
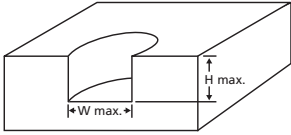
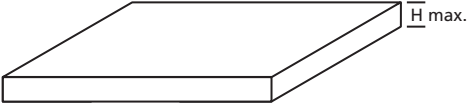
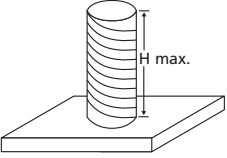




Application	Arrow-head	Fir Tree Mount	Rivet Wall Plug	Screw Mount	EdgeClip	Weld Stud Mount	Cable & Hose Attachment
	•	•		•			
		•	•	•			
					•		•
						•	



**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.



### 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.



#### EdgeClip without metal clamp

These EdgeClips are easily attached. The holding tap snaps into the drill hole securely.



### Weld Stud Mount

Various 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.

SB9 and SB14 are based on "hard push" technology and require a hammer to be applied.



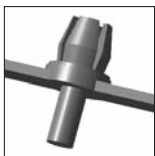
#### Weld Stud Fixings with lateral adjustment

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.



### Cable & Hose Attachment

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



### Rivet Wall Plug

Can be fixed to brick, cement or wood. Knocking the peg inside will spread the wings of the rivet and securely fasten it inside the hole. A tool is recommended for application.



### Screw Mount

These fixing ties can be attached to any surface with a screw or bolt. The maximum panel thickness is based on used screws offering high grade of flexibility. The tensioning force is related to the tensioning level of the screw allowing very strong or loose fixations.



### Two Piece Fixing Ties with Clip Coupler

The Coupler is an article to connect two cable ties maximum 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

- releasable
- for Oval Holes

### Features and Benefits

A simple one piece bundling and fixing tie with an arrowhead mount. When inserted into the hole the arrowhead locks into place and the 'disc', between the fixing and the head of the cable tie, covers the hole and minimises the ingress of dust, dirt and water, whilst adjusting for variations in panel thickness thereby ensuring a secure fixing at all times.

The RT versions are releasable and reusable, ideal for the removal or addition of cables after the initial installation is complete.

The T50SST type has a small 'tab' placed below the head which gives additional protection against axial forces and is particularly useful to assist retention on convoluted tubing.

### Application

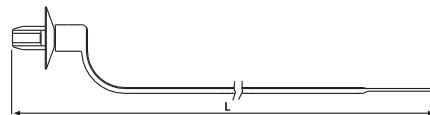
With a diverse range of fixing possibilities this range of fixing ties are ideal for use in many different industries, for example: automotive, aerospace, white goods manufacture and panel building.



The flexible 'discs' adjust to take up variations in panel thickness - ensuring a firm fixing at all times.



Common head/fixing design



Special design without a gap between head and bundle; T50MD7

#### Material Data

Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
111-85350	<b>T50SD6</b>	160	5.0	31.0	225	18.0	6.3-7.5	0.6	1.8	PA66HS	Black (BK)
126-02300	<b>T50SST5</b>	170	4.6	31.0	225	16.2	6.1-6.5	0.7	1.5	PA66	Natural (NA)
126-00017	<b>T50SST5</b>	170	4.6	31.0	225	16.2	6.1-6.5	0.7	1.5	PA66HS	Black (BK)
111-85850	<b>T50MD7</b>	225	5.0	59.0	225	16.0	6.8-7.2	1.2	2.0	PA66HS	Black (BK)
126-03102	<b>T50SOSFT6.5E</b>	160	4.6	35.0	225	16.0	6.3-6.7	1.9	2.5	PA66HS	Black (BK)
126-00099	<b>T50SOSKSFT5SE</b>	156	4.6	35.0	180	16,0	4.8-5.2	0.7	1.3	PA66HS	Black (BK)
126-00111	<b>T50SOSFT5S-E</b>	156	4,6	35.0	180	16,0	4.8-5.2	0,7	1,3	PA66HS	Natural (NA)
126-00075	<b>T50SOSKSFT5.4E</b>	156	4.6	35.0	225	16,0	5.2-5.6	0.7	1.3	PA66HS	Black (BK)
126-00081	<b>T50SOSKSFT65E</b>	156	4.6	35.0	180	16,0	6.3-6.7	0.7	1.3	PA66HS	Black (BK)
126-00086	<b>T50SOSFT6.5S2-E</b>	157	4.6	35.0	225	16.0	6.3-6.7	1.7	2.3	PA66HS	Black (BK)
Releasable											
111-85480	<b>RT50SD6</b>	160	5.0	31.0	180	18.0	6.3-7.5	0.6	1.8	PA66HS	Black (BK)
for Oval Holes											
126-00015	<b>T50SDOP</b>	160	5.0	30.0	225	22.0	6.2x12.2	0.7	2.0	PA66HS	Black (BK)
126-01600	<b>T50SDOR</b>	160.0	5.0	30.0	225	22.0	6.2x12.2	0.5	1.5	PA66HS	Black (BK)

All dimensions in mm. Subject to technical changes.



### 1-Piece Fixing Ties with Arrowhead, with Disc, sealed

- for Round holes
- for Oval holes

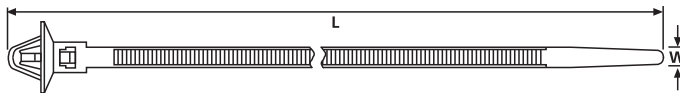
One-piece fixing ties assembled with a cellular rubber disc bring together a solution for the need to bundle a product whilst at the same time providing a fixing solution especially for the door and tailgate harnesses used for car body applications.

HellermannTyton's one-piece fixing ties combined with the specially designed cellular rubber discs offer a high protection against the ingress of dust and water. Tested according to the IEC 60529 standard the article types T50SOSSFT6.5E-MD and T60SOSSFT62x122-E-MD produced from PA66 heat stabilized material fulfill IP67.

As an additional protection against the loss of the seal disc during transportation, the cellular rubber disc of T50SOSSFT6.5E-MD is welded to the fixing tie by an automatic laser welding machine.



The additional seal protects against the ingress of moisture or dirt.



One piece fixing tie with arrowhead and disc, standard design

#### Material Data

Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
for Round Holes with foam seal											
126-03100	<b>T50SOSSFT6.5E-MD</b>	160	4.6	35.0	225	16.0	6.3-6.7	0.6	1.8	PA66HS	Green (GN)
156-00264	<b>T50SOSSFT6.5E-MD</b>	160	4.6	35.0	225	16.0	6.3-6.7	0.6	1.8	PA66HS	Black (BK)
156-00271	<b>T50SOSSFT6.5-E-MDL</b>	160	4.6	35.0	225	16.0	6.3-6.7	0.6	1.8	PA66HS	Natural (NA)
156-00379	<b>T50XROSSFT6.5EMDL</b>	200	4.6	45.0	200	16.0	6.25-6.75	1.2	2.1	PA66HS	Black (BK)
126-00065	<b>T50SOSSFT6.5-MS-MD</b>	163	4.6	35.0	180	16.0	6.25-6.75	0.7	1.6	PA66HS	Natural (NA)
for Oval Holes with foam seal											
126-00076	<b>T60SOSSFT65x130-E-MD</b>	157	5.5	30.0	300	16.0 x 22.0	6.5x13.0	0.6	2.0	PA66	Natural (NA)
126-00079	<b>T60SOSSFT70x120-E-MD</b>	157	5.5	30.0	300	16.0 x 22.0	7.0x12.0	0.7	2.0	PA66HS	Black (BK)
126-00080	<b>T60SOSSFT62x122-E-MD</b>	157	5.5	30.0	300	16.0 x 22.0	6.5x12.2	0.6	2.0	PA66HS	Black (BK)

All dimensions in mm. Subject to technical changes.



## 1-Piece Fixing Ties with Arrow-head, with Disc in the strap

### Features and Benefits

The arrowhead fixing is located in the mid-section of the strap of the cable tie which ensures that the cable bundle sits directly above the fixing point, minimising the space taken.

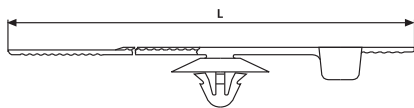
The 'disc' on types T50SSP and T50RSP completely covers the hole in the panel minimising the ingress of dust, dirt and water. The 'discs' on all three types flex to suit variations in panel thickness, ensuring a firm but secure fixing. A particular design feature of these ties is the 'tab' on the end of the head - this is to facilitate easy location and orientation of the head for assembly.

### Application

With a diverse range of fixing possibilities (from 5.7mm to 6.5mm hole diameters and 0.7mm to 3.5mm panel thickness) this range of fixing ties are ideal for use in many different industries, for example: automotive, aerospace, rail, and panel building.



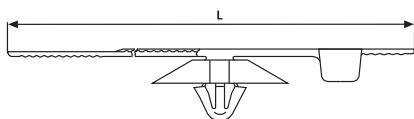
The 'tab' on the head of the tie makes it easy to locate and lift the head for assembly.



T50SSP/T50RSP

#### Material Data

Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



T80RSFT

#### Material Data

Material	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2, Limited Fire Hazard, Halogen free, Low smoke generation, Low generation of toxic gases and corrosive acid</b>



#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour	Application Tool
150-35932	<b>T50SSP</b>	120	4.6	24.0	225	18.0	6.0-6.5	0.7	1.3	PA66	Black (BK)	1-3, 5
150-35930	<b>T50RSP</b>	190	4.6	45.0	225	18.0	6.0-6.5	0.75	1.3	PA66	Black (BK)	1-3, 5
150-15493	<b>T80RSFT</b>	190	4.6	45.0	355	24.4	5.7-6.3	1.0	3.5	PA66	Black (BK)	1-3, 5
150-15498	<b>T80RSFT</b>	190	4.6	45.0	355	24.4	5.7-6.3	1.0	3.5	PA46	Grey (GY)	1-3, 5

All dimensions in mm. Subject to technical changes.



## 1-Piece Fixing Ties with Arrowhead, with Wings

### Features and Benefits

The arrowhead design, in conjunction with the supporting 'legs', ensures a firm and secure fixing. The 'legs' take up any variation in panel thickness enabling one part to suit many applications.

Both the RT and FBS versions are releasable and reusable, with the FBS type having the added feature of a ladder type strap as opposed to the conventional serrated strap - this ladder type strap has the benefit of being very flexible.

### Application

For the bundling and fixing of cable harnesses, pipes and hoses in the automotive, aerospace, white goods industries and panel building.





A wide range of arrowhead fixing ties which are suitable for panel thicknesses of 0.5mm to 4.5mm and hole diameters of 4.4mm to 8.0mm.



Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Material Data	
Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>

Material Data	
Material	<b>Polyamide 6.6 UV Resistant (PA66W)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>

Material Data	
Material	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2, Limited Fire Hazard, Halogen free, Low smoke generation, Low generation of toxic gases and corrosive acid</b>



## 1-Piece Fixing Ties with Arrowhead, with Wings

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour	Application Tool
111-85519	<b>T18RSF</b>	100	2.5	16.0	80	4.6-4.8	1.0	3.0	PA66	Natural (NA)	1-3, 5
111-85560	<b>T18RSF</b>	100	2.5	16.0	80	4.6-4.8	1.0	3.0	PA66W	Black (BK)	1-3, 5
111-85719	<b>T50SSF</b>	160	4.7	25.0	225	6.0-6.4	1.0	3.0	PA66	Natural (NA)	1-3, 5
126-01104	<b>T50SSF</b>	160	4.7	25.0	225	6.0-6.4	1.0	3.0	PA66HS	Natural (NA)	1-3, 5
126-00032	<b>T50SSF</b>	160	4.7	25.0	225	6.0-6.4	1.0	3.0	PA66HS	Black (BK)	1-3, 5
111-85729	<b>T50RSF</b>	200	4.7	45.0	225	6.0-6.4	1.0	3.0	PA66	Natural (NA)	1-3, 5
111-85329	<b>T50VSL5</b>	100	4.6	16.0	225	6.1-6.3	1.0	2.6	PA66	Natural (NA)	1-3, 5
111-85339	<b>T50SSL5</b>	135	4.6	27.0	225	6.1-6.5	0.8	2.7	PA66	Natural (NA)	1-3, 5
126-02204	<b>T50SSL5</b>	135	4.6	27.0	225	6.1-6.5	0.8	2.7	PA66HS	Black (BK)	1-3, 5
111-85395	<b>T50SSL5</b>	135	4.6	27.0	225	6.1-6.5	0.8	2.7	PA46	Grey (GY)	1-3, 5
126-00005	<b>T50SL5</b>	165	4.6	34.0	225	6.1-6.3	0.8	2.7	PA66HIRHS	Black (BK)	1-3, 5
111-85369	<b>T50SL5</b>	165	4.6	34.0	225	6.1-6.3	0.8	2.7	PA66	Natural (NA)	1-3, 5
126-00001	<b>T50SL5</b>	165	4.6	34.0	225	6.1-6.3	0.8	2.7	PA66HS	Black (BK)	1-3, 5
111-85460	<b>T50SL6</b>	165	4.6	34.0	225	6.3-7.5	0.5	2.5	PA66	Black (BK)	1-3, 5
111-85479	<b>T50SL7</b>	165	4.6	34.0	225	6.9-7.1	0.8	2.5	PA66	Natural (NA)	1-3, 5
111-85781	<b>YQR10050</b>	165	4.6	34.0	225	6.9-7.1	1.6	4.0	PA66	Brown (BN)	1-3, 5
155-41102	<b>T50SAH</b>	160	4.6	25.0	225	6.3	0.7	3.0	PA66HS	Natural (NA)	-

All dimensions in mm. Subject to technical changes.

## 1-Piece Fixing Ties with Arrowhead, with Wings, for Oval Holes

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour	Application Tool
150-48396	<b>T80RFT6X12</b>	228	4.6	45.0	225	6.3x12.3	0.6	3.0	PA66	Black (BK)	1-3, 5
150-48397	<b>T80RFT6X12</b>	228	4.6	45.0	225	6.3x12,3	0.6	3.0	PA46	Grey (GY)	1-3, 5

All dimensions in mm. Subject to technical changes.



### 1-Piece Fixing Ties with Arrowhead, with Wings, releasable

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
126-03000	<b>YQR10016</b>	165	4.6	34.0	225	6.9-7.1	1.6	4.0	PA66	Grey (GY)
115-07010	<b>RT50RSF</b>	215	4.6	50.0	225	7.8-8.2	0.8	2.5	PA66	Black (BK)
115-06960	<b>RT50SFK</b>	225	5.0	50.0	225	6.4-7.0	0.8	3.0	PA66	Black (BK)
150-26100	<b>FBS100</b>	115	10.0	27.0	–	6.3-6.7	0.7	3.9	PA66	Black (BK)
150-26180	<b>FBS185</b>	200	10.0	53.0	–	6.3-6.7	0.7	3.9	PA66	Black (BK)

All dimensions in mm. Subject to technical changes.





## 1-Piece Fixing Ties with Arrow-head, with Wings in the strap

- T80RSF6.5F
- T80RSF6.5FW with rib for convoluted tubes

### Features and Benefits

The arrowhead fixing is located in the mid-section of the strap of the cable tie which ensures that the cable bundle sits directly above the fixing point, minimising the space taken.

The head of the T80RSF tie is moulded in a raised position to ease assembly when the fixing is already in place in the panel.

The T50SSF type has specially moulded retainers to hold battery cables parallel and firmly in place



### Application

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





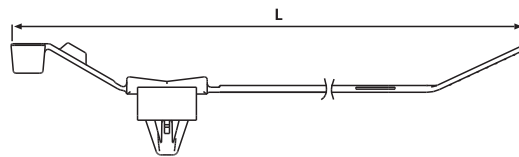
Designed to secure battery cables the T80RSF6.5F offers a simple and secure fixing.

Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>

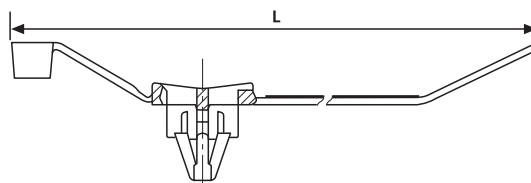



Material Data	
Material	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



T80RSF6.5FW



T80RSF6.5F

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour	Application Tool
126-02600	<b>T80RSF6.5F</b>	209	4.6	45.0	300	6.3-6.5	0.6	3.0	PA66HS	Black (BK)	1-3, 5
150-39385	<b>T80RSF6.5FW</b>	209	4.6	45.0	300	6.3-6.5	0.6	3.0	PA66HS	Black (BK)	1-3, 5
150-39395	<b>T80RSF6.5F</b>	209	4.6	45.0	300	6.3-6.5	0.6	3.0	PA46	Grey (GY)	1-3, 5

All dimensions in mm. Subject to technical changes.



### 1-Piece Fixing Ties with Arrowhead

- **T30RSF(U)** for max. bundle diameter 31.0 mm
- **T50RSF(E)** for max. bundle diameter 50.0 mm

#### Features and Benefits

The arrowhead is simply pushed through the panel and locks into place, the design of the arrowhead (without 'legs') ensures that the minimum amount of space is used, and yet offers a firm, secure fixing.

#### Application

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

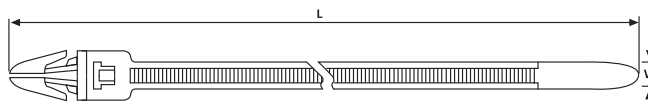


The arrowhead design allows these ties to be used in areas with limited space.

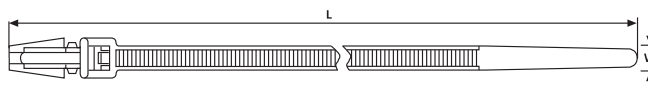
Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.

Material Data	
Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Operating Temperature	-40 °C to +105 °C continuous, (+145 °C for 500 h)
Flammability	UL94 V2



T30RSF



T50RSF

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour	Application Tool
111-85603	T30RSF(U)	161	3.6	31.0	135	4.8-5.6	0.9	2.4	PA66	Natural (NA)	1-3, 5
111-85610	T30RSF(U)	161	3.6	31.0	135	4.8-5.6	0.9	2.4	PA66HS	Black (BK)	1-3, 5
111-85799	T50RSF(E)	210	4.6	50.0	225	6.2-6.4	2.9	3.0	PA66	Natural (NA)	1-3, 5
126-01001	T50RSF(E)	210	4.6	50.0	225	6.2-6.4	2.9	3.0	PA66	Black (BK)	1-3, 5

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



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

### Features and Benefits

These two piece fixing ties are supplied ready assembled and offer a simple and versatile method of bundling and fixing cables, pipes and hoses.

The arrowhead base will easily push into pre-punched holes in panels and offers a very secure fixing. The two piece design enables the head of the tie to be orientated to the required position to ease assembly, whilst the 'disc' on the top of the arrowhead takes up variation in panel thickness ensuring a stable fixing at all times.

Available as either inside serrated or outside serrated 'standard' cable ties or 'double headed' ties.

### Application

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 manufacturers, white goods manufacturers.



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

#### Material Data

Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Colour	<b>Black (BK)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>



#### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Colour	<b>Black (BK)</b>
Operating Temperature	<b>-40 °C to +105 °C continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Technical Table

Article-No.	Type30	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material Cable Tie	Material Foot Part
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#### 2-Pieces Fixing Ties with Arrowhead, with Disc, sealed

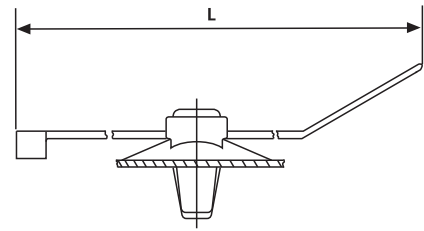
150-37799	<b>T50ROSSFT6.5 16-3MD</b>	200	4.6	45.0	225	16.0	6.3-6.7	2.5	3.5	PA66HS	PA66HIRHS
150-93100	<b>T50ROSSFT6,5ZD 16-2</b>	200	4.6	45.0	225	22,4	6.3-6.7	0.7	2.0	PA66HS	PA66HIRHS

All dimensions in mm. Subject to technical changes.



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

Other dimensions available, please contact us for further information.



Two piece fixing tie with moveable arrowhead

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material Cable Tie	Material Foot Part
150-13593	T50SSFT6.5	150	4.6	31.0	225	22.4	6.3-6.7	0.7	2.0	PA66HS	PA66HS
150-13591	T50RSFT6.5	200	4.6	45.0	225	22.4	6.3-6.7	0.9	2.0	PA66HS	PA66HS
117-05160	T50RDHSFT6.5	210	4.7	45.0	225	22.4	6.3-6.7	0.7	2.0	PA66HS	PA66HS
150-13596	T80ISFT6.5	300	4.6	81.0	355	22.4	6.3-6.7	0.7	2.0	PA66HS	PA66HS
150-13599	T50ROSSFT6.5	200	4.6	45.0	225	22.4	6.3-6.7	0.7	2.0	PA66HS	PA66HS
150-37691	T50RSFT6.5D18	200	4.6	45.0	225	18.0	6.5-6.8	0.4	1.6	PA66HS	PA66HIRHS
150-37791	T50ROS-SFT6,5 16-3	200	4.6	45.0	225	16.0	6.3-6.7	2.5	3.5	PA66HS	PA66HIRHS
150-37792	T50RSFT6,5 16-3	200	4.6	45.0	225	16.0	6.3-6.7	2.5	3.5	PA66HS	PA66HIRHS
150-93130	T50SOSFT65162OD	150	4.6	35.0	225	16.0	6,3-6,7	1.5	2.2	PA66HS	PA66HIRHS
155-42002	T50ROSSFT6,5-16-2-BK	200	4.6	45.0	225	16.0	6,3-6,7	0.7	1.2	PA66HS	PA66HIRHS

All dimensions in mm. Subject to technical changes.

## 2-Pieces Fixing Ties with Arrowhead, for Oval Holes

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material Cable Tie	Material Foot Part
156-00446	T50RFT62x122HR	200	4.6	45.0	225	6.3x12.2	0.6	3.0	PA66HS	PA66HIRHS

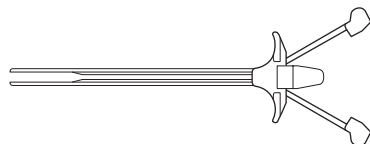
All dimensions in mm. Subject to technical changes.

## 2-Pieces Fixing Ties with Arrowhead, for parallel routing

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material Cable Tie	Material Foot Part
156-00133	T50SOSDSFT6.5	150	4.6	35.0	225	6.3-6.7	0.7	1.5	PA66HS	PA66HIRHS

All dimensions in mm. Subject to technical changes.



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



## 2-Pieces Fixing Ties with Arrowhead, with Disc for high temperature applications

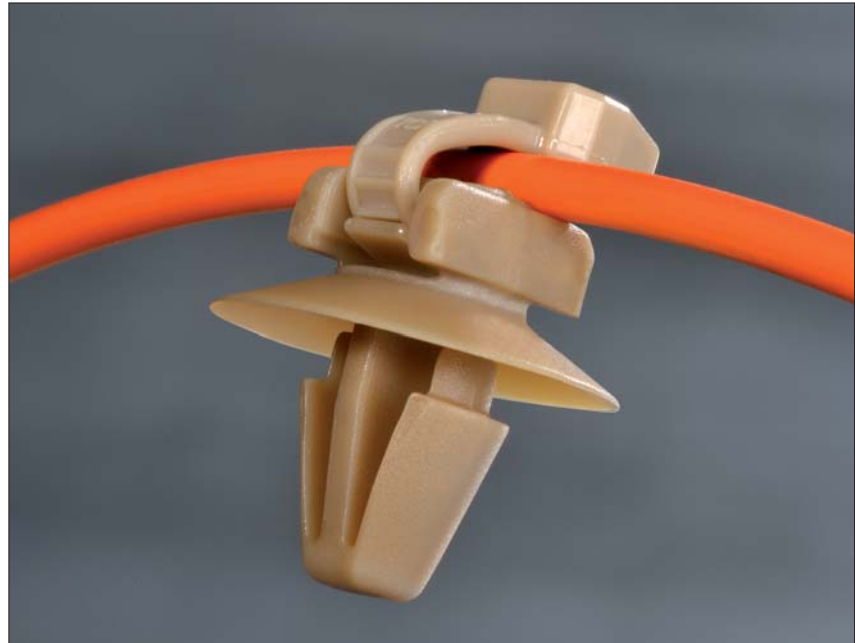
- **T50ROSP1SFT6.5** for panel thickness 0.7 - 1.3 mm
- **T50ROSP2SFT6.5** for panel thickness 1.7 - 2.3 mm

### Features and Benefits

PEEK Fixing-Ties are the combination of proven design and modern raw material. The two piece design of cable tie and foot part enables the head of the tie to be oriented to the required position to ease the assembly, whilst the arrowhead base will easily push into pre-punched holes for a tight fixing. Additionally the footparts made of PEEK withstand temperatures from -55°C up to +260°C. Their chemical resistance, even against acid and gamma radiation is excellent.




### Application

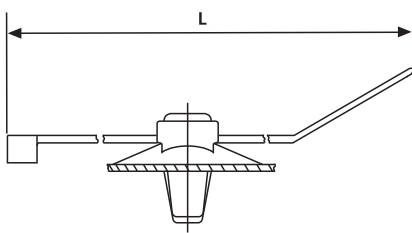
The Fixing-Ties with P1SFT6,5 and P2SFT6,5 are ideal when the requirements for temperature or chemical resistance are very high. They are used for cable harnesses in the automotive industry.






Peek FixingTies can be used for small diameters from 1.0 mm.

Material Data	
Material	<b>Polyetheretherketone (PEEK)</b>
Colour	<b>Beige (BGE)</b>
Operating Temperature	<b>-55 °C to +240 °C</b>
Flammability	<b>UL94 V0</b>



Material Data	
Material	<b>Polyamide 4.6 (PA46)</b>
Colour	<b>Grey (GY)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
156-00455	<b>T50ROSP1SFT65</b>	200	4.6	45.0	225	6.3-6.7	0.7	1.3	PA46, PEEK	Grey (GY), Beige (BGE)
156-00456	<b>T50ROSP2SFT65</b>	200	4.6	45.0	225	6.3-6.7	1.7	2.3	PA46, PEEK	Grey (GY), Beige (BGE)

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



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

#### Features and Benefits

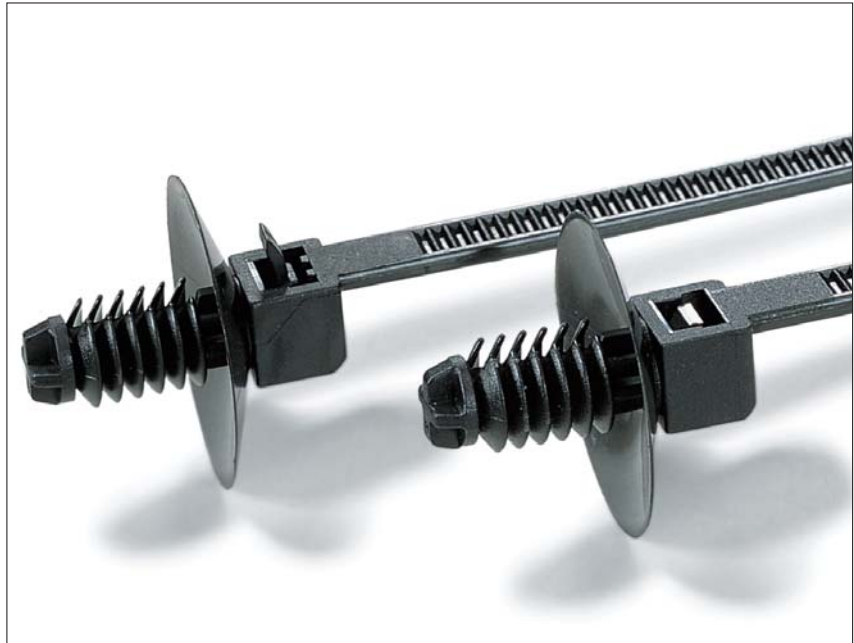
This one piece cable tie with fir tree fixing offers a simple and easy to use method of bundling and fixing cables, pipes and hoses. The design of the fir tree ensures a positive and secure fixing into panels from 0.8mm to 7.0mm deep or threaded blind holes.

The 'disc' on the top of the fir tree covers the hole and minimises the ingress of dust, dirt and water.

Type REL are releasable and reusable and are ideal for the removal or addition of cables after the initial installation is completed.

#### Application

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



*Ideal for use in deep panels and threaded, blind holes.*

#### Material Data

Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



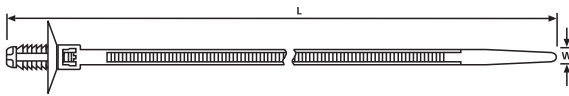
#### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>





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



One piece fixing tie with fir tree mount, standard design



Special design without a gap between head and bundle; FT220DP7

Technical Table

Article-No.	3Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
150-55610	T18RDP5	110	2.5	20.0	80	13.0	4.9-5.1	3.0	4.0	PA66	Black (BK)
157-00033	T50SOSFT6E-MOD	160	4.7	35.0	150	16.0	6.3-7.0	0.7	3.0	PA66HS	Black (BK)
157-00058	T50SOSFT6E1	160	4.7	35.0	150	16.0	6.3-7.0	0.7	3.0	PA66	Natural (NA)
157-00059	T50SOSFT6E1	160	4.7	35.0	225	16.0	6.3-7.0	0.7	3.0	PA46	Grey (GY)
157-00045	T50SOSFT6D10E	160	4.6	32.0	225	10.0	5.8-6.2	0.8	5.5	PA66	Black (BK)
157-00028	T50SOSFT6D10E	160	4.6	32.0	225	10.0	5.8-6.2	0.8	5.5	PA46	Grey (GY)
157-00042	T50SOSFT6LGE	165.0	4.6	35.0	180	16.0	6.3-7.0	0.7	7.0	PA66HS	Black (BK)
150-01700	FT220DP7	230	4.7	40.0	225	16.0	6.8-7.2	0.8	5.0	PA66	Black (BK)

All dimensions in mm. Subject to technical changes.

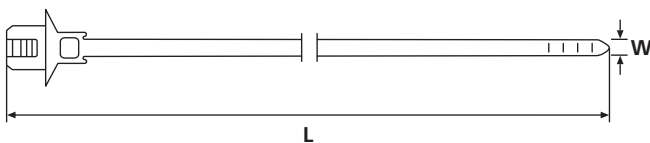
### 1-Piece Fixing Ties with Fir Tree, with Disc, releasable

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
150-55500	REL30SDP6	170	5.0	31.0	135	22.0	6.3-7.0	3.0	7.0	PA66	Black (BK)

All dimensions in mm. Subject to technical changes.

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



T50SOS2DOP

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
157-00014	T50SOS2DOP	164	4.6	35.0	225	16.0x21.0	6.2x12.2	0.6	6.0	PA66HIRHS	Black (BK)
157-00069	T50SOS2DOP	164	4.6	35.0	225	16.0x21.0	6.2x12.2	0.6	6.0	PA46	Grey (GY)
157-00016	T50SOS3DOP65130E	165	4.6	35.0	180	16.0x21.0	6.5x13.0	0.7	5.0	PA66HIRHS	Black (BK)

All dimensions in mm. Subject to technical changes.



## 2-Pieces Fixing Ties with Fir Tree, with Disc

### Features and Benefits

These two piece fixings are supplied ready assembled and offer a simple and versatile method of bundling and fixing cables.

The fir tree base will easily push into pre-punched holes in panels or threaded blind holes, and offers a very secure fixing.

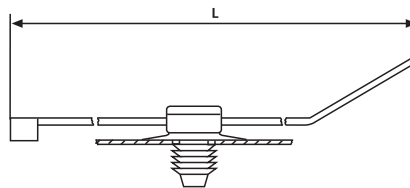
The two piece design enables the head of the tie to be orientated to the required position to ease assembly, whilst the 'disc' on the top of the fir tree covers the hole and minimises the ingress of dust, dirt and water.

### Application

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



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



One piece fixing tie with fir tree mount

**Other dimensions available on request. Please contact us.**

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Hole Ø	Panel Thickness min.	Panel Thickness max.	Colour	Material Cable Tie	Material Foot Part
150-55850	T30RFT5	150	3.6	34.0	135	16.0	4.5-5.0	0.7	3.0	Black (BK)	PA66HS	PA66HIRHS
150-55948	T30RFT5	150	3.6	34.0	135	16.0	4.5-5.0	0.7	3.0	Natural (NA), Grey (GY)	PA46	PA46
156-00025	T50RFT5	200	4.6	45.0	225	16.0	4.5-5.0	0.7	3.0	Black (BK)	PA66HS	PA66HIRHS
156-06200	T50SOSFT5	150	4.6	31.0	225	16.0	4.5-5.0	0.7	3.0	Black (BK)	PA66HS	PA66HIRHS
156-00432	T50SOSFT5SD	150	4.6	35.0	225	16.0	4.5-5.0	0.7	3.0	Black (BK)	PA66HS	PA66HIRHS
150-09110	T18RFT6	100	2.5	20.0	80	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66	PA66
150-77932	T30LRFT6	260	3.3	65.0	180	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
150-77950	T30RFT6	150	3.6	34.0	135	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
150-77933	T50SFT6	150	4.6	31.0	225	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66
150-77941	T50RFT6	200	4.6	45.0	225	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66
150-77938	T50RFT6	200	4.6	45.0	225	16.0	6.4-7.1	0.75	3.0	Grey (GY)	PA46	PA46
150-77934	T80LFT6	390	4.6	108.0	355	16.0	6.4-7.0	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
150-77937	T80IFT6	300	4.6	81.0	355	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
156-00076	T50ROSFT6	200	4.6	45.0	225	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
150-77936	T50RDHFT6	210	4.7	19.0	225	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
150-52690	T30RFT6SD	150	3.6	31.0	135	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIRHS
156-05902	T50ROSFT6SD	200	4.6	46.0	225	16.0	6.4-7.1	0.75	3.0	Black (BK)	PA66HS	PA66HIR
156-00085	T50ROSFT6SD	200	4.6	46.0	225	16.0	6.4-7.1	0.75	3.0	Grey (GY)	PA46	PA46

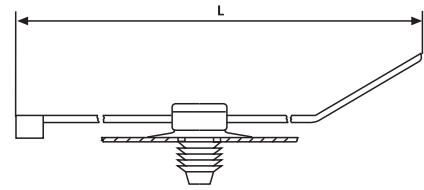
All dimensions in mm. Subject to technical changes.





## 2-Pieces Fixing Ties with Fir Tree, with Disc

Other dimensions available on request. Please contact us for further information.



One piece fixing tie with fir tree mount

### Material Data

Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>



### Material Data

Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Disc Ø	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Colour	Material Cable Tie	Material Foot Part
150-31090	<b>T30RFT6LG</b>	148	3.6	35.0	16.0	135	6.4-7.1	0.75	6.0	Black (BK)	PA66HS	PA66HIRHS
150-31097	<b>T30LFT6LG</b>	190	3.6	45.0	16.0	135	6.4-7.1	0.75	6.0	Black (BK)	PA66	PA66HIRHS
150-31093	<b>T50SFT6LG</b>	160	4.6	35.0	16.0	225	6.4-7.1	0.75	6.0	Black (BK)	PA66HS	PA66HIRHS
150-31091	<b>T50RFT6LG</b>	200	4.6	44.0	16.0	225	6.4-7.1	0.75	6.0	Black (BK)	PA66HS	PA66HIRHS
150-31096	<b>T80IFT6LG</b>	300	4.6	81.0	16.0	355	6.4-7.1	0.75	6.0	Black (BK)	PA66HS	PA66HIRHS
156-00154	<b>T50SFT6LG1SD</b>	160	4.6	30.0	16.0	225	6.5-7.0	0.6	6.0	Black (BK)	PA66HS	PA66HIRHS
156-00399	<b>T50RFT6LGSD-HEX</b>	200	4.6	45.0	16.0	225	6.25-6.75	0.7	5.0	Black (BK)	PA66HS	PA66HIRHS
111-85870	<b>T50RFT7</b>	200	4.6	45.0	16.0	225	6.5-7.0	0.8	7.0	Black (BK)	PA66HS	PA66HS
156-05312	<b>T50RFT7</b>	200	4.6	45.0	16.0	225	6.5-7.0	0.8	7.0	Black (BK)	PA66	PA66
150-00700	<b>T50IFT7</b>	300	4.6	81.0	16.0	225	6.5-7.0	0.8	7.0	Black (BK)	PA66HS	PA66HS
111-85880	<b>T50RFT8</b>	200	4.6	45.0	16.0	225	7.7-8.0	0.8	6.0	Black (BK)	PA66HS	PA66HS
156-00044	<b>T50RFT8</b>	200	4.6	45.0	16.0	225	7.7-8.0	0.8	6.0	Black (BK)	PA66HS	PA66HS
156-00104	<b>T40RFT8GSD</b>	180	4.0	40.0	16.0	180	8.0-8.5	1.5	4.0	Black (BK)	PA66HS	PA66HIRHS
133-00034	<b>T50RFT8</b>	200	4.6	45.0	16.0	225	8.0-8.5	1.5	4.0	Black (BK)	PA66HS	PA66HIRHS
156-00235	<b>T50RFT8GSD</b>	200	4.6	45.0	16.0	225	8.0-8.5	1.5	4.0	Grey (GY)	PA46	PA46
156-00200	<b>T120IFT9</b>	300	7.6	75.0	20.0	535	9.0-10.6	5.0	11.0	Black (BK)	PA66HIR(S)	PA66HIR(S)
156-05301	<b>T50RFT10</b>	200	4.6	45.0	18.0	225	9.7-10.0	0.8	5.0	Black (BK)	PA66	PA66
111-85810	<b>T50RFT10</b>	200	4.6	45.0	18.0	225	9.7-10.0	0.8	5.0	Black (BK)	PA66HS	PA66HS
156-00120	<b>T50ROSFT10</b>	200	4.6	45.0	18.0	225	9.7-10.0	0.8	5.0	Black (BK)	PA66HS	PA66HIRHS

All dimensions in mm. Subject to technical changes.

## 2-Pieces Fixing Ties with Fir Tree, with Disc, for Oval Holes

### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Disc Ø	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Colour	Material Cable Tie	Material Foot Part
150-37591	<b>T50RFT6OVAL</b>	200	4.6	45.0	-*	225	6.3x12.2	0.6	3.0	Black (BK)	PA66HS	PA66HIR
156-05908	<b>T50ROS1DOP62x122</b>	200	4.6	45.0	12.0x21.0	225	6.2x12.2	0.6	6.0	Black (BK)	PA66HS	PA66HIRHS

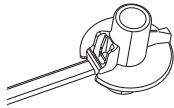
All dimensions in mm. Subject to technical changes. \* without disc, but with wings.



### 1-Piece Fixing Ties for Weld Studs

- **T50SOSSBH5E with plate to fix isolation material**

This cable tie offers three distinct benefits to the user. Firstly it offers the opportunity to retain insulation material. Secondly, it allows cables, pipes or hoses to be bundled. Thirdly it has a simple "soft push" mechanism which allows it to be installed onto a weld stud without the use of any tools. The unique head design allows the cable tie to firmly hold bundles as small as 1.6 mm diameter.



T50SOSSBH5E



The new head design offers additional fixing of soft materials.

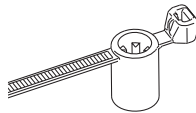
Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material	Colour
155-05701	T50SOSSBH5E	165	4.6	35.0	225	5.0	PA66HS	Black (BK)

All dimensions in mm. Subject to technical changes.

- **T50SSBS50TE for cable routing above the stud**

Using the "soft push" technology, this inside serrated tie is mounted on the top of the stud. The additional height gained by this design gives a clear "stand off" from the panel. Ideal applications include mass transit industries, panel builders, and white goods manufacturers.



T50SSBS50TE



The T50SSBS50TE allows very precise routing of cable bundles.



**Material specification  
please see page 64.**

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material	Colour
155-30602	T50SSBS50TE*	160	4.6	35.0	200	5	PA66HS	Black (BK)

All dimensions in mm. Subject to technical changes.

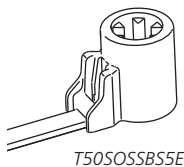
\* Since the bundled cables lie directly above or on the weld stud, care must be taken to ensure that the length of the weld stud does not exceed the height of the sheath. To avoid damage, we recommend a maximum weld stud length of 16.5 mm.



## 1-Piece Fixing Ties for Weld Studs

- **T50SOSSB55E** for cable routing alongside the stud

Providing an especially strong fixing method, the design of this fixing tie offers the "soft push" mounting technology with the ability to mount the cables very close to the fixing stud. The outside serrations present a smooth surface to the cables preventing chafe and damage to the insulation, especially in mass transit applications.



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



**Material specification  
please see page 64.**

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material	Colour
155-12300	<b>T50SOSSB55E</b>	160	4.6	35.0	225	5.0	PA66HS	Black (BK)

All dimensions in mm. Subject to technical changes.

## 1-Piece Fixing Ties for Weld, moveable

- **T50SOSSB5-High-E-C-CC** for 5 mm studs
- **T50SOSSB6HE** for 6 mm studs

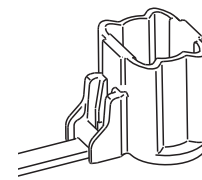
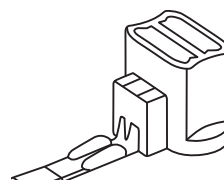
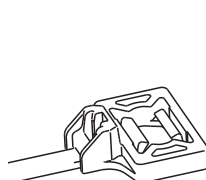
The special oval shape of the fixing on this stud mounted fixing tie provides a 5-6mm lateral adjustment to cater for any misalignment of the stud or incorrect positioning of the tie on the cables. The simple "soft push" mechanism allows for easier installation onto a weld stud without the use of any tools.

- **WSP-Serie**

The unique shape of the head on this fixing tie provides a 5-6mm lateral adjustment to cater for any misalignment of the stud or incorrect positioning of the tie on the cables. The low profile of the fixing allows for several ties to be installed one on top of the other on the same stud, to accommodate different cable routings. This is both space saving and versatile.



T50SOSWSP5E, parallel installation using two fixing ties.



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material	Colour
157-00037	<b>T50SOSSB5-High-E-C-CC</b>	167	5,0	35.0	225	5.0	PA66HS	Black (BK)
155-46302	<b>T50SOSSB6HE</b>	160	4.6	35.0	170	6.0	PA66HS	Black (BK)
133-00391	<b>T50SOSWSP5E-2</b>	163	4.6	35.0	200	5.0	PA66HS	Black (BK)

All dimensions in mm. Subject to technical changes.



**1-Piece Fixing Ties for Weld Studs**

- LFC-Series for routing close to the stud

**Features and Benefits**

This one piece fixing tie is designed for 5mm weld studs. Their closed retainer geometry protects the harnesses against damages eventually caused by the stud. As the tie closure lies above the stud retainer the bundle can be routed space-saving directly besides the stud. For the better handling with a tensioning tool the head of the retainer is specially equipped with a small contact surface.

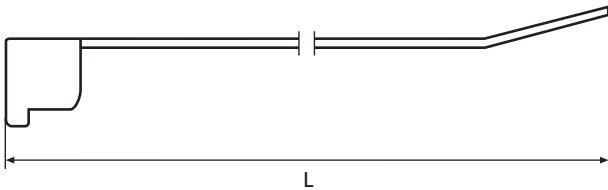


LFC165-2 for bundle diameters up to 35.0 mm.

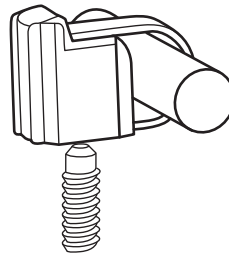
Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 HB</b>



Material Data	
Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



LFC165-2



LFC165-2 can be put on by hand

**Technical Table**

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Stud Ø	Min. Tensile strength for ties (N)	Material	Colour
157-00047	<b>LFC165-2</b>	165	4.7	35.0	5.0	150	PA66HS	Black (BK)
155-34202	<b>LFC165</b>	165	4.7	35.0	5.0	90	PA66HS	Black (BK)
131-60070	<b>LFC155</b>	163	4.7	26.0	5.0	160	PA66	Black (BK)

All dimensions in mm. Subject to technical changes.



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

- **WS-Series for 6 mm studs**
- **WSI380 for 9 mm studs**

### Features and Benefits

The wide strap stud mount cable tie minimizes pinching on soft bundles and features a low profile head to provide compact bundling. A thinner strap provides increased flexibility for improved ergonomics. Available with a 6mm and 9mm stud mount, the wide strap tie utilizes a strong hinge between the stud mount and head to provide superior holding ability on a threaded stud.

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

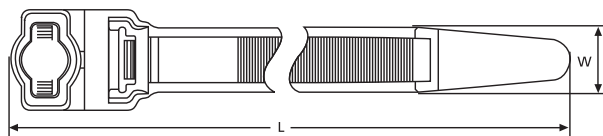
### Application

Primarily designed for use in the automotive or truck industry, these parts can be used in a wide variety of industries and applications where 6mm/9mm weld studs or 6mm/9mm ISO bolts are used and cables need to be bundled and secured.



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

Material Data	
Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +110 °C</b>
Flammability	<b>UL94 HB</b>



Wide Strap Heavy Duty Stud Mount Cable Ties

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material	Colour
6mm Stud Mount			12.7	57.0	534	PA66HIRHS	Black (BK)
157-00400	<b>WSS250</b>	246					
157-00401	<b>WSI250</b>	322					
157-00402	<b>WSR250</b>	398	12.7	104.0	534	PA66HIRHS	Black (BK)
9mm Stud Mount			12.7	82.5	534	PA66HIRHS	Black (BK)
157-00404	<b>WSI380</b>	322					

All dimensions in mm. Subject to technical changes.



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

- DCT9 for max. bundle diameter 33.0 mm
- DCT11 for max. bundle diameter 58.0 mm

#### Features and Benefits

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

Available in two lengths, the dual clamp ties accommodate bundles ranging from 6 mm to 58 mm. The flexible wide straps minimize pinching of hoses and convoluted tubing. The straps are also releasable.

#### Application

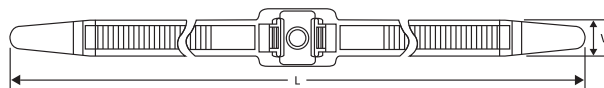
Primarily designed for use in the automotive/truck industry, these parts can be used in a wide variety of industries and applications where 6mm/9mm weld studs or 6mm/9mm ISO bolts are used and cables need to be bundled and secured.



Dual clamp ties are designed to provide parallel separation between hoses, wires, cables and tubing, protecting them from abrasion.

#### Material Data

Material	<b>Polyamide 6.6 High Impact Modified (PA66HIR)</b>
Operating Temperature	<b>-40 °C to +110 °C continuous</b>
Flammability	<b>UL94 HB</b>



Dual Clamp Ties

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material	Colour
115-00034	<b>DCT9</b>	330	12.7	33.0	670	6.35	PA66HIR	Black (BK)
115-00033	<b>DCT11</b>	489	12.7	58.0	670	6.35	PA66HIR	Black (BK)

All dimensions in mm. Subject to technical changes.



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

- SDCTR312 for 8 mm studs

### Features and Benefits

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

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

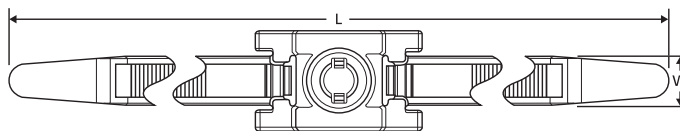
### Application

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 a standoff mounting position.



Standoff Mounting Dual Clamp Ties.

Material Data	
Material	Polyamide 6.6 High Impact Modified, Heat and UV Stabilised (PA66HIRHSW)
Operating Temperature	-40 °C to +110 °C
Flammability	UL94 HB



Standoff Mounting Dual Clamp Ties

### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material	Colour
117-00012	SDCTR312	511	12.7	58.0	445	8.0	PA66HIRHSW	Black (BK)

All dimensions in mm. Subject to technical changes.



### 1-Piece Fixing Ties for Weld Studs (Softpush) in the strap

- Softpush in the strap
- Softpush in the strap, releasable
- Hardpush in the strap, releasable

#### Features and Benefits

These weld stud fixing ties are designed to be fitted onto 5mm studs or 5mm ISO threaded studs. The types T50RS5, RT50RS5 and SBS9/230 are designed to be applied by hand (Soft Push). Types SB14 and SB9 are designed to be hammered onto the stud (Hard Push).

Both types give excellent 'pull-off' forces in relation to the application forces.



With the RT50RS5 and the SB14/172 you can mount pipes or cables to a weld stud.



Simple fixing to a weld stud or 5mm ISO bolt.

#### Material Data

Material	<b>Polyamide 6.6 (PA66)</b>
Colour	<b>Black (BK)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Height (H2)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material	Colour
Softpush								
111-07110	<b>T50RS5</b>	190	4.6	14.5	40.0	225	PA66	Black (BK)
115-07110	<b>RT50RS5</b>	190	4.6	14.5	40.0	225	PA66	Black (BK)
Hardpush								
150-10901	<b>SBS9/230</b>	230	5.0	10.0	60.0	245	PA66	Black (BK)
131-80050	<b>SB9/172</b>	172	5.0	10.0	40.0	245	PA66	Black (BK)
150-10900	<b>SB9/230</b>	230	5.0	10.0	60.0	245	PA66	Black (BK)
150-10690	<b>SB14/172</b>	172	5.0	15.5	40.0	245	PA66	Black (BK)
150-11400	<b>SB14/230</b>	230	5.0	15.5	60.0	245	PA66	Black (BK)

All dimensions in mm. Subject to technical changes.





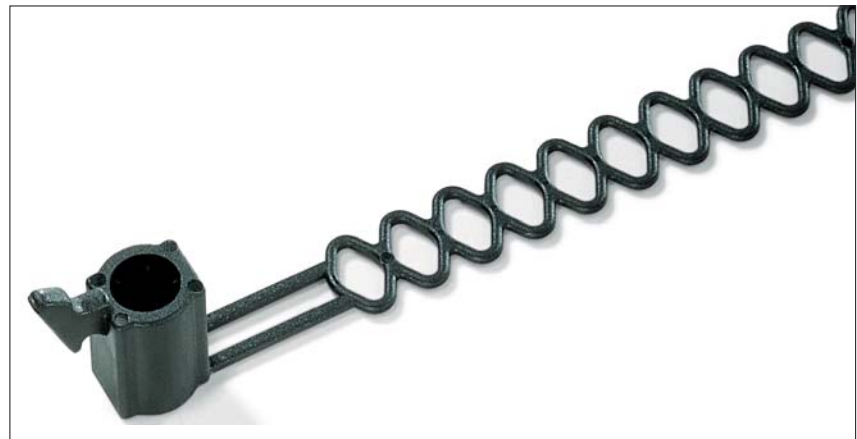
### 1-Piece Fixing Ties for Weld Studs (Softpush), releasable, with flexible strap

- Softpush, releasable, with flexible strap
- Hardpush, releasable

#### Features and Benefits

This one piece cable tie and fixing offers a simple and easy to use method of bundling and fixing cables, pipes and hoses. The design of the stud fixing ensures simple mounting while giving a positive and secure fixing.

A variety of designs gives the choice of a soft 'push fit' or 'hammer fit'. Both designs give excellent 'pull off' forces in relation to the application forces.



FBB one piece fixing ties for weld studs, can be easily removed by unscrewing in an anti-clockwise direction.

#### Material Data


Material	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2, Limited Fire Hazard, Halogen free, Low smoke generation, Low generation of toxic gases and corrosive acid</b>



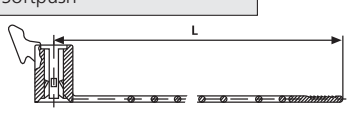
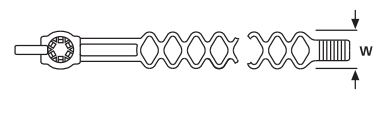
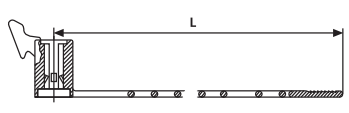
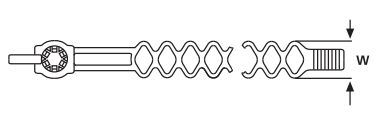
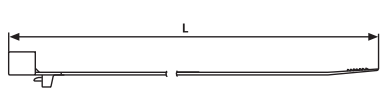
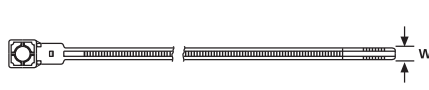
#### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



 **Material specification please see page 64.**

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material	Colour
<b>Softpush</b>							
							
150-28140	<b>FBB140</b>	142	10.0	38.0	–	PA66	Black (BK)
							
150-29100	<b>FBB100M</b>	110	10.0	23.0	–	PA66	Black (BK)
150-29140	<b>FBB140M</b>	145	10.0	38.0	–	PA66	Black (BK)
150-29180	<b>FBB185M</b>	200	10.0	50.0	–	PA66	Black (BK)
<b>Hardpush</b>							
							
131-60060	<b>SBR5</b>	220	6.0	40.0	300	PA66HS	Black (BK)
131-60058	<b>SBR8S</b>	215	6.0	40.0	300	PA46	Grey (GY)

All dimensions in mm. Subject to technical changes.



## 2-Piece Fixing Ties for Weld Studs

### Features and Benefits

These two piece fixing ties consist of the cable tie from the 'inside' or 'outside serrated' series with the foot part for fixing to weld studs already mounted on the strap.

They are easy to press onto a 5mm type weld stud (also suitable for M5 screws) without the need for separate application tools.

Because the foot part slides along the cable tie, the head can be rotated into the best position both during fitting and also for installation.

Series SBH5 and SBH5SD features a flat plate on the foot part which can simultaneously fix an insulation mat.

Series SB5 and SB5S have a cable guide on the weld stud.

Series SB5 has an oval weld stud for equalisation of the cable loom if out of line with the main loom.

### Application

Series SBH5 and SBH5SD are used mainly in the automotive industry. The SD variant is for the smallest bundle diameters, from 1.0 mm. Suitable for bundling and fastening cables, pipes and hoses in a multitude of industries, for example: switch gear manufacture, automotive and machine manufacture.



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

#### Material Data

Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 HB</b>



#### Material Data

Material	<b>Polyacetal (POM)</b>
Operating Temperature	<b>-40 °C to +90 °C Continuous, (+110 °C for 500 h)</b>
Flammability	<b>UL94 HB</b>



## 2-Piece Fixing Ties for Weld Studs, moveable

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Application Tool
150-10140	<b>T30RSB5</b>	150	3.5	31.0	135	PA66HS	POM	1-3, 5
150-10144	<b>T50SSB5</b>	150	4.6	31.0	225	PA6HS	PA66HS	1-5
150-10141	<b>T50RSB5</b>	200	4.6	45.0	225	PA66HS	POM	1-5
156-00084	<b>T50RSB5HR</b>	200	4.6	45.0	225	PA46	PA46	1-5
156-00080	<b>T50SOSSB5</b>	150	4.6	31.0	225	PA66HS	POM	1-5
150-10149	<b>T50ROSSB5</b>	200	4.6	45.0	225	PA66HS	POM	1-5
156-00083	<b>T50RSB5CSD</b>	200	4.6	45.0	225	PA66HS	PA66HS	1-5
156-05906	<b>T50ROSSB5CSD</b>	200	4.6	45.0	225	PA66HS	PA66HS	1-5

All dimensions in mm. Subject to technical changes.



## 2-Piece Fixing Ties for Weld Studs

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material		Application Tool
						Cable Tie	Foot Part	
150-21290	<b>T30RSBS5</b>	150	3.5	31.0	135	PA66HS	PA66HS	1-3, 5
150-21293	<b>T50SBS5</b>	150	4.6	31.0	225	PA66HS	PA66HS	1-5
150-21291	<b>T50RSBS5</b>	200	4.6	45.0	225	PA66HS	PA66HS	1-5
150-21297	<b>T80ISBS5</b>	300	4.6	81.0	355	PA66HS	PA66HS	1-5
156-00079	<b>T50SOSSBS5</b>	150	4.6	31.0	225	PA66HS	PA66	1-5
150-21299	<b>T50ROSSBS5</b>	200	4.6	45.0	225	PA66HS	PA66HS	1-5
156-00251	<b>T50ROSGBS8CA</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5
156-00252	<b>T50ROSGBS8CB</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5
156-00116	<b>T50ROSGBS8CC</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5

All dimensions in mm. Subject to technical changes.

## 2-Piece Fixing Ties for Weld Studs, with Plate (for isolation material)

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Disc Ø	Material Cable Tie	Material Foot Part	Application Tool
150-16941	<b>T30RSBH5</b>	150	3.5	31.0	135	30.0	PA66HS	PA66HS	1-3, 5
150-16943	<b>T50RSBH5</b>	200	4.6	45.0	225	30.0	PA66HS	PA66HS	1-5
150-16945	<b>T80ISBH5</b>	300	4.6	81.0	355	30.0	PA66HS	PA66HS	1-5
150-92904	<b>T50RSBH5-SD</b>	200	4.6	45.0	225	30.0	PA66HS	PA66HS	1-5
150-92905	<b>T80ISBH5SD</b>	300	4.6	78.0	355	30.0	PA66HS	PA66HS	1-5
156-05905	<b>T50ROSSBH5SD</b>	200	4.6	45.0	225	30.0	PA66HS	PA66HS	1-5
150-77591	<b>T50R-SBH5SD-14</b>	200	4.6	45.0	222	30.0	PA66HS	PA66HS	1-5

All dimensions in mm. Subject to technical changes.



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

- **T50SDSBS5** for max. bundle diameter 31.0 mm
- **T50ROSDSBS5** for max. bundle diameter 45.0 mm

### Features and Benefits

These are three part fixing ties, with a stud fix mounting base and two cable ties. The mounting base can be fitted to the weld stud prior to installing the cables, the cables are simply laid alongside the base and the cable ties then pulled tight. Having two separate 'cradles' allows for the installation of the two cable runs at different times. The design of the stud retainer means excessive force is not required for installation - it is simply a 'soft push' action by hand. Having separate ties to the fixing means that the head of the tie can be easily rotated to ensure the easiest possible assembly.

### Application

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 allow this to be achieved simply and quickly. Widely used for securing cables, pipes and hoses in the automotive and truck building industries, the mounting base is simply pushed onto a 5mm diameter weld stud or bolt.



Parallel fixation of two cables.

Material Data	
Foot Part	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>

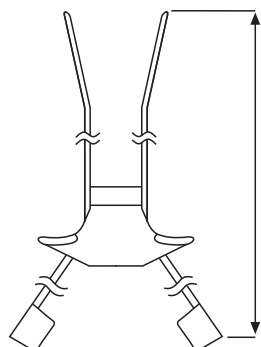


Material Data	
Cable Tie	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



Application Tool	Registration Numbers
<b>MK3SP</b>	<b>1</b>
<b>MK3PNSP2, MK7P</b>	<b>2</b>
<b>MK7</b>	<b>3</b>
<b>MK7HT</b>	<b>4</b>
<b>MK20</b>	<b>5</b>
<b>MK6</b>	<b>6</b>
<b>MK9P</b>	<b>7</b>
<b>MK9</b>	<b>8</b>
<b>MK9HT</b>	<b>9</b>
<b>MK21</b>	<b>10</b>

For detailed information on Application Tools please refer to page 561.



T50SDSBS5, T50ROSDSBS5

Other dimensions available on request. Please contact us for further information.

Technical Table										
Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Stud Ø	Material Cable Tie	Material Foot Part	Colour	Application Tool
150-56193	<b>T50SDSBS5</b>	150	4.6	31.0	225	5.0	PA66HS	PA66HIRHS	Black (BK)	1-5
150-56199	<b>T50ROSDSBS5</b>	200.0	4.6	45.0	225	5.0	PA66HS	PA66HIRHS	Black (BK)	1-5

All dimensions in mm. Subject to technical changes.



## Fixing Ties for Edges

- 1-Piece, 1.0 - 3.0 mm
- 2-Piece, 1.0 - 3.0 mm
- 2-Piece, 3.0 - 6.0 mm

### Features and Benefits

Available with either 'inside' or 'outside' serrated ties these two piece assemblies simply push onto metal or plastic 'edges' with thicknesses from 1.0 to 3.0mm and from 3.0 to 6.0mm. The high 'pull off' forces are due to the integrated metal clamp.

Different Edge Clip variations are available. One version allows for cables to run parallel to the metal/plastic edge, whilst another allows for installation at 90 degrees to the metal edge.

The clip is simply pushed on by hand and held firmly in place by the integrated metal clamp. No fixing hole is necessary.

Combined with the outside serrated (OS) ties, specially designed to protect cables from chafing (see section 1.1) and wear, the Edge Clip family provides an excellent fastening solution.

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 50021-SS (min. 720 h with corrosion of base metal). This solution has therefore been approved by many OEMs for exposed installation locations, e.g. in engine compartments and the running-gear area.

### Application

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.



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



*T50ROSEC23 - the cable bundle runs parallel with the edge.*



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

Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Colour	<b>Black (BK)</b>
Operating Temperature	<b>-40 °C to +105 °C continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



Material Data	
Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Colour	<b>Black (BK)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 V2</b>





## 1-Piece Fixing Ties for Edges, 1.0 - 3.0 mm

### EdgeClip-Family

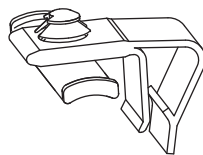
The single-piece mounting ties in the EdgeClip family are designed for extremely small bundle diameters of 1.0 mm and above. Thanks to its structure, the position of the head of the tie is always clearly defined, even when installed. The base section and the tie are permanently connected together. The outside-serrated design of the tie reduces the risk of chafing. The T40XEC is perfectly suitable for use in extremely restricted spaces.

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Application Tool	Drawing
148-00200	T50SOSEC12E	160	4.6	35.0	180	PA66HS	PA66HS	1-5	
126-00000	T50SOSEC13E	160	4.6	35.0	180	PA66HS	PA66HS	1-5	
126-00036	T50SOSEC34E	155	4.6	35.0	180	PA66HS	PA66HS	1-5	
133-00059	T40XEC5SPE	85	4.0	15.0	178	PA66HS	PA66HS	1-5	

All dimensions in mm. Subject to technical changes.

Edge Clips for panel thickness from 4 - 7 mm are available on request.



For more EdgeClip products please see page 191.



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

### EdgeClip-Family

With the Edge Clip family the bundled cables can be located either above or to the side of a fixing. In all two piece mounting ties, the edge clip moves freely along the tie. This allows the head of the tie to be rotated during mounting for installation in the ideal position.

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Application Tool	Drawing
150-76090	<b>T30REC4A</b>	150	3.5	32.0	135	PA66HS	PA66HIRHS	1-3, 5	
150-76091	<b>T50REC4A</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-10	
150-76093	<b>T50SOSEC4A</b>	150	4.6	35.0	225	PA66HS	PA66HIRHS	1-5	
150-76099	<b>T50ROSEC4A</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00570	<b>T50ROSEC4A-W</b>	200	4.6	45.0	225	PA66W	PA66W	1-5	
150-76080	<b>T30REC4B</b>	150	3.5	32.0	135	PA66HS	PA66HIRHS	1-3, 5	
156-00009	<b>T50REC4B</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-10	
156-00109	<b>T50SOSEC4B</b>	150	4.6	35.0	225	PA66HS	PA66HIRHS	1-5	
150-76079	<b>T50ROSEC4B</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00003	<b>T30REC5A</b>	150	3.6	33.0	135	PA66HS	PA66HIRHS	1-3, 5	
150-40593	<b>T50SOSEC5A</b>	150	4.6	35.0	225	PA66HS	PA66HIRHS	1-5	
150-40591	<b>T50ROSEC5A</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
150-40582	<b>T50REC5B</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-10	
150-40583	<b>T50SOSEC5B</b>	150.0	4.6	31.0	225	PA66HS	PA66HIRHS	1-5	
150-40581	<b>T50ROSEC5B</b>	200.0	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
155-37104	<b>T18REC9SD</b>	100	2.5	20.0	80	PA66HS	PA66HIRHS	1-5	
156-00019	<b>T50SOSEC9SD</b>	150	4.6	31.0	225	PA66HS	PA66HIRHS	1-5	
156-05903	<b>T50ROSEC9</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
155-38304	<b>T18REC10SD</b>	100	2.5	20.0	80	PA66HS	PA66HIRHS	1-3, 5	
156-00015	<b>T50SOSEC10</b>	150	4.6	31.0	225	PA66HS	PA66HIRHS	1-5	
156-05904	<b>T50ROSEC10</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00017	<b>T50SOSEC21</b>	150	4.6	35.0	225	PA66HS	PA66HIRHS	1-5	
156-00010	<b>T50ROSEC21</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00576	<b>T50REC22</b>	200.0	4.6	45.0	225	PA66W	PA66HIRHS	1-10	
156-00011	<b>T50ROSEC22</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	

All dimensions in mm. Subject to technical changes.



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

### EdgeClip-Family

The Edge Clips are produced as two part mounting clips for metal or plastic edge mounting of 3.0 to 6.0mm. The 'loose' tie means the head can be rotated during fitting for installation in the best position with respect to the tie closure. Combined with our outside-serrated (OS) ties, they reduce the risk of chafe and cable damage by offering a smooth surface to the cable insulation and are suitable for minimum bundle diameters of 1.0mm.

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.

**Combinations with other cable ties are possible. For further information please contact us.**

**For more EdgeClip products please see page 191.**

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Application Tool	Drawing
156-04600	T18ROSEC19	100	2.5	20.0	80	PA66HS	PA66HIRHS	1-3, 5	
156-04601	T50SOSEC19	150	4.6	31.0	225	PA66HS	PA66HIRHS	1-5	
156-04602	T50ROSEC19	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00016	T50SOSEC20	150	4.6	35.0	225	PA66HS	PA66HIRHS	1-5	
156-00020	T50ROSEC20	200.0	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00006	T50ROSEC23	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
156-00007	T50ROSEC24	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	

All dimensions in mm. Subject to technical changes.



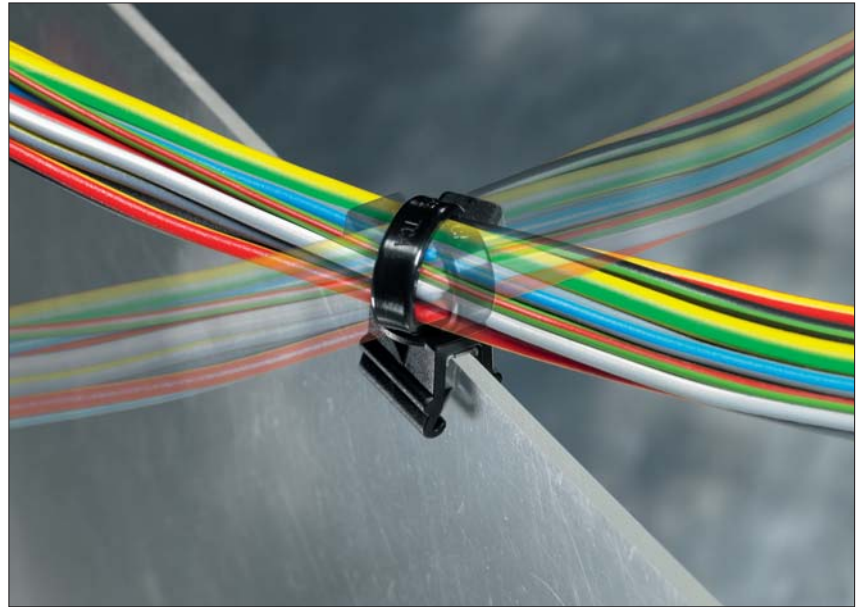


## 2-Piece Fixing Ties for Edges, twistable

- CBT30MR for max. bundle diameter 32.0 mm, rotatable 360 °
- CBTO50R for max. bundle diameter 47.0 mm, rotatable 90 °
- CBTO50RStud5 for max. bundle diameter 47.0 mm, rotatable 90 °, for parallel routing

### Features and Benefits

With the Edge Clip family the bundled cables can be located either above or to the side of a fixing. In all two piece mounting ties, the edge clip moves freely along the tie. This allows the head of the tie to be rotated during mounting for installation in the ideal position.

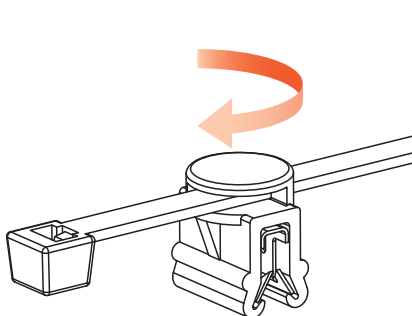


EdgeClip CBTO50R, rotatable 90°.

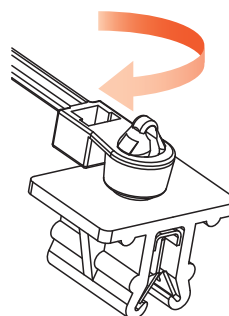
Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



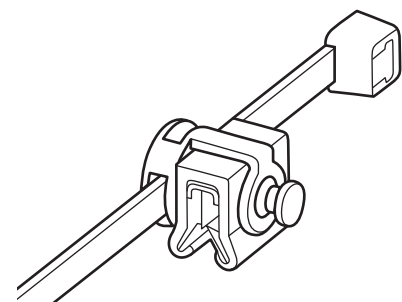
Material Data	
Material	<b>Polyacetal (POM)</b>
Operating Temperature	<b>-40 °C to +90 °C Continuous, (+110 °C for 500 h)</b>
Flammability	<b>UL94 HB</b>



CBT50R - the bundle can run above an edge



EdgeClip CBT30MR, rotatable 360°



CBTO50RSTUD5

Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Panel Thickness max.	Application Tool
156-00049	<b>CBT30MR</b>	160	3.5	32.0	135	PA66HS	POM	2.5	1-3, 5
156-01601	<b>CBTO50R</b>	200	4.6	47.0	225	PA66HS	PA66HIRHS	3.0	1-3, 5
156-00380	<b>CBTO50RSTUD5</b>	200	4.6	50.0	225	PA66HS	PA66HIRHS	3.0	1-3, 5

All dimensions in mm. Subject to technical changes.



### 2-Piece Fixing Ties for Edges, for Holes

- T50ROSEC2.5A for routing parallel to an edge
- T50REC2.5B for routing horizontal to an edge

#### Features and Benefits

Ideal for use on 2.5 mm edges, the tie's reduced installation height makes it ideal for use wherever space is at a premium.


#### Application

This EdgeClip is very easy to mount. The holding tab snaps into the drill hole very securely. You will hear and feel the connection being made during mounting. Cable ties from a variety of product series and varying in terms of their dimensions and materials can be used in conjunction with this fixing element.


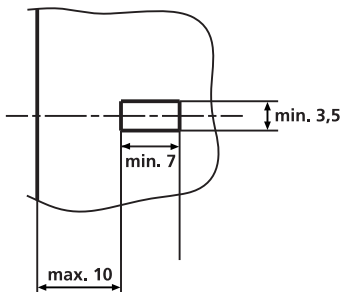


The holding tab increases the tensile strength additionally.

Material Data	
Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>

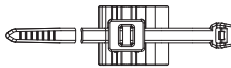
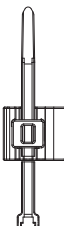


Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>

Position of the drill hole for the holding tab

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Application Tool	Drawing
150-45299	<b>T50ROSEC2.5A</b>	200	4.6	45.0	225	PA66HS	PA66HIRHS	1-5	
150-45292	<b>T50REC2.5B</b>	200.0	4.6	45.0	225	PA66HS	PA66HIRHS	1-10	

All dimensions in mm. Subject to technical changes.



## 2-Piece Fixing Ties

- with Pipe Clip
- with Pipe, twistable 90°

### Features and Benefits

OmegaClips were designed as a product solution in response to a recurring problem: how to add cables to preassembled cable loops post-installation. What was a difficult challenge has been made less complex thanks to OmegaClips, and much easier to achieve. Clips with a variety of twist angles and even different loop directions for the tie provide the requisite flexibility for cable routing in virtually any application.

Additional cable tie dimensions are available for the OC1 and 2A. Two loop directions are available for selection. In the case of the CBTO series, cable ties up to 5 mm in diameter can be used.



T50ROC10-14CBTOSD - the tie can be rotated 90° past assembly.

#### Material Data

Material	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C Continuous, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



#### Material Data

Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>



**Other dimensions available, please contact us for further information.**

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Attach to Ø	Colour	Material	Drawing
156-00012	<b>T30ROC1A</b>	150	3.6	31.0	4.0 - 10.0 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00036	<b>T50ROC1A</b>	200	4.6	45.0	4.0 - 10.0 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00505	<b>T30ROC1B</b>	150	3.6	31.0	4.0 - 10.0 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00306	<b>T50ROC1B</b>	200	4.6	45.0	4.0 - 10.0 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00013	<b>T30ROC2A</b>	150	3.6	30.0	6.5 - 7.5 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00014	<b>T30ROC2A</b>	150	3.6	30.0	6.5 - 7.5 mm	Grey (GY)	PA46	
156-00470	<b>T30ROC2B</b>	150	3.6	31.0	6.5 - 7.5 mm	Black (BK)	PA66HS, PA66HIRHS	
rotatable 90°								
156-00416	<b>T50ROC10-14CBTO-SD-SET</b>	200	4.6	45.0	10.0 - 14.0 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00419	<b>T50ROC15-18CBTO-SD-SET</b>	200	4.6	45.0	15.0 - 18.0 mm	Black (BK)	PA66HS, PA66HIRHS	
156-00422	<b>T50ROC19-24.5CBTO-SD-SET</b>	200	4.6	45.0	19.0 - 24.5 mm	Black (BK)	PA66HS, PA66HIRHS	

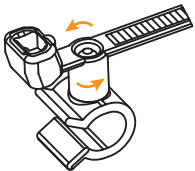
All dimensions in mm. Subject to technical changes.



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

### Features and Benefits

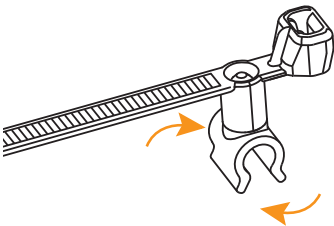
This simple to use inside serrated tie provides the opportunity to attach an additional 5mm diameter cable, pipe or hose to an existing bundle. Offering the facility of a full 360 degrees of rotation, the second bundle can be orientated in any direction in relation to the main harness. Ideally suited for any application where the cable, pipe or hose can move in relation to the fixing point.



T50SVC65



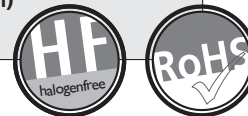
T50SVC5 rotates in any direction.



T50SVC5

### Material Data

Cable Tie	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Attach to Ø	Material	Colour
156-00318	<b>T50SVC4S</b>	155	4,7	35.0	225	3.8-4.2	PA66HS, PP	Black (BK), Natural (NA)
156-00447	<b>T50SVC4</b>	155	4.7	35.0	225	3.8-4.2	PA66HS, PA66HIRHS	Black (BK)
155-31202	<b>T50SVC5</b>	155	4.7	35.0	225	4.5-5.2	PA66HS	Black (BK)
156-00155	<b>T50SVC65</b>	155	4.7	35.0	225	6.5-8.0	PA66HS, PA66HIRHS	Black (BK)
156-00134	<b>T50SVCOC10-14</b>	155	4.7	35.0	225	10.0-14.0	PA66HS, PA66HIRHS	Black (BK)
156-00135	<b>T50SVCOC15-18</b>	155	4.7	35.0	225	15.0-18.0	PA66HS, PA66HIRHS	Black (BK)
156-00136	<b>T50SVCOC19-245</b>	155	4.7	35.0	225	19.0-24.5	PA66HS, PA66HIRHS	Black (BK)
156-00272	<b>T50SVCOC25-31</b>	155	4.7	35.0	225	25.0-31.0	PA66HS, PA66HIRHS	Black (BK)
156-00273	<b>T50SVCOC31-39</b>	155	4.7	35.0	225	31.0-39.0	PA66HS, PA66HIRHS	Black (BK)
156-00137	<b>T50SVCOC39-45</b>	155	4.7	35.0	225	39.0-45.0	PA66HS, PA66HIRHS	Black (BK)
156-00128	<b>T50SMVCOC10-14</b>	210	4.7	50.0	225	10.0-14.0	PA66HS, PA66HIRHS	Black (BK)
156-00129	<b>T50SMVCOC15-18SET</b>	210	4.7	50.0	225	15.0-18.0	PA66HS, PA66HIRHS	Black (BK)
156-00130	<b>T50SMVCOC19-245</b>	210	4.7	50.0	225	19.0-24.5	PA66HS, PA66HIRHS	Black (BK)
156-00577	<b>T50SMVCOC19245</b>	210	4.7	50.0	225	19.0-24.5	PA46	Grey (GY)
156-00303	<b>T50SMVCOC25-31</b>	210	4.7	50.0	225	25.0-31.0	PA66HS, PA66HIRHS	Black (BK)
156-00304	<b>T50SMVCOC31-39</b>	210	4.7	50.0	225	31.0-39.0	PA66HS, PA66HIRHS	Black (BK)
156-00131	<b>T50SMVCOC39-45SET</b>	210	4.7	50.0	225	39.0-45.0	PA66HS, PA66HIRHS	Black (BK)

All dimensions in mm. Subject to technical changes.



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

- HDM6-Series for M6-Screws
- HDM8-Series for M8-Screws

### Features and Benefits

These duty mounts, when used with a cable tie, eliminates the need to carry multiple sizes of fixed bundle diameter clamps.

Sturdy and easy to use, these duty mounts, with optimised design, can be either assembled directly on harnesses or on production line.

These products are a very good alternative to parts which are usually in metal or stainless steel.

Available in PA66 heat-stabilised or in PA46, they are suitable to various temperature grades.

Designed in order to meet the hard constraints in the automotive industry, these duty mounts assembled on harness are well adapted to vibration, dynamic and sliding strength forces. The tightening torque is assured by metallic inserts.

Their "H" design allows an excellent contact with harnesses or other tubes and hoses.

Mainly adapted to T120R and T120S cable ties, but can also be assembled with smallest sizes.

### Application

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.

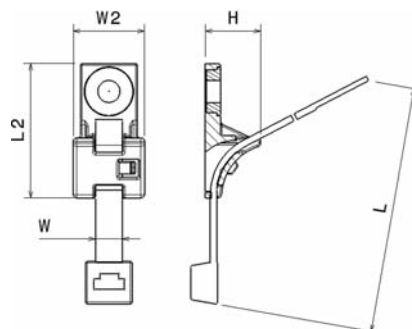


These HDM can be assembled on either screw or stud.

Material Data	
Material	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



Material Data	
Material	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>



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

Technical Table

Article-No.	Type	Length (L)	Length (L2)	Width (W)	Width (W2)	Height (H)	Bundle Ø max.	Mounting Screw Type	Material	Colour
156-00406	<b>T120RHDM6</b>	380	38	7.6	20.0	15.5	100	M6	PA66HIRHS	Black (BK)
156-00407	<b>T120RHDM6</b>	380	38	7.6	20.0	15.5	100	M6	PA46	Grey (GY)
156-00408	<b>T120RHDM8</b>	380	38	7.6	20.0	15.5	100	M8	PA66HIRHS	Black (BK)
156-00409	<b>T120RHDM8</b>	380	38	7.6	20.0	15.5	100	M8	PA46	Grey (GY)

All dimensions in mm. Subject to technical changes.



## 1-Piece Fixing Ties with Mounting Head for Screws

### Features and Benefits

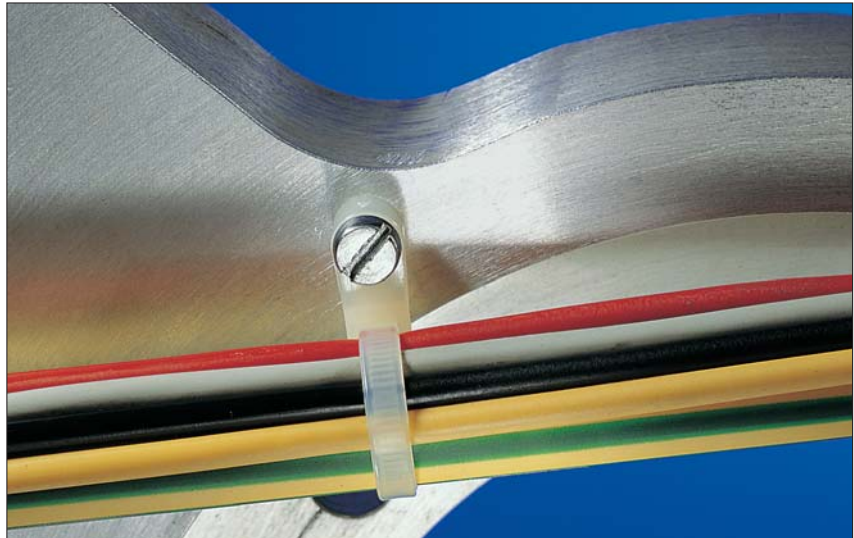
A one piece bundling and fixing tie offering quick and easy installation.

### Application

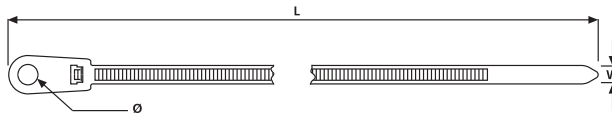
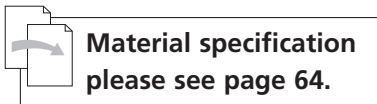
This range of one piece cable ties has a mounting hole fixing method. Once fastened around the cables the bundle can be simply secured to the panel with a screw or bolt.

Ideal for fixing cables, pipes and hoses onto solid surfaces with pre-drilled holes or holes in metal plates.



These ties are used in many industries, for example: building construction, panel builders and white goods manufacturers.





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



Material Data	
Material	<b>Polyamide 6.6 UV Resistant (PA66W)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>

Material Data	
Material	<b>Polyamide 6.6 Heat Stabilised (PA66HS)</b>
Operating Temperature	<b>-40 °C to +105 °C Continuous, (+145 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>

Technical Table									
Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Material	Colour	Application Tool
113-01819	T18MR	110	2.5	20.0	80	3.1	PA66	Natural (NA)	1-3, 5
113-01810	T18MR	110	2.5	20.0	80	3.1	PA66	Black (BK)	1-3, 5
113-03019	T30MR9	160	3.5	32.0	135	4.3	PA66	Natural (NA)	1-3, 5
113-03010	T30MR9	160	3.5	32.0	135	4.3	PA66	Black (BK)	1-3, 5
113-05019	T50MR	215	4.7	45.0	225	5.4	PA66	Natural (NA)	1-10
113-05010	T50MR	215	4.7	45.0	225	5.4	PA66	Black (BK)	1-10
113-05060	T50MR	215	4.7	45.0	225	5.4	PA66W	Black (BK)	1-10
113-05819	T50MS	165	4.6	32.0	225	5.3	PA66	Natural (NA)	1-10
113-05820	T50MS	165	4.6	32.0	225	5.3	PA66	Black (BK)	1-10
113-05419	T50ML	390	4.7	100	225	5.5	PA66	Natural (NA)	1-10
113-05400	T50ML	390	4.7	100	225	5.5	PA66	Black (BK)	1-10
113-12060	T120MR	395	7.6	102	535	6.5	PA66W	Black (BK)	6-10
113-12029	T120MR	395	7.6	102	535	6.5	PA66	Natural (NA)	6-10
113-12020	T120MR	395	7.6	102	535	6.5	PA66	Black (BK)	6-10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval.

For product specific approvals please refer to the Appendix.



## 1-Piece Fixing Ties with rivet

- releasable
- releasable, with flexible strap

### Features and Benefits

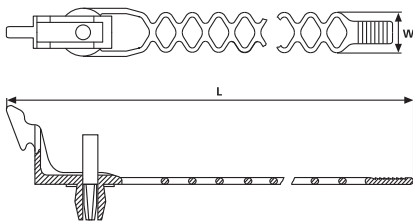
These ties are simply installed by pushing the rivet part of the tie into a hole and firmly tapping the rivet pin until flush to the surface. The pin expands the wings of the rivet and the tie is firmly locked in place.

All three versions listed are releasable and reusable allowing for the removal or addition of cables after installation.

The RELF and RI ranges are conventional 'serrated' cable ties, whilst the FBR range have a 'ladder-type' design which is locked by stretching the strap over the head of the tie. The design of the FBR gives a very flexible strap.

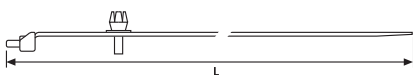


Fixing ties with rivet for especially safe fixing.



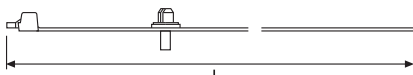
Fixing ties type FBR

Material Data	
Material	<b>Polyamide 6.6 (PA66)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



Fixing ties type RI

Material Data	
Material	<b>Polyamide 12 (PA12)</b>
Operating Temperature	<b>-40 °C to +85 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 HB</b>



Fixing ties type RELF

Material Data	
Material	<b>Polyamide 6.6 High Impact Modified (PA66HIR)</b>
Operating Temperature	<b>-40 °C to +80 °C Continuous, (+105 °C for 500 h)</b>
Flammability	<b>UL94 HB</b>



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Hole Ø	Panel Thickness min.	Panel Thickness max.	Material	Colour
150-27140	<b>FBR6/140</b>	160	10.0	42.0	–	6.2-6.5	0.8	2.4	PA66	Black (BK)
115-40902	<b>RELF170</b>	180	8.0	44.0	180	6.3	2.5	2.5	PA66HIR	Black (BK)
131-14080	<b>RI 80</b>	80	7.0	16.0	265	6.9-7.1	0.8	2.2	PA12	Black (BK)
131-14120	<b>RI 120</b>	120	9.0	28.0	265	6.9-7.1	0.8	2.2	PA12	Black (BK)
131-14160	<b>RI 160</b>	160	9.0	41.0	265	6.9-7.1	0.8	2.2	PA12	Black (BK)

All dimensions in mm. Subject to technical changes.



### 1-Piece Fixing Ties with peg

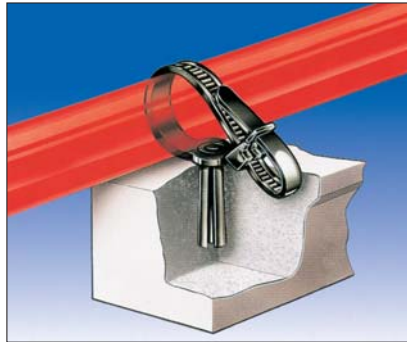
#### • WPT230

#### Features and Benefits

One piece fixing and cable tie can be fixed to brick, cement or wood. This product is often used in the construction industry and is both time saving and versatile.

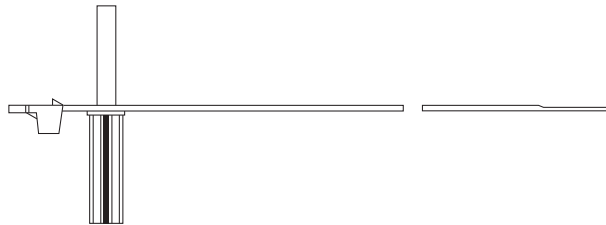
#### Application

Simply drill an 8mm hole and knock in the peg. Used to fasten cables, pipes or hoses in place.



Wall plug tie in application.

Material Data	
Material	Polyamide 6.6 High Impact Modified (PA66HIR)
Operating Temperature	-40 °C to +80 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 HB



WPT230

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Fixing Hole Ø (FH)	Material	Colour
126-00020	WPT230	230	8.0	59.0	8.0	PA66HIR	Black (BK)

All dimensions in mm. Subject to technical changes.

### 1-Piece Fixing Ties with Self Adhesive Socket

#### • T18RSA

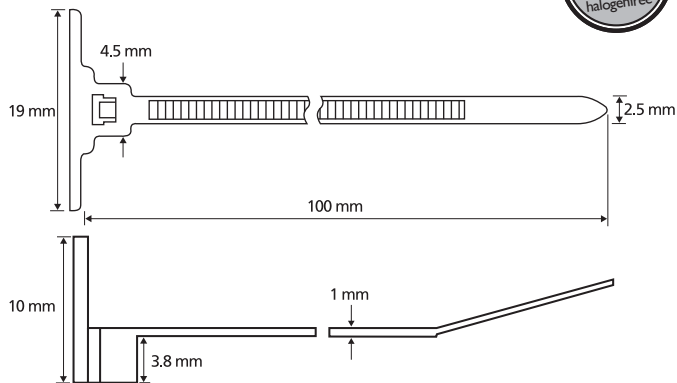
#### Features and Benefits

This cable tie and integral self adhesive base ensures a firm securement of wiring bundles to a variety of materials. The T18RSA is both quick and easy to install.

#### Application

Ideal for use in a variety of clean applications.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



T18RSA

#### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material	Colour
148-00001	T18RSA	100	2.5	16.0	80	PA66	Natural (NA)

All dimensions in mm. Subject to technical changes.





## 2-Piece Fixing Ties for parallel separation

- **T50RCoupler** for max. bundle diameter 2 x 50.0 mm
- **T120RSingleCoupler** for max. bundle diameter 1 x 100.0 mm
- **T120RCoupler** for max. bundle diameter 2 x 100.0 mm

### Features and Benefits

The Coupler is the simple way to connect two cable ties for a parallel routing of two bundles. His special design allows the ties 90 degrees of rotation. This is ideal for all applications where the cable, pipe or hose should move flexible in relation to the fixing point.

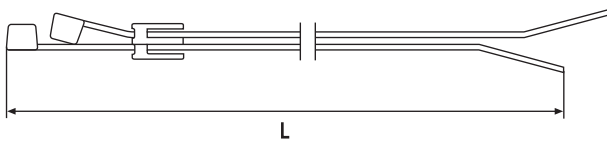
The Coupler can be used with one or two cable ties. This allows easily subsequent installation or replacements of further cables, pipes or hose.



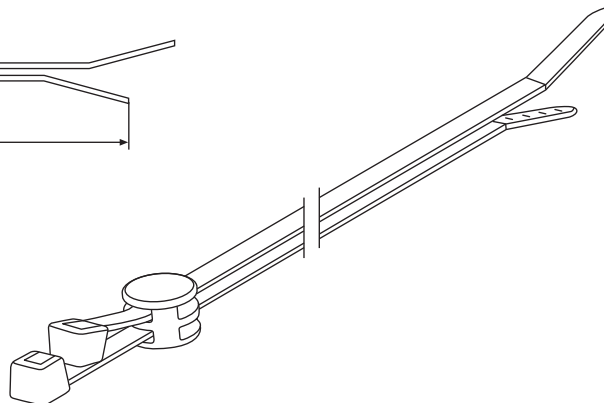
*T120RCoupler can be used for parallel routing of two cable ties.*



*The second tie can be used for post-installations.*



*T120RCoupler with two ties*



*T120RCoupler*



*Fixing Element - Coupler*

Material Data	
Cable Tie	<b>Polyamide 4.6 (PA46)</b>
Operating Temperature	<b>-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)</b>
Flammability	<b>UL94 V2</b>



Material Data	
Cable Tie	<b>Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)</b>
Operating Temperature	<b>-40 °C to +105 °C</b>
Flammability	<b>UL94 HB</b>



### Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile strength for ties (N)	Material Cable Tie	Material Foot Part	Colour
156-00276	<b>T50RCOUPLER</b>	200	4.6	50.0	225	PA66HIRHS(S)	PA66HIRHS	Black (BK)
156-00382	<b>T50RCOUPLER</b>	200	4.6	50.0	225	PA46	PA46	Grey (GY)
156-00550	<b>T120RSINGLECOUPLER</b>	380	7.6	100	535	PA66HIRHS	PA66HIRHS	Black (BK)
156-00275	<b>T120RCOUPLER</b>	380	7.6	100.0	535	PA66HIRHS(S)	PA66HIRHS	Black (BK)

All dimensions in mm. Subject to technical changes.