



More space for efficient
electrical panel building

Cable management solutions made by HellermannTyton



Speed up your projects.
With our cable management solutions.

Development and production expertise

Time is money, especially when engineering control panels. For many years we have been focusing on fast and easy installation, one of the reasons our experience is so crucial in this area. Our cable ducts and cable protection systems are designed on an industry-specific basis with maximum practical feasibility. Tested in a variety of industries for decades, we offer tailor-made solutions for panel building.

Perfect solutions for your cable needs.





Are you looking for a specific solution?
Call your field sales representative or
our hotline **+49 4122 701-0**

Innovative space safers for professionals.



Cable Protection Systems
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Identification Systems
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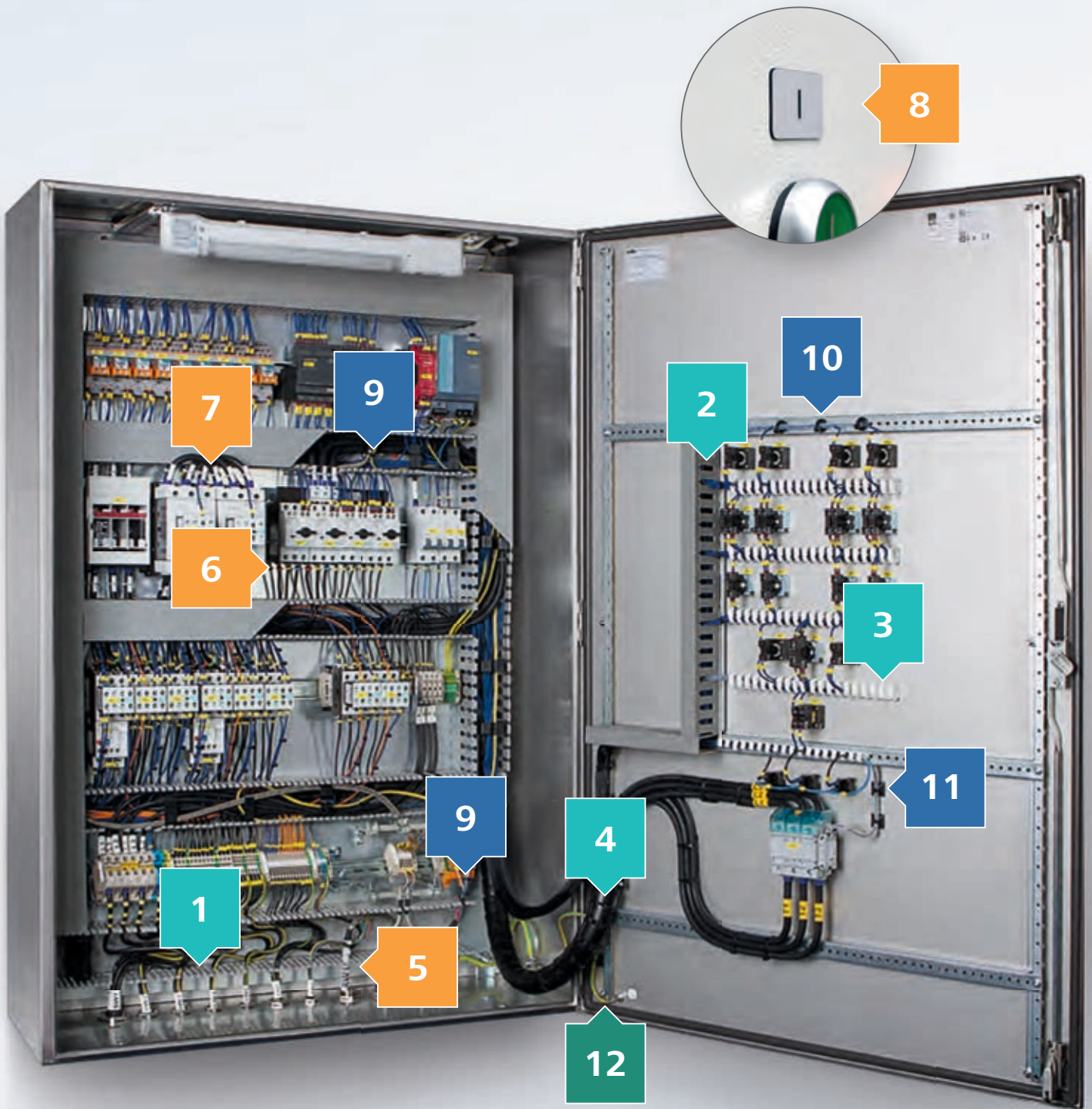
Cable Ties and Fixings
Page 57



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Don't struggle over every cubic centimetre.
Save space with our products.



Working efficiently in the tightest of spaces and implementing powerful designs – it's not rocket science, it's working smart. Working with the cable management system from HellermannTyton creates great new opportunities for your daily routine. Our product solutions are thought through in every detail.

Whether with our special wiring ducts and retainers which guarantee convenient installation or with our easy-to-use labelling systems: we simplify panel building.

Cable protection

- 1 Heladuct HTWD-PN:** Wiring ducts for cables with small diameters. Remove the fins safely and easily using the perforated breakage points. Particularly narrow ribs and slots. **See page 10**
- 2 Heladuct HTWD-PW:** Wiring ducts for cables with larger diameters. **See page 12**
- 3 Heladuct Flex:** Flexible cable harnesses for clarity in line management, even at step inclines. **See page 22**
- 4 Helawrap HWPP:** The ideal solution for bundling and protecting cables and lines. **See page 28**

Labelling systems

- 5 Helatag 1209:** Resistant labelling with excellent protection against humidity and mechanical abrasion thanks to protective laminate. **See page 38**
- 6 WIC:** Fast and easy labelling. Also suitable for retrofitting. **See page 43**
- 7 IT cable ties:** For easily combined labelling and bundling. **See page 46**
- 8 Panel labels:** Low-cost alternative to engraved plastic signs. No additional sign holder necessary and easy to print on site. **See page 53**

Cable tie and fixing systems

- 9 Q series:** Cable tie system with open tie head offers more than 25 % faster connection with its ease of use. **See page 62**
- 10 T50R0SFT6 cable ties:** Teeth are placed on the outside, protecting the bundled product, christmas tree fastener enables variable attachment (sheet thickness). **See page 65**
- 11 SolidTack:** Mount with very high adhesive strength – even on low energy surface materials. **See page 70**

Insulating products

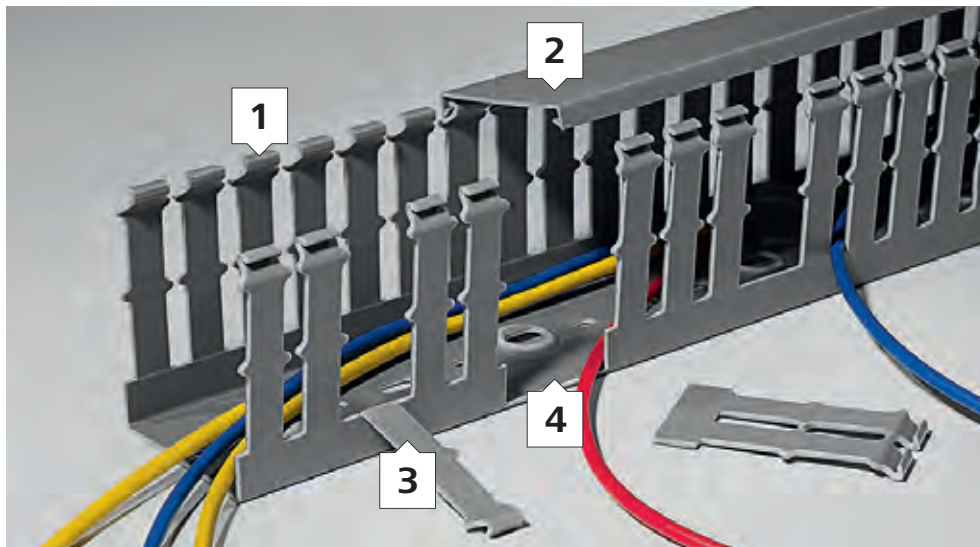
- 12 HIS-3:** For effective insulation and colour-coding. **See page 80**

For more information on panel building visit www.HellermannTyton.com/Panel-Building

Wiring ducts

Optimum protection for cables and installers

The HTWD-PW wiring ducts are used in panels and switching stations and are very well suited for cables with small cross sections.



- 1** The smooth, burr-free edges protect both the installer and the cables.
- 2** The cover is firmly in place, even under challenging conditions such as vertical installation and vibration. Flush cover on the side for optimum use of space. The wiring ducts must therefore also be mounted close to the cover.

- 3** Burr-free removal of ribs using perforated break points.
- 4** Wall segments can also be removed burr-free using perforated break points.

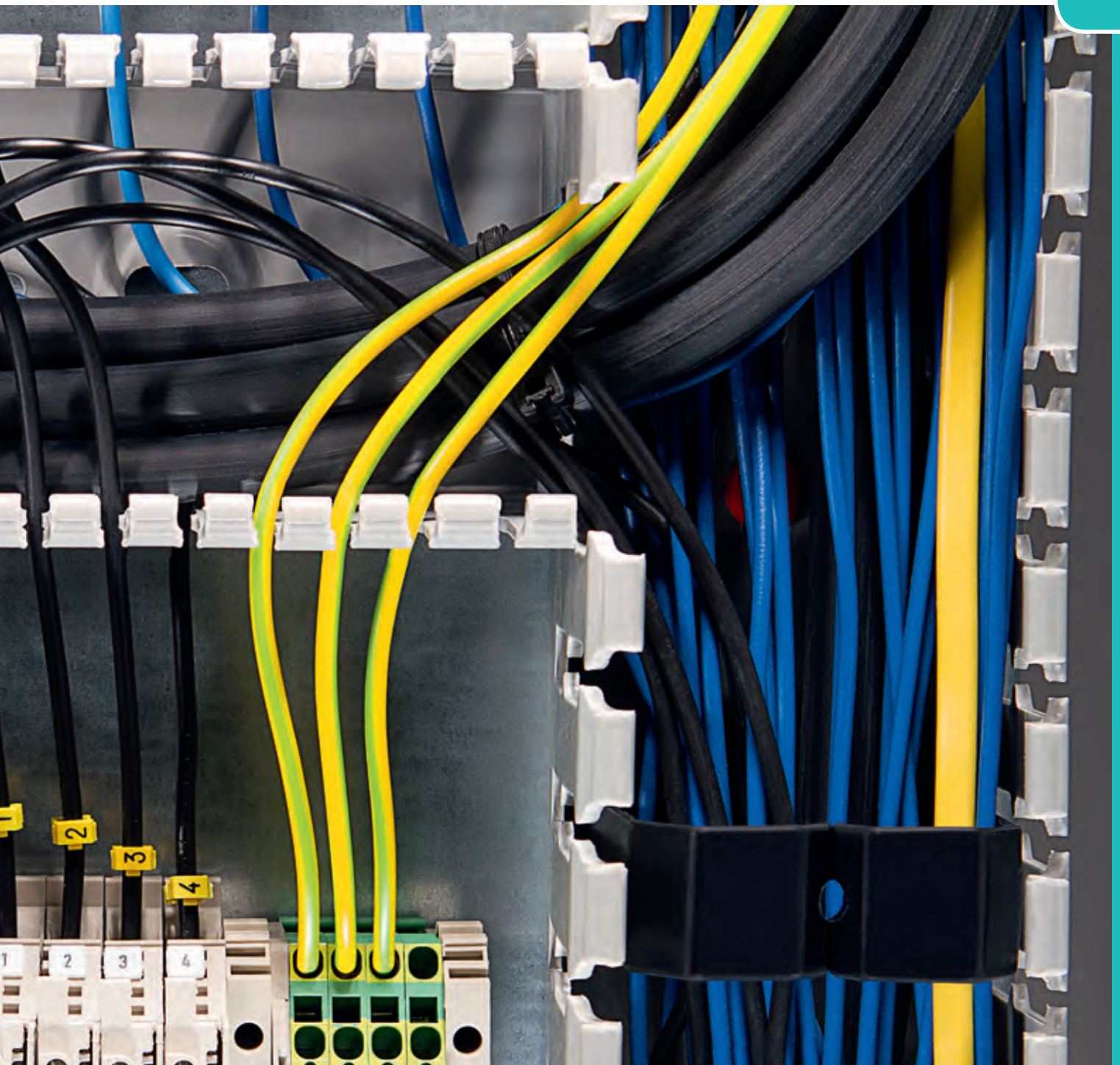


Wiring Ducts

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Protective Tubing and Spiral Binding

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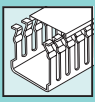
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Cable Protection Systems

Wiring Ducts

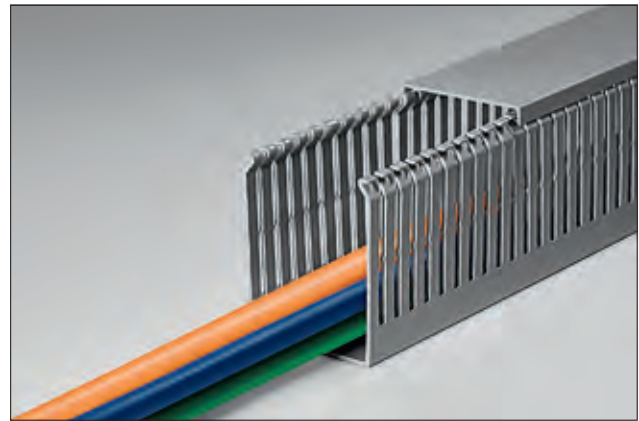
Rigid PVC Wiring Ducts

HelaDuct HTWD-PN for small-diameter wires

T1E wiring ducts are used in control panels, switching systems, and especially electronic control systems.

Features and Benefits

- Narrow slots suitable for small-diameter wires
- Smooth, burr-free edges protect installers from injury and wires from damage
- Fingers can be removed with no sharp edges at pre-notched snap-off points
- Further pre-notched snap-off point at base of sidewall allow cutting out and removing sections of sidewall with no sharp edges
- Raised mounting points for easily and securely fastening wire retainers and other accessories prior to cabling
- Wire retainers and accessories leave no protruding parts below surface of duct
- Duct covers are easy to mount and remove, yet hold securely even in a vertical position and under vibration
- Cover is flush with side of duct, allowing for tight, contiguous placement of ducts
- Additional retainer nub on fingers on ducts height 80 and above to prevent cables from slipping
- Base perforation according to DIN EN 50085

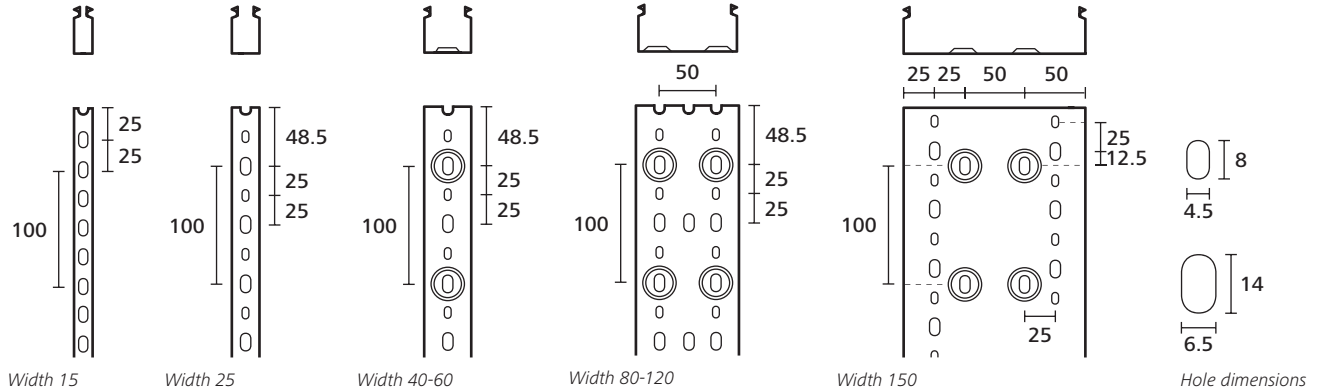


HTWD-PN wiring ducts with narrow fingers and slots for small-diameter wires.

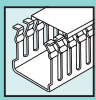
MATERIAL	Polyvinylchloride (PVC)
Colour	Grey (GY)
Length (L)	2 m
Operating Temperature	-5 °C to +65 °C
Flammability	UL 94 V0



Punching acc. DIN EN 50085 wiring ducts HTWD-PN

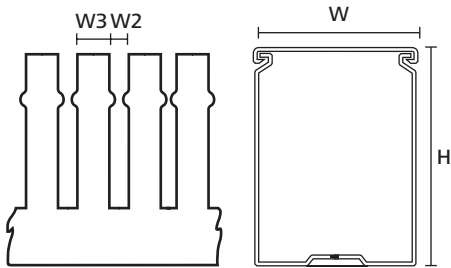


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Rigid PVC Wiring Ducts

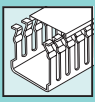
HelaDuct HTWD-PN for small-diameter wires



Wiring duct HTWD-PN

TYPE	Width (W)	Height (H)	Width (W2)	Width (W3)	Pack Cont.	Article-No.
HTWD-PN-25X40	25	40	4	6	72 m	184-10068
HTWD-PN-25X60	25	60	4	6	48 m	184-10138
HTWD-PN-25X80	25	80	4	6	48 m	184-10198
HTWD-PN-40X40	40	40	4	6	40 m	184-10078
HTWD-PN-40X60	40	60	4	6	36 m	184-10148
HTWD-PN-40X80	40	80	4	6	32 m	184-10208
HTWD-PN-40X100	40	100	4	6	16 m	184-10258
HTWD-PN-60X40	60	40	4	6	24 m	184-10088
HTWD-PN-60X60	60	60	4	6	24 m	184-10158
HTWD-PN-60X80	60	80	4	6	24 m	184-10218
HTWD-PN-60X100	60	100	4	6	8 m	184-10268
HTWD-PN-80X40	80	40	4	6	24 m	184-10098
HTWD-PN-80X60	80	60	4	6	24 m	184-10168
HTWD-PN-80X80	80	80	4	6	24 m	184-10228
HTWD-PN-80X100	80	100	4	6	8 m	184-10329
HTWD-PN-100X40	100	40	4	6	16 m	184-10108
HTWD-PN-100X60	100	60	4	6	16 m	184-10178
HTWD-PN-100X80	100	80	4	6	16 m	184-10238
HTWD-PN-100X100	100	100	4	6	8 m	184-10278
HTWD-PN-120X60	120	60	4	6	16 m	184-10188
HTWD-PN-120X80	120	80	4	6	16 m	184-10248

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Cable Protection Systems

Wiring Ducts

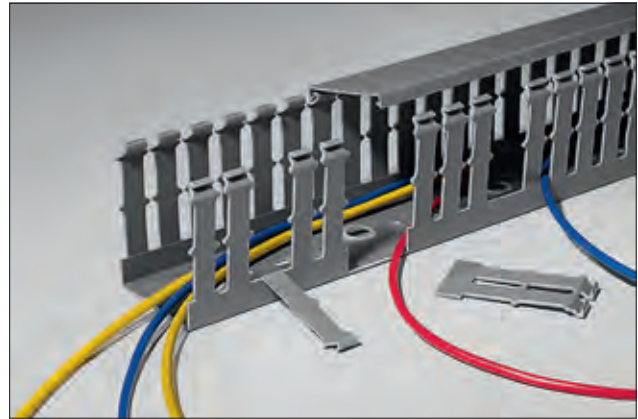
Rigid PVC Wiring Ducts

HelaDuct HTWD-PW for large-diameter wires

T1 wiring ducts are used in control panels and switching systems, particularly for wires with large diameters.

Features and Benefits

- Wide slots suitable for large-diameter wires
- Wide fingers provide additional wire support
- Smooth, burr-free edges protect installers from injury and wires from damage
- Fingers can be removed with no sharp edges at pre-notched snap-off points
- Further pre-notched snap-off point at base of sidewall allow cutting out and removing sections of sidewall with no sharp edges
- Raised mounting points for easily, quickly and securely fastening wire retainers and other accessories prior to cabling
- Wire retainers and accessories leave no protruding parts below surface of duct
- Duct covers are easy to mount and remove, yet hold securely even in a vertical position and under vibration
- Cover is flush with side of duct, allowing for tight, contiguous placement of ducts
- Additional retainer nub on fingers on ducts height 80 and above to prevent cables from slipping
- Base perforation according to DIN EN 50085

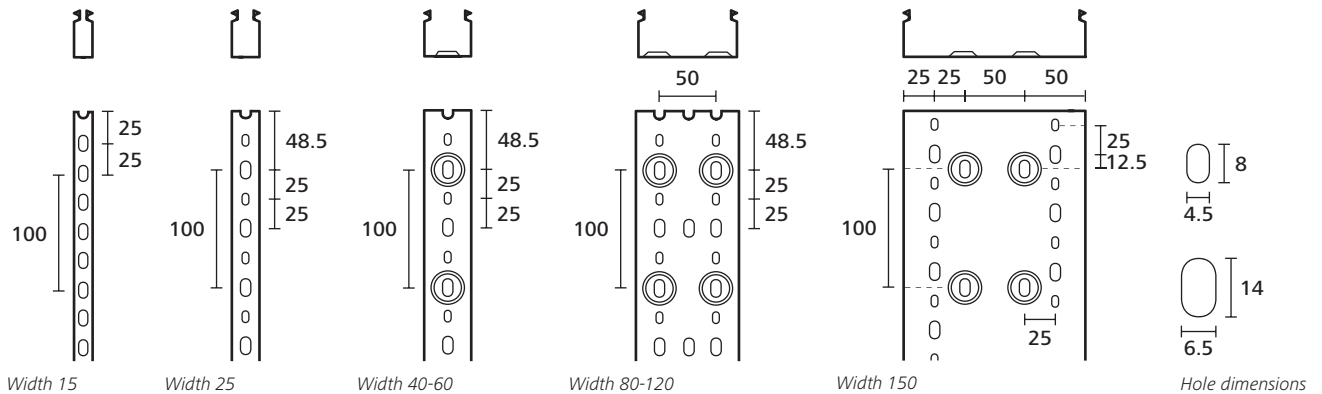


HTWD-PW wiring ducts with wide fingers and slots for large-diameter wires.

MATERIAL	Polyvinylchloride (PVC)
Colour	Grey (GY)
Length (L)	2 m
Operating Temperature	-5 °C to +65 °C
Flammability	UL 94 V0



Punching acc. DIN EN 50085 wiring ducts HTWD-PW

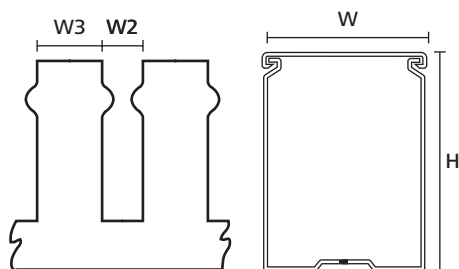


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Rigid PVC Wiring Ducts

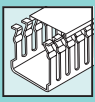
HelaDuct HTWD-PW for large-diameter wires



Wiring duct HTWD-PW

TYPE	Width (W)	Height (H)	Width (W2)	Width (W3)	Pack Cont.	Article-No.
HTWD-PW-15X18	15	18	5	7.5	72 m	181-10018
HTWD-PW-15X30	15	30	5	7.5	64 m	181-10038
HTWD-PW-15X40	15	40	5	7.5	48 m	181-10058
HTWD-PW-15X60	15	60	5	7.5	32 m	181-10118
HTWD-PW-25X30	25	30	5	7.5	72 m	181-10028
HTWD-PW-25X40	25	40	8	12	72 m	181-10068
HTWD-PW-25X60	25	60	8	12	48 m	181-10138
HTWD-PW-25X80	25	80	8	12	48 m	181-10198
HTWD-PW-25X100	25	100	8	12	16 m	181-10328
HTWD-PW-40X40	40	40	8	12	40 m	181-10078
HTWD-PW-40X60	40	60	8	12	36 m	181-10148
HTWD-PW-40X80	40	80	8	12	32 m	181-10208
HTWD-PW-40X100	40	100	8	12	16 m	181-10258
HTWD-PW-60X40	60	40	8	12	24 m	181-10088
HTWD-PW-60X60	60	60	8	12	24 m	181-10158
HTWD-PW-60X80	60	80	8	12	24 m	181-10218
HTWD-PW-60X100	60	100	8	12	8 m	181-10268
HTWD-PW-80X40	80	40	8	12	24 m	181-10098
HTWD-PW-80X60	80	60	8	12	24 m	181-10168
HTWD-PW-80X80	80	80	8	12	24 m	181-10228
HTWD-PW-80X100	80	100	8	12	8 m	181-10329
HTWD-PW-100X40	100	40	8	12	16 m	181-10108
HTWD-PW-100X60	100	60	8	12	16 m	181-10178
HTWD-PW-100X80	100	80	8	12	16 m	181-10238
HTWD-PW-100X100	100	100	8	12	8 m	181-10278
HTWD-PW-120X60	120	60	8	12	16 m	181-10188
HTWD-PW-120X80	120	80	8	12	16 m	181-10248
HTWD-PW-150X100	150	100	8	12	8 m	181-10288

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Rigid PVC Wiring Ducts

HelaDuct HTWD-PD DIN-sizes

HelaDuct HTWD-PD wiring ducts are used to route and protect wires in control panels and switching systems.

Features and Benefits

- Narrow slots suitable for small-diameter wires
- Smooth, burr-free edges protect installers from injury and wires from damage
- Fingers can be removed with no sharp edges at pre-notched snap-off points
- Further pre-notched snap-off point at base of sidewall allow cutting out and removing sections of sidewall with no sharp edges
- Duct covers are easy to mount and remove, yet hold securely even in a vertical position and under vibration
- Cover is flush with side of duct, allowing for tight, contiguous placement of ducts
- Base perforation according to DIN EN 50085

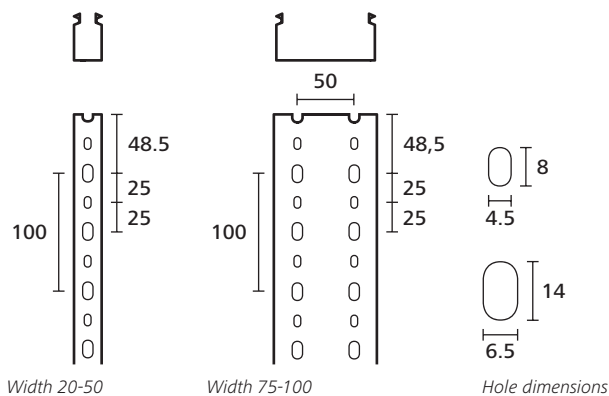


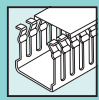
HTWD-PD wiring ducts in DIN sizes.

MATERIAL	Polyvinylchloride (PVC)
Colour	Grey (GY)
Length (L)	2 m
Flammability	UL 94 V0
Operating Temperature	-5 °C to +60 °C



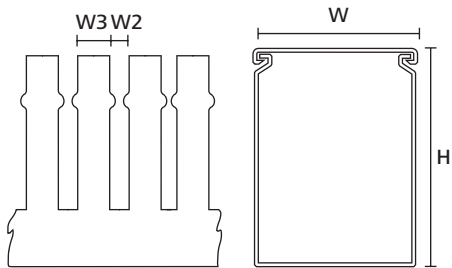
Punching acc. DIN EN 50085 wiring ducts HTWD-PD





Rigid PVC Wiring Ducts

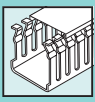
HelaDuct HTWD-PD DIN-sizes



Wiring duct HTWD-PD

TYPE	Width (W)	Height (H)	Width (W2)	Width (W3)	Pack Cont.	Article-No.
HTWD-PD-20X20	20	20	4	6	64 m	185-42020
HTWD-PD-20X37.5	20	37.5	4	6	32 m	185-42037
HTWD-PD-20X50	20	50	4	6	20 m	185-42050
HTWD-PD-25X25	25	25	5	7.5	48 m	185-42525
HTWD-PD-25X50	25	50	5	7.5	18 m	185-42550
HTWD-PD-25X75	25	75	5	7.5	32 m	185-42575
HTWD-PD-37.5X25	37.5	25	5	7.5	64 m	185-43725
HTWD-PD-37.5X37.5	37.5	37.5	5	7.5	32 m	185-43737
HTWD-PD-37.5X50	37.5	50	5	7.5	40 m	185-43750
HTWD-PD-37.5X75	37.5	75	5	7.5	40 m	185-43775
HTWD-PD-50X50	50	50	5	7.5	48 m	185-45050
HTWD-PD-50X75	50	75	5	7.5	20 m	185-45075
HTWD-PD-50X100	50	100	5	7.5	24 m	185-45010
HTWD-PD-75X50	75	50	5	7.5	20 m	185-47550
HTWD-PD-75X75	75	75	5	7.5	16 m	185-47575
HTWD-PD-75X100	75	100	5	7.5	16 m	185-47510
HTWD-PD-100X50	100	50	5	7.5	24 m	185-41050
HTWD-PD-100X75	100	75	5	7.5	16 m	185-41075
HTWD-PD-100X100	100	100	5	7.5	12 m	185-41010
HTWD-PD-125X50	125	50	5	7.5	18 m	185-41250
HTWD-PD-125X75	125	75	5	7.5	12 m	185-41275

All dimensions in mm. Subject to technical changes.
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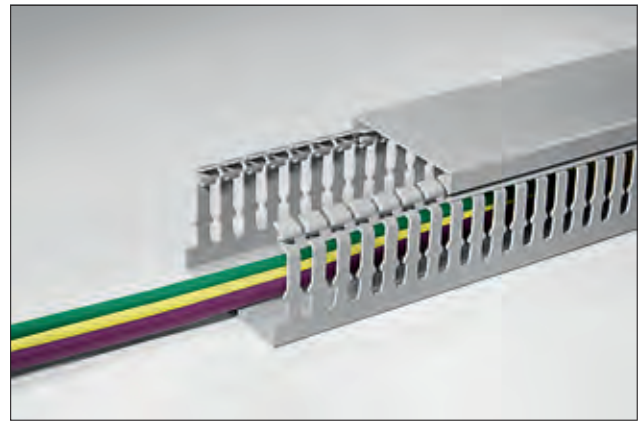
Halogen-Free Wiring Ducts

HelaDuct HTWD-HF

HelaDuct HTWD-HF wiring ducts are used to route and protect wires in control panels and switching systems where there are high demands on personal or material safety in case of fire, such as in public transport, tunnels, data-processing centers or public buildings.

Features and Benefits

- Excellent fire-safety characteristics
- Narrow slots suitable for small-diameter wires
- Smooth, burr-free edges protect installers from injury and wires from damage
- Fingers can be removed with no sharp edges at pre-notched snap-off points
- Further pre-notched snap-off point at base of sidewall allow cutting out and removing sections of sidewall with no sharp edges
- Duct covers hold securely even in a vertical position and under vibration
- Cover is flush with side of duct, allowing for tight, contiguous placement of duct
- Base perforation according to DIN EN 50085

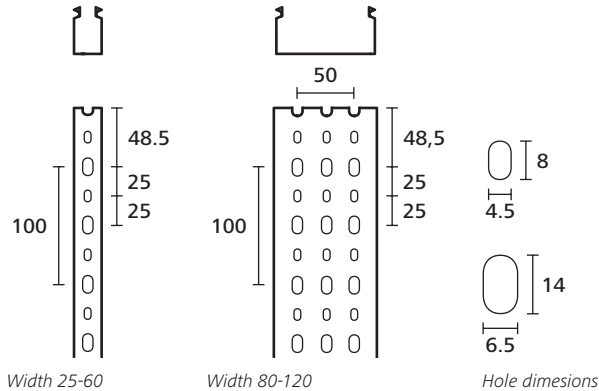


Halogen-Free wiring ducts HelaDuct HTWD-HF for high safety demands.

MATERIAL	Acrylonitrile Butadiene Styrene alloyed with Polycarbonate (PC/ABS)
Colour	Grey (GY)
Length (L)	2 m
Operating Temperature	-25 °C to +90 °C
Flammability	UL 94 V0



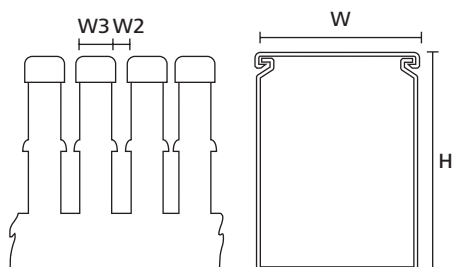
Punching acc. DIN EN 50085 wiring ducts HTWD-HF





Halogen-Free Wiring Ducts

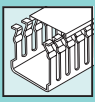
HelaDuct HTWD-HF



HelaDuct Wiring ducts HTWD-HF

TYPE	Width (W)	Height (H)	Width (W2)	Width (W3)	Pack Cont.	Article-No.
HTWD-HF-25X25	25	25	6	6.5	50 m	183-22525
HTWD-HF-25X40	25	40	6	6.5	48 m	183-22540
HTWD-HF-25X60	25	60	6	6.5	60 m	183-25060
HTWD-HF-25X80	25	80	6	6.5	20 m	183-22580
HTWD-HF-40X25	40	25	6	6.5	48 m	183-24025
HTWD-HF-40X40	40	40	6	6.5	50 m	183-24040
HTWD-HF-40X60	40	60	6	6.5	40 m	183-24060
HTWD-HF-40X80	40	80	6	6.5	20 m	183-24080
HTWD-HF-60X40	60	40	6	6.5	40 m	183-26040
HTWD-HF-60X60	60	60	6	6.5	24 m	183-26060
HTWD-HF-60X80	60	80	6	6.5	20 m	183-26080
HTWD-HF-60X100	60	100	6	6.5	16 m	183-26010
HTWD-HF-80X40	80	40	6	6.5	30 m	183-28040
HTWD-HF-80X60	80	60	6	6.5	24 m	183-28060
HTWD-HF-80X80	80	80	6	6.5	12 m	183-28080
HTWD-HF-80X100	80	100	6	6.5	16 m	183-28010
HTDW-HF-100X40	100	40	6	6.5	20 m	183-22040
HTWD-HF-100X60	100	60	6	6.5	16 m	183-21060
HTWD-HF-100X80	100	80	6	6.5	12 m	183-21080
HTWD-HF-100X100	100	100	6	6.5	12 m	183-21010
HTWD-HF-120X60	120	60	6	6.5	12 m	183-21260
HTDW-HF-120X80	120	80	6	6.5	16 m	183-21280

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Cable Protection Systems

Wiring Ducts

Rigid PVC Wiring Ducts

HelaDuct HTWD-PC with circular knockouts for conduits and heavy cables

HelaDuct HTWD-PC wiring ducts are typically used in applications requiring branching connections with corrugated or rigid conduits, such as lifts.

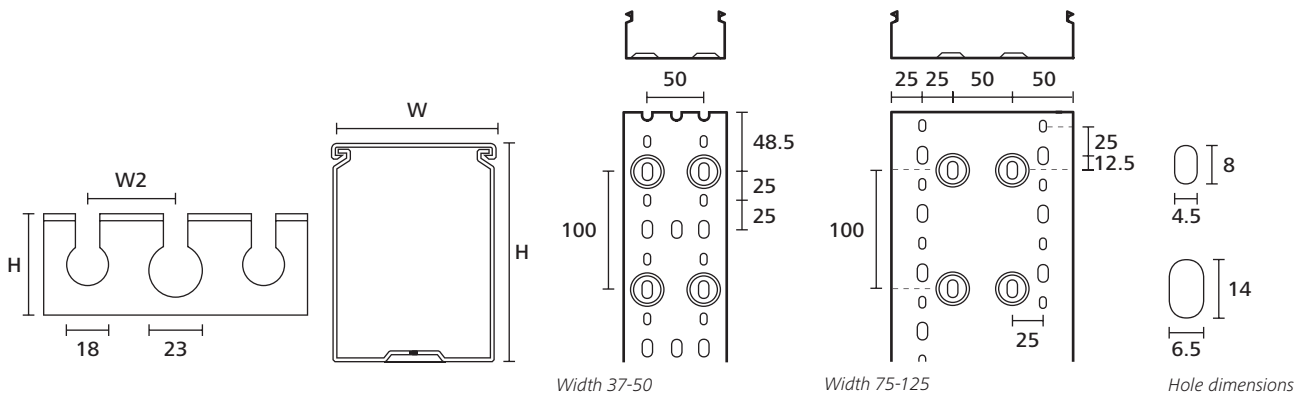
Features and Benefits

- Circular knockouts of 18 mm and 23 mm diameter
- Duct covers are easy to mount and remove, yet hold securely even in a vertical position and under vibration
- Cover is flush with side of duct
- Base perforation according to DIN EN 50085



HelaDuct HTWD-PC are typically used in lift shafts and wherever cables are branched off with corrugated or rigid conduits.

MATERIAL	Polyvinylchloride (PVC)
Colour	Grey (GY)
Length (L)	2 m
Operating Temperature	-5 °C to +65 °C
Flammability	UL 94 V0



TYPE	Width (W)	Height (H)	Width (W2)	Pack Cont.	Article-No.
HTWD-PC-37,5X50	37.5	50	50	24 m	186-10188
HTWD-PC-50X50	50	50	50	14 m	186-10198
HTWD-PC-75X50	75	50	50	24 m	186-10218
HTWD-PC-100X50	100	50	50	16 m	186-10238
HTWD-PC-125X50	125	50	50	16 m	186-10248

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Rigid PVC Wiring Duct Covers

HelaDuct HTWD-PCOVM covers for metric-size wiring ducts

HelaDuct HTWD-PCOVM duct covers are used with the HTWD-PN and HTWD-PW metric-sized wiring ducts.

Features and Benefits

- Easily mounted and removed
- Secure hold
- Flush with side of duct, allowing for tight, contiguous placement of ducts



HelaDuct HTWD-PCOVM covers for HTWD-PN and HTWD-PW metric-size ducts.

TYPE	Width (W)	Pack Cont.	Article-No.
HTWD-PCOVM-25	25	50 m	181-30208
HTWD-PCOVM-40	40	50 m	181-30308
HTWD-PCOVM-60	60	50 m	181-30408
HTWD-PCOVM-80	80	50 m	181-30508
HTWD-PCOVM-100	100	40 m	181-30608
HTWD-PCOVM-120	120	40 m	181-30708
HTWD-PCOVM-150	150	40 m	181-30808

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

MATERIAL	Polyvinylchloride (PVC)
Colour	Grey (GY)
Length (L)	2 m
Operating Temperature	-5 °C to +65 °C
Flammability	UL 94 V0

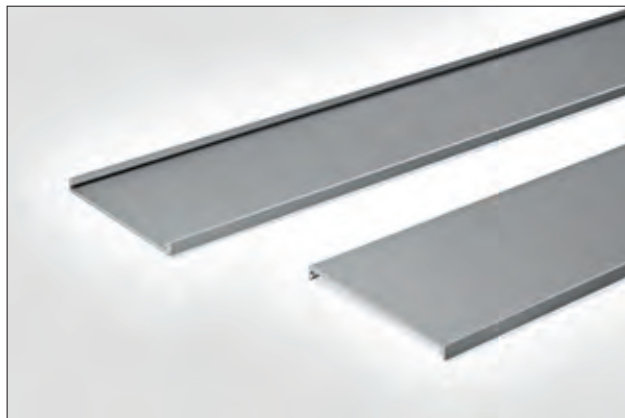


HelaDuct HTWD-PCOVD covers for DIN-size wiring ducts

HelaDuct HTWD-PCOVD duct covers are used with the HTWD-PD DIN-sized wiring ducts.

Features and Benefits

- Easily mounted and removed
- Secure hold
- Flush with side of duct, allowing for tight, contiguous placement of ducts



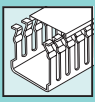
HelaDuct HTWD-PCOVD covers for HTWD-PD DIN-size ducts.

TYPE	Width (W)	Pack Cont.	Article-No.
HTWD-PCOVD-20	20	120 m	181-30109
HTWD-PCOVD-37.5	37.5	100 m	181-30209
HTWD-PCOVD-50	50	80 m	181-30309
HTWD-PCOVD-75	75	60 m	181-30409
HTWD-PCOVD-100	100	28 m	181-30509
HTWD-PCOVD-125	125	28 m	181-30609

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

MATERIAL	Polyvinylchloride (PVC)
Colour	Grey (GY)
Length (L)	2 m
Operating Temperature	-5 °C to +60 °C
Flammability	UL 94 V0





Cable Protection Systems

Wiring Ducts

Blue PVC Wiring Ducts

HelaDuct HTWD-PWB Wiring Ducts for intrinsically safe wiring

HelaDuct HTWD-PWB blue wiring ducts are used to identify intrinsically safe wiring, for instance in chemical plants or anywhere where explosive gases may be present.

Features and Benefits

- Blue colour to identify intrinsically safe wiring
- Wide slots suitable for large-diameter wires
- Wide fingers provide additional wire support
- Smooth, burr-free edges protect installers from injury and wires from damage
- Fingers can be removed with no sharp edges at pre-notched snap-off points
- Further pre-notched snap-off point at base of sidewall allow cutting out and removing sections of sidewall with no sharp edges
- Raised mounting points for easily, quickly and securely fastening wire retainers and other accessories prior to cabling
- Wire retainers and accessories leave no protruding parts below surface of duct
- Duct covers are easy to mount and remove, yet hold securely even in a vertical position and under vibration
- Cover is flush with side of duct, allowing for tight, contiguous placement of ducts
- Additional retainer nub on fingers to prevent cables from slipping
- Base perforation according to DIN EN 50085

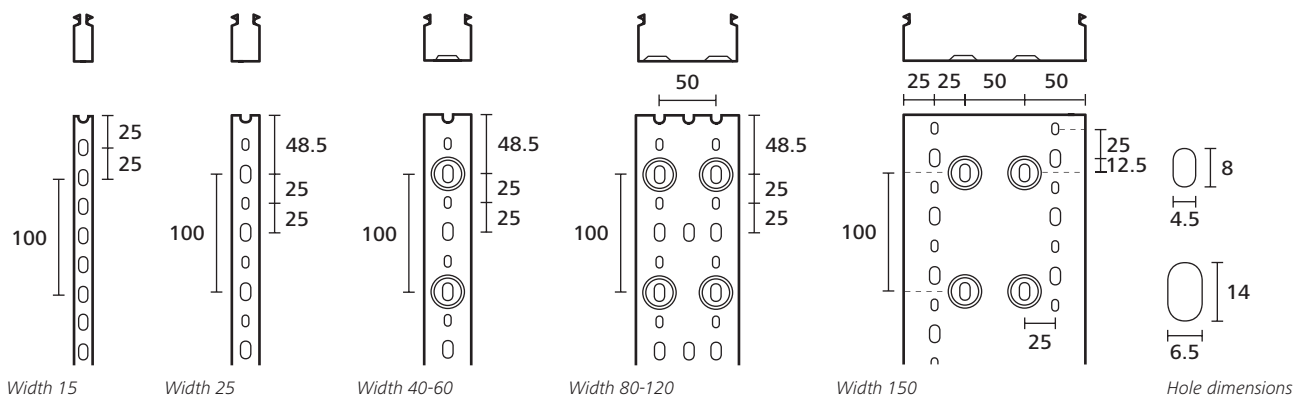


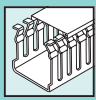
HelaDuct HTWD-PWB blue ducts to identify intrinsically safe wiring.

MATERIAL	Polyvinylchloride (PVC)
Colour	Blue (BU)
Length (L)	2 m
Operating Temperature	-5 °C to +65 °C
Flammability	UL 94 V0



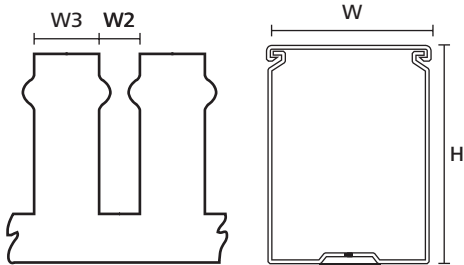
Punching acc. DIN EN 50085 wiring ducts HTWD-PWB





Blue PVC Wiring Ducts

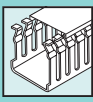
Heladuct HTWD-PWB Wiring Ducts for intrinsically safe wiring



Wiring duct HTWD-PW

TYPE	Width (W)	Height (H)	Width (W2)	Width (W3)	Pack Cont.	Article-No.
HTWD-PWB-25X30	25	30	5	7.5	72 m	181-10027
HTWD-PWB-25X60	25	60	8	12	48 m	181-10137
HTWD-PWB-25X80	25	80	8	12	48 m	181-10197
HTWD-PWB-25X100	25	100	5	7.5	16 m	181-10327
HTWD-PWB-40X40	40	40	8	12	40 m	181-10077
HTWD-PWB-40X60	40	60	8	12	36 m	181-10147
HTWD-PWB-40X80	40	80	8	12	20 m	181-10207
HTWD-PWB-40X100	40	100	8	12	16 m	181-10257
HTWD-PWB-60X40	60	40	8	12	24 m	181-10087
HTWD-PWB-60X60	60	60	8	12	24 m	181-10157
HTWD-PWB-60X80	60	80	8	12	24 m	181-10217
HTWD-PWB-60X100	60	100	8	12	8 m	181-10267
HTWD-PWB-80X80	80	80	8	12	24 m	181-10227
HTWD-PWB-80X100	80	100	8	12	8 m	181-10347
HTWD-PWB-100X80	100	80	8	12	16 m	181-10237
HTWD-PWB-100X100	100	100	8	12	8 m	181-10277
HTWD-PWB-150X100	150	100	8	12	8 m	181-10287

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

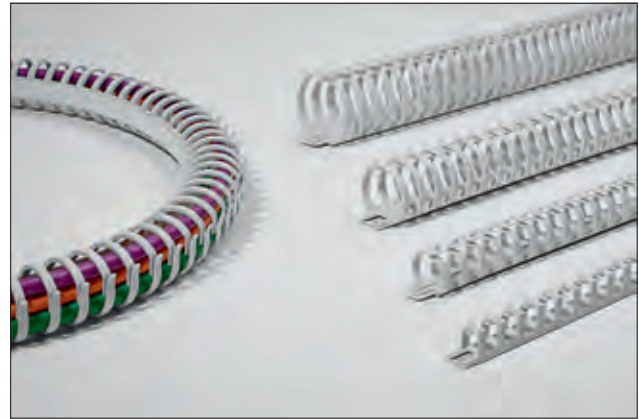


Flexible Cable Support

HelaDuct Flex are used to route cables where bending and twisting are common and cables need to be monitored, particularly in the door area.

Features and Benefits

- Very flexible, can be bent and twisted
- Cables easily and safely inserted
- Keeps cables open to view
- Rapidly mounted with adhesive strip or screws with high-quality foam bonding layer
- Can be clicked together end-to-end to create longer lengths



HelaDuct HTWD-Flex is strong, flexible and easy to mount.

HelaDuct Flex screwable

MATERIAL	Polyamide 6 (PA6)
Operating Temperature	-25 °C to +90 °C
Flammability	UL 94 V0



TYPE	Nominal Ø	Fixation Method	No. of Wires		Colour	Length (L)	Pack Cont.	Article-No.
HTWD-FLEX-10	10	Screw Mounting	8 x 1.50 mm ²	5 x 2.50 mm ²	White (WH)	250	40 pcs.	164-40010
HTWD-FLEX-20	20	Screw Mounting	18 x 1.50 mm ²	13 x 2.50 mm ²	White (WH)	500	40 pcs.	164-40020
HTWD-FLEX-30	30	Screw Mounting	46 x 1.50 mm ²	30 x 2.50 mm ²	White (WH)	500	40 pcs.	164-40030
HTWD-FLEX-40	40	Screw Mounting	81 x 1.50 mm ²	53 x 2.50 mm ²	White (WH)	500	40 pcs.	164-40040

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

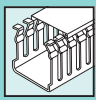
HelaDuct Flex with Adhesive

MATERIAL	Polyamide 6 (PA6)
Operating Temperature	-25 °C to +90 °C
Adhesive	Acrylate with base of polyethylene foam
Flammability	UL 94 V0 (excluding adhesive)



TYPE	Nominal Ø	Fixation Method	No. of Wires		Colour	Length (L)	Pack Cont.	Article-No.
HTWD-FLEX-A-10	10	Screw Mounting and Adhesive	8 x 1.50 mm ²	5 x 2.50 mm ²	White (WH)	250	40 pcs.	164-40015
HTWD-FLEX-A-20	20	Screw Mounting and Adhesive	18 x 1.50 mm ²	13 x 2.50 mm ²	White (WH)	500	40 pcs.	164-40025
HTWD-FLEX-A-30	30	Screw Mounting and Adhesive	46 x 1.50 mm ²	30 x 2.50 mm ²	White (WH)	500	40 pcs.	164-40035
HTWD-FLEX-A-40	40	Screw Mounting and Adhesive	81 x 1.50 mm ²	53 x 2.50 mm ²	White (WH)	500	40 pcs.	164-40045

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



For mounting prior to wiring

HelaDuct HTWD-BWR Wire Retainers

HelaDuct HTWD-BWR are anchored securely on the raised mounting points of HTWD-PN and HTWD-PW ducts to allow insertion of wires. Wires are held in place during wiring, for instance in a vertical position or during ceiling installation.

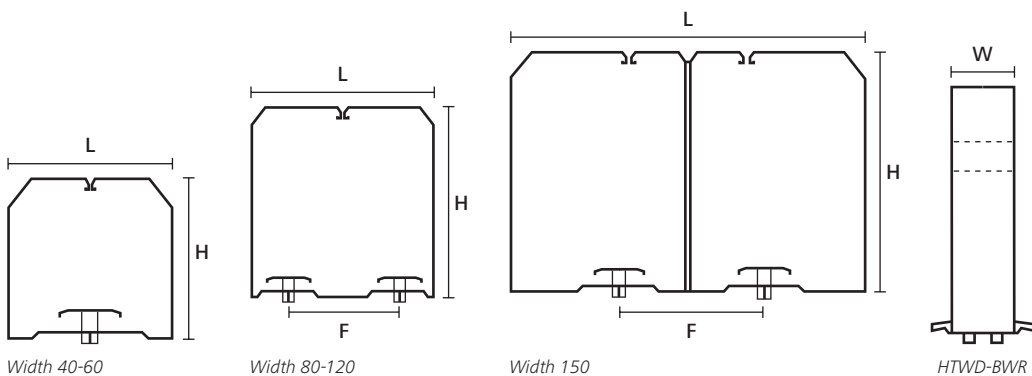
Features and Benefits

- Quickly and easily fastened on raised mounting points with a 1/4 turn of a screwdriver
- Wires easily inserted and firmly held in place
- Anchor of retainer remains inside raised mounting point and does not protrude below surface of duct base
- Reduces strain on duct fingers especially at corners and eliminates bulging against sidewall
- Available for all duct sizes of width and height larger than 40
- Fits snugly in duct for minimal loss of installation space



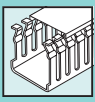
HTWD-BWR wire retainers are easy to mount and hold wires firmly during wiring.

MATERIAL	Acrylonitrile Butadiene Styrene alloyed with Polycarbonate (PC/ABS)
Operating Temperature	-5 °C to +85 °C
Flammability	UL 94 HB



TYPE	Length (L)	Height (H)	Width (W)	Fixing Hole Centres (F)	Colour	Pack Cont.	Article-No.
HTWD-BWR-40X80	34	75	20	-	Black (BK)	20 pcs.	181-50480
HTWD-BWR-40X40	35	36	20	-	Black (BK)	40 pcs.	181-50440
HTWD-BWR-40X60	35	56	20	-	Black (BK)	40 pcs.	181-50460
HTWD-BWR-60X60	54	55	20	-	Black (BK)	20 pcs.	181-50660
HTWD-BWR-60X80	54	75	20	-	Black (BK)	20 pcs.	181-50680
HTWD-BWR-60X100	54	95	20	-	Black (BK)	20 pcs.	181-50690
HTWD-BWR-60X40	55	35	20	-	Black (BK)	40 pcs.	181-50640
HTWD-BWR-80X60	74	55	20	50	Black (BK)	10 pcs.	181-50860
HTWD-BWR-80X80	74	74	20	50	Black (BK)	10 pcs.	181-50880
HTWD-BWR-80X100	74	94	20	50	Black (BK)	30 pcs.	181-50890
HTWD-BWR-100X100	93	94	20	50	Black (BK)	5 pcs.	181-51090
HTWD-BWR-100X60	94	55	20	50	Black (BK)	10 pcs.	181-51060
HTWD-BWR-100X80	94	75	20	50	Black (BK)	10 pcs.	181-51080
HTWD-BWR-120X80	113	74	20	50	Black (BK)	10 pcs.	181-51280
HTWD-BWR-120X60	114	54	20	50	Black (BK)	10 pcs.	181-51260
HTWD-BWR-150X100	143	94	20	50	Black (BK)	5 pcs.	181-51590

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



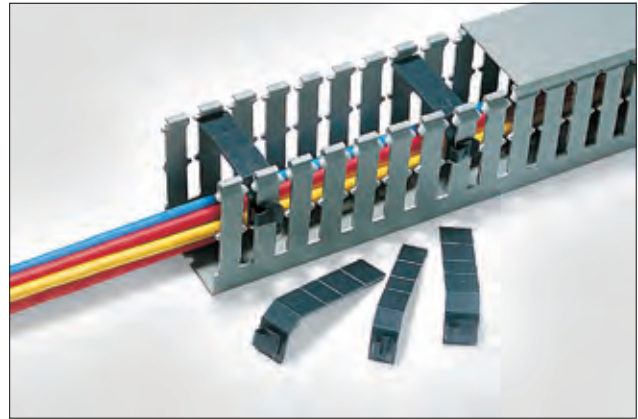
For mounting to duct fingers

HelaDuct HTWD-NFWR and HTWD-WFWR Wire Retainers

HTWD-NFWR for the HTWD-PN ducts and HTWD-WFWR for HTWD-PW ducts are easily inserted onto fingers and hold wires securely into place when cover is removed.

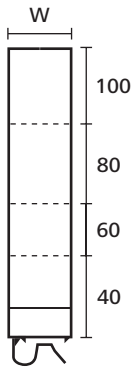
Features and Benefits

- Prevents wires from falling out even when vertical routed
- Easily inserted onto single fingers of duct
- Height can be freely adjusted
- Does not block insertion of wirings into slots
- One retainer for all duct widths: length of retainer can be shortened at break-off points to duct width
- HTWD-NFWR for HTWD-PN ducts, HTWD-WFWR for HTWD-PW ducts



HTWD-NFWR and HTWD-WFWR hold wires in place even when cover is removed.

MATERIAL	Polyamide 6 (PA6)
Operating Temperature	-40 °C to +80 °C
Flammability	UL 94 V0



HTWD-NFWR, -WFWR



TYPE	For Wiring Ducts	Width (W)	Colour	Pack Cont.	Article-No.
HTWD-NFWR	HTWD-PN	14	Black (BK)	100 pcs.	181-10020
HTWD-WFWR	HTWD-PW	18	Black (BK)	100 pcs.	181-10010

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



For fastening components to base of ducts

HelaDuct HTWD-CTH and HTWD-TL Mounts

HelaDuct HTWD-CTH is used to anchor a cable tie securely to the base of a duct. The HTWD-TL is used to fix a HTWD-RB rail mounting block to duct or to fix smaller ducts inside larger ones.

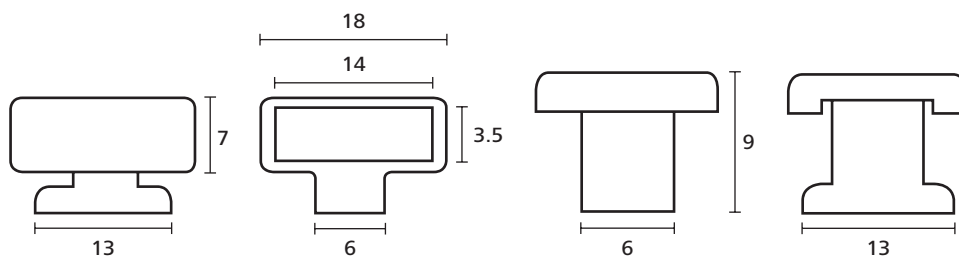
Features and Benefits

- Holds all components firmly in place
- Cable tie easily laced through HTWD-CTH
- Anchor of mount remains inside raised mounting point and does not protrude below surface of duct base



HTWD-CTH and HTWD-TL for mounting components to base of ducts.

MATERIAL	Polyamide 6 (PA6)
Operating Temperature	-40 °C to +80 °C
Flammability	UL 94 V2

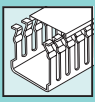


HTWD-CTH Mount

HTWD-TL Mount

TYPE	For Wiring Ducts	Colour	Pack Cont.	Article-No.
HTWD-CTH	HTWD-PN, HTWD-PW	White (WH)	50 pcs.	181-45029
HTWD-TL	HTWD-PN, HTWD-PW	White (WH)	100 pcs.	181-45019

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



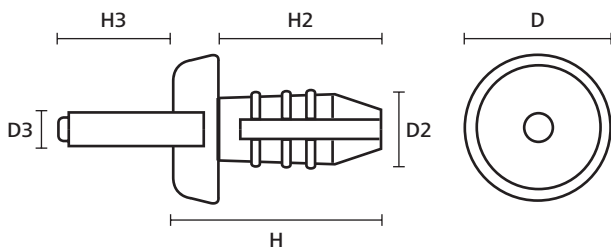
For installing wiring ducts into fixing holes

HelaDuct HTWD-R4 and HTWD-R6 Rivets

HTWD-R4 and HTWD-R6 are used to rapidly mount and secure wiring ducts into fixing holes without the use of screws.

Features and Benefits

- Very good mechanical properties
- Good resistance to vibration
- Easily and rapidly applied with HTWD-RT4 and HTWD-RT6 rivet tools
- Colour-coded for easy identification for use with rivet tools



HTWD-R4 and HTWD-R6 Rivet.

MATERIAL	Polyamide 6 (PA6)
Operating Temperature	-40 °C to +80 °C
Flammability	UL 94 V2



TYPE	Height (H)	Height (H2)	Height (H3)	Ø (D)	Ø (D2)	Ø (D3)	Colour	Pack Cont.	Article-No.
HTWD-R4	14.0	12.0	11.5	9.0	5.0	4.0	Blue (BU)	1,000 pcs.	181-42400
HTWD-R6	16.0	12.7	13.0	-	6.0	3.0	Black (BK)	250 pcs.	181-42600
	16.0	14.0	13.5	10.0	7.5	6.0	Orange (OG)	500 pcs.	181-42500

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

For inserting R4 and R6 rivets

HelaDuct HTWD-RT4 and HTWD-RT6 Rivet Tools

HelaDuct HTWD-RT4 and HTWD-RT6 tools are used to insert HTWD-R4 and HTWD-R6 rivets into fixing holes and thus mounting ducts without the use of screws.

Features and Benefits

- Durable and reliable
- Long aluminum body enables insertion even into very high ducts
- Soft plastic ergonomic handle
- Colour-coded for easy identification for use with correct rivets



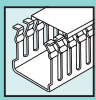
Rivet Tools HTWD-RT4, -RT6.

MATERIAL	Metal (MET), Plastic (PL)
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TYPE	For Wiring Duct Rivets	Weight	Colour	Article-No.
HTWD-RT4	R4	0.5 kg	Blue (BU)	181-41542
HTWD-RT6	R6	0.5 kg	Orange (OG)	181-41564

All dimensions in mm. Subject to technical changes.



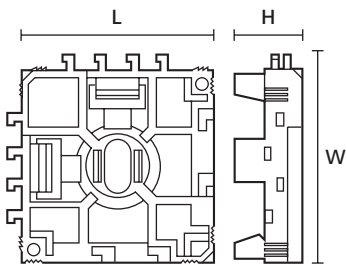
For mounting ducts to DIN rails

HelaDuct HTWD-RB Rail Mounting Blocks

HelaDuct HTWD-RB is used fix wiring ducts or other elements firmly to DIN rail.

Features and Benefits

- Easily snapped onto DIN rail
- Rapidly fixed to wiring duct with a HTWD-TL mount
- Assembly direction of wiring duct can be either parallel or perpendicular to DIN rail



HTWD-RB Rail Mounting Block



HTWD-RB rail mounting blocks for mounting ducts to DIN rails.

MATERIAL	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +80 °C
Flammability	UL 94 V2



TYPE	Width (W)	Length (L)	Height (H)	Colour	Pack Cont.	Article-No.
HTWD-RB	50	50	14	Black (BK)	25 pcs.	181-45130

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Cable Protection Systems

Protective Tubing and Spiral Binding

Helawrap Cable Cover

HWPP for industrial applications

Helawrap is used to bundle and protect cables and wires in the electrical industry, panel building, machine building and many other industrial applications. Helawrap is the time-saving solution for industrial applications.

Features and Benefits

- Ideal solution for bundling, protecting and fixing cables
- Quick and effortless to apply
- Good abrasion protection
- Special profile enables branching off cable at any point
- Can be removed and reapplied often
- Available in several colours and sizes
- Handy applicator tool included



Complete cable management for home and office.

MATERIAL	Polypropylene (PP)
Operating Temperature	-60 °C to +110 °C, intermittent +140 °C
Flammability	UL 94 HB



Application video:
Helawrap



More variants and dimensions are available on request. Please contact us for more information.

TYPE	Bundle Ø max.	Colour	Reel Length	Application Tool	Article-No.
HWPP8	9	Black (BK)	25 m	HAT8	161-64101
	9	Grey (GY)	25 m	HAT8	161-64102
	9	Silver (SR)	25 m	HAT8	161-64103
	9	White (WH)	25 m	HAT8	161-64104
HWPP16	16	Black (BK)	25 m	HAT16	161-64201
	16	Grey (GY)	25 m	HAT16	161-64202
	16	Silver (SR)	25 m	HAT16	161-64203
	16	White (WH)	25 m	HAT16	161-64207
HWPP20	21	Black (BK)	25 m	HAT20	161-64301
	21	Grey (GY)	25 m	HAT20	161-64302
	21	Silver (SR)	25 m	HAT20	161-64303
	21	White (WH)	25 m	HAT20	161-64304
HWPP25	27	Black (BK)	25 m	HAT25	161-64401
	27	Grey (GY)	25 m	HAT25	161-64402
	27	Silver (SR)	25 m	HAT25	161-64403
	27	White (WH)	25 m	HAT25	161-64407
HWPP30	32	Black (BK)	25 m	HAT30	161-64501
	32	Grey (GY)	25 m	HAT30	161-64502
	32	Silver (SR)	25 m	HAT30	161-64503
	32	White (WH)	25 m	HAT30	161-64504
HWPP40	42	Black (BK)	20 m	HAT40	161-64601

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



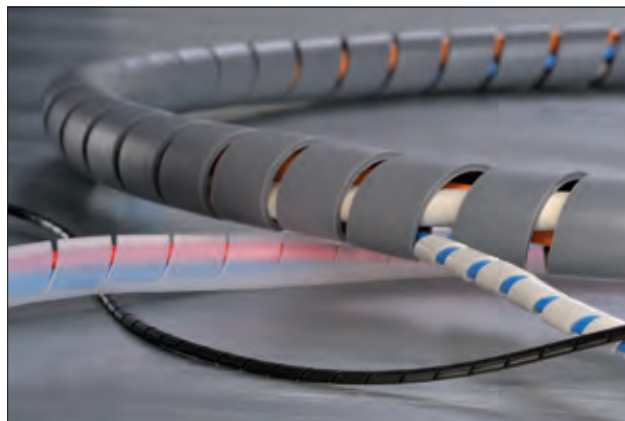
Standard Polyethylene Spiral Binding for general applications

SBPE

SBPE spiral binding is suitable for standard electrical applications and panel building and plant engineering. Sizes 4 and 9 are also available in practical 5 metre lengths.

Features and Benefits

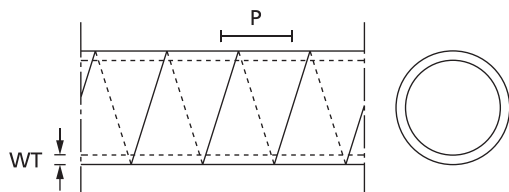
- Organises and protects cables and hoses
- Suitable for retro-fitting
- Cables branch out at any point
- Wide range of diameters and colours



Spiral binding SBPE.



One Step to the Web!



Spiral binding

MATERIAL	Polyethylene (PE)
Operating Temperature	-60 °C to +80 °C, intermittent +120 °C



TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPE1.5	1.5	0.8	6.0	1.6	8	Black (BK)	30 m	161-41001
	1.5	0.8	6.0	1.6	8	Grey (GY)	30 m	161-41002
	1.5	0.8	6.0	1.6	8	Natural (NA)	30 m	161-41000
SBPE4	4	1.0	7.8	5	20	Natural (NA)	30 m	161-41100
	4	1.0	7.8	5	20	Black (BK)	30 m	161-41101
	4	1.0	7.8	5	20	Grey (GY)	30 m	161-41102
SBPE9	9	1.4	12.5	10	100	Black (BK)	30 m	161-41201
	9	1.4	12.5	10	100	Grey (GY)	30 m	161-41202
	9	1.4	12.5	10	100	Natural (NA)	30 m	161-41200
SBPE16	16	1.6	16.0	20	150	Black (BK)	30 m	161-41301
	16	1.6	16.0	20	150	Grey (GY)	30 m	161-41302
	16	1.6	16.0	20	150	Natural (NA)	30 m	161-41300

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPE4D	4	1.0	7.8	5	20	Black (BK)	5 m	161-41104
	4	1.0	7.8	5	20	Grey (GY)	5 m	161-41105
	4	1.0	7.8	5	20	Natural (NA)	5 m	161-41103
SBPE9D	9	1.4	12.5	10	100	Black (BK)	5 m	161-41204
	9	1.4	12.5	10	100	Grey (GY)	5 m	161-41205
	9	1.4	12.5	10	100	Natural (NA)	5 m	161-41203

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Cable Protection Systems

Protective Tubing and Spiral Binding

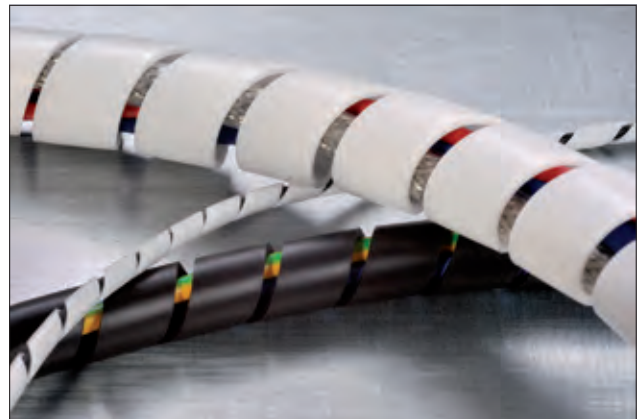
Polyethylene Spiral Binding for enhanced flame protection

SBPEFR

The flame-retardant properties of SBPEFR make it suitable for applications in the automobile and electrical industries, where enhanced fire protection is needed.

Features and Benefits

- Organises and protects cables and hoses
- Self-extinguishing according to UL94 V2
- Suitable for retro-fitting
- Cables branch out at any point
- Wide range of diameters and colours

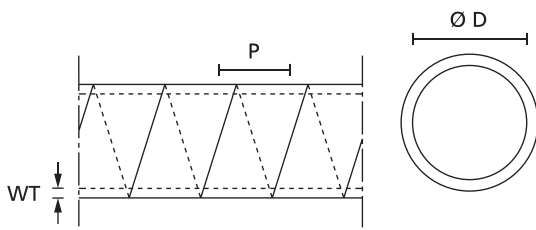


Spiral binding SBPEFR is available in a wide range of diameters and in colours black and white.



More variants and dimensions are available on request. Please contact us for more information.

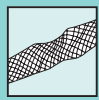
MATERIAL	Polyethylene (PEFR), Flame retardant
Operating Temperature	-60 °C to +80 °C, intermittent +120 °C
Flammability	UL 94 V2, FMVSS 302, Type B



Spiral binding

TYPE	Nominal Ø	Wall (WT)	Pitch (P)	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Article-No.
SBPEFR1.5	1.5	0.8	6.0	1.6	8	Black (BK)	30 m	161-43001
	1.5	0.8	6.0	1.6	8	White (WH)	30 m	161-43000
SBPEFR4	4	1.0	7.8	5	20	Black (BK)	30 m	161-43101
	4	1.0	7.8	5	20	White (WH)	30 m	161-43100
SBPEFR9	9	1.4	12.5	10	100	Black (BK)	30 m	161-43201
	9	1.4	12.5	10	100	White (WH)	30 m	161-43200
SBPEFR16	16	1.6	16.0	20	150	Black (BK)	30 m	161-43301
	16	1.6	16.0	20	150	White (WH)	30 m	161-43300

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



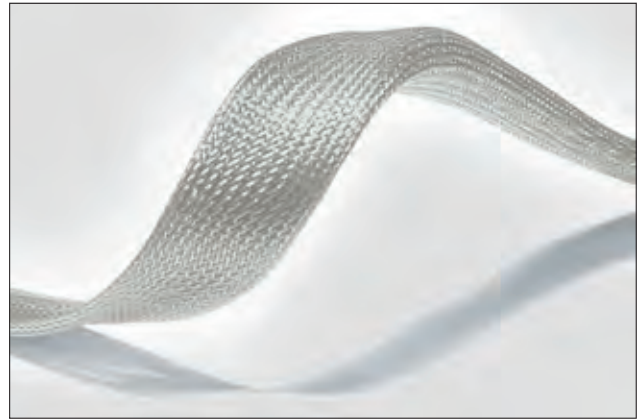
High-expansion polyester braided sleeving

Helagain HEGPX

Helagain HEGPX is used whenever a higher expansion rate is required. HEGPX is particularly suitable for use in the automotive industry and in electrical appliances.

Features and Benefits

- Made of sturdy polyester
- Highly flexible
- Expansion rate of 3:1
- Easy to apply over irregular shapes
- Good abrasion resistance



Helagain HEGPX braided sleeving.



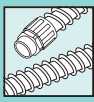
To prevent fraying, the sleeve can be cut with the hot cutting tool HSG0. Please see our Main Catalogue.

MATERIAL	Polyester (PET)
Operating Temperature	-50 °C to +150 °C
Melting Point	+240 °C
Flammability	material rated UL94 V2, FMVSS 302, Type B



TYPE	Bundle Ø min.	Bundle Ø max.	Colour	Reel Length	Pack Cont.	Article-No.
HEGPX06	3	9	Grey (GY)	500 m	500 m	170-00065
HEGPX09	5	16	Grey (GY)	350 m	350 m	170-00098
HEGPX12	7	19	Grey (GY)	350 m	350 m	170-00128
HEGPX20	14	30	Grey (GY)	250 m	250 m	170-00204
HEGPX30	20	50	Grey (GY)	150 m	150 m	170-00303
HEGPX40	35	75	Grey (GY)	100 m	100 m	170-00403

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



FlexiGuard Conduits & Fittings

FlexiGuard PVC Protective Conduits

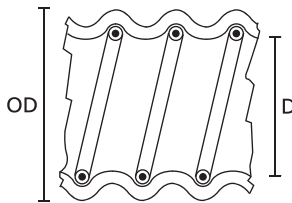
FlexiGuard protective hoses are used to protect cables in machines and plant construction, and robotics as well as leads to switch cabinets.

Features and Benefits

- Extremely flexible
- Excellent mechanical protection
- Good resistance to oils, acids and alkalis
- Good resistance to chemicals
- Good resistance to UV and ozone



FlexiGuard FG with FG-UH fitting.



FlexiGuard

MATERIAL	Flexible Polyvinyl Chloride, cadmium free (PVC), Steel (ST)
Operating Temperature	-20 °C to +70 °C, (+80 °C, 200 h)
Flammability	UL 94 HB



TYPE	Nominal Ø	Inside Ø (ID)	Outside Ø (OD)	Min. Bending Radius (R)	Reel Length	Colour	Pack Cont.	Article-No.
FG14	14	10	14	14	10 m	Grey (GY)	10 m	167-00209
FG17	17	13	17	17	10 m	Grey (GY)	10 m	167-00211
FG19	19	15	19	19	10 m	Grey (GY)	10 m	167-00213
FG21	21	16	21	21	10 m	Grey (GY)	10 m	167-00216
FG27	27	21	27	27	10 m	Grey (GY)	10 m	167-00221
FG36	36	30	36	36	10 m	Grey (GY)	10 m	167-00229
FG45	45	38	45	45	10 m	Grey (GY)	10 m	167-00236
FG56	56	48	56	56	10 m	Grey (GY)	10 m	167-00248

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



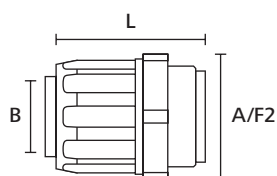
FlexiGuard Conduits & Fittings

FG-M Fittings

The TV fittings and TH fasteners are used to protect against dust and moisture, for instance outdoors or wherever dust and moisture are a particular hazard.

Features and Benefits

- One piece, easy fit
- Swivel thread
- Vibration and tension resistant
- Large bore size
- Inner ferrule protects cables
- Good resistance to chemicals
- Good resistance to UV and ozone



FlexiGuard fitting, straight with swivel thread



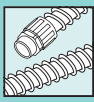
FG conduit fitting.

MATERIAL	Polypropylene (PP)
Operating Temperature	-35 °C to +80 °C
Flammability	UL 94 V2



TYPE	Nominal Ø	Thread Size	Min. Bore Size (B)	Length (L)	A/F Thread (A/F2)	Colour	Pack Cont.	Article-No.
FG14-M16	14	M16	8.8	42.0	20	Grey (GY)	10 pcs.	167-00530
FG14-PG9	14	PG9	8.8	42.0	20	Grey (GY)	10 pcs.	167-00510
FG17-M20	17	M20	11.1	45.5	24	Grey (GY)	10 pcs.	167-00531
FG17-PG11	17	PG11	11.1	45.5	24	Grey (GY)	10 pcs.	167-00511
FG19-PG13	19	PG13.5	13.0	47.5	27	Grey (GY)	10 pcs.	167-00512
FG21-M25	21	M25	14.8	49.8	30	Grey (GY)	10 pcs.	167-00533
FG21-PG16	21	PG16	14.8	49.8	30	Grey (GY)	10 pcs.	167-00513
FG27-M32	27	M32	19.4	52.0	36	Grey (GY)	10 pcs.	167-00534
FG27-PG21	27	PG21	19.4	52.0	36	Grey (GY)	10 pcs.	167-00514
FG36-M40	36	M40	27.9	55.0	46	Grey (GY)	10 pcs.	167-00535
FG36-PG29	36	PG29	27.9	55.0	46	Grey (GY)	10 pcs.	167-00515
FG45-M50	45	M50	35.6	58.0	55	Grey (GY)	10 pcs.	167-00536
FG45-PG36	45	PG36	35.6	58.0	55	Grey (GY)	10 pcs.	167-00516
FG56-M63	56	M63	45.9	60.5	65	Grey (GY)	10 pcs.	167-00537
FG56-PG48	56	PG48	45.9	60.5	65	Grey (GY)	10 pcs.	167-00517

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



FlexiGuard Conduits & Fittings

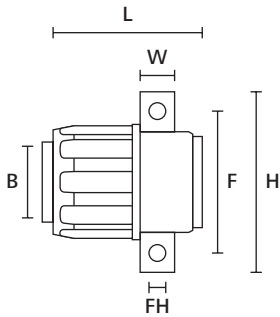
FG-UH Fittings with Bracket

Straight swivel bracket.

Fulfils IP54 with FlexiGuard FG conduits.

Features and Benefits

- One piece, easy fit
- Swivel bracket
- Vibration and tension resistant
- Large bore size
- Inner ferrule protects cables
- Good resistance to chemicals
- Good resistance to UV and ozone



FlexiGuard fitting, straight with bracket



FG-UH fitting with bracket.

MATERIAL	Polypropylene (PP)
Operating Temperature	-35 °C to +80 °C
Flammability	UL 94 V2



TYPE	Nominal Ø	Min. Bore Size (B)	Length (L)	Width (W)	Height (H)	Hole Ø (FH)	Fixing Hole Centres (F)	Colour	Pack Cont.	Article-No.
FG14-UH	14	8.8	42.0	10.0	40.0	5,7	29.0	Grey (GY)	10 pcs.	167-00520
FG17-UH	17	11.1	45.5	12.0	50.0	5,7	37.0	Grey (GY)	10 pcs.	167-00521
FG19-UH	19	13.0	47.5	12.0	50.0	5,7	37.0	Grey (GY)	10 pcs.	167-00522
FG21-UH	21	14.8	49.8	12.0	50.0	5,7	37.0	Grey (GY)	10 pcs.	167-00523
FG27-UH	27	19.4	52.0	12.5	57.0	5,7	43.0	Grey (GY)	10 pcs.	167-00524
FG36-UH	36	27.9	55.0	13.0	67.0	6,7	53.0	Grey (GY)	10 pcs.	167-00525
FG45-UH	45	35.6	58.0	14.0	80.0	6,7	65.0	Grey (GY)	10 pcs.	167-00526
FG56-UH	56	45.9	60.5	16.5	93.0	6,7	76.0	Grey (GY)	10 pcs.	167-00527

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.



Wire and Cable Markers

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Control Panel Labelling

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Industrial Identification

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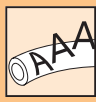
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Printers and Software

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Shrinkable markers, „Continuous Tube“, thermal transfer

TCGT - 3:1 Commercial Grade

TCGT is a commercial grade 3:1 heatshrink material supplied as a continuous tube and printable on both sides. The supplied accessories allow users to either perforate the tubing at pre-determined lengths (P4000), or fully sever the markers (S4000) whilst printing with the TrakMark DS or TT4000+ printer.

Print with HellermannTyton's premium range of thermal printers and ribbons.

Printers: TrakMark DS, TT4000+, and TT430

Ribbons: TTRC+, TTDTHOUT, TTRW, TT822OUT8

Accessories for TrakMark DS and TT4000+: Perforator (P4000), Cutter (S4000)

Accessories for TT430: Cutter (S430)

Software: TagPrint Pro

Features and Benefits

- Shrink ratio 3:1
- Available in Black, Blue, Red, White, and Yellow
- Cable range from 39mm to 1mm
- Good mechanical strength and resistance to organic solvents and chemicals
- Highly flexible
- Fulfils CSA requirements
- Delivery in convenient storage boxes
- Easy label design with TagPrint Pro



TCGT – 5 colours of printable tube to cover a wide range of diameters.

MATERIAL	Polyolefin, cross-linked (PO-X)
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+90 °C
Shrink Ratio	3:1
Recommended Ribbon Type	TTRC+, TTDTHOUT, TTRW, TT822OUT8



More colours and sizes available on request.

TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Pack Cont.	Colour	Article-No.
TCGT3-1WH	3.0	1.0	0.60	176 m	White (WH)	553-30351
TCGT3-1YE	3.0	1.0	0.60	176 m	Yellow (YE)	553-30350
TCGT4.8-1.6WH	4.8	1.6	0.65	110 m	White (WH)	553-30451
TCGT4.8-1.6YE	4.8	1.6	0.65	110 m	Yellow (YE)	553-30450
TCGT6-2WH	6.0	2.0	0.70	110 m	White (WH)	553-30651
TCGT6-2YE	6.0	2.0	0.70	110 m	Yellow (YE)	553-30650
TCGT9-3WH	9.0	3.0	0.80	72 m	White (WH)	553-30951
TCGT9-3YE	9.0	3.0	0.80	72 m	Yellow (YE)	553-30950
TCGT12-4WH	12.0	4.0	0.85	54 m	White (WH)	553-31251
TCGT12-4YE	12.0	4.0	0.85	54 m	Yellow (YE)	553-31250
TCGT18-6WH	18.0	6.0	1.00	26 m	White (WH)	553-31851
TCGT18-6YE	18.0	6.0	1.00	26 m	Yellow (YE)	553-31850
TCGT24-8WH	24.0	8.0	1.20	26 m	White (WH)	553-32451
TCGT24-8YE	24.0	8.0	1.20	26 m	Yellow (YE)	553-32450
TCGT39-13WH	39.0	13.0	1.25	10 m	White (WH)	553-33951
TCGT39-13YE	39.0	13.0	1.25	10 m	Yellow (YE)	553-33950

All dimensions in mm. Subject to technical changes.

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



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Identification tags for cable bundle „Ladder Style“, thermal transfer

TAGUL - Standard Tiptags „Ladder Style“

TAGUL is a specially designed for use in identifying wire and cable bundles in electronics and general cabling environments. The labels are applied to cables and harness assemblies with cable ties, and are also suitable for retrofit purposes. The material has been conditioned for printing on both thermal transfer and laser beam printers. The Tiptags are formatted onto a convenient „ladder“ system. Simply print and press out the required Tiptag and apply with cable ties. Print with HellermannTyton’s premium range of thermal printers and ribbons or a laser beam marking device.

Printers: TT4000+ and TT430

Ribbon: TTDTHOUT

Accessories for TT4000+: Cutter (S4000)

Accessories for TT430: Cutter (S430)

Software: TagPrint Pro

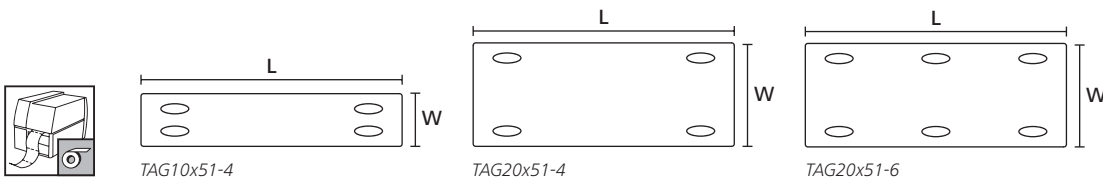
Features and Benefits

- TAGUL is a general purpose Tiptag
- Thermal transfer or laser beam printable
- Meets MIL-STD 202G Method 215 mark permanence tests
- Good mechanical strength and highly flexible
- Delivery in convenient storage boxes
- Easy label design with TagPrint Pro



Identification tags TAGUL for electronics and general cabling environments.

MATERIAL	Polyolefin, cross-linked (PO-X)
Operating Temperature	-55 °C to +135 °C
Flammability	ASTM D2671 B
Recommended Ribbon Type	TTDTHOUT

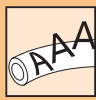


TYPE	Length (L)	Width (W)	Pack Cont.	Colour	Article-No.
TAGUL10X51-4WH	51.0	10.0	2,000 pcs.	White (WH)	556-82000
TAGUL10X51-4YE	51.0	10.0	2,000 pcs.	Yellow (YE)	556-82001
TAGUL20X51-4WH	51.0	20.0	1,000 pcs.	White (WH)	556-82005
TAGUL20X51-4YE	51.0	20.0	1,000 pcs.	Yellow (YE)	556-82004

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content. More colours on request.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Self-laminating labels, thermal transfer

Helatag 1209 (White-Transparent)

The specially formulated adhesive labels give the highest quality print clarity when printed on thermal transfer printers. The range of materials and ribbons have been developed to suit the needs of most users. Designing and printing labels is simple and users can quickly print out professional labels in a matter of moments when using TagPrint Pro labelling software.

Features and Benefits

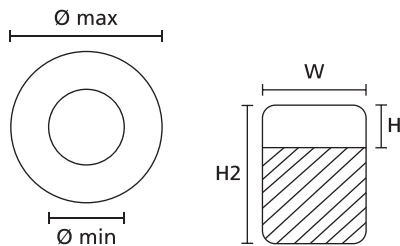
- High-quality self-laminating labels
- Suitable for marking of wires and cables
- Laminating function gives excellent protection against humidity and mechanical abrasion
- Excellent print performance using TT932DOUT ribbon
- Print with TT4000+, TT430 for best results
- Easy label design with TagPrint Pro
- Available in White-Transparent, other colours on request



Self-laminating labels offer an excellent protection against abrasion and environmental impact.



More variants and dimensions are available on request. Please contact us for more information.



MATERIAL	Type 1209, Vinyl (PVC), white-transparent (WH/CL)
Operating Temperature	-20 °C to +80 °C
Curing Temperature	from 0 °C
Adhesive	Acrylic
Thickness of Foil (µm)	90 µm
Chem. Material Properties	Resistant to water, alcohol, most oils, greases, fuel, aliphatic solvents, weak acids, salts and alkalis.
Recommended Ribbon Type	TT932DOUT



TYPE	Bundle Ø min.	Bundle Ø max.	Width (W)	Height (H)	Height (H2)	Width of Liner (WL)	Labels per Row	Pack Cont.	Article-No.
TAG51TD3-1209-WHCL	1.4	3.0	25.4	8.8	19.1	85.0	3 pcs.	5,000 pcs.	596-12091
TAG26TD6-1209-WHCL	1.5	3.0	12.7	9.5	19.1	85.0	6 pcs.	10,000 pcs.	596-12096
TAG36TD7-1209-WHCL	2.0	4.7	12.7	9.0	23.8	95.0	7 pcs.	10,000 pcs.	596-12097
TAG2TD6-1209-WHCL	3.5	7.6	12.7	12.7	36.5	82.0	6 pcs.	5,000 pcs.	596-61209
TAG22TD3-1209-WHCL	3.5	7.6	25.4	12.7	36.5	82.0	3 pcs.	2,500 pcs.	596-32091
TAG24TD1-1209-WHCL	3.5	7.6	50.8	12.7	36.5	55.0	1 pc.	1,000 pcs.	596-12094
TAG23TD5-1209-WHCL	4.5	10.0	19.1	12.7	44.5	101.6	5 pcs.	5,000 pcs.	596-12095
TAG25TD3-1209-WHCL	4.5	10.0	25.4	12.7	44.5	82.0	3 pcs.	2,500 pcs.	596-51209
TAG9TD3-1209-WHCL	5.5	12.1	25.4	19.1	57.1	82.0	3 pcs.	2,500 pcs.	596-91209
TAG10TD2-1209-WHCL	5.5	12.1	49.5	19.1	57.1	101.6	2 pcs.	1,000 pcs.	596-12090
TAG91TD1-1209-WHCL	8.0	16.0	70.0	35.0	85.0	74.0	1 pc.	500 pcs.	596-41209
TAG1TD2-1209-WHCL	8.5	18.2	48.2	19.1	79.2	101.6	2 pcs.	1,000 pcs.	596-21209
TAG3TD3-1209-WHCL	10.0	22.2	25.4	25.4	95.3	82.0	3 pcs.	1,000 pcs.	596-31209
TAG6TD1-1209-WHCL	10.0	22.2	50.8	25.4	95.3	55.0	1 pc.	500 pcs.	596-11209
TAG107TD3-1209-WHCL	12.0	37.5	25.4	31.8	149.9	82.0	3 pcs.	1,000 pcs.	596-01209
TAG38TD3-1209-WHCL	20.8	47.5	25.4	38.1	187.2	82.0	3 pcs.	1,000 pcs.	596-12098
TAG07TD1-1209-WHCL	20.8	47.5	50.8	25.4	187.2	55.0	1 pc.	250 pcs.	596-71209

All dimensions in mm. Subject to technical changes.

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



Pre-printed Cable Markers

Helagrip, slide on, chevron cut

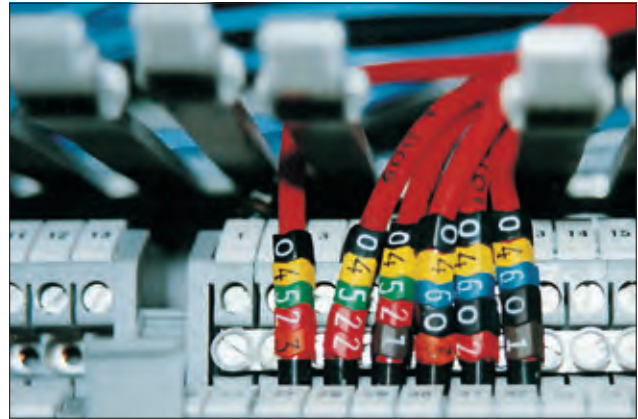
Helagrip is used to mark cable and wire. Ideally suited to panel building, mass transit, utilities, telecommunications and electrical contracting.

Markers are available as standard in international resistor colour code and yellow material marked in black. White material marked in black is available to special order.

Characters are 0-9, A-Z and standard electrical symbols.

Features and Benefits

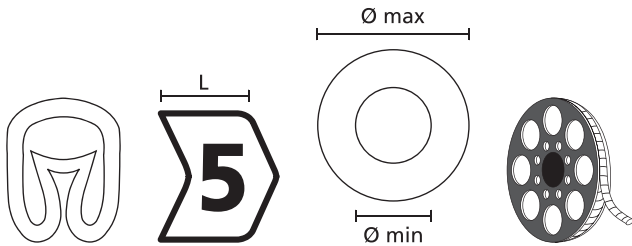
- Easily apply one size marker to wide range of cables
- Markers are applied before termination takes place
- Chevron cut to lock markers together ensuring text remains in place
- Traditional wire marking available in yellow, white and colour code
- Flexible material so product returns securely on the wire



Clearly a better way to identify in confined spaces.

i More variants and dimensions are available on request. Please contact us for more information.

MATERIAL	Flexible Polyvinyl Chloride, cadmium free (PVC)
Operating Temperature	-65 °C to +105 °C, intermittent +135 °C
Flammability	UL 94 V0 (3mm)



Helagrip chevron cut.

i The products have been tested in-house according to UL224.

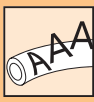
TYPE	Bundle Ø min.	Bundle Ø max.	Length (L)	Pack Cont.
HGDC1-3	1.0	3.0	3.5	1,000 pcs.
HGDC2-5	2.0	5.0	3.5	1,000 pcs.
HGDC4-9	4.0	9.0	5.0	250 pcs.

All dimensions in mm. Subject to technical changes.

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Pre-printed Cable Markers

Helagrip, slide on, chevron cut

HGDC1-3	
	Article-No.
A	515-01014
B	515-01024
C	515-01034
D	515-01044
E	515-01054
F	515-01064
G	515-01074
H	515-01084
I	515-01094
J	515-01104
K	515-01114
L	515-01124
M	515-01134
N	515-01144
O	515-01154
P	515-01164
Q	515-01174
R	515-01184
S	515-01194
T	515-01204
U	515-01214
V	515-01224
W	515-01234
X	515-01244
Y	515-01254
Z	515-01264

HGDC1-3	
	Article-No.
0	515-01604
1	515-01614
2	515-01624
3	515-01634
4	515-01644
5	515-01654
6	515-01664
7	515-01674
8	515-01684
9	515-01694
+	515-01704
>	515-01714
J	515-01724
>	515-01734
>	515-01804
0	515-01600
1	515-01611
2	515-01622
3	515-01633
5	515-01655
6	515-01666
7	515-01677
8	515-01688
9	515-01699

HGDC2-5	
	Article-No.
A	515-02014
B	515-02024
C	515-02034
D	515-02044
E	515-02054
F	515-02064
G	515-02074
H	515-02084
I	515-02094
J	515-02104
K	515-02114
L	515-02124
M	515-02134
N	515-02144
O	515-02154
P	515-02164
Q	515-02174
R	515-02184
S	515-02194
T	515-02204
U	515-02214
V	515-02224
W	515-02234
X	515-02244
Y	515-02254
Z	515-02264

HGDC2-5	
	Article-No.
0	515-02604
1	515-02614
2	515-02624
3	515-02634
4	515-02644
5	515-02654
6	515-02664
7	515-02674
8	515-02684
9	515-02694
+	515-02704
>	515-02714
>	515-02715
J	515-02724
>	515-02734
0	515-02600
1	515-02611
2	515-02622
3	515-02633
5	515-02655
6	515-02666
7	515-02677
8	515-02688
9	515-02699

HGDC4-9	
	Article-No.
A	515-03014
B	515-03024
C	515-03034
D	515-03044
E	515-03054
F	515-03064
G	515-03074
H	515-03084
I	515-03094
J	515-03104
K	515-03114
L	515-03124
M	515-03134
N	515-03144
O	515-03154
P	515-03164
Q	515-03174
R	515-03184
S	515-03194
T	515-03204
U	515-03214
V	515-03224
W	515-03234
X	515-03244
Y	515-03254
Z	515-03264

HGDC4-9	
	Article-No.
0	515-03604
1	515-03614
2	515-03624
3	515-03634
4	515-03644
5	515-03654
6	515-03664
7	515-03674
8	515-03684
9	515-03694
+	515-03704
>	515-03714
J	515-03724
>	515-01946
>	515-01947
0	515-03600
1	515-03611
2	515-03622
3	515-03633
5	515-03655
6	515-03666
7	515-03677
8	515-03688
9	515-03699



More variants and dimensions are available on request. Please contact us for more information.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Pre-printed Cable Markers

Ovalgrip, slide on, straight cut

Ideally suited to panel building, mass transit, utilities, telecommunications and electrical contracting.

These markers are supplied continuous on a reel (HODS).

Markers are available as standard in yellow material marked in black and international resistor colour code. Characters are 0-9, A-Z and standard electrical symbols.

White material marked in black available on special request.

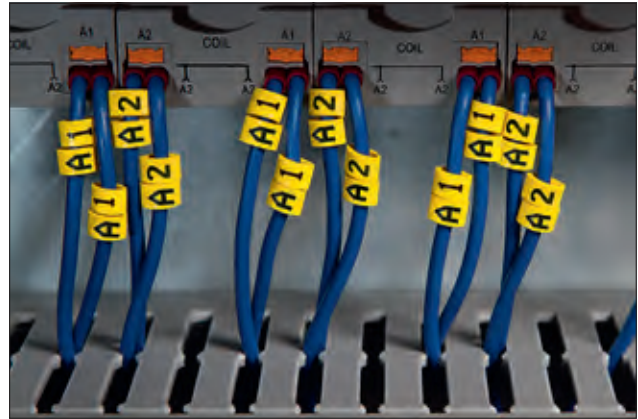
AT1 Arrowtags will fit 7 size 50 markers.

AT2 Arrowtags will fit 8 size 85 markers.

AT3 Arrowtags will fit 14 size 85 markers.

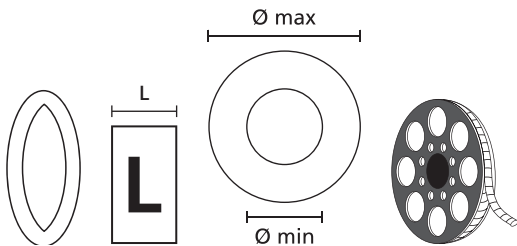
Features and Benefits

- Oval shaped markers designed to fit AT1, AT2 or AT3 (depends on Ovalgrip size)
- Ideal for use in maintenance and repair and fixed with cable ties
- Direct application to wire and cable before termination is also recommended
- Traditional wire marking available in yellow, white and colour code



Ovalgrip product family.

MATERIAL	Flexible Polyvinyl Chloride, cadmium free (PVC)
Operating Temperature	-65 °C to +105 °C, intermittent +135 °C
Flammability	UL 94 V0 (3mm)



Ovalgrip straight cut.

i More variants and dimensions are available on request. Please contact us for more information.

i The products have been tested in-house according to UL224.

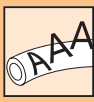
TYPE	Bundle Ø min.	Bundle Ø max.	Length (L)	Pack Cont.	For Size
HODS50	1.7	3.6	4.0	1,000 pcs.	AT1
HODS85	1.8	6.3	4.5	1,000 pcs.	AT2/AT3

All dimensions in mm. Subject to technical changes.

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



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Pre-printed Cable Markers

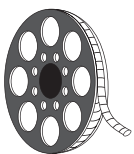
Ovalgrip, slide on, straight cut

HODS50	
	Article-No.
A	531-15014
B	531-15024
C	531-15034
D	531-15044
E	531-15054
F	531-15064
G	531-15074
H	531-15084
I	531-15094
J	531-15104
K	531-15114
L	531-15124
M	531-15134
N	531-15144
O	531-15154
P	531-15164
Q	531-15174
R	531-15184
S	531-15194
T	531-15204
U	531-15214
V	531-15224
W	531-15234
X	531-15244
Y	531-15254
Z	531-15264

HODS50	
	Article-No.
0	531-15274
1	531-15284
2	531-15294
3	531-15304
4	531-15314
5	531-15324
6	531-15334
7	531-15344
8	531-15354
9	531-15364
.	531-00174
/	531-00175
≡	531-00176
+	531-00451
-	531-00452
0	531-15365
1	531-15366
2	531-15367
3	531-15368
5	531-15370
6	531-15371
7	531-15372
8	531-15373
9	531-15374

HODS85	
	Article-No.
A	531-07935
B	531-07936
C	531-07937
D	531-07938
E	531-07939
F	531-07940
G	531-07941
H	531-07942
I	531-07943
J	531-07944
K	531-07945
L	531-07946
M	531-07947
N	531-07948
O	531-07949
P	531-07950
Q	531-07951
R	531-07952
S	531-07953
T	531-07954
U	531-07955
V	531-07956
W	531-07957
X	531-07958
Y	531-07959
Z	531-07960

HODS85	
	Article-No.
0	531-07925
1	531-07926
2	531-07927
3	531-07928
4	531-07732
5	531-07930
6	531-07931
7	531-07932
8	531-07933
9	531-07934
.	531-00384
/	531-07961
≡	531-00386
+	531-07924
-	531-07923
0	531-07728
1	531-07729
2	531-07730
3	531-07731
5	531-07733
6	531-07734
7	531-07735
8	531-07736
9	531-07737



More variants and dimensions are available on request. Please contact us for more information.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



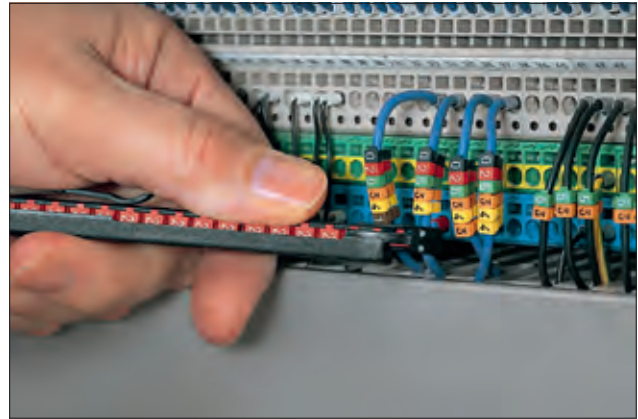
Pre-printed Cable Markers

WIC, snap on

WIC markers are applied to the wire by simply clicking them on using the WIC tool or if no tool is available they can easily be applied by hand. Simply insert the marker strip into the back of the tool and slide down to the end and simply press the marker down over the wire. Twist the marker off and apply the next marker. Once all the markers are on slide them together until the locking mechanism engages.

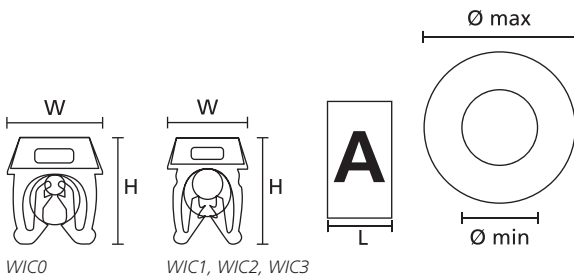
Features and Benefits

- Fast and easy to use pre-printed nylon snap-on marker
- Ideal where termination is completed or for maintenance and repair
- Markers lock together to give perfect text alignment
- Vibration resistant markers, WIC markers lock onto wire and cable tightly
- WIC tool holds 20 WIC marker in all three sizes
- Gripping system locks markers onto wire and resists rotation
- Available in Yellow, White and international resistor colour code
- Popular 2 digit markings such as L1, L2, L3, PE are available in Yellow or colour code
- Dispenser colour denotes marker size: WIC0 (GN), WIC1 (RD), WIC2 (BU), WIC3 (YE)



Use the applicator to simply snap the marker onto your cable.

MATERIAL	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C, (+105 °C, 500 h)
Flammability	UL 94 V0



Customized marking on request

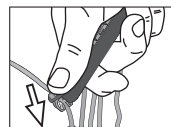
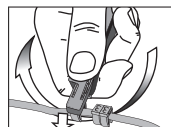
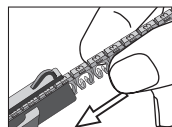


More variants and dimensions are available on request. Please contact us for more information.

TYPE	Drawing	Bundle Ø min.	Bundle Ø max.	Width (W)	Height (H)	Length (L)	Wire Size Range (mm ²)	Pack Cont.	Application Tool	Article-No.
WIC0-0-9	0 9	0.8	2.2	5.0	5.5	3.0	0.15-0.75	1,000 pcs.	WIC Tool	561-00101
WIC0-A,E,L,N, R,S,T,+,-,⊥	A E L N R S T + - ⊥	0.8	2.2	5.0	5.5	3.0	0.15-0.75	1,000 pcs.	WIC Tool	561-00994
WIC0-0-9	0 1 2 3 4 5 6 7 8 9	0.8	2.2	5.0	5.5	3.0	0.15-0.75	1,000 pcs.	WIC Tool	561-00100
WIC1-0-9	0 9	2.0	2.8	5.0	6.4	3.0	0.50-1.50	1,000 pcs.	WIC Tool	561-01101

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

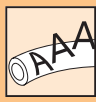
Application Tool	
WIC Tool	561-00001



Application video:
WIC

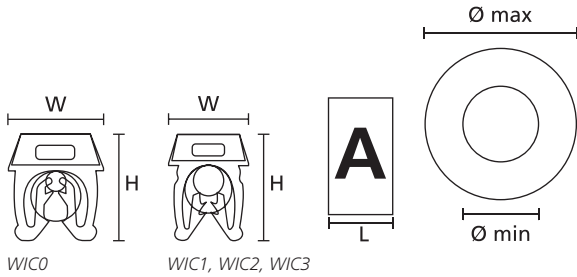


Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Pre-printed Cable Markers

WIC, snap on



TYPE	Drawing	Bundle Ø min.	Bundle Ø max.	Width (W)	Height (H)	Length (L)	Wire Size Range (mm ²)	Pack Cont.	Application Tool	Article-No.
WIC1- A,E,L,N, R,S,T,+,-,⊥		2.0	2.8	5.0	6.4	3.0	0.50-1.50	1,000 pcs.	WIC Tool	561-01994
WIC1-0-9		2.0	2.8	5.0	6.4	3.0	0.50-1.50	1,000 pcs.	WIC Tool	561-01100
WIC2-0-9		2.8	3.8	5.6	7.1	3.0	1.50-2.50	1,000 pcs.	WIC Tool	561-02101
WIC2- A,E,L,N, R,S,T,+,-,⊥		2.8	3.8	5.6	7.1	3.0	1.50-2.50	1,000 pcs.	WIC Tool	561-02994
WIC2-0-9		2.8	3.8	5.6	7.1	3.0	1.50-2.50	1,000 pcs.	WIC Tool	561-02100
WIC3-0-9		4.3	5.3	8.0	9.6	3.0	4.00-6.00	500 pcs.	WIC Tool	561-03101
WIC3- A,E,L,N, R,S,T,+,-,⊥		4.3	5.3	8.0	9.6	3.0	4.00-6.00	500 pcs.	WIC Tool	561-03994
WIC3-0-9		4.3	5.3	8.0	9.6	3.0	4.00-6.00	500 pcs.	WIC Tool	561-03100

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



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Identification tags for marking cable bundles

Q-tags

Q-tags are used to identify a cable or a cable bundle and are secured with a Q-tie. The Q-tag's flag design allows the user to quickly read or scan the printed information.

Features and Benefits

- Identify cable or cable bundle
- Quickly read or scan printed information
- Mark by hand with T82 series marker pen or use printed adhesive label
- HellermannTyton offers complete printing solution (printers, labels, ribbons)
- Perfect combination with Q-ties to safely secure and mark cables with highly visible text



The flagged orientation of Q-tags ensures that printed texts are easily visible.



Please find more Q-Series products for your system solution on page 62, 72.



Application video: Q-Series

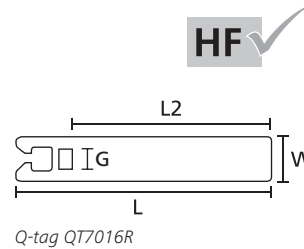
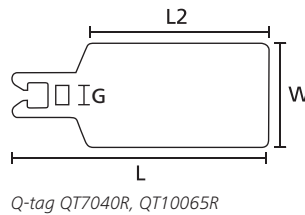
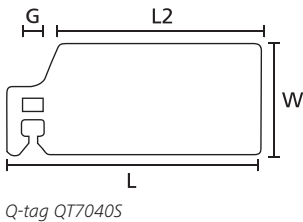


Q-tags can be labelled with pre-printed labels or by hand.



Q-tags are available in different sizes and types.

MATERIAL	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C
Flammability	UL 94 V2



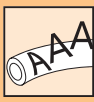
TYPE	Length (L)	Length (L2)	Width (W)	Strap Width max. (G)	Pack Cont.	Colour	Article-No.
QT7040S	88.0	70.0	42.0	3.6	50 pcs.	White (WH)	151-10952
QT7016R	100.0	70.0	18.0	4.7	50 pcs.	White (WH)	151-10950
QT7040R	100.0	70.0	42.0	4.7	50 pcs.	White (WH)	151-10951
QT10065R	135.0	100.0	67.0	4.7	25 pcs.	White (WH)	151-10953

All dimensions in mm. Subject to technical changes. Minimum Order Quantity (MOQ) may differ from package content.

T82 Marker Pen

TYPE	Description	Pack Cont.	Colour	Article-No.
T82S-BK	Indelible Marker Pen	2 pcs.	Black (BK)	500-50820
T82R-RD	Indelible Marker Pen	2 pcs.	Red (RD)	500-50822

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



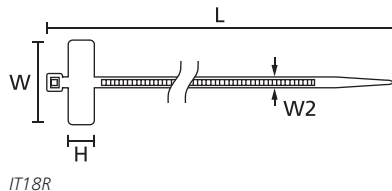
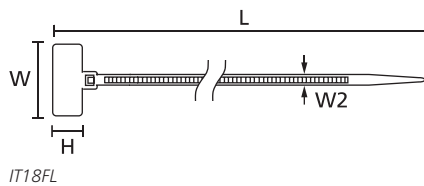
Identification ties and plates for marking cable bundles

IT Ties

One of the major benefits is the ability to both secure and identify cable bundles at different times.

Features and Benefits

- Identification ties made of Polyamide 6.6
- For simple identification and securing of cable bundles in one step
- Printable labels are available for a professional finish
- Manual or temporary marking is possible with an indelible pen (T82S-BK / T82R-RD)



One operation with two benefits.

MATERIAL	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C
Flammability	UL 94 V2



TYPE	Bundle Ø min.	Bundle Ø max.	Width (W)	Height (H)	Length (L)	Width (W2)	N	Recommended Labels	Pack Cont.	Colour	Article-No.
IT18FL	1.5	19.0	20.5	9.0	110.0	2.5	80	TAG18-07TD1	100 pcs.	Natural (NA)	111-81919
IT18R	6.0	22.0	25.0	8.0	100.0	2.3	80	TAG23-06TD1	100 pcs.	Natural (NA)	111-81821

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



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.

Labels for IT ties, IMP plates and Q-tags, thermal transfer

Helatag 892 (White)

Features and Benefits

- Suited to the slightly rough surfaces of Q-tags, IT ties and IMP/IT plates
- Adheres to rounded surfaces
- Excellent print performance using TT822OUT ribbon
- Print with TT4000+, TT430 for best results
- Easy label design with TagPrint Pro

MATERIAL	Type 892, Vinyl (PVC), white (WH)
Operating Temperature	-40 °C to +80 °C
Curing Temperature	from 0 °C
Adhesive	Acrylic
Thickness of Foil (µm)	83 µm
Chem. Material Properties	Good resistance against water, oils and most solvents.
Recommended Ribbon Type	TT822OUT



TYPE	Width (W)	Height (H)	Width of Liner (WL)	Labels per Row	For Size	Pack Cont.	Colour	Article-No.
TAG18-07TD1-892-WH	18.0	7.0	24.0	1 pc.	IT18FL	5,000 pcs.	White (WH)	596-12253
TAG23-06TD1-892-WH	23.0	6.0	30.0	1 pc.	IT18R	5,000 pcs.	White (WH)	596-12255
TAG63TD1-892-WH	63.5	38.1	70.0	1 pc.	QT7040R, QT7040S	1,000 pcs.	White (WH)	596-12263
TAG102-64TD1-892-WH	102.0	64.0	106.0	1 pc.	QT10065R	250 pcs.	White (WH)	596-12265

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



Carrier Marking System, laser

Helafix HC and HCR Carriers

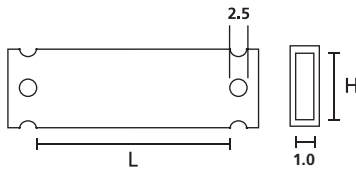
Marking of cable looms, cables, pipes, transport systems, valves, sensors, for inventory marking on machines or other parts.

Features and Benefits

- Versatile transparent carriers for HFX labels used for temporary or permanent marking
- Fixed in place using T18 series cable ties, screws or rivets (carrier HC06, no rivet hole)
- Protects inserted HFX label against damp, dirt, damage and UV radiation
- Helafix HC supplied as cut lengths in bags, pre-cut and pre-punched rivet hole (carrier HC06 have no punched hole)
- Helafix HCR supplied in continuous tube format and can be cut to size with HCT tool
- Helafix HFX labels designed to fit into HC and HCR carriers



Multi-purpose identification potential: Helafix HC and HCR.

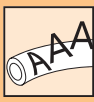


MATERIAL	Polyethylene, UV Resistant (PEUV)
Operating Temperature	-60 °C to +65 °C
Flammability	UL 94 HB
Chem. Material Properties	Resistance to UV light, water and a variety of solvents.



TYPE	Length (L)	Height (H)	Reel Length	Pack Cont.	Recommended Labels	Tools	Article-No.
HCR06	-	7.0	25 m	25 m	-	-	525-07003
HCR09	-	10.0	25 m	25 m	HFX9	50	525-10003
HCR12	-	13.0	25 m	25 m	HFX12	51	525-13003
HCR18	-	19.0	25 m	25 m	-	-	525-19003
HCR24	-	25.0	25 m	25 m	-	-	525-25003
HC06-17	17.5	7.0	-	50 pcs.	-	-	525-07173
HC09-17	17.5	10.0	-	50 pcs.	HFX9-17P	-	525-10173
HC12-17	17.5	13.0	-	50 pcs.	-	-	525-13173
HC06-35	35.0	7.0	-	50 pcs.	-	-	525-07353
HC09-35	35.0	10.0	-	50 pcs.	HFX9-35P	-	525-10353
HC12-35	35.0	13.0	-	50 pcs.	HFX12-35P	-	525-13353
HC18-35	35.0	19.0	-	50 pcs.	-	-	525-19353
HC09-52	52.0	10.0	-	50 pcs.	HFX9-52P	-	525-10523
HC12-52	52.0	13.0	-	50 pcs.	HFX12-52P	-	525-13523
HC18-52	52.0	19.0	-	50 pcs.	-	-	525-19523
HC24-52	52.0	25.0	-	50 pcs.	-	-	525-25523
HC12-70	70.0	13.0	-	50 pcs.	-	-	525-13703
HC18-70	70.0	19.0	-	50 pcs.	-	-	525-19703
HC24-70	70.0	25.0	-	50 pcs.	-	-	525-25703

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



Carrier Marking System, laser

Helafix HFX Labels

Use marking pen T82 or print the labels with laser printer. For indoor use in bundle applications in machines, panel building or wherever flexible self marked marking is needed.

Features and Benefits

- Laser printable non-adhesive labels for Helafix carrier strip (HC and HCR) range
- Every sheet in two colours (front yellow, back white)
- A4 format
- Simple and efficient label design and printing with TagPrint Pro software
- Mark manually with T82 series indelible markers pens

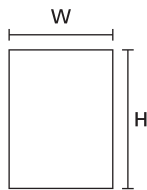


A precise match for Helafix, for permanent identification coding.



For MS-Windows Word design templates for simple applications please refer to www.HellermannTyton.com (downloadzone).

MATERIAL	Polyester (SP)
Operating Temperature	-70 °C to +125 °C
Chem. Material Properties	Resistance to a variety of solvents. Good UV light resistance.



TYPE	Width (W)	Height (H)	Labels per Sheet	Sheets per Pack	Carton Quantity	Colour	Article-No.
HFX9-17P	17.5	9.0	319 pcs.	20 pcs.	6,380 pcs.	Yellow (YE), White (WH)	526-01014
HFX9-35P	35.0	9.0	145 pcs.	20 pcs.	2,900 pcs.	Yellow (YE), White (WH)	526-01514
HFX12-35P	35.0	12.0	110 pcs.	20 pcs.	2,200 pcs.	Yellow (YE), White (WH)	526-01714
HFX9-52P	52.5	9.0	124 pcs.	20 pcs.	2,480 pcs.	Yellow (YE), White (WH)	526-02014
HFX12-52P	52.5	12.0	92 pcs.	20 pcs.	1,840 pcs.	Yellow (YE), White (WH)	526-02214
HFX12-105P	105.0	12.0	44 pcs.	20 pcs.	880 pcs.	Yellow (YE), White (WH)	526-02514
HFX24-105P	105.0	24.0	22 pcs.	20 pcs.	440 pcs.	Yellow (YE), White (WH)	526-03014
HFX12-210P	210.0	12.0	22 pcs.	20 pcs.	440 pcs.	Yellow (YE), White (WH)	526-05014
HFX24-210P	210.0	24.0	11 pcs.	20 pcs.	220 pcs.	Yellow (YE), White (WH)	526-05514

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

T82 Marker Pen

TYPE	Description	Pack Cont.	Colour	Article-No.
T82S-BK	Indelible Marker Pen	2 pcs.	Black (BK)	500-50820
T82R-RD	Indelible Marker Pen	2 pcs.	Red (RD)	500-50822

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



Helafix Tool

HCT1 for carrier size HCR09

HCT2 for carrier size HCR12

HCT1 and HCT2 tools are ideal for cleanly cutting the carrier strip as well as punching out the securing holes. For HCR06, HCR18 and HCR24, the front part of the pliers can be used. To fix the character holders HC and HCR simply use the T18 range of cable ties, fixings or rivets.

Features and Benefits

- Cleanly cut Helafix HCR carrier tubing
- Punch securing holes on edges of HCR09 (HCT1) and HCR12 (HCT2)
- Apply punched HCR09 and HCR12 with T18 range of cable ties
- Suitable for punching rivet holes in HCR06, HCR18 and HCR24 tubing
- Punch hole diameter 2.5 mm
- Fix with T18 range of cable ties or suitable rivets



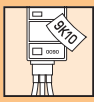
Any length can be used...



...just cut to suit.

TYPE	For Carrier Width	For Size	Ø (D)	Article-No.
HCT1	10.0	HCR09	2.5	525-00010
HCT2	13.0	HCR12	2.5	525-00013

All dimensions in mm. Subject to technical changes.



Identification Systems

Control Panel Labelling

Labels for control panel identification, thermal transfer

Helatag 880 (Yellow matt), removable

Helatag 1211 (Yellow) for rough surfaces

The specially formulated adhesive labels give the highest quality print clarity when printed on thermal transfer printers. The range of materials and ribbons have been developed to suit the needs of most users. Designing and printing labels is simple and users can quickly print out professional labels in a matter of moments when using TagPrint Pro labelling software.

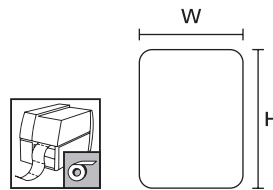
Due to the structure of the vinyl label they are suitable for rougher surfaces.

Features and Benefits

- Suited to labelling electrical panels
- Excellent print performance using TT822OUT ribbon
- Print with TT4000+, TT430 for best results
- Easy label design with Tagprint Pro



Switchgear application.



MATERIAL	Type 880, Vinyl (PVC), yellow matt (MTYE), removable
Operating Temperature	-40 °C to +80 °C
Curing Temperature	from +10 °C
Adhesive	Acrylic
Thickness of Foil (µm)	80 µm
Chem. Material Properties	Good resistance to water, oil and most solvents.
Recommended Ribbon Type	TT822OUT

MATERIAL	Type 1211, Vinyl (PVC), yellow gloss (GSYE)
Operating Temperature	-20 °C to +80 °C
Curing Temperature	from +5 °C
Adhesive	Acrylic
Thickness of Foil (µm)	83 µm
Chem. Material Properties	Resistant to water, alcohol, most oils, greases, fuel, aliphatic solvents, weak acids, salts and alkalis.
Recommended Ribbon Type	TT822OUT

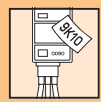


TYPE	Width (W)	Height (H)	Width of Liner (WL)	Labels per Row	Pack Cont.	Colour	Article-No.
TAG15-09TE-880-YE	15.0	9.0	89.0	5 pcs.	10,000 pcs.	Yellow matt (MTYE)	596-12174
TAG16-06TE-880-YE	16.5	6.0	101.6	5 pcs.	20,000 pcs.	Yellow matt (MTYE)	596-12172
TAG19-11TE-880-YE	19.0	11.0	89.0	4 pcs.	10,000 pcs.	Yellow matt (MTYE)	596-12175
TAG20-08TE-880-YE	20.0	8.0	101.6	4 pcs.	10,000 pcs.	Yellow matt (MTYE)	596-12173
TAG38-11TE-880-YE	38.0	11.0	85.1	2 pcs.	5,000 pcs.	Yellow matt (MTYE)	596-12176
TAG56-22TE-880-YE	56.0	22.0	62.0	1 pc.	2,000 pcs.	Yellow matt (MTYE)	596-12177

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

TYPE	Width (W)	Height (H)	Width of Liner (WL)	Labels per Row	Pack Cont.	Colour	Article-No.
TAG15-09TE-1211-YE	15.0	9.0	89.0	5 pcs.	10,000 pcs.	Yellow gloss (GSYE)	596-21211
TAG16-06TE-1211-YE	16.5	6.0	101.6	5 pcs.	20,000 pcs.	Yellow gloss (GSYE)	596-01211
TAG20-08TE-1211-YE	20.0	8.0	101.6	4 pcs.	10,000 pcs.	Yellow gloss (GSYE)	596-11211
TAG38-11TE-1211-YE	38.0	11.0	85.1	2 pcs.	5,000 pcs.	Yellow gloss (GSYE)	596-41211
TAG56-22TE-1211-YE	56.0	22.0	62.0	1 pc.	2,000 pcs.	Yellow gloss (GSYE)	596-51211

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



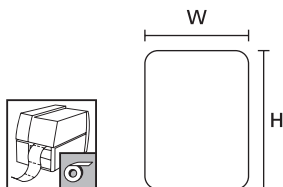
Labels for control panel identification, thermal transfer

Helatag 1216 (White) for rough surfaces

The specially formulated adhesive labels give the highest quality print clarity when printed on thermal transfer printers. The range of materials and ribbons have been developed to suit the needs of most users. Designing and printing labels is simple and users can quickly print out professional labels in a matter of moments when using TagPrint Pro labelling software.

Features and Benefits

- Suited to labelling electrical panels
- White labels give excellent contrast
- Excellent print performance using TT822OUT ribbon
- Print with TT4000+, TT430 for best results
- Easy label design with TagPrint Pro



Clear and permanent identification.

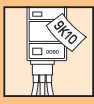
MATERIAL	Type 1216, Polyethylene (PE), white (WH)
Operating Temperature	-30 °C to +60 °C
Curing Temperature	from 0 °C
Adhesive	Acrylic
Thickness of Foil (µm)	110 µm
Chem. Material Properties	Resistant to water, alcohol, most oils, greases, fuel, aliphatic solvents, weak acids, salts and alkalis.
Recommended Ribbon Type	TT822OUT



TYPE	Width (W)	Height (H)	Width of Liner (WL)	Labels per Row	Pack Cont.	Colour	Article-No.
TAG05-08TC-1216-WH	5.0	8.0	85.0	16 pcs.	25,000 pcs.	White (WH)	596-12147
TAG05-15TC-1216-WH	5.0	15.0	85.0	16 pcs.	25,000 pcs.	White (WH)	596-12151
TAG06-10TC-1216-WH	6.0	10.0	85.0	13 pcs.	25,000 pcs.	White (WH)	596-12149
TAG08-15TC-1216-WH	8.0	15.0	85.0	10 pcs.	25,000 pcs.	White (WH)	596-12152

All dimensions in mm. Subject to technical changes.

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



Cotton cloth labels, manual marking

HELASIGN, Material 270 (Yellow), A4 Sheets

For areas where high label visibility is required, or where temporary labels are needed. The synthetic rubber adhesive allows the easy removal or repositioning of the label when needed. Using the T82 pens ensures clarity of written text and excellent mark permanence.

Features and Benefits

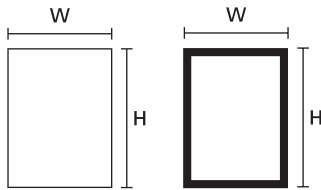
- Yellow fabric adhesive labels
- Easily remove or reposition labels as required
- No sticky residue on removal
- Labels available with or without black border
- Use T82 marker pen for market leading mark endurance
- Clear protective box to ensure labels stay as good as new



Cotton fabric labels will adhere to most surfaces and are repositionable.



Please note: These labels are not suitable for laser printing.



MATERIAL	Type 270, Cotton cloth, yellow (YE)
Operating Temperature	-29 °C to +80 °C
Curing Temperature	from +10 °C
Adhesive	Synthetic rubber
Thickness of Foil (µm)	150 µm
Chem. Material Properties	Good resistance against water, oils and most solvents.



TYPE	Drawing	Width (W)	Height (H)	Labels per Sheet	Pack Cont.	Colour	Article-No.
TAG120A4-270-YE		15.0	6.0	611 pcs.	15,275 pcs.	Yellow (YE)	597-12027
TAG122A4-270-YE		15.0	9.0	348 pcs.	9,300 pcs.	Yellow (YE)	597-12227
TAG124A4-270-YE		19.0	11.0	240 pcs.	6,000 pcs.	Yellow (YE)	597-12427
TAG121A4-270-YE		20.0	8.0	315 pcs.	7,875 pcs.	Yellow (YE)	597-12127
TAG123A4-270-YE		26.0	10.0	196 pcs.	4,900 pcs.	Yellow (YE)	597-12327
TAG126A4-270-YE		30.0	20.0	36 pcs.	2,100 pcs.	Yellow (YE)	597-12627
TAG125A4-270-YE		38.0	11.0	130 pcs.	3,250 pcs.	Yellow (YE)	597-12527
TAG127A4-270-YE		56.0	22.0	39 pcs.	975 pcs.	Yellow (YE)	597-12727
TAG128A4-270-YE		60.0	35.0	24 pcs.	600 pcs.	Yellow (YE)	597-12827
TAG122FA4-270-YE			15.0	9.0	348 pcs.	9,300 pcs.	Yellow (YE)
TAG124FA4-270-YE	19.0		11.0	240 pcs.	6,000 pcs.	Yellow (YE)	597-92427
TAG121FA4-270-YE	20.0		8.0	315 pcs.	7,875 pcs.	Yellow (YE)	597-92127
TAG125FA4-270-YE	38.0		11.0	130 pcs.	3,250 pcs.	Yellow (YE)	597-92527
TAG127FA4-270-YE	56.0		22.0	39 pcs.	975 pcs.	Yellow (YE)	597-92727
TAG128FA4-270-YE	60.0		35.0	24 pcs.	600 pcs.	Yellow (YE)	597-92827

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

T82 Marker Pen

TYPE	Description	Pack Cont.	Colour	Article-No.
T82S-BK	Indelible Marker Pen	2 pcs.	Black (BK)	500-50820
T82R-RD	Indelible Marker Pen	2 pcs.	Red (RD)	500-50822

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



Panel plate labels, thermal transfer

Helatag 1220 (White)

Panel Labels are durable adhesive labels made from a thick material that is designed to replace traditional engraved plastic plates. The white and silver glossy colours are suited to industrial control panels, switchgear, data racks, and general equipment labeling.

Create crisp and clear professional looking labels by printing with TT4000+ or TT430 printers and TT822OUT ribbons.

Simple label design creation is easily achieved using Tagprint Pro.

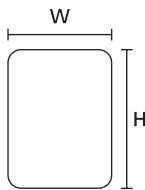
Features and Benefits

- Cost-effective replacement for engraved plastic plates, no need for additional label holder
- High performance adhesive and compressible foam backing ensures optimal adhesion to uneven surfaces if required
- Rounded corners ensure better long term durability of adhesion
- Print high contrast text and barcodes
- Print 'On Site' not order 'Off Site'
- Special sizes and colours are possible on request
- Excellent print performance using TT1220OUT and TT822OUT ribbons
- For outstanding chemical resistance use TT1220OUT
- Print with TT4000+, TT430 for best results
- Easy label design with TagPrint Pro



Panel labels are an ideal replacement for engraved plates.

MATERIAL	Type 1220, Polyester (PET), white (WH)
Operating Temperature	-40 °C to +90 °C
Curing Temperature	from +4 °C
Adhesive	Acrylic
Thickness of Foil (µm)	625 µm
Chem. Material Properties	Excellent resistance to aging, weathering and UV-radiation. Extensive resistance to the influence of chemicals and solvents.
Recommended Ribbon Type	TT1220OUT, TT822OUT



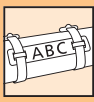
One Step to the Web!



TYPE	Width (W)	Height (H)	Width of Liner (WL)	Labels per Row	Pack Cont.	Colour	Article-No.
TAG13-07TDK1-1220-WH	13.0	7.0	21.0	1 pc.	1,000 pcs.	White (WH)	596-00560
TAG22-22TDK1-1220-WH	22.0	22.0	28.0	1 pc.	1,000 pcs.	White (WH)	596-00561
TAG27-08TDK1-1220-WH	27.0	8.0	33.0	1 pc.	1,000 pcs.	White (WH)	596-00562
TAG27-12.5TDK1-1220-WH	27.0	12.5	33.0	1 pc.	1,000 pcs.	White (WH)	596-00558
TAG27-15TDK1-1220-WH	27.0	15.0	33.0	1 pc.	1,000 pcs.	White (WH)	596-00563
TAG27-18TDK1-1220-WH	27.0	18.0	33.0	1 pc.	1,000 pcs.	White (WH)	596-00564
TAG27-27TDK1-1220-WH	27.0	27.0	33.0	1 pc.	1,000 pcs.	White (WH)	596-00565
TAG35-18TDK1-1220-WH	35.0	18.0	41.0	1 pc.	1,000 pcs.	White (WH)	596-00566
TAG45-15TDK1-1220-WH	45.0	15.0	51.0	1 pc.	1,000 pcs.	White (WH)	596-00567
TAG45-25TDK1-1220-WH	45.0	25.0	51.0	1 pc.	1,000 pcs.	White (WH)	596-00568
TAG60-30TDK1-1220-WH	60.0	30.0	66.0	1 pc.	500 pcs.	White (WH)	596-00569
TAG90-45TDK1-1220-WH	90.0	45.0	96.0	1 pc.	500 pcs.	White (WH)	596-00570
TAG100-30TDK1-1220-WH	100.0	30.0	106.0	1 pc.	250 pcs.	White (WH)	596-00571
TAG100-70TDK1-1220-WH	100.0	70.0	106.0	1 pc.	250 pcs.	White (WH)	596-00572

All dimensions in mm. Subject to technical changes.

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



Stainless Steel Printing System

M-BOSS Compact Markers

M-BOSS Markers are used in all areas where severe mechanical or chemical conditions occur e.g. offshore industry, marine engineering, petrochemical industry, mining, underground or on radio and cellular masts where mark permanence is critical.

The raised surface of the embossed print ensures that the text remains visible even with dirt, grease, and paint cover the marker. The physical characteristics of the metal and the height of the embossed mark allows users to apply a stiff or metallic brush to the surface and remove excess layers of paint or grease without damaging the integrity of the text.

Features and Benefits

- Raised marking ensure text visibility even when covered in dust, debris, grease and oil
- Stainless steel grade SS316 is suited for use in harsh environments
- Marker plates are designed for use with stainless steel cable ties with a 4.6 mm strap width
- Apply ties with a MK9SST



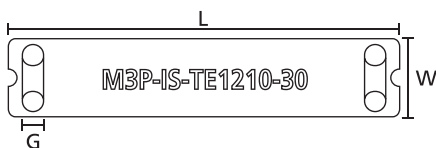
Application video:
M-BOSS Compact



Identification for hazardous environments: M-BOSS Compact stainless steel markers.



Identification for hazardous environments: M-BOSS Compact stainless steel markers.



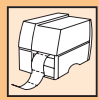
MBML

MATERIAL	Stainless Steel (SS316)
Operating Temperature	-80 °C to +538 °C



TYPE	Strap Width max. (G)	Number of lines	Characters per line	Number of characters	Width (W)	Length (L)	Pack Cont.	Article-No.
MBMLE-DE10X45	4.6	1	8	8	10.0	45.0	10	544-80103
MBMLE-DE10X90	4.6	1	23	23	10.0	90.0	10	544-80104
MBMLE-DE20X45	4.6	3	8	24	20.0	45.0	10	544-80203
MBMLE-DE20X90	4.6	3	23	69	20.0	90.0	10	544-80204

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



Thermal transfer printer

TT430

The TT430 is perfect for printing on HellermannTyton materials such as self-adhesive labels, shrinkable tubing and identification tags. Thanks to its low weight and compact construction, the TT430 integrates seamlessly into any workstation. It is easy to use due to its intuitive touch display and clear status messages which can be shown in multiple languages. The optional cutter and perforator make this printer ideal for a wide range of applications. 300 dpi resolution ensures that barcodes, warning symbols, logos and text are as sharp as they can be.

Features and Benefits

- Medium volume single sided printing
- Print on THTT DS, TLFX DS, TDRT DS and TULT DS (Ladder Products)
- Print on THTT, TLFX, TDRT, TULT, and TCGT (Continuous Tubing)
- Print on TAGHT, TAGLF, TAGDR, TAGUL, TAGPU, Tiptags
- Print on Adhesive Labels
- Uses standard ribbons
- Barcodes: standard and 2D
- Print speed up to 125 mm/s (30mm/s recommended for Ladder Products and Tubing)
- Adjustable label sensor
- Multiple language selection
- Windows drivers: 32/64 bit for Windows XP, Windows Vista, Windows 7 and Windows 8



TT430 thermal transfer printer.

Print Method	Thermal Transfer
Print Head Type	300 dpi, flat type
Print Speed	up to 125 mm/s
Max. Print Width	106 mm
Label Height Max (metric)	1,000 mm
Interfaces	USB 2.0, Ethernet 10/100 Base T
Supported Barcodes, Printer	Standard and 2D
Printer Memory	64 MB RAM
Dimensions W x H x D	253 mm x 189 mm x 322 mm
Weight	4 kg



One Step to the Web!



TYPE	Pack Cont.	Article-No.
TT430	1 pc.	556-00450

Subject to technical changes.

TYPE	Description	Pack Cont.	Article-No.
TT External Reel Holder	External Reel Holder	1 pc.	556-00451

Subject to technical changes.





Thermal transfer ribbons for

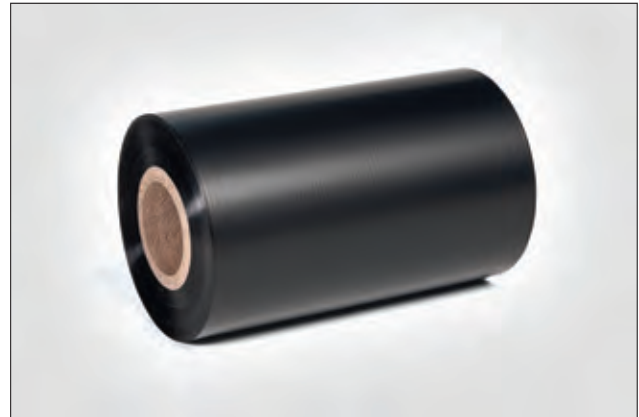
Adhesive Labels

Heatshrink and Tiptags

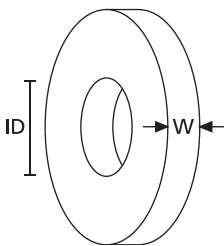
The thermal transfer print technology is based on heating up certain dots in the print head. This transfers the ink very precisely from the ribbon onto the surface of the printed material.

Features and Benefits

- Thermal transfer ribbons for highest quality and performance of printed labels
- Ribbons are specifically designed to maximise print performance for the recommended material



Ribbons for printing on Adhesive Labels.



i ID: The standard inside core diameter is 25.4 mm.

Adhesive Labels

TYPE	Recommended Material	Colour	Width (W)	Reel Length	Article-No.
TT822OUT 60MM	323/823/880/951/1203/1204/1206/1208/1210/1211/1213/1216/1220/1221	Black (BK)	60.0	300 m	556-00111
TT822OUT 110MM	323/823/880/951/1203/1204/1206/1208/1210/1211/1213/1216/1220/1221	Black (BK)	110.0	300 m	556-00101
TT932DOUT 85MM	323/1209	Black (BK)	85.0	300 m	556-00117
TT932DOUT 110MM	323/1209	Black (BK)	110.0	300 m	556-00118
TT122OUT 60mm	1220/1221	Black (BK)	60.0	300 m	556-00060
TT122OUT 110mm	1220/1221	Black (BK)	110.0	300 m	556-00061

All dimensions in mm. Subject to technical changes.

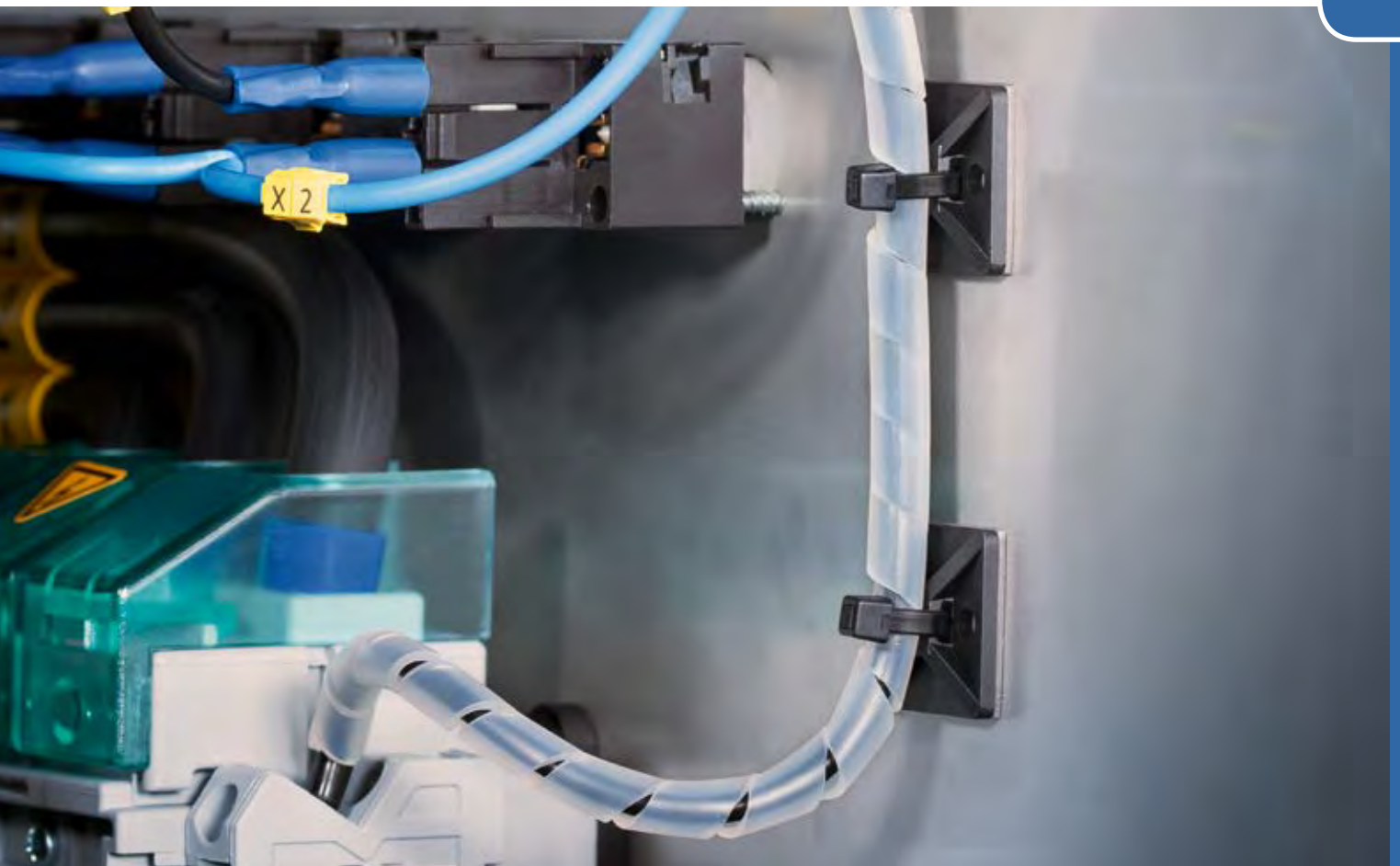
Heatshrink and Tiptags

TYPE	Recommended Material	Colour	Width (W)	Reel Length	Article-No.
TTDTHOUT 40MM	TCGT/TULT/TLFX/TDRT/TIPTAG	Black (BK)	40.0	300 m	556-00139
TTDTHOUT 60MM	TCGT/TULT/TLFX/TDRT/TIPTAG	Black (BK)	60.0	300 m	556-00140
TTDTHOUT 100MM	TCGT/TULT/TLFX/TDRT/TIPTAG	Black (BK)	100.0	300 m	556-00141

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Cable Ties Inside Serrated

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With Open Head		
standard, natural and black	Q-Series, PA66	62



Cable Ties With Fixing Elements

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Screwable, self adhesive	SolidTack-Series	70
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Clips, Clamps and Plugs

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self adhesive	RB-Series	78

Material Specification Overview

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
Polyacetal	POM	-40 °C to +90 °C, (+110 °C, 500 h)	Natural (NA)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Flexible at low temperature Not moisture sensitive Robust on impacts 	RoHS
Polyamide 12	PA12	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Good chemical resistance to: acids, bases, oxidizing agents UV-resistant 	HF RoHS
Polyamide 4.6	PA46	-40 °C to +150 °C (5000 h), +195 °C (500 h)	Natural (NA), Grey (GY)	UL 94 V2	<ul style="list-style-type: none"> Resistance to high temperatures Very moisture sensitive Low smoke sensitive 	HF LFH RoHS
Polyamide 6	PA6	-40 °C to +80 °C	Black (BK)	UL 94 V2	<ul style="list-style-type: none"> High yield strength 	RoHS
Polyamide 6, glass-fibre reinforced	PA6GF30	-40 °C to +100 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Good resistance to: lubricants, vehicle fuel and many solvents 	HF RoHS
Polyamide 6, high impact modified	PA6HIR	-40 °C to +80 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature 	RoHS
Polyamide 6.6	PA66	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK), Natural (NA)	UL 94 V2	<ul style="list-style-type: none"> High yield strength 	HF RoHS
Polyamide 6.6, glass-fibre reinforced	PA66GF13, PA66GF15	-40 °C to +105 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Good resistance to: lubricants, vehicle fuel, salt water and many solvents 	HF RoHS
Polyamide 6.6, heat and UV stabilised	PA66HSW	-40 °C to +105 °C	Black (BK)	UL 94 V2	<ul style="list-style-type: none"> High yield strength Modified elevated max. temperature UV-resistant 	HF RoHS
Polyamide 6.6, heat stabilised	PA66HS	-40 °C to +105 °C	Black (BK), Natural (NA)	UL 94 V2	<ul style="list-style-type: none"> High yield strength Modified elevated max. temperature 	HF RoHS
Polyamide 6.6, high impact modified	PA66HIR	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature 	RoHS
Polyamide 6.6, high impact modified, heat and UV stabilised	PA66HIRHSW	-40 °C to +110 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature Modified elevated max. temperature High yield strength, UV-resistant 	HF RoHS

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

**More colours on request.

*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.

= Minimum Loop Tensile Strength for Cable Ties (Newton)

HF = Halogenfree

LFH = Limited Fire Hazard

RoHS = Restriction of Hazardous Substances

MATERIAL	Material Shortcut	Operating Temperature	Colour**	Flammability	Material Properties*	Material Specifications
Polyamide 6.6 , high impact modified, heat stabilised	PA66HIRHS	-40 °C to +105 °C	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature Modified elevated max. temperature 	RoHS
Polyamide 6.6 , high impact modified, scan black)	PA66HIR(S)	-40 °C to +80 °C, (+105 °C, 500 h)	Black (BK)	UL 94 HB	<ul style="list-style-type: none"> Limited brittleness sensitivity Higher flexibility at low temperature 	HF RoHS
Polyamide 6.6 , UV-resistant	PA66W	-40 °C to +85 °C, (+105 °C, 500 h)	Black (BK)	UL 94 V2	<ul style="list-style-type: none"> High yield strength UV-resistant 	HF RoHS
Polyamide 6.6 V0	PA66V0	-40 °C to +85 °C, (+105 °C, 500 h)	White (WH)	UL 94 V0	<ul style="list-style-type: none"> High yield strength Low smoke emissions 	HF LFH RoHS
Polyester	SP	-50 °C to +150 °C	Black (BK)	Halogen free	<ul style="list-style-type: none"> UV-resistant Good chemical resistance to: most acids, alkalis and oils 	HF LFH RoHS
Polyetheretherketone	PEEK	-55 °C to +240 °C	Beige (BGE)	UL 94 V0	<ul style="list-style-type: none"> Resistance to radioactivity Not moisture sensitive Good chemical resistance to: acids, bases, oxidizing agents 	HF LFH RoHS
Polyethylene	PE	-40 °C to +50 °C	Black (BK), Grey (GY)	UL 94 HB	<ul style="list-style-type: none"> Low moisture absorption Good chemical resistance to: most acids, alcohol and oils 	HF RoHS
Polyolefin	PO	-40 °C to +90 °C	Black (BK)	UL 94 V0	<ul style="list-style-type: none"> Low smoke emissions 	HF LFH RoHS
Polypropylene	PP	-40 °C to +115 °C	Black (BK), Natural (NA)	UL 94 HB	<ul style="list-style-type: none"> Floats in water Moderate yield strength Good chemical resistance to: organic acids 	HF RoHS
Stainless Steel , Stainless Steel	SS304, SS316	-80 °C to +538 °C	Natural (NA)	Non burning	<ul style="list-style-type: none"> Corrosion resistant Antimagnetic Weather resistant Outstanding chemical resistance 	HF LFH RoHS

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

**More colours on request.

*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.

= Minimum Loop Tensile Strength for Cable Ties (Newton)

HF = Halogenfree

LFH = Limited Fire Hazard

RoHS = Restriction of Hazardous Substances



Cable Ties and Fixings

Cable Ties Inside Serrated

Cable Ties Polyamide 6.6 standard

T-Series in PA66 natural and black

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

Features and Benefits

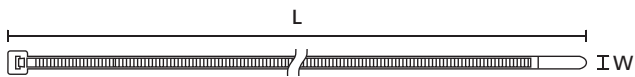
- Natural and black cable ties available in a wide range of sizes
- Made from 100% high quality plastic, allows for good recycling
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool
- Simple to insert due to the ergonomically bent tail



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



Material specification please see page 58-59.



T-Series

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T18S	2.3	83.0	16.0	80	PA66	Natural (NA)	1,000 pcs.	2;4-6	111-02809
T18R	2.5	100.0	22.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-01919
	2.5	100.0	22.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-01910
T18I	2.5	145.0	35.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02370
	2.5	145.0	35.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-02319
T18L	2.5	205.0	55.0	80	PA66	Natural (NA)	100 pcs.	2;4-6	111-02119
	2.5	205.0	55.0	80	PA66	Black (BK)	100 pcs.	2;4-6	111-02110
T25L	2.8	240.0	65.0	110	PA66	Black (BK)	100 pcs.	2;4-6	111-02500
	2.8	240.0	65.0	110	PA66	Natural (NA)	100 pcs.	2;4-6	111-02519
T25LL	2.8	330.0	95.0	110	PA66	Natural (NA)	100 pcs.	2;4-6	111-02619
T30R	3.5	150.0	35.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03219
	3.5	150.0	35.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03210
T30L	3.5	198.0	50.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03419
	3.5	198.0	50.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03410
T30LL	3.5	290.0	80.0	135	PA66	Black (BK)	100 pcs.	2;4-6	111-03500
	3.5	290.0	80.0	135	PA66	Natural (NA)	100 pcs.	2;4-6	111-03529
T40R	4.0	175.0	40.0	180	PA66	Natural (NA)	100 pcs.	2;4-8	111-01626
T50S	4.6	150.0	35.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05810
	4.6	150.0	35.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05819

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

Recommended Tools										
2	3	4	5	6	7	8	9	10	11	12
MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9	MK9HT/EVO9HT	MK9P

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

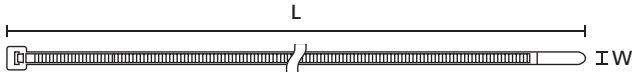


Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Cable Ties Polyamide 6.6 standard

T-Series in PA66 natural and black



T-Series

i See website or main catalogue for full range!

TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Material	Colour	Pack Cont.	Tools	Article-No.
T50R	4.6	200.0	50.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05000
	4.6	200.0	50.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05013
T50M	4.6	245.0	65.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-06201
	4.6	245.0	65.0	225	PA66	Black (BK)	100 pcs.	2-10	111-06200
T50I	4.6	300.0	85.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05210
	4.6	300.0	85.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05219
T50L	4.6	390.0	110.0	225	PA66	Natural (NA)	100 pcs.	2-10	111-05409
	4.6	390.0	110.0	225	PA66	Black (BK)	100 pcs.	2-10	111-05400
T50LL	4.6	445.0	130.0	225	PA66	Black (BK)	500 pcs.	2-10	111-06002
T80R	4.7	210.0	55.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-05019
	4.7	210.0	55.0	355	PA66	Black (BK)	100 pcs.	2-12	111-08010
T80I	4.7	300.0	85.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-08229
	4.7	300.0	85.0	355	PA66	Black (BK)	100 pcs.	2-12	111-08210
T80L	4.7	390.0	110.0	355	PA66	Black (BK)	100 pcs.	2-12	111-05410
	4.7	390.0	110.0	355	PA66	Natural (NA)	100 pcs.	2-12	111-05419

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

Recommended Tools										
2	3	4	5	6	7	8	9	10	11	12
MK20	MK21	MK3SP	MK3PNP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9	MK9HT/EVO9HT	MK9P

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



Cable Ties and Fixings

Cable Ties Inside Serrated

Cable Ties with open head Polyamide 6.6 standard

Q-Series in PA66 natural and black

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

Features and Benefits

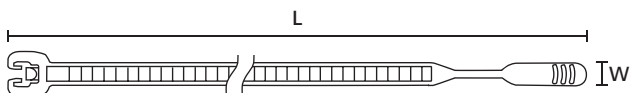
- Open lock head for quick and easy insertion
- Integrated pre-locking function
- More than 25% faster to apply than a standard cable tie
- Inside serration for a strong hold around bundles
- Easy application either manually or with a processing tool



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



Application video:
Q-Series



Q-Series



Please find more Q-Series products for your system solution on page 45.



See website or main catalogue for full range!

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

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

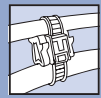
Recommended Tools

2	3	4	5	6	7	8	9	10	11	12	15
MK20	MK21	MK35P	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9	MK9HT/EVO9HT	MK9P	MK9SST

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



1-Piece Fixing Ties with Arrowhead, with Wings

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

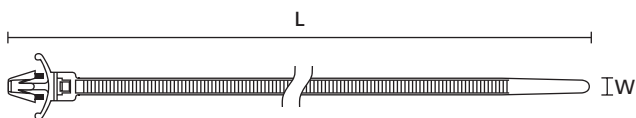
For bundling and fixing of cable harnesses, pipes and hoses in many different industries, including automotive, aerospace, white goods manufacturing and panel building.

Features and Benefits

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



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



T50SL



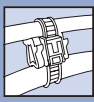
**Material specification
please see page 58-59.**

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
T18RSF		2.5	100.0	16.0	80	4,6 - 4,8	0.8 - 3.0	PA66HS	Natural (NA)	2;4-6	111-85519
		2.5	100.0	16.0	80	4,6 - 4,8	0.8 - 3.0	PA66W	Black (BK)	2;4-6	111-85560
T50SL5		4.6	163.0	34.0	200	6,1 - 6,5	0.8 - 2.7	PA66HIRHS	Black (BK)	2-10	126-00005
T50SL6		4.6	165.0	34.0	225	6,3 - 7,5	0.5 - 2.5	PA66	Black (BK)	2-10	111-85460
T50SL7		4.6	165.0	34.0	225	6,9 - 7,1	0.8 - 2.5	PA66	Natural (NA)	2-10	111-85479
T50SL5		4.7	165.0	34.0	222	6,1 - 6,5	0.8 - 2.5	PA66HS	Black (BK)	2-10	126-00001
		4.7	165.0	34.0	222	6,1 - 6,5	0.8 - 2.5	PA66	Natural (NA)	2-10	111-85369
T50SSF5M		4.6	160.0	35.0	225	6,0 - 6,6	0.7 - 3.0	PA66	Natural (NA)	2-10	111-85739
		4.6	160.0	35.0	225	6,0 - 6,6	0.7 - 3.0	PA66HS	Black (BK)	2-10	126-00032
		4.6	160.0	35.0	225	6,0 - 6,6	0.7 - 3.0	PA66HS	Natural (NA)	2-10	126-01104
T50RSFM		4.6	205.0	45.0	225	6,0 - 6,6	0.7 - 3.0	PA66	Natural (NA)	2-10	111-85729

All dimensions in mm. Subject to technical changes.

Recommended Tools									
2	3	4	5	6	7	8	9	10	
MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9	

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.

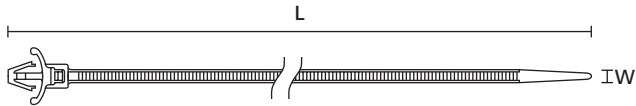


Cable Ties and Fixings

Cable Ties With Fixing Elements

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

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



RT50RSF

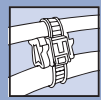
TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Hole Ø (FH)	Panel Thickness	Material	Colour	Tools	Article-No.
RT50RSF		4.6	215.0	50.0	225	7.8 - 8.2	0.8 - 2.5	PA66	Black (BK)	2-10	115-07010
RT50SFK		5.0	225.0	50.0	225	6.4 - 7.0	0.8 - 3.0	PA66	Black (BK)	2-10	115-06960

All dimensions in mm. Subject to technical changes.

Recommended Tools

2	3	4	5	6	7	8	9	10
MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



2-Piece Fixing Ties with Fir Tree, with Disc

Fir Tree Parts FT6

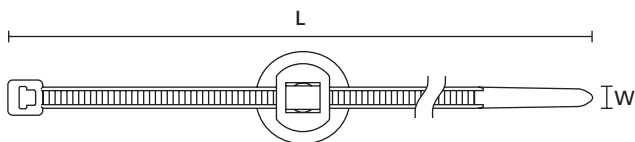
Primarily designed for fixing cable harnesses in the automotive industry their simplicity, and ease of use, has seen these parts used in everything from aircraft, to switch-gear, to washing machines.

Features and Benefits

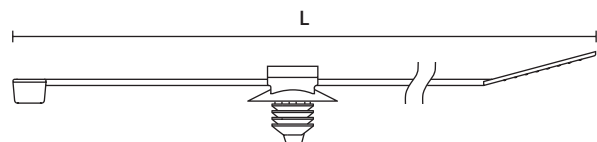
- Pre-assembled 2-piece fixing tie with fir tree foot part
- Cable tie head can be moved after bundling
- Easy to assemble without the need for a tool
- Disc adjusts tie for pressure from various directions and minimises access of dust, dirt and water
- Fir tree foot part can be used for a variety of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



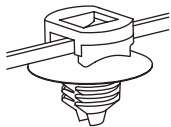
These Fir Tree fixings can also be used in threaded, blind holes.



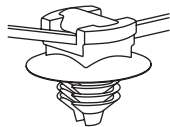
T30RFT6



T30RFT6



T18RFT6



T50ROSFT6SD



**Material specification
please see page 58-59.**

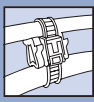
TYPE	Width (W)	Length (L)	Bundle Ø max.	N	Disc Ø	Hole Ø (FH)	Panel Thickness	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
T18RFT6	2.5	100.0	20.0	80	16.0	6.5 - 7.0	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-09110
T30RFT6	3.5	150.0	34.0	135	16.0	6.4 - 7.1	0.8 - 3.0	PA66HS	PA66HIRHS	Black (BK)	2;4-6	150-77950
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
	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
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

All dimensions in mm. Subject to technical changes.

Recommended Tools

2	3	4	5	6	7	8	9	10
MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



Cable Ties and Fixings

Cable Ties With Fixing Elements

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

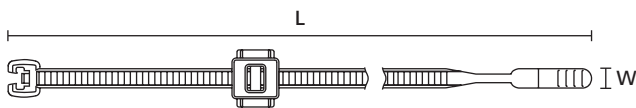
These cable ties and EdgeClip assemblies are ideal for use where holes are not acceptable or where due to temperature problems adhesives will fail. These assemblies are widely used for fixing and bundling cables, pipes and hoses within the automotive industry, harness making, panel building and electrical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

Features and Benefits

- Pre-assembled 2-piece fixing tie with EdgeClip and Q-tie
- A perfect complement within our Q-Series range
- Unique and innovative cable tie with open-head design
- Time saving solution due to quick and simple installation
- Q-tie saves more than 25 % of usual working time
- Cable tie head can be moved after bundling
- For edges of 1 – 3 mm



Q50REC4A, Q-tie with EdgeClip 1-3 mm Top Fixing.



Q50REC4A



Material specification please see page 58-59.

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
Q50REC4A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01085
Q50REC4B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01086

All dimensions in mm. Subject to technical changes.

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

TYPE	Drawing	Width (W)	Length (L)	Bundle Ø max.	N	Material Cable Tie	Material Foot Part	Colour	Tools	Article-No.
Q50REC5A		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01087
Q50REC5B		4.7	210.0	45.0	220	PA66W	PA66W	Black (BK)	2-10	156-01088

All dimensions in mm. Subject to technical changes.

Recommended Tools									
2	3	4	5	6	7	8	9	10	
MK20	MK21	MK3SP	MK3PNSP2	EVO7	MK7HT	MK7P	MK6	MK9/EVO9	

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



Manual Tensioning Tool for Cable Ties, simple version

MK20 up to 4.8 mm strap width

Features and Benefits

- Lightweight, ergonomic tools
- For tensioning and cutting HellermannTyton standard cable ties 4.8 - 7.6 mm wide
- MK20 and MK21 ideal for on-site assembly
- Mounted and pre-tensioned ties are cut off by twisting the tool



MK20, MK21.



Apply.



Tension.



Twist to cut.

TYPE	Strap Width max.	Strap Thickness max.	Weight	Article-No.
MK20	4.8	1.5	0.05 kg	110-20006

All dimensions in mm. Subject to technical changes.



Manual Tensioning Tool with Plastic Housing

EVO7 up to 4.8 mm strap width

HellermannTyton's EVO7 mechanical hand tool was ergonomically designed to reduce the risks of repetitive stress injuries to operators while concurrently increasing productivity. The EVO7 Tension/Lock/Cut Technology delivers performance, safety and comfort for the operators. Available in a standard grip span (EVO7) or short grip span (EVO7SP), for smaller hands. Additional accessories are available.

Features and Benefits

- Ergonomic, slip-proof handle for a comfortable and secure grip
- Extremely low maintenance
- Fast and precise application with minimum effort (TLC mechanism)
- Convenient and simple tension adjustment
- Extended, slim nose for use in narrow spaces
- Housing made of resilient and lightweight glass fibre-reinforced polyester
- Standard grip span (90 mm) and short grip span (80 mm) available



The EVO7: Maximum performance with minimum effort.

TYPE	Description	Strap Width max.	Strap Thickness max.	Weight	Article-No.
EVO7	EVO7	4.8	1.5	0.28 kg	110-70129
EVO7SP	EVO7SP	4.8	1.5	0.28 kg	110-70130

All dimensions in mm. Subject to technical changes.



The patent-pending TLC technology delivers increased productivity:

- Application force and effort is significantly reduced
- Precise cutting of the cable tie right at the head
- Smooth fastening of the cable tie without recoil
- Reduced long-term health issues due to lower recoil shock on the operator and reduced effort



Application video:
EVO7

Perfect cutting made easy with the EVO family:

From precise preliminary settings to the perfect cut, the EVO family allows for an even lighter, gentler and easier cable tie application than ever before. The patent-pending TLC technology makes all the difference!



1. Tension

Tension the cable tie as usual. Use the tension adjustment knob to select the desired tension setting.



2. Lock

The patent-pending locking mechanism detects when the desired tension is reached, locking the tie in place prior to cutting. No manual pressure is required to hold the cable tie in place.



3. Cut

For the final cut, very little effort is needed. By simply pulling the trigger enough to cut the tie, a precise finish can be achieved without excessive strain on the user.



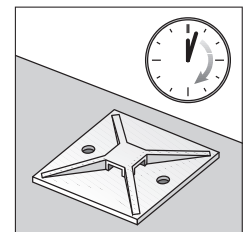
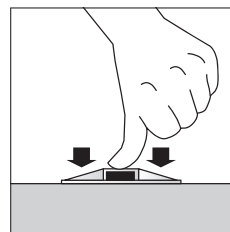
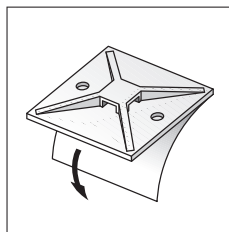
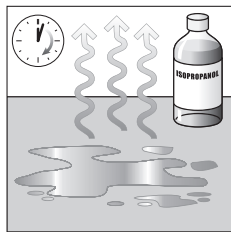
Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.

Information and installation instructions for self-adhesive mounting bases

HellermannTyton uses different types of adhesives for self-adhesive bases: acrylate and synthetic rubber. These differ in the operating temperature range and the 'pull off' force of the adhesive. Synthetic rubber has an excellent initial grip, allowing for almost immediate use. Acrylate adhesive has less initial grip, so there is a need to wait for a few hours before use, but has a higher 'pull off' force than synthetic rubber. This enables a permanent fixing lasting months or even years. To use these adhesives the surface must be dry, and free of dust, oil, oxides, parting agents and other impurities. For this the use of isopropanol / water (50/50) is recommended. After cleaning allow the surface to dry completely. Peel off the protective backing on the self-adhesive base, ensuring the adhesive is not touched. Apply the part to the surface and press down firmly for several seconds.

ADHESIVE		Adhesive Operating Temperature
Synthetic rubber with base of polyethylene foam	Synthetic rubber T60	-40 °C to +60 °C
Acrylate with base of polyurethane foam	Acrylate	to +105 °C
Acrylate with base of acrylic foam	mod. Acrylate	-30 °C to +120 °C

Instructions for use



1. The surface must be dry, free from dust, oil, oxides, parting agents and other impurities. The surface to be glued should be cleaned using a clean cloth and isopropanol/water (50/50). When using other appropriate cleaning agents, ensure that they do not attack the surface nor leave any residues. After cleaning allow the surface to air-dry completely.
2. Peel off protective backing and ensure the adhesive area is not touched.
3. Press down firmly on the base with the thumbs for several seconds.
4. Depending on the type of adhesive, wait for several minutes (synthetic rubber) or hours (acrylate) so that the adhesive can bond completely with the surface.

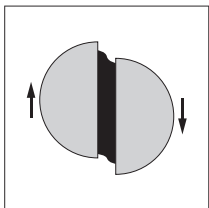
Advantages of our self-adhesive mounts with mod. Acrylate (SolidTack / FlexTack)

- Acrylic Foam Tape is made from a homogeneous system of high performance acrylic adhesive
- Very good initial bond
- High temperature resistance
- Adhesive offers design freedom, no need for bolts or screws
- Reduces the risk of corrosion, no need for boreholes
- Weight reduction compared to mechanical mounting
- Possibility to optimize production processes and to reduce production cost (bonding vs. screwing)
- Can compensate unevenness up to a certain degree
- Specially developed for low energy surfaces

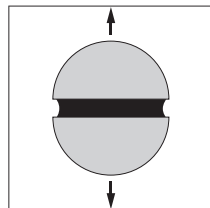


We will be happy to send you on request an up-to-date technical datasheet for whichever adhesive you are using.

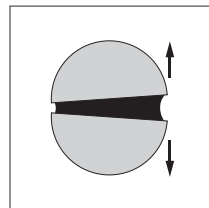
Load types on adhesive bonds



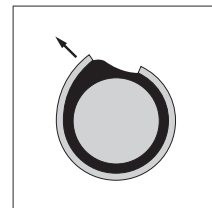
Shear resistance.
Shear force pulls the adhesive surfaces in opposite directions along a parallel line.



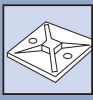
Tensile strength.
Tension force pulls surfaces apart perpendicular to the adhesive bond.



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



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



Cable Tie Mounts with Special Adhesive

SolidTack mounts offering an innovative fixing solution especially for low energy surfaces like PP, PE or if drilling a hole is not possible. Suitable for a wide range of applications on varnished or plastic or metal surfaces in many areas e. g. electrical cabinet, railway, aerospace, automotive and agriculture machinery.

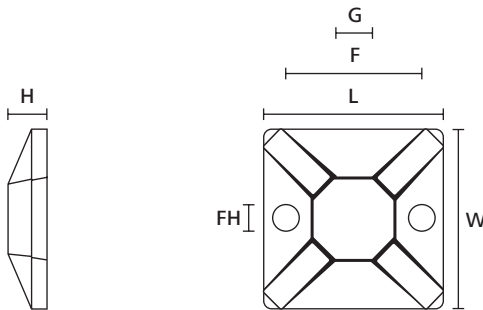
Features and Benefits

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



SolidTack products work on varnished and powder coated surfaces.

SolidTack-Series MB



MB3-MB5 (side view)

MB3-MB5 (plan view)



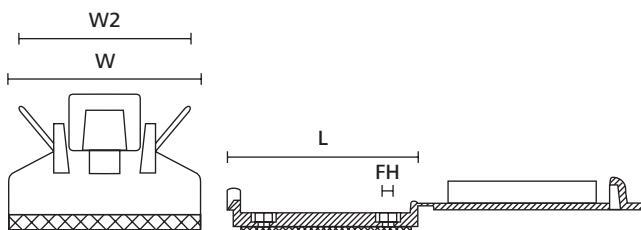
One Step to the Web!

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

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

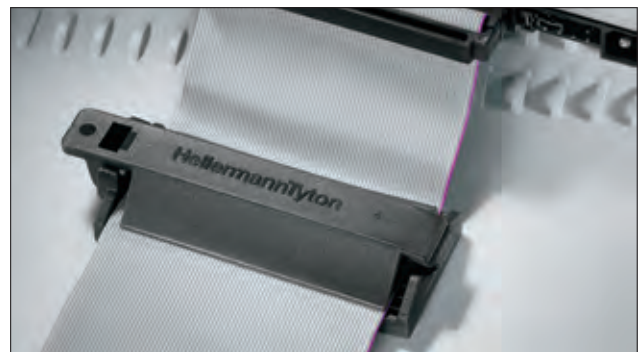
Cable Tie Mounts with Special Adhesive

SolidTack-Series FKH



Flat Ribbon Cable Mount (front view)

Flat Ribbon Cable Mount (side view)



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

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

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



Self Adhesive, Screw Fixing Cable Tie Mounts

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

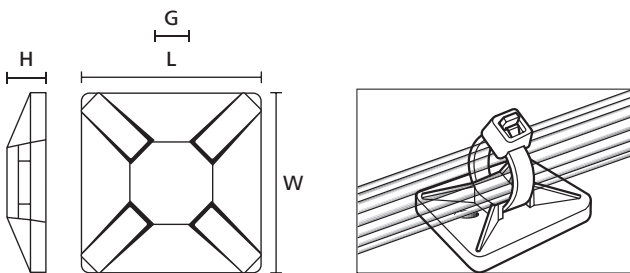
Features and Benefits

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

MB-Series Square-Cut, self adhesive, screwable



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



Cable Tie Mount MB2A (side and plan view) Cable Tie Mount MB3A in application

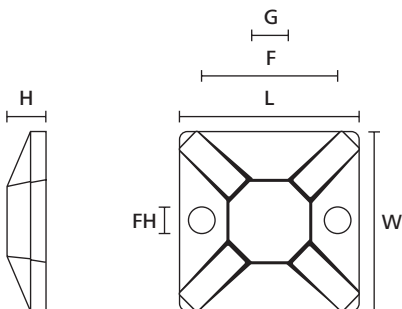


For more information on the types of adhesive please see page 69.

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Adhesive	Pack Cont.	Article-No.
MB2A	13.0	13.0	4.1	-	2.7	PA66	White (WH)	Synthetic rubber T60	100 pcs.	151-01802
MB3A	19.0	19.0	3.8	3,1	4.1	PA66	Black (BK)	Synthetic rubber T60	100 pcs.	151-28320
	19.0	19.0	3.8	3,1	4.1	PA66	White (WH)	Synthetic rubber T60	100 pcs.	151-28349
MB4A3	28.0	28.0	4.7	4,0	5.4	PA66	Black (BK)	Acrylate	100 pcs.	151-28430
MB4A	28.0	28.0	4.7	4,0	5.4	PA66	Black (BK)	Synthetic rubber T60	100 pcs.	151-28412
	28.0	28.0	4.7	4,0	5.4	PA66	White (WH)	Synthetic rubber T60	100 pcs.	151-28469

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

MB-Series Square-Cut, screwable



MB3-MB5 (side view)

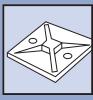
MB3-MB5 (plan view)

TYPE	Width (W)	Length (L)	Height (H)	Fixing Hole Centres (F)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
MB3	19.0	19.0	3.8	13.2	3,1	4.1	PA66	White (WH)	100 pcs.	151-28359
MB4	28.0	28.0	4.7	20.0	4,0	5.4	PA66	White (WH)	100 pcs.	151-28479
MB5	37.7	37.7	6.2	25.3	4,8	8.9	PA66	White (WH)	100 pcs.	151-00324

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



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Cable Ties and Fixings

Cable Tie Mounts

Cable Tie Mounts Q-Series

Q-mounts are ideally suited for holding our innovative Q-ties in place. They would perfectly fit to all applications where a reliable and durable fixation is required.

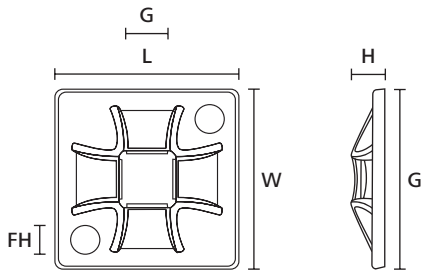
Features and Benefits

- Screw or self adhesive versions
- Perfect for combination with Q-ties
- 4-way entry for Q-tie
- Adhesive with high pull-off force
- Q-Mount base secures the Q-tie in a vertical position, leaving the hands free to apply cables



Please find more Q-Series products for your system solution on page 45, 62.

Q-Mount Series QMA, self adhesive, screwable



Q-Mount (plan view)

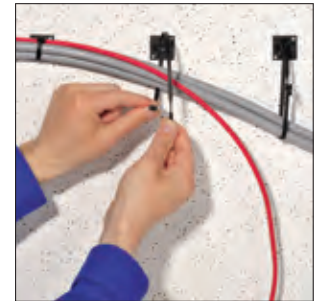
Q-Mount (side view)



Without additional effort only Q-ties can be used for temporary and final cable bundling.



The Q-mount base locks the Q-tie in vertical position, leaving the hands free to apply the cables.



Without additional effort only Q-ties can be used for temporary and final cable bundling.

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

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



For more information on the types of adhesive please see page 69.

Q-Mount Series QM, screwable

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
QM20	20.0	20.0	3.7	3.1	4.0	PA66	Natural (NA)	100 pcs.	151-10901
	20.0	20.0	3.7	3.1	4.0	PA66	Black (BK)	100 pcs.	151-10911
QM30	30.0	30.0	4.5	4.1	5.1	PA66	Natural (NA)	100 pcs.	151-10902
	30.0	30.0	4.5	4.1	5.1	PA66	Black (BK)	100 pcs.	151-10912
QM40	40.0	40.0	5.5	4,1	8.4	PA66	Natural (NA)	50 pcs.	151-10903
	40.0	40.0	5.5	4,1	8.4	PA66	Black (BK)	50 pcs.	151-10913

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



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Screw Fixing Mounts

Cable Tie Mounts with curved design

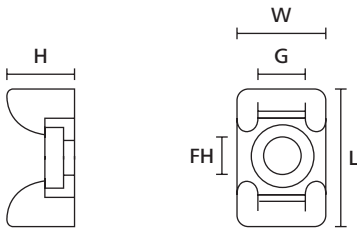
Designed specifically for holding heavier cable bundles, these mounting bases can be used in many industries from agriculture to truck manufacturing. They offer a very secure fixing and can be used with a wide variety of heavy duty cable ties up to 8.3 mm wide.

Features and Benefits

- Curved design for additional cable support
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration



Cable Tie Mounts KR6G5, KR8G5 and CTM.



KR6G5, KR8G5 and CTM (side view)

KR6G5, KR8G5 and CTM (plan view)

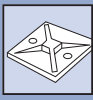


**Material specification
please see page 58-59.**

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
CTM0	9.4	14.7	6.9	3.8	5.0	PA66	Black (BK)	100 pcs.	151-30300
	9.4	14.7	6.9	3.8	5.0	PA66	White (WH)	100 pcs.	151-30303
CTM1	9.4	14.7	6.9	4.8	5.0	PA66	Black (BK)	100 pcs.	151-30400
	9.4	14.7	6.9	4.8	5.0	PA66	White (WH)	100 pcs.	151-30404
KR6G5	12.0	18.0	9.0	4.5	6.0	PA66	Natural (NA)	100 pcs.	151-24619
KR8G5	14.5	25.0	12.0	6.5	8.0	PA66	Natural (NA)	100 pcs.	151-24819
CTM2	15.5	21.8	9.4	4.6	7.9	PA66	Black (BK)	100 pcs.	151-30500
	15.5	21.8	9.4	4.6	7.9	PA66	White (WH)	100 pcs.	151-30504
CTM3	15.5	21.8	9.4	5.1	7.9	PA66	Black (BK)	100 pcs.	151-30600
	15.5	21.8	9.4	5.1	7.9	PA66	White (WH)	100 pcs.	151-30605
CTM4	15.8	21.8	9.4	6.4	7.9	PA66	Black (BK)	100 pcs.	151-30700
	15.8	21.8	9.4	6.4	7.9	PA66	White (WH)	100 pcs.	151-30703

All dimensions in mm. Subject to technical changes.

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



Cable Ties and Fixings

Cable Tie Mounts

Screw Fixing Mounts

CTAM-Series for applications where space is limited

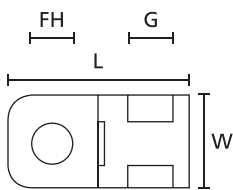
Each of these products offer particular benefits, but all are designed for simple, yet robust, installation in a wide variety of applications. Particularly used in telecoms equipment, switchgear and control cabinets.

Features and Benefits

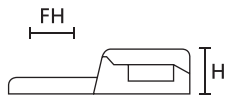
- Suitable for applications with minimal space
- Mounted before cable installation and in line with cable
- CTAM has 4-way entry design for use in line or at 90° angle to cable run
- CTAM mounts are available in different sizes and materials



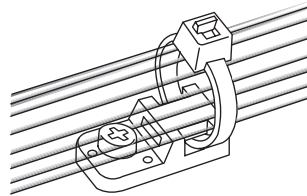
CTAM mounts, for applications with limited space.



CTAM-Series (plan view)



CTAM-Series (side view)



CTAM-Series in application



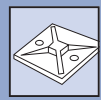
One Step to the Web!

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

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



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Mounts for Screw Fixing

MB-Series Curved Design, screwable

These products are designed for simple, yet robust, installation in a wide variety of applications - particularly used in telecoms equipment, switchgear and control cabinets.

Features and Benefits

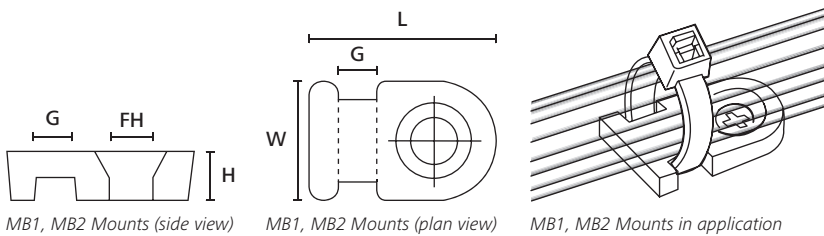
- Simple to install with a screw or bolt
- Excellent security, particularly in areas of high vibration
- Single hole fixing with two-way entry for cable tie



Material specification please see page 58-59.



TY- (l) and MB-Series (r) with curved design, screwable.



MB1, MB2 Mounts (side view)

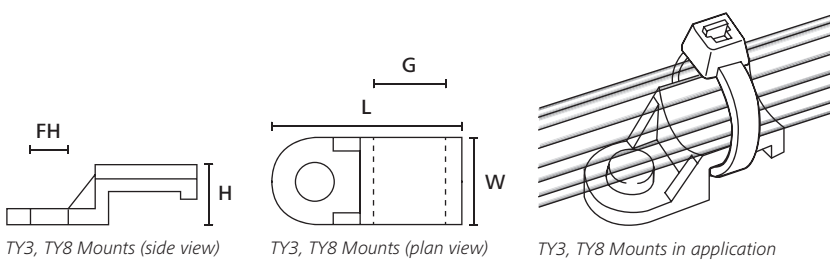
MB1, MB2 Mounts (plan view)

MB1, MB2 Mounts in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
MB1	8.0	12.5	3.5	2.9	2.6	PA66	Natural (NA)	100 pcs.	151-28119
MB2	12.5	20.5	3.3	5.0	5.0	PA66	Black (BK)	100 pcs.	151-28210
	12.5	20.5	3.3	5.0	5.0	PA66	White (WH)	100 pcs.	151-28219

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

TY-Series Curved Design, screwable



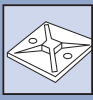
TY3, TY8 Mounts (side view)

TY3, TY8 Mounts (plan view)

TY3, TY8 Mounts in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
TY3F1	8.0	19.0	7.2	3.5	5.0	PA66	Natural (NA)	1,000 pcs.	151-23319
TY8F1	10.0	22.4	7.2	4.5	8.0	PA66	Natural (NA)	1,000 pcs.	151-23819

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



Screw Fixing Mounts

LKM / CL / FH with curved design for sideways fixing

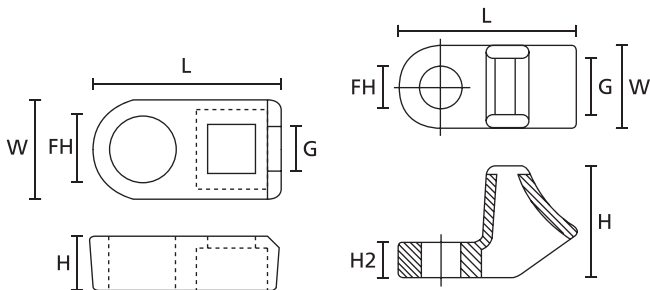
In areas with limited space, these mounting bases allow the cable to be offset from the fixing hole, and can be installed in the equipment prior to the cable installation. A major cost saving can be made by using these products as many different sizes of standard cable ties can be used, reducing the need to stock a wide range of specific fixing ties.

Features and Benefits

- Screw mounts for fixing cable sideways
- Ideal for securing large, heavier bundles
- Suitable for cable ties up to 8 mm wide

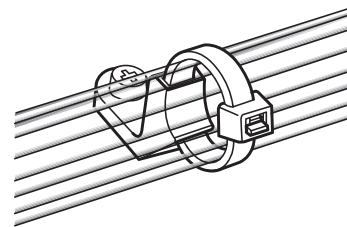


LKM, CL8 and FH cable tie mounts for applications with limited space.



FH cable tie mounts (plan and side view)

LKM, CL8 cable tie mounts (plan and side view)



CL8 cable tie mount in application

TYPE	Width (W)	Length (L)	Height (H)	Height (H2)	Hole Ø (FH)	Strap Width max. (G)	Material	Colour	Pack Cont.	Article-No.
FH18	7.1	13.3	4.0	-	3.7	2.5	PA66	Natural (NA)	500 pcs.	151-61119
FH30	9.5	17.9	4.7	-	5.5	3.5	PA66	Natural (NA)	500 pcs.	151-61319
FH50	11.3	22.2	6.2	-	7.1	4.6	PA66	Natural (NA)	500 pcs.	151-61519
LKM	12.0	27.0	16.0	5.0	6.0	7.6	PA66	Black (BK)	100 pcs.	151-26301
	12.0	27.0	16.0	5.0	6.0	7.6	PA66	Natural (NA)	100 pcs.	151-26304
CL8	12.5	27.3	16.0	5.0	6.5	8.0	PA66	Natural (NA)	100 pcs.	151-26819
	12.5	27.3	16.0	5.0	6.5	8.0	PA66W	Black (BK)	100 pcs.	151-26860

All dimensions in mm. Subject to technical changes.

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



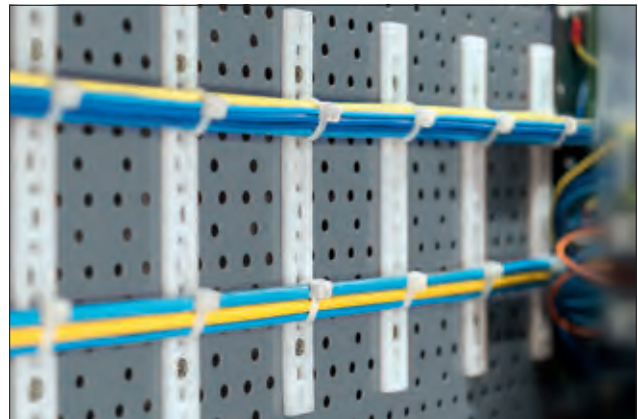
Mounting Plates for Screw Fixing

MP-Series for parallel bundling

Many applications require each cable run to be firmly held in place but separately from adjacent cable runs (example - control cabinets, machinery and military systems). The MP series of mounts helps to achieve this.

Features and Benefits

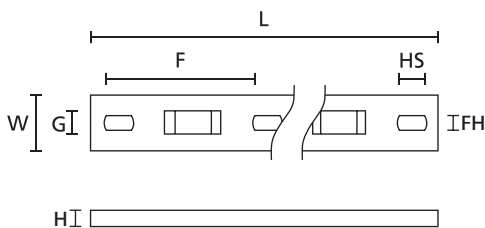
- Allow multiple cables to be run in parallel
- Simple to fix with two screws
- Cables are fixed by using a cable tie through any combination of the available slots



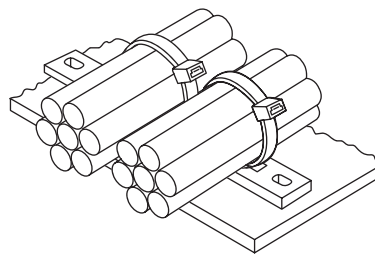
MSMP mounting plates, screwable.



Material specification please see page 58-59.



Mounting plates MP and MSMP (plan and side view)



Mounting plates in application

TYPE	Width (W)	Length (L)	Height (H)	Hole Ø (FH)	Strap Width max. (G)	No. of bundles	Material	Colour	Pack Cont.	Article-No.
MP2M3	12.7	76.2	3.2	3.7	5.2	2	PA66	Natural (NA)	100 pcs.	151-24219
MP3M3	12.7	108.0	3.2	3.7	5.2	3	PA66	Natural (NA)	100 pcs.	151-24319
MP4M3	12.7	139.8	3.2	3.7	5.2	4	PA66	Natural (NA)	100 pcs.	151-24419
MP5M3	12.7	171.6	3.2	3.7	5.2	5	PA66	Natural (NA)	100 pcs.	151-24519
MSMP5/10	15.8	204.5	5.3	5.1	7.6	5	PA66	Natural (NA)	100 pcs.	151-25519
MSMP6/6	15.8	244.0	5.3	3.8	7.6	6	PA66	Natural (NA)	100 pcs.	151-25619
MSMP4	15.9	167.0	5.2	5.1	8.2	4	PA66	Natural (NA)	500 pcs.	150-83499

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



Cable Ties and Fixings

Clips, Clamps and Plugs

Self Adhesive Clips

RA-Series with round design

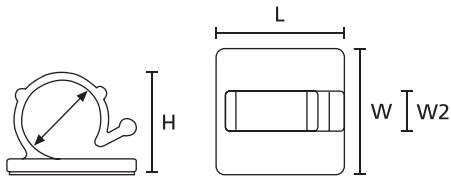
These clips are ideal for use in applications which are difficult to access, or for areas where self adhesive is the only possible fixing method (for example, where fixing „holes‘ would be unacceptable).

Features and Benefits

- One-piece self-adhesive fixing clips for quick and easy installation
- Designed to hold wires, cables or hoses without a cable tie
- Different sizes for various bundle diameters



Self-adhesive one piece fixing clips RA6 (l) and RB5 (r).



RA3-18 Series (side view)

RA3-18 Series (plan view)



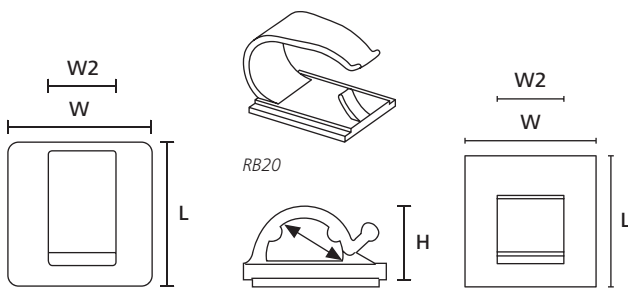
For more information on the types of adhesive please see page 69.

TYPE	Width (W)	Width (W2)	Length (L)	Height (H)	Bundle Ø max.	Material	Colour	Adhesive	Article-No.
RA3	13.0	5.0	13.0	5.0	3.0	PA66	Natural (NA)	Synthetic rubber T60	151-13018
RA6APT-I	19.0	5.0	19.0	9.0	6.0	PA66	Natural (NA)	mod. Acrylate	151-01635
RA6	19.0	5.0	19.0	9.0	6.0	PA66	Natural (NA)	Synthetic rubber T60	151-13019
RA9	19.0	7.5	19.0	12.5	9.0	PA66	Natural (NA)	Synthetic rubber T60	151-13020
RA13APT-I	25.0	10.0	25.0	16.5	13.0	PA66	Natural (NA)	mod. Acrylate	151-01636
RA13	25.0	10.0	25.0	16.5	13.0	PA66	Natural (NA)	Synthetic rubber T60	151-13021
RA18	28.5	10.0	28.5	23.0	18.0	PA66	Natural (NA)	Synthetic rubber T60	151-13119

All dimensions in mm. Subject to technical changes.

Self Adhesive Clips

RB-Series with flat design



RB8-14 Series (plan view)

RB8-14 Series (side view)

RB5-Series (plan view)



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

TYPE	Width (W)	Width (W2)	Length (L)	Height (H)	Bundle Ø max.	Material	Colour	Adhesive	Article-No.
RB5	19.0	9.7	19.0	6.0	5.0	PA66	Black (BK)	Synthetic rubber T60	151-14000
	19.0	9.7	19.0	6.0	5.0	PA66	Natural (NA)	Synthetic rubber T60	151-14059
RB8	25.0	12.7	25.0	11.5	8.0	PA66	Black (BK)	Synthetic rubber T60	151-13601
	25.0	12.7	25.0	11.5	8.0	PA66	Natural (NA)	Synthetic rubber T60	151-13606
RB20	27.0	18.0	33.0	25.0	20.0	PA66HIRHS	Black (BK)	Synthetic rubber T60	151-00831
RB14	27.4	23.0	33.2	16.0	14.0	PA66	Black (BK)	Synthetic rubber T60	151-00502
	27.4	23.0	33.2	16.0	14.0	PA66	Natural (NA)	Synthetic rubber T60	151-00505

All dimensions in mm. Subject to technical changes.



Heat Shrinkable Tubing

Thin walled	
HIS-3, 3:1, mini-reel in dispenser pack	80
TF31, 3:1, flexible and coloured	81
TF34, 3:1, flexible and transparent, VG	82



Heat Shrinkable Tubing 3:1 on a Reel

HIS-3

HIS-3 is used in general purpose of electrical insulation with a high level of protection against corrosion and mechanical abrasion.

Features and Benefits

- Unlined tubing in handy dispenser packs
- High shrink ratio (3:1) tubing
- Fits highly variable substrate dimensions
- Only 6 sizes for application diameter range of 1 mm up to 20 mm, reduce inventory by half



HIS-3 can fit highly variable substrate dimensions.



Also available with transparent adhesive!



More colours and sizes available on request.



Heat Shrinkable Tubing 3:1



MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	3:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+100 °C
Longitudinal change after shrinkage	-5 % max.
Dielectric Strength	20 kV/mm according to ASTM D 150
Flammability	UL 224 VW-1 (except transparent)
Insulation Class	B (VDE 0530)

TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Reel Length	Colour	Tools	Article-No.
HIS-3-1.5/0.5	1.5	0.5	0.45	10 m	Black (BK)	30-33	308-30150
HIS-3-3/1	3.0	1.0	0.55	10 m	Black (BK)	30-33	308-30300
HIS-3-6/2	6.0	2.0	0.65	5 m	Black (BK)	30-33	308-30600
HIS-3-9/3	9.0	3.0	0.75	5 m	Black (BK)	30-33	308-30900
HIS-3-12/4	12.0	4.0	0.80	5 m	Black (BK)	30-33	308-31200
HIS-3-18/6	18.0	6.0	0.90	4 m	Black (BK)	30-32	308-31800
HIS-3-24/8	24.0	8.0	1.20	3 m	Black (BK)	30-32	308-32400

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

Recommended Tools

30	31	32	33
H5002	H5004	E4500	ShrinkPad 110

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



One Step to the Web!



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Heat Shrinkable Tubing 3:1 flexible and coloured

TF31

If higher fire protection is a requirement heat shrinkable tubing TF31 is a good choice. It is used for protection insulation and identification wires, cables and light duty harnesses.

Features and Benefits

- Thin walled, very flexible polyolefin tubing
- Few sizes cover a wide range of diameters allowing reduced inventory
- Fast shrinking and low shrink temperature
- Flame-retardant, UL224 VW1 listed



Cut lengths available on request. Please contact us!



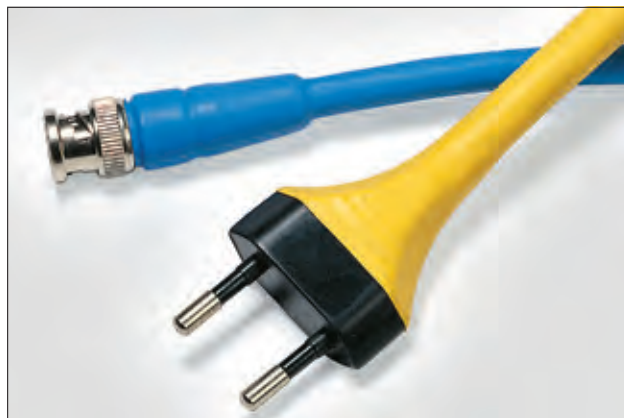
More colours and sizes available on request.



One Step to the Web!



Heat Shrinkable Tubing 3:1



TF31 with 3:1 shrink ratio allowing for a wider range of application.

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	3:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+90 °C
Longitudinal change after shrinkage	+5 %/-15 %
Dielectric Strength	37 kV/mm
Flammability	ASTM D876, UL 224 VW-1



TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Reel Length	Colour	Tools	Article-No.
TF31-1.5/0.5	1.5	0.5	0.50	30 m	Black (BK)	30-33	333-30150
TF31-3/1	3.0	1.0	0.60	30 m	Black (BK)	30-33	333-30300
TF31-6/2	6.0	2.0	0.70	30 m	Black (BK)	30-33	333-30600
TF31-9/3	9.0	3.0	0.80	30 m	Black (BK)	30-33	333-30900
TF31-12/4	12.0	4.0	0.85	30 m	Black (BK)	30-33	333-31200
TF31-18/6	18.0	6.0	1.00	30 m	Black (BK)	30-32	333-31800
TF31-24/8	24.0	8.0	1.20	30 m	Black (BK)	30-32	333-32400

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

Recommended Tools

30	31	32	33
H5002	H5004	E4500	ShrinkPad 110

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



Please note! Not all products listed on this page may have this approval. Please check our website for latest approvals.



Heat Shrinkable Tubing 3:1 flexible and transparent

TF34

Protects wire and cable markers subject to abuse, while permitting inspectability of each item covered. Protects electronic components while permitting their identification and inspection.

Features and Benefits

- Transparent, flexible polyolefin tubing
- Protects identification marking perfect
- Few sizes cover a wide range of diameters allowing reduced inventory
- Halogen free



TF34 transparent tubing with 3:1 shrink ratio allowing for a wider range of application.



Cut lengths available on request. Please contact us!



Heat Shrinkable Tubing 3:1

MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	3:1
Operating Temperature	-55 °C to +135 °C
Min. Shrink Temperature	+110 °C
Longitudinal change after shrinkage	-5 % max.
Dielectric Strength	46 kV/mm
Flammability	not flame retarded



TYPE	Supplied Ø D min.	Recov. Ø d max.	Wall (WT)	Reel Length	Colour	Tools	Article-No.
TF34-1.5/0.5	1.5	0.5	0.50	30 m	Transparent (CL)	30-33	333-30153
TF34-3/1	3.0	1.0	0.50	30 m	Transparent (CL)	30-33	333-30303
TF34-6/2	6.0	2.0	0.70	30 m	Transparent (CL)	30-33	333-30603
TF34-9/3	9.0	3.0	0.80	30 m	Transparent (CL)	30-33	333-30903
TF34-12/4	12.0	4.0	0.85	30 m	Transparent (CL)	30-33	333-31203
TF34-18/6	18.0	6.0	1.00	30 m	Transparent (CL)	30-32	333-31803
TF34-24/8	24.0	8.0	1.20	30 m	Transparent (CL)	30-32	333-32403

All dimensions in mm. Subject to technical changes.
Minimum Order Quantity (MOQ) may differ from package content.

Recommended Tools

30	31	32	33
H5002	H5004	E4500	ShrinkPad 110

For detailed information on Application Tooling please refer to our Main Catalogue or the Internet.



One Step to the Web!



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1. General

- 1.1 The following General Terms of Sale and Supply hereinafter referred to as "GTSS") apply to all current and future supplies and other services including any consultancy services and information of HellermannTyton GmbH (hereinafter referred to as "the Seller"). This will also apply even if the Seller does not refer the Customer to them again in subsequent transactions. The Customer's terms and conditions shall not form part of a contract even if the Seller does not expressly raise objections. Instead, these GTSS shall apply exclusively.
- 1.2 These General Terms of Sales shall apply only to companies, legal persons under private law or special funds under public law within the meaning of Section 310 paragraph 1 German Civil Code (BGB).
- 1.3 Quotations by the Seller are made without obligation. A duty to supply will not exist until the Seller issues a written confirmation of order.
- 1.4 All agreements that are made between the Seller and the Customer shall be put in writing in the contract.
- 1.5 In case of doubt, Incoterms 2010 shall prevail for the interpretation of trade terms.
- 1.6 The Customer may only assign to third parties claims against the Seller arising from this contract with the prior express consent of the Seller.
- 1.7 Where individual provisions of these GTSS are or become ineffective, this shall not affect the validity of the rest of the provisions. The invalid provision shall be replaced by such existing provision as is common practice in the trade for this event and, where there is no permissible provision that is common practice in the trade, the corresponding statutory provision.

2. Prices and payment conditions

- 2.1 Unless otherwise agreed in writing, prices quoted are ex works or ex Seller's warehouse exclusive of ancillary costs such as freight, customs clearance, packaging and insurance. Turnover Tax at the current statutory rate will apply. For minimum orders under 150 Euros (net less Turnover Tax) the Seller will charge a minimum order surcharge of 25 Euros (net) per delivery.
- 2.2 All invoices – subject to any divergent written agreement in individual cases – are payable within thirty days of date of invoice.
- 2.3 Payments must be made free of charge, in the agreed currency and with provision of the account number, exclusively to the Seller's accounts shown in the invoice. They must be made on the date due free of charge and without any deduction. Completion for payments of all types is the date on which the Seller has unrestricted access to the payment.
- 2.4 The Seller is not obliged to accept bills of exchange or cheques. If permitted they will only be accepted subject to possible discounting against payment of all charges. The Seller is not obliged to submit bills of exchange or cheques on time or to lodge protests.
- 2.5 In the event of payment default by the Customer, default interest of 9 (nine) percentage points p.a. over the current basic interest rate according to § 247 BGB [German Civil Code] shall be chargeable. The claiming of further loss caused by default shall remain reserved.
- 2.6 Rights of set-off or retention shall be available to the Customer only if its counterclaims are legally established, unchallenged or recognised by the Seller. This restriction shall not apply to the right of retention pursuant to § 320 BGB.
- 2.7 In the event of a petition to commence insolvency proceedings against the Customer's assets, if the Customer has initiated out-of-court proceedings to settle the debt or has stopped payments, or if the Seller is aware of other circumstances which substantially reduce the creditworthiness of the Customer and appear to threaten fulfilment by the Customer of the counter-performance, the Seller is entitled to seek security by advance payment or bank guarantee (at the Customer's choice) for outstanding supplies by fixing a period of at least one week and to delay supply until the security is made. The Seller is further entitled after the fruitless expiry of a reasonable period of grace to withdraw from this contract or to demand compensation for non-fulfilment of contract. In this case the Seller may also withdraw the authority to resell together with the authorisation to collect under 5.2 and 5.6 and the right to handle and process, combine and mix goods already supplied under 5.2 and 5.3 and also to demand the return of the goods supplied.

3. Supply and acceptance

- 3.1 The Seller's duty to supply is conditional on it receiving delivery that is complete, correct and on time in as far as the Seller obtains the goods as complete or as components of the goods from a subcontractor. This shall not apply if the Seller is responsible for non-delivery or delay. Failure to supply for which the Seller is not responsible shall entitle the Seller to withdraw from the Contract.
- 3.2 The Customer shall bear the risk and cost of shipment of the goods ex works/ ex warehouse (EXW) as well as the cost of any transport insurance. This shall also apply if shipment is by a carrier chosen by the Seller.

- 3.3 The risk passes to the Customer directly on leaving the Seller's premises – even in the case of carriage-paid deliveries.

- 3.4 Should the goods be ready to be shipped, and dispatch or assignment of space and/or acceptance is delayed on grounds beyond the Seller's control, the risk shall pass to the Customer upon receipt by the Customer of notification of readiness to ship.

- 3.5 The customer may not return excesses or shortfalls in supply of a reasonable size and must pay for such deliveries immediately upon receipt. Objection to an excess or shortfall in supply shall not entitle the Customer to refuse further shipments under the same or a different contract. The Seller reserves the right to oversupply or undersupply by 10% of the quantity ordered in the case of special orders. The actual quantity supplied will be invoiced in each case.

- 3.6 The Customer will also be in default of acceptance when the goods are ready for shipment if, in the case of delivery EXW or an agreed obligation to collect by the Seller, the delivery is merely offered in writing by the Seller or the Customer has declared that it will not accept the delivery.

- 3.7 The Customer must promptly accept goods notified as ready for shipment under the terms of the contract. Otherwise the Seller is entitled either to ship the goods at the risk and cost of the Customer or place the goods in store and to invoice after a grace period of one week has elapsed, as the Seller chooses. The same will apply if the goods have not been retrieved in full or in part within the period agreed for retrieval.

- 3.8 If the Customer falls more than one month behind in fulfilling the obligations resulting from the above arrangements, the Seller can, notwithstanding rights that extend further, demand from the Customer a contractual penalty of 5 (five) percent of the invoice value in place of fulfilment of contract, and sell the goods stored elsewhere. The contractual penalty must be calculated against the compensation the Customer would have to pay if the situation arose. The Customer must repay any quantity discount granted on earlier deliveries.

- 3.9 The Customer has to provide certificates of delivery. To this end, the Customer has to prove that goods have been delivered by sending the relevant original document to the Seller within four weeks of collection/shipment of the goods. If the document is not received by the Seller within this period, the Seller shall be entitled to invoice the Customer for the turnover tax applicable to the net value of goods at the moment in time.

4. Delivery periods and deadlines

- 4.1 Observance of delivery periods and dates is subject to the timely fulfilment of contractual obligations on the part of the Customer. Delivery periods start with the date of the Seller's confirmation of order but not before clarification of all details for execution of the order and receipt of all materials required for execution of the order and of other details to be supplied by the Customer and the receipt of any payment agreed. The delivery period will also be considered to have been met if the goods leave the works or warehouse at the time agreed or notification of readiness to ship has been sent to the Customer but the goods have not been shipped on time for reasons for which the Seller is not responsible. The above arrangements shall apply to the delivery dates correspondingly.

- 4.2 Unforeseeable events beyond the control of the Seller such as war, risk of war, unrest, the use of violence by third parties against persons or property, intervention involving sovereignty including currency and commercial policy measures, employment disputes at the Seller's company or its suppliers or shipping companies, interruptions to the transport links provided, fire, shortages of raw materials, shortage of energy and other non-fault operating problems at the Seller's company or its suppliers will extend fixed delivery periods and dates by the duration of the obstruction. This shall also apply to the extent that the Seller is already in default of delivery or to the extent that the foregoing obstructions to delivery were already present before conclusion of the contract but the Seller was not aware of them. The Seller shall advise the Customer immediately of obstructions of the type mentioned above.

- 4.3 If delivery delays caused by the obstructions last longer than two months, both parties shall be entitled to withdraw from the contract. The Customer may only withdraw if the Seller, at the former's request, fails to state within a week whether it wishes to withdraw or make delivery within a reasonable period. The same right to withdraw shall arise independently of the above period, if completion of the contract has become unreasonable for one of the parties in view of the delay that has occurred.

5. Reservation of ownership

- 5.1 All goods delivered shall remain the property of the Seller (reserved goods) until complete and final fulfilment of all claims arising from the business connection for whatever legal reason. The same shall also apply in respect of any future or conditional claims arising from contracts entered into concurrently or later within the context of the business connection. For current invoices, the reserved property shall serve as collateral for the receivables of the Seller from a current account relationship.

- 5.2 Treatment and processing of reserved goods shall be performed for the Seller as manufacturer within the meaning of Section 950 BGB, without placing any obligation on the Seller. In the event of treatment/processing, linking or mixing of the reserved goods by the Customer with other goods not belonging to the Seller, the Seller shall have joint ownership of the new item in the ratio of the invoice value of the reserved goods to the invoice value of the other goods used. If ownership by the Seller of the reserved goods expires by linking, mixing or treatment/processing of the reserved goods the Customer will transfer the title it holds in the new part or item to the extent of the invoice value of the reserved goods and will hold it for the Seller free-of-charge with the due care of a prudent businessman. If the Seller acquires ownership or joint ownership of the new item, it shall transfer its ownership or joint ownership of the new item to the Customer under the condition of precedent that the full purchase price will be paid.
- 5.3 The Customer may only sell the reserved goods in the normal course of its business and only on its normal terms of business provided that concurrently the claims under the resale pass to the Seller as per 5.4 to 5.6. The Customer is not entitled to any other dispositions of the reserved goods, in particular to a pledge or transfer by way of security. The above authorisation will expire in the event of the Customer's default of payment. The authorisation may also be cancelled by the Seller in the cases listed in No. 2.6, by a breach of the foregoing obligations and in the case of non-payment of an invoice when due. In such cases, the Customer is also prohibited from treating and processing the reserved goods and linking or mixing them with other goods.
- 5.4 The demands and other claims including the Customer's collateral rights arising from the resale of the reserved goods are now, i.e. with the agreement of these GTSS, assigned to the Seller, which hereby accepts the assignment. They shall serve to secure the Seller's claims to the same extent as the reserved goods. If the reserved goods are sold by the Customer with other goods not supplied by the Seller, the claim arising from the resale shall be assigned in the ratio of the invoice value of the reserved goods to the invoice value of the other goods. When goods are sold to which the Seller has joint title under 5.2, the Seller shall be assigned a part corresponding to its share under the joint title.
- 5.5 The Customer is entitled to collect receivables from the resale. The Customer shall notify the Seller immediately of any detriment to its rights through third parties by delivering any documents required for intervention. Any intervention costs incurred shall be borne by the Customer.
- 5.6 The Seller may, if the Customer is more than two weeks in arrears with its payment obligations to the Seller, demand the return of the reserved goods and collect the demands and other claims assigned to the Seller. Furthermore, the Seller may use the reserved goods to satisfy its claims as soon as the Seller has withdrawn from the contract or the conditions for a claim for compensation on the grounds of non-fulfilment have arisen.
- 5.7 If the collectible value of the existing securities exceeds the secured claims by a total of 10 (ten) percent, the Seller, at the Customer's request, will undertake to release securities to extent selected by the Seller.
- 6. Nature of the goods and warranty**
- 6.1 To the extent that the Seller places test pieces or samples at the disposal of the Customer or receives them from the Customer, or quotes analyses, DIN provisions, other domestic or foreign quality standards or gives other details on the quality of the goods, these shall merely serve to specify in more detail the services to be provided by the Seller. No guarantee of quality is associated with these details.
- 6.2 In particular, the Seller does not undertake to assess whether the goods meet or are suitable for the specific purpose intended by the Customer. Contrary to the rule above, in case of new parts to be developed for the Customer in accordance with the Customer's requests, an individual agreement relating to the specific purpose is required.
- 6.3 The Customer shall inspect the goods delivered without delay with the care it considers reasonable and (if necessary by way of a test process) check the quality of the goods supplied and raise a claim for any identifiable defects without delay but no later than 7 (seven) days of receipt of the goods in writing (as far as possible and reasonable, enclosing samples) quoting the invoice, manufacturing and shipping numbers. Hidden defects must be similarly notified immediately when they are detected during the normal course of business. Otherwise the goods will be deemed approved without reservation. Any further obligations of the Customer under Section 377 HGB [German Commercial Code] shall not be affected.
- 6.4 No claims for defects will apply if the Customer fails to grant third party rights of recourse, processes defective goods without prior quality control or supplies goods claimed as defective to third parties without giving the Seller the opportunity to check the defects constituting the claim. The same shall apply to inappropriate or improper use of the goods, faulty assembly or commissioning by the Customer or third parties, improper modifications to the goods supplied, natural wear and tear and faulty or careless handling.
- 6.5 If claims for defects or complaints are justified, the Seller undertakes at its choice either to repair or remedy the defect or supply a replacement. Sorting measures by the Customer shall be agreed in writing with Seller prior to their commencement.
In the event of repair, the Customer shall pay any extra costs arising from the goods supplied being taken to a place other than the place of performance.
- 6.6 If the repair chosen by the Seller should repeatedly be unsuccessful; if it should be unreasonable to expect such of the Customer; if it should be refused by the Seller or be delayed beyond a reasonable period on grounds within the Seller's control, the Customer may – notwithstanding any claims for damages – withdraw from the contract or reduce the purchase price.
- 6.7 Warranty claims for defective goods shall expire within one year after passing of the risk. This shall not apply where the law prescribes longer time limits pursuant to § 438, sub-section 1, No. 2 BGB (Building Works and Items for Building Works), § 479 sub-section 1 BGB (Recourse Claim) and § 634 a sub-section 1 No. 2 BGB (Structural Defects) or where the Seller is liable due to wilful intent.
- 6.8 Furthermore, any claims for damages are limited according to No. (7).
- 7. Limitation of claims for damages and reimbursement of expenses**
- 7.1 The Customer's claims for damages and reimbursement of expenses against the Seller or the Seller's employees, representatives and vicarious agents, on whatever legal grounds, are precluded, unless the aforementioned are held liable for wilful intent, gross negligence, the acceptance of a guarantee given, the acceptance of a risk of sourcing, harm to life, limb and health or fundamental contractual duties. This shall also apply to any claims for damages arising from incorrect supplier declarations. This ruling does not shift the burden of proof to the detriment of the Customer.
- 7.2 The Customer's claims for damages and reimbursement of expenses against the Seller or the Seller's employees, representatives and vicarious agents due to the infringement of essential contractual obligations are limited to the foreseeable damage typical of the contract. Essential contractual obligations will be deemed to mean such obligations as those which, when violated, threaten the purpose of the contract, e.g. in cases of substantial delay, considerable infringement of cooperation, notification or confidentiality obligations or in the case of considerable violation of obligations that may determine the success or failure of the contract. This above provision does not in any way shift the burden of proof to the detriment of the Customer.
- 7.3 Apart from cases involving wilful intent, gross negligence or injury to life, limb and health, when determining the amount of damages to be paid by the Seller due consideration adequately in favour of the Seller shall be given as to the economic capabilities of the Seller as well as to the nature, scope and duration of the business relations between the contractual partners as well as to a particularly unfavourable situation of installation of the part supplied. Especially damages, cost and expenditures which shall be paid by the Seller must be in reasonable ratio to the value of the part supplied.
- 7.4 Contractual claims for damages and reimbursement of expenses against the Seller or its employees, representatives and vicarious agents, on whatever legal grounds, shall expire after one year at the latest. The special regulation for warranty claims for defective goods in No. (6.7) is not affected.
- 7.5 Where the Seller is mandatorily liable under the Product Liability Act of 15 December 1989 for damage to property or personal injury caused by a product's defects, the provisions of the Product Liability Act shall prevail. The foregoing rules shall still apply to an internal settlement under § 5 sentence 2 of the Product Liability Act.
- 8. Intellectual property rights**
- The Seller reserves the copyright to drawings and other design materials. Such materials must not be made accessible to third parties. Where the Seller manufactures goods to the Customer's drawings, samples or other details and infringes third-party intellectual property rights thereby, the Customer shall indemnify the Seller against all claims associated with such infringements.
- 9. Place of performance, jurisdiction and applicable law**
- 9.1 Tornesch shall be the place of performance for delivery and payment.
- 9.2 Itzehoe shall be the forum for any legal disputes arising from or about the existence and validity of this contract including those arising from cheques or bills of exchange – insofar as the Customer is a trader or a special fund under public law. However, the Seller may instigate legal proceedings against the Seller at any other jurisdiction that is given under the Code of Civil Procedure.
- 9.3 The contractual relationship shall be governed by the law of the Federal Republic of Germany. The provisions of the UN Treaty on International Trade (CISG) are excluded.

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