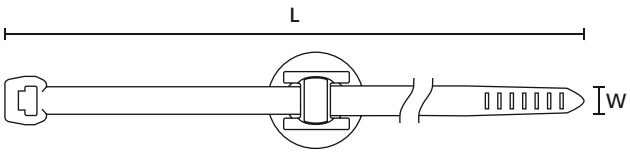
2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

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

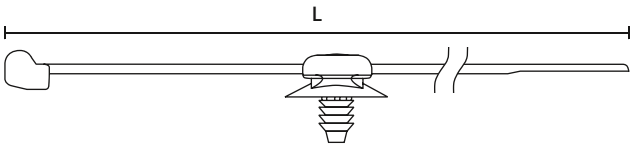
Features and benefits

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

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



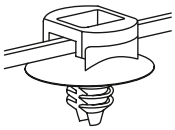
T50SOSFT5SD



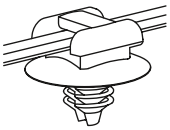
T50SOSFT5SD

Other dimensions are available on request.

Material specification please see page 26.



T30RFT5



T50SOSFT5SD

Fir Tree Parts FT3

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T18RFT3	2.5	100.0	20.0	80	13	M3	1.5 - 3.0	PA66HSUV	PA66HSW	Black (BK)	2;4-6	156-00338

All dimensions in mm. Subject to technical changes.

Fir Tree Parts FT5

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T18RFT5	2.5	100.0	22.0	80	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	156-01225
T30RFT5	3.5	150.0	34.0	135	16.0	4.5 - 5.0	0.7 - 3.0	PA46	PA46	Grey (GY)	2;4-6	156-01316
	3.5	150.0	34.0	135	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-55850
T50SOSFT5	4.6	150.0	31.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-06200
T50SOSFT5SD	4.6	150.0	35.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00432
T50RFT5	4.6	200.0	45.0	225	16.0	4.5 - 5.0	0.7 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00025

All dimensions in mm. Subject to technical changes.

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

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

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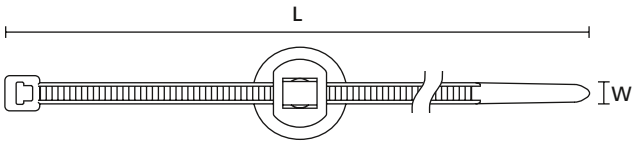
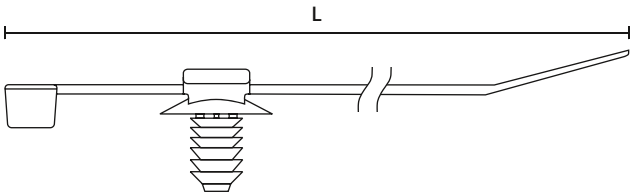
2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

Fir Tree Parts FT6



T50RFT6LG



T50RFT6LG

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
PT2AFT6	3.4	145.0	35.0	230	16	6.4 - 7.1	0.8 - 3.0	PEEK	PA46	Beige (BGE). Grey (GY)	2;4-6	156-00890
PT2AFT6LG	3.4	145.0	35.0	230	16.0	6.4 - 7.1	0.8 - 6.0	PEEK	PA46	Beige (BGE). Grey (GY)	2;4-6	156-01336
T30RFT6	3.5	150.0	30.0	135	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-77950
T30RFT6LG	3.5	150.0	35.0	133	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-31090
T30RFT6SD	3.6	148.0	35.0	135	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-52690
T50SFT6LG1SD	4.6	160.0	30.0	225	16.0	6.5 - 7.0	0.6 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00154
T50ROSFT6	4.6	200.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-00076
T50ROSFT6SD	4.6	200.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA46	PA46	Grey (GY)	2-10	156-00085
T50ROSFT6LG	4.6	200.0	45.0	225	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2;4-8	150-31099
T50ROSFT6SD	4.6	200.0	46.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIR	Black (BK)	2-10	156-05902
T50RFT6LGSD-HEX	4.6	202.0	45.0	225	16.0	6.25 - 6.75. 6.1 - 6.6 (hexagonal)	0.7 - 5.0	PA66HS	PA66HIRHS	Black (BK)	2-10	156-01705
T50RFT6	4.6	202.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA46	PA46	Grey (GY)	2-10	150-77938
	4.6	202.0	45.0	225	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66	Black (BK)	2-10	150-77941
T50RFT6LG	4.6	202.0	44.0	225	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-31091
T80IFT6LG	4.6	300.0	81.0	356	16.0	6.4 - 7.1	0.8 - 6.0	PA66HS	PA66HIRHS	Black (BK)	2-12	150-31096
T50RDHFT6	4.7	210.0	19.0	180	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2-10	150-77936

All dimensions in mm. Subject to technical changes.

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

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

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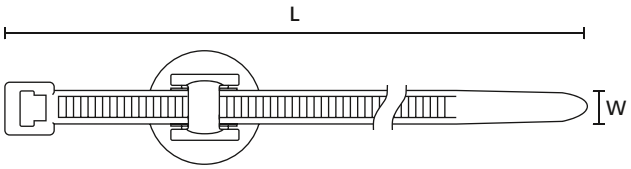
2-Piece Fixing Ties with Fir Tree, with Disc, for Round Holes

Fir Tree Parts FT7 - FT10



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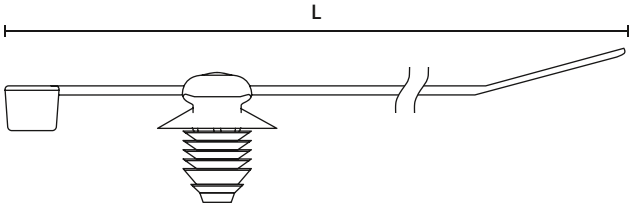

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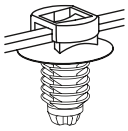
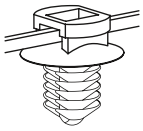
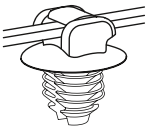


T50IFT7



T50RFT8



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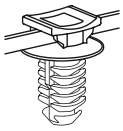
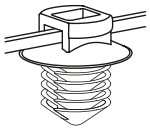


T120IFT9



T50RFT10

Material specification please see page 26.

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
V150RFT10	3.3	150.0	35.0	150	18.0	9.7 - 10.0	0.8 - 5.0	PA66	PA66HS	Black (BK)	2;4-6	156-01233
T30RFT7	3.5	150.0	35.0	135	16.0	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2;4-6;8	156-00057
T40RFT8GSD	4.0	180.0	40.0	180	16.0	8.0 - 8.5	1.5 - 4.0	PA66HS	PA66HIRHS	Black (BK)	2;4-8	156-00104
T50RFT7	4.6	200.0	44.0	225	16.0	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	111-85871
T50RFT10	4.6	200.0	45.0	225	18.0	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	111-85810
T50ROSFT10	4.6	200.0	45.0	225	18.0	9.7 - 10.0	0.8 - 5.0	PA66HS	PA66HS	Black (BK)	2-10	156-00120
T50ROSFT8 GSD	4.6	200.0	45.0	225	16	M10	1.1 - 1.5	PA66	PA66	Black (BK)	2-10	156-01484
T50RFT7HD	4.6	200.0	45.0	225	21.6	6.2 - 7.2	0.8 - 7.0	PA46	PA46	Brown (BN)	2-10	156-00457
T50RFT8	4.6	202.0	45.0	225	16.0	7.7 - 8.0	0.8 - 6.0	PA66HS	PA66HS	Black (BK)	2-10	111-85880
T50RFT8GSD	4.6	202.0	45.0	225	16.0	8.0 - 8.5	1.5 - 4.0	PA66HS	PA66HIRHS	Black (BK)	2-10	133-00034
	4.6	202.0	45.0	225	16.0	8.0 - 8.5	1.5 - 4.0	PA46	PA46	Grey (GY)	2-10	156-00235
T50IFT7	4.6	300.0	81.0	225	16.0	6.5 - 7.0	0.8 - 7.0	PA66HS	PA66HS	Black (BK)	2-10	150-00700
T50RDHFT8	4.7	210.0	19.0	-	16	7.7 - 8.0	180.0 - 6.0	PA66	PA66	Black (BK)	2-10	156-01612
T120IFT9	7.6	300.0	80.0	535	20.0	9.0 - 10.6	5.0 - 11.0	PA66HIR(S)	PA66HIR(S)	Black (BK)	3;9-12	156-00200
T120RFT9B	7.6	380.0	100.0	535	21.6	8.7 - 9.2	1.0 - 15.8	PA66HS	PA66HIRHSUV	Black (BK)	3;9-11;15	156-00071
T120RFT9A	7.6	380.0	100.0	535	21.6	8.7 - 9.2	1.0 - 6.5	PA66HS	PA66HIRHSUV	Black (BK)	3;9-11;15	156-00067
WSSFT9A	12.7	228.0	57.0	534	21.6	8.75 - 9.25	1.0 - 6.5	PA66HIRHSUV	PA66HIRHSUV	Black (BK)	3;9-12	156-00068

All dimensions in mm. Subject to technical changes.

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

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

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Material Specification Overview

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
Aluminium-alloy	AL	-40 °C to +180 °C	Natural (NA)		• Corrosion resistant • Antimagnetic	RoHS
Chloroprene	CR	-20 °C to +80 °C	Black (BK)		• Weather-resistant • High yield strength	RoHS
Ethylene Tetrafluoroethylene (Tefzel®)	E/TFE	-80 °C to +170 °C	Blue (BU)	UL 94 V0	• Resistance to radioactivity • UV- resistant, not moisture sensitive • Good chemical resistance to: acids, bases, oxidizing agents	RoHS
Polyacetal	POM	-40 °C to +90 °C, (+110 °C, 500 h)	Natural (NA)	UL 94 HB	• Limited brittleness sensitivity • Flexible at low temperature • Not moisture sensitive • Robust on impacts	RoHS
Polyamide 11	PA11	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	• Bio-plastic, derived from vegetable oil • Strong impact resistance at low temperature • Very low moisture absorption • Weather-resistant • Good chemical resistanc	HF RoHS
Polyamide 12	PA12	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	• Good chemical resistance to: acids, bases, oxidizing agents • UV- resistant	HF RoHS
Polyamide 4.6	PA46	-40 °C to +150 °C (5000 h), +195 °C (500 h)	Natural (NA), Grey (GY)	UL 94 V2	• Resistance to high temperatures • Very moisture sensitive • Low smoke sensitiv	HF LFH RoHS
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL 94 V2	• High yield strength	RoHS
Polyamide 6, high impact modified	PA6HIR	-40 °C to +80 °C	Black (BK)	UL 94 HB	• Limited brittleness sensitivity • Higher flexibility at low temperature	RoHS
Polyamide 6.6	PA66	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK), Natural (NA)	UL 94 V2	• High yield strength	HF RoHS
Polyamide 6.6, glass-fibre reinforced	PA66GF13, PA66GF15	-40 °C to +105 °C	Black (BK)	UL 94 HB	• Good resistance to: lubricants, vehicle fuel, salt water and a lot of solvent	HF RoHS
Polyamide 6.6, heat and UV stabilised	PA66HSW	-40 °C to +105 °C	Black (BK)	UL 94 V2	• High yield strength • Modified elevated max. temperature • UV-resistant	HF RoHS
Polyamide 6.6, heat stabilised	PA66HS	-40 °C to +105 °C	Black (BK), Natural (NA)	UL 94 V2	• High yield strength • Modified elevated max. temperature	HF RoHS
Polyamide 6.6, high impact modified	PA66HIR	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	• Limited brittleness sensitivity • Higher flexibility at low temperature	RoHS
Polyamide 6.6, high impact modified, heat and UV stabilised	PA66HIRHSW	-40 °C to +110 °C	Black (BK)	UL 94 HB	• Limited brittleness sensitivity • Higher flexibility at low temperature • Modified elevated max. temperature • High yield strength, UV-resistant	RoHS
Polyamide 6.6, high impact modified, heat stabilised	PA66HIRHS	-40 °C to +105 °C	Black (BK)	UL 94 HB	• Limited brittleness sensitivity • Higher flexibility at low temperature • Modified elevated max. temperature	RoHS
Polyamide 6.6, high impact modified, ScanBlack	PA66HIR(S)	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	• Limited brittleness sensitivity • Higher flexibility at low temperature	RoHS
Polyamide 6.6, UV-resistant	PA66W	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 V2	• High yield strength • UV-resistant	HF RoHS

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MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
Polyamide 6.6, with metal particles	PA66MP	-40 °C to +85 °C, (+105 °C, 500 h)	Blue (BU)	UL 94 HB	• High yield strength • Metal and X-Ray detectable	HF RoHS
Polyamide 6.6, with metal particles	PA66MP+	-40 °C to +85 °C	Blue (BU)	not flame retardant	• High yield strength • Metal and x-ray detectable	HF RoHS
Polyamide 6.6 V0	PA66V0	-40 °C to +85 °C	White (WH)	UL 94 V0	• High yield strength • Low smoke emission	HF LFH RoHS
Polyester	SP	-50 °C to +150 °C	Black (BK)	halogen free	• UV-resistant • Good chemical resistance to: most acids, alkaliks and oils	HF LFH RoHS
Polyetheretherketone	PEEK	-55 °C to +240 °C	Beige (BGE)	UL 94 V0	• Resistance to radioactivity • Not moisture sensitive • Good chemical resistance to: acids, bases, oxidizing agents	HF LFH RoHS
Polyethylene	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL 94 HB	• Low moisture absorption • Good chemical oilsresistance to: most acids, alcohol and oils	HF RoHS
Polyolefin	PO	-40 °C to +90 °C	Black (BK)	UL 94 V0	• Low smoke emissions	HF LFH RoHS
Polypropylene	PP	-40 °C to +115 °C	Black (BK), Natural (NA)	UL 94 HB	• Floats in water • Moderate yield strength • Good chemical resistance to: organic acids	HF RoHS
Polypropylene, Ethylene-Propylene-Dien-Terpolymere-rubber free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL 94 HB	• Good resistance to high temperatures • Good chemical and abrasion resistance	HF RoHS
Polypropylene with metal particles	PPMP	-40 °C to +115 °C	Blue (BU)	UL 94 HB	• Metal and X-Ray detectable • Heat resistant • Moderate yield strength • Good chemical resistance	RoHS
Polypropylene with metal particles	PPMP+	-40 °C to +85 °C	Blue (BU)	not flame retardant	• High yield strength • Metal and x-ray detectable	HF RoHS
Polyvinylchloride	PVC	-10 °C to +70 °C	Black (BK), Natural (NA)	UL 94 V0	• Low moisture absorption • Good chemical resistance to: acids, ethanol and oil	RoHS
Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)	non-burning	• Corrosion resistant • Antimagnetic • Weather resistant • Outstanding chemical resistance	HF LFH RoHS
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL 94 HB	• High elastic • Good chemical resistance to: acids, bases and oxidizing agents	HF RoHS

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

**More colours on request.

N = **Minimum Loop Tensile Strength for Cable Ties (Newton)**

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

Date of issue: 10/2017