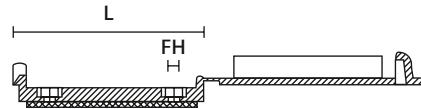
Material specification please see page 26.



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

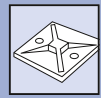
TYPE	Width (W)	Length (L)	Width (W2)	Hole Ø (FH)	Material	Colour	Adhesive	Article-No.
FKH25A	25.0	31.0	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15250
FKH30A	25.0	35.0	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15300
FKH50A	25.0	56.5	22.0	3.1	PA66HIR	Black (BK)	Acrylate	151-15500
FKH80A	25.0	86.0	22.0	3.1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



Screw Fixing Cable Tie Mounts

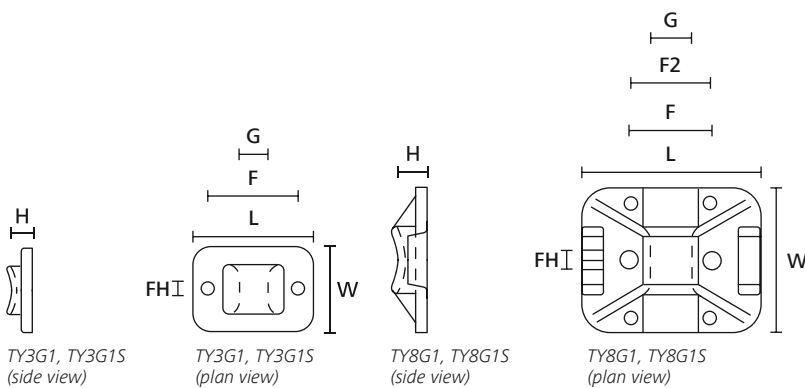
These products are designed for simple yet robust installation in a wide variety of applications. TY-Series mounts with rectangled design are particularly used in telecoms equipment, switchgear and control cabinets. With its small and compact design TY3G1 offers an easy and rapid assembly for many different 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 134.

TY-Series Rectangle Design, screwable

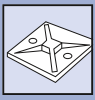
TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Fixing Hole Centres (F)	Fixing Hole Centres (F2)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
TY3G1	14.0	20.0	3.7	2.2	15.0	-	4.0	PA66	Natural (NA)	100 pcs.	151-21319
TY8G1	25.0	32.0	5.5	3.2	15.0	14.0	8.0	PA66	Natural (NA)	100 pcs.	151-21819

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

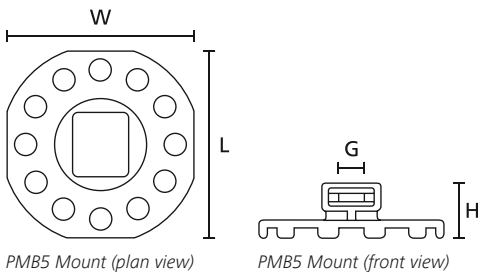
PMB5 pasty mount offers a fixing solution wherever screw fixing is not allowed. Due to a larger diameter the mount can even be installed onto uneven surfaces. PMB5 pasty mount is used in the railway industry as well as in the renewable energy industry. Further applications are in the ship building industry, 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 26.

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

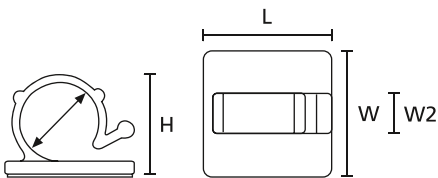
These mounts are ideal for use in applications which are difficult to access or for areas where self adhesive is the only possible fixing method and fixing holes would be unacceptable. The round self adhesive mounts can be used without cable ties. Offering process optimization in industries like automotive, 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)

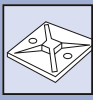
RA3-18 Series (plan view)



For more information on the types of adhesive please see page 134.

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

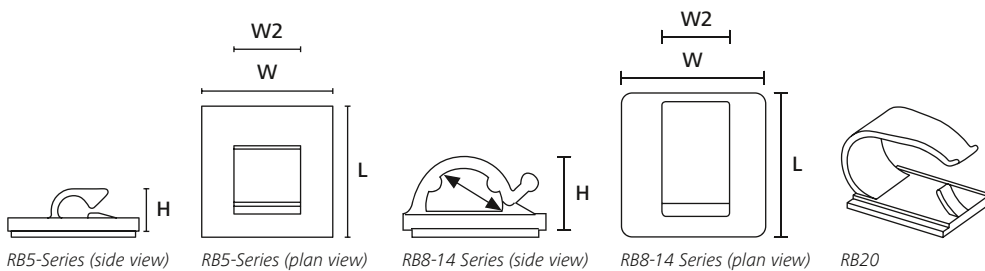
- Flat design to use in applications with limited space
- One-piece self adhesive mount for quick and easy installation
- Can be used without cable ties offering process optimization
- Different sizes for various bundle diameters available
- Cost effective with easy application on smooth, clean surfaces



Self adhesive one piece fixing mounts RB20 (l) and RB14 (r).

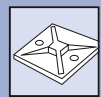


Material specification
please see page 26.



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.



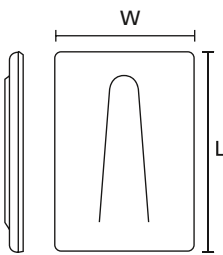
Mounts with flexible flat design

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 134.

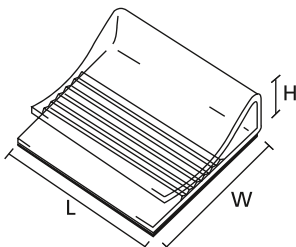
TYPE	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Adhesive	Article-No.
SAC0	15.0	20.0	3.0	ST	White (WH)	Acrylate	151-00033
SAC1	20.0	30.0	4.0	ST	White (WH)	Acrylate	151-00100
SAC2	25.0	35.0	8.0	ST	White (WH)	Acrylate	151-00200
SAC3	31.0	43.0	12.0	ST	White (WH)	Acrylate	151-00300
SAC4	38.0	51.0	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



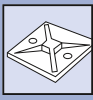
130100 Self Adhesive Clip



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



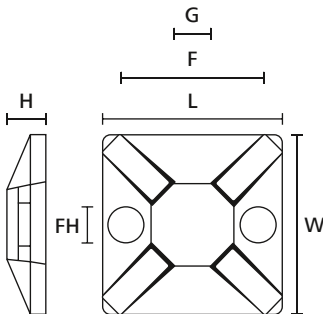
Detectable fixing solution containing of MCMB mount and MCT cable tie.



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 65.



MCMB Mount (side and plan view)

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.



Screw Fixing Cable Tie Mounts CTQM for limited space

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



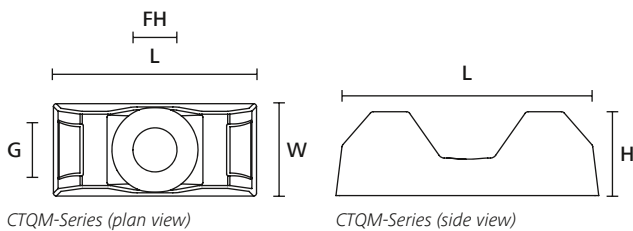
Q-Mount, CTQM 2-way entry, screwable.



Material specification
please see page 26.



Please find more Q-Series products
for your system solution on page
56, 137 and 492.

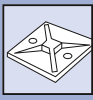


CTQM-Series (plan view)

CTQM-Series (side view)

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.



Screw Fixing Mounts

Cable Tie Mounts with curved design

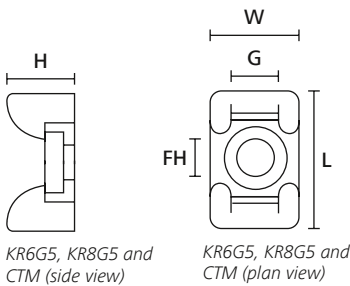
Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacture. They offer a very secure fixing and can be used with a wide variety of heavy duty cable ties up to 8.3 mm width.

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 51.



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.



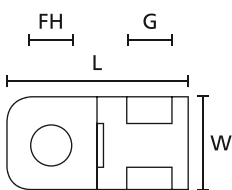
The CTAM mounts made of PEEK are the ideal complement for the PEEK tie on page 69.



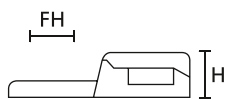
The CTAM mounts made of PA66MP+ are the ideal complement for MCTS ties on page 66.



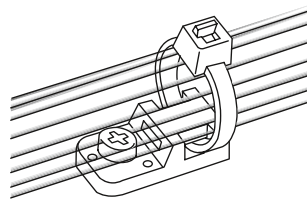
Can support quality assurance in the production of food stuffs, for example HACCP.



CTAM-Series (plan view)



CTAM-Series (side view)



CTAM-Series in application

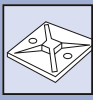
TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
CTAM1	10.2	20.4	5.1	4.3	5.0	PA66	White (WH)	100 pcs.	151-31109
CTAM2	10.2	20.4	5.1	5.2	5.0	PA66	White (WH)	100 pcs.	151-31203
CTAM1	10.2	20.5	5.5	4.3	5.0	PEEK	Beige (BGE)	100 pcs.	151-00757
CTAM2	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

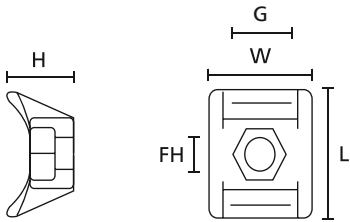
Designed specifically for holding heavier cable bundles, these mounting bases can be used in many industries from agriculture to truck manufacturing. They offer a very secure fixing and can be used with a wide variety of heavy duty cable ties up to 13 mm width.

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



Cable Tie Mounts LKC Series.



NY3256 (side view)

NY3256 (plan view)



**Material specification
please see page 26.**

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.

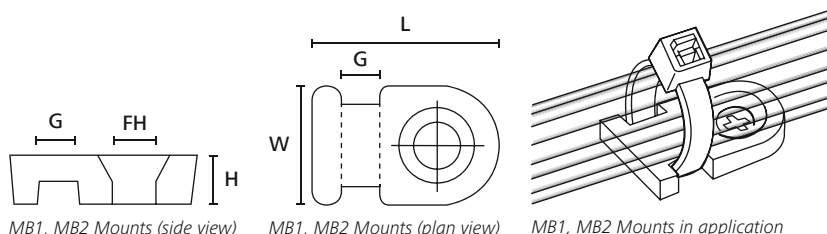
Features and benefits

- 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.

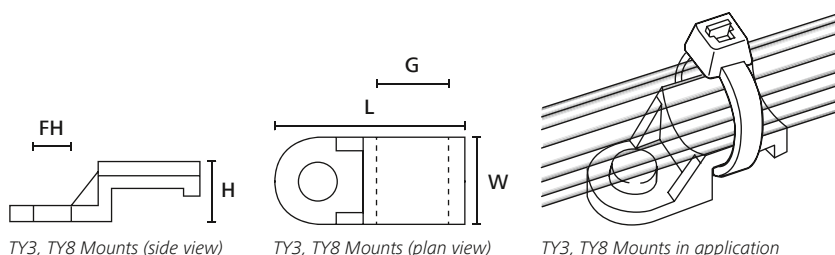
MB-Series Curved Design, screwable



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

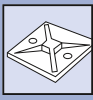
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

TY-Series Curved Design, screwable



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

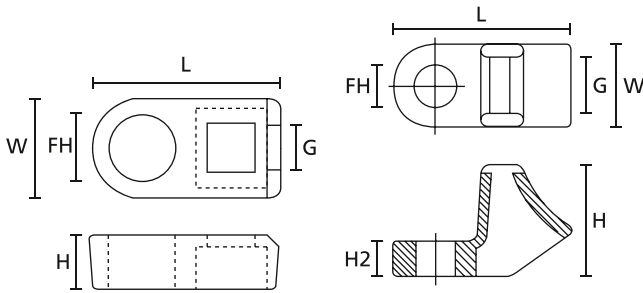
In areas with limited space these mounting bases allow the cable to be offset from the fixing hole, and can be installed in the equipment prior to the cable installation. A major cost saving can be made using these products as they will allow the use of many different sizes of standard cable ties without 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

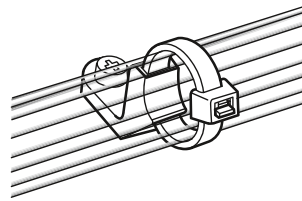


LKM, CL8 and FH cable tie mounts for applications with limited space.



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

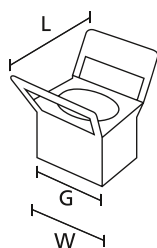
Designed specifically for holding heavier cable bundles these mounting bases can be used in many industries from agriculture to truck manufacture. LOK cable tie mounts offer a very secure fixing and can be used in combination with cable ties up to 9 mm width.

Features and benefits

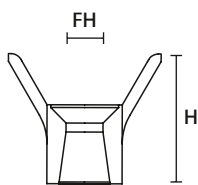
- Special design of fixing base gives additional support to cables
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration



LOK02 fixing base application.



LOK02 Fixing Base



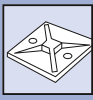
LOK02 Fixing Base
(front view)



**Material specification
please see page 26.**

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	PA6HIR	Black (BK)	151-80210

All dimensions in mm. Subject to technical changes.



Clamps with elastical loop

Cradle clamp

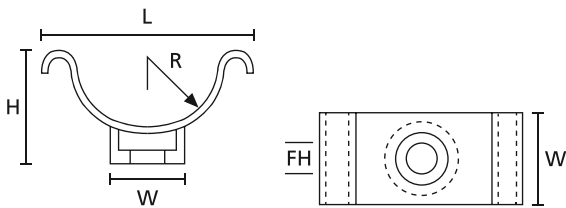
Simple and versatile method of bundling cables. These clamps consist of two parts. The clamping base for mounting onto a panel and the elastical loop.

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.

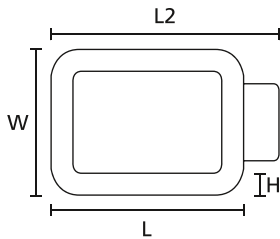


Cradle Clip (front view)

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)

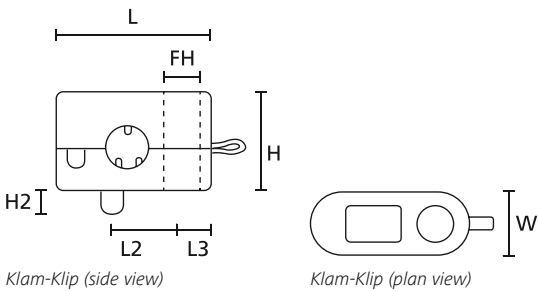
Strain relief clips for gripping cables up to 8.5 mm bundle diameter. Strain relief clip is simply attached to mounting surface with an M4 fixing screw.

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)

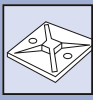
Klam-Klip (plan view)



**Material specification
please see page 26.**

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

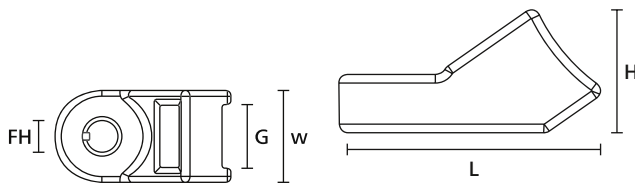
These heavy duty mounts (HDM) have been primarily designed for use in the automotive and truck industry. Nowadays they can be found in a variety of applications requiring heavy duty mounting in areas like the railway, defence and/or agriculture industry.

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 26.

Standard Torque Mounts

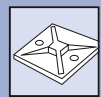
TYPE	Drawing	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
HDM25		19.0	35.8	16.7	6.2	12.7	PA66HIR	Black (BK)	100 pcs.	151-00437
HDM19		19.3	36.3	16.7	4.7	12.7	PA66HIRHS	Black (BK)	100 pcs.	151-00134
HDM312		19.3	36.3	16.7	7.8	12.7	PA66HIRHSW	Black (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	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

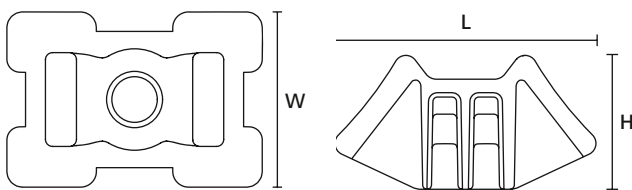
Heavy duty saddle mounts can be installed between two bundles to separate them and prevent chafing and wear. Fastened to a frame rail or mounting bracket, the special profile on the saddle mount provides a tight circumferential loop on large and small bundles. The saddle mount is an ideal assistant in 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



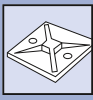
This saddle mount is installed between two bundles to separate them and prevent chafing and wear.



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 axial oval mount stands off bundles from frame rails and cross members to prevent them from rubbing and chafing. They can be perfectly used in combination with heavy duty cable ties up to 12.7 mm width – ideal to securely fix cables and wires in the railway and shipbuilding industry as well as in truck and agricultural vehicle construction.

Features and benefits

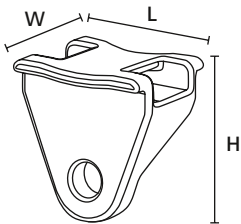
- Guides bundles securely above sharp edges
- For threaded bolts or screws
- Can be used in combination with heavy duty cable ties
- For cable ties up to 12.7 mm width



Axial oval mounts stand off bundles from frame rails and cross members to prevent them from rubbing and chafing.



Material specification please see page 26.



SAM83

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
SAM83	26.0	34.0	35.0	8.0	12.7	PA66HIRHS	Grey (GY)	500 pcs.	151-29600
SAOM82	26.0	34.3	35.0	8.0	12.7	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.



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.

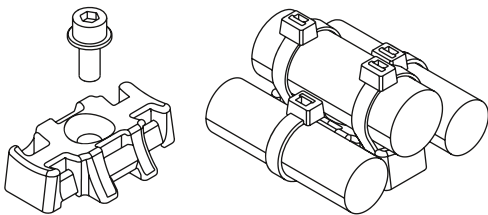
Features and benefits

- 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

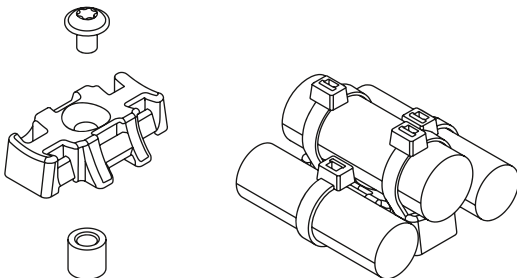


S3SB15CBM8 and S3CBM8.

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

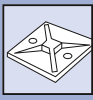


Suitable for welding studs (M8 internal bore & outer diameter 15 mm)

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

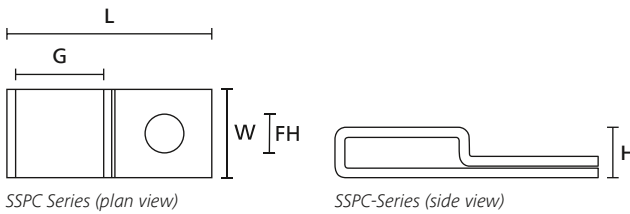


Stainless Steel P-Mount SSPC for use in arduous environments.

i The SSPC-Mounts can ideally be combined with the MBT cable ties on page 86–92 and with the MST and MLT cable ties on page 93, 94.

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

i Material specification please see page 26.



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

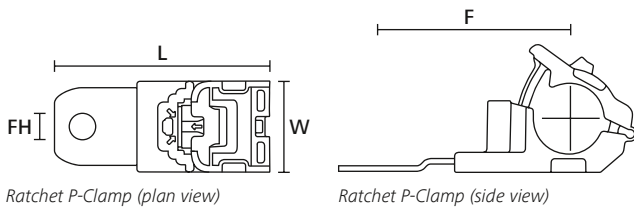
The Ratchet P-Clamp family offers versatility when managing wires, cables and hoses. The robust design and durable materials make it ideal for heavy duty applications, both in- and outdoors. The one-piece adjustable clamp can be closed by hand to the desired diameter. The release feature provides easy 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.

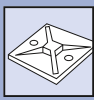


For bundle diameters from 6.2 mm to 13.7 mm

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

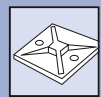
TYPE	Width (W)	Length (L)	Bundle Ø min.	Bundle Ø max.	Hole Ø (FH)	Fixing Hole Centres (F)	Variant	Material	Colour	Article-No.
RCD180SM8	34.9	181.5	36.0	51.0	M8	70.0	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01499
RCD180SM10	34.9	181.5	36.0	51.0	M10	70.0	180° Short	PA66HIRHSUV, ST, ZN	Black (BK)	151-01501
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

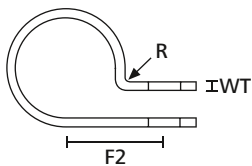
- Simple and secure pipe or cable fixation
- Can be combined with chloroprene rubber for vibration resistance
- Ideal for use in high temperature applications
- Suitable for applications needing strength of metal components



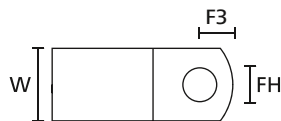
P-Clamps manufactured in polyamide, aluminium or aluminium with a chloroprene insert.



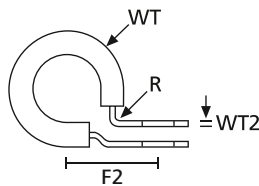
Material specification please see page 26.



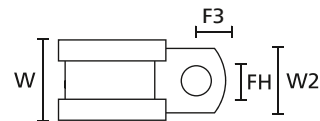
ALU P-Clamp (side view)



ALU P-Clamp (plan view)



ALU_C P-Clamp with chloroprene insert (side view)

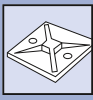


ALU_C P-Clamp with chloroprene insert (plan view)

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

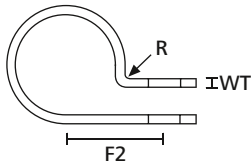
All dimensions in mm. Subject to technical changes.



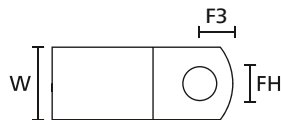


Aluminium P-Clamps

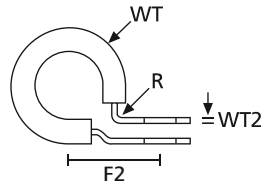
Alu-P-Clamp with / without chloroprene insert



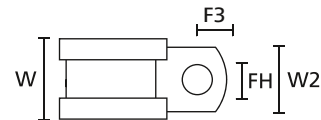
ALU P-Clamp (side view)



ALU P-Clamp (plan view)



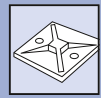
ALU_C P-Clamp with chloroprene insert (side view)



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

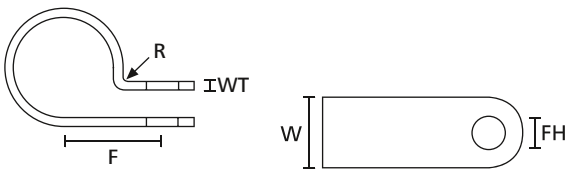
For permanent or semi-permanent cable fixings this range of plastic P-Clamps can be used in many industries. Their light weight makes them particularly suitable for use in areas such as aircraft and aerospace where minimising weight, but retaining a strong fixing, is vitally important.

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)

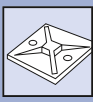
P-Clamp H1P - H18P (plan view)



**Material specification
please see page 26.**

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.



Fixing Elements with Fir Tree, for Distance Routing

Saddle Mount

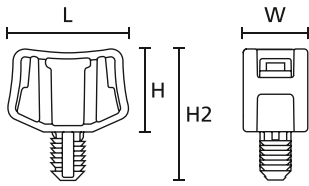
These heavy duty fixing offers excellent performance for ship building and the truck and construction vehicle industries.

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

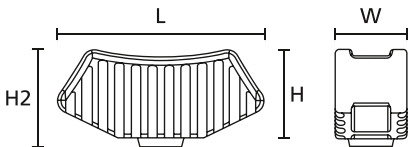
These heavy duty fixing offers excellent performance for ship building and the truck and construction vehicle industries.

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



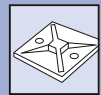
Saddle Mount MSBT120.



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.



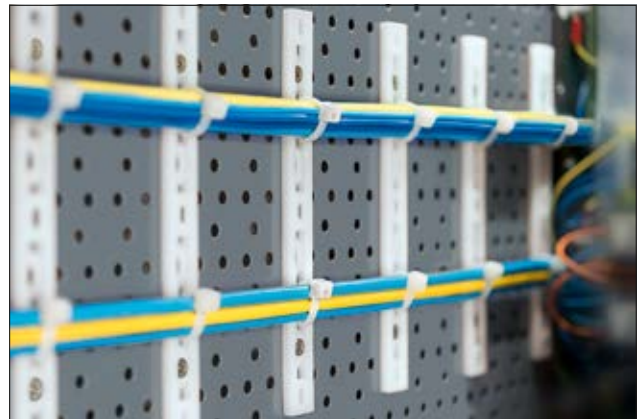
Mounting Plates for Screw Fixing

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

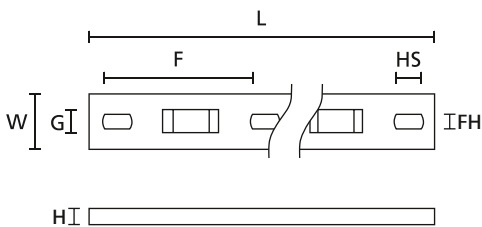
- Allow multiple cables to run in parallel
- Simple to fix with two screws
- Cables are fixed by using a cable tie through any combination of the available slots



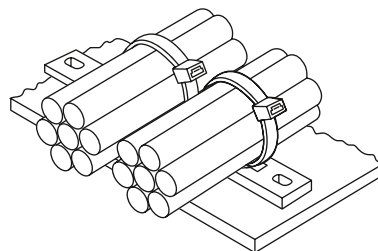
MSMP mounting plates, screwable.



Material specification please see page 26.



Mounting plates MP and MSMP (plan and side view)



Mounting plates in application

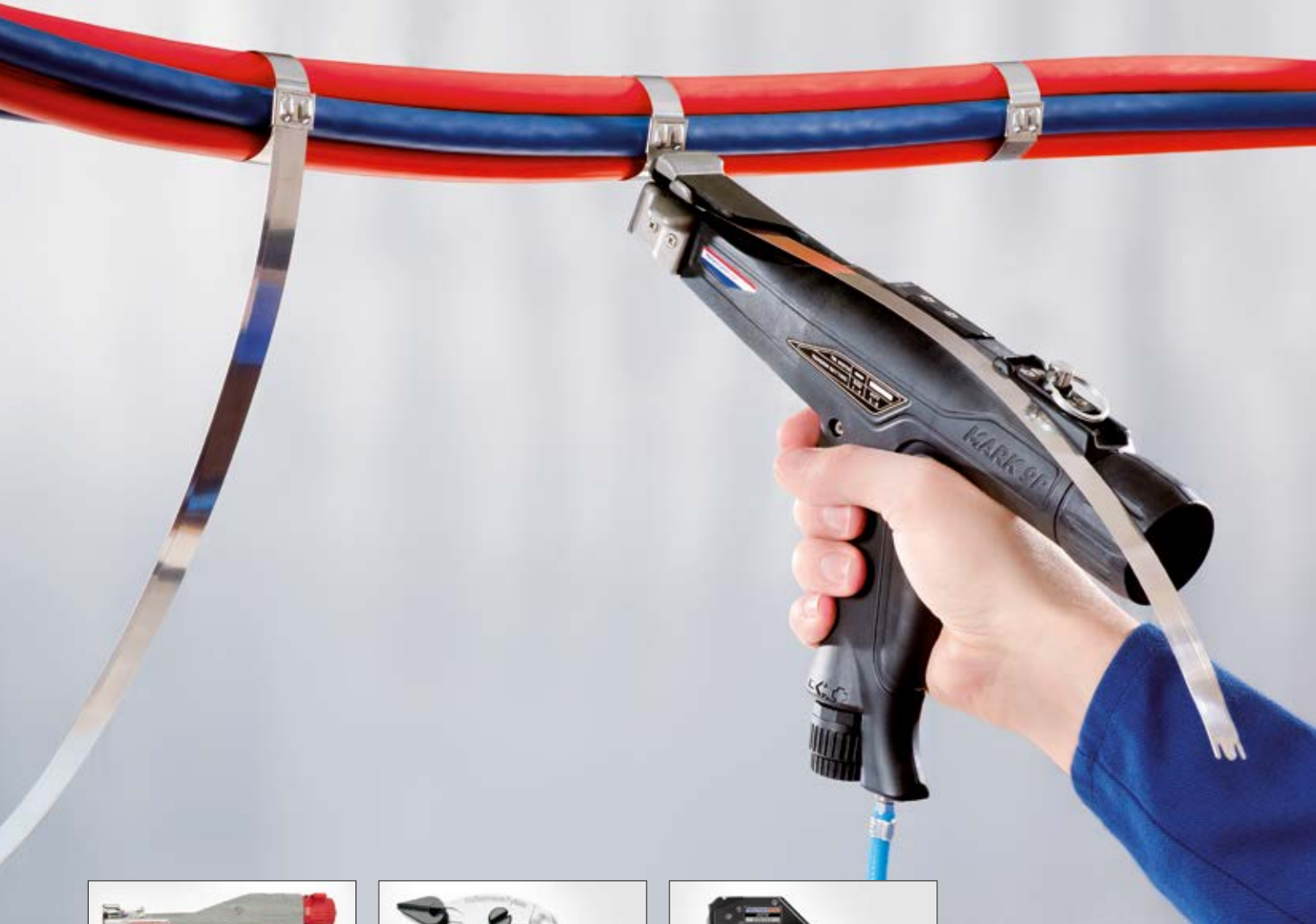
TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	No. of bundles	Material	Colour	Pack Cont.	Article-No.
MP2M3	12.7	76.2	3.2	3.7	5.2	2	PA66	Natural (NA)	100 pcs.	151-24219
MP3M3	12.7	108.0	3.2	3.7	5.2	3	PA66	Natural (NA)	100 pcs.	151-24319
MP4M3	12.7	139.8	3.2	3.7	5.2	4	PA66	Natural (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

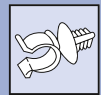
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.



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

Manual and pneumatic processing tools:
The professional way to fasten metal cable ties





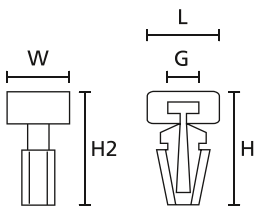
Cable Fixing Cradle

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 26.

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.

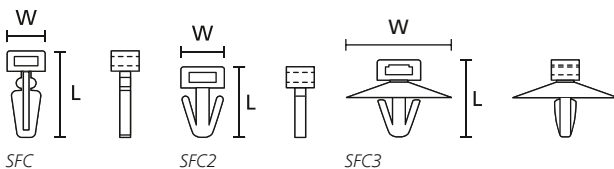
Arrowhead Cradle

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

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.

Bundling Clips for Edges

Features and benefits

- Easy assembly, just shuffle manually
- Designed for edges of 1 - 3 and 1.5 - 4 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, AT2000 or AT2000CPK



Cables and leads can be fastened with a cable tie or adhesive tape to the bars of the mounting element.



EC17 - Cables and leads can be fastened with adhesive tape to the bar of the mounting element.

Bundling Clips for Weld Studs, moveable

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



TCSB5CYCC: Tapebar, Stud Retainer and ConnectorClip in just one article.



The slim line BC series is particularly compact and flexible.

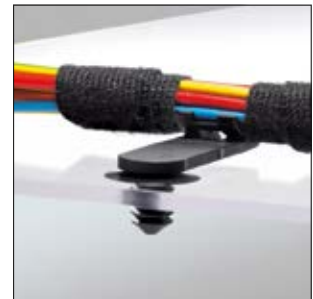
Bundling Clips for round and oval holes

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



Designed for defined distance of bundles to the hole.



COW Clip used as tape-on clip.



Material specification please see page 26.



Other product variants are available in our Automotive catalogue.



Bundling Clips for Edges

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

All dimensions in mm. Subject to technical changes.

Bundling Clips for Weld Studs, moveable

TYPE	Drawing	Length (L)	Length (L2)	Stud Ø	Material	Colour	Article-No.
BC30		55.0	30.0	5.0	PA66HIRHS	Black (BK)	151-00016
BCUW55-D5-25		50.0	-	5.0	PA66HIRHS	Natural (NA)	151-00851

All dimensions in mm. Subject to technical changes.

Bundling Clips for round and oval holes

TYPE	Drawing	Length (L)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
TC4FT6LG		37.0	6.3 - 7.0	0.6 - 5.1	PA66HIRHS	Black (BK)	151-00215
WICKELCLIP-VDS		40.0	6.3 x 9.0	0.6 - 2.5	PA66HIRHS	Black (BK)	155-16301
STAND-OFF-CLIP-2		40.0	6.5 - 6.8	0.4 - 1.6	PA66HIRHS	Black (BK)	155-01600
BCSFT6.5 16-3MD		55.0	6.3 - 6.7	1.5 - 3.0	PA66HIRHS	Black (BK)	155-11601
BCOWFT6M		27.3	6.5 - 7.0	0.6 - 3.5	PA66HIRHS	Natural (NA)	151-00790

All dimensions in mm. Subject to technical changes.



Connector Clips

The connector clips used here have been designed for electronic cables and cable sets used in the automotive industry.

Connector Clips for oval holes

Features and benefits

- Connector easily installed by simply pushing into place
- Connection can be released non-destructive
- Easy assembly, just shuffle manually
- Oval connectors offer twist protection



For a secure fixation simply push the connector by hand on our Connector Clip YCCFT62x122.

Connector Clips for Edges

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 snug fit almost all types of connector



EdgeClip EC6mod.

Connector Clips for round holes

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



Connector Clips are available for many different connector types and fixing varieties.



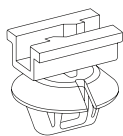
Material specification
please see page 26.



Other product variants are available in our Automotive catalogue.

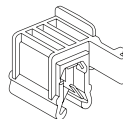
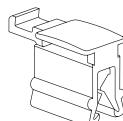


Connector Clips for oval holes

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
CCSFT7x12		7.0 x 12.0	0.8 - 2.0	PA66HIRHS	Grey (GY)	151-00222

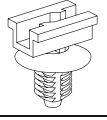
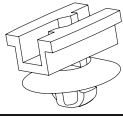
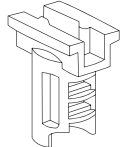
All dimensions in mm. Subject to technical changes.

Connector Clips for Edges

TYPE	Drawing	Panel Thickness	Material	Colour	Article-No.
EC42		1.5 - 4.0	PA66HIRHS	Black (BK)	151-00429
EC6mod		1.0 - 3.0	PA66HIRHS	Black (BK)	151-00464

All dimensions in mm. Subject to technical changes.

Connector Clips for round holes

TYPE	Drawing	Hole Ø (FH)	Stud Ø	Panel Thickness	Material	Colour	Article-No.
FT6LG-AMP		6.5 - 7.0	-	0.7 - 6.0	PA66HIRHS	Black (BK)	155-03800
CC-PAEKSFT6.5PT1.7-2.3		6.3 - 6.7	-	1.7 - 2.3	PA66HIRHS	Black (BK)	151-00840
CCSB55		-	5.0	-	PA66HIRHS	Black (BK)	151-01196

All dimensions in mm. Subject to technical changes.



Automatic bundling

Bundling Clips for Automatic Cable Tying Systems

Features and benefits

- Optimized for use automatic cable tying systems
- Easy to apply
- The fixing elements can be tied automatically with Autotool 2000 family and Autotool System 3080



Fixing Elements for Automatic bundling.

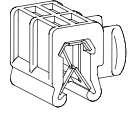
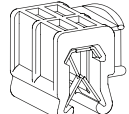
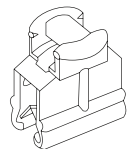
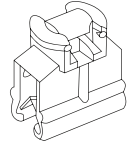
TYPE	Drawing	Panel Thickness	Hole Ø (FH)	Colour	Material	Article-No.
ATSBCEC35		1.5 - 4.0	-	Black (BK)	PA66HIRHS	102-68355
ATSBCSFT6.5		2.3 - 3.3	6.3 - 6.7	Black (BK)	PA66HIRHS	102-69066
ATSBCSFT6.5-MD		2.0 - 3.0	6.3 - 6.7	Black (BK)	PA66HIRHS	102-69065
ATSBCEC36		1.5 - 4.0	-	Black (BK)	PA66HIRHS	102-68365
ATSBCEC37		1.5 - 4.0	-	Black (BK)	PA66HIRHS	102-68375
ATSBCT6LG		0.6 - 5.1	6.3 - 7.0	Black (BK)	PA66HIRHS	102-67065
ATSBCEC38		1.5 - 4.0	-	Black (BK)	PA66HSW	102-68385
ATSBCKSFT6.5		0.7 - 1.3	6.3 - 6.7	Black (BK)	PA66HIRHS	102-69067
ATSBCK2KSFT6.5		1.7 - 2.3	6.3 - 6.7	Black (BK)	PA66HIRHS	102-69068
ATSBBCOWSFT6.5		2.3 - 3.3	6.3 - 6.7	Grey (GY)	PA46	102-69080
ATSBBCSFT6.5PT2.3-3.3		2.3 - 3.3	6.3 - 6.7	Grey (GY)	PA46	102-69089

All dimensions in mm. Subject to technical changes.



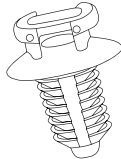
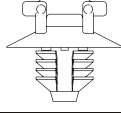
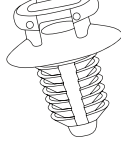

Automatic bundling

Edge Clips for Automatic Cable Tying Systems

TYPE	Drawing	Panel Thickness	Material	Colour	Article-No.
ATSEC38		1.5 - 4.0	PA66HIRHS	Black (BK)	102-68380
ATSEC37		1.5 - 4.0	PA66HIRHS	Black (BK)	102-68370
ATSEC35		1.5 - 4.0	PA66HIRHS	Black (BK)	102-68350
ATSEC36		1.5 - 4.0	PA66HIRHS	Black (BK)	102-68360

All dimensions in mm. Subject to technical changes.

Fir Tree Clips for Automatic Cable Tying Systems

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
ATSFT5LG		4.5 - 5.0	0.7 - 8.0	PA66HIRHS	Black (BK)	102-67050
ATSFT6		6.3 - 7.0	0.8 - 3.0	PA66HIRHS	Black (BK)	102-67060
ATSFT6LG		6.5 - 7.1	0.6 - 6.0	PA66HIRHS	Black (BK)	102-67062
ATSFT8GSD		8.0 - 8.5	1.5 - 4.0	PA66HIRHS	Black (BK)	102-67081

All dimensions in mm. Subject to technical changes.



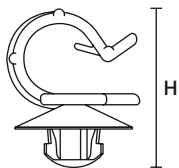
Fixing Elements for Tubes and Harnesses

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

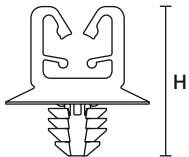
All dimensions in mm. Subject to technical changes.

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

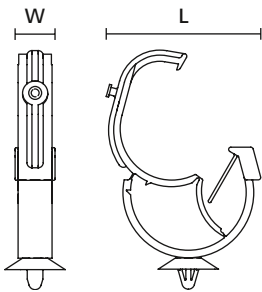
- Push and click closure for fixation of wires
- Clip is clicked into a specific hole
- AHC()SS und AHC()SB can be pushed onto a 5.0 mm stud



Automatic Harness Clip open.



Automatic Harness Clip closed.



AHC()AH



Material specification please see page 26.

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

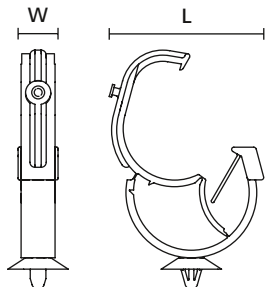
All dimensions in mm. Subject to technical changes.





Fixing Elements for Tubes and Harnesses with Automatic Locking Feature

AHC-Series



AHC()AH



Material specification
please see page 26.

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

IAHC-Series, Connectable

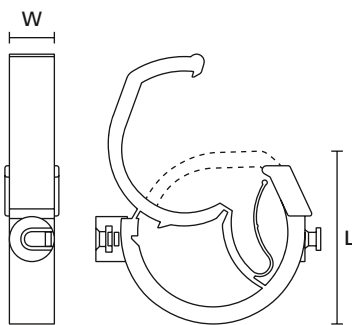
Offering a simple and secure method of attaching cables to panels. Originally designed for the automotive industry, these products are used in a wide range of applications with sheet metal panels across various industries.

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(J)T can only be connected with another IAHC element



IAHC(J)AH in combination with an IAHC(J)T.



IAHC(J)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.

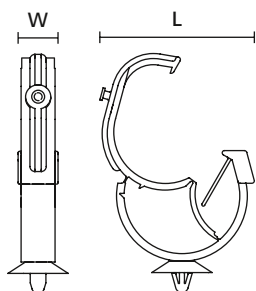


Fixing Elements for Tubes and Harnesses with Automatic Locking Feature, connectable

IAHC-Serie, Connectable, with Arrowhead



Material specification please see page 26.



AHC()AH



IAHC elements can be connected.

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

DTC - Double Tube Clip, rotatable 360°

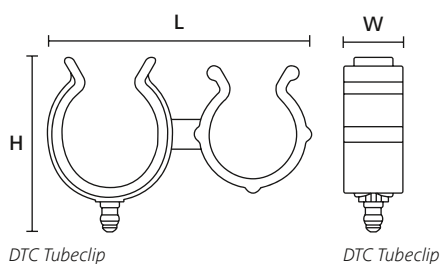
These Pipeclips interconnect two different bundles of goods, of various size and type. The mobility of the fixing tie provides even in difficult conditions, such as vibrations, a secure grip and protects the cables or bundles.

Features and benefits

- Fixing clip offers full 360° rotation
- For routing of two different bundles
- Simply clip on a wire or hose
- Suitable for post-installation of bundles



DTCs for easy assembly of rotatable routed tubes and harnesses.



TYPE	Width (W)	Length (L)	Height (H)	Ø (D)	Ø (D2)	Material	Colour	Article-No.
DTC18x5-S	12.0	37.1	26.0	18.0	5.0	PA66HIRHS	Black (BK)	156-01311
DTC18x6.5-S	12.0	38.1	26.0	18.0	6.5	PA66HIRHS	Black (BK)	156-01312
DTC18x9-11-S	12.0	43.0	26.0	18.0	11.0	PA66HIRHS	Black (BK)	156-01313
DTC18x18-20-S	12.0	54.0	35.6	18.0	20.0	PA66HIRHS	Black (BK)	156-01314
DTC18x28-S	12.0	63.0	45.0	18.0	28.0	PA66HIRHS	Black (BK)	156-01315

All dimensions in mm. Subject to technical changes.



Wire Push In Clips

WPC-Series

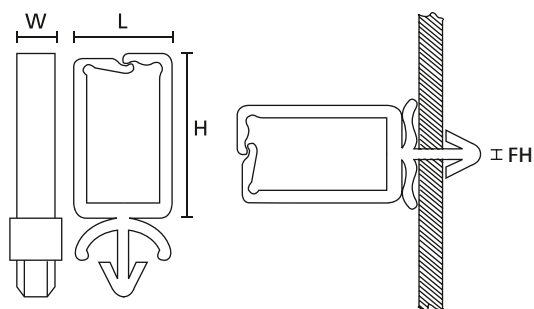
With the increased complexity of electronic and electrical installations the use of the WPC clips enables cables to be installed using the minimum amount of space, a typical application would be in the frames / rails of control cabinets or within the white goods industry.

Features and benefits

- Accept single or multiple wires
- Simply push wires into place
- Self-locking to prevent accidental removal
- Arrowhead design for simple and secure installation
- Access to panel only needed from one side



WPC – Wire Push In Clip.



WPC Wire Push In Clip (side view, front view, in application)



**Material specification
please see page 26.**

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Panel Thickness	Material	Colour	Article-No.
WPC5	5.3	15.0	12.7	4.7	0.8 - 4.0	PA66	Natural (NA)	151-75059
WPC10	5.3	15.0	17.7	4.7	0.8 - 4.0	PA66	Natural (NA)	151-75109
WPC15	5.3	15.0	22.7	4.7	0.8 - 4.0	PA66	Natural (NA)	151-75159
WPC20	5.3	15.0	27.7	4.7	0.8 - 4.0	PA66	Natural (NA)	151-75209

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

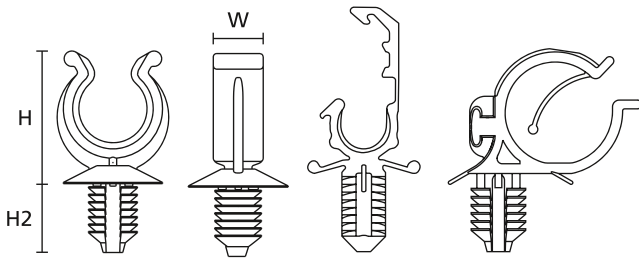
CTC clamps are used for example in the automotive, harness making, electrical industry and wherever corrugated tubing has to be quickly and firmly fixed.

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

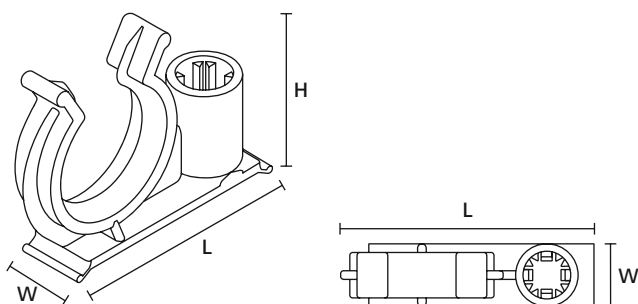
These holders are used in the automotive industry, in the production of cable harnesses and in the electrical industry. Their quick and easy mounting is the reason for their universal success wherever corrugated tubing and pipes have to be fixed quickly and securely.

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 26.

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

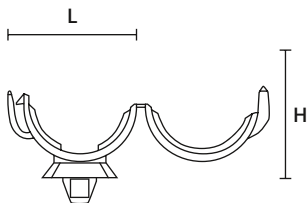
These clamps are used in the automotive industry, in the production of cable harnesses and in the electrical industry. Their quick and easy mounting is the reason for their universal success wherever corrugated tubing and pipes have to be fixed quickly and securely.

Features and benefits

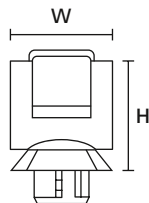
- Clamps for corrugated tubing for a variety of nominal diameters
- Arrowhead simply locks into place
- Tube is guided accurately by clicking
- Axial slipping is prevented by the inside profile of the clamp
- CTCLPROFILE clamp can also fastened to a metal edge



Simple and secure installation of pipes or hoses to panels.



RCC D21, D24, D28



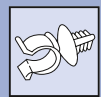
RCC D21, D24, D28



Material specification please see page 26.

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).

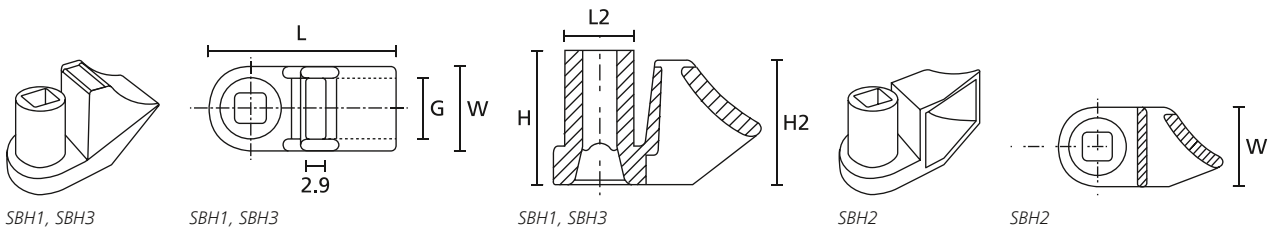
Features and benefits

- 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.

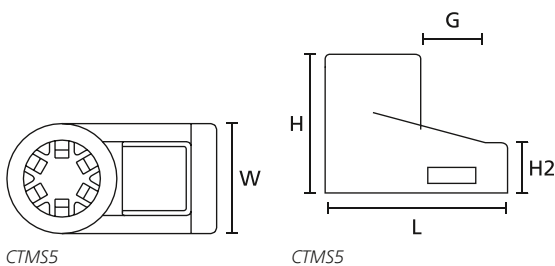
SB-Series



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.
CTMS5	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 Parallel Routing, twistable

DSWS-Series

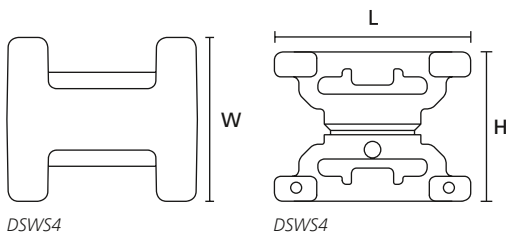
These fixing element for parallel routing can be used where bundles need separation from each other combined with the necessary functionality to support moving harnesses.

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

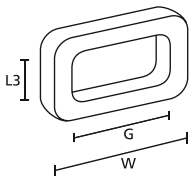
All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. Other packaging options may also be available.

LOK04

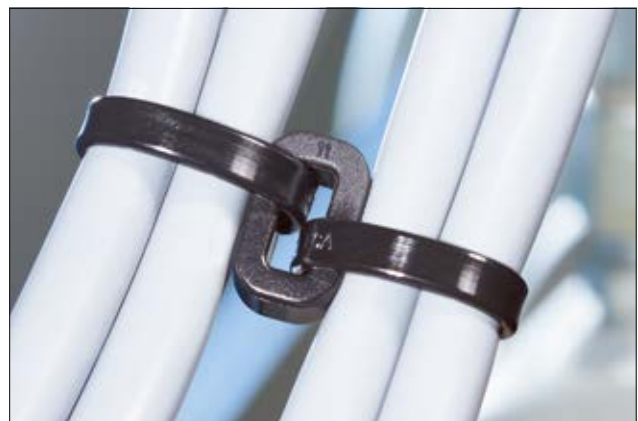
Whenever there is a need of running two or more cables in parallel the LOK04 fixing base would be an ideal and simple solution.

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	Article-No.
LOK04	16.0	4.0	9.0	PA66	Black (BK)	151-80400

All dimensions in mm. Subject to technical changes.



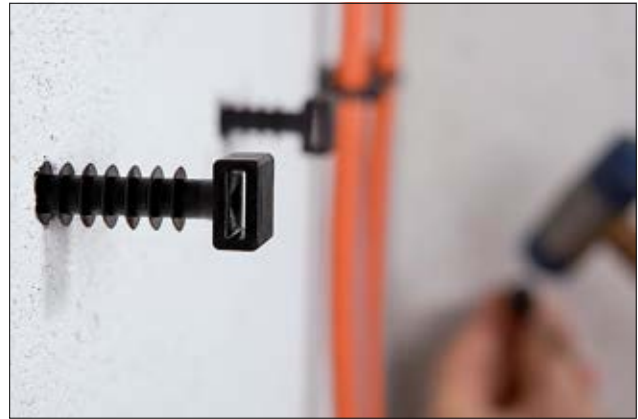
Fixing Base

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



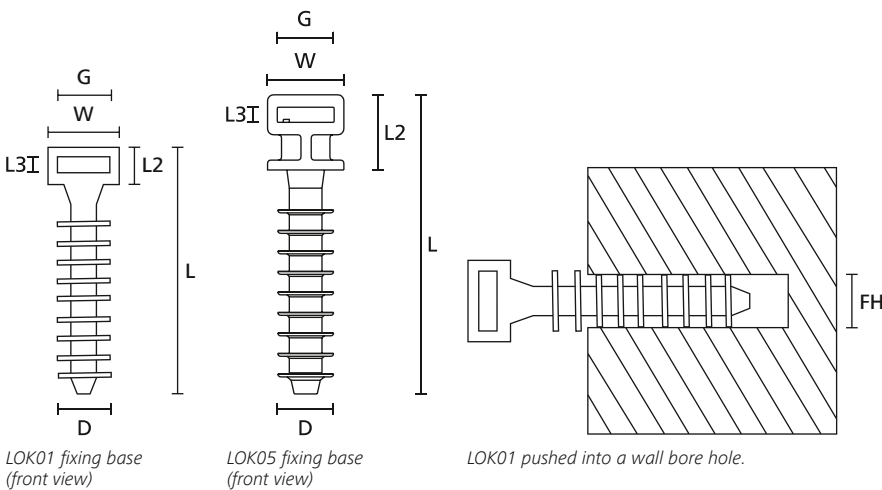
LOK01 fixing bases for indoor and outdoor use.



Material specification please see page 26.



The whole LOK-Series can ideally be combined with cable ties up to 9 mm cable tie width.



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.



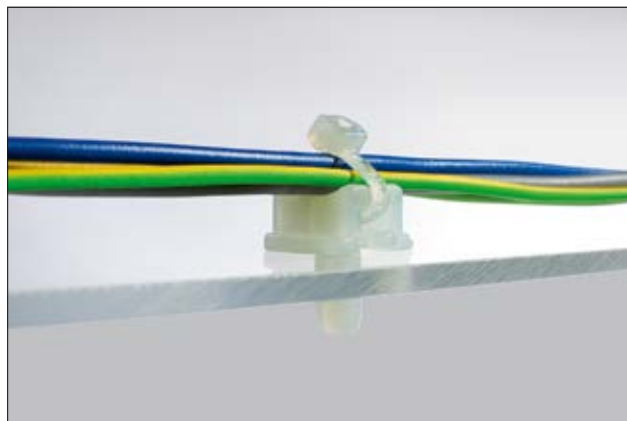
Rivet Mount

TY5-Series

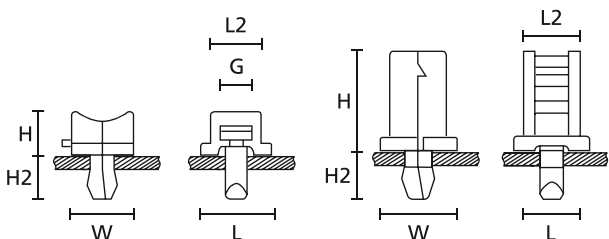
The TY Fixings are ideal for use where a high pull out force is required (eg. in the aircraft industry). The two piece 'wedge' ensures that once installed the mounts will not come away from the panel. Particularly designed for areas with restricted access.

Features and benefits

- Quick installation
- Two-piece wedge
- Easy insertion
- Firmly fixes wide variety of cable ties

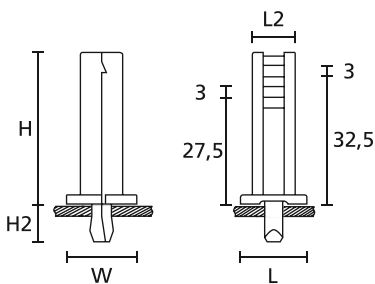


TY5 Wedge Base Socket.

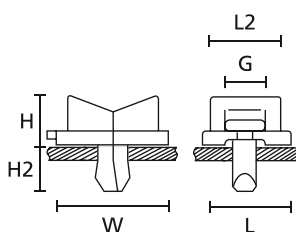


TY5K2 Rivet Mount

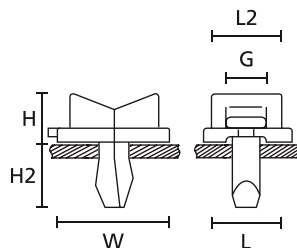
TY5K1 Rivet Mount



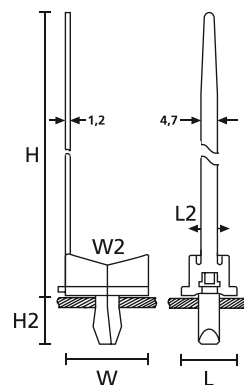
TY5K5 Rivet Mount



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



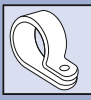
Blindplugs are available in different dimensions and materials.



**Material specification
please see page 26.**

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

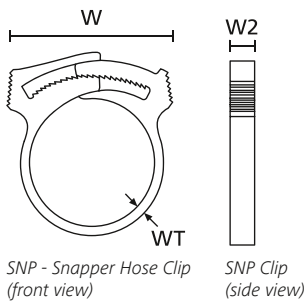
SNP range may replace metal hose clamps. Snapper can be used in markets as diverse as automotive, agriculture, white goods, venting systems, pumps and hydraulic systems to medical engineering.

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.



Material specification please see page 26.

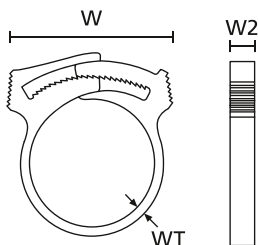
TYPE	Bundle Ø min.	Bundle Ø max.	Width (W) min.	Width (W) max.	Width (W2)	Wall (WT)	Material	Colour	Article-No.
SNP1	6.0	6.5	8.33	11.73	3.8	1.00	POM	White (WH)	190-00022
	6.0	6.8	8.40	11.70	3.8	1.00	PA66GF13	Black (BK)	192-10010
SNP1.25	7.1	7.7	10.57	12.62	3.8	1.10	PA66GF13	Black (BK)	190-00029
SNP2(E)	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
SNP20(E)	22.7	24.7	20.00	26.00	6.0	1.80	POM	Natural (NA)	191-10209

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)



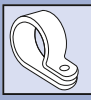
SNP Snapper are also available on request in material PA66HS and PA46.



Snapper tools please see page 566.

TYPE	Bundle Ø min.	Bundle Ø max.	Width (W) min.	Width (W) max.	Width (W2)	Wall (WT)	Material	Colour	Article-No.
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

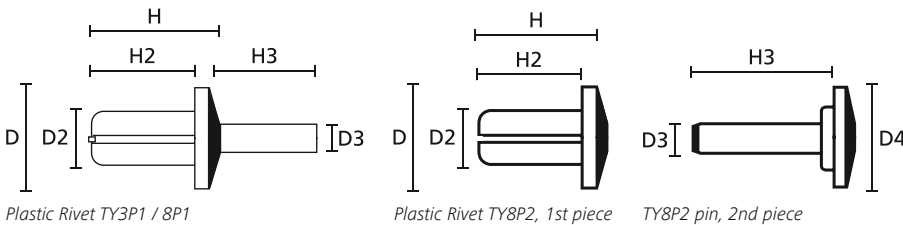
- One Piece
- Simply push pin into body of rivet
- TY3P1 and TY8P1 pins inserted using rivet placement tool
- TY8P2 has 'mushroom' head so pin is simply hammered in
- TY8P2 consists of two unattached parts



Plastic Rivet TY8P1 in application.



Material specification please see page 26.



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.

Custom-made solutions for the heavy duty sector –
at a glance.



Our sample boards give you a quick overview of our comprehensive range of specially designed products for heavy duty applications.