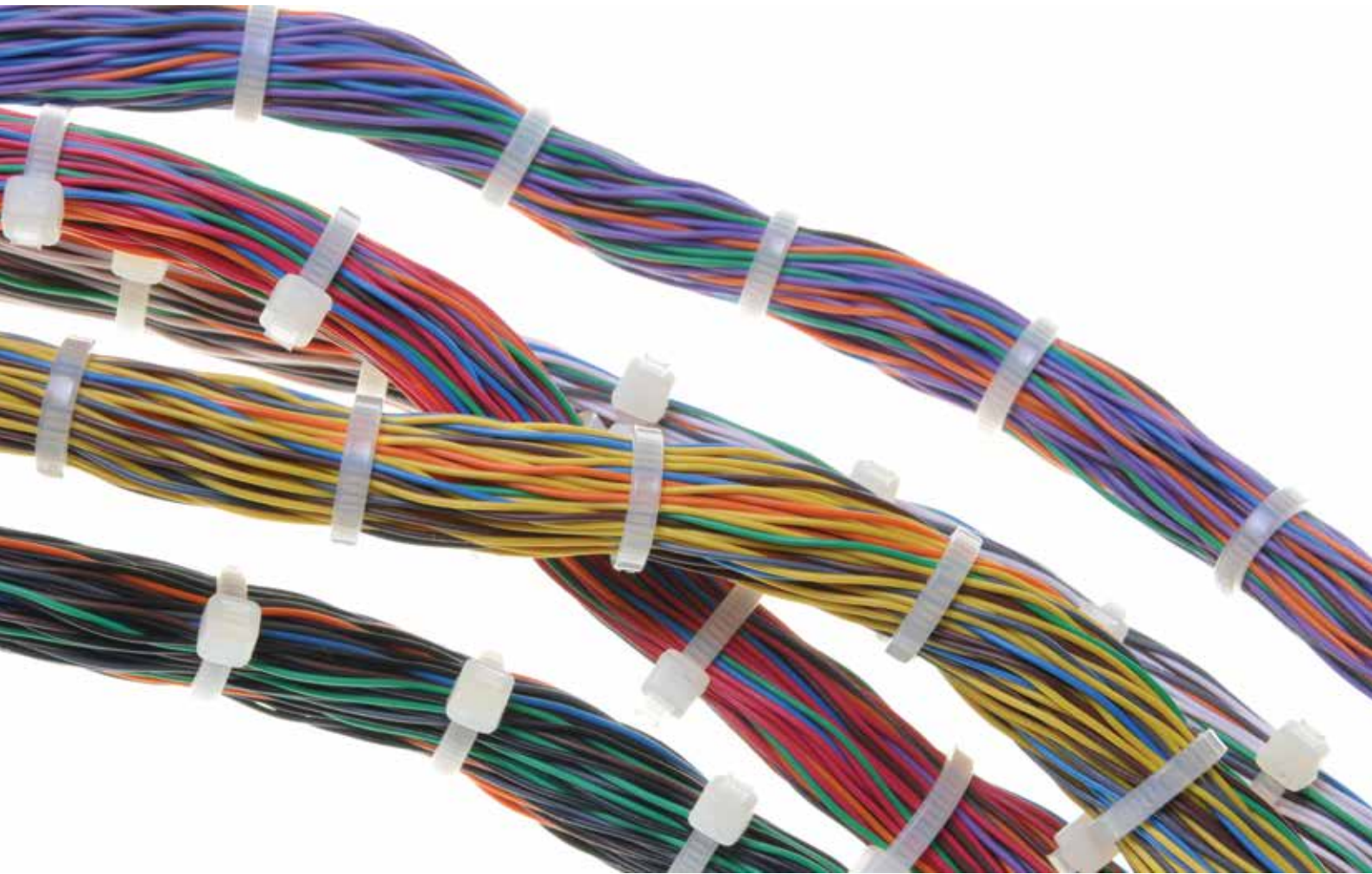




WKK: specialist in fixation materials

WKK is a leading importer and distributor that is specialized in fixation materials which offer a high quality solution for fixing, connecting, guiding and protecting cables for several industries. We serve customers throughout Europe from our office in The Netherlands, Germany, Italy and Poland.

Extensive and deep range

WKK offers you a wide and deep range of fixation materials which comprises many different types of cable ties, heat shrink tubing, automotive / solar clips, cable glands, terminals, cable end-sleeves, grommets and braided sleeving. We also offer you the opportunity to have products custom made to meet your specific requirements.



Solutions for fixing, connecting, guiding and protecting cables



About WKK

WKK is a leading importer and distributor that is specialized in fixation materials. Whether you are looking for cable ties, heat shrink tubing, automotive / solar clips, cable glands, terminals, cable end-sleeves, grommets or braided sleeving, WKK can provide you with this. We serve customers throughout Europe from our office in The Netherlands, Germany, Italy and Poland.

Europe's largest importer and distributor of cable ties

Since the founding in 1984, WKK works with a successful purchasing strategy for cable ties. Through ordering large quantities of high quality products from selected, long-standing suppliers on a weekly basis, WKK has grown to become Europe's largest importer and distributor of cable ties. This means that we can supply virtually every different type such as standard Polyamide 6.6 (PA 66), heat resistant, Polypropylene, Tefzel®, stainless steel and many other types of cable ties against competitive prices.

European importer and distributor of Hongshang heat shrink tubing

Since 2010, WKK has been an authorized importer and distributor of heat shrink tubing and accessories from the Asian quality brand Hongshang.

This gives WKK the opportunity to offer European customers an extensive range of heat shrinkable products such as thin-wall / dual-wall / special / medium-wall and heavy-wall heat shrink tubing, and busbar insulation tubing. In short, WKK's Hongshang Polyolefin heat shrink tubing offers you a solution for many different applications.

Development and production of fixation clips

Through our subsidiary WKK Automotive, WKK has access to its own production facility for the development and production of plastic clips for the automotive industry and other markets such as the solar market. The clips are used for the fixation and guidance of cables in vehicles and on profiles.

WKK offers you an extensive range of fixation clips such as edge clips (also for corrugated tubing), clips with fir tree & with arrowhead and solar clips which are suitable for different profile thicknesses and hole diameters. We also offer you the opportunity to have clips custom made to meet your specific requirements.

Milestones

To give you an impression of the founders of WKK and the developments that our company has been through in recent years, we have outlined a number of milestones below that show the history of WKK:

- 1984:** founding of WKK Nederland by Mr Edward Willems and Mr Jozef Kouwenberg
- 1992:** founding of subsidiary WKK GmbH
- 2002:** founding of subsidiary WKK Polska Sp. z o. o.
- 2008:** founding of subsidiary WKK Italy s.r.l.
- 2009:** founding of subsidiary WKK Automotive. This subsidiary focuses on the development and production of plastic clips for the automotive and solar industry
- 2010:** appointed as authorised European importer and distributor of Hongshang heat shrink tubing and accessories
- 2011:** founding of subsidiary WKK Shanghai. This subsidiary focuses on the assembly of special fixation clips for the automotive and solar industry
- 2013:** founding of subsidiary WKK Energy GmbH. This subsidiary focuses on cable accessories and heat shrink tubing

Over the years, the companies of WKK have gradually built up a good and reliable reputation throughout Europe. This reputation is due to the fact that WKK supplies fixation materials to virtually every European country.



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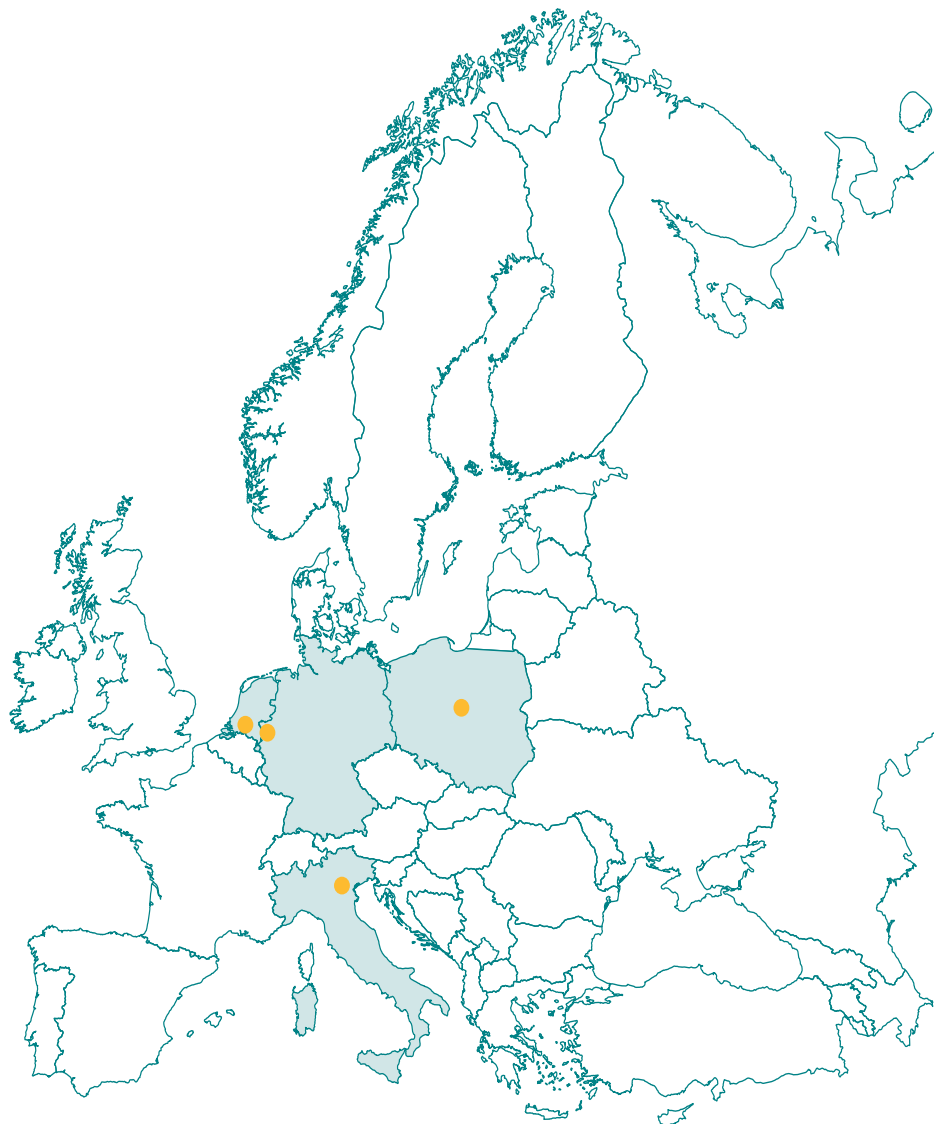
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We serve customers throughout Europe from our office in
The Netherlands, Germany, Italy and Poland



Why WKK

Are you looking for a reliable partner to supply your fixation materials, but do you find it difficult to make the correct choice from the various suppliers? WKK would like to explain what we stand for, what we can offer you as a customer and why you should choose WKK as your partner.

Extensive range

WKK offers an extensive and deep range of fixation materials such as cable ties, heat shrink tubing, automotive / solar clips, cable glands, terminals, cable end-sleeves, grommets and braided sleeving. Thus, you only have one point of contact.

Attractive prices

WKK purchases large quantities of fixation materials from leading suppliers on a weekly basis. We have long term relationships with these suppliers and as a result, we receive favourable purchasing conditions and can offer our customers competitive prices.

Quality

Reliability and quality are of utmost importance to WKK. Thus, we only supply high quality products, spend a lot of time and attention on quality control and improving our products, services and employees, and we are ISO 9001 certified.

Expertise

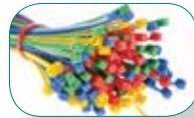
We would like to share the expertise that WKK has built up over the last 30 years with you. In particular, our knowledge in the fields of installation, maintenance and repair is of high-added value. Our sales team would be happy to advise you on the fixation materials that you require.

Fast delivery

When you place an order at WKK, you can rely on fast delivery. We hold all common types of cable ties, heat shrink tubing and clips in stock. In addition to fast delivery, WKK is also flexible to your requirements regarding the sending of your order.

Excellent service

WKK guarantees excellent service and personal attention. We will gladly assist you during the order and delivery process and offer you several possibilities for this. Therefore, you can have custom made products with private label or call orders.



1.0 Cable ties and accessories

1.1	Cable ties.....	10
	Standard cable ties.....	12
	Heat resistant cable ties.....	13
	Polypropylene cable ties.....	14
	Tefzel® cable ties.....	14
	Stainless steel cable ties.....	15
	Mountable head cable ties.....	15
	Releasable cable ties.....	16
	Push mount cable ties.....	16
	Marker cable ties.....	17
	Chassis cable ties.....	17
	Thomas & Betts Ty-Raps®.....	18
	Airconditioning cable ties.....	19
1.2	Accessories for cable ties.....	20
	Self adhesive cable tie mounts.....	20
	Wallplug for cable ties up to 9 mm wide.....	20
	Saddle tie mounts.....	21
	Tools for cable ties.....	21
1.3	Material specification overview.....	22
1.4	Storage of (PA 66) cable ties.....	23



2.0 Heat shrink tubing

2.1	Thin-wall heat shrink tubing.....	26
	H-2(Z) flexible / flame retardant / 2:1 /	26
	H-2(3X) flexible / flame retardant / 3:1 /	27
	H-2F flexible / flame retardant / 2:1 / mil spec 135 degrees.....	28
	H-2F(3X) flexible / flame retardant / 3:1 / mil spec 135 degrees.....	29
	H-2F(4X) flexible / flame retardant / 4:1 / mil spec 135 degrees.....	30
	H-2(HF) flexible / flame retardant / 2:1 / halogen free.....	31
	H-2F(Y/G) yellow/green striped / flexible / flame retardant / 2:1/3:1 / mil spec 135 degrees.....	32
	H-2(LS) flexible / flame retardant / 2:1 / low shrink temperature.....	34
	H-2(CB) flexible / flame retardant / 2:1 / ultra thin-wall.....	35
	H-1 non flame retardant / 2:1 /	36
	HBG flexible / 2:1 / for flexible gas pipes.....	37
	Mini box type 1 flexible / flame retardant / 2:1 / H-2(Z).....	38
	Mini box type 2 flexible / flame retardant / 3:1 / H-2(3X).....	39
	Assortment 1 127 pcs H-2(Z) heat shrink tubing (mixed colors).....	40
	Assortment 2 127 pcs H-2(Z) heat shrink tubing (black).....	40
	Assortment 3 469 pcs H-2(Z) heat shrink tubing (black).....	40
2.2	Dual-wall heat shrink tubing.....	41
	H-5(3X)-F and H-5(4X)-F flexible / flame retardant / 3:1/4:1 / adhesive lined.....	41
	HBK automotive / adhesive lined / 4:1.....	42
	Mini box type 3 flexible / flame retardant / 3:1 / adhesive lined / H-5(3X)-F.....	43
2.3	Special heat shrink tubing.....	44
	H-175K Kynar® / 175 degrees / 2:1.....	44
	H-200E and H-200E(TW) Viton® / 200 degrees / 2:1.....	45
	HTFE Teflon® / 260 degrees / 1,5:1.....	46
	H-2(XT) insulation sleeve.....	47
	HDR and HDR(TW) diesel-resistant / 2:1.....	48
	HFSP fiber optic splice protector.....	49

2.4	Medium-wall heat shrink tubing.....	50
	HRA2 and HR2 with and without hot melt adhesive.....	50
	HRTM with hot melt adhesive (co-extrusion).....	51
	HSTV with hot melt adhesive for CATV network.....	52
	HRS with mastic coating.....	53
2.5	Heavy-wall heat shrink tubing.....	54
	HRA3 and HR3 with and without hot melt adhesive.....	54
	HRTH with hot melt adhesive (co-extrusion).....	55
	HRA-6X with hot melt adhesive and extra high shrink ratio.....	56
	HRSL heat shrinkable cable repair sleeve with glue.....	57
2.6	Busbar insulation tubing.....	58
	HBM halogen free busbar insulation tubing.....	58
	HBTM and HBTM halogen free flexible busbar insulation tubing.....	59
2.7	Moulded parts.....	60
	HSEC and HCEC cable end caps with spiral adhesive coating.....	60
	HLB low voltage cable breakouts 2 - 5 cores.....	62
	HCB 3 - core conductive cable breakouts.....	64
	HCFT cable feed throughs.....	65
2.8	Selection table heat shrink tubing.....	66
2.9	Cross references heat shrink tubing.....	68



3.0 Cable glands and junction boxes

3.1	PA cable glands and accessories.....	72
	Polyamide Jacob cable glands, metric.....	72
	Polyamide Jacob cable glands, PG.....	72
	Polyamide Jacob locknuts, metric.....	73
	Polyamide Jacob locknuts, PG.....	73
	Polyamide Jacob sealing plugs, metric.....	74
	Polyamide Jacob sealing plugs, PG.....	74
3.2	Brass cable glands and accessories.....	75
	Brass Jacob cable glands, metric.....	75
	Brass Jacob cable glands, PG.....	75
	Brass Jacob locknuts, metric.....	76
	Brass Jacob locknuts, PG.....	76
	Brass Jacob sealing plugs, metric.....	77
	Brass Jacob sealing plugs, PG.....	77
3.3	Junction boxes.....	78



4.0 Terminals

PVC insulated ring terminals.....	82
PVC insulated spade terminals.....	83
PVC insulated female disconnectors.....	84
PVC fully insulated female disconnectors.....	85
PVC insulated piggy-back connectors.....	86
PVC insulated male disconnectors.....	86
PVC insulated butt connectors.....	87
Heat shrinkable butt connectors.....	87
Solder butt connectors.....	88
PVC fully insulated receptacle disconnectors.....	88
PVC insulated bullet disconnectors.....	89
PVC insulated pin terminals.....	89
Non insulated DIN 46234 terminals.....	90
Non insulated terminals.....	92
Quick splice connectors single tab.....	94
Fuseholders.....	94
Tools for terminals.....	94
Assortments terminals.....	95



5.0 Cable end-sleeves

Cable end-sleeves non-insulated.....	98
Cable end-sleeves insulated.....	100
Cable end-sleeves double "Twins".....	102
Assortments cable end-sleeves.....	103
Tool for cable end-sleeves.....	103



6.0 Fixation clips

6.1 Edge clips.....	106
6.2 Edge clips for corrugated tubing.....	108
6.3 Clips with fir tree & with arrowhead.....	110
6.4 Solar clips.....	112
6.5 Custom made clips.....	113



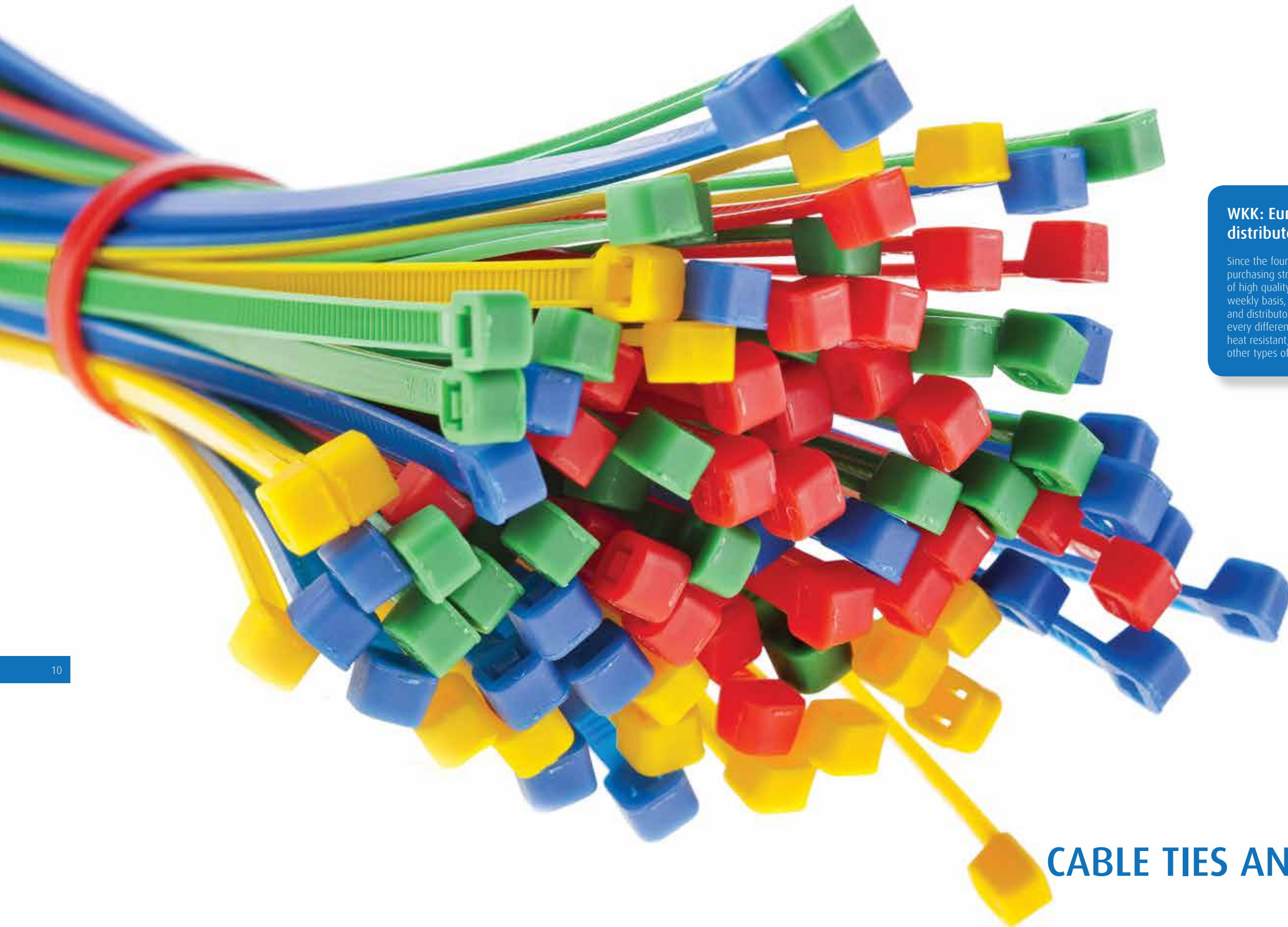
7.0 Other fixation materials

Sealing grommets.....	116
Twistlocks.....	117
Cable clamps.....	118
Clamp straps.....	118
Single floor clamps.....	119
Cable clips with nail.....	119
Cable ducts.....	120
Self-adhesive cover ducts.....	120
Click cable covers.....	121
Connector strips.....	121
Braided sleeving.....	122
Wrapping bands.....	122
Hook and loop tape.....	123
Corrugated tubing PA6.....	123
Duct tape.....	124
PVC tapes.....	124
Double sided foam tapes.....	125
Self amalgating tapes.....	125



8.0 Appendix

8.1 General terms and conditions.....	128
8.2 Notes.....	130



WKK: Europe's largest importer and distributor of cable ties

Since the founding in 1984, WKK works with a successful purchasing strategy for cable ties. Through ordering large quantities of high quality products from selected, long-standing suppliers on a weekly basis, WKK has grown to become Europe's largest importer and distributor of cable ties. This means that we can supply virtually every different type such as standard Polyamide 6.6 (PA 66), heat resistant, Polypropylene, Tefzel®, stainless steel and many other types of cable ties against competitive prices.

CABLE TIES AND ACCESSORIES

Standard cable ties

Material

Color

Temperature range

Flammability

Certification

: Polyamide 6.6

: Transparent / black (UV resistant)

: Other colors available on request

: -40 °C up to +85 °C

: UL 94 V2 (V0 available)

: UL E75050, Lloyd's, GL 59425-08HH, Mil-23190D



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)	Pcs per carton	
						100 pcs / pack	1.000 pcs / pack
8024	80	2,4	15	8,0	100 / 1.000	70.000	90.000
10025	100	2,5	22	8,1	100 / 1.000	55.000	70.000
12025	120	2,5	30	8,1	100 / 1.000	45.000	65.000
14025	140	2,5	33	8,1	100 / 1.000	45.000	55.000
16025	160	2,5	40	8,1	100 / 1.000	40.000	45.000
20025	200	2,5	53	8,1	100 / 1.000	30.000	32.000
14036	140	3,6	33	18,2	100 / 1.000	30.000	30.000
15036	150	3,6	35	18,2	100 / 1.000	30.000	30.000
20036	200	3,6	53	18,2	100 / 1.000	20.000	22.000
29236	300	3,6	76	18,2	100 / 1.000	17.000	17.000
37036	370	3,6	102	18,2	100 / 1.000	12.000	12.000
12048	120	4,8	24	22,2	100 / 1.000	20.000	25.000
16048	160	4,8	38	22,2	100 / 1.000	16.000	18.000
18848	188	4,8	46	22,2	100 / 1.000	16.000	16.000
20048	200	4,8	50	22,2	100 / 1.000	16.000	16.000
25048	250	4,8	60	22,2	100 / 1.000	12.000	12.000
28048	280	4,8	70	22,2	100 / 1.000	11.000	11.000
30048	300	4,8	76	22,2	100 / 1.000	11.000	11.000
36848	370	4,8	102	22,2	100	9.000	-
39048	390	4,8	105	22,2	100	8.500	-
43048	430	4,8	110	22,2	100	7.500	-
53048	530	4,8	140	22,2	100	5.600	-
15076	150	7,6	33	54,4	100	8.000	-
20076	200	7,6	50	54,4	100	7.000	-
25076	250	7,6	65	54,4	100	6.000	-
29276	300	7,6	76	54,4	100	5.000	-
36876	368	7,6	102	54,4	100	4.000	-
45076	450	7,6	132	54,4	100	2.500	-
54076	540	7,6	140	54,4	100	2.000	-
61576	615	7,6	176	54,4	100	2.000	-
75076	750	7,6	218	54,4	100	2.000	-

For other types, please see the following page

Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)	Pcs per carton	
						100 pcs / pack	1.000 pcs / pack
43090	430	9,0	110	79,4	100	2.500	-
53090	530	9,0	140	79,4	100	2.000	-
63090	630	9,0	187	79,4	100	2.000	-
71090	710	9,0	190	79,4	100	2.000	-
77590	775	9,0	228	79,4	100	2.000	-
83090	830	9,0	239	79,4	100	1.500	-
92090	920	9,0	263	79,4	100	1.200	-
102090	1020	9,0	295	79,4	100	1.000	-
122090	1220	9,0	365	79,4	100	1.000	-
153090	1530	9,0	460	79,4	100	500	-
230130	230	12,6	50	114,0	100	3.000	-
480130	480	12,6	120	114,0	100	1.500	-
580130	580	12,6	152	114,0	100	1.200	-
730130	730	12,6	204	114,0	100	1.000	-
880130	880	12,6	248	114,0	100	600	-
1030130	1030	12,6	295	114,0	100	600	-

Heat resistant cable ties

Material

Color

Sizes

Temperature range

Flammability

Certification

: Polyamide 6.6 heat resistant

: Transparent (greenish) / black (UV resistant)

: Other sizes available on request

: -40 °C up to +120 °C

: UL 94 V2

: UL E75050, Lloyd's, Mil-23190D



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
10025	100	2,5	22	8,1	100 / 1000
12025	120	2,5	30	8,1	100 / 1000
14025	140	2,5	33	8,1	100 / 1000
16025	160	2,5	40	8,1	100 / 1000
20025	200	2,5	53	8,1	100 / 1000
14036	140	3,6	33	18,2	100 / 1000
20036	200	3,6	53	18,2	100 / 1000
29236	300	3,6	76	18,2	100 / 1000
37036	370	3,6	102	18,2	100 / 1000
20048	200	4,8	50	22,2	100 / 1000
30048	300	4,8	76	22,2	100 / 1000
36848	370	4,8	102	22,2	100
43048	430	4,8	110	22,2	100
20076	200	7,6	50	54,4	100
29276	300	7,6	76	54,4	100
36876	368	7,6	102	54,4	100

Polypropylene cable ties

Material : Polypropylene
 Color : Green
 Temperature range : -35 °C up to +85 °C
 Properties : Acid resistant, floats, UV resistant
 Flammability : UL 94 HB



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
10025	100	2,5	22	8,1	100
14036	140	3,6	33	18,2	100
18848	188	4,8	46	22,2	100
20048	200	4,8	50	22,2	100
30048	300	4,8	76	22,2	100
36848	370	4,8	102	22,2	100
36876	368	7,6	102	54,4	100

Tefzel® cable ties

Material : Tefzel® E/TFE (Ethylene-tetrafluorethylene)
 Color : Aquamarine blue
 Temperature range : -46 °C up to +150 °C
 Flammability : UL 94 V0
 Certification : RoHS
 Resistency : UV, chemical fluids, : radiation: 200 Mrad EEE383/323



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
10025	100	2,5	22	8,1	100
15036	150	3,6	35	18,2	100
20036	200	3,6	53	18,2	100
20048	200	4,8	50	22,2	100
30048	300	4,8	76	22,2	100
36848	370	4,8	102	22,2	100
29276	300	7,6	76	54,4	100
36876	368	7,6	102	54,4	100
43090	430	9,0	110	79,4	100

There is a minimum order quantity for Tefzel® cable ties

Stainless steel cable ties

Material : Stainless steel AISI 304 or AISI 316
 Color : Steel
 Temperature range : -80 °C up to +500 °C
 Certification : DIN 14300 – 14301, DNV, Lloyd's, UL



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
MLG-130ST	129	4,45	33	46	100
MLG-200ST	200	4,45	50	46	100
MLG-300ST	300	4,45	76	46	100
MLG-370ST	370	4,45	102	46	100
MLG-520ST	520	4,45	156	46	100
MLG-680ST	680	4,45	207	46	100
MLG-840ST	840	4,45	257	46	100
MLG-200HD	197	7,96	50	114	100
MLG-300HD	300	7,96	76	114	100
MLG-370HD	368	7,96	102	114	100
MLG-450HD	450	7,96	135	114	100
MLG-500HD	500	7,96	150	114	100
MLG-680HD	680	7,96	207	114	100
MLG-840HD	840	7,96	257	114	100
MLG-1020HD	1020	7,96	312	114	100

Mountable head cable ties

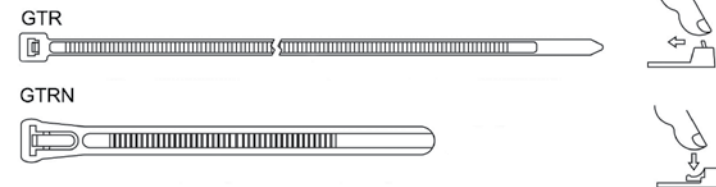
Material : Polyamide 6.6
 Color : Transparent / black (UV resistant)
 Temperature range : -40 °C up to +85 °C
 Flammability : UL 94 V2
 Certification : UL E75050, Lloyd's, Mil-23190D



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Hole (mm)	Packing (pcs)
11025H	110	2,5	22	8,1	Ø 3,2	100
15036H	150	3,6	32	18,2	Ø 4,2	100
20048H	200	4,8	50	22,2	Ø 5,5	100
20076H	200	7,6	50	54,4	Ø 5,7	100
30076H	313	7,6	76	54,4	Ø 5,7	100
37076H	382	7,6	98	54,4	Ø 6,3	100

Releasable cable ties

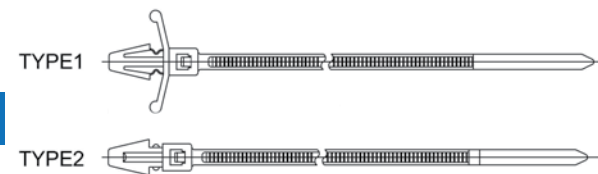
Material : Polyamide 6.6
 Color : Transparent / black (UV resistant)
 : Other colors available on request
 Temperature range : -40 °C up to +85 °C
 Flammability : UL 94 V2
 Certification : UL E75050, Lloyd's, Mil-23190D



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
GTR-140I	140	3,6	33	18,2	100
GTR-200ST	200	4,8	50	22,2	100
GTR-300ST	300	4,8	86	22,2	100
GTR-370ST	370	4,8	102	22,2	100
GTRN-120HD	120	7,6	30	22,2	100
GTRN-150HD	150	7,6	35	22,2	100
GTRN-200HD	200	7,6	50	22,2	100
GTRN-250HD	250	7,6	66	22,2	100
GTRN-300HD	300	7,6	80	22,2	100

Push mount cable ties

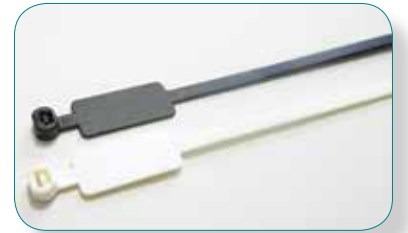
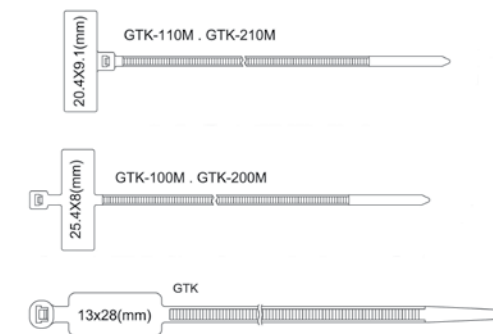
Material : Polyamide 6.6
 Color : Transparent / black (UV resistant)
 Temperature range : -40 °C up to +85 °C
 Flammability : UL 94 V2
 Certification : UL E75050, Lloyd's, Mil-23190ED



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)	Hole diameter (mm)	Panel thickness (mm)	Type
11025 PMT	110	2,5	22	8,1	100	Ø 4,8	~ 2,4	1
13032 PMT	130	3,2	28	13,6	100	Ø 4,0	~ 2,0	1
13048 PMT	132	4,8	25	22,2	100	Ø 6,4	~ 3,2	1
17048 PMT	170	4,8	38	22,2	100	Ø 6,4	~ 3,2	1
19048 PMT	200	4,8	45	22,2	100	Ø 6,4	~ 3,2	1
15036 PMT	150	3,6	32	13,6	100	Ø 5,2	~ 2,8	2
20048 PMT	200	4,8	46	22,2	100	Ø 6,3	~ 3,6	2

Marker cable ties

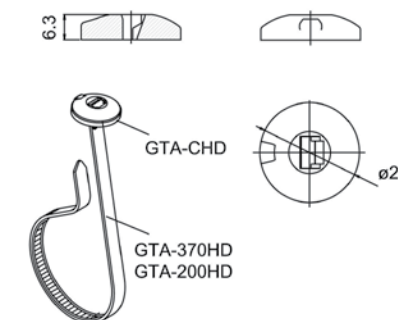
Material : Polyamide 6.6
 Color : Transparent / black (UV resistant)
 Temperature range : -40 °C up to +85 °C
 Flammability : UL 94 V2
 Certification : UL E75050, Lloyd's, Mil-23190D



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Type	Packing (pcs)
11025 MT	110	2,5	18	8,1	GTK-110M	100
21025 MT	210	2,5	50	8,1	GTK-210M	100
10025 MT	100	2,5	18	8,1	GTK-100M	100
20025 MT	200	2,5	50	8,1	GTK-200M	100
19048 MT	190	4,8	46	22,2	GTK	100
22048 MT	220	4,8	54	22,2	GTK	100
27048 MT	270	4,8	65	22,2	GTK	100
30048 MT	300	4,8	76	22,2	GTK	100
37048 MT	370	4,8	102	22,2	GTK	100

Chassis cable ties

Material : Polyamide 6.6
 Color : Transparent / black (UV resistant)
 Temperature range : -40 °C up to +85 °C
 Flammability : UL 94 V2
 Certification : UL E75050, Lloyd's, Mil-23190D



Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
GTA-200HD	200	7,6	50	65	100
GTA-370HD	370	7,6	101	65	100

Thomas & Betts Ty-Raps®

Tie

TY

TY

C

Material

Dimension code

XXXXM

5

25 M

X

R

Color

Packaging size

5

Material properties

UV-resistant black

UV-resistant black and heat stabilised (+105 °C)

Flame-retardant according to UL 94 V-0

Detectable Polyamide 6.6

Detectable buoyant Polypropylene

Standard, Polyamide 6.6

Heat stabilised Polyamide 6.6 (+105 °C)

High temperature resistant Polyamide 4.6 (+150 °C)

Polyamide 12

Polypropylene

ETFE Fluoropolymer

ECTFE Fluoropolymer

Standard, 1000/500 pieces

Workbench box, 1000 pieces

Small bags 100/50 pieces

[Blank] = natural

0 = black

1 = brown

2 = red

3 = orange

4 = yellow

5 = green

6 = blue

7 = purple

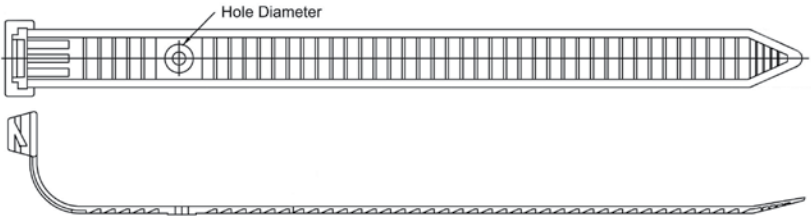
8 = grey

9 = white



Airconditioning cable ties

Material : Polyamide 6.6
 Color : Transparent / black (UV resistant)
 Temperature range : -40 °C up to +85 °C
 Flammability : UL 94 V2
 Certification : UL E75050, Lloyd's, Mil-23190D

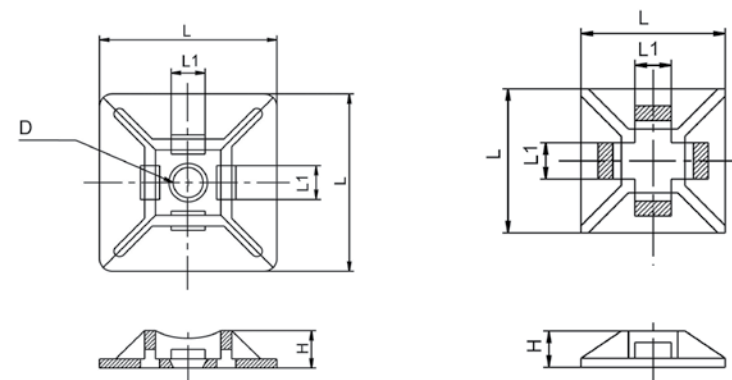


Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Thickness (mm)	Hole diameter (mm)	Packing (pcs)
BT-250	235	20	73	20	2,4	Ø 4,5	10
BT-290	275	20	85	20	2,4	Ø 4,5	10

Typenr.	Length (mm)	Width (mm)	Max. bundle diameter (mm)	Tensile strength (kg)	Packing (pcs)
Ty-23 m	92	2,4	16	8,1	1000
Ty-23 mx	92	2,4	16	8,1	1000
Ty-232 m	203	2,4	50	8,1	1000
Ty-232 mx	203	2,4	50	8,1	1000
Ty-234 m	356	2,4	102	8,1	1000
Ty-234 mx	356	2,4	102	8,1	1000
Ty-24 m	140	3,6	29	18,0	1000
Ty-24 mx	140	3,6	29	18,0	1000
Ty-242 m	204	3,6	50	18,0	1000
Ty-242 mx	204	3,6	50	18,0	1000
Ty-26 m	284	3,6	76	18,0	1000
Ty-26 mx	284	3,6	76	18,0	1000
Ty-244 m	368	3,6	103	18,0	1000
Ty-244 mx	368	3,6	103	18,0	1000
Ty-25 m	186	4,8	45	22,5	1000
Ty-25 mx	186	4,8	45	22,5	1000
Ty-253 m	295	4,8	78	22,5	1000
Ty-253 mx	295	4,8	78	22,5	1000
Ty-28 m	361	4,8	102	22,5	1000
Ty-28 mx	361	4,8	102	22,5	1000
Ty-272 m	223	6,9	50	54,4	500
Ty-272 mx	223	6,9	50	54,4	500
Ty-27 m	340	6,9	90	54,4	500
Ty-27 mx	340	6,9	90	54,4	500
Ty-29 m	771	6,9	229	54,4	500
Ty-29 mx	771	6,9	229	54,4	500

Self adhesive cable tie mounts

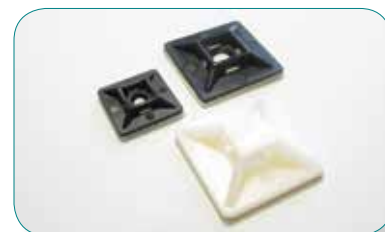
Material : Polyamide 6.6
Color : Transparent / black (UV resistant)
Temperature range : -40 °C up to +85 °C
Flammability : UL 94 V2



MB 1919 / MB 2828

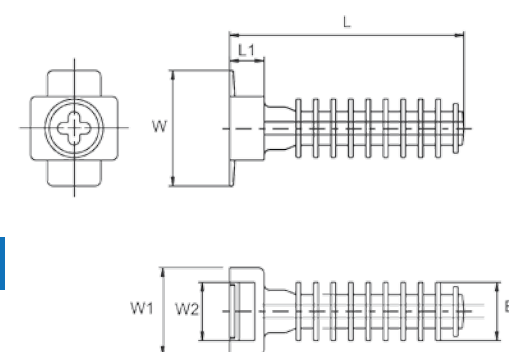
MB 1212

Typenr.	L (mm)	H (mm)	L1 (mm)	D (mm)	Packing (pcs)
MB 1212	12,7	3,2	3,2	-	100
MB 1919	19,0	4,4	4,0	Ø 3,5	100
MB 2828	27,7	5,7	5,3	Ø 5,7	100



Wallplug for cable ties up to 9 mm wide

Material : Polyamide 6.6
Color : Transparent / black (UV resistant)
Temperature range : -40 °C up to +85 °C
Flammability : UL 94 V2

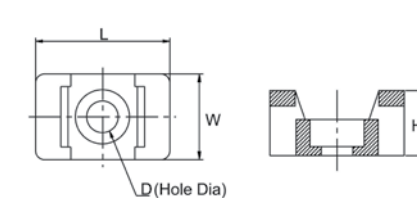


Typenr.	L (mm)	L1 (mm)	W (mm)	W1 (mm)	W2 (mm)	E (mm)	Packing (pcs)
GTN 9	40,5	5,9	20	15	10	Ø 9,5	100



Saddle tie mounts

Material : Polyamide 6.6
Color : Transparent / black (UV resistant)
Temperature range : -40 °C up to +85 °C
Flammability : UL 94 V2



Typenr.	L (mm)	W (mm)	H (mm)	D (mm)	Tie width (mm)	Packing (pcs)
TM-2S6	14,9	9,5	7,2	Ø 3,7	4,8	100
TM-2S8	14,9	9,5	7,2	Ø 4,5	4,8	100
TM-3S8	21,9	15,9	9,7	Ø 4,5	7,6	100
TM-3S10	21,9	15,9	9,7	Ø 5,0	7,6	100
TM-3S25	21,9	15,9	9,7	Ø 6,4	7,6	100



Tool 1 for cable ties

Type : T 1
Material : Metal
Color : Red
Use : For cable ties up to 4,8 mm



Tool 114 for cable ties

Type : T 114
Material : Metal
Color : Red
Use : For cable ties from 3,6 up to 9,5 mm



Tool 30 for steel cable ties

Type : T 30
Material : Metal
Color : Grey
Use : For steel cable ties up to 7,9 mm



Material specification overview

Material	Temperature range	Flammability	RoHS	Properties
Polyamide 6.6	-40 °C up to +85 °C	UL 94 V2	Yes	
Polyamide 6.6 heat resistant	-40 °C up to +120 °C	UL 94 V2	Yes	Higher maximum temperature
Polypropylene	-35 °C up to +85 °C	UL 94 HB	Yes	Acid resistant, floats on water
Tefzel® E/TFE	-46 °C up to +150 °C	UL 94 V0	Yes	Good chemical resistance, resistance to radioactivity
Stainless steel AISI 304/316	-80 °C up to +500 °C		Yes	

Storage of (PA 66) cable ties

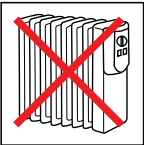
WKK supplies virtually all types of cable ties. Many of these types are made of Polyamide (PA 66): a synthetic material which is mainly used in injection moulding processes.

Polyamide is a hygroscopic material. This means that the material absorbs and loses moisture. For optimum handling of cable ties, it is important that the material is in a condition of equilibrium with a water content of approximately 2,5%.

The packaging in which WKK supplies cable ties, ensures that the water content in the material remains constant. Therefore, it is important to store cable ties in their original packaging to preserve the quality of the cable ties.



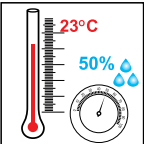
Always store cable ties in sealed plastic bags made of PE. Once opened, you should use the cable ties as quickly as possible.



Keep cable ties away from direct heat sources. Avoid contact with heat. For example: do not place a packing on a radiator.



Do not store cable ties in sunlight. For example: on the dashboard of your car / delivery van.



The ideal storage conditions are 23 °C, 50% relative humidity.

Official European Distributor of
Hongshang

WKK: European importer and distributor of Hongshang heat shrink tubing

Since 2010, WKK has been an authorized importer and distributor of heat shrink tubing and accessories from the Asian quality brand Hongshang. This gives WKK the opportunity to offer European customers an extensive range of heat shrinkable products such as thin-wall / dual-wall / special / medium-wall and heavy-wall heat shrink tubing, and busbar insulation tubing. In short, WKK's Hongshang Polyolefin heat shrink tubing offers you a solution for many different applications.

HEAT SHRINK TUBING

H-2(Z)

Thin-wall heat shrink tubing / flexible / flame retardant / 2:1

Features:

- Crosslinked Polyolefin
- Shrink ratio: 2:1
- Flame retardant
- General purpose
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS, Sony-SS-00259

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Colors: black, red, blue, yellow, green, white, purple, brown
- Other colors are available on request
- Also available in various lengths and in mini boxes (please see page 38)



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2(Z) 1,2/0,6	1,2	0,6	0,33	150
H-2(Z) 1,6/0,8	1,6	0,8	0,36	150
H-2(Z) 2,4/1,2	2,4	1,2	0,44	150
H-2(Z) 3,2/1,6	3,2	1,6	0,44	150
H-2(Z) 4,8/2,4	4,8	2,4	0,51	75
H-2(Z) 6,4/3,2	6,4	3,2	0,56	75
H-2(Z) 9,5/4,8	9,5	4,8	0,56	75
H-2(Z) 12,7/6,4	12,7	6,4	0,65	50
H-2(Z) 16,0/8,0	16,0	8,0	0,69	50
H-2(Z) 19,0/9,5	19,0	9,5	0,80	30
H-2(Z) 25,4/12,7	25,4	12,7	0,90	30
H-2(Z) 32,0/16,0	32,0	16,0	0,90	30
H-2(Z) 38,1/19,0	38,1	19,0	1,00	30
H-2(Z) 50,8/25,4	50,8	25,4	1,00	30
H-2(Z) 76,2/38,1	76,2	38,1	1,20	15
H-2(Z) 102,0/50,8	102,0	50,8	1,30	15
H-2(Z) 126,0/63,5	126,0	63,5	1,30	15
H-2(Z) 150,0/76,0	150,0	76,0	1,30	15

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2(3X)

Thin-wall heat shrink tubing / flexible / flame retardant / 3:1

Features:

- Crosslinked Polyolefin
- Shrink ratio: 3:1
- Flame retardant
- General purpose
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS, Sony-SS-00259

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black
- Other colors: red, blue, yellow, green, white, transparent (flame retardant class 2)
- Also available in mini boxes (please see page 39)



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2(3X) 1,5/0,5	1,5	0,5	0,45	150
H-2(3X) 3,0/1,0	3,0	1,0	0,55	150
H-2(3X) 4,5/1,5	4,8	1,5	0,60	75
H-2(3X) 6,0/2,0	6,4	2,0	0,65	75
H-2(3X) 9,0/3,0	9,5	3,0	0,75	75
H-2(3X) 12,0/4,0	12,7	4,0	0,80	50
H-2(3X) 18,0/6,0	19,1	6,0	0,90	30
H-2(3X) 24,0/8,0	25,4	8,0	1,00	30
H-2(3X) 39,0/13,0	39,0	13,0	1,25	30

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2F

Thin-wall heat shrink tubing / flexible / flame retardant / 2:1 / mil spec 135 degrees

Features:

- Crosslinked Polyolefin
- Shrink ratio: 2:1
- Flame retardant
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS, Sony-SS-00259
- Meets: SAE-AMS-DTL-23053/5 class 1 and 3

Application:

- Operating temperature: -55 °C to +135 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black
- Other colors: red, blue, yellow, green, white, transparent (flame retardant class 2, size available up to 76,2 mm)



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2F 1,2/0,6	1,2	0,6	0,40	150
H-2F 1,6/0,8	1,6	0,8	0,40	150
H-2F 2,4/1,2	2,4	1,2	0,48	150
H-2F 3,2/1,6	3,2	1,6	0,48	150
H-2F 4,8/2,4	4,8	2,4	0,48	75
H-2F 6,4/3,2	6,4	3,2	0,56	75
H-2F 9,5/4,8	9,5	4,8	0,62	75
H-2F 12,7/6,4	12,7	6,4	0,62	50
H-2F 16,0/8,0	16,0	8,0	0,68	50
H-2F 19,0/9,5	19,0	9,5	0,68	30
H-2F 25,4/12,7	25,4	12,7	0,87	30
H-2F 32,0/16,0	32,0	16,0	1,00	30
H-2F 38,1/19,0	38,1	19,0	1,00	30
H-2F 50,8/25,4	50,8	25,4	1,10	30
H-2F 76,2/38,1	76,2	38,1	1,20	15
H-2F 102,0/50,8	102,0	50,8	1,35	15
H-2F 126,0/63,5	126,0	63,5	1,40	15
H-2F 150,0/76,0	150,0	76,0	1,40	15

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2F(3X)

Thin-wall heat shrink tubing / flexible / flame retardant / 3:1 / mil spec 135 degrees

Features:

- Crosslinked Polyolefin
- Shrink ratio: 3:1
- Flame retardant
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS
- Meets: SAE-AMS-DTL-23053/5 class 1 and 3

Application:

- Operating temperature: -55 °C to +135 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black
- Other colors: red, blue, yellow, green, white, transparent (flame retardant class 2)



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2F(3X) 1,5/0,5	1,5	0,5	0,45	150
H-2F(3X) 3,0/1,0	3,0	1,0	0,55	150
H-2F(3X) 4,5/1,5	4,8	1,5	0,60	75
H-2F(3X) 6,0/2,0	6,4	2,0	0,65	75
H-2F(3X) 9,0/3,0	9,5	3,0	0,75	75
H-2F(3X) 12,0/4,0	12,7	4,0	0,80	50
H-2F(3X) 18,0/6,0	19,1	6,0	0,90	30
H-2F(3X) 24,0/8,0	25,4	8,0	1,20	30
H-2F(3X) 39,0/13,0	39,0	13,0	1,25	30

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2F(4X)

Thin-wall heat shrink tubing / flexible / flame retardant / 4:1 / mil spec 135 degrees

Features:

- Crosslinked Polyolefin
- Shrink ratio: 4:1
- Flame retardant
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS
- Meets: SAE-AMS-DTL-23053/5 class 1 and 3

Application:

- Operating temperature: -55 °C to +135 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black
- Other colors: red, blue, yellow, green



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
H-2F(4X) 19,1/4,6	19,1	4,6	1,7	1220
H-2F(4X) 25,4/7,0	25,4	7,0	1,7	1220
H-2F(4X) 38,1/9,5	38,1	9,5	1,7	1220
H-2F(4X) 50,8/14,0	50,8	14,0	1,7	1220
H-2F(4X) 76,2/20,6	76,2	20,6	1,7	1220
H-2F(4X) 102,0/26,7	102,0	26,7	1,7	1220
H-2F(4X) 115,0/36,8	115,0	36,8	1,7	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2(HF)

Thin-wall heat shrink tubing / flexible / flame retardant / 2:1 / halogen free

Features:

- Crosslinked Polyolefin
- Shrink ratio: 2:1
- Flame retardant
- Halogen free
- Low smoke emission

Approvals:

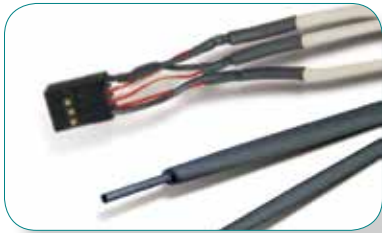
- UL224 125 °C VW-1 600 V
- Meets: RoHS

Application:

- Operating temperature: -55 °C to +105 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Colors: black and white
- Other colors are available on request



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2(HF) 1,2/0,6	1,2	0,6	0,33	150
H-2(HF) 1,6/0,8	1,6	0,8	0,36	150
H-2(HF) 2,4/1,2	2,4	1,2	0,44	150
H-2(HF) 3,2/1,6	3,2	1,6	0,44	150
H-2(HF) 4,8/2,4	4,8	2,4	0,51	75
H-2(HF) 6,4/3,2	6,4	3,2	0,56	75
H-2(HF) 9,5/4,8	9,5	4,8	0,56	75
H-2(HF) 12,7/6,4	12,7	6,4	0,65	50
H-2(HF) 16,0/8,0	16,0	8,0	0,69	50
H-2(HF) 19,0/9,5	19,0	9,5	0,80	30
H-2(HF) 25,4/12,7	25,4	12,7	0,90	30
H-2(HF) 32,0/16,0	32,0	16,0	1,02	30
H-2(HF) 38,1/19,0	38,1	19,0	1,02	30
H-2(HF) 50,8/25,4	50,8	25,4	1,14	30
H-2(HF) 76,2/38,1	76,2	38,1	1,27	15

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2F(Y/G)
Thin-wall heat shrink tubing / yellow/green striped / flexible / flame retardant / 2:1/3:1 / mil spec 135 degrees

- Features:**
- Crosslinked Polyolefin
 - Shrink ratio: 2:1 and 3:1
 - Flame retardant
 - High flexibility
- Approvals:**
- UL224 125 °C VW-1 600 V file E204071
 - CSA file no.: 1934614
 - Meets: RoHS
 - Meets: SAE-AMS-DTL-23053/5 class 1 and 3

- Application:**
- Operating temperature: -55 °C to +135 °C
 - Minimum shrink temperature: +70 °C
 - Minimum full recovery temperature: +100 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: yellow / green
 - Also available in various lengths and in mini boxes



Shrink ratio 2:1

Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2F(Y/G) 2:1 1,2/0,6	1,2	0,6	0,32	150
H-2F(Y/G) 2:1 1,6/0,8	1,6	0,8	0,32	150
H-2F(Y/G) 2:1 2,4/1,2	2,4	1,2	0,42	150
H-2F(Y/G) 2:1 3,2/1,6	3,2	1,6	0,42	150
H-2F(Y/G) 2:1 4,8/2,4	4,8	2,4	0,52	75
H-2F(Y/G) 2:1 6,4/3,2	6,4	3,2	0,54	75
H-2F(Y/G) 2:1 9,5/4,8	9,5	4,8	0,54	75
H-2F(Y/G) 2:1 12,7/6,4	12,7	6,4	0,62	50
H-2F(Y/G) 2:1 16,0/8,0	16,0	8,0	0,67	50
H-2F(Y/G) 2:1 19,0/9,5	19,0	9,5	0,75	30
H-2F(Y/G) 2:1 25,4/12,7	25,4	12,7	0,85	30
H-2F(Y/G) 2:1 32,0/16,0	32,0	16,0	0,85	30
H-2F(Y/G) 2:1 38,1/19,0	38,1	19,0	0,96	30
H-2F(Y/G) 2:1 50,8/25,4	50,8	25,4	0,96	30
H-2F(Y/G) 2:1 76,2/38,1	76,2	38,1	1,17	15
H-2F(Y/G) 2:1 102,0/50,8	102,0	50,8	1,30	15

For other types / sizes, please see the following page

Shrink ratio 3:1

Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2F(Y/G) 3:1 1,5/0,5	1,5	0,5	0,51	150
H-2F(Y/G) 3:1 2,4/0,8	2,4	0,8	0,51	150
H-2F(Y/G) 3:1 3,0/1,0	3,0	1,0	0,55	150
H-2F(Y/G) 3:1 4,5/1,5	4,8	1,5	0,60	75
H-2F(Y/G) 3:1 6,0/2,0	6,4	2,0	0,65	75
H-2F(Y/G) 3:1 9,0/3,0	9,5	3,0	0,75	75
H-2F(Y/G) 3:1 12,0/4,0	12,7	4,0	0,75	50
H-2F(Y/G) 3:1 18,0/6,0	19,1	6,0	0,85	30
H-2F(Y/G) 3:1 24,0/8,0	25,4	8,0	1,00	30
H-2F(Y/G) 3:1 39,0/13,0	39,0	13,0	1,15	30

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2(LS)

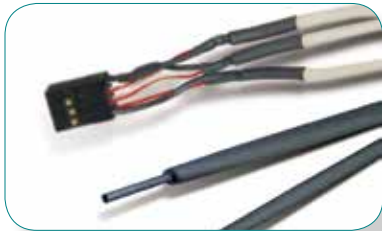
Thin-wall heat shrink tubing / flexible / flame retardant / 2:1 / low shrink temperature

- Features:**
- Crosslinked Polyolefin
 - Shrink ratio: 2:1
 - Low shrink temperature

- Approvals:**
- Flame propagation FMVSS 302
 - Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +125 °C
 - Minimum shrink temperature: +65 °C
 - Minimum full recovery temperature: +95 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2(LS) 1,6/0,8	1,6	0,8	0,5	150
H-2(LS) 2,4/1,2	2,4	1,2	0,5	150
H-2(LS) 3,2/1,6	3,2	1,6	0,5	150
H-2(LS) 4,8/2,4	4,8	2,4	0,5	75
H-2(LS) 6,4/3,2	6,4	3,2	0,6	75
H-2(LS) 9,5/4,8	9,5	4,8	0,6	75
H-2(LS) 12,7/6,4	12,7	6,4	0,6	50
H-2(LS) 16,0/8,0	16,0	8,0	0,6	50
H-2(LS) 19,0/9,5	19,0	9,5	0,8	30
H-2(LS) 25,4/12,7	25,4	12,7	0,9	30
H-2(LS) 32,0/16,0	32,0	16,0	0,9	30
H-2(LS) 38,1/19,0	38,1	19,0	1,0	30
H-2(LS) 50,8/25,4	50,8	25,4	1,1	30

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2(CB)

Thin-wall heat shrink tubing / flexible / flame retardant / 2:1 / ultra thin-wall

- Features:**
- Crosslinked Polyolefin
 - Shrink ratio: 2:1
 - Flame retardant
 - Ultra thin-wall
 - High flexibility

- Approvals:**
- UL224 125 °C VW-1 300 V file E204071
 - CSA file no.: 1934614
 - Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +125 °C
 - Minimum shrink temperature: +70 °C
 - Minimum full recovery temperature: +100 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black

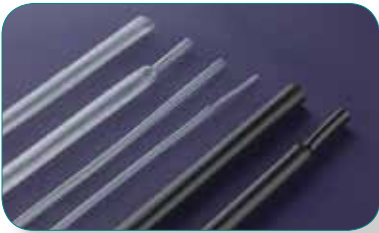


Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-2(CB) 1,2/0,6	1,2	0,6	0,20	150
H-2(CB) 1,6/0,8	1,6	0,8	0,20	150
H-2(CB) 2,4/1,2	2,4	1,2	0,25	150
H-2(CB) 3,2/1,6	3,2	1,6	0,25	150
H-2(CB) 4,8/2,4	4,8	2,4	0,25	75
H-2(CB) 6,4/3,2	6,4	3,2	0,28	75
H-2(CB) 9,5/4,8	9,5	4,8	0,28	75
H-2(CB) 12,7/6,4	12,7	6,4	0,28	50

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-1 Thin-wall heat shrink tubing / non flame retardant / 2:1

- Features:**
- Crosslinked Polyolefin
 - Shrink ratio: 2:1
 - 100% transparent
 - Bright shiny-black
- Approvals:**
- Meets: RoHS
- Application:**
- Operating temperature: -55 °C to +105 °C
 - Minimum shrink temperature: +70 °C
 - Minimum full recovery temperature: +95 °C
 - Longitudinal change: 0 ± 10% max.
- Order information:**
- Colors: shiny-black / transparent
 - Also available in various lengths and in mini boxes

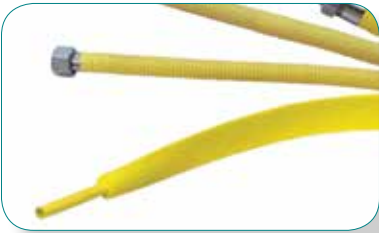


Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-1 1,2/0,6	1,2	0,6	0,33	150
H-1 1,6/0,8	1,6	0,8	0,36	150
H-1 2,4/1,2	2,4	1,2	0,44	150
H-1 3,2/1,6	3,2	1,6	0,44	150
H-1 4,8/2,4	4,8	2,4	0,56	75
H-1 6,4/3,2	6,4	3,2	0,56	75
H-1 9,5/4,8	9,5	4,8	0,56	75
H-1 12,7/6,4	12,7	6,4	0,65	50
H-1 16,0/8,0	16,0	8,0	0,69	50
H-1 19,0/9,5	19,0	9,5	0,80	30
H-1 25,4/12,7	25,4	12,7	0,90	30
H-1 32,0/16,0	32,0	16,0	0,90	30
H-1 38,1/19,0	38,1	19,0	1,00	30
H-1 50,8/25,4	50,8	25,4	1,00	30
H-1 76,2/38,1	76,2	38,1	1,20	15

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HBG Thin-wall heat shrink tubing / flexible / 2:1 / for flexible gas pipes

- Features:**
- Crosslinked Polyolefin
 - Industry specific design
 - Excellent shrinking properties
 - Good mechanical performance
- Approvals:**
- Meets: RoHS
- Application:**
- Operating temperature: -55 °C to +125 °C
 - Minimum shrink temperature: +80 °C
 - Minimum full recovery temperature: +110 °C
 - Longitudinal change: 0 ± 10% max.
- Order information:**
- Color: yellow



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
HBG 23,0/9,5	23,0	9,5	0,65	100
HBG 27,5/12,7	27,5	12,7	0,70	100
HBG 29,0/12,7	29,0	12,7	0,70	50
HBG 33,5/16,0	33,5	16,0	0,80	50
HBG 40,5/19,0	40,5	19,0	0,80	50
HBG 51,0/25,4	51,0	25,4	0,80	50
HBG 65,0/32,5	65,0	32,5	1,27	50
HBG 76,2/38,1	77,0	38,1	1,27	50

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

Mini box type 1

Thin-wall heat shrink tubing / flexible / flame retardant / 2:1 / H-2(Z)

Features:

- Crosslinked Polyolefin
- Shrink ratio: 2:1
- Flame retardant
- General purpose
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS, Sony-SS-00259

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Colors: black, red, blue, yellow, green, white



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Box / Meter
H-2(Z) 1,2/0,6	1,2	0,6	0,33	10
H-2(Z) 1,6/0,8	1,6	0,8	0,36	10
H-2(Z) 2,4/1,2	2,4	1,2	0,44	10
H-2(Z) 3,2/1,6	3,2	1,6	0,44	10
H-2(Z) 4,8/2,4	4,8	2,4	0,51	10
H-2(Z) 6,4/3,2	6,4	3,2	0,56	5
H-2(Z) 9,5/4,8	9,5	4,8	0,56	5
H-2(Z) 12,7/6,4	12,7	6,4	0,65	5
H-2(Z) 16,0/8,0	16,0	8,0	0,69	5
H-2(Z) 19,0/9,5	19,0	9,5	0,80	5
H-2(Z) 25,4/12,7	25,4	12,7	0,90	5

Mini box type 2

Thin-wall heat shrink tubing / flexible / flame retardant / 3:1 / H-2(3X)

Features:

- Crosslinked Polyolefin
- Shrink ratio: 3:1
- Flame retardant
- General purpose
- High flexibility

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- CSA file no.: 1934614
- Meets: RoHS, Sony-SS-00259

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +100 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Box / Meter
H-2(3X) 1,5/0,5	1,5	0,5	0,45	10
H-2(3X) 3,0/1,0	3,0	1,0	0,55	10
H-2(3X) 4,5/1,5	4,8	1,5	0,60	10
H-2(3X) 6,0/2,0	6,4	2,0	0,65	10
H-2(3X) 9,0/3,0	9,5	3,0	0,75	5
H-2(3X) 12,0/4,0	12,7	4,0	0,80	5
H-2(3X) 18,0/6,0	19,1	6,0	0,90	5
H-2(3X) 24,0/8,0	25,4	8,0	1,00	5

Assortments heat shrink tubing

- Features:**
- Crosslinked Polyolefin
 - Shrink ratio: 2:1
 - Flame retardant
 - General purpose
 - High flexibility

- Application:**
- Operating temperature: -55 °C to +125 °C
 - Minimum shrink temperature: +70 °C
 - Minimum full recovery temperature: +100 °C
 - Longitudinal change: 0 ± 10% max.

Content assortment 1: 127 pcs H-2(Z) heat shrink tubing (mixed colors)

Type / Size	Length in mm	Quantity
H-2(Z) 1,6/0,8	35,0	30
H-2(Z) 2,4/1,2	35,0	25
H-2(Z) 3,2/1,6	35,0	20
H-2(Z) 4,8/2,4	35,0	20
H-2(Z) 6,4/3,2	75,0	16
H-2(Z) 9,5/4,8	75,0	8
H-2(Z) 12,7/6,4	100,0	8



Content assortment 2: 127 pcs H-2(Z) heat shrink tubing (black)

Type / Size	Length in mm	Quantity
H-2(Z) 1,6/0,8	35,0	30
H-2(Z) 2,4/1,2	35,0	25
H-2(Z) 3,2/1,6	35,0	20
H-2(Z) 4,8/2,4	35,0	20
H-2(Z) 6,4/3,2	75,0	16
H-2(Z) 9,5/4,8	75,0	8
H-2(Z) 12,7/6,4	100,0	8



Content assortment 3: 469 pcs H-2(Z) heat shrink tubing (black)

Type / Size	Length in mm	Quantity
H-2(Z) 2,4/1,2	35,0	124
H-2(Z) 3,2/1,6	35,0	100
H-2(Z) 4,8/2,4	35,0	80
H-2(Z) 6,4/3,2	35,0	60
H-2(Z) 9,5/4,8	70,0	65
H-2(Z) 12,7/6,4	70,0	15
H-2(Z) 16,0/8,0	100,0	15
H-2(Z) 19,0/9,5	70,0	5
H-2(Z) 25,4/12,7	70,0	5



H-5(3X)-F and H-5(4X)-F Dual-wall heat shrink tubing / flexible / flame retardant / 3:1/4:1 / adhesive lined

- Features:**
- Crosslinked co-extruded adhesive lined Polyolefin
 - Shrink ratio: 3:1 and 4:1
 - Flame retardant
 - Excellent sealing and insulation properties
 - UV resistant

- Approvals:**
- UL224 125 °C VW-1 600 V file E204071
 - Meets: RoHS
 - Meets: SAE-AMS-DTL-23053/4

- Application:**
- Operating temperature: -55 °C to +125 °C
 - Minimum shrink temperature: +70 °C
 - Minimum full recovery temperature: +110 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black
 - Other colors: red, blue, yellow, green, white, transparent (flame retardant class 2)
 - Also available in various lengths and in mini boxes (please see page 43)



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter & Standard length in mm
H-5(3X)-F 3:1 3,0/1,0	3,0	1,0	1,00	150 meter
H-5(3X)-F 3:1 4,8/1,5	4,8	1,5	1,00	75 meter
H-5(3X)-F 3:1 6,0/2,0	6,0	2,0	1,00	75 meter
H-5(3X)-F 3:1 9,0/3,0	9,0	3,0	1,40	50 meter
H-5(3X)-F 3:1 12,0/4,0	12,0	4,0	1,60	30 meter
H-5(3X)-F 3:1 19,0/6,0	19,0	6,0	2,15	30 meter
H-5(3X)-F 3:1 24,0/8,0	24,0	8,0	2,40	30 meter
H-5(3X)-F 3:1 30,0/10,0	30,0	10,0	2,40	30 meter
H-5(3X)-F 3:1 40,0/13,0	40,0	13,0	2,40	30 meter
H-5(4X)-F 4:1 4,0/1,0	4,0	1,0	1,00	150 meter
H-5(4X)-F 4:1 6,0/1,5	6,0	1,5	1,00	75 meter
H-5(4X)-F 4:1 8,0/2,0	8,0	2,0	1,00	75 meter
H-5(4X)-F 4:1 12,0/3,0	12,0	3,0	1,40	50 meter
H-5(4X)-F 4:1 16,0/4,0	16,0	4,0	1,60	30 meter
H-5(4X)-F 4:1 24,0/6,0	24,0	6,0	2,15	30 meter
H-5(4X)-F 4:1 32,0/8,0	32,0	8,0	2,40	30 meter
H-5(4X)-F 4:1 52,0/13,0	52,0	13,0	2,40	1220 mm

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HBK

Dual-wall heat shrink tubing / automotive / adhesive lined / 4:1

Features:

- Crosslinked adhesive lined Polyolefin
- Shrink ratio: 4:1
- High performance adhesive
- Designed for wire harnesses / splices
- Tubing for automotive industry
- Excellent mechanical performance

Approvals:

- Meets: RoHS

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum shrink temperature: +110 °C
- Minimum full recovery temperature: +135 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Colors: black, transparent



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HBK 6,0/1,27	6,0	1,27	1,30	1220
HBK 8,0/1,65	8,0	1,65	1,52	1220
HBK 12,0/2,41	12,0	2,41	1,91	1220
HBK 18,0/4,45	18,0	4,45	2,41	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

Mini box type 3

Dual-wall heat shrink tubing / flexible / flame retardant / 3:1 / adhesive lined / H-5(3X)-F

Features:

- Crosslinked co-extruded adhesive lined Polyolefin
- Shrink ratio: 3:1
- Flame retardant
- Excellent sealing and insulation properties
- UV resistant

Approvals:

- UL224 125 °C VW-1 600 V file E204071
- Meets: RoHS
- Meets: SAE-AMS-DTL-23053/4

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum shrink temperature: +70 °C
- Minimum full recovery temperature: +110 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Box / Meter
H-5(3X)-F 3:1 3,0/1,0	3,0	1,0	1,00	5,0
H-5(3X)-F 3:1 4,8/1,5	4,8	1,5	1,00	4,0
H-5(3X)-F 3:1 6,0/2,0	6,0	2,0	1,00	3,5
H-5(3X)-F 3:1 9,0/3,0	9,0	3,0	1,40	3,0
H-5(3X)-F 3:1 12,0/4,0	12,0	4,0	1,60	2,5
H-5(3X)-F 3:1 19,0/6,0	19,0	6,0	2,15	2,0
H-5(3X)-F 3:1 24,0/8,0	24,0	8,0	2,40	1,5

H-175K

Special heat shrink tubing / Kynar® / 175 degrees / 2:1

- Features:**
- Crosslinked PVDF
 - Shrink ratio: 2:1
 - Superior mechanical and abrasion resistance
 - Highly flame retardant
 - High temperature resistance
 - Excellent chemical and solvent resistance

- Approvals:**
- Meets: RoHS
 - Meets: SAE-AMS-DTL-23053/18

- Application:**
- Operating temperature: -55 °C to +175 °C
 - Minimum shrink temperature: +175 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: transparent (black available on request)



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter & Standard length in mm
H-175K 1,2/0,6	1,2	0,6	0,20	150 meter
H-175K 1,6/0,8	1,6	0,8	0,20	150 meter
H-175K 2,4/1,2	2,4	1,2	0,23	150 meter
H-175K 3,2/1,6	3,2	1,6	0,23	150 meter
H-175K 4,8/2,4	4,8	2,4	0,23	75 meter
H-175K 6,4/3,2	6,4	3,2	0,28	75 meter
H-175K 9,5/4,8	9,5	4,8	0,28	1220 mm
H-175K 12,7/6,4	12,7	6,4	0,28	1220 mm
H-175K 19,1/9,5	19,1	9,5	0,36	1220 mm
H-175K 25,4/12,7	25,4	12,7	0,41	1220 mm
H-175K 38,1/19,0	38,1	19,0	0,51	1220 mm

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-200E and H-200E(TW)

Special heat shrink tubing / Viton® / 200 degrees / 2:1

- Features:**
- H-200E = Fluoroelastomer tubing
 - H-200E(TW) = thin-wall Fluoroelastomer tubing
 - Crosslinked Fluoroelastomer
 - Shrink ratio: 2:1
 - Superior abrasion resistance
 - High temperature resistance
 - Excellent resistance to aggressive chemicals and solvents

- Approvals:**
- Meets: RoHS
 - Meets: SAE-AMS-DTL-23053/13

- Application:**
- Operating temperature: -55 °C to +200 °C
 - Minimum full recovery temperature: +175 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black
 - Available in various wall thicknesses



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
H-200E 3,2/1,6	3,2	1,6	0,76	50
H-200E 4,8/2,4	4,8	2,4	0,90	50
H-200E 6,4/3,2	6,4	3,2	0,90	50
H-200E 9,5/4,8	9,5	4,8	0,90	50
H-200E 12,7/6,4	12,7	6,4	1,10	30
H-200E 19,0/9,5	19,0	9,5	1,30	30
H-200E 25,4/12,7	25,4	12,7	1,65	30
H-200E 38,1/19,0	38,1	19,0	1,90	15
H-200E 50,8/25,4	50,8	25,4	2,80	15
H-200E(TW) 9,5/4,8	9,5	4,8	0,90	50
H-200E(TW) 12,7/6,4	12,7	6,4	0,90	30
H-200E(TW) 15,9/7,9	15,9	7,9	1,07	30
H-200E(TW) 19,1/9,5	19,0	9,5	1,07	30
H-200E(TW) 22,0/11,0	22,0	11,0	1,25	30
H-200E(TW) 25,4/12,7	25,4	12,7	1,25	30
H-200E(TW) 31,8/15,7	31,8	15,7	1,40	30
H-200E(TW) 38,1/19,0	38,1	19,0	1,40	15
H-200E(TW) 50,8/25,4	50,8	25,4	1,65	15

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

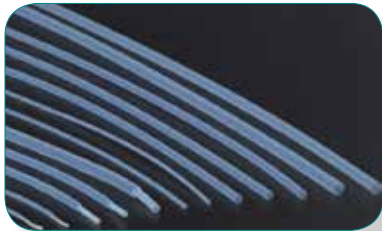
HTFE Special heat shrink tubing / Teflon® / 260 degrees / 1,5:1

- Features:**
- Modified Tetrafluoroethylene
 - Shrink ratio: 1,5:1
 - Superior chemical and mechanical performance
 - Very low friction coefficient
 - Excellent electrical properties

- Approvals:**
- Meets: RoHS
 - Meets: SAE-AMS-DTL-23053/12

- Application:**
- Operating temperature: -65 °C to +260 °C
 - Minimum full recovery temperature: +350 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: transparent



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HTFE AWG 20	1,52	0,97	0,30	1220
HTFE AWG 18	1,93	1,17	0,30	1220
HTFE AWG 16	2,36	1,45	0,30	1220
HTFE AWG 14	3,05	1,82	0,30	1220
HTFE AWG 12	3,81	2,26	0,30	1220
HTFE AWG 10	4,85	2,80	0,30	1220
HTFE AWG 8	6,10	3,55	0,38	1220
HTFE AWG 6	7,67	4,40	0,38	1220
HTFE AWG 4	9,40	5,45	0,38	1220
HTFE AWG 2	10,92	6,90	0,38	1220
HTFE AWG 0	11,94	8,56	0,38	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

H-2(XT) Special heat shrink tubing / insulation sleeve

- Features:**
- Crosslinked Polyolefin
 - Non shrinkable
 - Flame retardant

- Approvals:**
- Meets: RoHS
 - UL224 125 °C VW-1 600 V file E204071

- Application:**
- Operating temperature: -55 °C to +125 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	Wall thickness in mm (min.)	Reel / Meter
H-2(XT) AWG 18	1,00	0,4	150
H-2(XT) AWG 16	1,30	0,4	150
H-2(XT) AWG 14	1,65	0,4	150
H-2(XT) AWG 12	2,10	0,4	150
H-2(XT) AWG 10	2,60	0,5	75
H-2(XT) AWG 8	3,30	0,5	75
H-2(XT) AWG 6	4,10	0,5	75
H-2(XT) AWG 4	5,20	0,5	50
H-2(XT) AWG 2	6,50	0,5	50
H-2(XT) AWG 0	8,30	0,5	30
H-2(XT) 3/8	9,50	0,5	30
H-2(XT) 7/16	11,10	0,5	30
H-2(XT) 1/2	12,70	0,5	30

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HDR and HDR(TW)

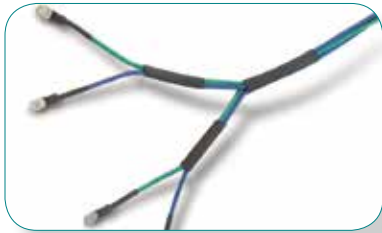
Special heat shrink tubing / diesel-resistant / 2:1

- Features:**
- HDR = diesel resistant elastomeric tubing
 - HDR(TW) = thin-wall diesel resistant elastomeric tubing
 - Crosslinked modified Fluoroelastomer
 - Shrink ratio: 2:1
 - Superior abrasion resistance
 - High temperature resistance
 - Excellent fluid resistance

- Approvals:**
- Meets: RoHS
 - Meets: SAE-AMS-DTL-23053/16

- Application:**
- Operating temperature: -65 °C to +150 °C
 - Minimum full recovery temperature: +175 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter
HDR 3,2/1,6	3,2	1,6	0,76	50
HDR 4,8/2,4	4,8	2,4	0,85	50
HDR 6,4/3,2	6,4	3,2	0,90	50
HDR 9,5/4,8	9,5	4,8	1,02	50
HDR 12,7/6,4	12,7	6,4	1,22	30
HDR 19,0/9,5	19,0	9,5	1,45	30
HDR 25,4/12,7	25,4	12,7	1,80	30
HDR 38,1/19,0	38,1	19,0	2,40	15
HDR 50,8/25,4	50,8	25,4	2,40	15
HDR(TW) 2,4/1,2	2,4	1,2	0,51	150
HDR(TW) 3,2/1,6	3,2	1,6	0,51	150
HDR(TW) 4,8/2,4	4,8	2,4	0,51	75
HDR(TW) 6,4/3,2	6,4	3,2	0,64	75
HDR(TW) 9,5/4,8	9,5	4,8	0,64	50
HDR(TW) 12,7/6,4	12,7	6,4	0,64	30
HDR(TW) 19,0/9,5	19,1	9,5	0,76	30
HDR(TW) 25,4/12,7	25,4	12,7	0,90	30
HDR(TW) 31,8/15,9	31,8	15,9	1,01	30
HDR(TW) 38,1/19,0	38,1	19,0	1,02	30
HDR(TW) 50,8/25,4	50,8	25,4	1,20	30
HDR(TW) 63,5/30,0	63,5	30,0	1,20	30

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HFSP

Special heat shrink tubing / fiber optic splice protector

- Features:**
- Crosslinked Polyolefin
 - Low shrink temperature
 - Pre-installed stainless steel or ceramic rod
 - Accomodate single or ribbon fibers

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -45 °C to +100 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Wide range of sizes
 - Color: transparent
 - Other colors are available on request



Type / Size	Splice protector: length in mm	Fusion tube: inside diameter in mm (max.)	Steel rod: length in mm	Packing
HFSP-61	61,0	1,40	55,0	100 pcs per bag
HFSP-45	45,0	1,40	40,0	100 pcs per bag
HFSP-61T	61,0	1,40	57,0	100 pcs per bag
HFSP-45T	45,0	1,40	41,0	100 pcs per bag
HFSP-40T	40,0	1,40	36,0	100 pcs per bag
HFSP-30T	30,0	1,40	26,0	100 pcs per bag
HFSP-25T	25,0	1,40	21,0	100 pcs per bag
HFSP-40M	40,0	0,35	40,0	100 pcs per bag
HFSP-25M	25,0	0,35	25,0	100 pcs per bag

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRA2 and HR2

Medium-wall heat shrink tubing / with and without hot melt adhesive

- Features:**
- Medium-wall tubing with and without hot melt adhesive
 - Good environmental protection
 - Good electrical and mechanical performance
 - Ideal for low voltage applications
 - UV resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +125 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Also available in lengths of 1 and 1,5 meter
 - Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HRA2/HR2 8/2	8,0	2,0	1,6	1220
HRA2/HR2 12/3	12,0	3,0	2,0	1220
HRA2/HR2 16/5	16,0	5,0	2,2	1220
HRA2/HR2 22/6	22,0	6,0	2,4	1220
HRA2/HR2 28/6	28,0	6,0	2,5	1220
HRA2/HR2 33/8	33,0	8,0	2,5	1220
HRA2/HR2 40/12	40,0	12,0	2,5	1220
HRA2/HR2 55/16	55,0	16,0	2,7	1220
HRA2/HR2 65/19	65,0	19,0	2,9	1220
HRA2/HR2 75/22	75,0	22,0	3,0	1220
HRA2/HR2 85/25	85,0	25,0	3,0	1220
HRA2/HR2 95/25	95,0	25,0	3,0	1220
HRA2/HR2 115/34	115,0	34,0	3,2	1220
HRA2/HR2 140/42	140,0	42,0	3,3	1220
HRA2/HR2 160/50	160,0	50,0	3,3	1220
HRA2/HR2 180/58	180,0	58,0	3,3	1220
HRA2/HR2 205/65	205,0	65,0	3,3	1220
HRA2/HR2 235/65	235,0	65,0	3,7	1220
HRA2/HR2 265/75	265,0	75,0	3,8	1220
HRA2/HR2 300/75	300,0	75,0	3,8	1220
HRA2/HR2 350/100	350,0	100,0	4,2	1220
HRA2/HR2 380/150	380,0	150,0	4,2	1220
HRA2/HR2 410/150	410,0	150,0	4,2	1220
HRA2/HR2 450/160	450,0	160,0	4,2	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRTM

Medium-wall heat shrink tubing / with hot melt adhesive (co-extrusion)

- Features:**
- Medium-wall tubing with hot melt adhesive
 - Co-extrusion technology
 - Good electrical and mechanical performance
 - Ideal for low voltage applications
 - UV resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +110 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Also available in lengths of 1 and 1,5 meter
 - Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HRTM 8/2	8,0	2,0	1,4	1220
HRTM 12/3	12,0	3,0	1,4	1220
HRTM 16/5	16,0	5,0	1,5	1220
HRTM 22/6	22,0	6,0	2,0	1220
HRTM 33/8	33,0	8,0	2,0	1220
HRTM 40/12	40,0	12,0	2,0	1220
HRTM 55/16	55,0	16,0	2,0	1220
HRTM 65/19	65,0	19,0	2,5	1220
HRTM 75/22	75,0	22,0	2,7	1220
HRTM 85/25	85,0	25,0	2,8	1220
HRTM 95/25	95,0	25,0	2,8	1220
HRTM 115/34	115,0	34,0	3,4	1220
HRTM 140/42	140,0	42,0	3,4	1220
HRTM 160/50	160,0	50,0	3,4	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HSTV

Medium-wall heat shrink tubing / with hot melt adhesive for CATV network

- Features:**
- Medium-wall tubing with hot melt adhesive
 - With thermo-chromatic stripes / paint
 - Designed for CATV industry
 - Easy to remove for repairs
 - UV resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +110 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HSTV 400	10,0	3,8	2,0	1220
HSTV 750	19,0	5,6	2,4	1220
HSTV 1100	28,0	9,0	2,4	1220
HSTV 1300	33,0	10,0	2,4	1220
HSTV 1500	38,1	12,0	2,4	1220
HSTV 1700	45,0	13,0	2,4	1220
HSTV 2050	55,0	19,0	2,4	1220
HSTV 2750	70,0	25,0	2,4	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRS

Medium-wall heat shrink tubing / with mastic coating

- Features:**
- Medium-wall tubing with mastic
 - Excellent corrosion protection properties
 - Excellent bonding to both metal and wood
 - UV resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -35 °C to +110 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Also available in lengths of 1 and 1,5 meter
 - Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HRS 33/8	33,0	8,0	2,5	1220
HRS 40/12	40,0	12,0	2,5	1220
HRS 55/16	55,0	16,0	2,7	1220
HRS 65/19	65,0	19,0	2,9	1220
HRS 75/22	75,0	22,0	3,0	1220
HRS 85/25	85,0	25,0	3,0	1220
HRS 95/25	95,0	25,0	3,0	1220
HRS 115/34	115,0	34,0	3,2	1220
HRS 140/42	140,0	42,0	3,3	1220
HRS 160/50	160,0	50,0	3,3	1220
HRS 180/58	180,0	58,0	3,3	1220
HRS 200/65	200,0	65,0	3,3	1220
HRS 235/65	235,0	65,0	3,7	1220
HRS 265/75	265,0	75,0	3,8	1220
HRS 300/85	300,0	85,0	3,8	1220
HRS 350/100	350,0	100,0	4,2	1220
HRS 380/150	380,0	150,0	4,2	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRA3 and HR3

Heavy-wall heat shrink tubing / with and without hot melt adhesive

Features:

- Heavy-wall tubing with and without hot melt adhesive
- Superior electrical and environmental insulation
- Excellent abrasion and impact resistance
- Ideal for low voltage applications
- UV resistant

Approvals:

- Meets: RoHS

Application:

- Operating temperature: -55 °C to +125 °C
- Minimum full recovery temperature: +120 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Also available in lengths of 1 and 1,5 meter
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HRA3/HR3 9/3	9,0	3,0	1,8	1220
HRA3/HR3 13/4	13,0	4,0	2,2	1220
HRA3/HR3 22/6	22,0	6,0	2,7	1220
HRA3/HR3 33/8	33,0	8,0	3,2	1220
HRA3/HR3 40/12	40,0	12,0	4,0	1220
HRA3/HR3 45/12	45,0	12,0	4,0	1220
HRA3/HR3 55/16	55,0	16,0	4,0	1220
HRA3/HR3 65/19	65,0	19,0	4,0	1220
HRA3/HR3 75/22	75,0	22,0	4,0	1220
HRA3/HR3 85/25	85,0	25,0	4,2	1220
HRA3/HR3 95/30	95,0	30,0	4,2	1220
HRA3/HR3 105/30	105,0	30,0	4,2	1220
HRA3/HR3 115/34	115,0	34,0	4,2	1220
HRA3/HR3 130/36	130,0	36,0	4,2	1220
HRA3/HR3 160/50	160,0	50,0	4,2	1220
HRA3/HR3 180/50	180,0	50,0	4,2	1220
HRA3/HR3 200/60	200,0	60,0	4,2	1220
HRA3/HR3 235/65	235,0	65,0	4,1	1220
HRA3/HR3 265/75	265,0	75,0	4,3	1220
HRA3/HR3 300/85	300,0	85,0	4,4	1220
HRA3/HR3 350/100	350,0	100,0	4,5	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRTH

Heavy-wall heat shrink tubing / with hot melt adhesive (co-extrusion)

Features:

- Heavy-wall tubing with hot melt adhesive
- Co-extrusion technology
- Excellent electrical and mechanical performance
- UV resistant

Approvals:

- Meets: RoHS

Application:

- Operating temperature: -55 °C to +110 °C
- Minimum full recovery temperature: +120 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Also available in lengths of 1 and 1,5 meter
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HRTH 9/3	9,0	3,0	1,95	1220
HRTH 15/4	15,0	4,0	2,35	1220
HRTH 20/6	20,0	6,0	2,45	1220
HRTH 33/8	33,0	8,0	3,15	1220
HRTH 43/12	43,0	12,0	4,05	1220
HRTH 51/16	51,0	16,0	4,05	1220
HRTH 75/22	75,0	22,0	4,20	1220
HRTH 85/25	85,0	25,0	4,20	1220
HRTH 95/25	95,0	25,0	4,20	1220
HRTH 105/25	105,0	25,0	4,20	1220
HRTH 115/34	115,0	34,0	4,20	1220
HRTH 130/36	130,0	36,0	4,20	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRA-6X

Heavy-wall heat shrink tubing / with hot melt adhesive and extra high shrink ratio

- Features:**
- Heavy-wall tubing with hot melt adhesive
 - Shrink ratio: 6:1
 - Crosslinked Polyolefin
 - Excellent sealing properties
 - Extra heavy-wall
 - UV resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +110 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard length in mm
HRA-6X 19,0/3,2	19,0	3,2	3,2	1220
HRA-6X 33,0/5,5	33,0	5,5	3,4	1220
HRA-6X 44,4/7,4	44,4	7,4	3,6	1220
HRA-6X 50,8/8,3	50,8	8,3	4,7	1220
HRA-6X 69,8/11,7	69,8	11,7	4,7	1220
HRA-6X 88,9/17,1	88,9	17,1	4,7	1220
HRA-6X 119,4/22,9	119,4	22,9	4,7	1220
HRA-6X 235,0/40,0	235,0	40,0	4,7	1220

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HRSL

Heavy-wall heat shrink tubing / heat shrinkable cable repair sleeve with glue

- Features:**
- Heat shrinkable wrap around sleeve
 - Good environmental protection
 - Good electrical and mechanical performance
 - Ideal for low voltage applications
 - UV and weather resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -40 °C to +65 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Standard lengths in mm
HRSL 36/10	38,0	9,0	2,4	500, 750, 1000, 1500
HRSL 55/13	57,0	13,0	2,5	500, 750, 1000, 1500
HRSL 85/20	85,0	20,0	3,0	500, 750, 1000, 1500
HRSL 108/27	110,0	27,0	3,0	500, 750, 1000, 1500
HRSL 136/30	138,0	30,0	3,2	500, 750, 1000, 1500
HRSL 180/50	183,0	50,0	3,2	500, 750, 1000, 1500

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HBM

Halogen free busbar insulation tubing

- Features:**
- Medium-wall halogen free busbar insulation tubing
 - Crosslinked Polyolefin
 - Excellent electrical properties and creeping resistance
 - UV resistant
 - Up to 36 kV

- Approvals:**
- Meets: RoHS

- Application:**
- Minimum full recovery temperature: +110 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: red



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter & Standard length in mm
HBM 19/6	19,0	6,0	1,9	30 meter
HBM 25/10	25,0	10,0	1,9	30 meter
HBM 30/12	30,0	12,0	1,9	30 meter
HBM 35/14	35,0	14,0	1,9	30 meter
HBM 40/16	40,0	16,0	1,9	30 meter
HBM 50/20	50,0	20,0	1,9	30 meter
HBM 65/25	65,0	25,0	1,9	30 meter
HBM 75/30	75,0	30,0	1,9	15 meter
HBM 100/40	100,0	40,0	1,9	15 meter
HBM 120/50	120,0	50,0	2,9	1000 mm
HBM 150/60	150,0	60,0	2,9	1000 mm
HBM 180/60	180,0	60,0	2,9	1000 mm
HBM 205/75	205,0	75,0	2,9	1000 mm
HBM 235/75	235,0	75,0	2,9	1000 mm

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HBTM and HBTH

Halogen free flexible busbar insulation tubing

- Features:**
- HBTM = medium-wall tubing
 - HBTH = heavy-wall tubing
 - Medium- and heavy-wall flexible busbar insulation tubing
 - Modified Polyolefin
 - Excellent electrical properties and creeping resistance
 - Halogen free
 - UV and weather resistant
 - Up to 36 kV

- Approvals:**
- Meets: RoHS

- Application:**
- Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: red



Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	Reel / Meter & Standard length in mm
HBTM 19/6	19,0	6,0	2,5	30 meter
HBTM 25/10	25,0	10,0	2,9	30 meter
HBTM 30/12	30,0	12,0	2,9	30 meter
HBTM 40/16	40,0	16,0	2,9	30 meter
HBTM 50/20	50,0	20,0	2,9	15 meter
HBTM 65/25	65,0	25,0	2,9	15 meter
HBTM 75/30	75,0	30,0	2,9	15 meter
HBTM 85/35	85,0	35,0	2,9	15 meter
HBTM 100/40	100,0	40,0	2,9	15 meter
HBTM 120/50	120,0	50,0	2,9	15 meter
HBTH 25/10	25,0	10,0	4,0	1220 mm
HBTH 33/8	33,0	8,0	4,0	1220 mm
HBTH 40/16	40,0	16,0	4,0	1220 mm
HBTH 55/16	55,0	16,0	4,0	1220 mm
HBTH 75/25	75,0	25,0	4,0	1220 mm
HBTH 95/30	95,0	30,0	4,0	1220 mm
HBTH 120/40	120,0	40,0	4,1	1220 mm
HBTH 180/58	180,0	58,0	4,1	1220 mm

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HSEC and HCEC

Moulded parts / cable end caps with spiral adhesive coating

- Features:**
- HSEC = standard end cap
 - HSEC-L = standard end cap, extended length
 - HCEC = conductive end cap
 - Crosslinked Polyolefin
 - Excellent sealing properties
 - Ideal for low voltage applications
 - UV and weather resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +110 °C
 - Minimum full recovery temperature: +120 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type HCEC

Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	After recovery: length in mm
HCEC 120	25,0	8,5	2,8	68,0
HCEC 130	42,0	15,0	3,3	110,0
HCEC 140	55,0	23,0	3,8	140,0
HCEC 145	62,0	23,0	3,8	140,0
HCEC 150	75,0	32,0	4,0	150,0
HCEC 150L	75,0	36,0	4,2	170,0
HCEC 160	105,0	45,0	4,0	150,0

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

Type HSEC

Type / Size	As supplied: inside diameter in mm (min.)	After recovery: inside diameter in mm (max.)	After recovery: wall thickness in mm (min.)	After recovery: length in mm
HSEC 105	12,0	4,0	2,6	40,0
HSEC 110	14,0	5,0	2,2	45,0
HSEC 115	20,0	6,0	2,8	55,0
HSEC 120	25,0	8,5	2,8	68,0
HSEC 130	35,0	16,0	3,3	90,0
HSEC 135	40,0	16,0	3,3	83,0
HSEC 140	55,0	26,0	3,5	103,0
HSEC 150	75,0	36,0	4,0	120,0
HSEC 160	100,0	52,0	4,0	140,0
HSEC 170	120,0	60,0	4,0	150,0
HSEC 180	145,0	60,0	4,0	150,0
HSEC 190	160,0	80,0	4,0	150,0
HSEC 110L	14,0	5,0	2,2	55,0
HSEC 130L	40,0	15,0	3,3	90,0
HSEC 135L	42,0	15,0	3,3	110,0
HSEC 140L	55,0	23,0	3,8	140,0
HSEC 145L	62,0	23,0	3,8	140,0
HSEC 150L	75,0	36,0	4,0	150,0
HSEC 150XL	75,0	36,0	4,2	170,0
HSEC 160L	100,0	47,0	4,0	155,0

For other types / sizes, please see the following page

HLB

Moulded parts / low voltage cable breakouts 2 - 5 cores

- Features:**
- HLB2 = low voltage cable breakout 2 – cores
 - HLB3 = low voltage cable breakout 3 – cores
 - HLB3..L = low voltage cable breakout 3 – cores (extended length)
 - HLB4 = low voltage cable breakout 4 – cores
 - HLB5 = low voltage cable breakout 5 – cores
 - Crosslinked Polyolefin
 - Available for 2 – 5 cores
 - Excellent sealing properties
 - Ideal for low voltage applications
 - UV resistant

- Approvals:**
- Meets: RoHS

- Application:**
- Operating temperature: -55 °C to +110 °C
 - Minimum shrink temperature: +110 °C
 - Minimum full recovery temperature: +130 °C
 - Longitudinal change: 0 ± 10% max.

- Order information:**
- Color: black



Type / Size	As supplied: inside diameter large in mm (min.)	As supplied: inside diameter small in mm (min.)	After recovery: inside diameter large in mm (max.)	After recovery: inside diameter small in mm (min.)	After recovery: wall thickness in mm (min.)	After recovery: length in mm
HLB 205	22,0	9,0	8,0	3,5	2,2	55,0
HLB 210	30,0	14,0	12,0	4,5	2,6	93,0
HLB 215	40,0	15,0	16,0	5,0	2,1	125,0
HLB 220	60,0	25,0	23,0	7,5	2,6	118,0
HLB 220L	60,0	25,0	23,0	7,5	2,6	155,0
HLB 230	100,0	30,0	42,0	9,0	3,1	155,0
HLB 240	150,0	20,0	75,0	6,0	3,8	170,0
HLB 310	38,0	14,0	17,0	4,5	2,7	98,0
HLB 320	60,0	25,0	25,0	8,0	3,0	165,0
HLB 330	80,0	35,0	38,0	11,0	3,5	185,0
HLB 340	110,0	46,0	50,0	17,5	4,0	250,0
HLB 350	125,0	55,0	57,0	20,0	4,0	260,0
HLB 360	140,0	62,0	70,0	26,0	4,0	280,0
HLB 370	170,0	75,0	77,0	28,0	4,0	280,0
HLB 310L	40,0	15,0	16,0	4,5	2,1	125,0
HLB 320L	60,0	25,0	24,0	8,0	3,2	180,0
HLB 330L	80,0	35,0	38,0	11,0	4,0	215,0

For other types / sizes, please see the following page

Type / Size	As supplied: inside diameter large in mm (min.)	As supplied: inside diameter small in mm (min.)	After recovery: inside diameter large in mm (max.)	After recovery: inside diameter small in mm (min.)	After recovery: wall thickness in mm (min.)	After recovery: length in mm
HLB 410	42,0	14,0	15,0	3,5	2,2	105,0
HLB 420	55,0	20,0	21,0	5,0	3,1	150,0
HLB 425	65,0	26,0	26,0	7,0	3,3	175,0
HLB 430	75,0	28,0	26,0	7,0	3,3	175,0
HLB 440	82,0	30,0	37,0	9,0	4,0	190,0
HLB 445	90,0	32,0	37,0	9,0	4,0	190,0
HLB 450	102,0	38,0	47,0	12,0	4,0	198,0
HLB 460	130,0	52,0	52,0	15,0	4,0	240,0
HLB 470	160,0	64,0	70,0	19,0	4,0	260,0
HLB 510	40,0	13,0	19,0	4,0	2,5	98,0
HLB 520	55,0	18,0	24,0	5,0	3,2	155,0
HLB 530	80,0	26,0	33,0	8,0	3,0	175,0
HLB 540	100,0	34,0	42,0	10,0	3,0	190,0

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HCB

Moulded parts / 3 - core conductive cable breakouts

Features:

- Crosslinked Polyolefin
- Conductive
- Red non tracking mastic applied
- UV resistant

Approvals:

- Meets: RoHS

Application:

- Operating temperature: -55 °C to +105 °C
- Minimum shrink temperature: +110 °C
- Minimum full recovery temperature: +130 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black



Type / Size	As supplied: inside diameter large in mm (min.)	As supplied: inside diameter small in mm (min.)	After recovery: inside diameter large in mm (max.)	After recovery: inside diameter small in mm (min.)	After recovery: wall thickness in mm (min.)	After recovery: length in mm
HCBS320	60,0	25,0	24,0	8,0	3,0	183,0
HCBS330	80,0	35,0	38,0	11,0	4,0	215,0
HCBS340	110,0	46,0	50,0	17,5	4,0	250,0
HCBS350	125,0	55,0	57,0	20,0	4,0	260,0
HCBS360	140,0	62,0	70,0	26,0	4,0	280,0

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

HCFT

Moulded parts / cable feed throughs

Features:

- Crosslinked Polyolefin adhesive lined
- Excellent sealing properties
- Ideal for low voltage applications
- UV and weather resistant

Approvals:

- Meets: RoHS

Application:

- Operating temperature: -55 °C to +110 °C
- Minimum full recovery temperature: +110 °C
- Longitudinal change: 0 ± 10% max.

Order information:

- Color: black



Type / Size	As supplied: inside diameter large in mm (min.)	As supplied: inside diameter small in mm (min.)	After recovery: inside diameter large in mm (max.)	After recovery: inside diameter small in mm (min.)	After recovery: wall thickness in mm (min.)	After recovery: length in mm
HCFT 110	85,0	15,0	42,0	5,0	2,5	130,0
HCFT 120	60,0	45,0	30,0	10,0	2,5	130,0
HCFT 130	100,0	20,0	52,0	8,0	3,0	150,0
HCFT 130L	100,0	20,0	50,0	8,0	3,0	210,0
HCFT 135	150,0	14,0	92,0	5,0	3,5	150,0
HCFT 140	160,0	60,0	92,0	20,0	3,2	150,0
HCFT 150	160,0	100,0	92,0	45,0	3,5	150,0

For selecting the right type of heat shrink tubing (selection table), please see page 66
For cross references, please see page 68

Selection table heat shrink tubing

Product type	Product name	Shrink ratio	Operating temperature and Potential rating	Flame retardant	UL	Mil spec	UV resistant	Halogen free
Thin-wall heat shrink tubing	H-2(Z)	2:1	-55 °C to +125 °C, 600 V	VW-1	Yes			
	H-2(3X)	3:1	-55 °C to +125 °C, 600 V	VW-1	Yes			
	H-2F	2:1	-55 °C to +135 °C, 600 V	VW-1	Yes	Yes		
	H-2F(3X)	3:1	-55 °C to +135 °C, 600 V	VW-1	Yes	Yes		
	H-2F(4X)	4:1	-55 °C to +135 °C, 600 V	VW-1	Yes	Yes		
	H-2(HF)	2:1	-55 °C to +105 °C, 600 V	Self-extinguish in 30 seconds	Yes			Yes
	H-2F(Y/G)	2:1 & 3:1	-55 °C to +135 °C, 600 V	VW-1	Yes	Yes		
	H-2(LS)	2:1	-55 °C to +125 °C, 600 V	FMVSS 302				
	H-2(CB)	2:1	-55 °C to +125 °C, 300 V	VW-1	Yes			
	H-1	2:1	-55 °C to +105 °C, 600 V					
	HBG	2:1	-55 °C to +125 °C, 600 V					
Dual-wall heat shrink tubing	H-5(3X)-F	3:1	-55 °C to +125 °C, 600 V	VW-1	Yes	Yes	Yes	
	H-5(4X)-F	4:1	-55 °C to +125 °C, 600 V	VW-1	Yes	Yes	Yes	
	HBK	4:1	-55 °C to +125 °C, 600 V	Self-extinguish in 30 seconds			Yes	
Special heat shrink tubing	H-175K	2:1	-55 °C to +175 °C, 600 V	VW-1		Yes		Yes
	H-200E	2:1	-55 °C to +200 °C, 600 V	VW-1		Yes		Yes
	H-200E(TW)	2:1	-55 °C to +200 °C, 600 V	VW-1		Yes		Yes
	HTFE	1,5:1	-65 °C to +260 °C, 600 V	Self-extinguish in 30 seconds		Yes		
	H-2(XT)		-55 °C to +125 °C, 600 V	Self-extinguish in 30 seconds				
	HDR	2:1	-65 °C to +150 °C, 600 V	Self-extinguish in 30 seconds		Yes		
	HDR(TW)	2:1	-65 °C to +150 °C, 600 V	Self-extinguish in 30 seconds		Yes		
	HFSP	2:1	-45 °C to +100 °C, 600 V					Yes

Selection table heat shrink tubing

Product type	Product name	Shrink ratio	Operating temperature and Potential rating	Flame retardant	UL	Mil spec	UV resistant	Halogen free
Medium-wall heat shrink tubing	HRA2	3:1	-55 °C to +125 °C				Yes	Yes
	HR2	3:1	-55 °C to +125 °C				Yes	Yes
	HRTM	3:1	-55 °C to +110 °C				Yes	Yes
	HSTV	3:1	-55 °C to +110 °C				Yes	Yes
	HRS	3:1	-35 °C to +110 °C				Yes	Yes
Heavy-wall heat shrink tubing	HRA3	3:1	-55 °C to +125 °C				Yes	Yes
	HR3	3:1	-55 °C to +125 °C				Yes	Yes
	HRTH	3:1	-55 °C to +110 °C				Yes	Yes
	HRA-6X	6:1	-55 °C to +110 °C				Yes	Yes
Busbar insulation tubing	HBM	2,5:1	-55 °C to +105 °C, up to 36 kV	ISO 4589			Yes	Yes
	HBTM	2,5:1	-55 °C to +105 °C, up to 36 kV	ISO 4589			Yes	Yes
	HBTH	2,5:1	-55 °C to +105 °C, up to 36 kV	ISO 4589			Yes	Yes
Moulded parts	HSEC		-55 °C to +110 °C				Yes	Yes
	HCEC		-55 °C to +110 °C				Yes	Yes
	HLB		-55 °C to +110 °C				Yes	Yes
	HCB		-55 °C to +105 °C				Yes	Yes
	HCFT		-55 °C to +110 °C				Yes	Yes

Cross references heat shrink tubing

Type	Hongshang	Raychem	DSG-Canusa	HellermannTyton
Thin-wall heat shrink tubing	H-2(Z)	BRST	Deray-H	TCN 20
	H-2(3X)			TCN 20
	H-2F	CGPT / RNF / Versafit	Deray-I	TF21
	H-2F(3X)	RNF-3000	Deray-I 3000	TF31
	H-2F(4X)			
	H-2(HF)		CZT 200	TF24
	H-2F(Y/G)	DCPT	Deray-IGY	TREDUX
	H-2(LS)	LSTT	Deray-LSB	
	H-2(CB)		Deray-ITW	
	H-1	CGPE-105	Deray-H	
	HBG			
Dual-wall heat shrink tubing	H-5(3X)-F	ATUM	Deray-IAKT	TA32
	H-5(4X)-F		Deray-IAKT	TA42
	HBK		CBK	
Special heat shrink tubing	H-175K	RW-175	Deray-KY175	
	H-200E	RW-200	Deray-VT220	
	H-200E(TW)	RW-200E		
	HTFE		Deray-PTFE	
	H-2(XT)	NETM		HS kous
	HDR		Deray-V25	
	HDR(TW)		Deray-V25 TW	
	HFSP		CFSP	

The cross references mentioned above are an indication.
Technical characteristics can differ from each other.

Cross references heat shrink tubing

Type	Hongshang	Raychem	DSG-Canusa	HellermannTyton
Medium-wall heat shrink tubing	HRA2	MWTM / RMW	CFM	MA47
	HR2		CFM	MU47
	HRTM	MWTM / RMW		TREDUX MA47
	HSTV	TCS / SCTV	CFTV	
	HRS			
Heavy-wall heat shrink tubing	HRA3	WCSM / RHW	CFW	HA47
	HR3		CFW	HU47
	HRTH	WCSM / RHW		TREDUX HA47
	HRA-6X	HRHT	CFHR	HA67
Busbar insulation tubing	HBM			
	HBTM	BPRM	CBTM	
	HBTH	BBIT	CBTH	
Moulded parts	HSEC		CCAP / CEC	Helashrink 1600
	HCEC			
	HLB		CCB	
	HCB			
	HCFT			

The cross references mentioned above are an indication.
Technical characteristics can differ from each other.

WKK: distributor of Jacob cable glands and accessories

The main purpose of cable glands is to ensure a safe cable entry. Therefore WKK offers cable glands and accessories of the company Jacob, one of the largest cable gland specialists in the world. Our standard range of cable glands and accessories include: Polyamide and brass cable glands, locknuts and sealing plugs. Of course the cable glands, locknuts and sealing plugs are available in different sizes (metric and PG) and colours. In addition to our standard range of cable glands and accessories, we also supply all other Jacob products. For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Jacob



CABLE GLANDS AND JUNCTION BOXES

Polyamide Jacob cable glands, metric

Material : Polyamide PA6-V2
 Thread : Metric (EN 60423)
 Temperature range : -20 °C up to +100 °C
 Protection grade : IP 68 – 5 bar
 Certification : EN 50262 / UL 514B
 UL / CSA file : E140310
 Colors : Grey (RAL 7035), silvergrey (RAL 7001) and black (RAL 9005)
 Miscellaneous : Also available in threads of 15,0 and 18,0 mm



Typenr.	Thread	Cable diameter (mm)	Thread length (mm)	Packing (pcs)
Jacob cable gland M12	M12 x 1,5	3,0 - 6,0	8,0	100
Jacob cable gland M16	M16 x 1,5	5,0 - 10,0	8,0	100
Jacob cable gland M20	M20 x 1,5	8,0 - 13,0	8,0	100
Jacob cable gland M25	M25 x 1,5	11,0 - 17,0	8,0	50
Jacob cable gland M32	M32 x 1,5	15,0 - 21,0	10,0	25
Jacob cable gland M40	M40 x 1,5	19,0 - 28,0	10,0	10
Jacob cable gland M50	M50 x 1,5	27,0 - 35,0	12,0	5
Jacob cable gland M63	M63 x 1,5	32,0 - 42,0	12,0	5

Polyamide Jacob cable glands, PG

Material : Polyamide PA6-V2
 Thread : PG (DIN 40430)
 Temperature range : -20 °C up to +100 °C
 Flammability : V0 / UL 94
 Protection grade : IP 68 – 5 bar
 Certification : UL 514B
 UL / CSA file : E140310
 Colors : Grey (RAL 7035), silvergrey (RAL 7001) and black (RAL 9005)
 Miscellaneous : Also available in threads of 15,0 and 18,0 mm



Typenr.	Thread	Cable diameter (mm)	Thread length (mm)	Packing (pcs)
Jacob cable gland PG7	PG7	3,0 - 6,5	8,0	100
Jacob cable gland PG9	PG9	4,0 - 8,0	8,0	100
Jacob cable gland PG11	PG11	5,0 - 10,0	8,0	100
Jacob cable gland PG13,5	PG13,5	6,0 - 12,0	9,0	100
Jacob cable gland PG16	PG16	10,0 - 14,0	10,0	50
Jacob cable gland PG21	PG21	13,0 - 18,0	11,0	50
Jacob cable gland PG29	PG29	18,0 - 25,0	11,0	25
Jacob cable gland PG36	PG36	22,0 - 32,0	13,0	10
Jacob cable gland PG42	PG42	30,0 - 38,0	13,0	5
Jacob cable gland PG48	PG48	34,0 - 44,0	14,0	5

In addition to our standard range of cable glands and accessories, we can also supply all other Jacob products (on request).
 For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Polyamide Jacob locknuts, metric

Material : Polyamide PA6 GF30
 Thread : Metric (EN 60423)
 Temperature range : -20 °C up to +100 °C
 Colors : Grey (RAL 7035), silvergrey (RAL 7001) and black (RAL 9005)



Typenr.	Thread	Height (mm)	Packing (pcs)
Jacob locknut M12	M12 x 1,5	5,0	100
Jacob locknut M16	M16 x 1,5	5,0	100
Jacob locknut M20	M20 x 1,5	5,6	100
Jacob locknut M25	M25 x 1,5	6,0	100
Jacob locknut M32	M32 x 1,5	7,0	100
Jacob locknut M40	M40 x 1,5	7,0	50
Jacob locknut M50	M50 x 1,5	8,0	50
Jacob locknut M63	M63 x 1,5	8,0	50

Polyamide Jacob locknuts, PG

Material : Polyamide PA6 GF30
 Thread : PG (DIN 40430)
 Temperature range : -20 °C up to +100 °C
 Colors : Grey (RAL 7035) and black (RAL 9005)



Typenr.	Thread	Height (mm)	Packing (pcs)
Jacob locknut PG7	PG7	5,0	100
Jacob locknut PG9	PG9	6,0	100
Jacob locknut PG11	PG11	6,0	100
Jacob locknut PG13,5	PG13,5	6,0	100
Jacob locknut PG16	PG16	6,0	100
Jacob locknut PG21	PG21	7,0	100
Jacob locknut PG29	PG29	7,0	100
Jacob locknut PG36	PG36	8,0	50
Jacob locknut PG42	PG42	8,0	50
Jacob locknut PG48	PG48	8,0	50

In addition to our standard range of cable glands and accessories, we can also supply all other Jacob products (on request).
 For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Polyamide Jacob sealing plugs, metric

Material : Polyamide PA6 GF30
Thread : Metric (EN 60423)
Temperature range : -30 °C up to +100 °C
Certification : IP 54
Colors : Grey (RAL 7035), silvergrey (RAL 7001) and black (RAL 9005)



Typenr.	Thread	Ø (mm)	Thread length (mm)	Height (mm)	Packing (pcs)
Jacob sealing plug M12	M12 x 1,5	15,0	6,0	10,0	100
Jacob sealing plug M16	M16 x 1,5	20,0	6,0	10,5	100
Jacob sealing plug M20	M20 x 1,5	24,0	6,0	10,5	100
Jacob sealing plug M25	M25 x 1,5	30,0	8,0	13,0	100
Jacob sealing plug M32	M32 x 1,5	37,0	8,0	13,5	100
Jacob sealing plug M40	M40 x 1,5	46,0	8,0	14,0	50
Jacob sealing plug M50	M50 x 1,5	56,0	10,0	16,5	50
Jacob sealing plug M63	M63 x 1,5	70,0	12,0	17,0	50

Polyamide Jacob sealing plugs, PG

Material : Polyamide PA6 GF30
Thread : PG (DIN 40430)
Temperature range : -30 °C up to +100 °C
Certification : IP 54
Colors : Grey (RAL 7035)



Typenr.	Thread	Ø (mm)	Thread length (mm)	Height (mm)	Packing (pcs)
Jacob sealing plug PG7	PG7	15,0	6,0	10,0	100
Jacob sealing plug PG9	PG9	19,0	6,0	10,0	100
Jacob sealing plug PG11	PG11	22,0	6,0	10,0	100
Jacob sealing plug PG13,5	PG13,5	25,0	6,0	10,0	100
Jacob sealing plug PG16	PG16	27,0	6,0	10,0	100
Jacob sealing plug PG21	PG21	33,0	8,0	12,5	100
Jacob sealing plug PG29	PG29	44,5	8,0	13,0	100
Jacob sealing plug PG36	PG36	55,5	10,0	15,0	50
Jacob sealing plug PG42	PG42	62,5	10,0	15,5	50
Jacob sealing plug PG48	PG48	69,5	12,0	17,0	50

In addition to our standard range of cable glands and accessories, we can also supply all other Jacob products (on request).
For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Brass Jacob cable glands, metric

Material : Brass CuZn39Pb3, galvanically nickel plated
Thread : Metric (EN 60423)
Temperature range : -20 °C up to +100 °C
Protection grade : IP 68 – 5 bar
Certification : EN 50262 / UL 514B
UL / CSA file : E140310



Typenr.	Thread	Cable diameter (mm)	Thread length (mm)	Packing (pcs)
Brass cable gland Jacob M12	M12 x 1,5	3,0 - 6,0	5,0	100
Brass cable gland Jacob M16	M16 x 1,5	5,0 - 9,0	5,0	100
Brass cable gland Jacob M20	M20 x 1,5	9,0 - 13,0	6,0	100
Brass cable gland Jacob M25	M25 x 1,5	11,0 - 16,0	7,0	50
Brass cable gland Jacob M32	M32 x 1,5	14,0 - 21,0	8,0	25
Brass cable gland Jacob M40	M40 x 1,5	19,0 - 27,0	8,0	10
Brass cable gland Jacob M50	M50 x 1,5	24,0 - 35,0	9,0	5
Brass cable gland Jacob M63	M63 x 1,5	32,0 - 42,0	10,0	5

Brass Jacob cable glands, PG

Material : Brass CuZn39Pb3, galvanically nickel plated
Thread : PG (DIN 40430)
Temperature range : -20 °C up to +100 °C
Protection grade : IP 68 – 5 bar



Typenr.	Thread	Cable diameter (mm)	Thread length (mm)	Packing (pcs)
Brass cable gland Jacob PG7	PG7	3,0 - 6,5	5,0	100
Brass cable gland Jacob PG9	PG9	4,0 - 8,0	6,0	100
Brass cable gland Jacob PG11	PG11	5,0 - 10,0	6,0	100
Brass cable gland Jacob PG13,5	PG13,5	6,0 - 12,0	6,5	100
Brass cable gland Jacob PG16	PG16	10,0 - 14,0	6,5	50
Brass cable gland Jacob PG21	PG21	13,0 - 18,0	7,0	50
Brass cable gland Jacob PG29	PG29	18,0 - 25,0	8,0	25
Brass cable gland Jacob PG36	PG36	22,0 - 32,0	9,0	10
Brass cable gland Jacob PG42	PG42	30,0 - 38,0	10,0	5
Brass cable gland Jacob PG48	PG48	34,0 - 44,0	10,0	5

In addition to our standard range of cable glands and accessories, we can also supply all other Jacob products (on request).
For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Brass Jacob locknuts, metric

Material : Brass CuZn39Pb3, galvanically nickel plated
 Thread : Metric (EN 60423 / ISO 965)
 Temperature range : Up to +200 °C



Typenr.	Thread	Height (mm)	Packing (pcs)
Brass locknut Jacob M12	M12 x 1,5	2,8	100
Brass locknut Jacob M16	M16 x 1,5	2,8	100
Brass locknut Jacob M20	M20 x 1,5	3,0	100
Brass locknut Jacob M25	M25 x 1,5	3,5	100
Brass locknut Jacob M32	M32 x 1,5	4,0	100
Brass locknut Jacob M40	M40 x 1,5	5,0	50
Brass locknut Jacob M50	M50 x 1,5	5,0	50
Brass locknut Jacob M63	M63 x 1,5	6,0	50

Brass Jacob locknuts, PG

Material : Brass CuZn39Pb3, galvanically nickel plated
 Thread : PG (DIN 40430)
 Temperature range : -60 °C up to +200 °C



Typenr.	Thread	Height (mm)	Packing (pcs)
Brass locknut Jacob PG7	PG7	2,8	100
Brass locknut Jacob PG9	PG9	2,8	100
Brass locknut Jacob PG11	PG11	3,0	100
Brass locknut Jacob PG13,5	PG13,5	3,0	100
Brass locknut Jacob PG16	PG16	3,0	100
Brass locknut Jacob PG21	PG21	3,5	100
Brass locknut Jacob PG29	PG29	4,0	100
Brass locknut Jacob PG36	PG36	5,0	50
Brass locknut Jacob PG42	PG42	5,0	50
Brass locknut Jacob PG48	PG48	5,5	50

In addition to our standard range of cable glands and accessories, we can also supply all other Jacob products (on request).
 For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Brass Jacob sealing plugs, metric

Material : Brass CuZn39Pb3, galvanically nickel plated
 Thread : Metric (EN 60423)
 Temperature range : Up to +200 °C
 Protection grade : IP 54



Typenr.	Thread	Ø (mm)	Thread length (mm)	Height (mm)	Packing (pcs)
Brass sealing plug Jacob M12	M12 x 1,5	16,0	5,0	8,0	100
Brass sealing plug Jacob M16	M16 x 1,5	20,0	6,0	9,0	100
Brass sealing plug Jacob M20	M20 x 1,5	24,0	6,5	9,5	100
Brass sealing plug Jacob M25	M25 x 1,5	28,0	7,0	11,0	100
Brass sealing plug Jacob M32	M32 x 1,5	35,0	8,0	12,0	50
Brass sealing plug Jacob M40	M40 x 1,5	45,0	8,0	12,0	50
Brass sealing plug Jacob M50	M50 x 1,5	55,0	9,0	15,0	25
Brass sealing plug Jacob M63	M63 x 1,5	68,0	10,0	16,0	10

Brass Jacob sealing plugs, PG

Material : Brass CuZn39Pb3, galvanically nickel plated
 Thread : PG (DIN 40430)
 Temperature range : -60 °C up to +200 °C
 Protection grade : IP 54



Typenr.	Thread	Ø (mm)	Thread length (mm)	Height (mm)	Packing (pcs)
Brass sealing plug Jacob PG7	PG7	14,0	5,0	8,0	100
Brass sealing plug Jacob PG9	PG9	17,0	6,0	9,0	100
Brass sealing plug Jacob PG11	PG11	20,0	6,0	9,0	100
Brass sealing plug Jacob PG13,5	PG13,5	22,0	6,5	9,5	100
Brass sealing plug Jacob PG16	PG16	24,0	6,5	9,5	100
Brass sealing plug Jacob PG21	PG21	30,0	7,0	11,0	100
Brass sealing plug Jacob PG29	PG29	39,0	8,0	12,0	50
Brass sealing plug Jacob PG36	PG36	50,0	9,0	15,0	25
Brass sealing plug Jacob PG42	PG42	57,0	10,0	16,0	25
Brass sealing plug Jacob PG48	PG48	64,0	10,0	16,0	10

In addition to our standard range of cable glands and accessories, we can also supply all other Jacob products (on request).
 For this, we refer you to the website of Jacob GmbH: www.jacob-gmbh.de/en/

Junction box 1 - FK70 - IP54 - 400 V

Dimensions	: 77 x 75 x 42 mm
Suitable for cables of	: 2,5 mm²
Suitable for cable glands	: M16 and M20
	: 7 flexible cable entries
Nominal voltage	: 400 V
Protection grade	: IP-54
Certification	: OVE
Material box	: PE-flame retardant
Material cover	: PP-flame retardant
Color	: Grey



Junction box 2 - FK75 - IP54 - 690 V

Dimensions	: 88 x 88 x 42 mm
Suitable for cables till	: 4,0 mm²
Suitable for cable gland	: M20
	: 7 flexible cable entries
	: M20 thread is present in each cable entry
Nominal voltage	: 690 V
Protection grade	: IP-54
Certification	: OVE
Material	: PP-flame retardant
Color	: Grey

Junction box 3 - FK80 - IP54 - 690 V

Dimensions	: 93 x 90 x 48 mm
Suitable for cables till	: 4,0 mm²
Suitable for cable gland	: M20
	: 12 flexible cable entries
Nominal voltage	: 690 V
Protection grade	: IP-54
Certification	: OVE
Material box	: PE-flame retardant
Material cover	: PP-flame retardant
Color	: Grey

Junction box 5 - With 4 cable glands PG16 - IP54 - 400 V

Dimensions	: 80 x 80 x 45 mm
Suitable for cables till	: 4,0 mm²
Suitable for cable gland	: PG16
	: 7 flexible cable entries
	: Will be delivered with 4 cable glands PG16
Nominal voltage	: 400 V
Protection grade	: IP-54
Certification	: Kema quality mark
Material	: PE-flame retardant
Color	: Grey



Junction box 6 - With 4 grommets PG16 - IP54 - 400 V

Dimensions	: 80 x 80 x 45 mm
Suitable for cables till	: 4,0 mm²
Suitable for cable gland	: PG16
	: 7 flexible cable entries
	: Will be delivered with 4 grommets
Nominal voltage	: 400 V
Protection grade	: IP-54
Certification	: Kema quality mark
Material	: PE-flame retardant
Color	: Grey

Junction box 9 - FD10 - IP54 - 400 V

Dimensions	: 93 x 43 x 42 mm
Suitable for cables of	: 2,5 mm²
Suitable for cable glands	: M16 and M20
	: 10 flexible cable entries
Nominal voltage	: 400 V
Protection grade	: IP-54
Certification	: OVE
Material box	: PE-flame retardant
Material cover	: PP-flame retardant
Color	: Grey



PVC insulated ring terminals

Maximum electrical rating : 600 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Copper

Also available without sleeve and with “easy entry”



Typenr.	Color	Wire range (mm²)	Hole (mm)	AWG	Length (mm)	Packing (pcs)
R 3.2 r	Red	0,5 ~ 1,5	3,2	22 ~ 16	16,7	100
R 3.7 r	Red	0,5 ~ 1,5	3,7	22 ~ 16	19,6	100
R 4.3 r	Red	0,5 ~ 1,5	4,3	22 ~ 16	19,6	100
R 5.3 r	Red	0,5 ~ 1,5	5,3	22 ~ 16	21,0	100
R 6.4 r	Red	0,5 ~ 1,5	6,5	22 ~ 16	26,8	100
R 8.4 r	Red	0,5 ~ 1,5	8,4	22 ~ 16	26,8	100
R 10.5 r	Red	0,5 ~ 1,5	10,5	22 ~ 16	30,7	100
R 3.7 b	Blue	1,5 ~ 2,5	3,7	16 ~ 14	19,5	100
R 4.3 b	Blue	1,5 ~ 2,5	4,3	16 ~ 14	22,0	100
R 5.3 b	Blue	1,5 ~ 2,5	5,3	16 ~ 14	22,0	100
R 6.4 b	Blue	1,5 ~ 2,5	6,5	16 ~ 14	27,0	100
R 8.4 b	Blue	1,5 ~ 2,5	8,4	16 ~ 14	27,0	100
R 10.5 b	Blue	1,5 ~ 2,5	10,5	16 ~ 14	30,7	100
R 3.2 g	Yellow	4,0 ~ 6,0	3,2	12 ~ 10	22,0	100
R 4.3 g	Yellow	4,0 ~ 6,0	4,3	12 ~ 10	25,5	100
R 5.3 g	Yellow	4,0 ~ 6,0	5,3	12 ~ 10	25,5	100
R 6.4 g	Yellow	4,0 ~ 6,0	6,5	12 ~ 10	29,0	100
R 8.4 g	Yellow	4,0 ~ 6,0	8,4	12 ~ 10	33,7	100
R 10.5 g	Yellow	4,0 ~ 6,0	10,5	12 ~ 10	33,7	100

PVC insulated spade terminals

Maximum electrical rating : 600 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Copper

Also available without sleeve and with “easy entry”



Typenr.	Color	Wire range (mm²)	Groove (mm)	AWG	Length (mm)	Packing (pcs)
V 3.2 r	Red	0,5 ~ 1,5	3,2	22 ~ 16	21,0	100
V 3.7 r	Red	0,5 ~ 1,5	3,7	22 ~ 16	20,6	100
V 4.3 r	Red	0,5 ~ 1,5	4,3	22 ~ 16	20,6	100
V 5.3 r	Red	0,5 ~ 1,5	5,3	22 ~ 16	21,0	100
V 6.4 r	Red	0,5 ~ 1,5	6,5	22 ~ 16	27,2	100
V 3.7 b	Blue	1,5 ~ 2,5	3,7	16 ~ 14	21,0	100
V 4.3 b	Blue	1,5 ~ 2,5	4,3	16 ~ 14	21,0	100
V 5.3 b	Blue	1,5 ~ 2,5	5,3	16 ~ 14	22,0	100
V 6.4 b	Blue	1,5 ~ 2,5	6,5	16 ~ 14	27,2	100
V 8.4 b	Blue	1,5 ~ 2,5	8,4	16 ~ 14	27,2	100
V 3.7 g	Yellow	4,0 ~ 6,0	3,7	12 ~ 10	25,2	100
V 4.3 g	Yellow	4,0 ~ 6,0	4,3	12 ~ 10	25,2	100
V 5.3 g	Yellow	4,0 ~ 6,0	5,3	12 ~ 10	25,2	100
V 6.4 g	Yellow	4,0 ~ 6,0	6,5	12 ~ 10	31,2	100

PVC insulated female disconnectors

Maximum electrical rating : 300 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Brass

Also available without sleeve and with “easy entry”



Typenr.	Color	Wire range (mm²)	Tab (mm)	AWG	Packing (pcs)
Con vh 2.8 rs	Red	0,5 ~ 1,5	0,5 * 2,8	22 ~ 16	100
Con vh 2.8 r	Red	0,5 ~ 1,5	0,8 * 2,8	22 ~ 16	100
Con vh 4.8 rs	Red	0,5 ~ 1,5	0,5 * 4,8	22 ~ 16	100
Con vh 4.8 r	Red	0,5 ~ 1,5	0,8 * 4,8	22 ~ 16	100
Con vh 6.3 r	Red	0,5 ~ 1,5	0,8 * 6,4	22 ~ 16	100
Con vh 2.8 bs	Blue	1,5 ~ 2,5	0,5 * 2,8	16 ~ 14	100
Con vh 2.8 b	Blue	1,5 ~ 2,5	0,8 * 2,8	16 ~ 14	100
Con vh 4.8 bs	Blue	1,5 ~ 2,5	0,5 * 4,8	16 ~ 14	100
Con vh 4.8 b	Blue	1,5 ~ 2,5	0,8 * 4,8	16 ~ 14	100
Con vh 6.3 b	Blue	1,5 ~ 2,5	0,8 * 6,4	16 ~ 14	100
Con vh 6.3 g	Yellow	4,0 ~ 6,0	0,8 * 6,8	12 ~ 10	100

PVC fully insulated female disconnectors

Maximum electrical rating : 300 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Brass

Also available without sleeve and with “easy entry”



Typenr.	Color	Wire range (mm²)	Tab (mm)	AWG	Packing (pcs)
Con vv 2.8 rs	Red	0,5 ~ 1,5	0,5 * 2,8	22 ~ 16	100
Con vv 2.8 r	Red	0,5 ~ 1,5	0,8 * 2,8	22 ~ 16	100
Con vv 4.8 rs	Red	0,5 ~ 1,5	0,5 * 4,8	22 ~ 16	100
Con vv 4.8 r	Red	0,5 ~ 1,5	0,8 * 4,8	22 ~ 16	100
Con vv 6.3 r	Red	0,5 ~ 1,5	0,8 * 6,4	22 ~ 16	100
Con vv 2.8 bs	Blue	1,5 ~ 2,5	0,5 * 2,8	16 ~ 14	100
Con vv 2.8 b	Blue	1,5 ~ 2,5	0,8 * 2,8	16 ~ 14	100
Con vv 4.8 bs	Blue	1,5 ~ 2,5	0,5 * 4,8	16 ~ 14	100
Con vv 4.8 b	Blue	1,5 ~ 2,5	0,8 * 4,8	16 ~ 14	100
Con vv 6.3 b	Blue	1,5 ~ 2,5	0,8 * 6,4	16 ~ 14	100
Con vv 6.3 g	Yellow	4,0 ~ 6,0	0,8 * 6,4	12 ~ 10	100

PVC insulated piggy-back connectors

Maximum electrical rating : 300 V max.
Maximum temperature : 75 °C
Insulation material : PVC
Terminal material : Brass

Also available without sleeve and with “easy entry”



Typenr.	Color	Wire range (mm²)	Tab (mm)	AWG	Packing (pcs)
Con dh 6.3 r	Red	0,5 ~ 1,5	0,8 * 6,4	22 ~ 16	100
Con dh 6.3 b	Blue	1,5 ~ 2,5	0,8 * 6,4	16 ~ 14	100
Con dh 6.3 g	Yellow	4,0 ~ 6,0	0,8 * 6,4	12 ~ 10	100

PVC insulated male disconnectors

Maximum electrical rating : 300 V max.
Maximum temperature : 75 °C
Insulation material : PVC
Terminal material : Brass

Also available without sleeve and with “easy entry”



Typenr.	Color	Wire range (mm²)	Tab (mm)	AWG	Packing (pcs)
Con mh 2.8 rs	Red	0,5 ~ 1,5	0,5 * 2,8	22 ~ 16	100
Con mh 2.8 r	Red	0,5 ~ 1,5	0,8 * 2,8	22 ~ 16	100
Con mh 4.8 rs	Red	0,5 ~ 1,5	0,5 * 4,8	22 ~ 16	100
Con mh 4.8 r	Red	0,5 ~ 1,5	0,8 * 4,8	22 ~ 16	100
Con mh 6.3 r	Red	0,5 ~ 1,5	0,8 * 6,4	22 ~ 16	100
Con mh 2.8 bs	Blue	1,5 ~ 2,5	0,5 * 2,8	16 ~ 14	100
Con mh 2.8 b	Blue	1,5 ~ 2,5	0,8 * 2,8	16 ~ 14	100
Con mh 4.8 bs	Blue	1,5 ~ 2,5	0,5 * 4,8	16 ~ 14	100
Con mh 4.8 b	Blue	1,5 ~ 2,5	0,8 * 4,8	16 ~ 14	100
Con mh 6.3 b	Blue	1,5 ~ 2,5	0,8 * 6,4	16 ~ 14	100
Con mh 6.3 g	Yellow	4,0 ~ 6,0	0,8 * 6,4	12 ~ 10	100

PVC insulated butt connectors

Maximum electrical rating : 600 V max.
Maximum temperature : 75 °C
Insulation material : PVC
Terminal material : Copper



Typenr.	Color	Wire range (mm²)	Length (mm)	AWG	Packing (pcs)
Ver 1.25 r	Red	0,5 ~ 1,5	26,0	22 ~ 16	100
Ver 2 b	Blue	1,5 ~ 2,5	26,0	16 ~ 14	100
Ver 5.5 g	Yellow	4,0 ~ 6,0	26,0	12 ~ 10	100

Heat shrinkable butt connectors

Properties : 100% waterproof with heat shrinkable tubing
Temperature range : -10 °C up to +105 °C
Shrink temperature : +100 °C up to +200 °C
Insulation material : Polyolefin
Certification : RoHS



Typenr.	Color	Wire range (mm²)	Length (mm)	AWG	Packing (pcs)
Ver 1.25 r heat shrink	Red	0,5 ~ 1,5	37,0	22 ~ 16	100
Ver 2 b heat shrink	Blue	1,5 ~ 2,5	37,0	16 ~ 14	100
Ver 5.5 g heat shrink	Yellow	4,0 ~ 6,0	41,0	12 ~ 10	100

Solder butt connectors

Temperature range : -55 °C up to +125 °C
 Shrink temperature : > +140 °C
 Insulation material : Polyolefin



Typenr.	Color	Wire range (mm²)	Length (mm)	Packing (pcs)
Solder 0.2 - 0.75 transp.	Transparent	0,2 ~ 0,75	40,0	100
Solder 0.6 - 2.0 red	Red	0,6 ~ 2,0	40,0	100
Solder 1.8 - 2.5 blue	Blue	1,8 ~ 2,5	40,0	100
Solder 2.4 - 4.5 yellow	Yellow	2,4 ~ 4,5	40,0	100

PVC fully insulated receptacle disconnectors

Maximum electrical rating : 300 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Brass

Also available without sleeve and with "easy entry"



Typenr.	Color	Wire range (mm²)	Diameter connector (mm)	AWG	Packing (pcs)
Kog v 4 r	Red	0,5 ~ 1,5	4,0	22 ~ 16	100
Kog v 4 b	Blue	1,5 ~ 2,5	4,0	16 ~ 14	100
Kog v 5 b	Blue	1,5 ~ 2,5	5,0	16 ~ 14	100
Kog v 5 g	Yellow	4,0 ~ 6,0	5,0	12 ~ 10	100

PVC insulated bullet disconnectors

Maximum electrical rating : 300 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Brass

Also available without sleeve and with "easy entry"



Typenr.	Color	Wire range (mm²)	Diameter connector (mm)	AWG	Packing (pcs)
Kog m 4 r	Red	0,5 ~ 1,5	4,0	22 ~ 16	100
Kog m 4 b	Blue	1,5 ~ 2,5	4,0	16 ~ 14	100
Kog m 5 b	Blue	1,5 ~ 2,5	5,0	16 ~ 14	100
Kog m 5 g	Yellow	4,0 ~ 6,0	5,0	12 ~ 10	100

PVC insulated pin terminals

Maximum electrical rating : 600 V max.
 Maximum temperature : 75 °C
 Insulation material : PVC
 Terminal material : Brass

Also available without sleeve and with "easy entry"

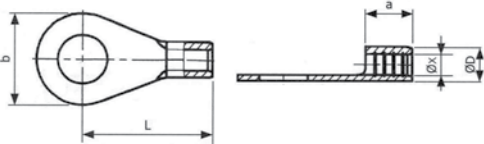


Typenr.	Color	Wire range (mm²)	AWG	Length (mm)	Packing (pcs)
Pin r	Red	0,5 ~ 1,5	22 ~ 16	22,5	100
Pin b	Blue	1,5 ~ 2,5	16 ~ 14	22,5	100
Pin g	Yellow	4,0 ~ 6,0	12 ~ 10	26,2	100

Non insulated DIN 46234 terminals

Material : Copper
 Certification : DIN 46234

On request: 95 mm², 120 mm², 150 mm², 185 mm² and 240 mm²



¹ = Does not meet the DIN standards

Typenr.	Wire range (mm²)	AWG	Hole diameter (mm)	X (mm)	D (mm)	b (mm)	L (mm)	a (mm)	Packing (pcs)
PKQ 15.03	0,5 ~ 1,5	22 ~ 16	3,0	1,6	3,2	6,0	11,0	5,0	100
PKQ 15.04	0,5 ~ 1,5	22 ~ 16	4,0	1,6	3,2	8,0	12,0	5,0	100
PKQ 15.05	0,5 ~ 1,5	22 ~ 16	5,0	1,6	3,2	10,0	13,0	5,0	100
PKQ 15.06 ¹	0,5 ~ 1,5	22 ~ 16	6,0	1,6	3,2	10,0	13,0	5,0	100
PKQ 15.08 ¹	0,5 ~ 1,5	22 ~ 16	8,0	1,6	3,2	14,0	17,0	5,0	100
PKQ 15.10 ¹	0,5 ~ 1,5	22 ~ 16	10,0	1,6	3,2	14,0	17,0	5,0	100
PKQ 25.03	1,5 ~ 2,5	16 ~ 14	3,0	2,3	3,9	6,0	11,0	5,0	100
PKQ 25.04	1,5 ~ 2,5	16 ~ 14	4,0	2,3	3,9	8,0	12,0	5,0	100
PKQ 25.05	1,5 ~ 2,5	16 ~ 14	5,0	2,3	3,9	10,0	14,0	5,0	100
PKQ 25.06	1,5 ~ 2,5	16 ~ 14	6,0	2,3	3,9	11,0	16,0	5,0	100
PKQ 25.08	1,5 ~ 2,5	16 ~ 14	8,0	2,3	3,9	14,0	17,0	5,0	100
PKQ 25.10 ¹	1,5 ~ 2,5	16 ~ 14	10,0	2,3	3,9	18,0	18,0	5,0	100
PKQ 25.12 ¹	1,5 ~ 2,5	16 ~ 14	12,0	2,3	3,9	18,0	18,0	5,0	100
PKQ 60.04	4,0 ~ 6,0	12 ~ 10	4,0	3,6	5,6	8,0	14,0	6,0	100
PKQ 60.05	4,0 ~ 6,0	12 ~ 10	5,0	3,6	5,6	10,0	15,0	6,0	100
PKQ 60.06	4,0 ~ 6,0	12 ~ 10	6,0	3,6	5,6	11,0	16,0	6,0	100
PKQ 60.08	4,0 ~ 6,0	12 ~ 10	8,0	3,6	5,6	14,0	19,0	6,0	100
PKQ 60.10	4,0 ~ 6,0	12 ~ 10	10,0	3,6	5,6	18,0	21,0	6,0	100
PKQ 60.12 ¹	4,0 ~ 6,0	12 ~ 10	12,0	3,6	5,6	18,0	21,0	6,0	100
PKQ 100.05	10,0	8	5,0	4,5	6,7	10,0	16,0	8,0	100
PKQ 100.06	10,0	8	6,0	4,5	6,7	11,0	17,0	8,0	100
PKQ 100.08	10,0	8	8,0	4,5	6,7	14,0	20,0	8,0	100
PKQ 100.10	10,0	8	10,0	4,5	6,7	18,0	21,0	8,0	100
PKQ 100.12	10,0	8	12,0	4,5	6,7	22,0	23,0	8,0	100



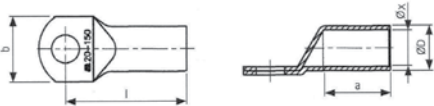
Typenr.	Wire range (mm²)	AWG	Hole diameter (mm)	X (mm)	D (mm)	b (mm)	L (mm)	a (mm)	Packing (pcs)
PKQ 160.05	16,0	6	5,0	5,8	8,2	11,0	20,0	10,0	100
PKQ 160.06	16,0	6	6,0	5,8	8,2	11,0	20,0	10,0	100
PKQ 160.08	16,0	6	8,0	5,8	8,2	18,0	24,0	10,0	100
PKQ 160.10	16,0	6	10,0	5,8	8,2	18,0	24,0	10,0	100
PKQ 160.12	16,0	6	12,0	5,8	8,2	22,0	26,0	10,0	100
PKQ 250.05	25,0	4	5,0	7,5	10,5	12,0	25,0	11,0	100
PKQ 250.06	25,0	4	6,0	7,5	10,5	12,0	25,0	11,0	100
PKQ 250.08	25,0	4	8,0	7,5	10,5	16,0	25,0	11,0	100
PKQ 250.10	25,0	4	10,0	7,5	10,5	18,0	26,0	11,0	100
PKQ 250.12	25,0	4	12,0	7,5	10,5	22,0	31,0	11,0	100
PKQ 250.16	25,0	4	16,0	7,5	10,5	28,0	35,0	11,0	100
PKQ 350.06	35,0	2	6,0	9,0	12,2	15,0	26,0	12,0	100
PKQ 350.08	35,0	2	8,0	9,0	12,2	16,0	26,0	12,0	100
PKQ 350.10	35,0	2	10,0	9,0	12,2	18,0	27,0	12,0	100
PKQ 350.12	35,0	2	12,0	9,0	12,2	22,0	31,0	12,0	100
PKQ 350.16	35,0	2	16,0	9,0	12,2	28,0	36,0	12,0	100
PKQ 500.06	50,0	1/0	6,0	11,0	14,6	18,0	34,0	16,0	100
PKQ 500.08	50,0	1/0	8,0	11,0	14,6	18,0	34,0	16,0	100
PKQ 500.10	50,0	1/0	10,0	11,0	14,6	18,0	34,0	16,0	100
PKQ 500.12	50,0	1/0	12,0	11,0	14,6	22,0	36,0	16,0	100
PKQ 500.16	50,0	1/0	16,0	11,0	14,6	28,0	40,0	16,0	100
PKQ 700.06	70,0	2/0	6,0	13,0	17,0	22,0	36,0	18,0	100
PKQ 700.08	70,0	2/0	8,0	13,0	17,0	22,0	38,0	18,0	100
PKQ 700.10	70,0	2/0	10,0	13,0	17,0	22,0	38,0	18,0	100
PKQ 700.12	70,0	2/0	12,0	13,0	17,0	22,0	38,0	18,0	100
PKQ 700.16	70,0	2/0	16,0	13,0	17,0	28,0	42,0	18,0	100

For other types, please see the following page

Non insulated terminals

Material : Copper

On request: 185 mm², 240 mm² and 300 mm²



Typenr.	Wire range (mm²)	AWG	Hole diameter (mm)	X (mm)	D (mm)	a (mm)	l (mm)	b (mm)	Packing (pcs)
PKK 60.05	6,0	10	5,0	3,6	5,6	9,0	21,0	11,5	100
PKK 60.06	6,0	10	6,0	3,6	5,6	9,0	21,0	11,5	100
PKK 60.08	6,0	10	8,0	3,6	5,6	9,0	23,0	13,0	100
PKK 60.10	6,0	10	10,0	3,6	5,6	9,0	25,0	16,0	100
PKK 60.12	6,0	10	12,0	3,6	5,6	9,0	25,0	19,0	100
PKK 100.05	10,0	8	5,0	4,5	7,0	10,0	21,0	12,0	100
PKK 100.06	10,0	8	6,0	4,5	7,0	10,0	21,5	12,0	100
PKK 100.08	10,0	8	8,0	4,5	7,0	10,0	23,5	15,0	100
PKK 100.10	10,0	8	10,0	4,5	7,0	10,0	25,5	17,0	100
PKK 160.05	16,0	6	5,0	5,5	8,5	13,0	25,0	12,0	100
PKK 160.06	16,0	6	6,0	5,5	8,5	13,0	25,5	12,0	100
PKK 160.08	16,0	6	8,0	5,5	8,5	13,0	27,5	15,0	100
PKK 160.10	16,0	6	10,0	5,5	8,5	13,0	29,5	17,0	100
PKK 160.12	16,0	6	12,0	5,5	8,5	13,0	30,5	19,0	100
PKK 250.05	25,0	4	5,0	7,2	10,0	15,0	28,0	14,0	100
PKK 250.06	25,0	4	6,0	7,2	10,0	15,0	28,5	14,0	100
PKK 250.08	25,0	4	8,0	7,2	10,0	15,0	30,5	16,0	100
PKK 250.10	25,0	4	10,0	7,2	10,0	15,0	32,5	18,0	100
PKK 250.12	25,0	4	12,0	7,2	10,0	15,0	33,5	19,0	100
PKK 350.06	35,0	2	6,0	8,5	12,0	17,0	31,5	18,0	25
PKK 350.08	35,0	2	8,0	8,5	12,0	17,0	33,5	18,0	25
PKK 350.10	35,0	2	10,0	8,5	12,0	17,0	35,5	18,0	25
PKK 350.12	35,0	2	12,0	8,5	12,0	17,0	36,5	20,0	25

For other types, please see the following page

Typenr.	Wire range (mm²)	AWG	Hole diameter (mm)	X (mm)	D (mm)	a (mm)	l (mm)	b (mm)	Packing (pcs)
PKK 500.06	50,0	1/0	6,0	10,2	14,0	19,0	34,5	20,0	25
PKK 500.08	50,0	1/0	8,0	10,2	14,0	19,0	36,5	20,0	25
PKK 500.10	50,0	1/0	10,0	10,2	14,0	19,0	38,5	20,0	25
PKK 500.12	50,0	1/0	12,0	10,2	14,0	19,0	39,5	23,0	25
PKK 500.16	50,0	1/0	16,0	10,2	14,0	19,0	42,5	28,0	25
PKK 700.06	70,0	2/0	6,0	12,0	16,5	21,0	40,5	23,0	25
PKK 700.08	70,0	2/0	8,0	12,0	16,5	21,0	40,5	23,0	25
PKK 700.10	70,0	2/0	10,0	12,0	16,5	21,0	43,5	23,0	25
PKK 700.12	70,0	2/0	12,0	12,0	16,5	21,0	43,5	23,0	25
PKK 700.14	70,0	2/0	14,0	12,0	16,5	21,0	46,5	28,0	25
PKK 700.16	70,0	2/0	16,0	12,0	16,5	21,0	46,5	28,0	25
PKK 950.08	95,0	3/0	8,0	13,5	17,8	24,0	47,0	25,0	25
PKK 950.10	95,0	3/0	10,0	13,5	17,8	24,0	47,0	25,0	25
PKK 950.12	95,0	3/0	12,0	13,5	17,8	24,0	47,0	25,0	25
PKK 950.14	95,0	3/0	14,0	13,5	17,8	24,0	50,0	25,0	25
PKK 950.16	95,0	3/0	16,0	13,5	17,8	24,0	50,0	29,0	25
PKK 1200.08	120,0	4/0	8,0	15,0	19,5	26,0	50,0	29,0	25
PKK 1200.10	120,0	4/0	10,0	15,0	19,5	26,0	50,0	29,0	25
PKK 1200.12	120,0	4/0	12,0	15,0	19,5	26,0	50,0	29,0	25
PKK 1200.14	120,0	4/0	14,0	15,0	19,5	26,0	53,0	29,0	25
PKK 1200.16	120,0	4/0	16,0	15,0	19,5	26,0	53,0	29,0	25
PKK 1200.20	120,0	4/0	20,0	15,0	19,5	26,0	57,5	35,0	25
PKK 1500.10	150,0	5/0	10,0	16,5	20,8	29,0	54,0	31,0	25
PKK 1500.12	150,0	5/0	12,0	16,5	20,8	29,0	54,0	31,0	25
PKK 1500.16	150,0	5/0	16,0	16,5	20,8	29,0	57,0	31,0	25
PKK 1500.20	150,0	5/0	20,0	16,5	20,8	29,0	61,5	35,0	25

Quick splice connectors single tab

Maximum electrical rating : 600 V max.
Maximum temperature : 105 °C
Insulation material : Nylon
Terminal material : Brass



Typenr.	Color	Wire range (mm²)	AWG	Length (mm)	Packing (pcs)
Quick r	Red	0,5 ~ 1,5	22 ~ 16	26,0	100
Quick b	Blue	1,5 ~ 2,5	16 ~ 14	26,0	100
Quick g	Yellow	4,0 ~ 6,0	12 ~ 10	32,8	100

Fuseholders

Maximum electrical rating : 600 V max.
Maximum temperature : 75 °C
Insulation material : Polypropylene
Terminal material : Brass



Typenr.	Color	Wire range (mm²)	AWG	Length (mm)	Packing (pcs)
WK/2 fuse holder	Blue	1,5 ~ 2,5	16 ~ 14	34,0	200

Tool 4 for terminals

Type : Tool T4 KS insulated 0,5 – 6,0 mm²
Material : Carbon steel
Use : For insulated terminals of 0,5 – 6,0 mm²
Release of the tool when reaching the right pressure



Tool 5 for terminals

Type : Tool T5 KS insulated 0,5 – 6,0 mm²
Material : Steel 3 / 16
Use : For insulated terminals of 0,5 – 6,0 mm²



Assortments terminals

Assortment 1: terminals with tool 5 (261 pcs)

Terminal material : Brass
Insulation material : PVC
Maximum temperature : 75 °C
Maximum electrical rating : 300 V

Including:

Typenr.	Color	Quantity
Tool 5		1
Con vh 6.3 r	Red	25
Con vh 6.3 b	Blue	25
Con mh 6.3 r	Red	25
Con mh 6.3 b	Blue	25
Con dh 6.3 r	Red	25
Con dh 6.3 b	Blue	25
Ver 1.25 r	Red	25
Ver 2 b	Blue	25
R 5.3 r	Red	25
R 6.4 b	Blue	25
Quick r	Red	5
Quick b	Blue	5



Assortment 2: heat shrinkable terminals (110 pcs)

Terminal material : Brass
Insulation material : Polyolefin
Shrink temperature : +150 °C
Temperature range : -10 °C up to +105 °C

Including:

Typenr.	Color	Quantity
Ver 1.25 r heat shrink	Red	20
Ver 2 b heat shrink	Blue	20
Ver 5.5 g heat shrink	Yellow	10
Con vh 6.3 r heat shrink	Red	10
Con vh 6.3 b heat shrink	Blue	10
Con mh 6.3 r heat shrink	Red	10
Con mh 6.3 b heat shrink	Blue	10
R 5.3 r heat shrink	Red	10
R 5.3 b heat shrink	Blue	10

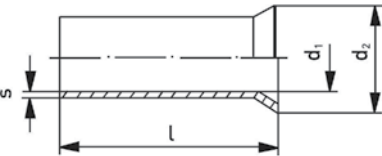




CABLE END-SLEEVES

Cable end-sleeves non-insulated

Material : Copper
Minimum coating thickness : 3 µm
Certification : DIN 46228/1



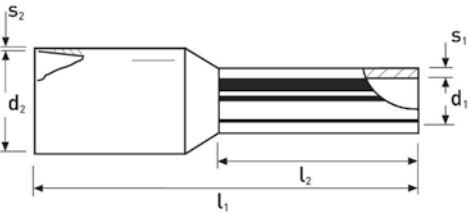
Typenr.	Mm²	AWG	L (mm)	D1 (mm)	D2 (mm)	S (mm)	Packing (pcs)
Co 001407	0,14	26	7,00	0,65	1,60	0,15	1000
Co 002505	0,25	24	5,00	0,75	1,70	0,15	1000
Co 002507	0,25	24	7,00	0,75	1,70	0,15	1000
Co 003405	0,34	22	5,00	0,85	1,80	0,15	1000
Co 003407	0,34	22	7,00	0,85	1,80	0,15	1000
Co 005006	0,50	20	6,00	1,00	2,10	0,15	1000
Co 005008	0,50	20	8,00	1,00	2,10	0,15	1000
Co 005010	0,50	20	10,00	1,00	2,10	0,15	1000
Co 005012	0,50	20	12,00	1,00	2,10	0,15	1000
Co 007506	0,75	18	6,00	1,20	2,30	0,15	1000
Co 007508	0,75	18	8,00	1,20	2,30	0,15	1000
Co 007510	0,75	18	10,00	1,20	2,30	0,15	1000
Co 007512	0,75	18	12,00	1,20	2,30	0,15	1000
Co 007515	0,75	18	15,00	1,20	2,30	0,15	1000
Co 010006	1,00	18	6,00	1,40	2,50	0,15	1000
Co 010007	1,00	18	7,00	1,40	2,50	0,15	1000
Co 010008	1,00	18	8,00	1,40	2,50	0,15	1000
Co 010010	1,00	18	10,00	1,40	2,50	0,15	1000
Co 010012	1,00	18	12,00	1,40	2,50	0,15	1000
Co 010015	1,00	18	15,00	1,40	2,50	0,15	1000
Co 015006	1,50	16	6,00	1,70	2,80	0,15	1000
Co 015007	1,50	16	7,00	1,70	2,80	0,15	1000
Co 015008	1,50	16	8,00	1,70	2,80	0,15	1000
Co 015010	1,50	16	10,00	1,70	2,80	0,15	1000
Co 015012	1,50	16	12,00	1,70	2,80	0,15	1000
Co 015015	1,50	16	15,00	1,70	2,80	0,15	1000
Co 015018	1,50	16	18,00	1,70	2,80	0,15	1000
Co 015020	1,50	16	20,00	1,70	2,80	0,15	1000

Typenr.	Mm²	AWG	L (mm)	D1 (mm)	D2 (mm)	S (mm)	Packing (pcs)
Co 025007	2,50	14	7,00	2,20	3,40	0,15	1000
Co 025008	2,50	14	8,00	2,20	3,40	0,15	1000
Co 025010	2,50	14	10,00	2,20	3,40	0,15	1000
Co 025012	2,50	14	12,00	2,20	3,40	0,15	1000
Co 025015	2,50	14	15,00	2,20	3,40	0,15	1000
Co 025018	2,50	14	18,00	2,20	3,40	0,15	1000
Co 025020	2,50	14	20,00	2,20	3,40	0,15	1000
Co 040009	4,00	12	9,00	2,80	4,00	0,20	1000
Co 040010	4,00	12	10,00	2,80	4,00	0,20	1000
Co 040012	4,00	12	12,00	2,80	4,00	0,20	1000
Co 040015	4,00	12	15,00	2,80	4,00	0,20	1000
Co 040018	4,00	12	18,00	2,80	4,00	0,20	1000
Co 040020	4,00	12	20,00	2,80	4,00	0,20	1000
Co 060010	6,00	10	10,00	3,50	4,70	0,20	250
Co 060012	6,00	10	12,00	3,50	4,70	0,20	250
Co 060015	6,00	10	15,00	3,50	4,70	0,20	250
Co 060018	6,00	10	18,00	3,50	4,70	0,20	250
Co 060020	6,00	10	20,00	3,50	4,70	0,20	250
Co 100012	10,00	8	12,00	4,50	5,80	0,20	250
Co 100015	10,00	8	15,00	4,50	5,80	0,20	250
Co 100018	10,00	8	18,00	4,50	5,80	0,20	250
Co 100020	10,00	8	20,00	4,50	5,80	0,20	250
Co 100025	10,00	8	25,00	4,50	5,80	0,20	250
Co 160012	16,00	6	12,00	5,80	7,50	0,20	250
Co 160015	16,00	6	15,00	5,80	7,50	0,20	250
Co 160018	16,00	6	18,00	5,80	7,50	0,20	250
Co 160020	16,00	6	20,00	5,80	7,50	0,20	250
Co 160025	16,00	6	25,00	5,80	7,50	0,20	250
Co 160032	16,00	6	32,00	5,80	7,50	0,20	250

For other types, please see the following page

Cable end-sleeves insulated

Material : Copper
 Temperature range : Up to +105 °C
 Minimum coating thickness : 3 µm
 Certification : DIN 46228/4
 Entry tunnel is made of Polypropylene



“T” type = Telemechanic
 “W” type = Weidmüller
 “D” type = DIN

Typenr.	Mm²	AWG	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	Color T	Color W	Color D	Packing (pcs)
Ce 001406	0,14	26	10,00	6,00	0,70	1,60	0,15	Brown	Grey	-	500
Ce 001408	0,14	26	12,00	8,00	0,70	1,60	0,15	Brown	Grey	-	500
Ce 002506	0,25	24	10,00	6,00	0,75	1,80	0,15	Yellow	Blue	Purple	500
Ce 002508	0,25	24	12,00	8,00	0,75	1,80	0,15	Yellow	Blue	Purple	500
Ce 003406	0,34	22	10,00	6,00	0,80	2,00	0,15	Green	Turquoise	Pink	500
Ce 003408	0,34	22	12,00	8,00	0,80	2,00	0,15	Green	Turquoise	Pink	500
Ce 005006	0,50	20	12,00	6,00	1,00	2,60	0,15	White	Orange	White	500
Ce 005008	0,50	20	14,00	8,00	1,00	2,60	0,15	White	Orange	White	500
Ce 005010	0,50	20	16,00	10,00	1,00	2,60	0,15	White	Orange	White	500
Ce 007506	0,75	18	12,00	6,00	1,20	2,80	0,15	Blue	White	Grey	500
Ce 007508	0,75	18	14,00	8,00	1,20	2,80	0,15	Blue	White	Grey	500
Ce 007510	0,75	18	16,00	10,00	1,20	2,80	0,15	Blue	White	Grey	500
Ce 007512	0,75	18	18,00	12,00	1,20	2,80	0,15	Blue	White	Grey	500
Ce 010006	1,00	18	12,00	6,00	1,40	3,00	0,15	Red	Yellow	Red	500
Ce 010008	1,00	18	14,00	8,00	1,40	3,00	0,15	Red	Yellow	Red	500
Ce 010010	1,00	18	16,00	10,00	1,40	3,00	0,15	Red	Yellow	Red	500
Ce 010012	1,00	18	18,00	12,00	1,40	3,00	0,15	Red	Yellow	Red	500
Ce 015006	1,50	16	12,00	6,00	1,70	3,50	0,15	Black	Red	Black	500
Ce 015008	1,50	16	14,00	8,00	1,70	3,50	0,15	Black	Red	Black	500
Ce 015010	1,50	16	16,00	10,00	1,70	3,50	0,15	Black	Red	Black	500
Ce 015012	1,50	16	18,00	12,00	1,70	3,50	0,15	Black	Red	Black	500
Ce 015018	1,50	16	24,00	18,00	1,70	3,50	0,15	Black	Red	Black	500
Ce 025008	2,50	14	14,00	8,00	2,20	4,20	0,15	Grey	Blue	Blue	500
Ce 025010	2,50	14	16,00	10,00	2,20	4,20	0,15	Grey	Blue	Blue	500
Ce 025012	2,50	14	18,00	12,00	2,20	4,20	0,15	Grey	Blue	Blue	500
Ce 025018	2,50	14	24,00	18,00	2,20	4,20	0,15	Grey	Blue	Blue	500

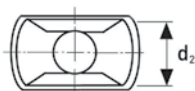
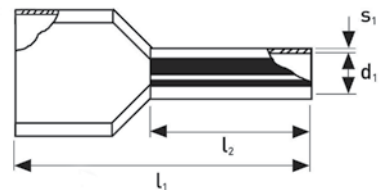


Typenr.	Mm²	AWG	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	Color T	Color W	Color D	Packing (pcs)
Ce 040010	4,00	12	17,00	10,00	2,80	4,80	0,20	Orange	Grey	Grey	500
Ce 040012	4,00	12	20,00	12,00	2,80	4,80	0,20	Orange	Grey	Grey	500
Ce 040018	4,00	12	26,00	18,00	2,80	4,80	0,20	Orange	Grey	Grey	500
Ce 060012	6,00	10	20,00	12,00	3,50	6,30	0,20	Green	Black	Yellow	100
Ce 060018	6,00	10	26,00	18,00	3,50	6,30	0,20	Green	Black	Yellow	100
Ce 100012	10,00	8	22,00	12,00	4,50	7,60	0,20	Brown	Cream	Red	100
Ce 100018	10,00	8	28,00	18,00	4,50	7,60	0,20	Brown	Cream	Red	100
Ce 160012	16,00	6	24,00	12,00	5,80	8,80	0,20	Cream	Green	Blue	100
Ce 160018	16,00	6	28,00	18,00	5,80	8,80	0,20	Cream	Green	Blue	100
Ce 250016	25,00	4	30,00	16,00	7,30	11,20	0,20	Black	Brown	Yellow	50
Ce 250018	25,00	4	30,00	18,00	7,30	11,20	0,20	Black	Brown	Yellow	50
Ce 250022	25,00	4	36,00	22,00	7,30	11,20	0,20	Black	Brown	Yellow	50
Ce 350016	35,00	2	30,00	16,00	8,30	12,70	0,20	Red	Cream	Red	50
Ce 350018	35,00	2	30,00	18,00	8,30	12,70	0,20	Red	Cream	Red	50
Ce 350025	35,00	2	39,00	25,00	8,30	12,70	0,20	Red	Cream	Red	50
Ce 500020	50,00	1	36,00	20,00	10,30	15,00	0,30	Blue	Olive	Blue	50
Ce 500025	50,00	1	40,00	25,00	10,30	15,00	0,30	Blue	Olive	Blue	50
Ce 700021	70,00	2/0	37,00	21,00	13,50	16,00	0,40	Yellow	Yellow	Yellow	25
Ce 950025	95,00	3/0	44,00	25,00	14,50	18,00	0,40	Red	Red	Red	25
Ce 1200027	120,00	4/0	48,00	27,00	16,50	20,00	0,45	Blue	Blue	Blue	25
Ce 1500032	150,00	300 MCM	58,00	32,00	19,50	23,00	0,50	Yellow	Yellow	Yellow	25

For other types, please see the following page

Cable end-sleeves double “Twins”

Material : Copper
 Temperature range : Up to +105 °C
 Minimum coating thickness : 3 µm
 Certification : DIN 46228/4
 Entry tunnel is made of Polypropylene



“T” type = Telemecanic
 “W” type = Weidmüller
 “D” type = DIN

Typenr.	Mm²	AWG	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	Color T	Color W	Color D	Packing (pcs)
Ct 005008	0,50	2 x 20	15,00	8,00	1,40	2,50	0,15	White	Orange	White	500
Ct 007508	0,75	2 x 18	15,00	8,00	1,70	2,80	0,15	Blue	White	Grey	500
Ct 007510	0,75	2 x 18	17,00	10,00	1,70	2,80	0,15	Blue	White	Grey	500
Ct 010008	1,00	2 x 18	15,00	8,00	1,95	3,40	0,15	Red	Yellow	Red	500
Ct 010010	1,00	2 x 18	17,00	10,00	1,95	3,40	0,15	Red	Yellow	Red	500
Ct 015008	1,50	2 x 16	16,00	8,00	2,20	3,60	0,15	Black	Red	Black	500
Ct 025010	2,50	2 x 14	18,50	10,00	2,80	4,20	0,20	Grey	Blue	Blue	250
Ct 025013	2,50	2 x 14	21,50	13,00	2,80	4,20	0,20	Grey	Blue	Blue	250
Ct 040012	4,00	2 x 12	23,00	12,00	3,70	4,90	0,20	Orange	Grey	Grey	100
Ct 060014	6,00	2 x 10	26,00	14,00	4,80	6,90	0,20	Green	Black	Yellow	100
Ct 100014	10,00	2 x 8	26,00	14,00	6,40	7,20	0,20	Brown	Cream	Red	100
Ct 160014	16,00	2 x 6	30,00	14,00	8,20	9,60	0,20	Cream	Green	Blue	50



Assortments cable end-sleeves

Material : Copper
 Temperature range : Up to +105 °C
 Minimum coating thickness : 3 µm
 Certification : DIN 46228/4
 Entry tunnel is made of Polypropylene

Content assortment 1: cable end-sleeves insulated (400 pcs)

Typenr.	Quantity
0,50 mm² x 8 mm	50
0,75 mm² x 8 mm	100
1,00 mm² x 8 mm	100
1,50 mm² x 8 mm	100
2,50 mm² x 8 mm	50



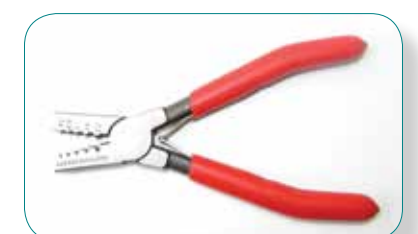
Content assortment 2: cable end-sleeves insulated (900 pcs)

Typenr.	Quantity
0,50 mm² x 8 mm	200
0,75 mm² x 8 mm	200
1,00 mm² x 8 mm	200
1,50 mm² x 8 mm	200
2,50 mm² x 8 mm	100



Tool 9 for cable end-sleeves

Type : Tool T9 AD 0,5 – 2,5 mm²
 Material : Steel 3 / 16
 Use : For insulated and non-insulated cable end-sleeves
 : of 0,5 - 2,5 mm²





WKK: producer of fixation clips

Through our subsidiary WKK Automotive, WKK has access to its own production facility for the development and production of plastic clips for the automotive industry and other markets such as the solar market. The clips are used for the fixation and guidance of cables in vehicles and on profiles.

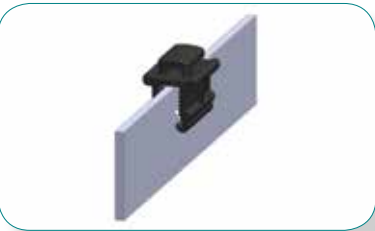
WKK offers you an extensive range of fixation clips such as edge clips (also for corrugated tubing), clips with fir tree & with arrowhead and solar clips which are suitable for different profile thicknesses and hole diameters. We also offer you the opportunity to have clips custom made to meet your specific requirements.

FIXATION CLIPS

Edge clips

Edge clips are an excellent solution for attachment of cables, wires and tubes on a plastic or metal profile. To choose the right type of edge clip, you should take into account the profile thickness and the way in which the cable will be mounted. WKK offers edge clips for different applications: with the cable tie fastening on top or on the side of the clip and by which the cable tie can be attached right-angled on or in longitudinal direction of the profile.

Material specifications:
 Clip : Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
 Cable tie : Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
 Temperature range : -40 °C to +120 °C (short time 140 °C)
 Metal clamp : Spring steel, hardened surface
 : The surface replies to the highest requirements for corrosion protection



Types of edge clips for profile thickness 0,7 - 3,0 mm

Typenr.	Profile thickness in mm	Mounting of cable
KC1 *	0,7 - 3,0	• Cable tie fastening on top of the clip • Cable tie right-angled on the profile
KC2 *	0,7 - 3,0	• Cable tie fastening on the side of the clip • Cable tie right-angled on the profile
KC3 *	0,7 - 3,0	• Cable tie fastening on top of the clip • Cable tie in longitudinal direction of the profile
KC5 *	0,7 - 3,0	• Cable tie fastening on the side of the clip • Cable tie in longitudinal direction of the profile
KC15 *	0,7 - 3,0	• Cable tie fastening on top and on the side of the clip • Cable tie can be mounted in 4 ways
KC17-16036-CVUV **	0,7 - 3,0	• Cable tie fastening on top of the clip • Cable tie right-angled on the profile
KC18-16036-CVUV **	0,7 - 3,0	• Cable tie fastening on the side of the clip • Cable tie right-angled on the profile
KC19-16036-CVUV **	0,7 - 3,0	• Cable tie fastening on top of the clip • Cable tie in longitudinal direction of the profile
KC20-16036-CVUV **	0,7 - 3,0	• Cable tie fastening on the side of the clip • Cable tie in longitudinal direction of the profile
KC11	0,7 - 3,0	• With plug attachment
KC13	0,7 - 3,0	• With plug attachment

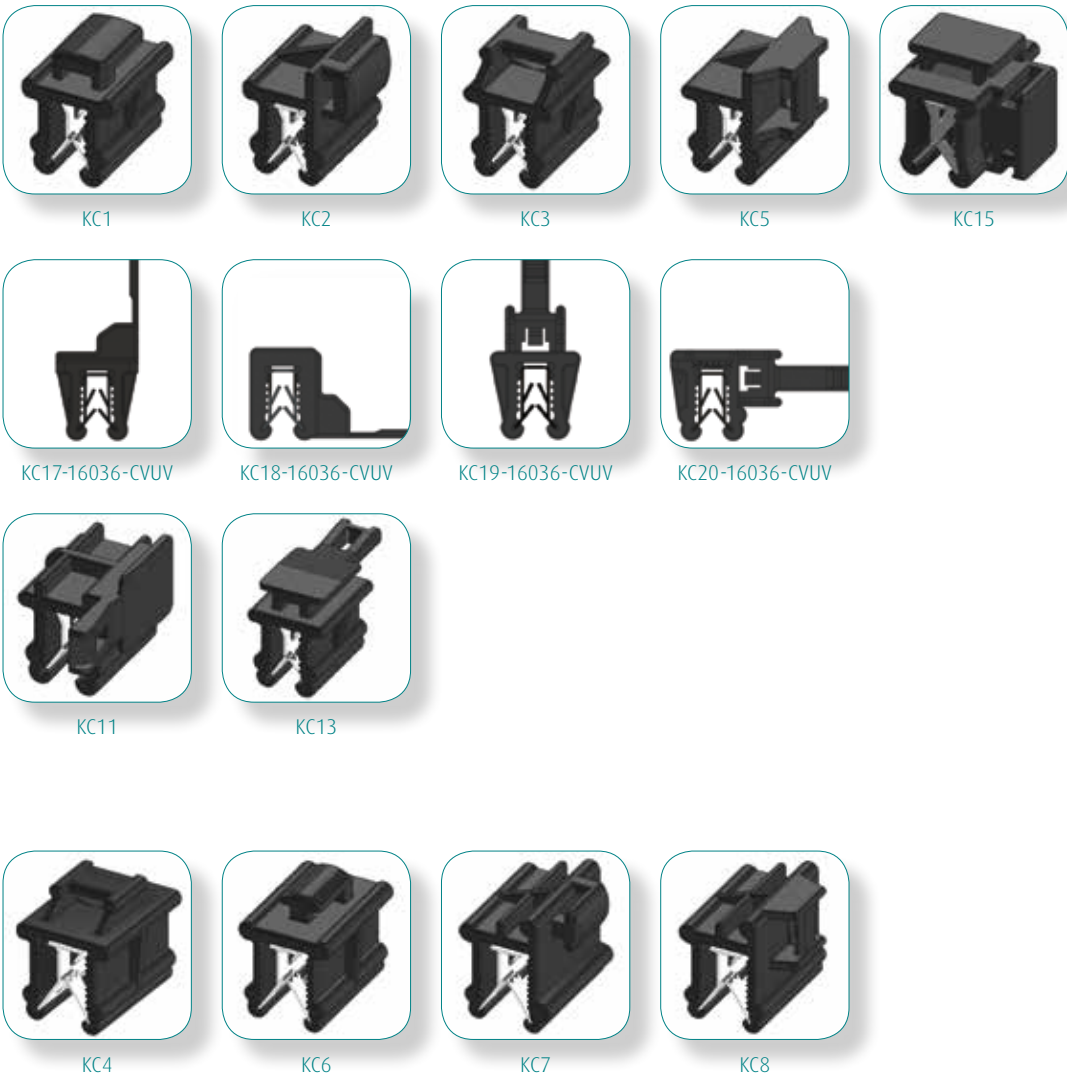
* = Also available with cable tie: 200 x 4,8 mm (PA 6.6 / black)
 ** = Delivered with cable tie: 140 x 3,6 mm (PA 6.6 / black)

For other types, please see the following page

Types of edge clips for profile thickness 3,0 - 6,0 mm

Typenr.	Profile thickness in mm	Mounting of cable
KC4 *	3,0 - 6,0	• Cable tie fastening on top of the clip • Cable tie in longitudinal direction of the profile
KC6 *	3,0 - 6,0	• Cable tie fastening on top of the clip • Cable tie right-angled on the profile
KC7 *	3,0 - 6,0	• Cable tie fastening on the side of the clip • Cable tie right-angled on the profile
KC8 *	3,0 - 6,0	• Cable tie fastening on the side of the clip • Cable tie in longitudinal direction of the profile

* = Also available with cable tie: 200 x 4,8 mm (PA 6.6 / black)



Edge clips for corrugated tubing

These edge clips are designed for guiding corrugated tubes on a plastic or metal profile. To choose the right type of edge clip for corrugated tubing, you should take into account the outer diameter of the corrugated tube, the profile thickness and the way in which the cable will be mounted.

Material specifications:

Clip	: Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
Temperature range	: -40 °C to +120 °C (short time 140 °C)
Metal clamp	: Spring steel, hardened surface
	: The surface replies to the highest requirements for corrosion protection



Types of edge clips for corrugated tubing

Typenr.	Profile thickness in mm	Inside measure in mm	Mounting of cable
KC24-NW4,5	0,7 - 3,0	4,5	• Grip in longitudinal direction of the profile on top of the clip
KC21-NW7,5	0,7 - 3,0	7,5	• Grip in longitudinal direction of the profile on top of the clip
KC32-NW17	0,7 - 3,0	17,0	• Grip in longitudinal direction of the profile on top of the clip
KC30-NW4,5	3,0 - 6,0	4,5	• Grip in longitudinal direction of the profile on top of the clip
KC12-NW13	3,0 - 6,0	13,0	• Grip in longitudinal direction of the profile on top of the clip
KC23-NW4,5	0,7 - 3,0	4,5	• Grip right-angled on the profile on top of the clip
KC22-NW10	0,7 - 3,0	10,0	• Grip right-angled on the profile on top of the clip
KC31-NW13	0,7 - 3,0	13,0	• Grip right-angled on the profile on top of the clip
KC33-NW10-2x	0,7 - 3,0	2x 10,0	• Grip right-angled on the profile on top of the clip
KC34-NW10-2x	0,7 - 3,0	2x 10,0	• Grip right-angled on the profile on top of the clip
KC35-NW10-2x	0,7 - 3,0	2x 10,0	• Grip right-angled on the profile on top of the clip
KC38-NW10	3,0 - 6,0	10,0	• Grip right-angled on the profile on top of the clip
KC40-NW10	3,0 - 6,0	10,0	• Grip right-angled on the profile on top of the clip
KC25-NW4,5	0,7 - 3,0	4,5	• Grip in longitudinal direction of the profile on the side of the clip
KC26-NW10	0,7 - 3,0	10,0	• Grip in longitudinal direction of the profile on the side of the clip
KC39-NW10	0,7 - 3,0	10,0	• Grip in longitudinal direction of the profile on the side of the clip
KC36-NW13	0,7 - 3,0	13,0	• Grip in longitudinal direction of the profile on the side of the clip
KC28-NW4,5	3,0 - 6,0	4,5	• Grip in longitudinal direction of the profile on the side of the clip
KC29-NW7,5	3,0 - 6,0	7,5	• Grip in longitudinal direction of the profile on the side of the clip
KC27-NW10	3,0 - 6,0	10,0	• Grip in longitudinal direction of the profile on the side of the clip
KC42-NW14	3,0 - 6,0	14,0	• Grip in longitudinal direction of the profile on the side of the clip



KC24-NW4,5



KC21-NW7,5



KC32-NW17



KC30-NW4,5



KC12-NW13



KC23-NW4,5



KC22-NW10



KC31-NW13



KC33-NW10-2x



KC34-NW10-2x



KC35-NW10-2x



KC38-NW10



KC40-NW10



KC25-NW4,5



KC26-NW10



KC39-NW10



KC36-NW13



KC28-NW4,5



KC29-NW7,5



KC27-NW10



KC42-NW14

Clips with fir tree & with arrowhead

Clips with fir tree and clips with arrowhead are specially designed for mounting of the clip in a bore hole. To select the right type of clip, you should take into account the profile thickness and the diameter of the bore hole. WKK offers clips with fir tree by which the lamellae ensure a firm attachment in the bore hole. By this, the thickness of the profile may vary. WKK also offers clips with arrowhead by which the arrowhead ensures a solid attachment in the bore hole.

Material specifications:

Clip : Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
 Cable tie : Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
 Temperature range : -40 °C to +120 °C (short time 140 °C)

Types of clips with fir tree & with arrowhead

Typenr.	Hole diameter in mm	Sheet thickness in mm	Cable diameter in mm
LFC1 *	ø 6,3 - 7,0	0,5 - 6,0	1,0 - 45,0
LFC2 *	ø 6,3 - 7,0	0,5 - 3,0	1,0 - 45,0
LC1 *	ø 6,5 ± 0,2	0,7 - 2,0	1,0 - 45,0
LC2 *	ø 6,5 ± 0,2	2,0 - 3,5	1,0 - 45,0
LC3 *	ø 6,5 - 7,0	1,8 - 2,8	1,0 - 45,0
LCD3	ø 6,3 - 6,7	0,6 - 1,2	3,0 - 8,5
LFC6	ø 6,3 - 7,0	0,7 - 6,0	4,5 - 6,0
FKH-LFC	ø 6,3 - 6,7	0,5 - 4,5	
LLC-NW10-2x	ø 6,2 - 12,2	2,0 - 3,0	2x 10,0
WR-LLC	ø 6,3 - 12,3	0,7 - 3,0	4,5 - 30,0
BK-LLC	ø 6,3 - 12,3	0,7 - 3,0	1,0 - 40,0

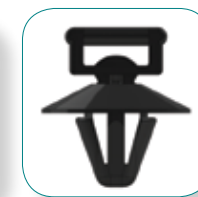
* = Also available with cable tie: 200 x 4,8 mm (PA 6.6 / black)



LFC1



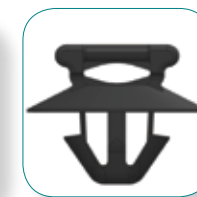
LFC2



LC1



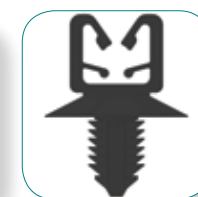
LC2



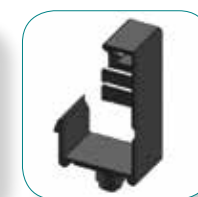
LC3



LCD3



LFC6



FKH-LFC



LLC-NW10-2x



WR-LLC



BK-LLC

Solar clips

Solar clips are ideal for attachment of cables, wires and tubes on a profile. To choose the right type of solar clip, you need to take into account the dimensions of the profile. The types SC1 and SC2 can be mounted, in combination with a cable tie, in a M8 or M10 aluminium profile. The type of clip SKC1 can be mounted on a profile without a cable tie. This clip is designed for the attachment of two cables with a diameter of 6 mm.

Material specifications:

Clip	: Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
Cable tie	: Polyamide 6.6 HS, black, impact resistant, heat resistant, UV resistant
Temperature range	: -40 °C to +120 °C (short time 140 °C)
Metal clamp	: Spring steel, hardened surface
	: The surface replies to the highest requirements for corrosion protection



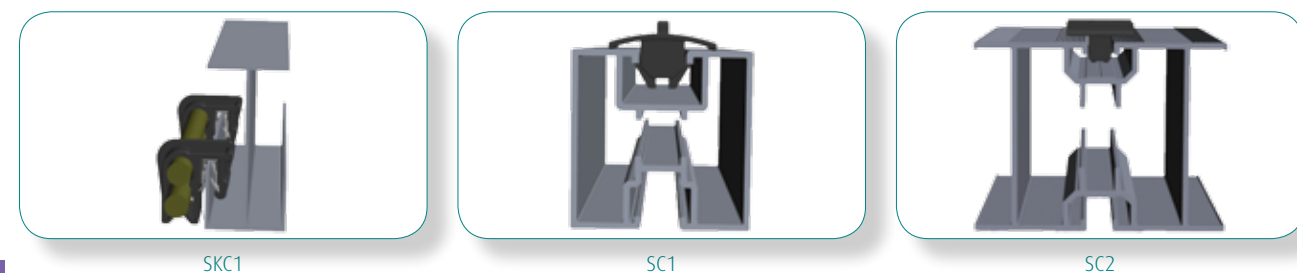
Types of solar clips

Typenr.	Mounting of clip	Mounting of cable
SKC1	• Profile thickness of 0,7 - 3,0 mm	• 2 x 6 mm, without cable tie
SC1 *	• M10 / 7,0 mm deep	• Attachment with cable tie
SC2 *	• M8 / 6,9 mm deep	• Attachment with cable tie

* = Also available with cable tie: 200 x 4,8 mm (PA 6.6 / black)



Mounting of cable

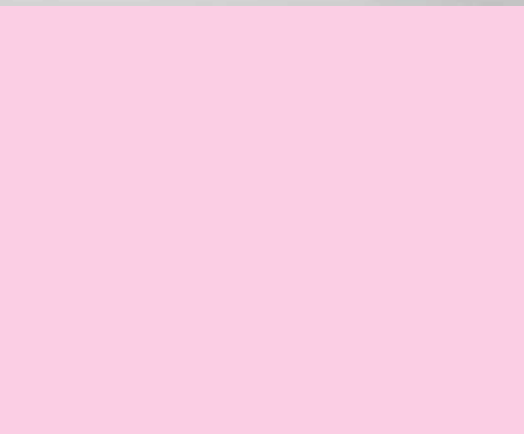
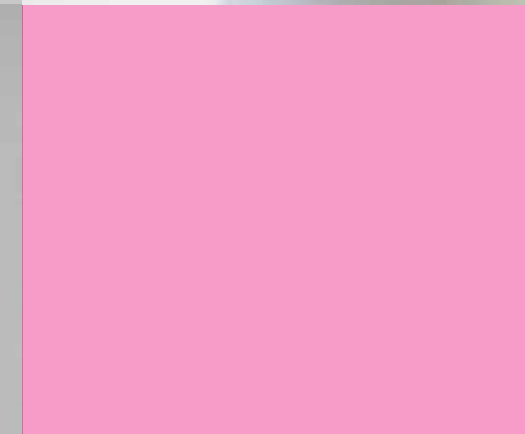
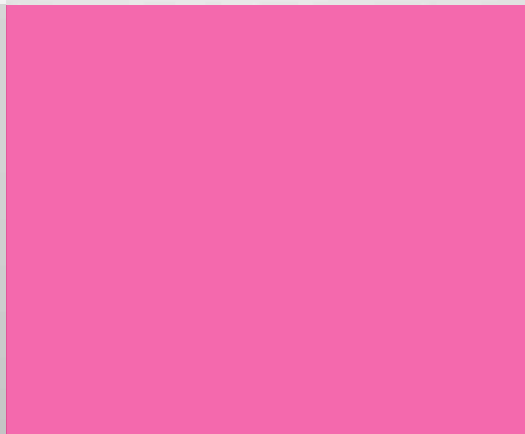


Custom made clips

Besides the standard range of fixation clips, WKK also offers you the possibility to have clips custom made to meet your specific requirements.

Through our subsidiary WKK Automotive, we have access to our own production facility which enables us to develop and produce customized clips.

Would you like more information or advice about the development of custom made clips? Please contact our sales department. We are at your service.

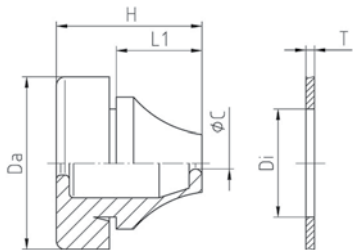


OTHER FIXATION MATERIALS

Sealing grommets

Material
Thread
Temperature range
Protection grade
Certification
SEMKO report
Colors

: EPDM, Chloroprene on request
: Metric, PG
: -40 °C up to +110 °C
: IP 67
: SEMKO 44: 1984
: 0211038 / 01-07
: Grey (RAL 7035), black (RAL 9005)

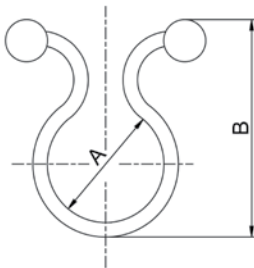


Typenr.	Hole Ø Di (mm)	Wall thickness T (mm)	Cable Ø C (mm)	L 1 (mm)	H (mm)	Da (mm)	Packing (pcs)
Sealing grommets WKK M12	12,5	0,5 - 2,0	4,0 - 7,0	5,6	12,8	20,0	50
Sealing grommets WKK M16	16,5	1,0 - 4,0	5,0 - 9,0	11,0	17,7	21,0	50
Sealing grommets WKK M20	20,5	1,0 - 4,0	8,0 - 12,0	13,4	20,0	25,5	50
Sealing grommets WKK M25	25,5	1,0 - 4,0	11,0 - 16,0	15,3	21,3	30,5	50
Sealing grommets WKK M32	32,5	1,0 - 4,0	15,0 - 20,0	16,6	24,6	38,5	25
Sealing grommets WKK M40	40,5	1,0 - 4,0	19,0 - 28,0	21,7	29,5	48,5	25
Sealing grommets WKK M50	50,5	1,0 - 4,0	27,0 - 35,0	25,0	34,8	60,5	10
Sealing grommets WKK PG 3-5	12,5	0,5 - 2,0	3,0 - 5,0	5,4	12,6	20,0	50
Sealing grommets WKK PG 5-7	16,0	1,0 - 4,0	5,0 - 7,0	10,3	17,8	21,0	50
Sealing grommets WKK PG 7-10	19,0	1,0 - 4,0	7,0 - 10,0	12,7	19,8	24,0	50
Sealing grommets WKK PG 10-14	23,0	1,0 - 4,0	10,0 - 14,0	14,7	21,6	28,0	50
Sealing grommets WKK PG 14-20	29,0	1,0 - 4,0	14,0 - 20,0	17,6	24,6	35,0	25
Sealing grommets WKK PG 20-26	38,0	1,0 - 4,0	20,0 - 26,0	20,0	28,5	46,0	25
Sealing grommets WKK PG 26-35	48,0	1,0 - 4,0	26,0 - 35,0	23,9	34,9	58,0	10

Twistlocks

Material
Flammability
Color

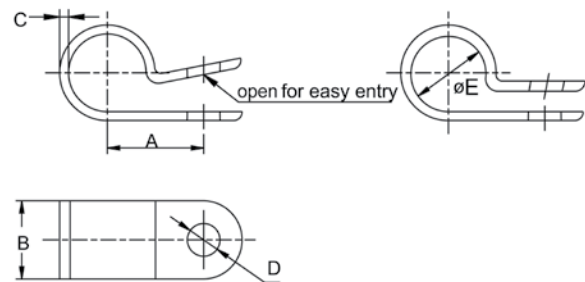
: Polyamide PA 6.6
: UL 94 V2
: Natural



Typenr.	Bundle diameter (mm)	A (mm)	B (mm)	Packing (pcs)
TH-D	10,2	11,2	28,4	100
TH-E	4,5	5,2	21,0	100
TH-F	7,3	8,3	25,2	100
TH-G	10,5	11,5	30,9	100
TH-H	14,0	15,0	35,1	100
TH-I	17,0	18,0	40,0	100
TH-J	19,0	19,5	42,5	100
TH-K	22,0	22,5	45,5	100

Cable clamps

Material : Polyamide PA 6.6
Color : Natural



Typenr.	Ø (mm)	A (mm)	B (mm)	C (mm)	Packing (pcs)
WKK CL 1/8 S	3,3	8,2	9,1	1,27	100
WKK CL 3/16 S	4,8	9,6	9,1	1,27	100
WKK CL 1/4 S	6,6	10,3	9,1	1,27	100
WKK CL 5/16 S	7,8	10,6	9,1	1,27	100
WKK CL 3/8 S	9,7	11,9	9,2	1,27	100
WKK CL 1/8	2,9	9,1	12,7	1,5	100
WKK CL 1/4	5,9	11,4	12,7	1,5	100
WKK CL 3/8	9,1	13,4	12,1	1,5	100
WKK CL 1/2	12,2	15,0	12,7	1,5	100
WKK CL 9/16	13,8	15,8	12,7	1,5	100
WKK CL 3/4	18,6	19,8	12,7	1,5	100
WKK CL 7/8	21,8	21,4	12,7	1,5	100
WKK CL 1-1/8	27,9	24,6	12,7	1,5	100

Clamp straps

Material : Nylon
Colors : Grey and natural

These universal halogen-free clamp straps are mainly used for the assembly of pipes



Typenr.	Ø (mm)	Packing (pcs)
UKB 031	16,0 - 22,0	50
UKB 032	25,0 - 28,0	50

Single floor clamps

Material : Nylon
Color : Natural



Typenr.	Ø (mm)	Packing (pcs)
PLC 16-19 mm single	16,0 - 19,0	100
PLC 20-25 mm single	20,0 - 25,0	100
PLC 25-30 mm single	25,0 - 30,0	100

Cable clips with nail

Material : Nylon
Colors : Natural, white, grey and cream



Typenr.	Ø (mm)	Colors	Packing (pcs)
SPC 700/5-7	5,0 - 7,0	White, grey, cream	100
SPC 700/8-10	8,0 - 10,0	White, grey, cream	100
SPC 700/11-15	11,0 - 15,0	White, grey, cream	100
SPC 700/16-19	16,0 - 19,0	Natural, grey, cream	50
SPC 700/23-29	23,0 - 29,0	Natural	50

Cable ducts

Material
Color

: Flexible PVC with removable cover
: White



Typenr.	Width (mm)	Height (mm)	Length (mtr)	Packing (mtr)
LEK 20x10 with tape	20,0	10,0	2	2

Self-adhesive cover ducts

Material
Color

: PVC, self-adhesive with hinged cover
: White



Typenr.	Width (mm)	Height (mm)	Length (mtr)	Packing (mtr)
Dk 12x7 with tape	12,0	7,0	2	2
Dk 15x10 with tape	15,0	10,0	2	2
Dk 20x10 with tape	20,0	10,0	2	2

Click cable covers

Material
Color

: PVC
: White

Adjustable in heights of 10 mm and 15 mm



Typenr.	Width (mm)	Height (mm)	Length (mtr)	Packing (mtr)
KLL 20 x 10-15 with tape	20,0	10,0 - 15,0	2	2

Connector strips

Material
Colors

: Polypropylene
: White and black



Typenr.	Max. voltage	Packing (pcs)
Connector strips 4q	450 V	10
Connector strips 6q	450 V	10
Connector strips 10q	450 V	10
Connector strips 16q	450 V	10

Braided sleeving

Material : Polyester PET HB
 Temperature range : -50 °C up to +150 °C
 Melting temperature : +250 °C
 Color : Black



Typenr.	Bundle diameter (mm)	Packing (mtr)
Braided sleeving PG 3 mm	3,00 - 7,00	100
Braided sleeving PG 4 mm	4,00 - 10,00	100
Braided sleeving PG 5 mm	5,00 - 10,00	100
Braided sleeving PG 8 mm	8,00 - 11,00	100
Braided sleeving PG 10 mm	10,00 - 15,00	100
Braided sleeving PG 12 mm	12,00 - 19,00	50
Braided sleeving PG 15 mm	15,00 - 27,00	50
Braided sleeving PG 20 mm	20,00 - 28,00	50
Braided sleeving PG 25 mm	25,00 - 34,00	25
Braided sleeving PG 30 mm	30,00 - 37,00	25
Braided sleeving PG 40 mm	40,00 - 45,00	25
Braided sleeving PG 50 mm	50,00 - 65,00	25

Wrapping bands

Material : Polyethylene
 Temperature range : -50 °C up to +85 °C
 Colors : Black and natural



Typenr.	Inside diameter (mm)	Outside diameter (mm)	W (mm)	Bundle diameter (mm)	Packing (mtr)
GST-4	5,0	6,0	7,0	4,0 - 50,0	10,0
GST-6	7,0	8,0	10,8	6,0 - 60,0	10,0
GST-8	8,5	10,0	11,4	7,5 - 60,0	10,0
GST-9	10,2	12,0	13,9	9,0 - 65,0	10,0
GST-12	13,0	15,0	15,0	12,0 - 70,0	10,0
GST-15	16,4	19,0	18,2	15,0 - 100,0	10,0
GST-20	21,0	24,0	19,6	20,0 - 130,0	10,0

Hook and loop tape

Color : Black



Typenr.	Width (mm)	Packing (mtr)
Hook and loop tape back to back 12 mm	12,0	25
Hook and loop tape back to back 20 mm	20,0	25
Hook and loop tape back to back 25 mm	25,0	25
Hook and loop tape back to back 50 mm	50,0	25

Corrugated tubing PA6

Material : Polyamide 6
 Protection rating : IP 68
 Flame class : UL 94 HB
 Temperature range : -40 °C up to +120 °C
 : short term +150 °C



On request also slotted and in Polypropylene available

Applications:

Machine and plant constructions, automotive, shipbuilding, automation, electrical installations.

Mechanical protection for cables and conductors, pressure and impact resistant, flexible, high tensile and compressive strength.

Typenr.	DN	Inside diameter (mm)	Outside diameter (mm)	Bending radius (mm)	Packing (mtr)
Corrugated tubing DN 7,5	7,5	6,9	9,9	13,0	50
Corrugated tubing DN 8,5	8,5	8,4	11,4	15,0	50
Corrugated tubing DN 10,0	10,0	9,9	13,0	20,0	50
Corrugated tubing DN 12,0	12,0	12,2	15,7	30,0	50
Corrugated tubing DN 13,0	13,0	12,7	15,8	35,0	50
Corrugated tubing DN 14,0	14,0	14,2	18,5	40,0	50
Corrugated tubing DN 16,0	16,0	14,9	18,9	40,0	50
Corrugated tubing DN 17,0	17,0	16,6	21,2	45,0	50
Corrugated tubing DN 22,0	22,0	21,2	25,5	50,0	50
Corrugated tubing DN 23,0	23,0	23,2	28,3	55,0	50
Corrugated tubing DN 26,0	26,0	25,7	32,2	60,0	50
Corrugated tubing DN 29,0	29,0	29,0	34,5	65,0	25
Corrugated tubing DN 36,0	36,0	36,0	42,4	90,0	25
Corrugated tubing DN 50,0	50,0	48,1	53,8	100,0	25
Corrugated tubing DN 56,0	56,0	56,3	67,2	130,0	30
Corrugated tubing DN 65,0	65,0	62,7	73,5	145,0	10
Corrugated tubing DN 70,0	70,0	67,5	80,0	160,0	10
Corrugated tubing DN 95,0	95,0	91,5	106,0	210,0	10

Duct tape

Bearer : Polyester / linen weavings with Polyethylene coating
 Adhesive : Natural rubber
 Temperature resistance : +65 °C
 Thickness : 0,25 mm
 Colors : Black and silver

Suitable for temporary fixing of ducts and pipes and for other temporary repairs



Typenr.	Width (mm)	Length (mtr)	Packing (mtr)
Tape duct 50 mm	50	25	25

PVC tapes

Adhesive : Rubber
 Temperature resistance : +80 °C
 Thickness : 0,15 mm

Suitable for electrical insulation and for a large number of other applications.
It's also flame retardant.



Typenr.	Width (mm)	Colors	Length (mtr)	Packing (mtr)
Tape PVC 15 mm	15,0	Black, blue, yellow/green, grey, red, white, yellow, brown	10	10
Tape PVC 19 mm	19,0	Black, mixed assortment, yellow/green, grey, blue, red, white, yellow, brown	10	10
Tape PVC 50 mm	50,0	Black	10	10

Double sided foam tapes

Material : Polyethylene
 Temperature range : -20 °C up to +60 °C
 Thickness : 0,8 mm
 Color : White



Typenr.	Width (mm)	Length (mtr)	Packing (mtr)
Tape foam 12 mm	12	50	50
Tape foam 15 mm	15	50	50
Tape foam 19 mm	19	50	50
Tape foam 25 mm	25	50	50

Self amalgating tapes

Adhesive : Rubber
 Temperature resistance : +90 °C
 Thickness : 0,50 mm
 Color : Black

Suitable for insulating electrical wiring, waterproofing hoses, etc.
Also suitable for final and temporary repairs.



Typenr.	Width (mm)	Length (mtr)	Packing (mtr)
Self amalgating tape 19 mm	19	10	10
Self amalgating tape 25 mm	25	10	10
Self amalgating tape 38 mm	38	10	10
Self amalgating tape 50 mm	50	10	10



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Validity of our terms

These terms apply to all offers and agreements, however they may be named, agreed to or concluded with third parties. Any variations to these terms, including purchasing agreements, and endorsed by a third party, will not be considered binding. Our terms will always prevail.

Offers

All offers are without any binding obligation net/net and exclusive of Value Added Tax, unless specifically stated otherwise and or based on approved drawings provided by either party relating to the said offer. All data mentioned in printed matter provided by us is not legally binding. The responsibility for the right application and the suitability of the matter offered for the required application by the party to whom is offered, lies with the latter. Samples of small items such as cable ties, terminals, cable end-sleeves etc. are supplied complimentary for testing purposes and quality checks.

Agreements

Agreements, in any form and including amendments, only become binding upon written confirmation by us reflecting agreed details and the way that acceptance was reached. Acceptance as defined here can only be endorsed by a member of the management team or one of our staff members who has right of proxy.

Prices

We exercise the right to charge the current prices on the day of delivery. This also applies to backorders. All prices mentioned during promotional campaigns, in our catalogue, leaflets or any other type of advertising material, are net/net and exclusive the Value Added Tax. We reserve the right:

- in case of agreements with a person who does not act in the capacity of a trade or represent a company, to charge any or all price increases and or levy imposed by government legislation if it occurs within the first 3 months of commencement of this agreement.
- in case of legal entities or entity acting in a professional capacity or legally representing a company, to charge such an entity any or all price increases due.

Delivery, delivery times and partial deliveries

Delivery conditions are always in conformation with the offer or as accepted by agreement. The seller has the right to charge extra costs incurred by following the special instructions of the buyer, e.g. “dispatch by express or special transport”.

Delivery times:

- Delivery times are indicative and will never be guaranteed.
- Non-compliance to the delivery time gives the buyer, a natural person not following a trade or representing a company, only the right to claim compensation and or cancellation of the agreement if the statutory requirements have been met.
- Non-compliance to the delivery time does not give the buyer, in the capacity of a legal entity or entities, the right to claim compensation and or dissolution of the agreement.

Part delivery:

We reserve the right to deliver an order in parts. The buyer is compelled to pay the applicable invoices in compliance with our terms of payment.

Extended ownership

The goods delivered remain in our ownership until the purchaser has fully paid the amounts due in relation to the delivered goods, inclusive of possible interest charges and derived costs. The risk of loss or damage pertaining to purchased goods is transferred to the buyer at point of delivery or otherwise confirmed in writing. The buyer is not entitled to dispose of the goods, in any form, or allow third parties the use of them before payment has been received in full. In case of failure to meet it's payment obligations, the buyer is obliged to return the goods on first demand, and to co-operate fully to enable us to exercise our rights.

Packaging

The selling price is, unless otherwise agreed, inclusive of the packaging costs. The form of packaging is decided by us. Packing can not be returned. Extra or different packaging requirements as stipulated by the buyer will be charged additionally.

Transport and transport damage

The method of transportation is decided by us. Should the buyer require a different method of transport, than the one decided by us, additional costs can be charged to the buyer. If the packaging or the goods appear to be damaged on arrival, the buyer is obliged to lodge or countersign an official report with the forwarder before accepting the goods and should send at least one copy of the report to us within forty-eight hours.

Claims

Claims can only be entertained by us, if they have been received in writing and correctly addressed, within 14 days of the said delivery taking place.

Return of goods

Goods can only be returned after written permission from us. The risk of loss or damage to the goods remains with the buyer unless otherwise agreed by us in writing.

Payment

Payment for the goods shall be made in full, unless otherwise agreed in writing, directly to us within thirty days of the date of invoice and without any unauthorised deductions. In so far as payment has not taken place within thirty days after the date of invoice, we have the right to charge the purchasing party interest on the amount due from due date, being 2% a month or part thereof as well as charge all relating judicial and extra-judicial collection costs incurred by us. The extra-judicial collection costs are 15% of the amount on invoice with a reserve of 125,- Euro each invoice. We reserve the right to deliver C.O.D. (cash on delivery). We always deliver C.O.D. to buyers who are unknown to us, unless references can be supplied timely indicating a solid financial position. If a credit granted to a buyer gets too high in our opinion, we reserve the right to demand payment before we execute new orders or part orders.

Warranty

We supply a warranty with our goods in so far as and for that part that we were able to obtain a warranty from our suppliers. This remains subject to the goods delivered being faulty and we will at all times have the choice to replace or repair of the goods or parts thereof. We reserve the right in those cases to take back the goods or parts thereof and credit the buyer accordingly. Our warranty cannot be invoked for faults or malfunctions that are incurred as a consequence of force from outside, poor maintenance, overload, natural wear and tear or other causes beyond our control. Slight technical deviations in colour, structure of the material or finish, common and/or inevitable to the trade, are not covered by the warranty and do not oblige us to any form of compensation and do not give the buyer the right to refuse delivery of the goods or refuse payment of the goods delivered.

Liability/force majeure

Paragraph 1:

We do not accept liability, in cases of force majeure or circumstances that hinder the usual continuance in our company - e.g. for non-delivery or overdue delivery by our suppliers, lack of labour force, strike or exclusion of staff etc. - and which render us temporarily or permanently incapable to fulfil the contract(s), irrespective whether the circumstances mentioned were foreseeable or not at the time of the conclusion of the contract. In cases of force majeure or the circumstances here described we can suspend the execution of the orders, until the force majeure or the circumstances here described cease to exist. Alternatively we reserve the right to annul the agreement entirely or partially, in so far as it has not been executed, without any judicial intervention.

Paragraph 2:

In cases of agreements with natural persons who do not act in the capacity of a trade or representing a company, our liability, subject to the stipulation in paragraph 3, never reaches beyond our statutory liability. In cases of agreements with legal entities who officially represent a trade or a company, our liability, subject to the stipulation in paragraph 3, never reaches further than the amount of the order.

Paragraph 3:

In all cases we exclude consequential damage, except in cases where it's proven to be a matter of intentional act or gross negligence on our part and only then to the maximum as referred to in paragraph 2. For personal damage as a consequence of a faulty product we are only liable in so far as we are producer or EC importer and only as far as our statutory liability.

Paragraph 4:

If, in spite of the liability as set out in this article, we are called upon with regards to the execution of this agreement, the client or buyer shall indemnify us entirely, inclusive of all costs that are subsequently incurred due to us being held liable.

Failure in fulfilment

If the buyer fails to meet his obligations properly or does not comply with any obligation arising from the agreement in time, including bankruptcy, suspension of payment or liquidation of the company, he is considered to be in default by operation of law and we have the right to suspend the agreements concluded with the buyer without further notification of default and without judicial intervention or to dissolve the agreement entirely or partially without incurring subsequent liabilities. In the case of dissolving the agreement we are entitled to take back delivered and unpaid goods as our property without prejudice to our right of compensation.

Disputes

Paragraph 1:

Dutch law is applicable to agreements that are subjected to these terms, irrespective of international trade regulations.

Paragraph 2:

All disputes arising from such agreements with the buyer, will:

- In case of a dispute, as referred to aforementioned with a legal entity representing a trade or a company, it will be settled exclusively by the competent Court of law residing in the district of Breda in The Netherlands and without prejudice to our right to start an action against the other party in a statutory competent Court.
- In case of a dispute, as referred to aforementioned with an other party being a natural person, not representing a trade or a company, it will be settled in a statutory competent Court residing in The Netherlands and under Dutch law.

WKK Nederland B.V. is entitled to change these general terms and conditions.

The last filed version of these terms and conditions will be applicable.

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Your Personal Connection

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