



2-piece fixing ties with fir tree, with disc, for round holes

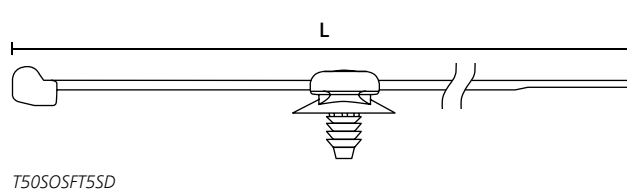
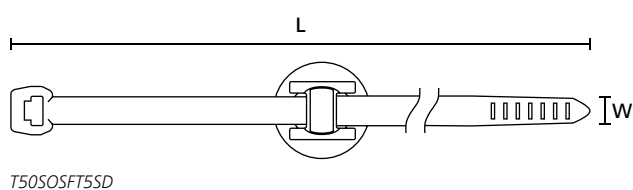
Primarily designed for fixing cable harnesses in the automotive industry their simplicity, and ease of use, has seen these parts used in everything from aircraft, to switch-gear, to washing machines.

Features and benefits

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



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



Fir tree parts FT3

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Bundle Ø max.	N	Disc Ø	Material	Colour	Tools	Article-No.
T18RFT3		M3	1.5 - 3.0	2.5	20.0	80	13.0	PA66HSUV	BK	1-2;4-6;25	156-00338

All dimensions in mm. Subject to technical changes.

Fir tree parts FT5

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Bundle Ø max.	N	Disc Ø	Material	Colour	Tools	Article-No.
T30RFT5		4.5 - 5.0	0.7 - 3.0	3.5	34.0	135	16.0	PA46	GY	1-2;4-6;25	156-01316
		4.5 - 5.0	0.7 - 3.0	3.5	34.0	135	16.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-55850
T50SOSFT5		4.5 - 5.0	0.7 - 3.0	4.6	35.0	225	16.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-06200
T50RFT5		4.5 - 5.0	0.7 - 3.0	4.6	45.0	225	16.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-00025
T18RFT5		4.5 - 5.0	0.7 - 3.0	2.5	22.0	80	16.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-01225
T50SOSFT5SD		4.5 - 5.0	0.7 - 3.0	4.6	35.0	225	16.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-00432

All dimensions in mm. Subject to technical changes.

Recommended Tools						
	1	2	4	5	6	25
	MK10-SB	MK20	MK3PNSP2	EVO7i	MK7P	EVOcut
	550	550	551	553	555	563

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



Add items to your watchlist!

www.HT.click/49-108





2-piece fixing ties with fir tree, with disc, for round holes

Fir tree parts FT6



Material specification
please see page 26.

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Tools	Article-No.
PT2AFT6LG		6.4 - 7.1	0.8 - 6.0	3.4	145.0	35.0	PEEK, PA46	BGE, GY	1-2;4-6;25	156-01336
T30RFT6LG		6.5 - 7.0	0.8 - 6.0	3.5	150.0	30.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-31090
T50ROSFT6LG		6.5 - 7.0	0.8 - 6.0	4.6	200.0	45.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-31099
T50RFT6LG		6.5 - 7.0	0.8 - 6.0	4.6	202.0	45.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-31091
T80IFT6LG		6.5 - 7.0	0.8 - 6.0	4.7	305.0	75.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-31096
T30RFT6SD		6.4 - 7.1	0.8 - 3.0	3.5	150.0	35.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-52690
T50ROS FT6SD		6.4 - 7.1	0.8 - 3.0	4.6	200.0	45.0	PA46	GY	1-2;4-6;25	156-00085
		6.4 - 7.1	0.8 - 3.0	4.6	200.0	46.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-05902
T50R FT6LGSD-HEX		6.25 - 6.75, 6.1 - 6.6 (hexagonal)	0.7 - 5.0	4.6	202.0	45.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-01705
T50S FT6LG1SD		6.5 - 7.0	0.6 - 6.0	4.6	160.0	30.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-00154
T30RFT6		6.4 - 7.1	0.8 - 3.0	3.5	150.0	30.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-77950
T50ROSFT6		6.4 - 7.1	0.8 - 3.0	4.6	200.0	45.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-00076
T50RFT6		6.4 - 7.1	0.8 - 3.0	4.6	202.0	45.0	PA46	GY	1-2;4-6;25	156-01693
		6.4 - 7.1	0.8 - 3.0	4.6	202.0	45.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-77941
T50RDHFT6		6.4 - 7.1	0.8 - 3.0	4.7	210.0	19.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	150-77936

All dimensions in mm. Subject to technical changes.

Recommended Tools						
	1	2	4	5	6	25
	MK10-SB	MK20	MK3PNSP2	EVO7i	MK7P	EVOcut
	550	550	551	553	555	563

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



Add items to your watchlist!

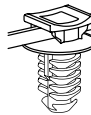
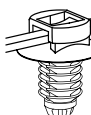
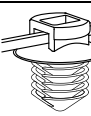
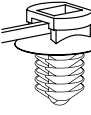
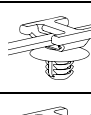
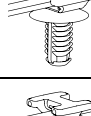
www.HT.click/49-109





2-piece fixing ties with fir tree, with disc, for round holes

Fir tree parts FT7 - FT10

TYPE	Drawing	Hole Ø (FH)	Panel Thickness	Width (W)	Length (L)	Bundle Ø max.	Material	Colour	Tools	Article-No.
T120IFT9		9.0 - 10.6	5.0 - 11.0	7.6	300.0	80.0	PA66HIR(S)	BK	1;3;9-10;25	156-00200
T30RFT7		6.5 - 7.0	0.8 - 7.0	3.5	150.0	35.0	PA66HS	BK	1-2;4-6;25	156-00057
T50RFT7		6.5 - 7.0	0.8 - 7.0	4.6	202.0	45.0	PA66HS	BK	1-2;4-6;25	111-85871
T50IFT7		6.5 - 7.0	0.8 - 7.0	4.6	300.0	85.0	PA66HS	BK	1-2;4-6;25	150-00700
V150RFT10		9.7 - 10.0	0.8 - 5.0	3.3	150.0	35.0	PA66, PA66HS	BK	1-2;4-6;25	156-01233
T50ROSFT10		9.7 - 10.0	0.8 - 5.0	4.6	200.0	45.0	PA66HS	BK	1-2;4-6;25	156-00120
T50RFT10		9.7 - 10.0	0.8 - 5.0	4.6	200.0	45.0	PA66HS	BK	1-2;4-6;25	111-85810
T50RFT8		7.7 - 8.0	0.8 - 6.0	4.6	202.0	45.0	PA66HS	BK	1-2;4-6;25	111-85880
T50ROSFT8GSD		8.0 - 8.5	1.1 - 1.5	4.6	200.0	45.0	PA66HS, PA66W	BK	1-2;4-6;25	156-01484
T40RFT8GSD		8.0 - 8.5	1.5 - 4.0	4.0	180.0	40.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	156-00104
T50RFT8GSD		8.0 - 8.5	1.5 - 4.0	4.6	202.0	45.0	PA46	GY	1-2;4-6;25	156-00235
		8.0 - 8.5	1.5 - 4.0	4.6	202.0	45.0	PA66HS, PA66HIRHS	BK	1-2;4-6;25	133-00034
T120RFT9A		8.7 - 9.2	1.0 - 6.5	7.6	380.0	105.0	PA66HIRHSUV	BK	1;3;9-10;25	156-00067
WSSFT9A		8.7 - 9.2	1.0 - 6.5	12.7	228.0	57.0	PA66HIRHSUV	BK	3;5;7;9-10	156-00068
T120RFT9B		8.7 - 9.2	1.0 - 15.8	7.6	380.0	105.0	PA66HIRHSUV	BK	1;3;9-10;25	156-00071
T50RFT7HD		6.2 - 7.2	0.8 - 7.0	4.6	202.0	50.0	PA46	BN	1-2;4-6;25	156-00457

All dimensions in mm. Subject to technical changes.

Recommended Tools										
	1	2	3	4	5	6	7	9	10	25
	MK10-SB	MK20	MK21	MK3PNSP2	EVO7i	MK7P	EVO9	EVO9HT	MK9P	EVOcut
	550	550	550	551	553	555	554	554	556	563

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



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 rubber	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 impact	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 resistance	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 +130 °C, (+150 °C, 5000 h; +195 °C, 500 h)	Natural (NA), Grey (GY)	UL 94 V2	- Resistance to high temperatures - Very moisture sensitive - Low smoke sensitivity	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	-40 °C to +105 °C, (+105 °C for 500 h)	Black (BK)	UL 94 HB	Good resistance to lubricants, fuels, salt water and solvents	HF RoHS
Polyamide 6.6, heat and UV-stabilised	PA66HSUV	-40 °C to +105 °C, (+105 °C for 500 h)	Black (BK)	UL 94 V2	- High yield strength - Modified elevated maximum temperature - UV resistant	HF RoHS
Polyamide 6.6, heat stabilised	PA66HS	-40 °C to +105 °C, (+105 °C for 500 h)	Black (BK), Natural (NA)	UL 94 V2	- High yield strength - Modified elevated maximum 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	PA66HIRHSUV	-40 °C to +110 °C	Black (BK)	UL 94 HB	- Limited brittleness sensitivity - Higher flexibility at low temperature - Modified elevated maximum temperature - High yield strength, UV resistant	RoHS
Polyamide 6.6, high impact modified, heat stabilised	PA66HIRHS	-40 °C to +105 °C, (+105 °C for 500 h)	Black (BK)	UL 94 HB	- Limited brittleness sensitivity - Higher flexibility at low temperature - Modified elevated maximum temperature	RoHS
Polyamide 6.6, high impact modified, scan black	PA66HIR(S)	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	- 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
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

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
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)		- UV resistant - Good chemical resistance to most acids, bases 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, oxidising agents	HF LFH RoHS
Polyethylene	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL 94 HB	- Low moisture absorption - Good chemical resistance to most acids, bases, alcohol, 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 acids, bases and solvents	HF RoHS
Polypropylene, Ethylene Propylene Diene Terpolymer rubber free of Nitrosamine	PP, EPDM	-20 °C to +95 °C	Black (BK)	UL 94 HB	- Good resistance to high temperature - 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, bases, salts, alcohol, oils	RoHS
Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)	Non burning	- Corrosion resistant - Antimagnetic - Weather resistant - Chemical resistance - SS316 also resistant against seawater, salt spray and anorganic acids	HF LFH RoHS
Thermoplastic Polyurethane	TPU	-40 °C to +85 °C	Black (BK)	UL 94 HB	- High elasticity - Good chemical resistance to: acids, bases and oxidizing agents	HF RoHS

Tefzel® is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material E/TFE is Tefzel®-Tie. In addition to Tefzel® from DuPont HellermannTyton also uses equivalent E/TFE raw material from other suppliers.

**Further colours available on request.

*These details are only guide values. They should not be regarded as a exhaustive material specification and are no substitute for suitability tests. Please see our datasheets for further details.

HF = Halogen Free

LFH = Limited Fire Hazard

RoHS = Restriction of Hazardous Substances

 = Minimum Loop Tensile Strength for Cable Ties (newton)