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Quality and functionality our highest priority ...

The brand **Weitkowitz** stands for quality products in the electrical industry for nearly 100 years.

Mr. Franz Weitkowitz established the company in 1918. The name Weitkowitz stands for a high claim of quality functionality and longevity off all products and services until today.

Our slogan "A safe Connection – Guaranteed!" is a promise to all our worldwide well-known customers.

Weitkowitz is certified to ISO 9001 and ISO/TS 16949 and fulfilled thereby the highest quality requirements, e.g. of the automotive industry.

Our customers comes from different areas, e.g. electrical installation, switchgear and transformers construction, cable assemblies, lightning protection, railway technology, wind energy and solar energy. They use the **Weitkowitz** items in their products and machines successfully.



Dear Valued Customer,

Weitkowitz was established by Franz Weitkowitz in 1918. *Weitkowitz* GmbH is resident in Peine (Lower Saxony) and a midsize company. *Weitkowitz* is a worldwide operating enterprise and a member of the intercable group in Brunico (Italy) since 2010.

Our core competence is the solderless connection technology. New line systems and cable types require a customization of the cable lugs and crimping techniques again and again.

We face up to these requirements daily and ensure reliable connections. The *Weitkowitz* cable lugs can be processed by the intensive WM-crimp without use of a filling sleeve or special cable lugs. The *Weitkowitz* WM-crimp can be used to stranded, pre-compacted and flexible copper conductors.

Furthermore *Weitkowitz* have developed for flexible aluminium conductors the C8-crimp. Due to this pressing profile we reach a press quality according to IEC 61238-1:2003 or DIN EN 61238:2004-03.

Following product groups belong to our product range – cable lugs – connectors – flat connector technology –

cord-end-sleeves – innovative earthing items for lighting protection and railway constructions- mechanical and hydraulic crimping and cutting tools – cable ties and heat shrink tubes.

More than 3500 standard articles are available from stock within 24 hours. Our competence is the production of special solutions which we can develop especially for our customers. *Weitkowitz* have already produced more than 10000 special solutions. We provide our customers always the necessary technical documentation with a post purchase guarantee for decades.

Weitkowitz tin-plated his copper products in an in-house electroplating. This guarantees always a bright tinplating and short products times, also for special solutions.

We can check extraction values, layer thicknesses, fill factor and size accuracy in our own test laboratory. The quality of the mechanical and electrical connections is proved to hand of protocols.

Use our long-term experiences in the area of solderless connection technique. Our technical sales team will be pleased to advice you.



The *Weitkowitz* team looks forward to a long cooperation and partnership.

Contents

page

	Certificates	6
1	Tubular cable lugs, copper, standard-series	7-16
	Tubular connectors, copper, standard-series	17-18
	Assortment boxes, standard-series	18
2	Tubular cable lugs, copper, Siemens Norm SN 71322	19-24
	Tubular connectors, copper, Siemens Norm SN 71322	21
	Tubular cable lugs, Siemens Norm SN 71322	22-24
3	Tubular cable lugs, copper, for finewiring conductors	25-31
	Tubular connectors, copper, for finewiring conductors	32
4	Tubular cable lugs, copper, euro-series	33-41
	Tubular connectors, copper, euro-series	42-43
	Assortment boxes, euro-series	43
5	Tubular cable lugs, copper, DIN 46235	44-51
	Tubular compression cable lugs, 1-and 2-conductor-version with 2 holes, Compression bolts, copper	52
	Tubular compression connectors, copper, DIN 46267 part 1 + assortment box	53
	Tubular compression connectors, copper with oil stop , measurements similar to DIN 46267 part 1 and Compression tab-connectors, copper, H-shape	54
6	Tubular compression cable lugs aluminum	55-57
	Bi-metallic washers	57
	Tubular compression connectors DIN 46267 Teil 2, aluminum and Tubular compression connectors 10 - 30 kV, relieved, aluminium	58
	Tubular compression connectors, aluminum, relieved, DIN 46329 and c8-crimping	59-60
	Bi-metallic tubular compression cable lugs	61-62
	Bi-metallic Compression bolts	62
	Bi-metallic tubular compression connectors	63-64
7	Tubular cable lugs and connectors, high grade nickel	65-66
8	Tubular cable lugs, stainless steel V4A	67-68
9	Noninsulated ring- and fork terminals DIN 46234	69-73
	Noninsulated pin-terminals DIN 46230	74
	Noninsulated parallel- and butt-connectors DIN 46341 part 1	75
	Assortment boxes with <i>noninsulated</i> cable lugs	76
10	Insulated terminals ring-type DIN 46237 and fork type	77-81
	Insulated pin-terminals DIN 46231 and insulated butt-connectors	82
	Insulated parallel- heat-shrinkable- and close-end-connectors	83
	Insulated male and female disconnectors	84-86
	Insulated receptacle disconnectors and bullet disconnectors	86-87
	Noninsulated male and female open barrel terminals, DIN 46343, 46248	88-89
	Insulated housings	89
	Noninsulated male terminals and multi-way-adapters for tab dimensions 6.3 x 0.8 mm	90
	Fully insulated male tabs and fully insulated male tab	91
	Assortment boxes	92-93
11	Noninsulated cord-end-sleeves DIN 46228 part 1	94-97
	Insulated cord-end-sleeves DIN 46228 part 4 and others	98-101
	Dispenser boxes	101
	Assortment boxes	102-103
	Insulated cord-end-sleeves, strip form + tools	104
12	Cable ties, nature + black	105-107
	Cable ties, coloured	108
	Cable ties, removable and cable ties with inscription area	109
	Cable ties with steel clip , nature + black	110
	Cable ties out of stainless steel , Cable tie mounts and cord-clips	111-112
13	Heat shring tubings	113-117
14	Quality, safety and environmental protection	118
15	Hand operated crimping tools and pneumatical/electrical driven crimping machines	119-134
16	Wire strippers	135-142
17	Cable cutters	143-148
18	Mechanical crimping tools + accessories	149-153
	Hydraulic working system + accessories	154-174
19	Hydraulic cutting tools + accessories	175-186
	Weitkowitz-App	187
	Hydraulic tools + accessories	188-192
20	Hydraulic punching, bending and cutting tools for bus bars	193-203
21	Overview erthing terminals	204-205
	Technical appendix	206-220
	Numerical index	221-231
	Special cable lugs, reference internet	234

Certificates



reference: You can download the documents and further information from our webpage www.weitkowitz.de bereit.

A close-up, high-angle shot of a large pile of copper tubular cable lugs and connectors. The pieces are made of polished copper, showing a bright orange-gold color. They are of various lengths and diameters, some with flared ends. The pile is dense, with many pieces overlapping and reflecting light, creating a shimmering effect. The background is dark, making the copper pieces stand out.

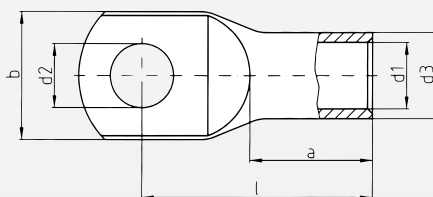
Tubular cable lugs, copper
Tubular connectors, copper
Assortment boxes
standard-series

Tubular cable lugs 0.5 – 6 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated

1

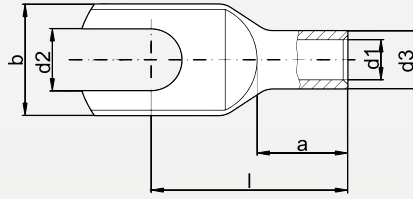


cross section mm ²	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
			d1	d3	d2	b	l	a					
0,5 – 0,75	3	13000	1,4	3	3,2	6,5	12,5	6	0,07	100	WZ 22 127	WZ 36 126	
	4	13001			4,3	8,5	14		0,08	100			
	5	13002			5,3	10	15		0,10	100			
1,0 – 1,5	3	13005	1,9	3,9	3,2	6,5	14	6	0,12	100			
	4	13006			4,3	8,5	15		0,14	100			
	5	13007			5,3	10	16		0,15	100			
	6	13008			6,4	11	18		0,17	100			
2,5	4	13010	2,4	4,4	4,3	8,5	15	6,5	0,17	100			
	5	13011			5,3	10	16		0,18	100			
	6	13012			6,4	11	18		0,20	100			
	8	13013			8,4	13	20		0,22	100			
4	4	13015	3	5	4,3	8,5	17	8	0,22	100			
	5	13016			5,3	10	18		0,24	100			
	6	13017			6,4	11	20		0,27	100			
	8	13018			8,4	14	22		0,30	100			
6	4	13020	3,7	5,5	4,3	8,5	17,5	8	0,24	100	PW 6/50 150	DP 6/95 153	
	5	13021			5,3	10	19		0,26	100			
	6	13022			6,4	11	21		0,28	100			
	8	13023			8,4	14	23		0,32	100			
	10	13024			10,5	15	25,5		0,34	100			

Tubular cable lugs, fork type 0.5 – 16 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated

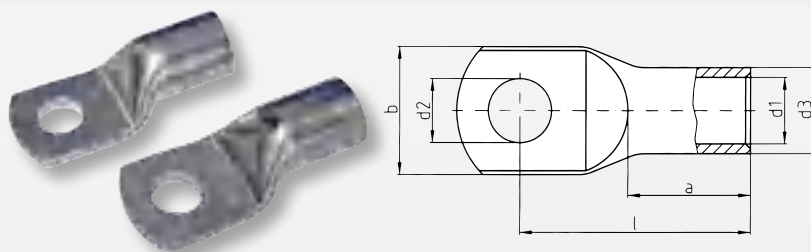


cross section mm²	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
			d1	d3	d2	b	l	a					
0,5 – 0,75	3	13050	1,4	3	3,2	6,5	12,5	6	0,07	100	WZ 22 127	WZ 36 126	DP 6/95 153, PW 6/50 150
	4	13051			4,3	8,5	14		0,07	100			
	5	13052			5,3	10	15		0,08	100			
1,0 – 1,5	3	13055	1,9	3,9	3,2	6,5	13,5	6	0,11	100			
	4	13056			4,3	8,5	15		0,12	100			
	5	13057			5,3	10	16		0,13	100			
	6	13058			6,4	11	18		0,14	100			
2,5	4	13060	2,4	4,4	4,3	8,5	15	6,5	0,15	100			
	5	13061			5,3	10	16		0,16	100			
	6	13062			6,4	11	18		0,16	100			
	8	13063			8,4	13	20		0,19	100			
4	4	13065	3	5	4,3	8,5	17	8	0,18	100			
	5	13066			5,3	10	18		0,21	100			
	6	13067			6,4	11	20		0,22	100			
	8	13068			8,4	14	22		0,23	100			
6	4	13070	3,7	5,5	4,3	8,5	17,5	8	0,21	100			
	5	13071			5,3	10	19		0,23	100			
	6	13072			6,4	11	21		0,25	100			
	8	13073			8,4	14	23		0,26	100			
10	5	13076	4,3	6,7	5,3	10	20,5	10	0,40	100			
	6	13077			6,4	11	22,5		0,42	100			
	8	13078			8,4	15	25		0,46	100			
16	5	13081	5,4	7,8	5,3	12	22,5	11	0,53	100			
	6	13082			6,4	12	24,5		0,57	100			
	8	13083			8,4	15	26,5		0,60	100			
16 f	5	13086	6	9	5,3	14	25,5	13	0,82	100			
	6	13087			6,4	14	27		0,86	100			
	8	13088			8,4	15	29,5		0,94	100			

Tubular cable lugs 10 – 35 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole

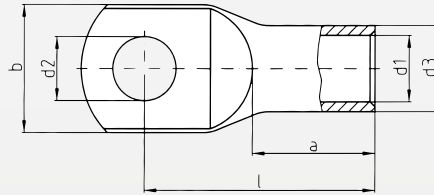


cross section mm ²	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspection hole	tool recommendation
10	4	13204	4,3	6,7	4,3	10	19,5	10	0,41	100	13704	WZ 36 126 PW 6/50 150 AP 10 156, HHW 10 + HPW 10 157, APW 20 160, HHW 20 + HPW 20 161, AHW 30 + HHW 30 164, HPW 17 164, Stilo 1 154 PW 6/70 151, DP 6/95 153, PW 10/120 152
	5	13205			5,3	10	20,5		0,43	100	13705	
	6	13206			6,4	11	22,5		0,48	100	13706	
	8	13207			8,4	15	25		0,52	100	13707	
	10	13208			10,5	18	27,5		0,57	100	13708	
	12	13209			13	19	28,5		0,58	100	13709	
16	5	13210	5,4	7,8	5,3	12	22,5	11	0,57	100	13710	
	6	13211			6,4	12	24,5		0,62	100	13711	
	8	13212			8,4	15	26,5		0,67	100	13712	
	10	13213			10,5	18	29		0,78	100	13713	
	12	13214			13	20	30		0,77	100	13714	
25	5	13296	6,9	9,4	5,3	14	25	13	0,87	100	13796	
	6	13215			6,4	14	27		0,94	100	13715	
	8	13216			8,4	15	29		1,00	100	13716	
	10	13217			10,5	18	31,5		1,07	100	13717	
	12	13218			13	20	32,5		1,08	100	13718	
	14	13219			15	22	34,5		1,16	100	13719	
35	5	13298	8,3	11,3	5,3	16,5	32,5	16	1,60	100	13798	
	6	13220			6,4	16,5	32,5		1,60	100	13720	
	8	13221			8,4	16,5	33		1,62	100	13721	
	10	13222			10,5	18	35,5		1,83	100	13722	
	12	13223			13	20	36,5		1,75	100	13723	
	14	13224			15	22	39		1,87	100	13724	
	16	13292			17	26	41,5		1,97	100	13792	

Tubular cable lugs 50 – 150 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole



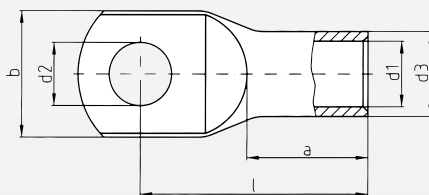
cross section mm ²	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspection hole	tool recommendation	
50	6	13281	9,6	13,1	6,4	19	36	18	2,35	100	13781	PW 6/50 150	PW 6/70 151
	8	13225			8,4	19	37		2,41	100	13725		
	10	13226			10,5	20	39		2,53	100	13726		
	12	13227			13	23	40,5		2,61	100	13727		
	14	13282			15	25	42,5		2,79	100	13782		
	16	13228			17	27	45,5		2,94	100	13728		
	20	13297			21	28	50		3,57	100	13797		
70	6	13229	11,5	15,3	6,4	22,5	41	21	3,46	100	13729	PW 6/50 150	PW 6/70 151
	8	13230			8,4	22,5	41		3,38	100	13730		
	10	13231			10,5	22,5	42,5		3,59	100	13731		
	12	13232			13	23	43,5		3,64	100	13732		
	14	13283			15	26	46		3,93	100	13783		
	16	13233			17	28	48,5		3,83	100	13733		
	20	13234			21	29	53		4,21	100	13734		
95	6	13299	13,5	17,5	6,4	25	46	23	4,71	50	13799	PW 6/50 150	PW 6/70 151
	8	13235			8,4	25	45,5		4,76	50	13735		
	10	13236			10,5	25	47		4,82	50	13736		
	12	13237			13	26	47		4,81	50	13737		
	14	13284			15	26	49		5,16	50	13784		
	16	13238			17	28	50		5,15	50	13738		
	20	13239			21	31	54,5		5,66	50	13739		
120	8	13285	15,5	20	8,4	29	50,5	26	7,20	50	13785	PW 6/50 150	PW 6/70 151
	10	13240			10,5	29	53		7,13	50	13740		
	12	13241			13	29	52,5		7,14	50	13741		
	14	13286			15	29	53,5		7,24	50	13786		
	16	13242			17	29	55		7,21	50	13742		
	20	13243			21	35	60		7,81	50	13743		
150	8	13244	16,8	21,3	8,4	31	55,5	29	8,34	25	13744	PW 6/50 150	PW 6/70 151
	10	13245			10,5	31	56,5		8,34	25	13745		
	12	13246			13	31	56		8,23	25	13746		
	14	13287			15	31	57		8,26	25	13787		
	16	13247			17	31	58		8,50	25	13747		
	20	13248			21	35	63		8,84	25	13748		

AP 10 156, HHW 10 + HPW 10 157, APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 17 164, Stilo 1 154

Tubular cable lugs 185 – 630 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole

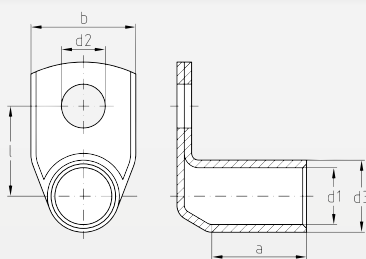


cross section mm²	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspection hole	tool recommendation							
185	8	13293	19	24	8,4	35	58	30	10,37	25	13793	AP 10 156, HHW 10 + HPW 10 157	APW 30 + HHW 30 164, HPW 17 164	APW 20 160, HHW 20 + HPW 20 161, APW 35 + HHW 35 165	HPW 18 172				
	10	13249			10,5	35	59		10,71	25	13749								
	12	13250			13	35	58,5		10,54	25	13750								
	14	13288			15	35	61		10,98	25	13788								
	16	13251			17	35	63		10,86	25	13751								
	20	13252			21	35	66		11,78	25	13752								
240	8	13253	21	26	8,4	38	67	35	12,40	25	13753								
	10	13254			10,5	38	67		12,97	25	13754								
	12	13255			13	38	67		13,41	25	13755								
	14	13289			15	38	69		13,36	25	13789								
	16	13256			17	38	69,5		13,56	25	13756								
	20	13257			21	38	71		13,80	25	13757								
300	10	13259	24	30	10,5	44	79,5	42	20,77	20	13759								
	12	13260			13	44	82		21,18	20	13760								
	14	13290			15	44	84		22,19	20	13790								
	16	13261			17	44	85		22,00	20	13761								
	20	13262			21	44	85		22,40	20	13762								
400	10	13263	27,5	33,5	10,5	49	92	47	27,90	15	13763								
	12	13264			13	49	92		27,85	15	13764								
	16	13265			17	49	92		27,65	15	13765								
	20	13266			21	49	92		27,80	15	13766								
500	12	13269	31	38	13	55,5	113	70	49,38	5	13769								
	16	13270			17	55,5	113		49,38	5	13770								
	20	13271			21	55,5	113		48,56	5	13771								
630	16	13275	34	41	17	60	115	70	51,35	5	13775								
	20	13276			21	60	115		50,60	5	13776								

Tubular cable lugs 185 – 630 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole



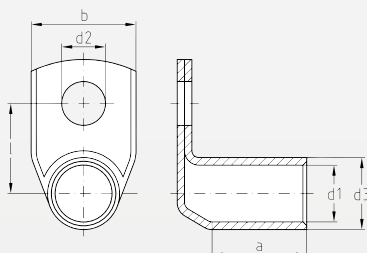
1

cross section mm²	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspection hole	tool recommendation	
			d1	d3	d2	b	l	a					
0,5 – 0,75	3	13100	1,4	3	3,2	6,5	7,5	5	0,09	100	–	WZ 22 127	WZ 36 126
	4	13101			4,3	8,5	8,5		0,10	100	–		
	5	13102			5,3	10	9,5		0,10	100	–		
1,0 – 1,5	3	13105	1,9	3,9	3,2	6,5	8	5	0,16	100	–		
	4	13106			4,3	8,5	9		0,16	100	–		
	5	13107			5,3	10	10		0,16	100	–		
	6	13108			6,4	11	12		0,18	100	–		
2,5	4	13110	2,4	4,4	4,3	8,5	9,2	5,5	0,18	100	–		
	5	13111			5,3	10	10,2		0,19	100	–		
	6	13112			6,4	11	12,2		0,22	100	–		
	8	13113			8,4	14	14,2		0,23	100	–		
4	4	13115	3	5	4,3	8,5	9,5	7	0,25	100	–		
	5	13116			5,3	10	10,5		0,24	100	–		
	6	13117			6,4	11	12,5		0,29	100	–		
	8	13118			8,4	14	14,5		0,30	100	–		
6	4	13120	3,7	5,5	4,3	8,5	9,8	7	0,27	100	–		
	5	13121			5,3	10	10,8		0,25	100	–		
	6	13122			6,4	11	12,8		0,30	100	–		
	8	13123			8,4	14	14,8		0,34	100	–		
10	5	13305	4,3	6,7	5,3	10	11,4	9	0,49	100	13805		
	6	13306			6,4	11	13,4		0,53	100	13806		
	8	13307			8,4	15	15,4		0,60	100	13807		
	10	13308			10,5	18	17,4		0,67	100	13808		
	12	13309			13	20	18,4		0,62	100	13809		
16	5	13310	5,4	7,8	5,3	11	11,9	10	0,66	100	13810		
	6	13311			6,4	11,5	13,9		0,74	100	13811		
	8	13312			8,4	15	15,9		0,82	100	13812		
	10	13313			10,5	18	17,9		0,82	100	13813		
	12	13314			13	20	18,9		0,78	100	13814		
25	5	13396	6,9	9,4	5,3	14	12,7	12	0,99	100	13896		
	6	13315			6,4	14	14,7		1,13	100	13815		
	8	13316			8,4	15	16,7		1,22	100	13816		
	10	13317			10,5	18	18,7		1,23	100	13817		
	12	13318			13	20	19,7		1,24	100	13818		

Tubular cable lugs with 90° angle, 35 – 300 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole

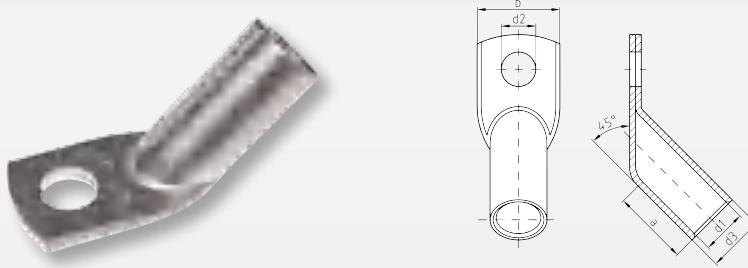


cross section mm²	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspection hole	tool recommendation			
			d1	d3	d2	b	l	a							
35	6	13320	8,3	11,3	6,4	16,5	16,2	15	1,75	100	13820	PW 6/70 151 PW 10/120 152 AP 10 156, HHW 10 + HPW 10 157 APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 15 165, HPW 17 164			
	8	13321			8,4	16,5	18,2		1,75	100	13821				
	10	13322			10,5	18	20,2		1,98	100	13822				
	12	13323			13	20	21,2		1,80	100	13823				
50	6	13381	9,6	13,1	6,4	19	17,1	17	2,63	100	13881				
	8	13325			8,4	19	19,1		2,89	100	13825				
	10	13326			10,5	20	21,1		2,99	100	13826				
	12	13327			13	23	23,5		3,00	100	13827				
	16	13328			17	27	25,1		2,95	100	13828				
70	8	13330	11,5	15,3	8,4	22	20,2	20	3,66	50	13830				
	10	13331			10,5	22	22,2		3,88	50	13831				
	12	13332			13	23	23,2		3,82	50	13832				
	16	13333			17	28	26,2		4,29	50	13833				
	20	13334			21	29	30,2		5,01	50	13834				
95	8	13335	13,5	17,5	8,4	25	21,3	22	4,94	50	13835				
	10	13336			10,5	25	23,3		5,27	50	13836				
	12	13337			13	25	24,3		4,96	50	13837				
	16	13338			17	28	27,3		5,20	50	13838				
	20	13384			21	31	31,3		6,85	50	13884				
120	8	13339	15,5	20	8,4	29	22,5	25	7,01	50	13839				
	10	13340			10,5	29	25		7,52	50	13840				
	12	13341			13	29	26		7,33	50	13841				
	16	13342			17	29	28,5		8,03	50	13842				
150	8	13344	16,8	21,3	8,4	31	25,7	28	8,79	25	13844				
	10	13345			10,5	31	25,7		8,07	25	13845				
	12	13346			13	31	26,7		8,29	25	13846				
	16	13347			17	31	29,7		8,50	25	13847				
	20	13348			21	35	33,7		8,89	25	13848				
185	10	13349	19	24	10,5	35	27	29	10,86	25	13849				
	12	13350			13	35	28		10,14	25	13850				
	16	13351			17	35	31		11,15	25	13851				
	20	13352			21	35	35		11,58	25	13852				
240	10	13354	21	26	10,5	38	28	34	13,16	25	13854				
	12	13355			13	38	29		12,69	25	13855				
	16	13356			17	38	32		13,46	25	13856				
	20	13357			21	38	36		13,60	25	13857				
300	12	13360	24	30	13	43	31	41	20,04	20	13860				
	16	13361			17	43	34		21,87	20	13861				
	20	13362			21	43	38		21,81	20	13862				

Tubular cable lugs with 45° angle, 10 – 70 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated



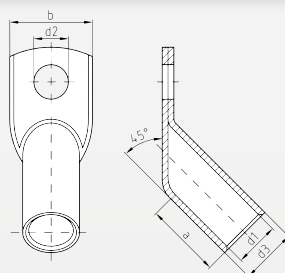
cross section mm ²	flat hole M	art.-no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
			d1	d3	d2	b	a					
10	5	13134	4,3	6,7	5,3	10	9	0,49	100	PW 6/70 151, DP 6/95 153	PW 10/120 152, AP 10 156, HHW 10 + HPW 10 157	APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 17 164, Stilo 1 154
	6	13135			6,4	11		0,54	100			
	8	13136			8,4	15		0,59	100			
16	6	13140	5,4	7,8	6,4	11,5	10	0,69	100			
	8	13141			8,4	15		0,71	100			
	10	13142			10,5	18		0,82	100			
25	5	13144	6,9	9,4	5,3	14	12	0,89	100			
	6	13145			6,4	14		1,10	100			
	8	13146			8,4	15		1,13	100			
	10	13147			10,5	18		1,20	100			
	12	13148			13	20		1,22	100			
35	6	13150	8,3	11,3	6,4	16,5	15	1,81	50			
	8	13151			8,4	16,5		1,88	50			
	10	13152			10,5	18		1,95	50			
	12	13153			13	20		1,97	50			
50	6	13154	9,6	13,1	6,4	19	17	2,42	50			
	8	13155			8,4	19		2,85	50			
	10	13156			10,5	20		3,27	50			
	12	13157			13	23		3,41	50			
70	6	13159	11,5	15,3	6,4	22	20	3,66	25			
	8	13160			8,4	22		3,92	25			
	10	13161			10,5	22		4,30	25			
	12	13162			13	23		4,24	25			

Tubular cable lugs 45° angle, 95 – 300 mm² standard-series

material: Cu-HCP according to DIN EN 13600

surface: tin plated

1

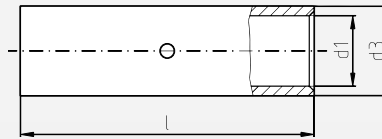


cross section mm ²	flat hole M	art.-no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
			d1	d3	d2	b	a					
95	8	13165	13,5	17,5	8,4	25	22	5,38	25	DP 6/95 133 PW 10/120 152	AP 10 156, HHW 10 + HPW 10 157	API 20 160, HPI 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 15 165, HPW 17 164
	10	13166			10,5	25		5,61	25			
	12	13167			13	25		5,74	25			
120	8	13169	15,5	20	8,4	29	25	7,65	25			
	10	13170			10,5	29		8,33	25			
	12	13171			13	29		8,47	25			
	16	13172			17	29		8,59	25			
150	8	13173	16,8	21,3	8,4	31	28	10,20	25			
	10	13174			10,5	31		9,87	25			
	12	13175			13	31		9,68	25			
	16	13176			17	31		10,19	25			
185	10	13178	19	24	10,5	35	29	12,52	20			
	12	13179			13	35		12,29	20			
	16	13180			17	35		12,84	20			
	20	13181			21	35		13,99	20			
240	10	13182	21	26	10,5	38	34	14,80	15			
	12	13183			13	38		15,46	15			
	16	13184			17	38		16,51	15			
	20	13185			21	38		17,04	15			
300	12	13187	24	30	13	43	41	25,70	15			
	16	13188			17	43		25,68	15			
	20	13189			21	43		24,10	15			

Tubular butt-connectors 0.5 – 630 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated – type: with or without wirestop

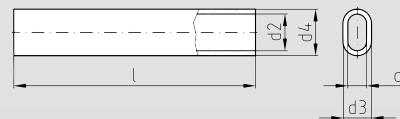


cross section mm ²	art.-no. with wirestop	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	art.-no. without wirestop	tool recommendation		
		d1	d3	l						
0,5 – 0,75	13450	1,4	3	15	0,08	100	13554	WZ 36 126 PW 6/70 151 DP 6/95 153	WZ 22 127	HPW 17 164, APW 30 + HHW 30 164 AP 10 156 PW 10/120 152
1,0 – 1,5	13452	1,9	3,9	15	0,12	100	13555			
2,5	13454	2,4	4,4	16	0,15	100	13556			
4	13456	3	5	19	0,22	100	13557			
6	13458	3,7	5,5	19	0,22	100	13558			
10	13460	4,3	6,7	30	0,55	100	13560			
16	13462	5,4	7,8	35	0,81	100	13561			
25	13464	6,9	9,4	40	1,16	100	13562			
35	13466	8,3	11,3	45	1,91	100	13563			
50	13468	9,6	13,1	50	2,70	100	13564			
70	13470	11,5	15,3	55	3,90	50	13566	HPW 18 172 mit Adapter ab 10 mm ²		
95	13472	13,5	17,5	60	5,00	50	13567			
120	13474	15,5	20	65	7,19	50	13568			
150	13476	16,8	21,3	70	8,73	25	13569			
185	13478	19	24	75	11,63	25	13570			
240	13480	21	26	85	14,22	25	13572			
300	13482	24	30	100	23,14	10	13573			
400	13484	27,5	33,5	100	26,27	10	13574			
500	13486	31	38	140	47,30	5	13575			
630	13488	34	41	160	61,75	5	13576			

Tubular oval-connectors 0.5 – 10 mm²

for connection of solid conductors

material: Cu according to DIN EN 13600, surface: tin plated



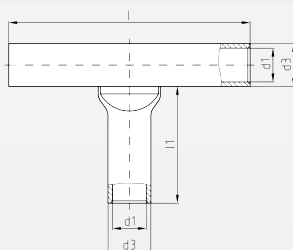
cross section mm ²	art.-no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
		d1	d2	d3	d4	l			
0,5	13410	1,0	2,0	2,0	3,0	25	0,08	100	special crimping tool art.-no. 99056 130
1,5	13412	1,6	3,2	2,6	4,2	25	0,11	100	
2,5	13414	2,1	4,2	3,1	5,2	25	0,14	100	
4	13416	2,5	5,0	3,5	6,0	25	0,16	100	
6	13418	3,0	6,0	5,0	8,0	40	0,65	100	Stilo 1 154 art.-no. 91100
10	13420	3,9	7,6	5,9	9,6	50	0,96	50	

Tubular T-connectors 1.0 – 300 mm² standard-series

material: Cu according to DIN EN 13600

surface: tin plated

1



cross section mm ²	art.-no.	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
		d1	d3	l	l1			
1,0 – 1,5	13952	1,9	3,9	30	16	0,36	50	WZ 36 126 DP 6/95 153 PW 10/120 152 APW 30 + HHW 30 164
2,5	13954	2,4	4,4	30	16	0,45	50	
4	13956	3	5	35	16,5	0,57	50	
6	13958	3,7	5,5	35	17	0,66	50	
10	13960	4,3	6,7	45	25	1,34	50	
16	13962	5,4	7,8	50	26	1,71	50	
25	13964	6,9	9,4	50	27	2,20	25	
35	13966	8,3	11,3	60	31	3,82	25	
50	13968	9,6	13,1	72	35	6,13	10	
70	13970	11,5	15,3	77	37	8,00	10	
95	13972	13,5	17,5	88	45	11,82	10	
120	13974	15,5	20	106	53	18,27	10	
150	13976	16,8	21,3	120	58	23,42	5	
185	13978	19	24	110	42	25,62	5	
240	13980	21	26	135	55	33,94	5	
300	13982	24	30	140	55	48,53	3	

Assortment box with tubular cable lugs, standard-series

material: varnished steel, with 12 small compartments and 1 tool compartment

measurements: 405 x 250 x 50 mm



special filling
on request

contents of tubular cable lugs, standard-series:

quantity	cross section mm ²	flat hole M	art.-no.
25 x	6	6	13022
25 x	6	8	13023
25 x	10	6	13206
25 x	10	8	13207
25 x	16	8	13212
25 x	16	10	13213
25 x	25	8	13216
25 x	25	10	13217
20 x	35	8	13221
20 x	35	10	13222
20 x	50	10	13226
20 x	50	12	13227
1 x PW 6/50			90180
Assortment box			90876

Assortment box without contents:
art.-no.: 90877



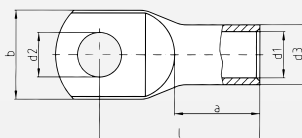
**Tubular cable lugs and
Tubular connectors for
Siemens Norm SN 71322**



Tubular cable lugs 10 – 150 mm², Siemens Norm SN 71322, for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: with inspection hole

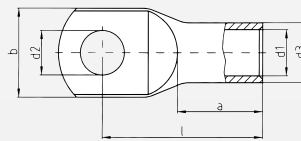


cross section mm ²	flat hole M	art.-no.	dimensions in mm						weight 100 Stk./kg	packing units (pcs.)	tool recommendation
			d1	d3	d2	b	l	a			
10 Sf	5	11310	5,0	8,0	5,3	11,5	23	10	0,77	100	STILO 1 154 APW 30 + HHW 30 164, HPW 17 164 APW 20 + STILO 20 160, HPW 20 161 APW 35 + HHW 35 + HPW 15 165 AP 10 156, HHW 10 157
	6	11311			6,4	11,5	23		0,73	100	
	8	11312			8,4	13,5	26		0,78	100	
	10	11313			10,5	16	26		0,79	100	
	12	11314			13	19	31		0,97	100	
16 Sf	5	11385	6,0	9,0	5,3	13	26	11	1,02	100	
	6	11315			6,4	13	26		1,01	100	
	8	11316			8,4	13	26		0,93	100	
	10	11317			10,5	16	28		1,01	100	
	12	11318			13	22	35		1,26	100	
25 Sf	5	11382	8,0	11,0	5,3	16	31	14,5	1,53	100	
	6	11320			6,4	16	31		1,51	100	
	8	11321			8,4	16	31		1,44	100	
	10	11322			10,5	17	32		1,52	100	
	12	11323			13	22	35		1,68	100	
35 Sf	6	11383	9,0	13,0	6,4	18	37	18	2,85	100	
	8	11325			8,4	18	37		2,76	100	
	10	11326			10,5	18	37		2,64	100	
	12	11327			13	22	40		3,11	100	
50 Sf	6	11384	11,0	14,5	6,4	21	39	19	3,11	100	
	8	11330			8,4	21	39		2,99	100	
	10	11331			10,5	21	39		2,91	100	
	12	11332			13	21	41		2,93	100	
	16	11333			17	27	44		3,28	100	
70 Sf	6	11334	13,0	17,0	6,4	25	44	21	4,71	50	
	8	11335			8,4	25	44		4,57	50	
	10	11336			10,5	25	44		4,47	50	
	12	11337			13	25	46		4,54	50	
	16	11338			17	28	49		4,71	50	
95 Sf	8	11386	15,0	20,0	8,4	29	54	25	8,75	50	
	10	11340			10,5	29	54		8,47	50	
	12	11341			13	29	54		8,23	50	
	16	11342			17	29	54		7,74	50	
120 Sf	10	11345	17,0	22,0	10,5	32	58	27	10,12	50	
	12	11346			13	32	58		9,86	50	
	16	11347			17	32	58		9,34	50	
150 Sf	10	11349	19,0	25,0	10,5	36	65	31	15,16	25	
	12	11350			13	36	65		14,78	25	
	16	11351			17	36	65		14,19	25	
	20	11352			21	36	68		14,89	25	

Tubular cable lugs 185 – 300 mm², Siemens Norm SN 71322, for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: with inspection hole



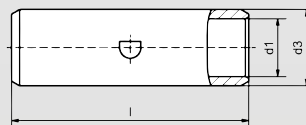
2

cross section mm ²	flat hole M	art.-no.	dimensions in mm						weight 100 Stk./kg	packing units (pcs.)	tool recommendation
			d1	d3	d2	b	l	a			
185 Sf	10	11389	21,0	27,0	10,5	39	71	35	18,19	25	AP 10 156 HHW 10 157 APW 30 + HHW 30 164, HPW 17 164 APW 20 + HHW 20 161 STILO 20 160 APW 35 + HHW 35 165 HPW 15 165
	12	11390			13	39	71		17,79	25	
	16	11392			17	39	71		17,18	25	
	20	11393			21	39	74		18,00	25	
240 Sf	10	11394	22,5	29,0	10,5	42	77	36	23,60	20	
	12	11395			13	42	77		23,20	20	
	16	11397			17	42	77		22,44	20	
	20	11398			21	42	77		21,48	20	
300 Sf	10	11355	24,5	32,0	10,5	45	94	40	34,93	20	
	12	11356			13	45	94		34,64	20	
	16	11357			17	45	94		34,03	20	
	20	11358			21	45	94		33,26	20	

Tubular butt-connectors 10 – 300 mm² Siemens Norm 71322, for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: with wirestop

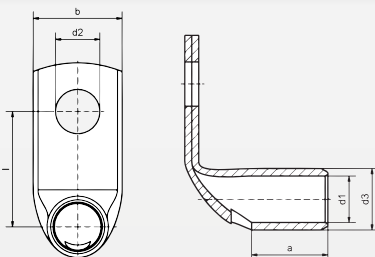


cross section mm ²	art.-no.	dimensions in mm			weight 100 Stk./kg	packing units (pcs.)	tool recommendation
		d1	d3	l			
10 Sf	11460	5,0	8,0	30	0,79	100	AP 10 156, HHW 10 157 APW 30 + HHW 30 164 HPW 17 164 APW 20 + HHW 20 161 STILO 20 160 APW 35 + HHW 35 165 HPW 15 165
16 Sf	11461	6,0	9,0	35	1,07	100	
25 Sf	11462	8,0	11,0	35	1,36	100	
35 Sf	11463	9,0	13,0	35	2,17	100	
50 Sf	11464	11,0	14,5	45	2,75	100	
70 Sf	11465	13,0	17,0	45	3,68	50	
95 Sf	11466	15,0	20,0	45	5,33	50	
120 Sf	11467	17,0	22,0	55	7,31	50	
150 Sf	11468	19,0	25,0	65	12,02	25	
185 Sf	11469	21,0	27,0	70	13,76	25	
240 Sf	11470	22,5	29,0	70	16,98	10	
300 Sf	11471	24,5	32,0	75	21,63	10	

Tubular cable lugs with 90° angle 10 – 120 mm², Siemens Norm SN 71322, for flexible conductors

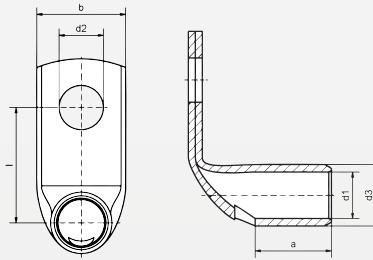
material: Cu according to DIN EN 13600

surface: tin plated – type: with inspection hole



cross section mm ²	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	tool recommendation				
			d1	d3	d2	b	l	a							
10 Sf	5	11710	5,0	8,0	5,3	13	16	9	0,99	100	AP 10 156, HPI 10 157	APW 35 + HPW 15 165, HHW 35 165	APW 20 + HHW 20 161, STILO 20 160	APW 30 + HHW 30 164, HPW 17 164	STILO 1 154
	6	11711			6,4	13	16,5		1,03	100					
	8	11712			8,4	13,5	17		0,93	100					
	10	11713			10,5	16	18,5		1,04	100					
16 Sf	5	11785	6,0	9,0	5,3	13	16,5	10	1,08	100					
	6	11715			6,4	13	17		1,14	100					
	8	11716			8,4	13	17,5		1,21	100					
	10	11717			10,5	16	19		1,23	100					
	12	11718			13	19	24		1,44	100					
25 Sf	6	11720	8,0	11,0	6,4	17	18,5	13,5	1,61	100					
	8	11721			8,4	17	19		1,68	100					
	10	11722			10,5	17	20,5		1,72	100					
	12	11723			13	19	25,5		1,92	100					
35 Sf	6	11783	9,0	13,0	6,4	18	19,5	17	2,70	100					
	8	11725			8,4	18	20		2,81	100					
	10	11726			10,5	18	21,5		2,92	100					
	12	11727			13	19	26,5		3,11	100					
50 Sf	6	11784	11,0	14,5	6,4	21	23,3	18	3,42	100					
	8	11730			8,4	21	26,3		3,69	100					
	10	11731			10,5	21	27,3		3,79	100					
	12	11732			13	21	28,3		3,77	100					
	16	11733			17	27	29,3		4,02	100					
70 Sf	6	11734	13,0	17,0	6,4	25	27,5	20	5,07	50					
	8	11735			8,4	25	27,5		5,23	50					
	10	11736			10,5	25	28,5		5,38	50					
	12	11737			13	25	29,5		5,38	50					
	16	11738			17	28	30,5		5,25	50					
95 Sf	8	11786	15,0	20,0	8,4	29	29	24	7,77	50					
	10	11740			10,5	29	30		8,02	50					
	12	11741			13	29	31		8,11	50					
	16	11742			17	29	32		8,18	50					
120 Sf	8	11744	17,0	22,0	8,4	32	30,5	26	9,05	50					
	10	11745			10,5	32	31,5		9,35	50					
	12	11746			13	32	32,5		9,47	50					
	16	11747			17	32	33,5		9,60	50					

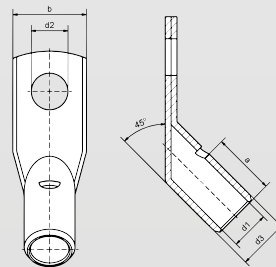
Tubular cable lugs with 90° angle 150 – 240 mm², Siemens Norm SN 71322, for flexible conductors
material: Cu according to DIN EN 13600
surface: tin plated – type: with inspection hole



2

cross section mm ²	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	tool recommendation			
			d1	d3	d2	b	l	a						
150 Sf	10	11749	19,0	25,0	10,5	36	33	30	13,76	25	AP 10 156 + HPi 10 157	APW 35 + HHW 35 + HPW 15 165	APW 20 + STILO 20 160 + HHW 20 161	APW 30 + HHW 30 164, HPW 17 164
	12	11750			13	36	34		13,86	25				
	16	11751			17	36	35		14,09	25				
185 Sf	10	11789	21,0	27,0	10,5	39	34	34	15,82	25				
	12	11790			13	39	35		15,94	25				
	16	11792			17	39	36		16,23	25				
240 Sf	10	11794	22,5	29,0	10,5	42	35	35	18,93	20				
	12	11795			13	42	36		19,08	20				
	16	11797			17	42	37		19,46	20				

Tubular cable lugs with 45° angle 10 – 160 mm², Siemens Norm SN 71322, for flexible conductors
material: Cu according to DIN EN 13600
surface: tin plated – type: with inspection hole

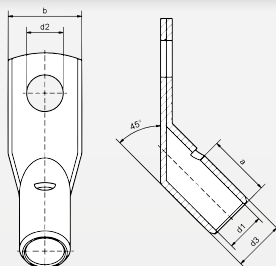


cross section mm²	flat hole M	art.-no.	dimensions in mm					weight 100 pcs./kg	packing units (pcs.)	tool recommendation									
			d1	d3	d2	b	a												
10 Sf	5	11810	5,0	8,0	5,3	13	9	1,05	100	AP 10 156 + HPW 10 157	APW 35 + HPW 15 165, HHW 35 165	APW 20 + STILO 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164	STILO 1 154					
	6	11811			6,4	13		1,09	100										
	8	11812			8,4	13,5		0,99	100										
	10	11813			10,5	16		1,09	100										
16 Sf	5	11885	6,0	9,0	5,3	13	10	1,21	100										
	6	11815			6,4	13		1,27	100										
	8	11816			8,4	13,5		1,34	100										
	10	11817			10,5	16		1,35	100										
	12	11818			13	19		1,55	100										

Tubular cable lugs with 45° angle 25 – 240 mm², Siemens Norm SN 71322, for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: with inspection hole



cross section mm ²	flat hole M	art.-no.	dimensions in mm					weight 100 pcs./kg	packing units (pcs.)	tool recommendation				
			d1	d3	d2	b	a							
25 Sf	6	11820	8,0	11,0	6,4	17	13,5	1,70	100	AP 10 156 + HHW 10 157	APW 35 + HHW 35 + HPW 15 165	APW 30 + HHW 30 164, HPW 17 164	APW 20 + STILO 20 160, HHW 20 161	STILO 1 154
	8	11821			8,4	17		1,77	100					
	10	11822			10,5	17		1,81	100					
	12	11823			13	19		2,00	100					
35 Sf	6	11883	9,0	13,0	6,4	18	17	2,97	100					
	8	11825			8,4	18		3,08	100					
	10	11826			10,5	18		3,20	100					
	12	11827			13	19		2,80	100					
50 Sf	6	11884	11,0	14,5	6,4	21	18	3,22	100					
	8	11830			8,4	21		3,50	100					
	10	11831			10,5	21		3,59	100					
	12	11832			13	21		3,57	100					
	16	11833			17	27		3,75	100					
70 Sf	6	11834	13,0	17,0	6,4	25	20	4,97	50					
	8	11835			8,4	25		5,13	50					
	10	11836			10,5	25		5,28	50					
	12	11837			13	25		5,27	50					
	16	11838			17	28		5,18	50					
95 Sf	8	11886	15,0	20,0	8,4	29	24	8,16	50					
	10	11840			10,5	29		8,41	50					
	12	11841			13	29		8,50	50					
	16	11842			17	29		8,57	50					
120 Sf	8	11844	17,0	22,0	8,4	32	26	9,47	50					
	10	11845			10,5	32		9,77	50					
	12	11846			13	32		9,90	50					
	16	11847			17	32		10,03	50					
150 Sf	10	11849	19,0	25,0	10,5	36	30	14,55	25					
	12	11850			13	36		14,65	25					
	16	11851			17	36		14,88	25					
185 Sf	10	11889	21,0	27,0	10,5	39	34	17,05	25					
	12	11890			13	39		17,17	25					
	16	11892			17	39		17,45	25					
240 Sf	10	11894	22,5	29,0	10,5	42	35	20,35	20					
	12	11895			13	42		20,95	20					
	16	11897			17	42		20,87	20					

A close-up photograph of a copper cable end. The cable is encased in a blue jacket, and the copper strands are exposed at the end. A black tubular lug is attached to the copper strands. The background is blurred, showing some orange and green elements.

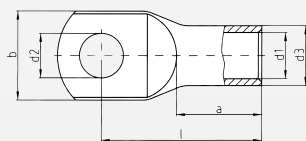
Tubular cable lugs for flexible conductors, copper
Tubular butt-connectors for flexible conductors, copper



Tubular cable lugs 10 – 50 mm² for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole



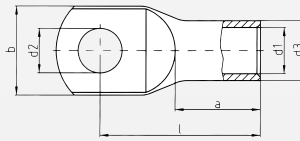
3

cross section mm ² min. cable-Ø	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	art.-no. with inspection hole	tool recommendation
d1	d3	d2	b	l	a							
10 f	5	13510	5	8	5,3	12	23	12	0,71	100	13610	FW 10/70 151 APW 35 + HHW 35 + HPW 15 165 AP 10 156, HHW 10 + HPW 10 157, APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 17 164, Silo 1 154, Silo 20 160
.....	6	13511			6,4	12	25		0,80	100	13611	
4,0 mm	8	13512			8,4	15	28		0,92	100	13612	
	10	13513			10,5	18	31		0,98	100	13613	
	12	13514			13	20	32		1,00	100	13614	
16 f	5	13585	6	9	5,3	14	25,5	13	0,94	100	13685	
.....	6	13515			6,4	14	27		1,01	100	13615	
5,0 mm	8	13516			8,4	15	29,5		1,12	100	13616	
	10	13517			10,5	18	32		1,12	100	13617	
	12	13518			13	20	33		1,18	100	13618	
25 f	6	13520	7,7	10,7	6,4	16	32	16	1,47	100	13620	
.....	8	13521			8,4	16	34		1,54	100	13621	
6,5 mm	10	13522			10,5	18	35		1,53	100	13622	
	12	13523			13	20	36		1,61	100	13623	
	16	13524			17	26	40,5		1,91	100	13624	
35 f	6	13583	9,2	12,4	6,4	18	36	18	2,07	100	13683	
.....	8	13525			8,4	18	36		2,07	100	13625	
7,8 mm	10	13526			10,5	18	38		2,20	100	13626	
	12	13527			13	23	40		2,22	100	13627	
	16	13528			17	26	45		2,47	100	13628	
50 f	6	13584	11,2	14,8	6,4	22	42	21	3,25	100	13684	
.....	8	13530			8,4	22	42		3,22	100	13630	
9,0 mm	10	13531			10,5	22	43		3,33	100	13631	
	12	13532			13	23	44		3,39	100	13632	
	14	13581			15	25	45,5		3,60	100	13681	
	16	13533			17	28	48,5		3,65	100	13633	

Tubular cable lugs 70 – 240 mm² for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: without or optionally with inspection hole



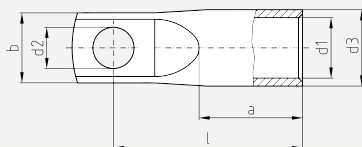
3

cross section mm ² min. cable-Ø	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	art.-no. with inspection hole	tool recommendation			
d1	d3	d2	b	l	a										
70 f	6	13534	13,5	17,5	6,4	25	46	23	4,67	50	13634	FW 10/70 151	AP 10 156, HHW 10 + HPW 10 157	APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, Stilo 20 160	HPW 17 164, HPW 15 + APW 35 + HHW 35 165
.....	8	13535			8,4	25	45,5		4,43	50	13635				
11,0 mm	10	13536			10,5	25	47		4,84	50	13636				
	12	13537			13	26	47		4,84	50	13637				
	16	13538			17	28	50		5,05	50	13638				
	20	13539			21	31	54,5		5,56	50	13639				
95 f	6	13588	15,5	20	6,4	29	50,5	26	6,77	50	13688				
.....	8	13586			8,4	29	50,5		6,62	50	13686				
13,0 mm	10	13540			10,5	29	53		7,15	50	13640				
	12	13541			13	29	52,5		7,11	50	13641				
	16	13542			17	29	55		7,19	50	13642				
	20	13543			21	35	60		7,64	50	13643				
120 f	10	13545	16,8	21,3	10,5	31	56,5	29	8,07	50	13645				
.....	12	13546			13	31	56		8,15	50	13646				
15,0 mm	16	13547			17	31	58		8,36	50	13647				
	20	13548			21	35	63		8,76	50	13648				
150 f	10	13549	19	24	10,5	35	59	30	10,86	25	13649				
.....	12	13550			13	35	58,5		11,60	25	13650				
16,3 mm	16	13551			17	35	63		11,20	25	13651				
	20	13552			21	35	66		11,61	25	13652				
185 f	10	13589	21	26	10,5	38	67	35	13,03	25	13689				
.....	12	13590			13	38	67		12,15	25	13690				
18,5 mm	16	13592			17	38	69,5		13,84	25	13692				
	20	13593			21	38	71		13,99	25	13693				
240 f	10	13594*	24	30	10,5	44	79,5	42	21,26	20	13694*				
	12	13595			13	44	82		21,40	20	13695				
.....	16	13597			17	44	85		22,13	20	13697				
20,5 mm	20	13598			21	44	85		22,20	20	13698				

* not UL permitted

Tubular cable lugs 35 – 240 mm² with narrow flange, for flexible conductors for switch gear connections

material: Cu according to DIN EN 13600, surface: tin plated



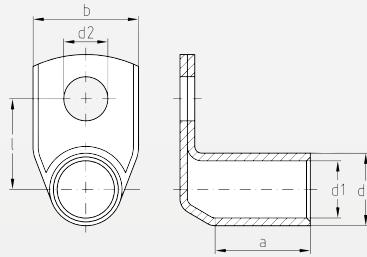
3

cross section mm² min. cable-Ø	flat hole M	art.-no. without inspection hole			dimensions in mm				weight 100 pcs./kg	packing units (pcs.)	art.-no. with inspection hole	tool recommendation			
			d1	d3	d2	b	l	a							
35 f	6	18583	9,2	12,4	6,4	15	35	18	1,80	25	18683	FW 10/70 151	AP 10 156, HHW 10 + HPW 10 157	APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, APW 35 + HHW 35 165	HPW 15 165, HPW 17 164
7,8 mm															
50 f	6	18584	11,0	14,8	6,4	15	38,5	21	2,69	25	18684				
	8	18530			8,4	17	41		3,00	25	18630				
9,0 mm	10	18531			10,5	19	45,5		3,37	25	18631				
	12	18532			13	19	46,5		3,30	25	18632				
70 f	6	18599	13,4	17,5	6,4	18	47,5	23	4,51	25	18699				
	8	18535			8,4	18	48		4,70	25	18635				
11,0 mm	10	18536			10,5	19	50		4,74	25	18636				
	12	18537			13	22	51		4,63	25	18637				
95 f	6	18580	14,9	20	6,4	19	50	26	5,95	25	18680				
	8	18586			8,4	19	51		6,29	25	18686				
13,0 mm	10	18540			10,5	19	53,5		6,54	25	18640				
	12	18541			13	22	55		6,66	25	18641				
120 f	6	18544	16,3	21,3	6,4	19	53	29	6,84	10	18644				
	8	18594			8,4	19	55		7,11	10	18694				
15,0 mm	10	18545			10,5	19	57		7,34	10	18645				
	12	18546			13	22	58		7,63	10	18646				
150 f	6	18595	18,7	24	6,4	26	56	30	8,57	10	18695				
	8	18593			8,4	26	58		9,18	10	18693				
16,3 mm	10	18549			10,5	26	60		9,72	10	18649				
	12	18550			13	26	59,5		9,99	10	18650				
	16	18551			17	26	62,5		10,50	10	18651				
185 f	8	18553	21	26	8,4	30	62	35	11,50	10	18653				
	10	18554			10,5	30	65		11,72	10	18654				
18,5 mm	12	18555			13	30	65		11,87	10	18655				
	16	18556			17	30	68		11,76	10	18656				
240 f	10	18559	23,5	30	10,5	30	76	42	18,59	5	18659				
	12	18560			13	30	79		20,50	5	18660				
20,5 mm	16	18561			17	30	81		20,23	5	18661				

Tubular cable lugs with 90° angle. 10 – 50 mm², for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated



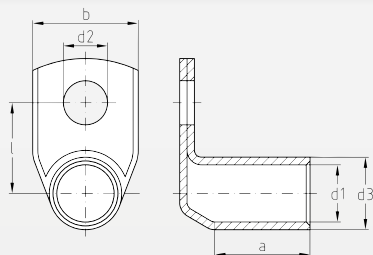
3

cross section mm ² min. cable-Ø	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	tool recommendation			
			d1	d3	d2	b	l	a						
10 f	5	11510	5	8	5,3	12	12	11	0,86	100	FW 10/70 151	AP 10 156, HHW 10 + HPW 10 157	HPW 15 165, HPW 17 164	APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, APW 35 + HHW 35 165, Stilo 1 154, Stilo 20 160
.....	6	11511			6,4	13	14		0,87	100				
4,0 mm	8	11512			8,4	15	16		0,94	100				
	10	11513			10,5	18	18		1,05	100				
	12	11514			13	20	19		0,98	100				
16 f	5	11585	6	9	5,3	15	12,5	12	0,94	100				
.....	6	11515			6,4	15	14,5		1,05	100				
5,0 mm	8	11516			8,4	15	16,5		1,18	100				
	10	11517			10,5	18	18,5		1,25	100				
	12	11518			13	20	19,5		1,43	100				
25 f	6	11520	7,7	10,7	6,4	16	15,9	15	1,55	100				
.....	8	11521			8,4	16	17,9		1,80	100				
6,5 mm	10	11522			10,5	18	19,9		1,88	100				
	12	11523			13	20	20,9		1,82	100				
35 f	6	11583	9,2	12,4	6,4	18	16,7	17	1,97	100				
.....	8	11525			8,4	18	18,7		2,20	100				
7,8 mm	10	11526			10,5	18,5	20,7		2,36	100				
	12	11527			13	23	21,7		2,23	100				
	16	11528			17	28	24,7		2,25	100				
50 f	6	11584	11,2	14,8	6,4	22	17,9	20	2,90	100				
.....	8	11530			8,4	22	19,9		3,15	100				
9,0 mm	10	11531			10,5	22	21,9		3,30	100				
	12	11532			13	23	22,9		3,36	100				
	16	11533			17	28	25,9		3,57	100				

Tubular cable lugs with 90° angle, 70 – 240 mm², for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated

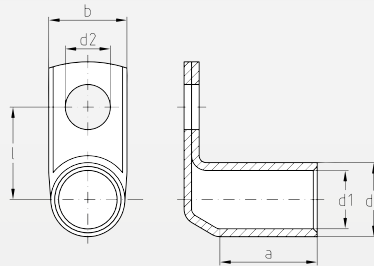


3

cross section mm ² min. cable-Ø	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	tool recommendation		
			d1	d3	d2	b	l	a					
70 f	8	11535	13,5	17,5	8,4	25	21,3	22	4,53	50	FW 10/70 151	AP 10 156, HPI 10 + HPW 10 157	HPW 15 165, HPW 17 164
.....	10	11536			10,5	25	23,3		4,82	50			
11,0 mm	12	11537			13	25	24,3		5,14	50			
	16	11538			17	28	27,3		5,10	50			
	20	11539			21	31	31,3		5,40	50			
95 f	8	11586	15,5	20	8,4	29	23,5	25	7,50	50			
.....	10	11540			10,5	29	25		7,50	50			
	12	11541			13	29	26		7,26	50			
13,0 mm	16	11542			17	29	28,5		7,50	50			
	20	11543			21	35	32,5		7,70	50			
120 f	10	11545	16,8	21,3	10,5	31	25,7	28	8,16	50			
.....	12	11546			13	31	26,7		8,02	50			
15,0 mm	16	11547			17	31	29,7		8,33	50			
	20	11548			21	35	33,7		8,61	50			
150 f	10	11549	19	24	10,5	35	27	29	10,06	25			
.....	12	11550			13	35	28		10,75	25			
16,3 mm	16	11551			17	35	31		11,04	25			
	20	11552			21	35	35		11,96	25			
185 f	12	11555	21	26	13	38	29	34	13,09	25			
.....	16	11556			17	38	32		13,46	25			
18,5 mm	20	11557			21	38	36		14,02	25			
240 f	12	11560	24	30	13	43	31	41	19,92	20			
.....	16	11561			17	43	34		21,87	20			
20,5 mm	20	11562			21	43	38		22,47	20			

Tubular cable lugs 90° angle, 35 – 240 mm² with narrow flange, for flexible conductors for switchgear connections

material: Cu according to DIN EN 13600, surface: tin plated



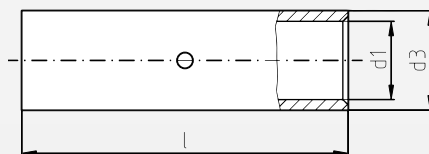
3

cross section mm ² min. cable-Ø	flat hole M	art.-no. without inspection hole	dimensions in mm						weight 100 pcs./kg	packing units (pcs.)	art.-no. with inspection hole	tool recommendation		
d1	d3	d2	b	l	a									
35 f	6	18383	9,2	12,4	6,4	15	16,7	17	1,80	25	18483	FW 10/70 151	AP 10 156, HHW 10 + HPW 10 157	HPW 15 165, HPW 17 164
.....														
7,8 mm														
50 f	6	18384	11,0	14,8	6,4	15	17,9	20	2,60	25	18484			
.....	8	18330			8,4	17	19,9		2,90	25	18430			
9,0 mm	10	18331			10,5	19	21,9		3,00	25	18431			
70 f	6	18399	13,4	17,5	6,4	18	20	22	4,30	25	18499			
.....	8	18335			8,4	18	22		4,50	25	18435			
11,0 mm	10	18336			10,5	19	24		4,80	25	18436			
	12	18337			13	22	27		4,80	25	18437			
95 f	6	18380	14,9	20	6,4	19	21	25	6,40	25	18480	FW 10/70 151	AP 10 156, HHW 10 + HPW 10 157	HPW 15 165, HPW 17 164
.....	8	18386			8,4	19	23		6,70	25	18486			
13,0 mm	10	18340			10,5	19	25		7,00	25	18440			
	12	18341			13	22	26		6,79	25	18441			
120 f	6	18344	16,3	21,3	6,4	19	21,7	28	7,30	10	18444			
.....	8	18394			8,4	19	23,7		7,70	10	18494			
15,0 mm	10	18345			10,5	19	25,7		7,90	10	18445			
	12	18346			13	22	26,7		8,90	10	18446			
150 f	6	18395	18,7	24	6,4	26	23	29	9,20	10	18495			
.....	8	18393			8,4	26	25		9,80	10	18493			
16,3 mm	10	18349			10,5	26	27		9,96	10	18449	FW 10/70 151	AP 10 156, HHW 10 + HPW 10 157	HPW 15 165, HPW 17 164
	12	18350			13	26	28		10,20	10	18450			
	16	18351			17	26	31		10,50	10	18451			
185 f	10	18354	21	26	10,5	30	28	34	11,90	10	18454			
.....	12	18355			13	30	29		11,90	10	18455			
18,5 mm	16	18356			17	30	32		12,30	10	18456			
240 f	10	18359	23,5	30	10,5	30	30	41	18,60	5	18459			
.....	12	18360			13	30	31		18,70	5	18460			
20,5 mm	16	18361			17	30	34		19,20	5	18461			

Tubular butt-connectors 10 – 240 mm², for flexible conductors

material: Cu according to DIN EN 13600

surface: tin plated – type: with wirestop



3

cross section mm² min. cable-Ø	art.-no.	dimensions in mm d1 d3 l			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation			
10 f 4,0 mm	13660	5	8	30	1,26	100	FW 10/70 140	AP 10 156, HHW 10 + HPW 10 157	APW 20 160, HHW 20 + HPW 20 161, APW 35 165, HHW 35 165, HPW 15 165, Stilo 20 160	APW 30 + HHW 30 164, HPW 17 164
16 f 5,0 mm	13661	6	9	35	1,10	100				
25 f 6,5 mm	13662	7,7	10,7	40	1,50	100				
35 f 7,8 mm	13663	9,2	12,4	45	2,18	100				
50 f 9,0 mm	13664	11,2	14,8	50	3,24	100				
70 f 11,0 mm	13665	13,5	17,5	60	5,10	50				
95 f 13,0 mm	13666	15,5	20	65	7,49	50				
120 f 15,0 mm	13667	16,8	21,3	65	8,44	50				
150 f 16,3 mm	13668	19	24	70	10,56	25				
185 f 18,5 mm	13669	21	26	85	14,01	25				
240 f 20,5 mm	13670	24	30	100	23,43	10				



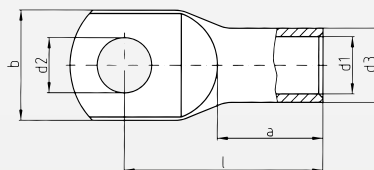
**Tubular cable lugs and connectors, copper
euro-series, compatible to many other brands**



Tubular cable lugs 0.5 – 25 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated – Type: without or optionally with inspection hole



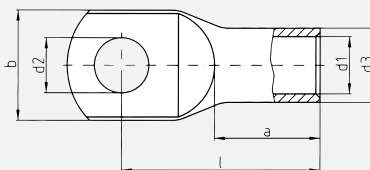
4	cross section mm ²	flat hole M	art.-no. without inspecting hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspecting hole	tool recommendation
				d1	d3	d2	b	l	a				
0,5 – 0,75	3	3	13000*	1,4	3	3,2	6,5	12,5	6	0,07	100	–	WZ 21 126
	4	4	13001*			4,3	8,5	14		0,08	100	–	
	5	5	13002*			5,3	10	15		0,10	100	–	
1,0 – 1,5	3	3	13005*	1,9	3,9	3,2	6,5	14	6	0,12	100	–	WZ 21 126
	4	4	13006*			4,3	8,5	15		0,14	100	–	
	5	5	13007*			5,3	10	16		0,15	100	–	
	6	6	13008*			6,4	11	18		0,17	100	–	
2,5	4	4	13010*	2,4	4,4	4,3	8,5	15	6,5	0,16	100	–	WZ 21 126
	5	5	13011*			5,3	10	16		0,18	100	–	
	6	6	13012*			6,4	11	18		0,19	100	–	
	8	8	13013*			8,4	13	20		0,22	100	–	
4	4	4	13015*	3	5	4,3	8,5	17	8	0,22	100	–	WZ 21 126
	5	5	13016*			5,3	10	18		0,24	100	–	
	6	6	13017*			6,4	11	20		0,26	100	–	
	8	8	13018*			8,4	14	22		0,30	100	–	
6	4	4	16020	3,5	6,5	4,3	10	19	9	0,46	100	15215	WW 6/70 151
	5	5	16021			5,3	10	20		0,47	100	15216	
	6	6	16022			6,4	11	21,5		0,54	100	15217	
	8	8	16023			8,4	15	24		0,59	100	15218	
	10	10	16024			10,5	18	26		0,64	100	15219	
	12	12	16025			13	19	27,5		0,64	100	15220	
10	4	4	15204	4,5	7	4,3	12	20	10	0,46	100	15221	WW 10/120 152
	5	5	15205			5,3	12	21		0,48	100	15222	
	6	6	15206			6,4	12	22,5		0,52	100	15223	
	8	8	15207			8,4	15	25		0,58	100	15224	
	10	10	15208			10,5	18	27		0,63	100	15225	
	12	12	15209			13	20	28,5		0,67	100	15226	
16	4	4	15299	5,5	8,5	4,3	12	24	13	0,82	100	15227	Stilo 1 154, HHW 20 + HPW 20 161 HPW 17 164, APW 20 + Stilo 20 160
	5	5	15210			5,3	12	25		0,89	100	15228	
	6	6	15211			6,4	12	26,5		0,96	100	15229	
	8	8	15212			8,4	15	29		1,03	100	15230	
	10	10	15213			10,5	18	31		1,10	100	15231	
	12	12	15214			13	19	32		1,08	100	15232	
25	5	5	16296	7	10	5,3	15	33,5	15	1,52	100	15234	
	6	6	16215			6,4	15	31,5		1,31	100	15235	
	8	8	16216			8,4	16	33		1,29	100	15236	
	10	10	16217			10,5	18	34,5		1,46	100	15237	
	12	12	16218			13	20	36		1,56	100	15238	
	14	14	16219			15	22	39		1,66	100	15239	
	16	16	16295			17	24	42		1,73	100	15240	

* not UL permitted

Tubular cable lugs 35 – 120 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated – Type: without or optionally with inspection hole

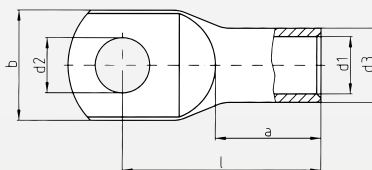

4

cross section mm ²	flat hole M	art.-no. without inspecting hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspecting hole	tool recommendation
35	6	16220	8,5	12	6,4	17	33	17	2,07	100	15241	WW 6/70 151 WW 10/120 152 AP 10 165, HHW 10 + HPW 10 157, APW 20 160, HHW 20 + HPW 20 161, Stilo 20 160 APW 30 + HHW 30 164, APW 35 + HHW 35 165, HPW 15 165, HPW 17 164, Stilo 1 154
	8	16221			8,4	17	34		2,18	100	15242	
	10	16222			10,5	20	36,5		2,19	100	15243	
	12	16223			13	22	37,5		2,24	100	15244	
	14	16281			15	23	40		2,44	100	15245	
	16	16292			17	28	44		2,60	100	15246	
50	6	16224	10	14	6,4	20	37	19	3,01	100	15248	
	8	16225			8,4	20	39		3,05	100	15249	
	10	16226			10,5	20	40,5		3,13	100	15250	
	12	16227			13	23	42		3,22	100	15251	
	14	16282			15	23	44		3,51	100	15252	
	16	16228			17	27	46		3,55	100	15253	
	20	16297			21	30,5	52,5		3,94	100	15254	
70	6	16229	12	16,5	6,4	24	40,5	21	4,11	25	15256	
	8	16230			8,4	24	42,5		4,69	25	15257	
	10	16231			10,5	24	43,5		4,66	25	15258	
	12	16232			13	24	45		4,83	25	15259	
	14	16283			15	25	46		4,91	25	15260	
	16	16233			17	28	48,5		4,96	25	15261	
	20	16234			21	29	52		5,29	25	15262	
95	6	16290	13,5	18	6,4	26	43	23	4,95	25	15263	
	8	16235			8,4	26	46		5,36	25	15264	
	10	16236			10,5	26	47		5,56	25	15265	
	12	16237			13	26	48		5,51	25	15266	
	14	16284			15	26	51,5		5,89	25	15267	
	16	16238			17	28	51		5,85	25	15268	
	20	16239			21	30	55		6,24	25	15269	
120	8	16285	15	20	8,4	29	49,5	26	7,33	25	15271	
	10	16240			10,5	29	52		7,99	25	15272	
	12	16241			13	29	51,5		8,35	25	15273	
	14	16286			15	30	53		8,14	25	15274	
	16	16242			17	30	55		8,07	25	15275	
	20	16243			21	35	60		8,90	25	15276	

Tubular cable lugs 150 – 630 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated – Type: without or optionally with inspection hole

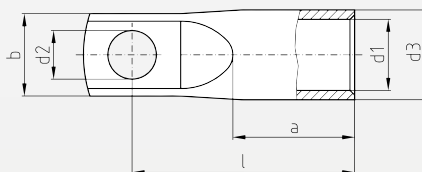


cross section mm²	flat hole M	art.-no. without inspecting hole	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. with inspecting hole	tool recommendation			
			d1	d3	d2	b	l	a							
150	8	16244	16,8	21,3	8,4	31	55,5	29	7,89	25	15278	Stilo 1 154	APW 30 + HHW 30 164, HPW 17 164	APW 20 160, HHW 20 + HPW 20 161, APW 35 + HHW 35 165, Stilo 20 160	HPW 18 172
	10	16245			10,5	31	56,5		8,37	25	15279				
	12	16246			13	31	56		8,07	25	15280				
	14	16287			15	31	57		8,30	25	15281				
	16	16247			17	31	58		8,36	25	15282				
	20	16248			21	35	63		8,75	25	15283				
185	8	13293	19	24	8,4	35	58	30	10,37	25	13793				
	10	13249			10,5	35	59		10,71	25	13749				
	12	13250			13	35	58,5		10,60	25	13750				
	14	13288			15	35	61		10,98	25	13788				
	16	13251			17	35	63		10,86	25	13751				
	20	13252			21	35	66		11,78	25	13752				
240	8	13253	21	26	8,4	38	67	35	12,40	25	13753				
	10	13254			10,5	38	67		12,97	25	13754				
	12	13255			13	38	67		13,41	25	13755				
	14	13289			15	38	69		13,36	25	13789				
	16	13256			17	38	69,5		13,56	25	13756				
	20	13257			21	38	71		13,80	25	13757				
300	10	13259	24	30	10,5	44	79,5	42	20,77	20	13759				
	12	13260			13	44	82		21,18	20	13760				
	14	13290			15	44	84		22,19	20	13790				
	16	13261			17	44	85		21,94	20	13761				
	20	13262			21	44	85		22,40	20	13762				
400	10	13263	27,5	33,5	10,5	49	92	47	27,90	15	13763				
	12	13264			13	49	92		27,85	15	13764				
	16	13265			17	49	92		27,65	15	13765				
	20	13266			21	49	92		27,80	15	13766				
500	12	13269*	31	38	13	55,5	113	70	49,38	5	13769*				
	16	13270			17	55,5	113		49,38	5	13770				
	20	13271			21	55,5	113		48,56	5	13771				
630	16	13275*	34	41	17	60	115	70	51,35	5	13775*				
	20	13276*			21	60	115		50,60	5	13776*				

* not UL permittted

Tubular cable lugs 35 – 300 mm² with narrow flange, euro-series for switchgear connections

material: Cu according to DIN EN 13600, surface: tin plated



Type with inspection
hole or angle on request.



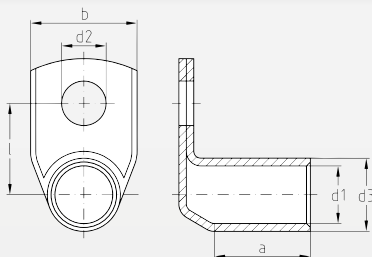
4

cross section mm ²	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d3	d2	b	l	a				
35	6	18220	8,5	12	6,4	15	33	17	1,93	25	WW 6/70 151	WW 10/120 152
	8	18221			8,4	15	35		1,90	25		
50	6	18224	10	14	6,4	15	37	19	2,69	25		
	8	18225			8,4	17	39		2,79	25		
	10	18226			10,5	17	41		2,79	25		
70	6	18229	11,8	16,5	6,4	17	41	21	3,99	25		
	8	18230			8,4	17	43		4,38	25		
	10	18231			10,5	17	45		4,40	25		
	12	18232			13	19	46		4,53	25		
95	6	18290	13,5	18	6,4	19	43	23	4,78	25		
	8	18235			8,4	19	45		4,98	25		
	10	18236			10,5	19	47		5,36	25		
	12	18237			13	19	48		5,20	25		
120	6	18280	14,7	20	6,4	20	49	26	6,43	10		
	8	18285			8,4	20	51		7,12	10		
	10	18240			10,5	20	53		6,70	10		
	12	18241			13	20	54		7,12	10		
150	6	18294	16,3	21,3	6,4	19	53	29	7,01	10		
	8	18244			8,4	19	55		7,31	10		
	10	18245			10,5	19	56		7,63	10		
	12	18246			13	22	59		7,63	10		
	16	18247			17	26	62		8,33	10		
185	10	18249	18,7	24	10,5	26	60	30	10,78	10		
	12	18250			13	26	59,5		10,27	10		
	16	18251			17	26	64		10,81	10		
240	10	18254	21	26	10,5	30	65	35	12,80	5		
	12	18255			13	30	65		11,71	5		
	16	18256			17	30	68		12,11	5		
300	10	18259	23,5	30	10,5	30	76	42	19,66	5		
	12	18260			13	30	79		20,08	5		
	16	18261			17	30	81		20,60	5		

Tubular cable lugs with 90° angle, 0.5 – 35 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated



4

cross section mm²	flat hole M	art.-no.	dimensions in mm							weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d3	d2	b	l	a					
0,5 – 0,75	3	13100*	1,4	3	3,2	6,5	7,5	5	0,09	100	WZ 21 126		
	4	13101*			4,3	8,5	8,5		0,10	100			
	5	13102*			5,3	10	9,5		0,10	100			
1,0 – 1,5	3	13105*	1,9	3,9	3,2	6,5	8	5	0,16	100			
	4	13106*			4,3	8,5	9		0,16	100			
	5	13107*			5,3	10	10		0,16	100			
	6	13108*			6,4	11	12		0,15	100			
2,5	4	13110*	2,4	4,4	4,3	8,5	9,2	5,5	0,18	100			
	5	13111*			5,3	10	10,2		0,19	100			
	6	13112*			6,4	11	12,2		0,22	100			
	8	13113*			8,4	14	14,2		0,23	100			
4	4	13115*	3	5	4,3	8,5	9,5	7	0,25	100			
	5	13116*			5,3	10	10,5		0,24	100			
	6	13117*			6,4	11	12,5		0,29	100			
	8	13118*			8,4	14	14,5		0,30	100			
6	4	16120	3,5	6,5	4,3	10	10,3	8	0,52	100			
	5	16121			5,3	11	11,2		0,56	100			
	6	16122			6,4	11	13,3		0,62	100			
	8	16123			8,4	15	15,3		0,64	100			
	10	16124			10,5	18	17,2		0,68	100			
	12	16125			13	20	18,2		0,66	100			
10	5	15305	4,5	7	5,3	12	11,5	9	0,54	100			
	6	15306			6,4	12	12,5		0,59	100			
	8	15307			8,4	15	15,5		0,68	100			
	10	15308			10,5	18	17,5		0,70	100			
	12	15309			13	20	18,5		0,70	100			
16	5	15310	5,5	8,5	5,3	12	13	12	1,09	100			
	6	15311			6,4	12	14,3		1,15	100			
	8	15312			8,4	15	16,3		1,20	100			
	10	15313			10,5	18	18,3		1,23	100			
	12	15314			13	20	19,3		1,23	100			
25	5	16396*	7	10	5,3	15	13,5	14	1,18	100			
	6	16315			6,4	15	15,5		1,35	100			
	8	16316			8,4	16	17,5		1,37	100			
	10	16317			10,5	18	19,5		1,57	100			
	12	16318			13	20	20,5		1,51	100			
	14	16319			15	22	22,5		1,69	100			
35	6	16320	8,5	12	6,4	17	16,5	16	2,13	100			
	8	16321			8,4	17	18,5		2,31	100			
	10	16322			10,5	20	20,5		2,36	100			
	12	16323			13	22	21,5		2,40	100			
	14	16381			15	23	23,5		2,48	100			
	16	16392			17	28	24,5		2,48	100			

WW 6/70 151

WW 10/120 152

AP 10 156, HHW 10 + HPW 10 157, HPW 17 164, Stilo 1 154, APW 30 + HHW 30 164
Stilo 20 + APW 20 160, HHW 20 + HPW 20 161

* not UL permitted

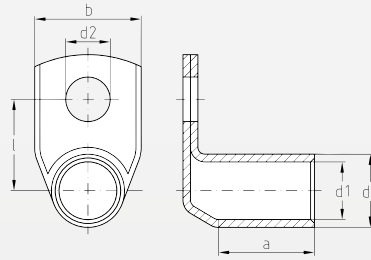
WW 6/70 151

AP 10 156, HHW 10 + HPW 10 157, HPW 17 164, Stilo 1 154, APW 30 + HHW 30 164
Stilo 20 + APW 20 160, HHW 20 + HPW 20 161

Tubular cable lugs with 90° angle, 50 – 300 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated

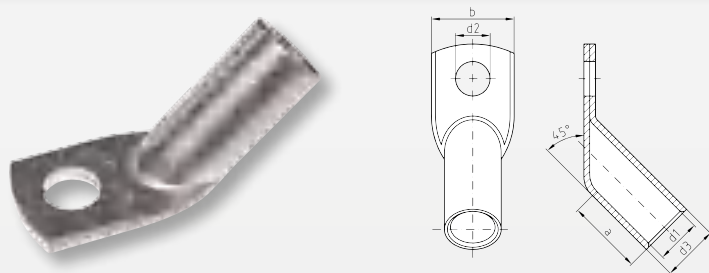


cross section mm²	flat hole M	art.-no.	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation				
			d1	d3	d2	b	l	a			WW 6/70 151	WW 10/120 152	Stilo 1 154	AP 10 156, HHW 10 + HPW 10 157	APW 30 + HHW 30 164, HPW 17 164, APW 35 + HHW 35 165, Stilo 20 + APW 20 160, HHW 20 + HPW 20 161
50	6	16324	10	14	6,4	20	17,5	18	3,00	100					
	8	16325			8,4	20	19,5		3,22	100					
	10	16326			10,5	20	21,5		3,32	100					
	12	16327			13	23	22,5		3,28	100					
	14	16382			15	23	24,5		3,41	100					
	16	16328			17	27	28,5		3,63	100					
	20	16397			21	30	32,5		3,89	100					
70	6	16329	12	16,5	6,4	24	18,8	20	4,47	25					
	8	16330			8,4	24	20,8		4,86	25					
	10	16331			10,5	24	22,8		5,06	25					
	12	16332			13	24	23,8		4,94	25					
	14	16383			15	25	25,8		5,19	25					
	16	16333			17	28	26,8		5,11	25					
	20	16334			21	29	30,8		5,26	25					
95	8	16335	13,5	18	8,4	26	21,5	22	5,33	25					
	10	16336			10,5	26	23,5		5,64	25					
	12	16337			13	26	24,5		5,66	25					
	14	16384			15	26	26,5		5,89	25					
	16	16338			17	28	27,5		6,40	25					
120	8	16385	15	20	8,4	29	22,5	25	7,63	25					
	10	16340			10,5	29	24,5		8,07	25					
	12	16341			13	29	25,5		7,99	25					
	16	16342			17	30	28,5		8,46	25					
150	8	16344	16,8	21,3	8,4	31	25,7	28	8,58	25					
	10	16345			10,5	31	25,7		8,32	25					
	12	16346			13	31	26,7		8,51	25					
	16	16347			17	31	29,7		8,68	25					
	20	16348			21	35	33,7		10,92	25					
185	10	16349	19	24	10,5	35	27	29	11,90	25					
	12	16350			13	35	28		12,04	25					
	16	16351			17	35	31		12,48	25					
	20	16352			21	35	35		12,70	25					
240	10	16354	21	26	10,5	38	28	34	13,32	25					
	12	16355			13	38	29		13,40	25					
	16	16356			17	38	32		13,76	25					
	20	16357			21	38	36		14,23	25					
300	12	13360	24	30	13	43	31	41	20,04	20					
	16	13361			17	43	34		21,87	20					
	20	13362			21	43	38		21,81	20					

Tubular cable lugs with 45° angle, 10 – 70 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated



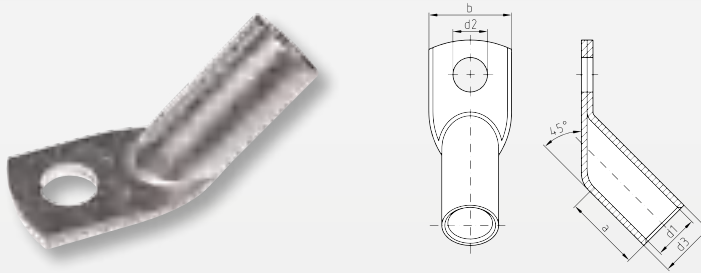
4	cross section mm ²	flat hole M	art.-no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
				d1	d3	d2	b	a			WW 6/70 151, WW 10/120 152	AP 10 156, HHW 10 + HPW 10 157, HPW 15 165, APW 20 + Stilo 20 160, HHW 20 + HPW 20 161	APW 30 + HHW 30 164, APW 35 165, HHW 35 165, HPW 17 164, Stilo 1 154
10	5	5	15134	4,5	7	5,3	12	9	0,55	100			
	6		15135			6,4	12		0,58	100			
	8		15136			8,4	15		0,65	100			
	10		15137			10,5	18		0,66	100			
16	5	5	15139	5,5	8,5	5,3	12	12	0,95	100			
	6		15140			6,4	12		1,02	100			
	8		15141			8,4	15		1,17	100			
	10		15142			10,5	18		1,17	100			
25	6	6	16145	7	10	6,4	15	14	1,39	100			
	8		16146			8,4	16		1,51	100			
	10		16147			10,5	18		1,66	100			
	12		16148			13	20		1,70	100			
35	6	6	16150	8,5	12	6,4	17	16	2,17	50			
	8		16151			8,4	17		2,46	50			
	10		16152			10,5	20		2,34	50			
	12		16153			13	22		2,40	50			
50	6	6	16154	10	14	6,4	20	18	2,94	50			
	8		16155			8,4	20		3,34	50			
	10		16156			10,5	20		3,65	50			
	12		16157			13	23		3,86	50			
	16		16158*			17	27		4,05	50			
70	8	8	16160	12	16,5	8,4	24	20	4,90	25			
	10		16161			10,5	24		5,39	25			
	12		16162			13	24		5,34	25			
	16		16163*			17	28		5,66	25			

* not UL permitted

Tubular cable lugs with 45° angle 95 – 300 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated

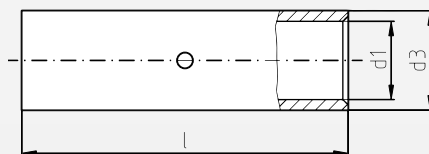


cross section mm ²	flat hole M	art.-no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
			d1	d3	d2	b	a			
95	8	16165	13,5	18	8,4	26	22	6,18	25	WW 10/120 152 Stilo 1 154 AP 10 156, HHW 10 + HPW 10 157 APW 30 + HHW 30 164, APW 35 + HHW 35 165, HPW 15 165, HPW 17 164 APW 20 160, HHW 20 + HPW 20 161, Stilo 20 160
	10	16166			10,5	26		6,20	25	
	12	16167			13	26		6,20	25	
	16	16168			17	28		6,80	25	
120	8	16169	15	20	8,4	29	25	7,80	25	
	10	16170			10,5	29		8,90	25	
	12	16171			13	29		8,91	25	
	16	16172			17	30		9,31	25	
150	8	16173	16,8	21,3	8,4	31	28	11,31	25	
	10	16174			10,5	31		9,80	25	
	12	16175			13	31		10,91	25	
	16	16176			17	31		10,12	25	
	20	16177			21	35		10,12	25	
185	10	13178	19	24	10,5	35	29	12,35	20	
	12	13179			13	35		12,24	20	
	16	13180			17	35		12,84	20	
	20	13181			21	35		13,99	20	
240	10	13182	21	26	10,5	38	34	14,80	15	
	12	13183			13	38		15,46	15	
	16	13184			17	38		16,51	15	
	20	13185			21	38		17,04	15	
300	12	13187	24	30	13	43	41	25,70	15	
	16	13188			17	43		25,68	15	
	20	13189			21	43		24,10	15	

Tubular butt-connectors 0.5 – 630 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated – type: with wirestop



4

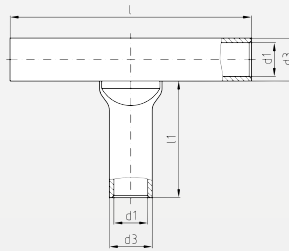
cross section mm ²	art.-no.	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
		d1	d3	l			
0,5 – 0,75	13450*	1,4	3	15	0,08	100	WZ 21 126
1,0 – 1,5	13452*	1,9	3,9	15	0,12	100	
2,5	13454*	2,4	4,4	16	0,15	100	
4	13456*	3	5	19	0,22	100	
6	16458	3,5	6,5	25	0,51	100	WW 10/120 152
10	15460	4,5	7	30	0,60	50	
16	15462	5,5	8,5	35	1,00	50	
25	16464	7	10	40	1,45	50	
35	16466	8,5	12	45	2,16	50	DP 6/95 153
50	16468	10	14	50	3,52	50	
70	16470	12	16,5	55	5,06	50	
95	16472	13,5	18	60	6,10	50	
120	16474	15	20	65	8,21	25	APW 30 + HHW 30 164, HPW 17 164
150	13476	16,8	21,3	70	8,73	25	
185	13478	19	24	75	11,63	25	
240	13480	21	26	85	14,22	25	
300	13482	24	30	100	22,40	10	HPW 18 with adapter from 6 mm ² 172
400	13484	27,5	33,5	100	26,27	10	
500	13486*	31	38	140	47,30	5	
630	13488*	34	41	160	61,75	5	

* not UL permitted

Tubular T-connectors 1.0 – 300 mm² euro-series

material: Cu according to DIN EN 13600

surface: tin plated



cross section mm²	art.-no.	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
		d1	d3	l	l1					
1,0 – 1,5	13952*	1,9	3,9	30	16	0,36	50	DP 6/95 153	WZ 21 126	APW 30 + HHW 30 164
2,5	13954*	2,4	4,4	30	16	0,45	50			
4	13956*	3	5	35	16,5	0,57	50			
6	16958	3,5	6,5	35	17	1,08	50			
10	15960	4,5	7	45	25	1,40	50			
16	15962	5,5	8,5	50	26	2,28	50			
25	16964	7	10	50	27	2,82	25			
35	16966	8,5	12	60	31	4,50	25			
50	16968	10	14	72	35	7,20	10			
70	16970	12	16,5	77	37	10,62	10			
95	16972	13,5	18	88	45	13,24	10			
120	16974	15	20	106	53	17,80	10			
150	13976	16,8	21,3	120	58	23,42	5			
185	13978	19	24	110	42	25,62	5			
240	13980	21	26	135	55	33,94	5			
300	13982	24	30	140	55	48,53	3			

* not UL permitted

Assortment box with tubular cable lugs euro-series

material: varnished steel, with 12 small compartments and 1 tool compartment

measurements: 405 x 250 x 50 mm



special filling
on request

contents of tubular cable lugs, euro-series

quantity	cross section mm ²	flat hole diameter M	art.-no.
25 x	6	6	16022
25 x	6	8	16023
25 x	10	6	15206
25 x	10	8	15207
25 x	16	8	15212
25 x	16	10	15213
25 x	25	8	16216
25 x	25	10	16217
20 x	35	8	16221
20 x	35	10	16222
20 x	50	10	16226
20 x	50	12	16227
1 x WW 6/50			90179
assortment box			90891

assortment box without contents
art.-no.: 90877



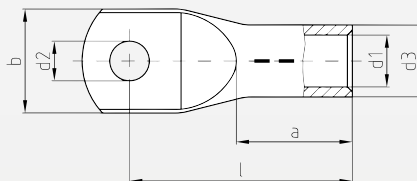


Tubular compression cable lugs, copper, DIN 46235
Tubular compression cable lugs 90° angled, copper,
tube measurements in accordance with DIN 46235
Tubular compression cable lugs, 1- and 2-conductor version,
with 2 holes, copper
Compression bolts, copper
Tubular compression connectors, copper, DIN 46267 part 1
tube measurements according to DIN 46267 part 1
Compression tab-connectors, H-shape, copper

Tubular compression cable lugs 6 – 35 mm², DIN 46235

material: Cu according to DIN EN 13600

surface: tin plated or optionally uncoated

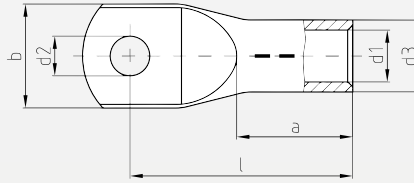


* not standardized,
tube measurements in
accordance with DIN 46235

cross section mm²	flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation
				d1	d3	d2	b	l	a				
6	5	14021	5	3,7	5,5	5,3	8,5	24	10	0,34	100	14121	DW 6/70 151
	6	14022				6,4	9	24		0,34	100	14122	
	8*	14023				8,4	13	26		0,35	100	14123	
10	5	14205	6	4,4	6	5,3	10	27	10	0,38	100	14605	DW 10/120 152
	6	14206				6,4	10	27		0,38	100	14606	
	8*	14207				8,4	13	28		0,38	100	14607	
	10*	14208				10,5	15	29		0,40	100	14608	
16	5*	14210	8	5,5	8,5	5,3	13	36	20	1,22	100	14610	
	6	14211				6,4	13	36		1,27	100	14611	
	8	14212				8,4	13	37		1,30	100	14612	
	10	14213				10,5	16,5	38		1,32	100	14613	
	12*	14214				13	19	40		1,35	100	14614	
25	6	14215	10	7	10	6,4	14	39	20	1,69	100	14615	
	8	14216				8,4	17	39		1,73	100	14616	
	10	14217				10,5	17	40,5		1,77	100	14617	
	12	14218				13	18	40,5		1,72	100	14618	
	16*	14219				17	22	45		1,99	100	14619	
35	6*	14220	12	8,2	12,5	6,4	17,5	42,5	20	3,16	100	14620	
	8	14221				8,4	18	42		3,19	100	14621	
	10	14222				10,5	20	42,5		3,17	100	14622	
	12	14223				13	21	44		3,11	100	14623	
	16*	14224				17	28	47		3,14	100	14624	
	20*	14290				21	30	53		3,73	100	14690	

Tubular compression cable lugs 50 – 120 mm², DIN 46235

material: Cu according to DIN EN 13600
surface: tin plated or optionally uncoated



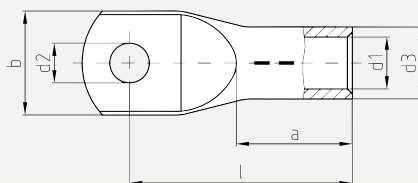
* not standardized,
tube measurements in
accordance with DIN 46235

cross section mm ²	flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation	
				d1	d3	d2	b	l	a					
50	6*	14284	14	9,8	14,5	6,4	20	52	28	4,67	100	14684	DW 6/70 151 DW 10/120 152	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161, APW 30 + HHW 30 164, HPW 17 164
	8	14225				8,4	20	52		5,00	100	14625		
	10	14226				10,5	22	52		4,94	100	14626		
	12	14227				13	23	52		4,89	100	14627		
	14*	14293				15	26	53,5		4,94	100	14693		
	16	14228				17	28	55,5		5,04	100	14628		
	20*	14229				21	30	61,5		5,56	100	14629		
70	8	14230	16	11,3	16,5	8,4	24	56	28	6,71	50	14630		
	10	14231				10,5	24	56		6,59	50	14631		
	12	14232				13	24	56,5		6,57	50	14632		
	14*	14292				15	24	55,5		6,00	50	14692		
	16	14233				17	29	57		6,92	50	14633		
	20*	14234				21	31	61		6,99	50	14634		
95	8*	14235	18	13,5	19	8,4	28	65	35	9,44	50	14635		
	10	14236				10,5	28	65,5		9,61	50	14636		
	12	14237				13	28	65,5		9,63	50	14637		
	14*	14285				15	28	65,5		9,43	50	14685		
	16	14238				17	30	65,5		9,72	50	14638		
	20*	14239				21	33	71		9,86	50	14639		
120	8*	14282	20	15,5	21	8,4	31	70	35	11,35	50	14682		
	10	14240				10,5	31	70		11,59	50	14640		
	12	14241				13	31	70,5		11,60	50	14641		
	14*	14283				15	31	70		11,41	50	14683		
	16	14242				17	31,5	70		11,36	50	14642		
	20	14243				21	36	72		11,66	50	14643		

Tubular compression cable lugs 150 – 300 mm², DIN 46235

material: Cu according to DIN EN 13600

surface: tin plated or optionally uncoated



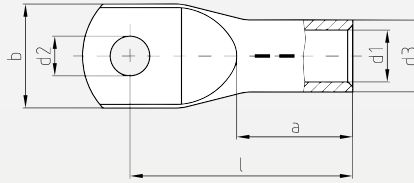
* not standardized,
tube measurements in
accordance with DIN 46235

cross section mm²	flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation		
				d1	d3	d2	b	l	a						
150	8*	14244	22	17	23,5	8,4	34	79	35	16,40	25	14644	AP 10 156, HHW 10 + HPW 10 157	APW 35 + HHW 35 + HPW 15 165	APW 30 + HHW 30 164, HPW 18 172, APW 20 160, HHW 20 + HPW 20 161, HPW 17 164
	10	14245				10,5	34	79		16,46	25	14645			
	12	14246				13	34	78,5		16,53	25	14646			
	14*	14294				15	34	78		16,49	25	14694			
	16	14247				17	34	78		16,52	25	14647			
	20	14248				21	38	78		16,34	25	14648			
185	8*	14288	25	19	25,5	8,4	37	83	40	18,50	25	14688			
	10	14249				10,5	37	83		18,50	25	14649			
	12	14250				13	37	82,5		18,96	25	14650			
	14*	14295				15	37	82		18,90	25	14695			
	16	14251				17	37	82		19,41	25	14651			
	20	14252				21	40	83		19,01	25	14652			
240	10*	14254	28	21,5	29	10,5	42	92	40	27,10	20	14654			
	12	14255				13	42,5	92		27,50	20	14655			
	14*	14287				15	42,5	92		26,73	20	14687			
	16	14256				17	42,5	92		27,45	20	14656			
	20	14257				21	45	92		27,67	20	14657			
300	10*	14259	32	24,5	32	10,5	48,5	104	50	34,80	10	14659			
	12*	14260				13	48,5	104		34,50	10	14660			
	14*	14291				15	48,5	104		35,36	10	14691			
	16	14261				17	48,5	100		34,16	10	14661			
	20	14262				21	48,5	100		34,37	10	14662			

Tubular compression cable lugs 400 – 1000 mm², DIN 46235

material: Cu-HCP according to DIN EN 13600

surface: tin plated or optionally uncoated



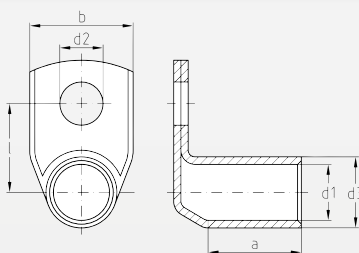
* not standardized,
tube measurements in
accordance with DIN 46235

cross section mm ²	flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation
				d1	d3	d2	b	l	a				
400	10*	14263	38	27,5	38,5	10,5	55	117	70	73,42	5	14663	APW 18 + HPW 18 172
	12*	14264				13	55	117		72,38	5	14664	
	14*	14296				15	55	117		72,84	5	14696	
	16	14265				17	55	117		71,75	5	14665	
	20	14266				21	55	117		70,64	5	14666	
500	12*	14269	42	31	42	13	60	130	70	86,92	5	14669	
	14*	14289				15	60	130		87,50	5	14689	
	16*	14270				17	60	130		88,90	5	14670	
	20	14271				21	60	130		87,66	5	14671	
625	12*	14273	44	34,5	44	13	63	135	80	84,27	5	14673	
	14*	14274				15	63	135		83,89	5	14674	
	16*	14275				17	63	135		82,05	5	14675	
	20	14276				21	63	135		82,05	5	14676	
800	14*	14279	52	40	52	15	75	165	100	148,60	2	14679	
	16*	14280				17	75	165		148,60	2	14680	
	20	14281				21	75	165		150,17	2	14681	
1000	16*	14297	58	44	58	17	83	167	100	193,70	2	14697	
	20	14286				21	83	167		192,91	2	14686	

Tubular compression cable lugs with 90° angle, 10 – 70 mm²

tube measurements according to DIN 46235

material: Cu according to DIN EN 13600; surface: tin plated or optionally uncoated

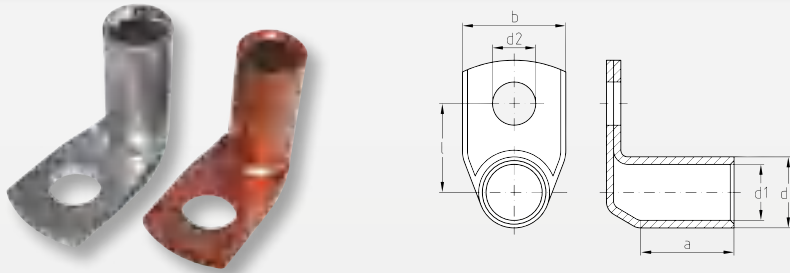


cross section mm ²	flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation
d1	d3	d2	b	l	a								
10	5	14305	6	4,4	6	5,3	10	11	10	0,31	100	14705	DW 6/70 151, DW 10/120 152
	6	14306				6,4	10	13		0,35	100	14706	
	8	14307				8,4	13	15		0,37	100	14707	
16	6	14311	8	5,5	8,5	6,4	13	14,3	20	1,29	100	14711	
	8	14312				8,4	13	16,3		1,30	100	14712	
	10	14313				10,5	16,5	18,3		1,41	100	14713	
	12	14314				13	19	19,3		1,17	100	14714	
25	6	14315	10	7	10	6,4	15	15,5	20	1,68	100	14715	
	8	14316				8,4	16	17,5		1,78	100	14716	
	10	14317				10,5	16	19,5		1,84	100	14717	
	12	14318				13	19	20,5		1,82	100	14718	
35	6	14320	12	8,2	12,5	6,4	17	16,8	20	2,74	100	14720	
	8	14321				8,4	17	18,8		3,04	100	14721	
	10	14322				10,5	19	20,8		3,12	100	14722	
	12	14323				13	21	21,8		3,26	100	14723	
50	8	14325	14	9,8	14,5	8,4	20	19,8	28	4,62	100	14725	
	10	14326				10,5	22	21,8		4,82	100	14726	
	12	14327				13	24	22,8		5,03	100	14727	
	16	14328				17	27	25,8		5,06	100	14728	
70	8	14330	16	11,3	16,5	8,4	24	20,8	28	5,93	25	14730	
	10	14331				10,5	24	22,8		6,51	25	14731	
	12	14332				13	24	23,8		7,00	25	14732	
	16	14333				17	29	26,8		6,96	25	14733	

APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 17 164
AP 10 156, HHW 10 + HPW 10 157, APW 35 165, HPW 35 166

Tubular compression cable lugs with 90° angle, 95 – 300 mm² tube measurements according to DIN 46 235

material: Cu according to DIN EN 13600; surface: tin plated or optionally uncoated

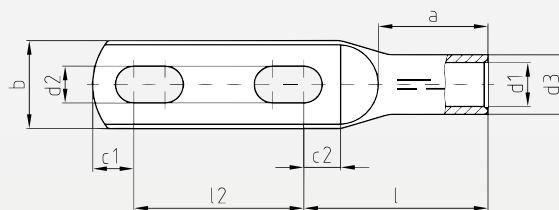


cross section mm ²	flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation
95	8	14335	18	13,5	19	8,4	28	22	35	8,50	25	14735	DW 10/120 152 AP 10 156, HHW 10 + HPW 10 157 APW 35 + HHW 35 + HPW 15 165 APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 17 164 APW 18 + HPW 18 172
	10	14336				10,5	28	24		9,37	25	14736	
	12	14337				13	28	25		9,49	25	14737	
	16	14338				17	32	28		9,67	25	14738	
120	10	14340	20	15,5	21	10,5	32	25,5	35	10,84	25	14740	
	12	14341				13	32	26,5		11,00	25	14741	
	16	14342				17	32	29,5		11,16	25	14742	
	20	14343				21	38	33,5		12,39	25	14743	
150	8	14344	22	17	23,5	8,4	34	26,8	35	13,87	25	14744	
	10	14345				10,5	34	26,8		14,16	25	14745	
	12	14346				13	34	27,8		14,41	25	14746	
	16	14347				17	34	30,8		14,83	25	14747	
	20	14348				21	34	34,8		15,51	25	14748	
185	8	14396	25	19	25,5	8,4	37	25,8	40	15,70	25	14796	
	10	14349				10,5	37	27,8		16,81	25	14749	
	12	14350				13	37	28,8		17,29	25	14750	
	16	14351				17	37	31,8		18,09	25	14751	
	20	14352				21	40	35,8		20,20	25	14752	
240	12	14355	28	21,5	29	13	42	30,5	40	22,61	20	14755	
	16	14356				17	42	33,5		24,64	20	14756	
	20	14357				21	42	37,5		25,59	20	14757	
300	12	14360	32	24,5	32	13	48,5	32	50	29,35	10	14760	
	16	14361				17	48,5	35		30,51	10	14761	
	20	14362				21	48,5	39		38,60	10	14762	

Compression cable lugs 70 – 120 mm²

with two holes á 13 x 24 mm, tube measurements according to DIN 46235

material: Cu according to DIN EN 13600, surface: tin plated

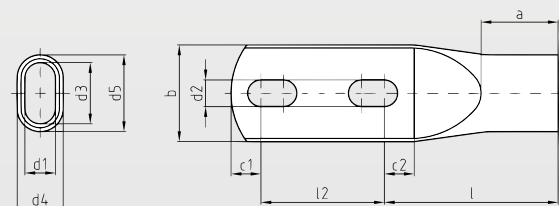


cross section mm ²	flat hole M	art.-no.	die code	dimensions in mm										weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
d1	d3	d2	b	l	l2	a	c1	c2										
70	2 x M 12	14032	16	11,3	16,5	13	24	61,5	40-62	28	14,5	14,5	11,79	25	10/120	DW AP 10 HHW 10	APW 30 HPW 17	
95	2 x M 12	14037	18	13,5	19	13	28	63	40-62	35	14,5	15	15,12	25				
120	2 x M 12	14041	20	15,5	21	13	31	65	40-62	35	14,5	13	18,58	25				

Compression cable lugs 70 – 120 mm² with two holes á 13 x 24 mm, tube measurements according to DIN 46235

material: Cu according to DIN EN 13600, surface: tin plated

Version designed to accommodate 2 multi-wire cables according to VDE0295, Class 2..

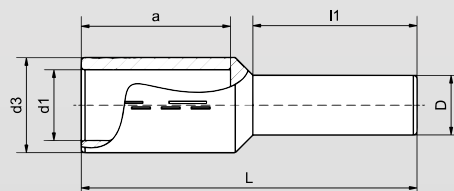


cross section mm ²	flat hole M	art.-no.	d1	d3	d4	d5	d2	b	l	l2	a	c1	c2	weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
2 x 70	2 x M 12	14132	11,5	23,3	18	29,8	13	37	82	40-62	38,5	14,5	14,5	26,00	10	HHW 30 APW 30	HPW 17	
2 x 95	2 x M 12	14137	14	26,1	22	33,6	13	42	92	40-62	45,5	14,5	14,5	41,00	5			
2 x 120	2 x M 12	14141	14,9	30,8	22,4	38,0	13	47	100	40-62	50,5	14,5	14,5	47,00	5			

Compression bolts 120 – 240 mm²

tube measurements according to DIN 46235

material: Cu according to DIN EN 13601, surface: tin plated

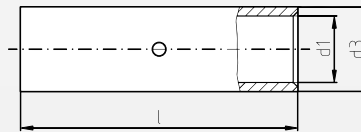
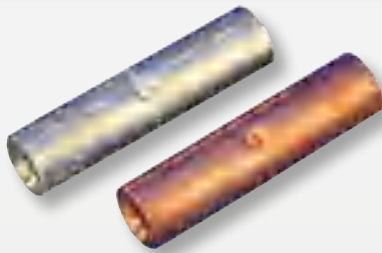


cross section mm ²	flat hole M	art.-no.	d1	d3	d2	l	l2	a	weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
120	14514	20	15,5	21	13	79	38	35	10,60	10	APW 20 HHW 20	APW 30 HHW 30	HPW 17
150	14516	22	17	23,5	14	79	38	35	13,30	10			
185	14518	25	19	25,5	16	90	44	40	17,65	5			
240	14520	28	21,5	29	18	90	44	40	23,00	5			

Tubular compression connectors 6 – 1000 mm² DIN 46267 part 1

material: Cu according to DIN EN 13600

surface: tin plated or optionally uncoated



Tubular compression connectors for medium voltage conductors 10 – 30 kV are available on request!

cross section mm ²	art.-no. tin plated	die code	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation		
d1	d3	l									
6	14458	5	3,7	5,5	30	0,36	100	14858	AP 10 156, HHW 10 + HPW 10 157	DW 10/120 152	APW 30 + HHW 30 164, HPW 17 164
10	14460	6	4,4	6	30	0,35	100	14860			
16	14462	8	5,5	8,5	50	1,51	100	14862			
25	14464	10	7	10	50	1,88	100	14864			
35	14466	12	8,2	12,5	50	3,20	100	14866			
50	14468	14	9,8	14,5	56	4,64	50	14868			
70	14470	16	11,3	16,5	56	5,82	50	14870			
95	14472	18	13,5	19	70	9,08	50	14872			
120	14474	20	15,5	21	70	10,27	25	14874			
150	14476	22	17	23,5	80	14,96	25	14876			
185	14478	25	19	25,5	85	16,98	25	14878			
240	14480	28	21,5	29	90	24,44	15	14880			
300	14482	32	24,5	32	100	30,52	10	14882			
400	14484	38	27,5	38,5	150	77,85	5	14884			
500	14486	42	31	42	160	92,28	5	14886			
625	14488	44	34,5	44	160	86,93	5	14888			
800	14490	52	40	52	200	152,50	3	14890			
1000	14492	58	44	58	200	206,87	3	14892			

5

Assortment box with tubular compression cable lugs, DIN 46235

material: varnished steel, with 12 small compartments and 1 tool-compartment

measurements: 405 x 250 x 50 mm



**special filling
on request**

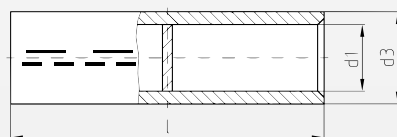
Contents of tubular compression cable lugs, DIN 46235:

quantity	cross section	flat hole	art.-no.
25 x	6	6	14022
25 x	6	8	14023
25 x	10	6	14206
25 x	10	8	14207
25 x	16	8	14212
25 x	16	10	14213
25 x	25	8	14216
25 x	25	10	14217
20 x	35	8	14221
20 x	35	10	14222
15 x	50	10	14226
15 x	50	12	14227
1 x DW 6/50, 6-50			90178
assortment box			90893

assortment box without contents
art.-no.: 90877

Tubular compression connectors 35 – 240 mm², with oil stop

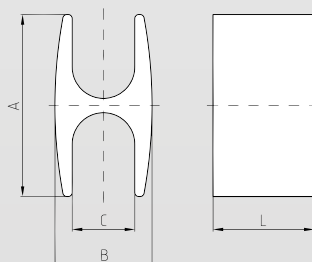
Tube measurements according to DIN 46 267 part 1 The copper separation in the middle guarantees a complete **oilstop**. material: Cu-HCP according to DIN EN 13600, surface: tin plated or optionally uncoated



cross section mm ²	art.-no. tin plated	die code	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation			
			d1	d3	l				DW 10/120 152	AP 10 156, HHW 10 + HPW 10 157	APW 20 160, HHW 20 + HPW 20 161	APW 30 + HHW 30 164, HPW 17 164
35	14566	12	8,2	12,5	50	3,18	100	14966				
50	14568	14	9,8	14,5	56	4,65	50	14968				
70	14570	16	11,3	16,5	56	5,85	50	14970				
95	14572	18	13,5	19	70	9,15	50	14972				
120	14574	20	15,5	21	70	10,20	25	14974				
150	14576	22	17	23,5	80	15,10	25	14976				
185	14578	25	19	25,5	85	17,10	25	14978				
240	14580	28	21,5	29	90	24,00	15	14980				

Compression tab-connectors, H-shape for copper conductors according to DIN 48201

material: Cu according to DIN EN 13601, surface: tin plated or optionally uncoated



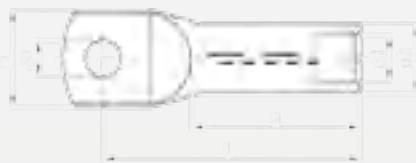
cross section (mm ²)		art.-no. tin plated	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation		
main conductor	tab conductor		A	B	C	L						
70	70	14420	34	17	10,8	28	6,51	25	14820	HHW 30 164	APW 30 164	HPW 17 164
95	95	14422	40	22	13,0	30	10,30	25	14822			
120	120	14424	45	24	15,5	25	9,96	25	14824			



Tubular compression cable lugs aluminium
Tubular compression connectors aluminium
Tubular compression connectors aluminium 10 - 30 kV
Tubular compression cable lugs aluminium, DIN 46329,
longitudinally sealed
Bi-metallic compression cable lugs aluminium/copper
Bi-metallic compression connectors aluminium/copper
Bi-metallic washers aluminium/copper
Bi-metallic Compression bolts aluminium/copper

Tubular compression cable lugs 16 – 185 mm², for aluminium conductors DIN 48 201-1 dimensions in accordance to DIN 46329 und DIN 46267 part 2

material: Al 99,5, surface: uncoated, sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

cross section (mm ²)		flat hole	art.-	die	dimensions in mm						weight	packing unit	tool
rm/sm*	se**	M	no.	code	d1	d3	d2	b	l	a	100 pcs./kg	(pcs.)	recommendation
16	25	8	21212	12	5,6	12	8,4	16	52	26	0,96	50	DW 6/70 151
		10	21213				10,5	18	52		0,97	50	
25	35	8	21216	12	6,8	12	8,4	16	60	34	1,48	50	
		10	21217				10,5	18	60		1,64	50	
35	50	8	21221	14	8	14	8,4	20	67	40	2,45	50	
		10	21222				10,5	20	67		2,45	50	
		12	21223				13	20	67		2,35	50	
50	70	8	21225	16	10	16	8,4	23	74	42	3,29	25	
		10	21226				10,5	23	74		2,88	25	
		12	21227				13	23	74		3,38	25	
70	95	8	21230	18	11,5	18,5	8,4	28	84	50	4,67	25	APW 18 + HPW 18 172
		10	21231				10,5	28	84		4,77	25	
		12	21232				13	28	87		4,73	25	
95	120	8	21235	22	13,2	22	8,4	30	90	55	6,95	10	
		10	21236				10,5	32	90		7,01	10	
		12	21237				13	32	90		7,82	10	
		16	21238				17	32	90		7,62	10	
120	150	10	21240	22	14,7	23	10,5	32	98	60	8,38	10	
		12	21241				13	32	98		8,79	10	
		16	21242				17	32	98		8,64	10	
150	185	10	21245	25	16,3	25	10,5	35	104	64	9,98	10	APW 30 + HHW 30 164, HPW 17 164, APW 20 160, HHW 20 + HPW 20 161
		12	21246				13	35	104		10,23	10	
		16	21247				17	35	104		10,08	10	
		20	21248				21	35	104		10,02	10	
185	240	10	21249	28	18,5	28,5	10,5	40	109	66	13,46	10	
		12	21250				13	40	109		13,39	10	
		16	21251				17	40	109		13,75	10	
		20	21252				21	40	109		13,75	10	

Tubular compression cable lugs 240 – 500 mm², for aluminium conductors DIN 48 201-1 dimensions in accordance to DIN 46329 und DIN 46267 part 2 material: Al 99.5, surface: uncoated, sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

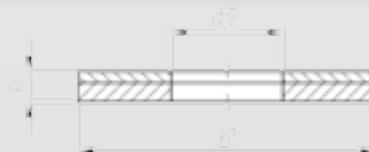
cross section (mm ²)		flat hole M	art.-no.	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
rm/sm*	se**				d1	d3	d2	b	l	a					
240	300	10	21254	32	21	32	10,5	45	119	70	18,28	10	APW 20, HHW 20	HPW 17, APW 30 + HHW 30	APW 18 + HPW 18 172
		12	21255				13	45	119		17,94	10			
		16	21256				17	45	119		17,62	10			
		20	21257				21	45	119		17,74	10			
300	–	12	21260	34	23,3	34	13	50	125	70	20,54	5			
		16	21261				17	50	125		20,14	5			
		20	21262				21	50	125		19,43	5			
400	–	12	21264	38	26	38,5	13	55	120	70	28,30	5			
		16	21266				17	55	120		27,33	5			
		20	21268				21	55	120		24,00	5			
500	–	12	21270	44	29	44	13	63	140	80	38,00	5			
		16	21272				17	63	140		37,80	5			
		20	21273				21	63	140		37,35	5			

6

Bi-metallic washers

aluminium sheet, one-sided copper plated

material: Al 99.5 according to DIN EN 573-3 and Cu-DHP according to DIN EN 1652



flat hole M	art.-no.	dimensions in mm			weight 100 pcs./kg		packing unit (pcs.)	for cable lugs max. mm ²
		d1	d2	s	total	Cu		
6	21903	16	6,5	1	0,07	0,04	100	120
8	21906	18	8,5	1	0,08	0,04	100	120
10	21909	23	10,5	1	0,15	0,08	50	240
10	21912	26	11	1	0,20	0,10	50	300
12	21915	26	13	2	0,28	0,16	50	240
12	21918	30	13	2	0,40	0,24	50	400
12	21920	46	13	2	1,11	0,46	50	1000
16	21921	35	17	2	0,62	0,31	50	500
16	21923	46	17	2	1,07	0,43	50	1000
20	21924	37	21	2	0,60	0,30	25	500
20	21926	46	21	2	0,88	0,40	25	1000

Tubular compression connectors 16 – 500 mm², DIN 46267 part 2

material: Al 99,5, surface: uncoated, sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

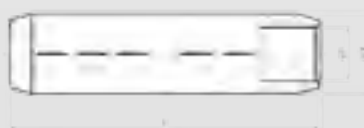
**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

*** = not standardized

cross section (mm ²)		art.-no.	die code	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation			
rm/sm [*]	se ^{**}			d1	d3	l						
16 ^{***}	25	21462	12	5,6	12	55	1,34	50	AP 10 156, HHW 10 157	APW 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164	DW 6/70 151
25	35	21464	12	6,8	12	70	1,54	50				APW 18 + HPW 18 172
35	50	21466	14	8,0	14	85	2,85	50				
50	70	21468	16	10,0	16	85	3,40	25				
70	95	21470	18	11,5	18,5	105	5,59	25				
95	120	21472	22	13,2	22	105	8,21	10				
120	150	21474	22	14,7	23	105	8,64	10				
150	185	21476	25	16,3	25	125	11,13	10				
185	240	21478	28	18,5	28,5	125	14,35	10				
240	300	21480	32	21,0	32	145	19,17	10				
300	–	21482	34	23,3	34	145	22,71	10				
400	–	21484	38	26,0	38,5	210	35,90	5				
500	–	21486	44	29,0	44,0	210	48,80	5				

Tubular compression connectors 10 - 30 kV 95 – 1000 mm²

material: Al 99,5, surface: uncoated, sleeves are prefilled with compound

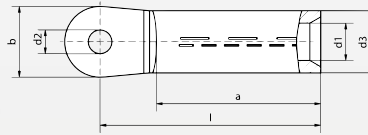


cross section (mm ²)		art.-no.	die code	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
rm/sm*	se**			d1	d3	l				
95	120	21672	22	13,2	22,0	100	6,30	10	APW 30 164 HHW 30 164 HPW 17 164	APW 18 + HPW 18 172
120	150	21674	22	14,7	23,0	105	6,58	10		
150	185	21676	25	16,3	25,0	105	7,51	10		
185	240	21678	28	18,5	28,5	125	12,00	10		
240	300	21680	32	21,0	32,0	125	14,44	10		
300	–	21682	34	23,3	34,0	125	13,70	10		
400	–	21684	38	26,0	38,5	150	30,23	5		
500	–	21686	44	29,0	44,0	170	46,97	5		
625	–	21688	52	35,0	52,0	200	65,00	5		
800	–	21690	58	40,0	58,0	235	87,50	5		
1000	–	21692	60	44,0	60,0	235	82,50	5	on request	

Tubular compression cable lugs 16 - 150 mm², or aluminium conductors DIN 46329

strain-relieved and longitudinally sealed

material: Al 99,5, surface: tin plated or uncoated, sleeves are prefilled with compound



*rm = round stranded
 sm = sector stranded

**se = sector solid

(Sector solid shaped conductors must be rounded with dies for round-forming.)

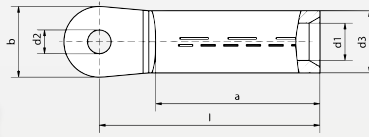
cross section mm ²		flat hole	art.-no.	die	dimensions in mm						weight	packing	art.-no.	tool
rm/sm*	se**	M	tin plated	code	d1	d3	d2	b	l	a	100 pcs./kg	unit (pcs.)	uncoated	recommendation
16***	25	8	22312	12	5,8	12	8,4	20	53	30	1,34	50	22212	APW 20 160, HHW 20 + HPW 20 161 + HPW 17 164, APW 30 + HHW 30 164
		10	22313				10,5				1,30	50	22213	
25	35	8	22316	12	6,8	12	8,4	25	53	30	1,40	50	22216	
		10	22317				10,5				1,36	50	22217	
		12	22318				13				1,31	50	22218	
35	50	8	22321	14	8,0	14	8,4	25	65	42	2,03	50	22221	
		10	22322				10,5				1,99	50	22222	
		12	22323				13				1,94	50	22223	
50	70	8	22325	16	9,8	16	8,4	25	65	42	2,59	25	22225	
		10	22326				10,5				2,55	25	22226	
		12	22327				13				2,48	25	22227	
70	95	8	22330	18	11,2	18,5	8,4	25	75	52	3,68	25	22230	
		10	22331				10,5				3,63	25	22231	
		12	22332				13				3,56	25	22232	
95	120	8	22335	22	13,2	22	8,4	25	81	56	5,81	10	22235	
		10	22336				10,5				5,75	10	22236	
		12	22337				13				5,66	10	22237	
120	150	10	22340	22	14,7	23	10,5	30	86	56	6,89	10	22240	
		12	22341				13				6,79	10	22241	
		16	22342				17				5,46	10	22242	
150	185	10	22345	25	16,3	25	10,5	30	90	60	8,74	10	22245	
		12	22346				13				8,62	10	22246	
		16	22347				17				8,39	10	22247	
		20	22348				21				8,09	10	22248	
185	240	10	22349	28	18,3	28,5	10,5	30	91	60	11,00	10	22249	
		12	22350				13				10,89	10	22250	
		16	22351				17				10,48	10	22251	
		20	22352				21				10,18	10	22252	
240	300	10	22354	32	21	32	10,5	38	106	70	16,24	10	22254	
		12	22355				13				16,08	10	22255	
		16	22356				17				15,76	10	22256	
		20	22357				21				15,35	10	22257	

APW 18 + HPW 18 172

Tubular compression cable lugs 185 - 500 mm², or aluminium conductors DIN 46329

strain-relieved and longitudinally sealed

material: Al 99,5, surface: tin plated or uncoated, sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

cross section mm ²		flat hole M	art.-no. tin plated	die code	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	art.-no. uncoated	tool recommendation
rm/sm*	se**				d1	d3	d2	b	l	a				
300	-	12	22360	34	23,3	34	13	38	106	70	17,76	5	22260	HPW 17 APW 30 HHW 30 164 APW 18 + HPW 18 172
		16	22361				17				17,38	5	22261	
		20	22362				21				16,90	5	22262	
400	-	12	22364	38	26	38,5	13	38	116	73	25,98	5	22264	
		16	22366				17				25,57	5	22266	
		20	22368				21				25,05	5	22268	
500	-	12	22370	44	29	44	13	44	122	79	36,04	5	22270	
		16	22372				17				35,60	5	22272	
		20	22373				21				35,04	5	22273	

A new processing system for flexible aluminium cables (class 5)

WEITKOWITZ has developed a new kind of crimping for the right processing of flexible aluminium cables. We call the new shape **C8-crimp**.



The oxidation on the surface of every single leader is torn open by the extremely intensive pressing contour. The results are good electric values and high tension forces. Flexible aluminium cables are used very strongly in wind power plants.



Please don't hesitate to contact us if you have any further questions!!!

WEITKOWITZ Kabelschuhe und Werkzeuge GmbH

Bi-metallic tubular compression cable lugs 10 – 240 mm², for aluminium conductors

material: Al 99.5 and Cu according to DIN EN 13601, surface: uncoated

Al-sleeves are prefilled with compound



*rm = round stranded

sm = sector stranded

**se = sector solid

(Sector solid shaped conductors must be rounded with dies for round-forming.)

cross section mm ² rm/sm* se**		flat hole M	art.- no.	die code	dimensions in mm						weight 100 pcs./kg total Cu		packing unit (pcs.)	tool recommendation		
					d1	d3	d2	b	l	a						
10	–	8	21707	10	5	10	8,4	20	50	16	2,65	2,28	25	DW 10/120 152	APW 20 160, HHW 20 + HPW 20 161, APW 30 + HHW 30 164, HPW 17 164	AP 10 156, HHW 10 + HPW 10 157
16	25	8	21712	12	5,6	12	8,4	20	60	26	3,54	2,68	25			
		10	21713				10,5	20	60	26	3,42	2,56	25			
25	35	8	21716	12	6,8	12	8,4	20	65	31	3,57	2,68	25			
		10	21717				10,5	20	65	31	3,44	2,55	25			
		12	21718				13	26	67	31	4,45	3,56	25			
35	50	8	21721	14	8	14	8,4	20	75	41	4,55	3,17	25			
		10	21722				10,5	20	75	41	4,42	3,04	25			
		12	21723				13	26	75	41	5,15	3,76	25			
50	70	8	21725	16	9,8	16	8,4	20	75	41	4,87	3,19	25			
		10	21726				10,5	20	75	41	4,72	3,04	25			
		12	21727				13	26	75	41	5,95	4,24	25			
70	95	8	21730	18	11,2	18,5	8,4	26	85	48	6,19	3,42	10			
		10	21731				10,5	26	85	48	7,37	4,60	10			
		12	21732				13	26	85	48	7,12	4,35	10			
		16	21733				17	30	88	48	8,10	5,33	10			
95	120	8	21735	22	13,2	22	8,4	26	86	48	10,29	6,18	10			
		10	21736				10,5	26	86	48	10,59	5,90	10			
		12	21737				13	26	86	48	10,34	5,80	10			
		16	21738				17	30	88	48	10,99	6,48	10			
120	150	8	21739	22	14,7	23	8,4	26	88	49	10,68	6,79	10			
		10	21740				10,5	26	88	49	10,68	6,64	10			
		12	21741				13	26	88	49	10,45	6,41	10			
		16	21742				17	30	90	49	11,45	7,41	10			
150	185	8	21744	25	16,3	25	8,4	30	100	58,5	13,88	8,46	5			
		10	21745				10,5	30	100	58,5	13,80	8,31	5			
		12	21746				13	30	100	58,5	13,57	8,07	5			
		16	21747				17	30	100	58,5	12,88	7,18	5			
185	240	8	21748	28	18,3	28,5	8,4	30	102	58,5	18,37	10,47	5			
		10	21749				10,5	30	102	58,5	17,61	10,30	5			
		12	21750				13	30	102	58,5	18,21	10,00	5			
		16	21751				17	36	105	58,5	19,68	12,40	5			
		20	21752				21	36	105	58,5	18,97	11,69	5			
240	300	10	21753	32	21	32	10,5	30	112	69	20,41	10,00	5			
		12	21755				13	30	112	69	20,41	10,00	5			
		16	21756				17	36	115	69	22,58	12,00	5			
		20	21757				21	36	115	69	21,85	11,28	5			

Bi-metallic tubular compression cable lugs 300 – 625 mm², for aluminium conductors

material: Al 99.5 and Cu according to DIN EN 13601, surface: uncoated

Al-sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

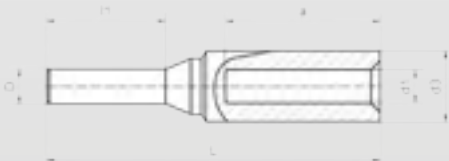
**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

Querschnitt mm ² rm/sm* se**	Bohrung M	Bestell- Nr.	Kenn- zahl	Maße in mm							Gewicht 100 Stk./kg		Verpackungs- Einheit (Stk.)	tool recommendation		
				d1	d3	d2	b	l	a		gesamt	Cu				
300	–	10	21758	34	23,3	34	10,5	30	115	69	21,84	10,80	5	APW 30 164 HHW 30 164 HPW 17 164	APW 18 + HPW 18 172	
		12	21760				13	30	120,5	69	28,33	10,80	5			
		16	21761				17	36	116	69	23,20	12,80	5			
		20	21762				21	36	116	69	22,50	12,10	5			
400	–	10	21763	38	26	38,5	10,5	36	125	70	32,87	17,67	5			
		12	21764				13	36	125	70	33,28	17,39	5			
		16	21765				17	36	125	70	35,26	16,79	5			
		20	21766				21	36	125	70	34,15	16,05	5			
500	–	10	21768	44	29	44	10,5	44	140	80	43,71	21,58	1			
		12	21769				13	44	143	80	58,62	21,20	1			
		16	21770				17	44	143	80	57,98	20,70	1			
		20	21771				21	44	140	80	42,08	19,96	1			
625	–	12	21773	52	35	52	13	50	177	111	63,01	21,77	1			
		16	21775				17	50	177	111	77,00	35,40	1			
		20	21777				21	50	177	111	76,30	34,70	1			

Bi-metallic Compression bolts

material: Al 99.5 and Cu according to DIN EN 13601, surface: uncoated

Al-sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

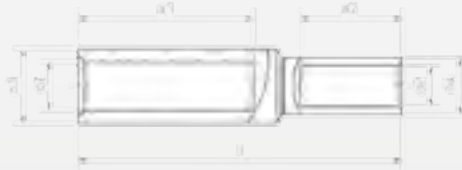
**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

cross section (mm ²)		art.-no.	die code	dimensions in mm						weight (100 pcs./kg)		packing unit (pcs.)	tool	
rm/sm*	se**			d1	d3	D	l1	L	a	total	Cu		recommendation	
16	25	21940	12	5,6	12	6	20	56	26	1,54	0,68	25	APW 30 + HHW 30 164, HPW 17 164	APW 18 + HPW 18 172
25	35	21944	12	6,8	12	6	20	61,5	31	1,60	0,68	25		
35	50	21948	14	8	14	7	22	72,5	41	2,51	1,03	25		
50	70	21952	16	9,8	16	8	25	78	41	3,45	1,60	25		
70	95	21956	18	11,2	18,5	10	30	92,5	48	5,78	2,77	10		
95	120	21960	22	13,2	22	12	33	95	48	8,64	4,36	10		
120	150	21964	22	14,7	23	12	38	105	49	9,67	5,14	10		
150	185	21968	25	16,3	25	12	38	117,5	58,5	11,52	5,61	5		
185	240	21972	28	18,3	28,5	14	44	124	58,5	16,78	8,71	5		
240	300	21976	32	21	32	16	44	136,5	69	22,30	11,43	5		
300	–	21980	34	23,3	34	18	46	138	69	27,24	14,37	5		

Bi-metallic tubular compression connectors 16 – 120 mm², for aluminium conductors

material: Al 99.5 und Cu according to DIN EN 13601, surface: uncoated

Al-sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

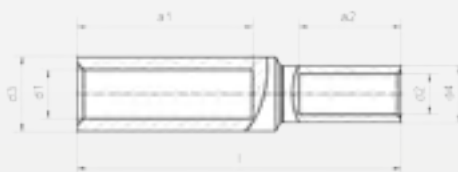
cross section (mm ²)			art.-no.	die code		dimensions in mm							weight		packing unit (pcs.)	tool recommendation		
Al rm/sm*	se**	Cu rm/sm*		Al	Cu	d1	d3	d2	d4	l	a1	a2	100 pcs./kg total	Cu				
16	25	6	21802	12	5	5,6	12	3,7	5,5	48	26	10	0,92	0,34	25	DW 10/120 152	APW 20 160, HHW 20 + HPW 20 161, AP 10 156	APW 30 + HHW 30 164, HPW 17 164, HHW 10 + HPW 10 157
		10	21804		6			4,4	6	48	26	10	0,94	0,36	25			
		16	21806		8			5,5	8,5	58	26	20	1,58	0,92	25			
25	35	10	21808	12	6	6,8	12	4,4	6	53	31	10	0,99	0,36	25			
		16	21810		8			5,5	8,5	63	31	20	1,66	0,92	25			
		25	21812		10			7	10	63	31	20	1,92	1,13	25			
35	50	16	21814	14	8	8	14	5,5	8,5	77	41	20	2,12	1,11	25			
		25	21816		10			7	10	77	41	20	2,41	1,33	25			
		35	21818		12			8,2	12,2	77	41	20	2,99	1,97	25			
50	70	25	21820	16	10	9,8	16	7	10	77	41	20	2,66	1,44	25			
		35	21822		12			8,2	12,2	77	41	20	3,34	2,06	25			
		50	21824		14			10	14,5	82	41	25	4,35	3,10	25			
70	95	25	21826	18	10	11,2	18,5	7	10	84	48	20	3,62	1,55	10			
		35	21828		12			8,2	12,2	84	48	20	4,22	2,16	10			
		50	21830		14			10	14,5	89	48	25	5,33	3,18	10			
		70	21832		16			11,5	16,5	91	48	27	6,40	4,16	10			
95	120	35	21834	22	12	13,2	22	8,2	12,2	84	48	20	5,74	2,32	10			
		50	21836		14			10	14,5	89	48	25	6,91	3,34	10			
		70	21838		16			11,5	16,5	91	48	27	7,89	4,25	10			
		95	21840		18			13,5	19	98	48	34	9,88	6,26	10			
120	150	50	21842	22	14	14,7	23	10	14,5	92	49	25	6,65	3,45	10			
		70	21844		16			11,5	16,5	94	49	27	7,61	4,38	10			
		95	21846		18			13,5	19	103	49	34	9,72	6,76	10			
		120	21848		20			15,5	21	103	49	34	10,83	7,84	10			

* APW 18 + HPW 18 172

Bi-metallic tubular compression connectors 150 – 500 mm², for aluminium conductors

material: Al 99.5 und Cu according to DIN EN 13601, surface: uncoated

Al-sleeves are prefilled with compound



*rm = round stranded
sm = sector stranded

**se = sector solid
(Sector solid shaped conductors must be rounded with dies for round-forming.)

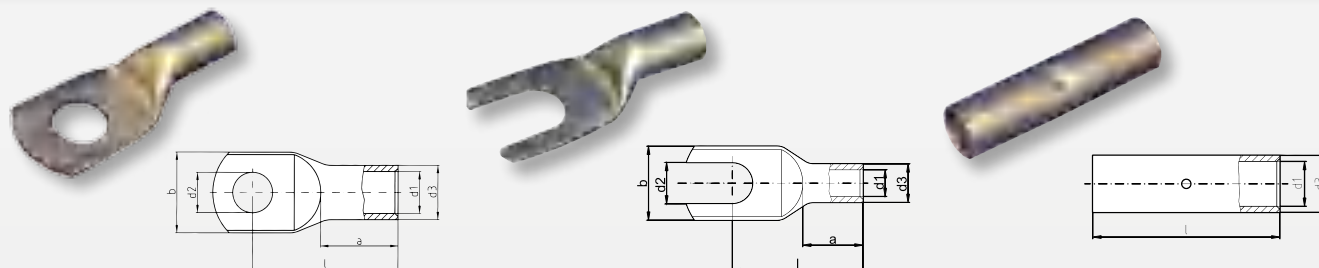
cross section (mm ²)			art.-no.	die code		dimensions in mm							weight		packing unit (pcs.)	tool recommendation			
Al rm / sm*		Cu rm/sm*		Al	Cu	d1	d3	d2	d4	l	a1	a2	gesamt	100 Stk./kg Cu					
150	185	70	21850	25	16	16,3	25	11,5	16,5	106	58,5	27	9,59	4,93	5	AP 10 156 HHW 10 157	APW 20 160, HHW 20 + HPW 20 161	APW 30 + HHW 30 164, HPW 17 164	APW 18 + HPW 18 172
		95	21852		18			13,5	19	113	58,5	34	11,66	6,97	5				
		120	21854		20			15,5	21	113	58,5	34	12,59	7,84	5				
		150	21856		22			17	23,5	118	58,5	39	15,50	11,02	5				
185	240	95	21858	28	18	18,3	28,5	13,5	19	113	58,5	34	13,00	7,21	5				
		120	21860		20			15,5	21	113	58,5	34	14,01	8,13	5				
		150	21862		22			17	23,5	118	58,5	39	16,93	11,02	5				
		185	21864		25			19	25,5	121	58,5	42	18,53	13,02	5				
240	300	120	21865	32	20	21	32	15,5	21	124	69	34	17,36	8,47	5				
		150	21866		22			17	23,5	129	69	39	20,08	11,45	5				
		185	21868		25			19	25,5	132	69	42	21,84	13,23	5				
		240	21870		28			21,5	29	132	69	42	28,00	13,23	5				
300	–	150	21872	34	22	23,3	34	17	23,5	129	69	39	20,51	9,27	5				
		185	21874		25			19	25,5	134	69	42	22,58	11,19	5				
		240	21876		28			21,5	29	137	69	42	29,32	17,30	5				
		300	21878		32			24,5	32	147	69	52	34,90	22,90	5				
400	–	185	21879	38	25	26	38,5	19	25,5	135	70	42	26,70	11,20	1				
		240	21880		28			21,5	29	138	70	42	32,90	17,30	1				
		300	21884		32			24,5	32	148	70	52	38,60	22,90	1				
500	–	240	21886	44	28	29	44	21,5	29	155	80	42	40,20	17,30	1				
		300	21887		32			24,5	32	165	80	52	46,10	22,90	1				
		400	21888		38			27,5	38,5	185	80	70	64,36	46,30	1				



Tubular cable lugs and connectors
high grade nickel

Tubular cable lugs and connectors 0.5 – 16 mm² high grade nickel

material: high grade nickel
heat resistance up to 500 °C



cross section mm²	flat hole M	art.- no.	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d3	d2	b	l	a				
ring type 0,5 – 1	3	12000	1,6	3,2	3,2	6,5	12,5	6	0,08	100	WZ 20 127	WZ 36 126
	4	12001			4,3	7	13,5		0,08	100		
	5	12002			5,3	7,5	14,5		0,09	100		
1,5 – 2,5	3	12009	2,3	3,9	3,2	7	14	6	0,12	100		
	4	12010			4,3	7	14		0,11	100		
	5	12011			5,3	8,5	15,5		0,12	100		
	6	12012			6,4	9,5	17		0,14	100		
4 – 6	4	12015	3,6	5,6	4,3	9,4	18	8	0,26	100		
	5	12016			5,3	10	18,5		0,28	100		
	6	12017			6,4	10,5	19,5		0,29	100		
	8	12018			8,4	12,5	23,5		0,34	100		
10	5	12205	4,5	6,5	5,3	10,8	20,5	10	0,38	100		
	6	12206			6,4	11,5	22,5		0,42	100		
	8	12207			8,4	13,3	25		0,42	100		
16	5	12210	5,5	7,5	5,3	12,8	22,5	11	0,44	100		
	6	12211			6,4	13,6	24,5		0,48	100		
	8	12212			8,4	15,7	26,5		0,54	100		
fork type 0,5 – 1	4	12101	1,6	3,2	4,3	6,5	13,5	6	0,08	100	WZ 20 127	
	5	12102			5,3	7,5	14,5		0,07	100		
1,5 – 2,5	4	12110	2,3	3,9	4,3	7	14	6	0,10	100		
	5	12111			5,3	8,5	15,5		0,11	100		
	6	12112			6,4	9,5	17		0,12	100		
4 – 6	4	12115	3,6	5,6	4,3	9,4	18	8	0,23	100		
	5	12116			5,3	10	18,5		0,24	100		
	6	12117			6,4	10,5	19,5		0,24	100		
	8	12118			8,4	13	23,5		0,30	100		
10	5	12076	4,5	6,5	5,3	10,8	20,5	10	0,34	100		
	6	12077			6,4	11,5	22,5		0,37	100		
	8	12078			8,4	13,3	25		0,41	100		
16	5	12081	5,5	7,5	5,3	12,8	22,5	11	0,44	100		
	6	12082			6,4	13,6	24,5		0,48	100		
	8	12083			8,4	15,7	26,5		0,53	100		
butt connector												
0,5 – 1	–	12450	1,6	3,2	–	–	15	–	0,08	100	WZ 20 127	
1,5 – 2,5		12454	2,3	3,9			15		0,10	100		
4 – 6		12458	3,6	5,6			15		0,19	100		
10		12460	4,5	6,5			25		0,38	100		
16		12462	5,5	7,5			30		0,54	100		

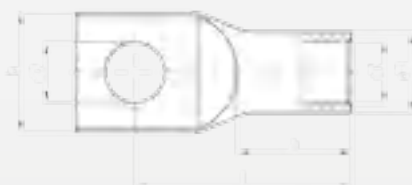


Tubular cable lugs V4A
stainless steel

Tubular cable lugs out of stainless steel 1.5 – 95 mm²

material: stainless steel

heat resistance up to 400 °C, korrosion resistant



cross section mm ²	flat hole M	art.- no.	dimensions in mm						weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
d1	d3	d2	b	l	a							
1,5 - 2,5	4	12510	3	5	4,3	9	24	8	0,27	10	AP 10 156, HHW 10 + HPW 10 157	APW 35 + HHW 35 + HPW 15 165, APW 30 + HHW 30 164, HPW 17 164
	5	12511			5,3	9	21,5		0,26	10		
	6	12512			6,4	10	22		0,25	10		
4 - 6	4	12515	4	6	4,3	9	23,5	9	0,33	10		
	5	12516			5,3	9	22,5		0,34	10		
	6	12517			6,4	10	21		0,33	10		
10	5	12705	5	8	5,3	12	29	10	0,81	10		
	6	12706			6,4	12	27,5		0,80	10		
	8	12707			8,4	13	25		0,84	10		
16	5	12710	6	8	5,3	12	33	13	0,73	10		
	6	12711			6,4	12	31,5		0,72	10		
	8	12712			8,4	13	31		0,64	10		
25	6	12715	7	10	6,4	14	33,5	15	1,26	10		
	8	12716			8,4	16	31		1,25	10		
35	6	12720	9	12	6,4	18	39,5	17	1,86	10		
	8	12721			8,4	18	37		1,81	10		
	10	12722			10,5	20	38		1,79	10		
50	8	12725	10	14	8,4	21	43	19	3,16	10		
	10	12726			10,5	21	42		3,07	10		
	12	12727			13	23	43		2,95	10		
70	8	12730	12	16	8,4	24	53	21	4,46	10		
	10	12731			10,5	24	52		4,37	10		
	12	12732			13	24	50		4,24	10		
	16	12733			17	28	47		4,17	10		
95	8	12735	14	18	8,4	26	58	25	5,60	10		
	10	12736			10,5	26	57		5,50	10		
	12	12737			13	26	55		5,36	10		
	16	12738			17	28	54		5,19	10		

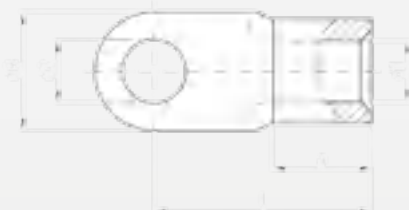


Noninsulated ring- and fork-terminals, copper
Noninsulated pin-terminals, copper
Noninsulated parallel- and butt-connectors, copper
Assortment boxes with noninsulated terminals

Noninsulated terminals with brazed seam 0.1 – 6 mm² DIN 46234

material: Cu

surface: tin plated, s = small palm



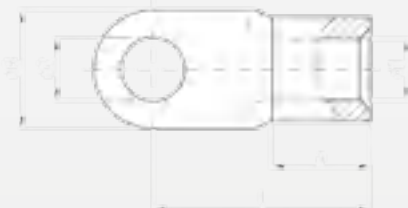
* not standardized, dimensions similar to DIN 46234

cross section mm ²	flat hole M	art.- no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d2	d3	l	a				
0,1 – 0,5	2	41001	1,0	2,2	5	10	4	0,02	100	WZ 35 126	WZ 20 127
	3	41003		3,2	5	10		0,02	100		
	4	41005		4,3	6,5	12		0,03	100		
	5	41006		5,3	8	11		0,03	100		
0,5 – 1	2*	41010	1,6	2,2	6	11	5	0,06	100	WZ 36 126, WZ 12 120, WZ 1 124	
	2,5	41011		2,7	6	11		0,06	100		
	3	41012		3,2	6	11		0,06	100		
	3,5	41013		3,7	6	11		0,06	100		
	4/S*	41014		4,3	7	11		0,06	100		
	4	41015		4,3	8	12		0,07	100		
	5/S*	41016		5,3	8	12		0,06	100		
	5	41017		5,3	10	13		0,08	100		
	6*	41018		6,5	10	13		0,07	100		
	8*	41019		8,4	12	17		0,10	100		
1,5 – 2,5	10*	41009		10,5	14	17		0,10	100		
	3	41020	2,3	3,2	6	11	5	0,07	100		
	3,5	41021		3,7	6	11		0,06	100		
	4/S*	41022		4,3	6,8	11		0,06	100		
	4	41023		4,3	8	12		0,08	100		
	5/S*	41024		5,3	8	12		0,07	100		
	5	41025		5,3	10	14		0,10	100		
	6	41026		6,5	11	16		0,11	100		
	8	41027		8,4	14	17		0,14	100		
4 – 6	10*	41028		10,5	18	20		0,19	100		
	12*	41029		13	18	20		0,16	100		
	4	41030	3,6	4,3	8	14	6	0,14	100		
	5	41031		5,3	10	15		0,16	100		
	6	41032		6,5	11	16		0,17	100		
	8	41033		8,4	14	19		0,21	100		
	10	41034		10,5	18	21		0,27	100		
	12*	41035		13	18	21		0,23	100		

Noninsulated terminals with brazed seam 10 – 70 mm² DIN 46234

material: Cu

surface: tin plated



* not standardized, dimensions similar to DIN 46234

cross section mm ²	flat hole M	art.- no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d2	d3	l	a				
10	4*	41039	4,5	4,3	10	16	8	0,23	100	WZ 1 124, WZ 12 120 WZ 20 127	WZ 36 126
	5	41040		5,3	10	16		0,22	100		
	6	41041		6,5	11	17		0,24	100		
	8	41042		8,4	14	20		0,29	100		
	10	41043		10,5	18	21		0,35	100		
	12	41044		13	22	23		0,41	100		
16	5	41045	5,8	5,3	11	20	10	0,40	100		
	6	41046		6,5	11	20		0,38	100		
	8	41047		8,4	14	22		0,42	100		
	10	41048		10,5	18	24		0,50	100		
	12	41049		13	22	26		0,58	100		
25	5	41050	7,5	5,3	12	25	11	0,70	50		
	6	41051		6,5	12	25		0,71	50		
	8	41052		8,4	16	25		0,76	50		
	10	41053		10,5	18	26		0,78	50		
	12	41054		13	22	31		0,97	50		
	16	41096		17	28	35		1,20	50		
35	6	41055	9	6,5	15	26	12	0,97	50		
	8	41056		8,4	16	26		0,96	50		
	10	41057		10,5	18	27		1,02	50		
	12	41058		13	22	31		1,17	50		
	16	41059		17	28	36		1,41	50		
	20*	41098		21	30	37,5	14	1,67	50		
50	6	41097	11	6,5	18	34	16	1,75	50		
	8	41060		8,4	18	34		1,72	50		
	10	41061		10,5	18	34		1,66	50		
	12	41062		13	22	36		1,80	50		
	16	41063		17	28	40		2,11	50		
	20*	41099		21	32	41,2	18	2,57	50		
70	6	41064	13	6,5	22	38	18	2,66	50		
	8	41065		8,4	22	38		2,61	50		
	10	41066		10,5	22	38		2,58	50		
	12	41067		13	22	38		2,49	50		
	16	41068		17	28	42		2,77	50		
	20*	41069		21	32	45	19	3,06	50		

Noninsulated terminals with brazed seam 95 – 240 mm² DIN 46 234

material: Cu

surface: tin plated



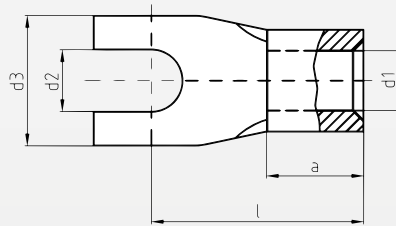
* not standardized,
dimensions similar to DIN 46234

cross section mm ²	flat hole M	art.- no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
			d1	d2	d3	l	a					
95	8	41070	15	8,4	24	42	20	4,24	25	DP 6/95 153	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164
	10	41071		10,5	24	42		4,17	25			
	12	41072		13	24	42		4,06	25			
	16	41073		17	28	44		4,26	25			
	20*	41074		21	32	51,8		4,25	25			
120	8	41075	16,5	8,4	24	44	22	5,77	25	DP 6/95 153	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164
	10	41076		10,5	24	44		5,67	25			
	12	41077		13	24	44		5,42	25			
	16	41078		17	28	48		6,21	25			
	20*	41079		21	32	53	21	5,81	25			
150	10	41081	19	10,5	30	50	24	8,29	25	DP 6/95 153	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164
	12	41082		13	30	50		8,31	25			
	16	41083		17	30	50		8,01	25			
	20*	41084		21	36	63	27	10,35	25			
185	10	41086	21	10,5	36	50	28	11,16	25	DP 6/95 153	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164
	12	41087		13	36	50		10,96	25			
	16	41088		17	36	50		10,73	25			
	20*	41089		21	36	50		10,17	25			
240	10	41091	23,5	10,5	38	56	32	15,01	25	DP 6/95 153	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161	APW 30 + HHW 30 164, HPW 17 164
	12	41092		13	38	56		15,20	25			
	16	41093		17	38	56		14,53	25			

Noninsulated terminals with brazed seam 0.5 – 16 mm², fork-type

material: Cu

surface: tin plated, S = small palm

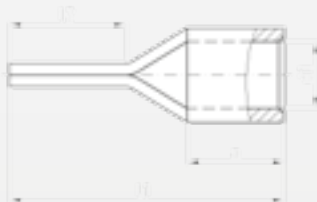


cross section mm²	flat hole M	art.- no.	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation			
			d1	d2	d3	l	a						
0,5 – 1	C 3	41112	1,6	3,2	6	11	5	0,06	100	WZ 20 127, WZ 12 120, WZ 1 124	WZ 36 126		
	C 3,5	41113		3,7	6	11		0,05	100				
	C 4/S	41114		4,3	6,8	12		0,06	100				
	C 4	41115		4,3	8	12		0,07	100				
	C 5	41117		5,3	10	13		0,08	100				
	C 6	41118		6,5	12	17		0,09	100				
1,5 – 2,5	C 3	41120	2,3	3,2	6	11	5	0,06	100			AP 10 156, HHW 10 157	
	C 3,5	41121		3,7	6,8	11		0,07	100				
	C 4/S	41122		4,3	6,8	11		0,06	100				
	C 4	41123		4,3	8	12		0,08	100				
	C 5	41125		5,3	10	14		0,10	100				
	C 6	41126		6,5	11	16		0,11	100				
4 – 6	C 4	41130	3,6	4,3	8	14	6	0,14	100	AP 10 156, HHW 10 157			
	C 5	41131		5,3	10	15		0,16	100				
	C 6	41132		6,5	11	16		0,16	100				
	C 8	41133		8,4	14	19		0,19	100				
10	C 5	41140	4,5	5,3	10	16	8	0,23	100				AP 10 156, HHW 10 157
	C 6	41141		6,5	11	17		0,24	100				
16	C 6	41146	5,8	6,5	11	20	10	0,48	50			AP 10 156, HHW 10 157	
	C 8	41147		8,4	14	22		0,54	50				

Noninsulated pin-terminals with brazed seam 0.1 – 95 mm² DIN 46230

material: Cu

surface: tin plated



*not standardized

cross section mm ²	art.- no.	d1	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
0,1 – 0,5	41301	1	14	9	4	1,2	0,02	100	WZ 20 127	WZ 35 126 WZ 36 126
0,5 – 1	41302	1,6	17	10	5	1,9	0,06	100		
1,5 – 2,5	41304	2,3	17	10	5	1,9	0,07	100		
	41305*		22	15			0,09	100	DP 6/95 153	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161, HPW 15 165
4 – 6	41306	3,6	20	11	6	2,6	0,15	100		
10	41308	4,5	22	12	8	2,3 x 4,2	0,25	100		
16	41310	5,8	26	13	10	2,5 x 5,6	0,41	100		
25	41312*	7	34,1	16	14	2,5 x 6,9	0,66	50		
35	41314*	8,4	41	20	16	3,2 x 8,1	1,19	50		
50	41316*	9,5	45,7	21	19	3,7 x 9,5	1,88	50		
70	41318*	11,2	55	24	24	4 x 11	3,08	50		
95	41320*	13,5	55,5	22	24	5,1 x 12,3	4,20	25		

Noninsulated parallel-connectors 0.1 – 150 mm² form A, DIN 46341 part 1

material: Cu

surface: tin plated



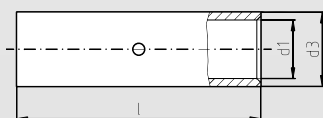
*not standardized

cross section mm²	art.- no.	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation						
		l	d1	d3									
0,1 – 0,5*	41400	5	1,2	2	0,01	100	DP 6/95 153	WZ 20 127	WZ 12 120	WZ 36 126	AP 10 156	APW 30 + HHW 30 164	
0,5 – 1	41401	7	1,6	3,3	0,04	100							
1,5 – 2,5	41404	7	2,3	4	0,05	100							
4 – 6	41408	7	3,6	5,7	0,09	100							
10	41410	9	4,6	6,8	0,15	100							
16	41412	10	5,9	8,3	0,23	100							
25	41414	12,5	7,7	10,7	0,45	100							
35	41416	14	9,2	12,4	0,65	100							
50	41418	17,5	11,2	14,8	1,13	100							
70	41420	18	13,5	17,5	1,59	100							
95	41422	19	15	20	2,34	50							
120	41424	21	16,7	22,7	3,53	50							
150	41426	25	19	25,5	5,02	50							

Noninsulated butt-connectors 0.1 – 150 mm² form B, DIN 46341 part 1

material: Cu

surface: tin plated



*not standardized

cross section mm²	art.- no.	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation					
		l	d1	d3								
0,1 – 0,5*	41450	12	1,2	2	0,02	100	DP 6/95 153	WZ 20 127	WZ 12 120	WZ 36 126	AP 10 156	APW 30 + HHW 30 164
0,5 – 1	41451	15	1,6	3,3	0,09	100						
1,5 – 2,5	41454	15	2,3	4	0,11	100						
4 – 6	41458	15	3,6	5,7	0,18	100						
10	41460	20	4,6	6,8	0,36	100						
16	41462	26	5,9	8,3	0,61	100						
25	41464	29	7,7	10,7	1,13	100						
35	41466	32	9,2	12,4	1,55	100						
50	41468	38	11,2	14,8	2,44	100						
70	41470	42	13,5	17,5	3,73	50						
95	41472	48	15	20	6,08	50						
120	41474	52	16,7	22,7	8,67	50						
150	41476	56	19	25,5	11,25	50						

Assortment boxes with noninsulated cable lugs and connectors



Assortment box out of varnished steel, with 12 small compartments and 1 tool-compartment. An inlay out of foam material prevents the content from mixing up. Measurements: 350 x 160 x 35 mm

quantity	description	flat hole mm	cross section mm ²	art.- no.
200 x	ring-terminals	3 – 1		41012
300 x	ring-terminals	4 – 1		41015
200 x	ring-terminals	5 – 1		41017
300 x	ring-terminals	4 – 2,5		41023
200 x	ring-terminals	5 – 2,5		41025
50 x	ring-terminals	5 – 6		41031
100 x	pin-terminals	1		41302
100 x	pin-terminals	2,5		41304
50 x	pin-terminals	6		41306
50 x	butt-connectors	1		41451
50 x	butt-connectors	2,5		41454
25 x	butt-connectors	6		41458
without tool				90848

special filling
on request

assortment box **without** contents
art.-no.: 90821



Assortment box out of varnished steel, with 7 small compartments and 1 tool-compartment for meter wiring. Measurements: 350 x 160 x 35 mm

quantity	description	flat hole mm ²	length mm	art.- no.
100 x	cord-end-sleeves	10 – 18		51434
50 x	cord-end-sleeves	16 – 18		51438
quantity	description	flat hole M	length mm	art.-no.
50 x	fork-terminals	5 – 10		41140
50 x	fork-terminals	6 – 10		41141
25 x	fork-terminals	6 – 16		41146
25 x	fork-terminals	8 – 16		41147
1 x	crimping tool WZ 6			91936
1 x	crimping tool AZ 6			90806
assortment box				90849

special filling
on request

assortment box **without** contents
art.-no.: 90823

Insulated ring-, fork- and pin-terminals
Insulated connectors
Male and female disconnectors,
insulated and noninsulated
Assortment boxes

Quality advantages:

Brazed seam:

The seam of WEITKOWITZ ring-, fork- and pin-terminals is hard-soldered. This guarantees a defined deformation during crimping and a really good electric and mechanical connection.

Injected insulation sleeve

WEITKOWITZ ring-, fork- and pin-terminals have an injected easy-entry insulation sleeve that chamfers on the inside funnel shaped to the edge of the cable lug.

advantages for you:

- during crimping no white lines occur. Even after extreme deformation the colour of insulation does not change. Therefore the crimped cable lugs give an excellent and clean optical impression.
- due to the easy-entry insulation cables with a thicker insulation can be inserted without any problems. And what is more our products can be crimped with any common tool that is suitable for insulated terminals.
- furthermore the easy-entry insulation prevents wire turn-backs. Therefore you can work easier, faster and safer.

Insulated terminals with soldered seam and easy-entry insulation 0.1 – 6 mm² DIN 46 237

material: Cu, insulation: PC (resp. *polyamide)

surface: tin plated. S = small palm



cross section mm ²	flat hole M	art.- no.	colour of insulation	dimensions in mm					Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
				d1	d4	d2	d3	l			
0,1 – 0,5	2	42001*	yellow	1	2,3	2,2	5	14	0,02	100	WZ35 126
	3	42003*				3,2	5	14	0,02	100	
	4	42005*				4,3	6,5	16	0,03	100	
	5	42006*				5,3	8	16	0,03	100	
0,5 – 1	2	42010	red	1,6	4	2,2	6	17	0,06	100	WZ 9 129, WZ 24 129, WZ 43 129, WZ 12 120, WZ 1 124
	2,5	42011				2,7	6	17	0,06	100	
	3	42012				3,2	6	17	0,06	100	
	3,5	42013				3,7	6	17	0,06	100	
	4/S	42014				4,3	7	17,5	0,06	100	
	4	42015				4,3	8	18	0,07	100	
	5/S	42016				5,3	8	18,5	0,06	100	
	5	42017				5,3	10	19	0,08	100	
	6	42018				6,5	10	19	0,07	100	
	8	42019				8,4	14	23	0,10	100	
1,5 – 2,5	10	42009	blue			10,5	18	25	0,10	100	
	3	42020		2,3	4,4	3,2	6	17	0,07	100	WZ 9 129, WZ 24 129, WZ 43 129, WZ 12 120, WZ 1 124
	3,5	42021				3,7	6	17	0,06	100	
	4/S	42022				4,3	6,8	17,6	0,06	100	
	4	42023				4,3	8	18	0,08	100	
	5/S	42024				5,3	8	19,5	0,07	100	
	5	42025				5,3	10	20	0,10	100	
	6	42026				6,5	11	22	0,11	100	
	8	42027				8,4	14	23	0,14	100	
	10	42028				10,5	18	25,6	0,19	100	
	12	42029				13	18	26	0,16	100	
4 – 6	4	42030	yellow	3,6	6,4	4,3	8	21	0,14	100	WZ 9 129, WZ 24 129, WZ 43 129, WZ 12 120, WZ 1 124
	5	42031				5,3	10	22	0,16	100	
	6	42032				6,5	11	23	0,17	100	
	8	42033				8,4	14	26	0,21	100	
	10	42034				10,5	18	28	0,27	100	
	12	42035				13	18	28	0,23	100	

Insulated terminals with soldered seam and easy-entry insulation 10 - 50 mm²

material: Cu, insulation: polyamide
 surface: tin plated

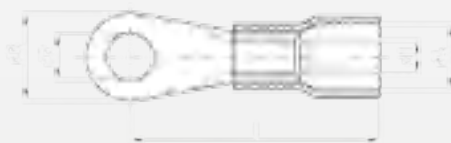


cross section mm ²	flat hole M	art.- no.	colour of insulation	dimensions in mm					Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
				d1	d4	d2	d3	l					
10	5	42040	red	4,5	8	5,3	10	24,5	0,22	50	WZ 28 130, WZ 12 120	AP 10 156, HHW 10 157, APW 20 160, HHW 20 161, Stilo 20 160	APW 30 + HHW 30 164, HPW 17 164, APW 35 + HHW 35 + HPW 15 165, Stilo 1 154
	6	42041				6,5	11	25,5	0,24	50			
	8	42042				8,4	14	28,5	0,29	50			
	10	42043				10,5	18	29,5	0,35	50			
16	5	42045	blue	5,8	10,5	5,3	11	31,5	0,40	50			
	6	42046				6,5	11	31,5	0,38	50			
	8	42047				8,4	14	33,5	0,42	50			
	10	42048				10,5	18	35,5	0,50	50			
25	5	42050	yellow	7,5	13	5,3	12	38	0,70	50			
	6	42051				6,5	12	38	0,71	50			
	8	42052				8,4	16	38	0,76	50			
	10	42053				10,5	18	39	0,78	50			
	12	42054				13	22	44	0,97	50			
35	6	42055	red	9	14,5	6,5	15	41	0,97	50			
	8	42056				8,4	16	41	0,96	50			
	10	42057				10,5	18	42	1,00	50			
	12	42058				13	22	46	1,17	50			
50	6	42097	blue	11	16,5	6,5	18	47,5	1,75	50			
	8	42060				8,4	18	47,5	1,72	50			
	10	42061				10,5	18	47,5	1,66	50			
	12	42062				13	22	49,5	1,80	50			

Insulated terminals with soldered seam and easy-entry insulation 70 - 150 mm²

material: Cu, insulation: polyamide

surface: tin plated

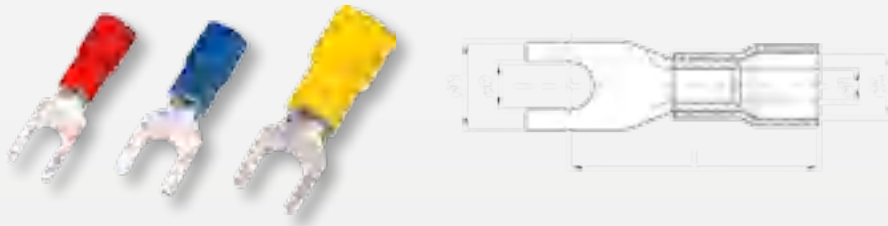


cross section mm ²	flat hole M	art.- no.	colour of insulation	dimensions in mm					Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
				d1	d4	d2	d3	l					
70	6	42064	yellow	13	18,7	6,5	22	51	2,66	50	APW 20 160, HHW 20 161	APW 35 + HHW 35 + HPW 15 165	APW 30 + HHW 30 164, HPW 17 164
	8	42065				8,4	22	51	2,34	50			
	10	42066				10,5	22	51	2,58	50			
	12	42067				13	22	51	2,49	50			
	16	42068				17	28	55	2,77	50			
95	8	42070	red	15	21,7	8,4	24	57,5	4,24	50			
	10	42071				10,5	24	57,5	4,17	50			
	12	42072				13	24	57,5	3,92	50			
	16	42073				17	28	59,5	3,94	50			
120	8	42075	blue	16,5	24,2	8,4	24	62	5,77	25			
	10	42076				10,5	24	62	5,67	25			
	12	42077				13	24	62	5,42	25			
	16	42078				17	28	66	6,21	25			
150	10	42081	yellow	19	27,2	10,5	30	70	8,29	25			
	12	42082				13	30	70	8,31	25			
	16	42083				17	30	70	8,01	25			

Insulated terminals with soldered seam and easy-entry insulation 0.5 – 16 mm², fork type

material: Cu, insulation: PC (resp. * PA)

surface: tin plated, S = small palm

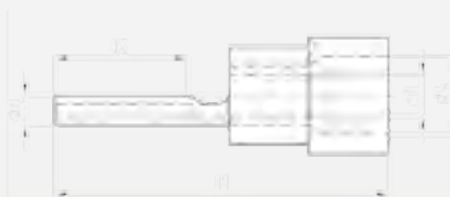


cross section mm ²	flat hole M	art.- no.	colour of insulation	dimensions in mm					Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
				d1	d4	d2	d3	l					
0,5 – 1	C 3	42112	red	1,6	4	3,2	6	17	0,06	100	WZ 9 129, WZ 1 124	WZ 43 129, WZ 24 129	WZ 12 120
	C 3,5	42113				3,7	6	17	0,05	100			
	C 4/S	42114				4,3	6,8	18	0,06	100			
	C 4	42115				4,3	8	18,1	0,07	100			
	C 5	42117				5,3	10	19	0,08	100			
	C 6	42118				6,5	11	21	0,09	100			
1,5 – 2,5	C 3	42120	blue	2,3	4,5	3,2	5,5	19	0,06	100			
	C 3,5	42121				3,7	6	17	0,07	100			
	C 4/S	42122				4,3	6,8	18,7	0,06	100			
	C 4	42123				4,3	8	18	0,08	100			
	C 5	42125				5,3	10	20	0,10	100			
	C 6	42126				6,5	11	22	0,11	100			
4 – 6	C 4	42130	yellow	3,6	6,4	4,3	8	21	0,14	100			
	C 5	42131				5,3	10	22	0,16	100			
	C 6	42132				6,5	11	23	0,16	100			
	C 8	42133				8,4	14	26	0,19	100			
	C 10	42134				10,5	18	28	0,33	100			
10	C 5	42140*	red	4,5	8	5,3	10,5	24,1	0,23	50	WZ 28 130	AP 10 156, Stilo 1 154	
	C 6	42141*				6,5	10,8	24,6	0,24	50			
16	C 6	42146*	blue	5,8	11	6,5	11	32,2	0,48	50			
	C 8	42147*				8,4	13,8	32,2	0,50	50			

Insulated pin-terminals with soldered seam 0.1 – 35 mm² DIN 46231

material: Cu, insulation: PC (resp. * PA)

surface: tin plated



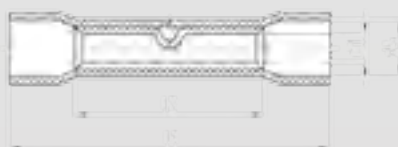
*not standardized

cross section mm ²	art.- no.	colour of insulation	d1	dimensions in mm				Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
0,1 – 0,5	42301* ¹	yellow	1	2,2	1,2	18	9	0,02	100	WZ 35 126
0,5 – 1	42302	red	1,7	4	1,9	22,8	11	0,06	100	WZ 9 129
1,5 – 2,5	42304	blue	2,3	4,5	1,9	22,8	11	0,07	100	WZ 12 120
	42305	blue				27	14	0,09	100	WZ 24 129
4 – 6	42306	yellow	3,6	6,4	2,8	27	11	0,15	100	WZ 43 129
10	42308* ¹	red	4,5	7,8	2,4 x 4,3	34	12	0,25	50	
16	42310* ¹	blue	5,8	9,1	2,5 x 5,6	40,7	13,5	0,41	50	
25	42312* ¹	yellow	7	12,4	2,5 x 6,9	44	16	0,66	50	
35	42314* ¹	red	8,4	14	3,2 x 8,1	52,5	20	1,19	50	on request

Insulated butt-connectors 0.1 – 6 mm² with easy-entry insulation

material: Cu, insulation: PC (resp. * PA)

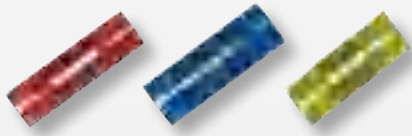
surface: tin plated



cross section mm ²	art.- no.	colour of insulation	d1	d4	l2	l1	Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
0,1 – 0,5	42450*	yellow	1,2	2	12	20	0,02	100	WZ 35 126
0,5 – 1	42451	red	1,6	4,1	15	25	0,09	100	WZ 1 124
1,5 – 2,5	42454	blue	2,3	4,5	15	26	0,11	100	WZ 12 120
4 – 6	42458	yellow	3,6	6,4	15	27	0,18	100	WZ 9 129
									WZ 43 129
									WZ 24 129

Insulated parallel-connectors 0.1 – 6 mm²

material: Cu, insulation: PA
 surface: tin plated



cross section mm ²	art.- no.	colour of insulation	dimensions in mm				Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d4	l2	l1				
0,1 – 0,5	42400	yellow	1,2	2	5	12	0,01	100	WZ 12 120	WZ 35 126
0,5 – 1	42401	red	1,7	3,2	7	17	0,04	100		WZ 24 129
1,5 – 2,5	42404	blue	2,3	4	7	17	0,05	100		WZ 43 127
4 – 6	42408	yellow	3,6	5,4	7	21,2	0,09	100		WZ 9 129 WZ 1 124

Heat shrinkable butt-splice-connectors 0.14 – 6 mm²

material: Cu, tin plated
 shrink temperature approx. 120 °C

insulation: 0.14 – 0.5 mm² = Polyolefin
 0.5 – 6 mm² = Polyethylen


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cross section mm ²	art.- no.	colour of insulation	dimensions in mm				Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d4	l2	l1				
0,14 – 0,5	42430	yellow	1,4	3,1	11,5	24,5	0,04	50	WZ 9 129	WZ 35 126
0,5 – 1	42431	red	1,7	4,4	15	36	0,09	50		
1,5 – 2,5	42434	blue	2,3	5,2	15	36	0,11	50		WZ 12 120
4 – 6	42436	yellow	3,6	6,5	15	41	0,18	20		

Insulated closed-end-connectors 1.5 – 10 mm²

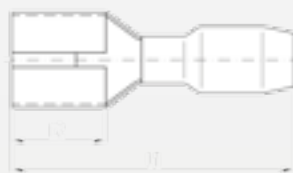
material: Cu, insulation: PA
 surface: tin plated



cross section mm ²	art.- no.	colour of insulation	dimensions in mm				Cu-weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			d1	d4	l2	l1				
1,5 – 2,5	42484	blue transparent	2,3	6,4	8	15,4	0,05	100	only: WZ 9 129	
4 – 6	42486	yellow transparent	3,4	9,2	8,5	17,7	0,09	100		
10	42488	transparent	5	11,8	8	22	0,15	50	only: WZ 28 130	

Female disconnectors 0.1 – 6 mm²

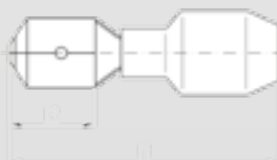
material: **brass**, insulation: **PVC** resp. **PC**
surface: tin plated



cross section mm ²	art.-no. insulation		colour of insulation	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
	PVC	PC		tab- width	tab- thickness	l1	l2				
0,1 – 0,5	44002	–	yellow	2,8	0,5	16	6,4	0,04	100	WZ 35 126	
	44003	–		2,8	0,8	16	6,4	0,04	100		
0,5 – 1	44010	44610	red	2,8	0,5	19	6,5	0,08	100	WZ 24 129, WZ 43 129	WZ 9 129
	44011	44611		2,8	0,8	19	6,5	0,08	100		
	44012	44612		4,8	0,5	19,4	6,4	0,09	100		
	44013	44613		4,8	0,8	19,4	6,4	0,09	100		
	44014	44614		6,3	0,8	20,8	7,5	0,10	100		
1,5 – 2,5	44018	44618	blue	2,8	0,5	19	6,5	0,08	100		
	44019	44619		2,8	0,8	19	6,5	0,08	100		
	44015	44615		4,8	0,5	19,4	6,4	0,09	100		
	44016	44616		4,8	0,8	19,4	6,4	0,09	100		
	44017	44617		6,3	0,8	20,8	7,3	0,11	100		
4 – 6	44020	44620	yellow	6,3	0,8	23,3	7,3	0,18	100		
	44021	44621		9,5	1,2	28,6	12	0,27	100		

Male disconnectors 0.5 – 6 mm²

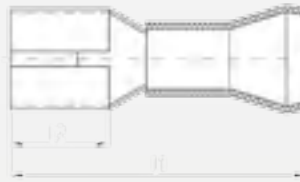
material: **brass**, insulation: **PVC** resp. **PC**
Oberfläche: galvanisch verzinkt



cross section mm ²	art.-no. insulation		colour of insulation	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
	PVC	PC		tab- width	tab- thickness	l1	l2					
0,5 – 1	44031	44631	red	2,8	0,8	19,2	6,5	0,08	100	WZ 43 129	WZ 24 129	WZ 9 129
	44033	44633		4,8	0,8	19,8	6,7	0,08	100			
	44034	44634		6,3	0,8	21,8	7,7	0,09	100			
1,5 – 2,5	44039	44639	blue	4,8	0,8	19,8	6,7	0,09	100			
	44035	44635		6,3	0,8	21,8	7,7	0,10	100			
4 – 6	44036	44636	gelb	6,3	0,8	24	7,7	0,17	100			

Female disconnectors 0.5 – 6 mm²

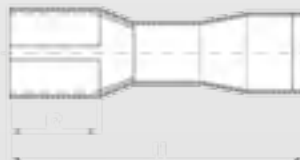
material: **phos. bronze**, insulation: PA
 surface: tin plated



cross section mm ²	art.- no.	colour of insulation	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
			tab- width	tab- thickness	l1	l2				
0,5 – 1	44080	red	2,8	0,5	18,4	6,4	0,07	100	WZ 9 129	
	44081		2,8	0,8	18,4	6,4	0,07	100		
	44083		4,8	0,8	19	6,2	0,08	100		
	44084		6,3	0,8	21	8	0,10	100		
1,5 – 2,5	44087	blue	6,3	0,8	21	8	0,11	100		
4 – 6	44090	gelb	6,3	0,8	24,7	8	0,18	100		

Female disconnectors 0.5 – 6 mm², completely insulated

material: **brass**, insulation: PA resp. PC
 surface: tin plated

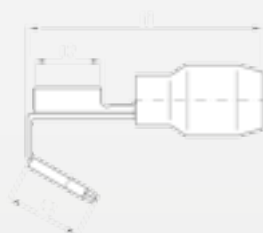
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cross section mm ²	art.-no. insulation		colour of insulation	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation	
	PA	PC		tab- width	tab- thickness	l1	l2				
0,5 – 1	44040	44640	red	2,8	0,5	19,2	6,4	0,08	100	WZ 43 129	WZ 9 129
	44041	44641		2,8	0,8	19,2	6,4	0,08	100		
	44042	44642		4,8	0,5	20,2	6,4	0,10	100		
	44043	44643		4,8	0,8	20,2	6,4	0,10	100		
	44044	44644		6,3	0,8	21,5	7,3	0,11	100		
1,5 – 2,5	44045	44645	blue	4,8	0,5	20,2	6,5	0,11	100		
	44046	44646		4,8	0,8	20,2	6,5	0,11	100		
	44047	44647		6,3	0,8	21,5	7,3	0,14	100		
4 – 6	44049	44649	yellow	6,3	0,8	24,2	7,3	0,20	100		

Piggy back disconnectors 0.5 – 2.5 mm²

material: brass, insulation: PVC resp. PC

surface: tin plated



cross section mm ²	art.-no. insulation		colour of insulation	dimensions in mm					weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
	PVC	PC		tab- width	tab- thickness	l1	l2	l3			
0,5 – 1	44025	44625	redt	6,3	0,8	23,9	8	8,2	0,15	100	WZ 24 129, WZ 43 129 WZ 9 129
1,5 – 2,5	44026	44626	blue	6,3	0,8	23	8	8,2	0,15	100	

Flag female disconnectors 0.5 – 2.5 mm², completely insulated

material: brass, Insulation: PA

surface: tin plated



cross section mm ²	art.- no.	colour of insulation	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
			tab- width	tab- thickness	l1	l2			
0,5 – 1	44056	redt	6,3	0,8	16,3	15	0,14	100	only: WZ 46 130
1,5 – 2,5	44060	blue	6,3	0,8	16,8	15	0,13	100	

Insulated receptacle disconnectors 0.5 – 6 mm²

material: brass, insulation: PVC

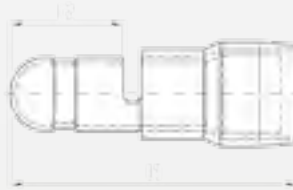
surface: tin plated



cross section mm ²	art.- no.	colour of insulation	dimensions in mm		weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
			pin Ø mm	l1 mm			
0,5 – 1	44510	redt	4	23,3	0,13	100	WZ 24 129 WZ 43 129 WZ 9 129
1,5 – 2,5	44512	blue	5	23,3	0,15	100	
4 – 6	44514	yellow	5	25,1	0,23	100	

Insulated bullet disconnectors 0.5 – 6 mm²

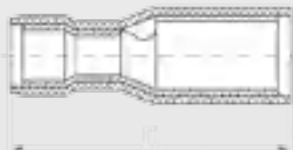
material: brass, insulation: PVC resp. PC
surface: tin plated



cross section mm ²	art.-no. insulation		colour of insulation	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
	PVC	PC		pin-Ø	l1	l2			
0,5 – 1	44520	44560	redt	4	21,5	8,5	0,10	100	WZ 24 129 WZ 43 129 WZ 9 129
1,5 – 2,5	44523	44563	blue	5	21,2	8,5	0,11	100	
4 – 6	44526	44566	yellow	5	24	8,5	0,17	100	

Fully insulated receptacle disconnectors 0.5 – 2.5 mm²

material: brass, insulation: polyamide
surface: tin plated

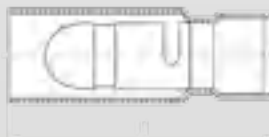
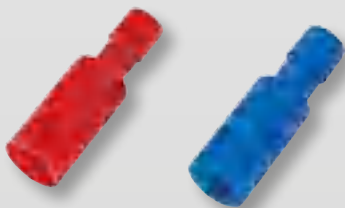


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cross section mm ²	art.- no.	colour of insulation	dimensions in mm		weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
			Stecker-Ø	l1			
0,5 – 1	44516	redt	4	25,2	0,12	100	only: WZ 9 129
1,5 – 2,5	44518	blue	4	25,2	0,13	100	

Fully insulated bullet disconnectors 0.5 – 2.5 mm²

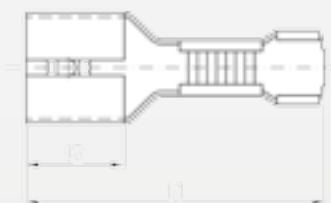
material: brass, insulation: polyamide
surface: tin plated



cross section mm ²	art.- no.	colour of insulation	dimensions in mm		weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
			pin-Ø	l1			
0,5 – 1	44528	redt	4	27	0,13	100	only: WZ 9 129
1,5 – 2,5	44530	blue	4	27	0,15	100	

Noninsulated female open barrel terminals 0.5 – 6 mm², DIN 46247

material: **brass**, tin plated resp. **steel**, nickel plated

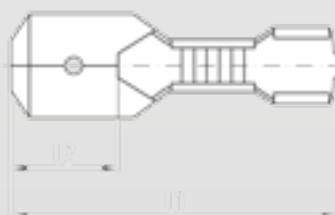


cross section mm ²	art.-no.		dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation		
	brass tin plated	steel nickel plated	tab width	tab thickness	l1	l2					
0,5 – 1	44110	–	2,8	0,5	14,6	6,2	0,03	100	WZ 1 124	WZ 12 120	WZ 8 128
	44111	–	2,8	0,8	14,6	6,2	0,03	100			
	44112	–	4,8	0,5	15,6	6,4	0,05	100			
	44113	–	4,8	0,8	15,6	6,4	0,05	100			
	44114	44314	6,3	0,8	19,7	7,7	0,07	100			
1,5 – 2,5	44116	–	4,8	0,8	15,9	6,6	0,05	100	WZ 1 124	WZ 12 120	WZ 8 128
	44117	44317	6,3	0,8	19,7	7,7	0,08	100			
4 – 6	44120	44320	6,3	0,8	19,8	7,7	0,09	100	WZ 1 124	WZ 12 120	WZ 8 128

Noninsulated male open barrel terminals 0.5 – 2.5 mm², DIN 46248

material: brass

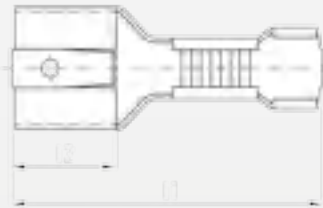
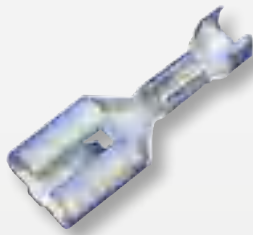
surface: tin plated



cross section mm ²	art.- no.	tab width	dimensions in mm		weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
			tab thickness	l1			
0,5 – 1	44134	6,3	0,8	20,5	9,3	0,06	100
1,5 – 2,5	44135	6,3	0,8	20,7	8	0,07	100

Noninsulated female open barrel terminals 0.5 – 6 mm², DIN 46340

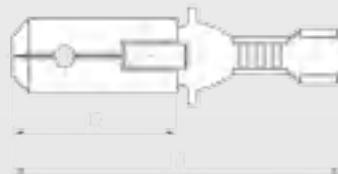
with latch to engage in housings
material: brass, surface: tin plated



cross section mm ²	art.- no.	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
		tab width	tab thickness	l1	l2			
0,5 – 1	44214	6,3	0,8	20	7,6	0,07	100	only: WZ 37 128 WZ 8 128 WZ 12 120
1,5 – 2,5	44217	6,3	0,8	20	7,6	0,08	100	
4 – 6	44220	6,3	0,8	19,8	7,7	0,09	100	

Noninsulated male open barrel terminals 0.5 – 6 mm², DIN 46343

with latch to engage in housings
material: brass, surface: tin plated

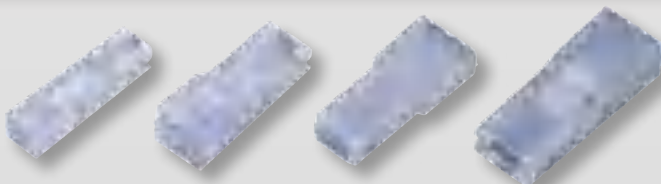


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cross section mm ²	art.- no.	dimensions in mm				weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
		tab width	tab thickness	l1	l2			
0,5 – 1	44234	6,3	0,8	28	15	0,08	100	only: WZ 37 128 WZ 8 128 WZ 12 120
1,5 – 2,5	44235	6,3	0,8	28	15	0,09	100	
4 – 6	44236	6,3	0,8	28,7	15,4	0,10	100	

Insulated housings

for noninsulated female open barrel terminals without latch
colour: nature



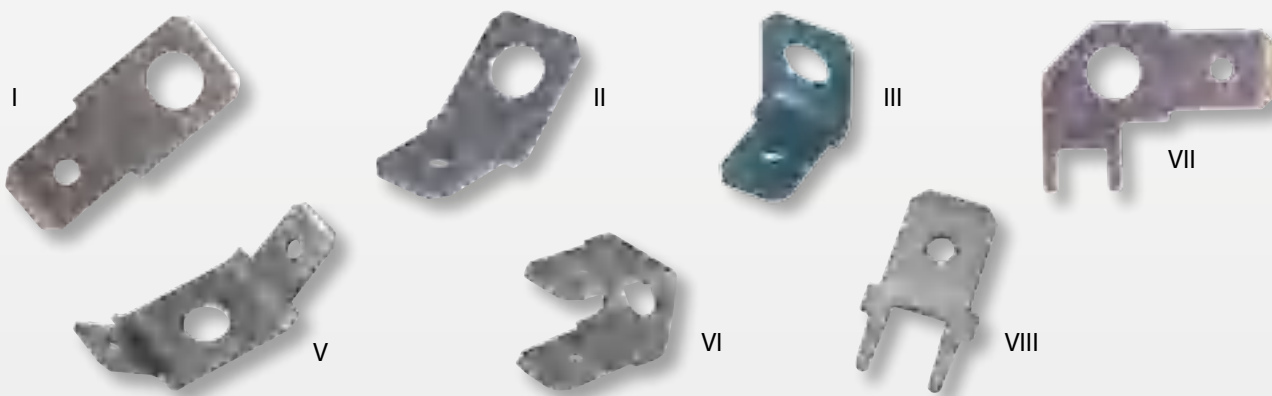
* frontal insertion for afterwards
slide on of the crimped terminal
housing does snap in

art.-no.	for tab width mm	for cross section mm ²	material	weight 100 pcs./kg	packing unit (pcs.)
44142*	2,8	0,5 – 1	Polyamid 6.6	0,02	100
44143*	4,8	0,5 – 2,5	Polyamid 6.6	0,03	100
44145	6,3	0,5 – 2,5	Polyethylen	0,04	100
44147*	6,3	0,5 – 6	Polyamid 6.6	0,05	100

Noninsulated male terminals

material: brass

surface: tin plated



art.-no.	type	dimensions in mm			weight 100 pcs./kg	packing unit (pcs.)
		tab width	tab thickness	hole Ø		
44151	I	6,3	0,8	4,2	0,09	100
44152	II	6,3	0,8	4,2	0,09	100
44157	II	6,3	0,8	5,2	0,08	100
44153	III	6,3	0,8	4,2	0,09	100
44155	V	6,3	0,8	4,3	0,14	100
44158	V	6,3	0,8	6,2	0,15	100
44156	VI	6,3	0,8	4,3	0,14	100
44159	VII	2,8	0,8	–	0,04	100
44160	VII	6,3	0,8	–	0,09	100
44161	VIII	6,3	0,8	–	0,05	100

Noninsulated multi-way-adapters for tab dimensions 6.3 x 0.8 mm

material: brass

surface: tin plated



art.-no.	type	cross section mm ²	weight 100 pcs./kg	packing unit (pcs.)	tool recommendation
44162	I	0,5 – 1	0,11	100	WZ 8 128
44163	I	1,5 – 2,5	0,12	100	
44166	II	–	0,12	100	
44167	III	–	0,19	100	

Fully insulated male tabs

1 pole and 12 poles

material of tabs: brass, colour of insulation: transparent



art.-no.	quantity of poles	dimensions in mm			insulation	surface of tab	weight 100 pcs./kg	packing unit (pcs.)
		tab width	tab thickness	width b				
44064	1	6,3	0,8	27,8	soft-PVC	tin plated	0,25	100
44065	12	6,3	0,8	25,8	soft-PP	tin plated	2,80	10
44067	12	6,3	0,8	42	soft-PVC	uncoated	3,68	10
44068	1	6,3	0,8	50	hard-Polyamid	tin plated	0,27	100
44069	12	6,3	0,8	50	soft-PVC	uncoated	4,48	10

10

Fully insulated male tabs

1/2-poles or 2/2-poles

material of tabs: brass, colour of insulation: transparent



art.-no.	quantity of poles	dimensions in mm			insulation	surface of tab	weight 100 pcs./kg	packing unit (pcs.)
		tab width	tab thickness	width b				
44071	1/2	6,3	0,8	42	soft-PVC	uncoated	0,58	20
44073	1/2	6,3	0,8	54	soft-PVC	tin plated	0,69	20
44075	2/2	6,3	0,8	50	soft-PVC	tin plated	0,64	20

Assortment boxes

with insulated terminals,
connectors and disconnectors

special filling on
request



art.-no.: 90845

like above, but **without** crimping tool

art.-no.: 90825

Assortment box **without** contents

quantity			art.-no.
50 x	ring-terminals	4 – 1	42015
50 x	ring-terminals	5 – 1	42017
50 x	ring-terminals	4 – 2,5	42023
50 x	ring-terminals	5 – 2,5	42025
50 x	ring-terminals	6 – 2,5	42026
25 x	ring-terminals	5 – 6	42031
25 x	ring-terminals	6 – 6	42032
50 x	fork-terminals	4 – 1	42114
50 x	fork-terminals	4 – 2,5	42122
25 x	fork-terminals	6 – 6	42132
50 x	pin-terminals	1	42302
50 x	pin-terminals	2,5	42304
25 x	pin-terminals	6	42306
50 x	female disconnectors	6,3 x 1	44014
25 x	piggy-back disconnectors	6,3 x 1	44025
50 x	Flachsteckhülsen	6,3 x 2,5	44017
50 x	butt-connectors	1	42451
50 x	butt-connectors	2,5	42454
25 x	butt-connectors	6	42458
1 x	crimping tool WZ 9		90709
Assortment box			90844

Assortment boxes

out of vanished steel, with 12 small compartments, measurements: 350 x 160 x 35 mm
1 tool compartment and an inlay out of foam material



quantity			art.-no.
100 x	ring-terminals	4 – 1	42015
100 x	ring-terminals	5 – 1	42017
100 x	ring-terminals	4 – 2,5	42023
100 x	ring-terminals	5 – 2,5	42025
50 x	ring-terminals	6 – 2,5	42026
50 x	ring-terminals	6 – 6	42032
50 x	pin-terminals	1	42302
50 x	pin-terminals	2,5	42304
50 x	butt-connectors	1	42451
50 x	butt-connectors	2,5	42454
50 x	cord-end-sleeves	6,3 x 1	44014
50 x	cord-end-sleeves	6,3 x 2,5	44017
1 x	crimping tool WZ 9 0,5-6,0		90709
Assortment box			90852

art.-no.: 90853 like above, but **without** crimping tool

art.-no.: 90821 Assortment box **without** contents

quantity			art.-no.
100 x	cord-end-sleeves	2,8 x 1	44011
100 x	cord-end-sleeves	6,3 x 1	44014
100 x	cord-end-sleeves	6,3 x 2,5	44017
50 x	cord-end-sleeves	6,3 x 6	44020
50 x	multi-way-adapters	6,3 x 1	44025
50 x	multi-way-adapters	6,3 x 2,5	44026
50 x	cord-end-sleeves	6,3 x 1	44034
50 x	cord-end-sleeves	6,3 x 2,5	44035
20 x	fully insulated male tabs		44064
50 x	ring-terminals	4 – 1	42015
50 x	ring-terminals	5 – 2,5	42025
50 x	ring-terminals	6 – 6	42032
1 x	crimping tool WZ 9 0,5-6,0		90709
Assortment box			90855

art.-no.: 90856 like above, but **without** crimping tool

art.-no.: 90821 Assortment box **without** contents

Assortment boxes

out of vanished steel, measurements: 350 x 160 x 35 mm,
with 7 small compartments and 1 tool compartment

**special filling on
request**



art.-no.: 90823 Assortment box **without** contents

with insulated terminals, connectors and disconnectors

quantity			art.-no.
50 x	ring-terminals	4 – 1	42015
50 x	ring-terminals	5 – 2,5	42025
25 x	ring-terminals	6 – 6	42032
50 x	fork-terminals	4 – 1	42114
50 x	fork-terminals	5 – 2,5	42125
50 x	pin-terminals	1	42302
50 x	pin-terminals	2,5	42304
1 x	crimping tool WZ 9		90709
Assortment box			90857



art.-no.: 90823 Assortment box **without** contents

with special products for **meter wiring**

quantity			art.-no.
50 x	cord-end-sleeves	10 – 18	51368
25 x	cord-end-sleeves	16 – 18	51376
50 x	fork-terminals	5 – 10	42140
50 x	fork-terminals	6 – 10	42141
25 x	fork-terminals	6 – 16	42146
25 x	fork-terminals	8 – 16	42147
1 x	crimping tool WZ 28		90728
1 x	crimping tool AZ 6		90806
Assortment box			90851



art.-no.: 90823 Assortment box **without** contents

with noninsulated male and female disconnectors

quantity			art.-no.
100 x	cord-end-sleeves	2,8 x 1	44111
100 x	cord-end-sleeves	4,8 x 1	44113
100 x	cord-end-sleeves	6,3 x 1	44114
100 x	cord-end-sleeves	6,3 x 2,5	44117
50 x	cord-end-sleeves	6,3 x 6	44120
50 x	multi-way-adapters	6,3 x 1	44162
50 x	multi-way-adapters	6,3 x 2,5	44163
1 x	crimping tool	WZ 7	90707
Assortment box			90846





Noninsulated cord-end-sleeves
Insulated cord-end-sleeves
Assortment boxes
Insulated cord-end-sleeves, strip form

Noninsulated cord-end-sleeves 0.25 – 6 mm² DIN 46 228 part 1

material: Cu according to DIN EN 13600 resp. Cu according to DIN EN 12449

surface: tin plated



* not standardized

cross section mm²	length (l) mm	art.- no.	d1 mm	weight 1.000 pcs./kg	packing unit (pcs.)	tool recommendation	
0,25 – 0,34	5*	51402	0,8	0,03	1000	AZ 4 131, AZ 10 132	AZ 6 131, AZ 8 132, AZ 14 132, WZ 12 120, AZ 40 134, AZ 42 134
	7*	51404		0,03	1000		
0,5	6	51410	1,1	0,04	1000		
	8*	51442		0,05	1000		
	10	51411		0,06	1000		
0,75	6	51412	1,3	0,04	1000		
	8*	51443		0,06	1000		
	10	51413		0,07	1000		
	12*	51444		0,08	1000		
	15*	51445		0,10	1000		
1	6	51414	1,5	0,05	1000		
	7*	51416		0,05	1000		
	8*	51446		0,06	1000		
	10	51415		0,08	1000		
	12*	51447		0,09	1000		
	15*	51448		0,11	1000		
1,5	7	51418	1,9	0,06	1000		
	8*	51450		0,08	1000		
	10	51419		0,09	1000		
	12	51420		0,11	1000		
	15*	51449		0,14	500		
	18	51421		0,17	500		
2,5	7	51422	2,3	0,08	1000		
	8*	51456		0,09	1000		
	10	51451		0,11	1000		
	12	51423		0,13	1000		
	15*	51452		0,18	500		
	18	51424		0,21	500		
4	9	51425	2,9	0,16	1000		
	12	51426		0,21	1000		
	15	51427		0,31	500		
	18	51453		0,34	500		
	20*	51454		0,38	500		
6	10	51428	3,7	0,24	500		
	12	51429		0,29	500		
	15	51430		0,36	500		
	18	51431		0,41	500		
	20*	51457		0,46	500		
						AP 10 156 HPW 10 157	

Noninsulated cord-end-sleeves 10 – 240 mm² DIN 46 228 part 1

material: Cu according to DIN EN 13600 resp. Cu according to DIN EN 12449

surface: tin plated



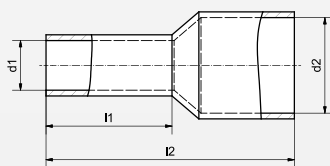
* not standardized

cross section mm ²	length (l) mm	art.- no.	d1 mm	weight 1.000 pcs./kg	packing unit (pcs.)	tool recommendation			
10	10*	51458	4,6	0,30	500	AZ 8 129, AZ 42 134, AZ 40 134	WZ 12 120	AP 10 156, HHW 10 + HPW 10 157	APW 30 + HHW 30 164, HPW 17 164, APW 35 + HHW 35 + HPW 15 165
	12	51432		0,35	500				
	15	51433		0,44	500				
	18	51434		0,58	100				
	20*	51459		0,59	100				
16	12	51436	6,0	0,57	100				
	15	51437		0,62	100				
	18	51438		0,77	100				
	25	51439		1,00	100				
	32	51440		1,24	100				
25	12*	51406	7,5	0,74	100				
	15	51463		0,83	100				
	18	51464		1,03	100				
	22*	51407		1,26	100				
	25	51465		1,32	100				
	32	51462		1,55	100				
35	18	51466	8,3	1,16	100				
	22*	51408		1,36	100				
	25	51467		1,55	100				
	32	51460		1,99	100				
50	18	51468	10,5	1,75	100				
	22*	51409		2,09	100				
	25	51469		2,42	100				
	32	51461		3,36	100				
70	25*	51470	12,5	3,91	100				
	32*	51471		4,90	100				
95	25*	51472	14,7	4,22	100				
	32*	51473		6,12	100				
120	32*	51474	16,7	8,79	100				
	40*	51475		11,13	100				
150	32*	51476	18,7	10,72	100				
	40*	51477		10,70	100				
185	40*	51455	20,2	14,39	100				
240	34*	51502	23,1	15,36	50				
	40*	51504		15,34	50				

Insulated cord-end-sleeves 0.14 – 2.5 mm² * = DIN 46 228 part 4

material: Cu-DHP according to DIN EN 12449, insulation: polypropylene

surface: tin plated



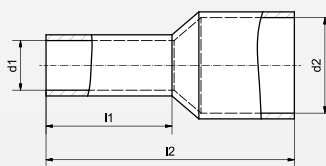
Small packagings with 100 pcs./bag are available at additional costs!

		DIN 46228 part 4						dimensions in mm			Cu-weight		packing unit (pcs.)	tool recommendation
cross section mm ²	length mm (l1)	colour of insulation	art.-no.	colour of insulation	art.-no.	colour of insulation	art.-no.	l2	d1	d2	1.000 pcs./kg			
0,14	6	–	–	grey	51600	brown	51300	10	0,7	1,6	0,03		500	AZ 4 131, AZ 8 + AZ 10 + AZ 14 132
	8	–	–		51601		51301	12			0,04		500	
0,25	6	–	–	violet	51602	light blue	51302	10	0,75	1,8	0,03		500	
	8	–	–		51603		51303	12			0,04		500	
0,34	6	–	–	pink	51605	torquoise	51305	10	0,8	2	0,03		500	
	8	–	–		51606		51306	12			0,04		500	
0,5	6	white	51311	orange	51611	white	51311	12	1	2,6	0,04		500	
	8		51479		51612		51479	14			0,05		500	
	10		51478		51613		51478	16			0,06		500	
0,75	6	grey	51317	white	51616	light blue	–	12	1,2	2,8	0,04		500	AZ 5 + AZ 6 131
	8		51318		51617		51480	14			0,06		500	
	10		51320		51618		–	16			0,07		500	
	12		51322		51619		51481	18			0,08		500	
1	6	red	51325	yellow	51622	red	51325	12	1,4	3	0,05		500	
	8		51482		51623		51482	14			0,06		500	
	10		51328		51624		51328	16			0,08		500	
	12		51483		51625		51483	18			0,09		500	
1,5	6	black	51334	red	51629	black	51334	12	1,7	3,5	0,06		500	
	8		51484		51630		51484	14			0,08		500	
	10		51335		51631		51335	16			0,09		500	
	12		51336		51632		51336	18			0,11		500	
	18		51485		51635		51485	24			0,17		500	
2,5	8	blue	51342	blue	51342	grey	51486	14	2,2	4,2	0,09		500	
	12		51344		51344		–	18			0,13		500	
	18		51346		51346		51487	24			0,21		500	

Insulated cord-end-sleeves 4 – 150 mm² * = DIN 46 228 part 4

material: Cu according to DIN EN 12449, insulation: polypropylene

surface: tin plated



* Small packagings with 100 pcs./bag are available at additional costs!

		DIN 46228 part 4													
cross section mm²	length mm (l1)	colour of insulation	art.- no.	colour of insulation	art.- no.	colour of insulation	art.- no.	dimensions in mm			Cu-weight 1.000 pcs./kg	packing unit (pcs.)	tool recommendation		
4	10	grey	51348	grey	51348	orange	51488	17	2,8	4,8	0,21	500	AZ 8 132	AZ 6 131	AZ 14 132
	12		51350		51350	–		20			0,22	500			
	18		51352		51352		51489	26			0,34	100			
6	12	yellow	51356	black	51654	green	51490	20	3,5	6,3	0,28	100	AP 10 156, HHW 10 + HPW 10 157	APW 30 + HHW 30 164, HPW 17 164, APW 35 + HHW 35 + HPW 15 165	
	18		51360		51656		51491	26			0,41	100			
10	12	red	51364	ivory	51660	brown	51492	22	4,5	7,6	0,35	100			
	18		51368		51662		51493	28			0,58	100			
16	12	blue	51372	green	51668	ivory	51494	24	5,8	8,8	0,57	100			
	18		51376		51670		51495	28			0,74	100			
25	16	yellow	51379	brown	51679	black	51496	30	7,3	11,2	0,80	50			
	18		51380		51680		51497	32			0,93	50			
	22		51381		51681		51498	36			1,14	50			
35	16	red	51382	beige	51682			30	8,3	12,7	0,80	50			
	18		51383		–			32			1,04	50			
	25		51384		51684			39			1,38	50			
50	20	blue	51387	oliv	51687			36	10,3	15	2,20	50			
	25		51388		–			40			2,42	50			
70	21			yellow	51689			37	13,5	16	2,94	25			
95	25			red	51691			44	14,5	18	4,23	25			
120	27			blue	51693			48	16,5	20	6,90	25			
150	32			yellow	51695			58	19,5	23	8,89	25			

Insulated twin cord-end-sleeves 2 x 0.5 – 2 x 16 mm²

with rectangular insulation for two conductors

material: Cu according to DIN EN 12449, surface: tin plated, insulation: polypropylen



Small packagings with 100 pcs./bag are available at additional costs!

cross section mm²	length mm (l2)	art.- no.	colour of insulation	dimensions in mm			Cu-weight 1.000 pcs./kg	packing unit (pcs.)	tool recommendation
				l1	d1	d2			
2 x 0,25	8	51220	light blue	15	1,15	1,8/3,4	0,08	500	Werkzeugempfehlung siehe Seite 213
2 x 0,34	8	51222	torquoise	15	1,15	1,8/3,4	0,08	500	
2 x 0,5	8	51390	white	15	1,5	2,5/4,7	0,08	500	
2 x 0,75	8	51392	grey	15	1,8	2,8/5	0,08	500	
	10	51393			17		0,10	500	
2 x 1	8	51394	red	15	2	3,4/5,4	0,09	500	
	10	51395			17		0,12	500	
	18	51224			25		0,24	500	
2 x 1,5	8	51396	black	16	2,3	3,6/6,6	0,17	500	
	12	51397			20		0,23	500	
	18	51226			26		0,28	500	
2 x 2,5	10	51398	blue	18,5	2,9	4,2/7,8	0,22	250	
	13	51216			21,5		0,28	250	
2 x 4	12	51399	grey	23	3,8	4,9/8,8	0,38	100	
2 x 6	14	51400	yellow	26	4,9	6,9/10	0,52	100	
2 x 10	14	51401	red	26	6,5	7,2/13	0,70	100	
2 x 16	14	51228	blue	30	8,3	9,6/18,4	1,04	50	

Insulated cord-end-sleeves with large plastic collar 1.5 – 16 mm²

suitable for all short circuit resistant conductors according to VDE 0250 part 602. NSGAFÖU 1,8 kV/3 kV/6kV

material: Cu according to DIN EN 12449, surface: tin plated, insulation: polypropylen



cross section mm²	length mm (l2)	art.- no.	colour of insulation	dimensions in mm			Cu-weight 1.000 pcs./kg	packing unit (pcs.)	tool recommendation	
				l1	d1	d2				
1,5	8	51510	black	17,5	1,8	7,5	0,08	100	AZ 4 131 AZ 10 132	AZ 8 129, WZ 12 120, AZ 14 132 AZ 42 134
	10	51511		19,5			0,10	100		
2,5	8	51512	blue	17,5	2,3	8	0,09	100		
	12	51513		21,5			0,14	100		
4	10	51514	grey	19,5	2,9	9,5	0,18	100		
6	12	51516	yellow	23	3,6	10	0,28	100		
10	12	51518	red	24	4,6	11,5	0,39	100		
16	12	51520	blue	25,5	6	13,5	0,50	100		

Insulated cord-end-sleeves, for Tri-Rated Cables (Great Britain) 0,5 – 1,5 mm² und 16 mm² suitable for cables with strengthened insulation

material: Cu acc. to DIN EN 12449, surface: tin plated, insulation: polypropylene



cross section mm ²	length mm (l2)	art.- no.	colour of insulation	dimensions in mm			Cu-weight 1.000 pcs./kg	packing unit (pcs.)	tool recommendation
0,5	8	51540	weiß	l1	d1	d2	0,06	500	AZ 10 + AZ 14 132
0,75	8	51542	grau	14	1,3	3,4	0,06	500	
1	8	51544	rot	14	1,5	3,4	0,07	500	
1,5	8	51546	schwarz	14	1,8	3,8	0,09	500	
16	12	51548	blau	23	6	9,5	0,60	100	AZ 42 134

Dispenser boxes with insulated cord-end-sleeves



Assortment 1

quantity	cross section	art.-no.
50 x	0,50 mm ²	51479
100 x	0,75 mm ²	51480
100 x	1,00 mm ²	51482
100 x	1,50 mm ²	51484
50 x	2,50 mm ²	51486
art.-no.		90881

Assortment 2

quantity	cross section	art.-no.
50 x	4 mm ²	51488
20 x	6 mm ²	51490
20 x	10 mm ²	51492
10 x	16 mm ²	51494
art.-no.		90882

Assortment 7 (with twin cord-end-sleeves)

quantity	cross section	art.-no.
65 x	2 x 0,5 mm ²	51390
70 x	2 x 0,75 mm ²	51392
75 x	2 x 1 mm ²	51394
70 x	2 x 1,5 mm ²	51396
45 x	2 x 2,5 mm ²	51398
art.-no.		90887

Assortment 3 (DIN-colours)

Menge	Querschnitt	art.-no.
50 x	0,50 mm ²	51479
100 x	0,75 mm ²	51318
100 x	1,00 mm ²	51482
100 x	1,50 mm ²	51484
50 x	2,50 mm ²	51342
art.-no.		90883

Assortment 4 (DIN-colours)

Menge	Querschnitt	art.-no.
50 x	4 mm ²	51348
20 x	6 mm ²	51356
20 x	10 mm ²	51364
10 x	16 mm ²	51372
art.-no.		90884

dispenser boxes without contents
with 4 compartments

art.-no. 90879

dispenser boxes without contents
with 5 compartments

art.-no. 90880



Dispenser boxes with noninsulated cord-end-sleeves

Assortment 5

quantity	cross section	art.-no.
500 x	0,50 mm ²	51410
500 x	0,75 mm ²	51412
500 x	1,00 mm ²	51414
300 x	1,50 mm ²	51418
200 x	2,50 mm ²	51422
art.-no.		90885

Assortment 6

quantity	cross section	art.-no.
100 x	4 mm ²	51425
100 x	6 mm ²	51428
50 x	10 mm ²	51434
25 x	16 mm ²	51438
art.-no.		90886

Assortment boxes

with insulated cord-end-sleeves DIN 46228 part 4

**special filling
on request**

Assortment box out of vanished steel, with 6 small compartments, 1 tool compartment and an inlay out of foam material. Measurements: 245 x 160 x 45 mm



quantity	art.-no.
1.000 x 0,75 mm ²	51412
1.000 x 1 mm ²	51414
1.000 x 1,5 mm ²	51418
500 x 2,5 mm ²	51422
500 x 4 mm ²	51425
500 x 6 mm ²	51428
1 x crimping tool AZ 6	90806
Assortment box	90863

art.-no.: 90866 like above, but **without** crimping tool
art.-no.: 90824 assortment box **without** content

Assortment box out of vanished steel, with 7 small compartments, 1 tool compartment and an inlay out of foam material. Measurements: 350 x 160 x 35 mm



quantity	art.-no.
1.000 x 0,75 mm ²	51412
1.000 x 1 mm ²	51414
1.000 x 1,5 mm ²	51418
500 x 2,5 mm ²	51422
500 x 4 mm ²	51425
500 x 6 mm ²	51428
200 x 10 mm ²	51434
1 x crimping tool AZ 6	90806
Assortment box	90875

art.-no.: 90878 like above, but **without** crimping tool
art.-no.: 90823 assortment box **without** content

Assortment box out of vanished steel, with 12 small compartments, 1 tool compartment and an inlay out of foam material. Measurements: 350 x 160 x 35 mm



quantity	art.-no.
1.000 x 0,75 mm ²	51412
1.000 x 1 mm ²	51414
500 x 1 mm ²	51415
1.000 x 1,5 mm ²	51418
500 x 1,5 mm ²	51420
800 x 2,5 mm ²	51422
400 x 4 mm ²	51425
200 x 6 mm ²	51428
100 x 10 mm ²	51432
100 x 10 mm ²	51434
100 x 16 mm ²	51436
100 x 16 mm ²	51438
1 x crimping tool AZ 6	90806
Assortment box	90864

art.-no.: 90865 like above, but **without** crimping tool
art.-no.: 90821 assortment box **without** content

Assortment boxes

with insulated cord-end-sleeves DIN 46228 part 4

**special filling
on request**

Assortment box out of vanished steel, with 6 small compartments, 1 tool compartment and an inlay out of foam material. Measurements: 245 x 160 x 45 mm



quantity		art.-no.
300 x	0,75 mm ² , grey	51318
300 x	1 mm ² , red	51482
300 x	1,5 mm ² , black	51484
200 x	2,5 mm ² , blue	51342
200 x	4 mm ² , grey	51348
100 x	6 mm ² , yellow	51356
1 x	crimping tool AZ 6	90806
Assortment box		90869

art.-no.: 90872 like above, but **without** crimping tool
art.-no.: 90824 assortment box **without** content

Assortment box out of vanished steel, with 7 small compartments, 1 tool compartment and an inlay out of foam material. Measurements: 350 x 160 x 35 mm



quantity		art.-no.
300 x	0,75 mm ² , grey	51318
300 x	1 mm ² , red	51482
300 x	1,5 mm ² , black	51484
200 x	2,5 mm ² , blue	51342
200 x	4 mm ² , grey	51348
100 x	6 mm ² , yellow	51356
50 x	10 mm ² , red	51368
1 x	crimping tool AZ 6	90806
Assortment box		90854

art.-no.: 90860 like above, but **without** crimping tool
art.-no.: 90823 assortment box **without** content

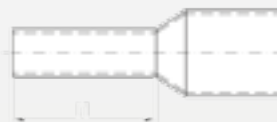
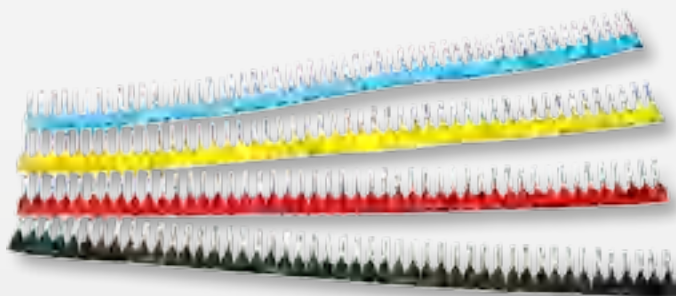
Assortment box out of vanished steel, with 12 small compartments, 1 tool compartment and an inlay out of foam material. Measurements: 350 x 160 x 35 mm



quantity		art.-no.
100 x	0,75 mm ² , grey	51318
100 x	1 mm ² , red	51482
100 x	1,5 mm ² , black	51484
100 x	1,5 mm ² , black	51485
100 x	2,5 mm ² , blue	51342
100 x	2,5 mm ² , blue	51346
100 x	4 mm ² , grey	51348
50 x	6 mm ² , yellow	51356
50 x	10 mm ² , red	51364
50 x	10 mm ² , red	51368
30 x	16 mm ² , blue	51372
50 x	16 mm ² , blue	51376
1 x	crimping tool AZ 6	90806
Assortment box		90873

art.-no.: 90874 like above, but **without** crimping tool
art.-no.: 90821 assortment box **without** content

Insulated cord-end-sleeves 0.5 – 2.5 mm², strip form
material Cu according to DIN EN 12449 insulation: polypropylen
surface: tin plated
strips with 50 pcs.



cross selection mm ²	length mm (l2)	colour of insulation	art.- no.	colour of insulation	art.- no.	colour of insulation	art.- no.	Cu-weight 1.000 pcs./kg	packing unit (pcs.)
0,5	8	white	50011	orange	50111	–	–	0,05	500
0,75	8	grey	50016	white	50116	light blue	50216	0,06	500
1	8	red	50021	yellow	50121	–	–	0,06	500
1,5	8	black	50026	red	50126	–	–	0,08	500
2,5	8	blue	50031	–	–	grey	50231	0,09	500

11



Stripping and crimping tool "Stripax Plus"

art.-no.: 91010

Crimping tool for crimping insulated cord-end-sleeves in strip form with cross section 0.5 - 2.5 mm². With stripping- and cutting unit for wires up to 2.5 mm².

Working principle:

- Put cord-end-sleeves in strip form into upper part of the grip
- Insert the end of the cable into the front of the tool and strip the insulation
- Now put the stripped cable into the crimp opening from the side and press the grips together. A cord-end-sleeve is pressed onto the cable and the next sleeve is transported into its crimping position automatically.



Cable ties, colour nature + black, polyamide

Cable ties, various colours, polyamide

Cable ties, removable, polyamide

Cable ties with inscription area, polyamide

Cable ties with steel tongue, colour nature + black, polyamide

Cable ties out of stainless steel

Cable tie mounts, polyamide

Clips, self adhesive, polyamide

Cable ties

material: polyamide 6.6, **colour nature**

temperature of every-day usage: – 40 °C up to + 85 °C



approvals:

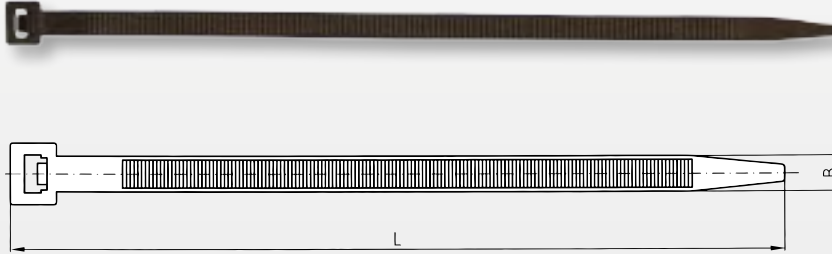


cable ties can be printed with your additional text, see catalogue page 218. Please send us your inquiry.

length mm	width mm	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation	
100	2,5	61051	24	100	100	KB 1 142	KB 3 142
135		61053	35				
200		61057	55				
140	3,5	61059	36	190	100		
200		61062	55				
280		61065	80				
360		61068	103				
160	4,5	61071	38	270	100		
180		61073	45				
200		61075	51				
250		61077	68				
280		61080	76				
360		61083	101				
430		61086	123				
180	7,5	61090	44	630	100		
240		61091	62				
320		61095	88				
360		61098	101				
450		61101	130				
540		61104	160				
750		61106	220				
780	9,0	61110	235	780	100		
500	12,5	61116	140	1170	50		
750		61119	222				
1000		61122	300				

Cable ties

material: polyamide 6.6, colour black, UV-stabilized*
temperature of every-day usage: – 40 °C up to + 85 °C



approvals:



cable ties can be printed with your additional text, see catalogue page 218. Please send us your inquiry.

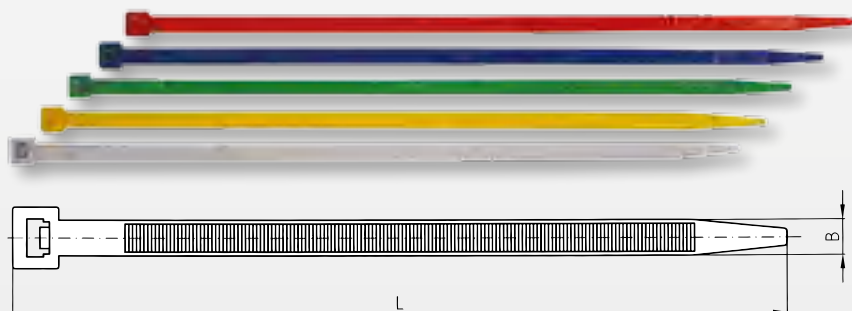
length mm	width mm	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation	
100	2,5	61151	24	100	100	KB 1 142	KB 3 142
135		61153	35				
200		61157	55				
140	3,5	61159	36	190	100		
200		61162	55				
280		61165	80				
360		61168	103				
160	4,5	61171	38	270	100		
180		61173	45				
200		61175	51				
250		61177	68				
280		61180	76				
360		61183	101				
430		61186	123				
180	7,5	61190	44	630	100	KB 1 142	KB 3 142
240		61191	62				
320		61195	88				
360		61198	101				
450		61201	130				
540		61204	160				
750		61206	220				
780	9	61210	235	780	100		
500	12,5	61216	140	1170	50		
750		61219	222				
1000		61222	300				

* 1-2 years outdoor- and weather-resistant

Cable ties

material: polyamide 6.6, **different colours**

temperature of every-day usage: -40 °C up to + 85 °C



cable ties can be printed with your additional text, see catalogue page 218. Please send us your inquiry.

length mm	witdh mm	colour	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation
100	2,5	red	61602	24	100	100	KB 3 142, KB 1 142
		blue	61604				
		green	61606				
		yellow	61608				
		grey	61610				
		black	61151				
		nature	61051				
140	3,5	red	61612	36	190	100	
		blue	61614				
		green	61616				
		yellow	61618				
		green	61620				
		black	61159				
		nature	61059				
200	4,5	red	61622	51	270	100	
		blue	61624				
		green	61626				
		yellow	61628				
		grey	61630				
		black	61175				
		nature	61075				
280	4,5	red	61632	76	270	100	
		blue	61634				
		green	61636				
		yellow	61638				
		green	61640				
		black	61180				
		nature	61080				

Cable ties, releasable

material: polyamide 6.6, **colour: nature + black**

temperature of every-day usage: -15 °C up to + 75 °C



length mm	width mm	colour	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)
200	7,5	nature	61660	50	340	100
		black	61662			
250	7,5	nature	61664	65	340	100
		black	61666			
280	7,5	nature	61668	76	340	100
		black	61670			
360	7,5	nature	61672	100	340	100
		black	61674			

Cable ties with label field

material: polyamide 6.6, **colour: nature**

temperature of every-day usage: -15 °C up to + 75 °C

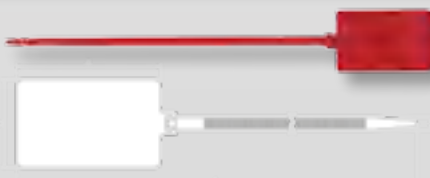
12


length mm	width mm	inscription area (A x C) mm	variant	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation
100	2,5	25 x 8 (cross)	A	61680	25	100	100	KB 1 142
200				61682	50			
200	4,8	13 x 37 (length)	B	61684	50	270	100	KB 1 + KB 3 142
290				61686	90			

Cable ties with large label field

material: polyamide 6.6, **colour: red**

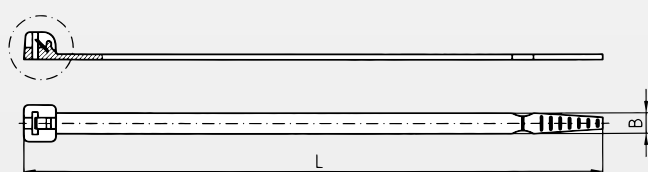
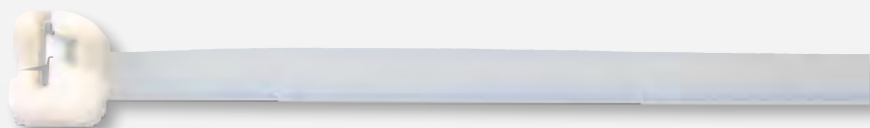
temperature of every-day usage: -15 °C up to + 75 °C



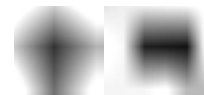
length mm	width mm	inscription area (A x C) mm	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)
363	7,5	51 x 83	61690	70	420	50

Cable ties with steel clip according to DIN EN 50146 version 2000

material: polyamide 6.6, colour nature, steel clip out of stainless steel for high tensile strength
temperature of every-day usage: -40 °C up to +85 °C



approvals:



Cable ties can be printed with your additional text, see catalogue page 213. Please send us your inquiry

length mm	width mm	art.- no.	colour	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation	
100	2,5	61251	nature	24	180	100	KB 1 142	KB 3 142
200		61257		55				
140	3,5	61259		36	280	100		
200		61262		55				
280		61265		80				
186	4,5	61275		51	400	100		
290		61280		76				
360		61283		101				
220	7,5	61291		56	800	50		
360		61298		101				



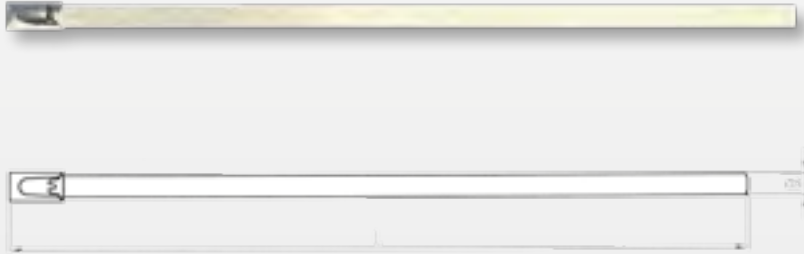
UV-resistant, 1-2 years outdoor- and weather resistant

length mm	width mm	art.- no.	colour	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation	
100	2,5	61351	black	24	180	100	KB 1 142	KB 3 142
200		61357		55				
140	3,5	61359		36	280	100		
200		61362		55				
280		61365		80				
186	4,5	61375		51	400	100		
290		61380		76				
360		61383		101				
220	7,5	61391		56	800	50		
360		61398		101				

Cable ties out of stainless steel

material: stainless steel 316L (thickness: 0,3 mm)

heat resistance: -80 °C up to +538 °C



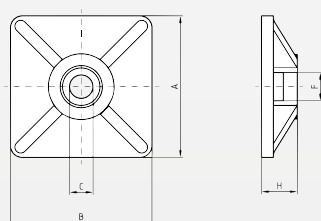
approvals:



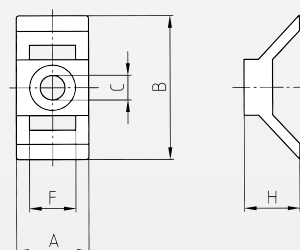
length mm	width mm	art.- no.	max. bundle-Ø mm	tensile strength Newton	packing unit (pcs.)	tool recommendation
152	4,5	61300	25	444	10	KB 7 142
200		61302	50			
360		61304	102			
520	8	61320	152	1111	10	
840		61324	254			
1050		61326	318			
520	12	61330	152	2646	10	
680		61332	203			

Cable tie mounts

material: polyamide 6.6, colour nature



art.-no. 61038 und 61040



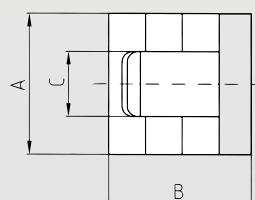
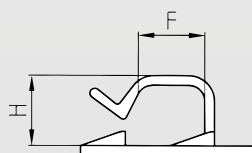
art.-no. 61044

art.-no.	dimensions in mm					packing unit (pcs.)	remarks
	A	B	C	F	H		
61038	19	19	4,8	4	5,3	100	adhesive
61040	26,5	26,5	4,9	5,5	6,7		adhesive
61044	14,7	30	5,2	9,4	11,5		screwable

Cord-clips, self adhesive

applicable for fixing cables, hoses, tubes, etc.

material: polyamide 6.6, colour nature



art.-no.	dimensions in mm					packing unit (pcs.)
	A	B	C	F	H	
61020	19	19	10,1	5,5	5,3	100
61022	26,4	26,7	12,2	11,5	10	
61024	25,7	25,7	16	17,5	15	



Heat shrink tubings in miniboxes
Heat shrink tubings
Assortment boxes

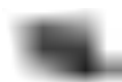
Heat shrink tubings in miniboxes type: W 135 B

material: polyolefin, colour black, shrink ratio 2 : 1

flame-retardant, thin walled



approvals::



size Inches	inside-Ø in mm		art.- no.	wall thickness (mm) after shrinking	packing unit m
	before shrinking	after shrinking			
3/64	1,2	0,6	65047	0,41	15
1/16	1,6	0,8	65050	0,43	15
3/32	2,4	1,2	65053	0,51	15
1/8	3,2	1,6	65056	0,51	15
3/16	4,8	2,4	65059	0,51	10
1/4	6,4	3,2	65062	0,64	10
3/8	9,5	4,8	65065	0,64	10
1/2	12,7	6,4	65068	0,64	5
3/4	19,1	9,6	65071	0,77	5
1	25,4	12,7	65074	0,89	5

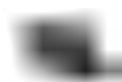
Heat shrink tubings in miniboxes type: W 135 gr/ge B

material: polyolefin, colour green-yellow, shrink ratio 2 : 1

flame-retardant, thin walled



approvals::



size Inches	inside-Ø in mm		art.- no.	wall thickness (mm) after shrinking	packing unit m
	before shrinking	after shrinking			
3/64	1,2	0,6	65447	0,41	15
1/16	1,6	0,8	65450	0,43	15
3/32	2,4	1,2	65453	0,51	15
1/8	3,2	1,6	65456	0,51	15
3/16	4,8	2,4	65459	0,51	10
1/4	6,4	3,2	65462	0,64	10
3/8	9,5	4,8	65465	0,64	10
1/2	12,7	6,4	65468	0,64	5
3/4	19,1	9,6	65471	0,77	5
1	25,4	12,7	65474	0,89	5

Heat shrink tubings type: W 135

material: polyolefin, colour: black, shrink ratio: 2 : 1

flame-retardant, thin walled



approvals::



E 355596

size Inches	inside-Ø in mm		art.- no.	wall thickness (mm) after shrinking	packing unit m
	before shrinking	after shrinking			
1/16	1,6	0,8	65001	0,4	150
3/32	2,4	1,2	65003	0,5	150
1/8	3,2	1,6	65006	0,5	150
3/16	4,8	2,4	65009	0,5	75
1/4	6,4	3,2	65012	0,6	75
3/8	9,5	4,8	65015	0,6	75
1/2	12,7	6,4	65018	0,6	50
3/4	19	9,5	65021	0,8	30
1	25,4	12,7	65024	0,9	30
1 ¼	31,8	15,9	65027	0,9	30
1 ½	38	19	65030	1,0	30

Heat shrink tubings type: W 135 tr

material: polyolefin, colour: transparent, **shrink ratio 2 : 1**
 thin walled



size Inches	inside-Ø in mm		art.- no.	wall thickness (mm)	packing unit m
	before shrinking	after shrinking		after shrinking	
1/16	1,6	0,8	65701	0,4	150
3/32	2,4	1,2	65703	0,5	150
1/8	3,2	1,6	65706	0,5	150
3/16	4,8	2,4	65709	0,5	75
1/4	6,4	3,2	65712	0,6	75
3/8	9,5	4,8	65715	0,6	75
1/2	12,7	6,4	65718	0,6	50
3/4	19	9,5	65721	0,8	30
1	25,4	12,7	65724	0,9	30
1 ¼	31,8	15,9	65727	0,9	30
1 ½	38	19	65730	1	30

Heat shrink tubings type: W 135

material: polyolefin, **colour: black**, **shrink ratio**
 flame retardent, thin walled

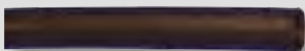


size Inches	inside-Ø in mm		art.- no.	wall thickness (mm)	packing unit m / roll
	before shrinking	after shrinking		after shrinking	
1/8	3,2	1	65106	0,55	150
1/4	6,4	2	65112	0,65	75
3/8	9,5	3	65115	0,75	75
1/2	12,7	4	65118	0,75	50
3/4	19	6	65121	0,85	30
1	25,4	8	65124	1	30
1 ½	39	13	65130	1,15	30

13

Heat shrink tubings type: WKS

material: polyolefin, colour: black, **shrink ratio**
 flame retardent (outer jacket), thin walled, **adhesive-lined**



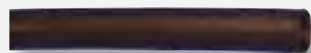
inside-Ø in mm		art.- no.	wall thickness (mm*)	packing unit in length à 1,22 m
before shrinking	after shrinking		after shrinking	
6	2	65212	1,2	1/10
9	3	65215	1,4	1/10
12	4	65218	1,7	1/10
19	6	65221	2,1	1/10
24	8	65224	2,4	1/10
40	13	65227	2,4	1/10

* included adhesive coating

Heat shrink tubings type: WDW

material: polyolefin, colour: black, **shrink ratio: 3 : 1**

thick-walled, not protected against fire, **with inside gluer**



approvals:



* not listed

inside-Ø in mm		art.-no.	wall thickness (mm) after shrinking	packing unit in length à 1,22 m
before shrinking	after shrinking			
13	4,1	65318	2,4	1/75
19,1	6,1	65321	2,4	1/75
27,9	8,9	65324	3	1/75
38,1	11,9	65325	4,1	1/40
50,8	16	65327	4,1	1/25
68,1	22,1	65330	4,1	1/15
89,9	30	65333*	4,1	1/10
119,9	39,9	65336*	4,3	1/5

** included adhesive coating

Heat shrink tubings type: W 135 gr/ye

material: polyolefin, colour: green/yellow, **shrink ratio: 3 : 1**

flame retardent, thin walled



approvals:



size Inches	inside-Ø in mm		art.-no.	wall thickness (mm) after shrinking	packing unit in length à 1,22 m
	before shrinking	after shrinking			
1/8	3,2	1	65406	0,55	1/25
1/4	6,4	2	65412	0,65	1/10
3/8	9,5	3	65415	0,75	1/10
1/2	12,7	4	65418	0,75	1/10
3/4	19	6	65421	0,85	1/10
1	25,4	8	65424	1	1/10

Heat shrink tubings type: W 135 bl

material: polyolefin, colour: blue, **shrink ratio: 3 : 1**

flame retardent, thin walled



approvals:



size Inches	inside-Ø in mm		art.-no.	wall thickness (mm) after shrinking	packing unit in length à 1,22 m
	before shrinking	after shrinking			
1/8	3,2	1	65506	0,55	1/25
1/4	6,4	2	65512	0,65	1/10
3/8	9,5	3	65515	0,75	1/10
1/2	12,7	4	65518	0,75	1/10
3/4	19	6	65521	0,85	1/10
1	25,4	8	65524	1	1/10

Heat shrink tubings type: WHF

material: polyolefin, colour: black, **shrink ratio 2 : 1**

halogen free, protected against fire (low smoke generation at burnings)



approvals:



size Inches	inside-Ø in mm		art.- no.	wall thickness (mm) after shrinking	packing unit m/coil
	before shrinking	after shrinking			
1/8	3,2	1,6	65606	0,51	300
3/16	4,8	2,4	65609	0,51	300
1/4	6,4	3,2	65612	0,64	300
3/8	9,5	4,8	65615	0,64	150
1/2	12,7	6,4	65618	0,64	100
3/4	19	9,5	65621	0,76	50
1	25,4	12,7	65624	0,89	50
1 ½	38	19	65630	1,02	50

Assortment box

Heat shrink tubing set with different coloured lengths, **shrink ratio: 2 : 1**
 flame-retardent, thin walled



assortment box out of high quality plastic, filled with coloured
 heat-shrink tubes of size 1,2/0,6 mm – 12,7/6,4 mm
 colours: black, red, yellow, blue, white.
 Exactly content see following table.

Continuous operating temperature: -55 °C to + 125 °C
 Shrink temperature: 110 °C

approvals:



13

box no.	size Inches	inside-Ø in mm		wall thickness (mm) after shrinking	length mm	quantity pcs.	colours
		before shrinking	after shrinking				
1	3/64	1,2	0,6	0,4	40	each 25	black, yellow, white, red, blue
2	1/16	1,6	0,8	0,4	40	each 25	black, yellow, white, red, blue
3	3/32	2,4	1,2	0,5	40	each 25	black, yellow, white, red, blue
4	1/8	3,2	1,6	0,5	40	each 20	black, yellow, red, blue
5	3/16	4,8	2,4	0,5	40	each 10	black, yellow, red, blue
6	1/4	6,4	3,2	0,6	40	each 5	black, yellow, red, blue
7	3/64	1,2	0,6	0,4	250	5	blue
	1/16	1,6	0,8	0,4	250	5	red
	1/8	3,2	1,6	0,5	250	5	blue
	3/16	4,8	2,4	0,5	250	5	yellow
	1/4	6,4	3,2	0,6	250	5	black
	3/8	9,5	4,8	0,6	250	3	black
8	3/8	9,5	4,8	0,6	125	each 4	yellow, red, blue
9	1/2	12,7	6,4	0,6	125	each 3	yellow, red, blue

Assortment box

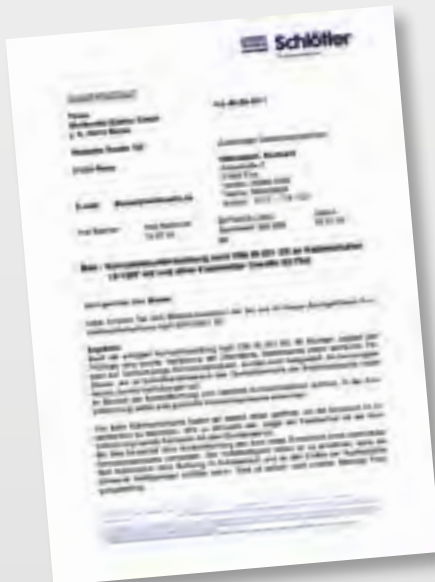
90859

Quality, safety and environmental protection

Quality means for us to produce products that provide the desired functionality of the planned service life accurately and reliably. To meet this requirement, we attach great importance to ensuring that every employee the importance of his contribution to the production of highest quality recognizes and acts accordingly. The measure of our quality formulated solely by the customer.

Safety and environmental protection mean for us to develop processes that minimize health and safety risks to our employees and the environmental impacts at the site. To all products delivered high standards are applied with respect to environmental impact.

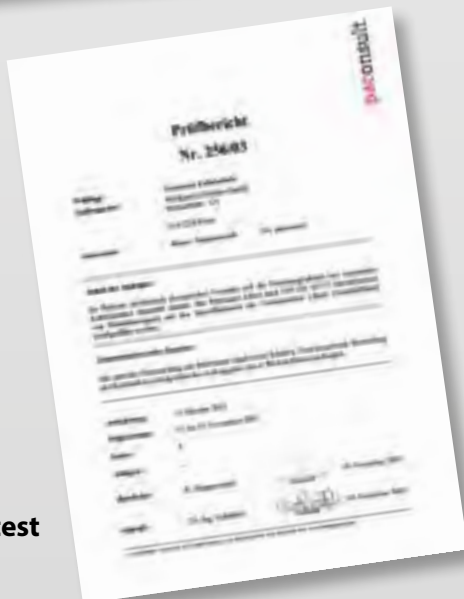
We guarantee quality, safety and environmental protection through preventive measures. The initial outlay for the early appearance of greater quality and safety planning and contraceptive measures, the error is compensated by the continuous improvement of our processes and methods.



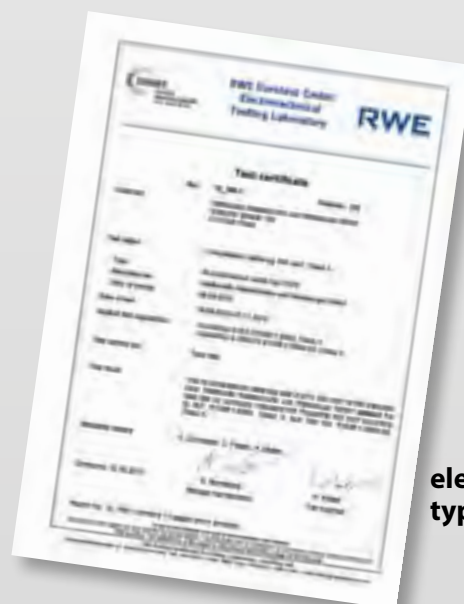
corrosion test



environmental protection



vibration test



electrical type-test



Hand-operated crimping tools

**Pneumatic and electrical
crimping machines**

Pneumatic crimping machine PA 4 without dies



Pneumatic crimping machine with safety control for working without dual safety switch or protection cover.

Maximum operator conveniences with optimal security was the exchallenge for the new development of this pneumatic crimping machine PA 4. The new developed security mechanism gives the crimping about a installes safety valve free. The safety valve opens only when the pressing die are less than 5,9 mm open. Security covers for the protection of the users are not necessary any more. By the use of the safety double foot pedal the productivity is increased and simplifies the handling very much. The hands are free for inserting the contacts and cables. In addition you get an optimal processing result through the parallel die-location. Due to of the integrated LED-lamp is the working-place lighted up very well. (The power-supply for the 12V-lighting is included in the scope of the delivery.) A user-friendly work is possible any time by the ergonomic inclination of 10 degree.

A big choice of crimping dies for small contacts are available. (page 121 - 122)

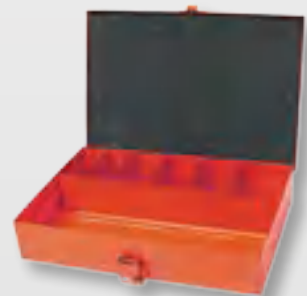
technical data:

air pressure: 6 bar
air consumption per stroke: 2,3 litre
noise: 62 dB(A)
weight incl. foot pedal: 26 kg
measurements: 390 x 175 x 440 mm
CE-approval

art.-no.: 90955
(without dies)

assortment box for keeping
equipment and dies

art.-no.: 90824



System crimping tool WZ 12 without dies



System crimping tool with changeable dies for crimping nearly every common small electric contact

advantages:

- parallel crimping, therefore optimal press quality
- ratchet with release function for reliable crimping
- possibility to adjust the crimping force by a central pin
- 30% reduced hand force due to optimal transmission by toggle transmission
- delivery including plastic case

length: 210 mm
weight: 0,57 kg

art.-no.: 90712 (without dies)

Crimping dies for PA 4 and WZ 12

further dies are available on request!



dies mandrel shape

for crimping noninsulated ring terminals and connectors and WEITKOWITZ cable lugs and connectors of **0.5 to 10 mm²**.
art.-no.: 90772



dies for insulated terminals

for crimping insulated ring- and fork terminals, pin-terminals, connectors, etc. of **0.5 to 6 mm²**, contact and insulation crimping in one step.
art.-no.: 90773

for crimping insulated ring- and fork-terminals and pin-terminals with cross sections of **10 to 16 mm²** (PA 3 16 mm² ring form only)
art.-no.: 90774



dies for heat shrinkable butt splice connectors

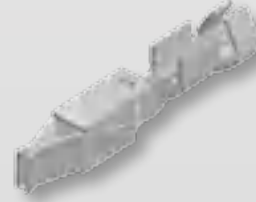
for crimping heat shrinkable butt splice connectors (WEITKOWITZ products) with cross sections of **0.14 to 6 mm²**, catalogue page 75.
art.-no.: 90790



dies for noninsulated open barrel terminals

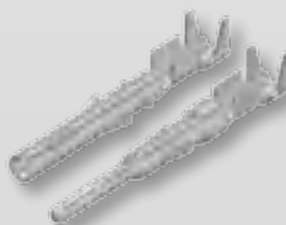
for crimping noninsulated open barrel male and female terminals (rolled version only) with cross sections of **0.1 to 2.5 mm²** and tab width 2.8 and 4.8 mm; contact and insulation crimping in one step.
art.-no.: 90775

for crimping noninsulated open barrel male and female terminals (rolled version only) with cross sections of **0.5 to 6 mm²** and tab width 4.8 and 6.3 mm; contact and insulation crimping in one step
art.-no.: 90776



dies for modular plugs

for crimping modular plugs **0.5 - 2.5 mm²**; contact and insulation crimping in one step.
art.-no.: 90777



dies for rolled contacts

for crimping rolled contacts **0.14 - 1.5 mm²**; contact and insulation crimping in one step.
art.-no.: 90778

Crimping dies for PA 4 and WZ 12

further dies are available on request!



dies for D-sub-connectors

for crimping D-sub-connectors **0.08 - 0.56 mm²**; contact and insulation crimping in one step.

art.-no.: 90779



dies for turned contacts

or crimping turned contacts (multipin plug connections)
plug-in-Ø **1.6 mm, 2.4 mm and 2.5 mm**,
cross section : **0.14 - 4.0 mm²**

art.-no.: 90781

for crimping turned contacts (multipin plug connections)
plug-in-Ø **1.6 mm, 2.4 mm and 2.5 mm**,
cross section: **1.5 - 6.0 mm²**

art.-no.: 90782



dies square-shape

for crimping insulated and noninsulated cord-end-sleeves **0.25 - 6 mm²**,
pressing width 12 mm

art.-no.: 90784

for crimping insulated and noninsulated cord-end-sleeves
10 - 25 mm². pressing width 12 mm

art.-no.: 90785

for crimping insulated and noninsulated cord-end-sleeves
35 - 50 mm². pressing width 12 mm (not suitable for PA 4)

art.-no.: 90786



dies square-shape

for crimping insulated twin-cord-end-sleeves **2 x 6 mm²**
up to **2 x 16 mm²**, pressing width 12 mm.

art.-no.: 90780



dies hexagonal shape

for crimping coax-connectors RG 58, RG 59, RG 62 und RG 71
art.-no.: 90788

for crimping coax-connectors RG 58 und RG 174

art.-no.: 90789

Crimping dies only for WZ 12, for solar connectors
further dies are available on request!

crimping die	contact support	solar contact	description	
			crimping die for solar contacts from Multi-Contact "MC 3"- contacts 2.5 / 4.0 / 6.0 mm ²	
			crimping die	art.-no.: 90783
			contact support	art.-no.: 91797
			contacts 4.0 / 6.0 / 10.0 mm ²	
			crimping die	art.-no.: 91777
			contact support	art.-no.: 91778
			crimping die for solar contacts from die for Multi-Contact "MC 4"- contacts 2.5 / 4.0 / 6.0 mm ²	
			crimping die	art.-no.: 90787
			contact support	art.-no.: 91798
			contacts 4.0 / 6.0 / 10.0 mm ²	
			crimping die	art.-no.: 91779
			contact support	art.-no.: 91799
			crimping die for Amphenol Helios H 4 contacts 2,5 / 4 / 6+10 mm ²	
			crimping die	art.-no.: 91795
			contact support	art.-no.: 91796
			crimping die for solar contacts from Multi-Contact MC 4 - contacts 4.0 mm ² multifunctional use for cutting, stripping and crimping	
			crimping die	art.-no.: 90742
			contact support	art.-no.: 90743
			crimping die for solar contacts from Multi-Contact MC 4 - contacts 6.0 mm ² multifunctional use for cutting, stripping and crimping	
			crimping die	art.-no.: 90744

Crimping tools



15

Crimping tool set WZ 1

art.-no.: 90701

Crimping tool set with changeable dies for crimping all common crimp contacts.

advantages:

- very good cost-performance ratio
- quick and easy change of dies because of quick-locking mechanism
- all components of the set are kept in a high quality transport box with inlay out of foam material

Set consists of:

basic tool:

matt chromium-plated, with releaseable locking device, adjustable crimping pressure, 2-components-handle

length: 250 mm, weight: 0,59 kg

supplied standard crimping dies:



for insulated terminals, connectors and disconnectors, etc. of **0.5 to 6 mm²**

for noninsulated terminals, cable lugs, etc. of **0.5 to 10 mm²**



for cord-end-sleeves of **0.5 to 16 mm²**

for noninsulated male and female disconnectors of **0.5 to 2.5 mm²**, tab width 4.8 mm² + 6.3 mm²



for BNC and TNC coax connectors RG58, RG59, RG62 and RG71 conductors



optional special dies (sold separately):

15



art.-no.: 97188



art.-no.: 97189



art.-no.: 97035



art.-no.: 97036

Dies for cord-end-sleeves

art.-no.: 97188 - with cross sections of 0,25-16 mm²*

art.-no.: 97189 - with cross sections of 25-50 mm²*

Dies for MC3 and MC4 plug (solar field)

art.-no.: 97035- MC3-with cross sections of 4+6 mm²

art.-no.: 97036- MC4-with cross sections of 4+6 mm²

*For thin conductor, pressing contour according to DIN EN 60947-1.

Crimping tools



Crimping tool WZ 35

art.-no.: 91935

Crimping tool to crimp non- and insulated terminals, connectors, insulated disconnectors. The releasable locking device guarantees a permanent high quality crimping result. The contact and insulation crimp are performed in one step. cross section range: **0.1 - 0.5 mm²**

length: 220 mm
weight: 0,510 kg



Crimping tool WZ 36

art.-no.: 91936

Crimping tool to crimp non-insulated terminals, tubular cable lugs and connectors-standard-series, high-grade nickel cable lugs and connectors. The ratchet guarantees a permanent high quality crimping result. cross section range: **0.5 - 16 mm²**

length: 270 mm
weight: 0,565 kg



Crimping tool WZ 21

art.-no.: 90721

Crimping tool for crimping tubular cable lugs and connectors of the euro-series of **0.5 to 6 mm²**.

The ratchet guarantees a permanent high quality crimping result. The parallel crimping motion leads to optimal pressing results

length: 210 mm
weight: 0,61 kg

Crimping tools



Crimping tool WZ 22

art.-no.: 90722

Crimping tool for crimping tubular cable lugs and connectors of the standard-series of **0,5 to 10 mm²**.

The ratchet guarantees a permanent high quality crimping result.

length: 225 mm
weight: 0,52 kg



Crimping tool WZ 20

art.-no.: 90720

Crimping tool for crimping noninsulated terminals of copper: 0.1 to 10 mm².

Nickel: **0,5-2,5 mm²**

The ratchet guarantees a permanent high quality crimping result.

length: 225 mm
weight: 0,51 kg



Special crimping tool series for solid conductors 4, 6, 10 or 16 mm²

Special crimping tool for crimping solid conductors in combination with the following series of cable lugs and connectors. A releaseable ratchet guarantees a permanent high quality crimping result. The extremely small crimping head enables convenient working even in areas difficult to reach.

Crimping shape: special mandrel-shape

length: 275 mm
weight: 0,52 kg

Four different versions are available:

cross section mm ²	die code no.	applicable for series	art.-no.
4	-	standard - serie	99903
6	5	DIN 46235/DIN 46267 part 1	99907
10	6	DIN 46235/DIN 46267 part 1	99904
16	8	DIN 46235/DIN 46267 part 1	99905

Crimping tool



Presszange WZ 37

art.-no.: 91937

Crimping tool to crimp non-insulated open barrel terminals. The ratchet guarantees a permanent high quality crimping result. The contact and insulation crimp are performed in one step. cross section range: 0.5 to 6 mm², tab width: **6.3 and 9.5 mm**

length: 220 mm
weight: 0,480 kg



Presszange WZ 8

art.-no.: 90708

Crimping tool with end-point-locking for crimping noninsulated open barrel terminals with cross sections from **0.5 to 6 mm²** and tab width of 4.8 and 6.3 mm. Contact and insulation crimping are performed in one step. The parallel crimping motion leads to optimal pressing results.

length: 205 mm
weight: 0,6 kg



Crimping tool WZ 10

art.-no.: 90710

Crimping tool with a simple design for crimping insulated terminals, male and female disconnectors, etc. of **0.5 to 6 mm²**. Cable cutter, stripping unit and screw cutter as well as dies for spark-plugs and ignition distributor contacts make these pliers an universal tool.

The WZ 10 is made of high resistance steel with fine grain microstructure. All parts of the tool are case hardened and subsequently tempered.

length: 210 mm
weight: 0,22 kg

Crimping tool



Presszange WZ 9

art.-no.: 90709

Crimping tool with end-point-locking for crimping noninsulated open barrel terminals with cross sections of **0.5 to 6 mm²** and a tab width of 6.3 mm. Contact and insulation crimping are performed in one step. This tool has a cutting and stripping unit for cables up to 6 mm².

length: 210 mm
weight: 0,52 kg



Presszange WZ 24

art.-no.: 90724

Crimping tool with releaseable locking device for crimping insulated terminals, connectors, male and female disconnectors, receptacles and bullet disconnectors of **0.5 to 6 mm²**. Contact and insulation crimping are performed in one step.

The toggle transmission enables an advantageous opening angle and reduced hand forces during crimping.

length: 225 mm
weight: 0,52 kg



Crimping Tool WZ 43

item no. 91943

Crimping tool to crimp insulated terminals, connectors, male und female disconnectors, receptacle and bullet disconnectors. The ratchet guarantees a permanent high quality crimping result. The optimized lever transmission guarantees a power-saving working. cross section range: **0.5 to 6 mm²**

length: 270 mm
weight: 0,565 kg

Crimping tool



Crimping tool WZ 28

art.-no.: 90728

Crimping tool for crimping insulated terminals with cross sections of **10 mm² and 16 mm²** and closed-end-connectors 10 mm². The releaseable locking device guarantees a permanent high quality crimping result.

length: 245 mm
weight: 0,41 kg



Crimping Tool WZ 46

item no.: 91946

Crimping tool to crimping the Weitekowitz insulated flag femal disconnectors. The ratchet guarantees a permanent high quality crimping result. cross section range: **0.5 to 2.5 mm²**, tab width: 6.3 mm

length: 220 mm
weight: 0,510 kg

Special crimping tools for tubular oval-connectors

art.-no.: 99056



Special crimping tool with toggle transmission and releaseable locking device for crimping tubular oval-connectors from **0.5 to 4 mm²**. The parallel crimping and the wave-shaped dies (specially designed for **WEITKOWITZ** oval-connectors) guarantee optimal crimping results (catalogue page 17).

length: 210 mm
weight: 0,62 kg

Crimping tool



Cord-end-sleeve crimping pliers AZ 4

art.-no.: 90804

Crimping pliers for crimping cord-end-sleeves from **0.14 to 2.5 mm²**, square-shaped crimping.

length: 165 mm
weight: 0,2 kg



Cord-end-sleeve crimping pliers AZ 6

art.-no.: 90806

Crimping pliers for crimping cord-end-sleeves from **0.5 to 16 mm²**, in transverse direction notching. Easy handling because of optimal lever transmission.

length: 190 mm
weight: 0,24 kg



Crimping tool AZ 5

art.-no.: 90805

Crimping tool with releasable locking device for crimping cord-end-sleeves of **0.25 – 6 mm²**. Good handiness through the pistol form. Front pressing, very well suitable for house installation and switchgear construction. Steady square contour guarantees good contact surfaces. The maximum crimping length amount to 18 mm. (Of 12 mm you must be pressed twice.)

length: 160 mm
weight: 0,43 kg

Crimping tool



Crimping tool AZ 10

art.-no.: 90810

Crimping tool with releaseable locking device for crimping cord-end-sleeves of **0.14 to 4 mm²**. Cord-end-sleeves are inserted into the universal die and are equally pressed from four sides. This square crimping guarantees optimal contact zones for clamping.

The ergonomically formed, soft cushioned 2-components-handle guarantees a convenient usage.

length: 190 mm

weight: 0,41 kg



Crimping tool AZ 8

art.-no.: 90808

Crimping tool with releaseable locking device for crimping cord-end-sleeves of **0.08 to 16 mm²**. The cord-end-sleeves are inserted into the universal die from the front and are equally pressed from four sides. This results in optimal contact zones for clamping.

The adjustment to the cross section being crimped is performed fully automatically.

length: 190 mm

weight: 0,5 kg



**NEW: now available
for 16 mm²**

Crimping tool AZ 14

art.-no.: 90814

Crimping tool with releaseable locking device for crimping cord-end-sleeves of **0.08 to 16 mm²**. Cord-end-sleeves are inserted into the universal die and are equally pressed from four sides. This square crimping guarantees optimal contact zones for clamping. The ergonomically formed, soft cushioned 2-components-handle guarantees a convenient usage

length: 175 mm

weight: 0,41 kg

Crimping tool



Crimping tool AZ 35

Crimping tool with releaseable locking device for consistently high Crimping quality. intensive round crimping suitable for confined space and thinned conductor terminal. The ergonomically formed and soft-handle.

cross-sections: **0,14-2,5 mm²**
 crimping range: 12 mm

length: 250 mm
 weight: 0,345 kg

art.-no.: 91835



Crimping tool AZ 37

Crimping tool with releaseable locking device for consistently high Crimping quality. intensive round crimping suitable for confined space and thinned conductor terminal. The ergonomically formed and soft-handle.

cross-sections: **1,5-6 mm²**
 crimping range: 12 mm

length: 250 mm
 weight: 0,345 kg

art.-no.: 91837



Crimping tool AZ 39

Crimping tool with releaseable locking device for consistently high Crimping quality. intensive round crimping suitable for confined space and thinned conductor terminal. The ergonomically formed and soft-handle.

cross-sections: **10-16 mm²**
 crimping range: 18 mm

length: 250 mm
 weight: 0,380 kg

art.-no.: 91839

Crimping tool



Innovation

Crimping tool AZ 40

art.-no.: 91840

Crimping tool with releaseable locking device for consistently high Crimping quality. The ergonomically formed, soft cushioned 2-components-handle guarantees a convenient usage. Automatic cross-section adapting crimping tools for cord-end-sleeves. Pivot positions for positioning of smaller cross-sections. cross-sections: **0,08-16 mm²**, crimping range: 18 mm, compression dies: hexagonal-shape

length: 215 mm

weight: 0,5 kg



Crimping tool AZ 42

art.-no.: 91842

Crimping tool with releaseable locking device for consistently high Crimping quality. The ergonomically formed, soft cushioned 2-components-handle guarantees a convenient usage. cross-sections: **0,14-16 mm²**, crimping range: 12 mm

length: 230 mm

weight: 0,485 kg

15

Electric hand crimping tool CRIMMBOSS for crimping cord-end-sleeves



Forceful advantages:

- powerful:**
 - electric drive 220 V (110 V available on request)
- universal:**
 - for crimping insulated cord-end-sleeves **0.5 – 2.5 mm²** without changing dies
 - press length 12 mm
- simple:**
 - automatic release after inserting a cord-end-sleeve
- practical:**
 - easily mounted at nearly any place due to magnet holder
- safe:**
 - safe handling, of course with CE-sign
- good value:**
 - very good cost-performance ratio

Crimmboss
Magnet holder for Crimmboss

art.-no.: 90755
art.-no.: 90756



Stripping tools | Assortments
Cable tie tools
Cable cutters

Stripping tools



Stripax-automatic wire stripping tool AB 13

art.-no.: 90713

Stripping tool with automatic insulation slip off. For wires from **0.08 to 10 mm²**. The elastically mounted, lamellated wire stripper adjusts automatically to the respective conductor cross section. The AB 13 is equipped with a touch protected wire cutter for finewiring copper cables up to 6 mm² and a stop in order to adjust easily the insulation length to be stripped off.

length: 190 mm weight: 0,17 kg

Replacemant stripping-unit for AB 13 art.-no.: 91924



Automatic wire stripping tool AB 22

art.-no.: 91922

Stripping tool with automatic insulation slip off. Cross section: **0.25 to 6 mm²**.

The cable cannot damage the conductors due to a special knife design. The tool has an adjustable length stop and a two-stage part stripping

length: 190 mm weight: 0,17 kg

Replacement stripping unit to AB 22 art.-no.: 91923



Automatic wire stripping tool AB 15

art.-no.: 90715

Stripping tool with automatic insulation slip off. For wires from **0.03 bis 10 mm²**. The tool does automatically adjust to wire size and insulation for optimal stripping. Applicable for single or multiwire PVC- and a large variety of Teflon[®]-, Radox[®]- or rubber-insulated cables. With build-in wire cutter for Cu and Al multi-wire cables up to 10 mm² and single wire cables up to 6 mm². The blade and length stop are easy to replace. The tool body is made of glass fibre reinforced plastic. The ergonomically formed, soft cushioned 2-components-handle guarantees a convenient usage.

length: 195 mm weight: 0,15 kg

Replacemant stripping-unit for AB 15 art.-no.: 90798



Automatic wire stripping tool AB 19

art.-no.: 90719

Stripping tool with automatic insulation slip off. For wires from **0.08 to 6 mm²**. The elastically mounted, lamellated wire stripper adjusts automatically to the respective conductor cross section. The blades consist of metal completely. The AB 19 is equipped with a touch protected wire cutter for finewiring copper cables up to 4 mm² and a stop in order to adjust easily the insulation length to be stripped off. The ergonomic handgrip make this tool convenient to use even for people with small hands.

length: 180 mm weight: 0,18 kg

Replacemant stripping-unit for AB 19 art.-no.: 90794

Stripping tools



Automatic wire stripping tool AB 20

art.-no.: 91920

Stripping tool with automatic insulation slip off. Cross section: **6 to 16 mm²**.

The tool has a V-shape and can use for stripping flexible and solid conductors. The tool has an adjustable length stop and a two-stage part stripping.

length: 190 mm weight: 0,17 kg

Replacemant stripping-unit for AB 20 art.-no.: 91921



Wire stripping tool for solar cable AB 2

art.-no.: 90702

Special insulation stripping tool with length stop for high quality stripping and dismantling of solar-cable **1.5 to 6 mm²**. No pinching or deforming of cable ends by special cutting mode.

Model: chrome plated, with ergonomically designed two-components handles.

length: 200 mm weight: 0,46 kg

Replacemant stripping-unit for AB 2 art.-no.: 90797



Round cable stripper no. 13

art.-no.: 90812

For round and continental type cables of 8 - 13 mm outside-Ø (NYM 3 x 1.5 mm² to 5 x 2.5 mm²). Flush stripping even in areas hard to reach. No damages of the inner conductors. An adjustment of the cutting depth is not necessary

length: 120 mm weight: 0,1 kg



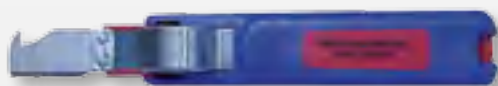
Coaxial cable stripper no. 2

art.-no.: 90813

Two- or three-level stripping of all common coaxial cables (e.g. antenna and transmission cables) from 4.8 to 7.5 mm outside-Ø. An adjustment of cutting depth is not necessary.

length: 110 mm weight: 0,1 kg

Skinning tools and cable cutters



Swivel-blade cable strippers with knife

art.-no.: 90818

Cable stripper for accurate, fast and safe stripping of all common round cables from 4 to 28 mm outside-Ø. No damages of the inner conductors due to variable adjustment of the cutting depth.

length: 175 mm weight: 0,1 kg

Replacement cutting blade for cable stripper art.-no.: 90826



Skinning tool AM 2

art.-no.: 90816

Skinning tool for round cables from 4.5 to 40 mm Ø and a max. insulation strength of 4.5 mm. Because of defined locking positions it is possible to perform circle, longitudinal and spiral cuttings. Two interchangeable cable hooks (small hook for 4.5 - 25 mm Ø and big hook for 20 - 40 mm Ø) make the AM2 an universal skinning tool.

It is an extremely ergonomic tool and consists of a modern, high-resistant plastic material. Replacement cutting blades are available and can be stored inside the tool.

length: 115 mm weight: 0,17 kg

Replacement cutting blade for AM 2 art.-no.: 90793



Cable stripping knife KM 1

art.-no.: 91811

cable stripping knife with special grinding. The special blade prevented a damage of the conductor. The knife has blade protection, sinking into the handle. The changeable blade is made of stainless steel according to DIN EN 10020, hardness minimum 50 HRC. The high-quality, ergonomically formed handle is out of impact plastic (PA). With admission of the VDE up to 1000 volt according to EN/IEC 60900:2004 and GS-sign.

length: 200 mm weight: 0,06 kg

spare blade with moulded plastic insert for KM 1

art.-no.: 91891



Cable stripping knife KM 3

art.-no.: 91813

cable stripping knife with changeable and customary trapeze blade. The knife has blade protection. The protection is sinkable into the handle. The high-quality, ergonomically formed handle is out of impact resistant plastic (PA). With admission of the VDE up to 1000 volt according to EN/IEC 60900:2004 and GS-sign.

length: 200 mm weight: 0,1 kg

spare trapeze blade for KM 3 art.-no.: 91893



Skinning tools



Skinning tool AM 1

art.-no.: 90815

Skinning tool for round cables from 25 mm Ø on, suitable for longitudinal and round section. The depth of the cut is adjustable from 0 to 5 mm. The cutting blade can be used double-sided. Delivery including plastic box.

length: 50 mm weight: 0,16 kg

Replacement cutting blade for AM 1 art.-no.: 90791



Outside cleading cutter AMX

art.-no.: 91821

The outside cleading cutter with rapid clamping system can be used to strip the outer sheath from NS and MS conductors with an outside diameter of 16 up to 54 mm.

A switch lever between longitudinal section and round cut as well as an additional claw for breaking the insulation are available. The positioning on the cable is made by a clamping system. The cut depth is adjustable from 0 – 5 mm in steps of 0.1 mm. The feed rate is made by a ratchet wrench. The maximum rotation diameter is 300 mm. The components are produced from aluminum and stainless steel. The moldings are made of impact-resistant plastic material. The blades are from alloyed steel according to EN 10020 with a hardness of least 50 HRC.

weight: 1.32 kg

delivery completely with AMX-device, ratchet wrench and nylon case.

Spare blade with screw and hex-wrench for AMX

art.-no. 91881



Cable stripper for vulcanized semi conductive layer FBS

art.-no. 91822

The device is for stripping the vulcanized semi conductive layer of NS and MS conductors. The maximum layer thickness is 1.5 mm. The stripper can be used for insulation diameter of 10 up to 52 mm. The positioning on the cable is made by a clamping system. The stripping process can be started and stopped in every position of the cable. A switch lever to activate/inactivate the axial traverse speed is available. The device has optimum gliding properties through coated contact surfaces. The maximum rotation diameter is 200 mm. The components are made of aluminium, steel and brass, with anodized, chromium-plated and nickel-plated surfaces. The form parts are of impact resistant plastic. The blades are from alloyed steel according to EN 10020 with a hardness of least 55 HRC.

length: 170 mm weight: 0.79 kg

delivery completely with FBS-device, silicone paste, allen wrench 2.5 mm, plastic case

spare blade 17° for FBS spare tube

art.-no. 91882

silicone paste 100 ml

art.-no. 91899

Skinning tools



Inside cleading cutter (universal) IMS II

art.-no. 91823

The inside cleading cutter IMS II can be used for stripping-off the primary insulation on the ends of medium voltage conductors of 6 up to 45 kV with outside diameters of 15 up to 52 mm and a maximum insulation thickness of 15 mm. The positioning on the cable is made by a clamping system. Spiral and circle cuts are possible. The cut depth is adjustable of 0 up to 15 mm and the feed rate is selectable in 5 steps. The stripping can be stopped in every position of the cable. The stripping length is unlimited. The device has optimum gliding properties through coated contact surfaces. The maximum rotation diameter is 220 mm.

The components are made of aluminium, steel and brass, with anodized, chromium-plated and nickel-plated surfaces. The blades are from alloyed steel according to EN 10020 with a hardness of least 55 HRC.

length: 170 mm weight: 1.0 kg

delivery completely with IMS II device, silicone paste, allen wrench 2.5mm, plastic case,

spare blade for IMS II spare tube

art.-no. 91883

silicone paste 100 ml

art.-no. 91899



Chamfer cutter UFS

art.-no. 91824

The chamfer cutter UFS is for chamfering the primary insulation of medium voltage conductors with outside diameter from 15 up to 60 mm.

The positioning on the cable is made by a clamping system. The device has PTFE-plates for optional gliding properties on the cable. A silicone paste is not necessary. Size of the chamfer: 2 mm x 60°. The maximum rotation diameter is 220 mm. The device is light and has a robust construction form. The components are made of aluminium and steel. The blades are from alloyed steel according to EN 10020 with a hardness of least 55 HRC.

length: 145 mm weight: 0.39 kg

delivery completely with UFS device, allen wrench 2.5mm, nylon case
spare blade for UFS
art.-no. 91884

Assortement case – Skinning tools



Assortement case with skinning tools art.-no.: 97040

delivery completely with:

Skinning tool AM 1 art.-no.: 90815

Outside cleading cutter AMX art.-no.: 91821

Cable stripper for vulcanized semi conductive layer FBS art.-no.: 91822

Inside cleading cutter (universal) IMS II art.-no.: 91823

Chamfer cutter UFS art.-no.: 91824

For detailed description see previous pages.

Cable tie tools



Cable tie tension tool for plastic-cable ties KB 1

art.-no.: 90888

For tensioning and cutting plastic cable ties in one step. The tractive force is steplessly adjustable. By cutting of the cable tie aligned with the clasp, sharp edges are avoided. Applicable for cable ties up to 4.8 mm width.

length: 165 mm
weight: 0,3 kg



Cable tie tension tool for plastic-cable ties KB 3

art.-no.: 90895

For tensioning and cutting plastic cable ties up to 9.5 mm width and a maximum strength of 2.3 mm. Handy, robust tool.

length: 190 mm
weight: 0,25 kg



Cable tie tension tool for cable ties out of stainless steel KB 7

art.-no.: 90897

For tensioning and cutting cable ties out of stainless steel in one step. The tractive force is steplessly adjustable. Applicable for cable ties up to 8 mm width and maximum strength of 0.3 mm.

length: 180 mm
weight: 0,55 kg



Cable pliers for stainless steel cable ties

art.-no.: 90899

For tightening and cutting stainless steel cable ties. Robust and handy tool, suitable for stainless steel cable ties up to max. 12 mm width and 0.6 mm thickness, also suitable for nylon-coated stainless steel cable ties.

length: 210 mm
weight: 0,57 kg



Cable cutters

Cable Cutter



Cable cutter scissor KS 1

art.-no.: 91831

cutting area:

straight blade area 0.5 - 6 mm²
integrated cable cutter up to 50 mm²

- ergonomical and extremely robust
- high cutting performance
- loose-free screw/pin fixing
- 2-component-handles
- with special safety box

scope of delivery: cable cutter scissor KS 1, safety box

length: 150 mm

weight: 0,17 kg



Cable cutter KS 35

art.-no.: 90842

High quality forged cable cutter for cutting stranded aluminium and copper cables up to 35 mm², resp. up to 11 mm outsideØ.

Long life cycle, low efforts during cutting and a clean, round cut make the KS 35 a convenient tool.

length: 165 mm

weight: 0,2 kg

Cable cutter KS 50

art.-no.: 90829

High quality forged cable cutter for cutting stranded aluminium and copper cables up to 50 mm², resp. up to 15 mm outside-Ø.

Long life cycle, low efforts during cutting and a clean, round cut make the KS 50 a convenient tool.

length: 215 mm

weight: 0,3 kg



Cable Cutter



Cable cutter KS 30

art.-no.: 90833

Cable cutter for cutting stranded aluminium and copper cables up to 30 mm outside-Ø. Cutting area for copper cables for example:

- finewiring cables up to 1 x 240 mm²
- stranded cables up to 1 x 70 mm²
- PVC insulated power cable NYY up to 4 x 25 mm²

The cutting blades consist of a hardened special tool steel.
Not applicable for cutting **steel-wires**, cables with **steel-insertion** and **solid conductors**.

length: 440 mm
weight: 1,29 kg



Cable cutter KS 32

art.-no.: 90835

Cable cutter for cutting stranded aluminium and copper cables up to 32 mm outside-Ø. Cutting area for copper cables for example:

- finewiring cables up to 1 x 300 mm²
- stranded cables up to 1 x 150 mm²
- PVC insulated power cable NYY up to 4 x 50 mm²

The cutting blades consist of a hardened special tool steel.

Not applicable for cutting steel-wires, cables with steel-insertion and solid conductors.

length: 600 mm
weight: 1,5 kg



Cable cutter KS 42

art.-no.: 90834

Cable cutter for cutting stranded aluminium and copper cables up to 42 mm outside-Ø. Cutting area for copper cables for example:

- finewiring cables up to 1 x 500 mm²
- stranded cables up to 1 x 300 mm²
- PVC insulated power cable NYY up to 4 x 70 mm²

The cutting blades consist of a hardened special tool steel.

Not applicable for cutting **steel-wires**, cables with **steel-insertion** and **solid conductors**.

length: 800 mm
weight: 3,3 kg

Cable Cutter



Cable Cutter KS 32R

art.-no.: 90908

One hand Control cable cutter for cutting stranded aluminium and copper cables and finewiring conductors up to 32 mm outside-diameter. Not applicable for cutting steel-wires, cables with steel-insertion and solid conductors.

Unlocking possible in any position

length: 250 mm

weight: 0,6 kg



Cable Cutter KS 54R

art.-no.: 90914

Very robust and smooth running cable cutter for cutting stranded aluminium and copper cables and finewiring conductors up to 54 mm outside-diameter. Not applicable for cutting steel-wires, cables with steel-insertion and solid conductors.

Unlocking possible in any position.

length: 300 mm

weight: 1,0 kg

Cable Cutter



Cable cutter KS 34 S

art.-no.: 90910

Very robust and smooth running cable cutter for cutting stranded aluminium and copper cables up to 4 x 70 approx. 1 x 185 mm² and finewiring conductors up to 34 mm outside-diameter. The double needle beared and patented excentric dive compined with a special blade design guarantees the excellent efficiency of this cable cutter.

Not applicable for cutting steel-wires, cables with steel-insertion and solid conductors.

length: 250 mm

weight: 0,94 kg



Cable cutter KS 52 S

art.-no.: 90913

Very robust and smooth running cable cutter for cutting stranded aluminium and copper cables up to 4 x 120 approx. 1 x 300 mm² and finewiring conductors up to 52 mm outside-diameter. The double needle beared and patented excentric dive compined with a special blade design guarantees the excellent efficiency of this cable cutter.

Not applicable for cutting **steel-wires**, cables with **steel-insertion** and **solid conductors**.

length: 325 mm

weight: 1,2 kg

Cable Cutter



Cable cutter KS 60

art.-no.: 90916

Very stable and smooth hand-operated cable cutter for cutting stranded aluminium and copper cables with a coat of hard rubber or plastic up to 60 mm outside-Ø, e.g. 4 x 240 mm² NAYY. No squeezing, no deformation of the conductor, easy clean cut due to ratchet gearing. It is possible to open the cutter in any cutting position. The cutting blades consist of a hardened special tool steel. With telescopic arms anodized aluminum tube and 2-component handles.

Not applicable for cutting steel-wires, cables with steel-insertion and solid conductors.

length: 610 bis 810 mm
weight: 3,85 kg



Cable cutter KS 100

art.-no.: 90919

Very stable and smooth hand-operated cable cutter for cutting stranded aluminium and copper cables with a coat of hard rubber or plastic up to 100 mm outside-Ø, e.g. 4 x 400 mm² NAYY.

No squeezing, no deformation of the conductor, easy clean cut due to ratchet gearing. It is possible to open the cutter in any cutting position. The cutting blades consist of a hardened special tool steel. With telescopic arms anodized aluminum tube and 2-component handles.

Not applicable for cutting steel-wires, cables with steel-insertion and solid conductors.

length: 660 bis 860 mm
weight: 4,98 kg



Mechanical crimping tools
Hydraulic crimping tools

Crimping tools



Crimping tool PW 6/50

art.-no.: 90180

Crimping tool for crimping **WEITKOWITZ** tubular cable lugs and connectors of the standard-series (catalogue page 8 - 18).

application range: 6 - 50 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight and an extremely high crimping quality due to WM-crimping.

length: 380 mm
weight: 1,50 kg



Presszange WW 6/50

art.-no.: 90179

Crimping tool for crimping tubular cable lugs and connectors of the euro-series (catalogue page 28 - 37).

application range: 6 - 50 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight and an extremely high crimping quality due to WM-crimping.

length: 380 mm
weight: 1,49 kg



Crimping tool DW 6/50

art.-no.: 90178

Crimping tool for crimping compression cable lugs DIN 46235, compression connectors DIN 46267, aluminium cable lugs and connectors (catalogue page 46 - 64).

application range: Cu 6 - 50 mm² (K 5 - K 14)
Alu 16 - 35 mm² (K 10 - K 14)

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight and an extremely high crimping quality due to hexagonal-shape-crimping.

length: 380 mm
weight: 1,44 kg

Crimping tools



Crimping tool PW 6/70

art.-no.: 90181

Crimping tool for crimping **WEITKOWITZ** tubular cable lugs and connectors of the standard-series (catalogue page 8 - 18).
 application range: 6 - 70 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight, optimized transmission ratio and an extremely high crimping quality due to precisely guided dies.

crimping profile: WM-crimping

length: 515 mm, weight: 2,02 kg



Crimping tool WW 6/70

art.-no.: 90186

Crimping tool for crimping tubular cable lugs and connectors of the euro-series (catalogue page 34 - 43).

application range: 6 bis 70 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight, optimized transmission ratio and an extremely high crimping quality due to precisely guided dies.

crimping profile: WM-crimping

length: 515 mm, weight: 2 kg



Crimping tool FW 10/70

art.-no.: 90184

Crimping tool for crimping **WEITKOWITZ** tubular cable lugs and connectors for finewiring conductors (catalogue page 26 - 32).

application range: 10 bis 70 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight, optimized transmission ratio and an extremely high crimping quality due to precisely guided dies.

crimping profile: WM-crimping

length: 515 mm, weight: 2,21 kg



Crimping tool DW 6/70

art.-no.: 90182

Crimping tool for crimping compression cable lugs DIN 46235, compression connectors DIN 46267, aluminium cable lugs and connectors (catalogue page 46 - 64).

application range:

Cu von 6 - 70 mm² (K 5 - K 16), Alu von 10 - 50 mm² (K 10 - K 16)

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight, optimized transmission ratio and an extremely high crimping quality due to precisely guided dies.

crimping profile: hexagonal-shape with control embossing

length: 515 mm, weight: 2,04 kg

Crimping tools



Crimping tool PW 10/120

art.-no.: 90185

Crimping tool for crimping **WEITKOWITZ** tubular cable lugs and connectors of the standard-series (catalogue page 8 - 18).

application range: 10 bis 120 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight and an extremely high crimping quality due to WM-crimping.

length: 660 mm
weight: 4,1 kg



Crimping tool WW 10/120

art.-no.: 90188

Crimping tool for crimping tubular cable lugs and connectors of the euro-series (catalogue page 34 - 43).

application range: 10 bis 120 mm²

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies. Furthermore this tool points by small measurements, light weight and an extremely high crimping quality due to WM-crimping.

length: 660 mm
weight: 4,1 kg



Crimping tool DW 10/120

art.-no.: 90189

Crimping tool for crimping compression cable lugs DIN 46235, compression connectors DIN 46267, aluminium cable lugs and connectors (catalogue page 46 - 64).

application range:
Cu von 10 - 120 mm² (K 6 - K 20)
Alu von 10 - 70 mm² (K 10 - K 18)

The cross section can be adjusted by turning the in-built revolving dies. So there is no need of changing dies.

crimping shape: hexagonal-shape with control embossing

length: 660 mm
weight: 4,1 kg

Crimping tools



Crimping tool DP 6/95

art.-no.: 90131

Crimping tool for crimping **WEITKOWITZ** tubular cable lugs and connectors of the standard- and euro-series, for crimping terminals DIN 46 234, pin terminals DIN 46 230 and connectors DIN 46351 with cross sections from 6 mm² to 95 mm².

- with two threads for mounting on a workbench
- easy adjustment of cross section by an adjustable, self-lockinggearing.

So there is no need of changing dies

- with telescopic tubes
- with locking device, the tool opens not until a started crimping process has been finished

length: 535 mm bis 730 mm

weight: 3,5 kg

STILO1 – hydraulic battery tool 45kN

Battery-powered hydraulic compression hand-crimping tool for crimp cable lugs and connectors up to 150 mm².

Characteristics

- extremely quick processing due to a three-stage axial piston pump
- wide application range up to 150 mm²
- 270° revolving head with quick opening and closing
- automatic pressure limits and monitoring through pressure sensor
- engine shutdown and automatic retract after completed pressing
- manual retract with button
- save of all crimps and error messages on internal memory
- selections of all cycles and error messages about USB interface
- no uncompleted pressing cycles through ongoing monitoring of the rest battery cargo load
- controlled engine drive to the life extension of gearbox, engine and battery
- integrated service management and software updates about the USB interface
- fast tool return pipe through high return flow volume
- sleep-mode; maintenance indication and battery control
- integrated, intelligent electronics assembly with multifunctional LED
- mini-USB interface for all standard computer systems for:
- Li-Ion battery with charge level indicator: 18 V 1.5 Ah
- measurements: 370 x 123 x 80 mm
- max. piston stroke: 16 mm; press capacity: 45 kN
- weight incl. battery: 2.3 kg



range of application	cross section mm ²
Dies, WM-shape for standard-series	10 – 150
Dies, WM-shape for cable lugs and connectors, flexible copper cables	10f – 120f
Dies, WM-shape for euro-series	6 – 150
Dies, hexagonal-shape for compression cable lugs (DIN 46235) + connectors (DIN 46267)	6 – 150 (K5-K22)
Dies, hexagonal-shape for Aluminium cable lugs and connectors	10 – 120 (K6-K22)
Dies, mandrel-shape for crimping non insulated terminals DIN 46234	6 – 50
Dies, for crimping insulated terminals	10 – 50
Dies square-shape for crimping cord-end-sleeves	6 – 70
Dies for rounding sector-shaped copper and aluminium conductors	10 – 150

delivery completely:

- hydraulic tool including 1x battery and 1x battery charger
- manual
- software
- USB connection cable
- carrying bag without dies

art.-no.	description
91100	hydraulic tool STILO 1
91101	Replacement



Dies for hydraulic battery tool STILO1

Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors of the standard-series

Not suitable for cable lugs from other manufacturers!



art.-no.	mm ²
90301	10/70
90302	16/35
90303	25/50
90304	95
90305	120
90306	150

Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for **Siemens Norm SN 71322** for finewiring conductors.



art.-no.	mm ²	art.-no.	mm ²
91431	10Sf / 25Sf	91434	70Sf
91432	16Sf / 35Sf	91435	95Sf
91433	50Sf	91436	120Sf

Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for **finewiring conductors**.

Not suitable for cable lugs of other manufacturers!



art.-no.	mm ²
90331	10f/25f
90332	16f/35f
90333	50f
90334	70f
90335	95f
90336	120f

Dies WM-shape

for crimping cable lugs and connectors of the euro-series



art.-no.	mm ²
90430	6
90390	10/70
90398	16/35
90393	25/50
90394	95
90305	120
90306	150

Dies hexagonal-shape

for crimping compression copper cable lugs DIN 46 235, compression copper connectors DIN 46 267 part 1 and compression aluminium and aluminium/cu copper cable lugs and connectors



art.-no.	die code	Cu	mm ²	Al
90310	5	6	–	–
90311	6/16	10/70	–/50	–
90312	8/12	16/35	–/16+25	–
90313	10/14	25/50	10/35	–
90314	18	95	70	–
90315	20	120	–	–
90316	22	150	–	–
90318	22	–	120	–
90319	22	–	95	–

Dies mandrel-shape

for crimping noninsulated terminals DIN 46 234, pin terminals DIN 46 230, and connectors DIN 46 341 part 1



art.-no.	mm ²
90491	6
90492	10
90493	16
90494	25
90495	35
90496	50

Dies

for crimping insulated terminals



art.-no.	mm ²
90320	10
90321	16
90322	25
90323	35
99696	50

Dies square-shape

for crimping cord-end-sleeves
crimping width: 19 mm



art.-no.	mm ²
90324	6
90325	10
90326	16
90327	25
90328	35
90329	50
90330	70

Dies for round forming

for rounding sector-shaped copper and aluminium conductors
crimping width: 12 mm

sm = stranded conductors
se = solid conductors



art.-no.	mm ² sm	mm ² se
90371	10	–
90372	16	–
90373	25	35
90374	35	50
90375	50	70
90376	70	95
90377	95	120
90378	120	150
90379	150	185

Dies for crimping oval-connectors

crimping profile: wave-shape crimping



art.-no.	mm ²	art.-no.	mm ²
99754	6	99755	10

Battery-powered compression tool AP 10 without dies



Battery-powered hydraulic compression tool for crimping cable lugs and connectors up to 240 mm²

art.-no.: 91120

product characteristics:

- 3 years of warranty or 20.000 work cycles
- high speed feed with double hydraulic cylinder
- ergonomic grip for weight balance and easy and safe operation
- plastic housing, grip and pressure release button, insulation and shock resistant
- powerful lithium-ion battery 18V
- fastening ring shoulder strap
- powerful LED for working space illumination

technical data:

application area	6 to 240 mm ²
press capacity	60 kN
head rotation	360°
head opening	17 mm
battery voltage.....	18 V
total weight (incl. battery).....	approx. 3.6 kg
dimensions	330 x 331 x 75 mm

Set Equipment: manual, test report, battery-operated tool, battery 18V/3.0, battery-charger, shoulder strap, rigid plastic case for tool and maximum 18 crimping dies

Hand-operated hydraulic compression tool HHW 10 without dies



Hand-operated hydraulic compression tool for crimping cable lugs and connectors up to 240 mm².

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- extremely light, handy and compact construction form
- 180° revolving head with quick opening and closing
- integrated pressure relief valve, false pressings cause no damage at tool nor dies
- universal usage: dies for all versions of cable lugs are available
- delivery completely transport plastic case (without dies)

technical data:

press capacity:approx. 55 kN
length400 mm
weight.....2,5 kg

art.-no.: 91111

Hydraulic compression head HPW 10 without dies



Hydraulic compression head for crimping cable lugs and connectors up to 240 mm².

advantages:

- light, handy, compact construction
- wide application range
- hinged head, therefore quick insertion and removal of cable lugs and connectors
- quick connection via plug-in coupling free of leakage
- you can use all dies from our tools AP 10 and HPI 10
- delivery in a high-quality nylon case

technical data:

hydraulic pressure max. 700 bar (70 MPa)
press capacityca. 60 kN
length204 mm
weight.....1,60 kg

art.-no.: 90653

Compression dies for AP 10, HHW 10 and HPW 10



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors of the **standard-series** (page 8 - 18).
Not suitable for cable lugs from other manufacturers!

mm ²	art.-no.	mm ²	art.-no.
10/70	91302	120	91306
16/35	91303	150	91307
25/50	91304	185	91308
95	91305	240	91309



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for **Siemens Norm SN 71322 for finewiring conductors** (page 20-24)

mm ²	art.-no.	mm ²	art.-no.
10Sf / 25Sf	91441	95Sf	91445
16Sf / 35Sf	91442	120Sf	91446
50Sf	91443	150Sf	91447
70Sf	91444	185Sf	91448



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for **finewiring conductors** (page 26 - 32)
Not suitable for cable lugs from other manufacturers

mm ²	art.-no.	mm ²	art.-no.
10f/25f	91330	95f	91334
16f/35f	91331	120f	91335
50f	91332	150f	91336
70f	91333	185f	91337



Dies WM-shape

for crimping cable lugs and connectors of the **euro-series** (page 34 bis 43).

mm ²	art.-no.	mm ²	art.-no.
6	91315	120	91306
10/70	91316	150	91307
16/35	91317	185	91308
25/50	91318	240	91309
95	91319		



Dies hexagonal-shape

for crimping compression copper cable lugs DIN 46 235, compression copper connectors DIN 46 267 part 1 and compression aluminium and aluminium/copper cable lugs and connectors (page 46 bis 64).

die code	Cu mm ²	Al mm ²	art.-no.
5	6	-	91343
6/16	10/70	-/50	91344
8/12	16/35	-/10+25	91345
10/14	25/50	16/35	91346
18	95	70	91347
20	120	-	91348
22	150	95 + 120	91349
25	185	150	91350



Dies mandrel-shape

for stainless steel cable lugs (page 68)

mm ²	for use*	art.-no.
1,5 - 2,5	VA / Cu	91480
4-6	VA / Cu	91481
10	VA / Cu	91482
16	VA / Cu	91483
25	VA / Cu	91484
35	VA	91485
35	Cu	91486

* VA / Cu = for stainless steel ropes and copper-conductors
(finewiring and stranded-precompressed)

VA = only for stainless steel ropes

Cu = only for copper conductors (finewiring and stranded-precompressed)

Compression dies for AP 10, HHW 10 and HPW 10



Dies madre-shaped

for crimping noninsulated terminals DIN 46 234, pin terminals DIN 46 230 and connectors DIN 46 341 part 1 (page 70 - 76)

mm ²	art.-no.	mm ²	art.-no.
6	91465	50	91470
10	91466	70	91471
16	91467	95	91472
25	91468	120	91473
35	91469		



Dies

for crimping insulated terminals (page 78 - 82)

mm ²	art.-no.	mm ²	art.-no.
10	91372	35	91375
16	91373	50	91376
25	91374	70	91377



Dies square-shape

for crimping cord-end-sleeves (page 95 - 103), crimping width: 19 mm

mm ²	art.-no.	mm ²	art.-no.
6	91383	50	91388
10	91384	70	91389
16	91385	95	91390
25	91386	120	91391
35	91387		



Dies for round forming

for rounding sector-shaped copper and aluminium conductors
crimping width: 12 mm

mm ² sm	mm ² se	art.-no.	mm ² sm	mm ² se	art.-no.
10	–	91450	95	120	91456
16	–	91451	120	150	91457
25	35	91452	150	185	91458
35	50	91453	185	240	91459
50	70	91454	240	300	91460
70	95	91455			



Cutting die

art.-no.: 91354

for coarsesewing aluminium and copper cables without steel insertion up to Ø 12 mm.

Stilo20 - Battery Operated Hydraulic Crimping Tool - 60 kN

without dies



art.-no.: 91148

Battery-powered hydraulic compression crimping tool for crimp cable lugs and connectors up to 300 mm².

advantages:

- very light and compact structure
- ergonomic 2-Component handle for one-handed fatigue-proof working
- extremely quick processing due to a three-stage axial piston pump
- automatic pressure limits and monitoring through pressure sensor
- fast tool return pipe through high return flow volume
- engine shutdown and automatic retract after completed pressing
- electronic crimping cycle control and monitoring
- manual retract with button
- sleep-mode; maintenance indication and battery control
- integrated, intelligent electronics assembly with multifunctional LED
- mini-USB interface for all standard computer systems
- output of all cycles (compression curves) and fault messages
- maintenance control
- software inclusive
- battery state control is readable directly on the battery

delivery completely with battery, battery charger and supporting loop for transport and safety, transport plastic case

technical data:

compression section max 6-300 mm²
press capacity 60 kN
max. stroke 16 mm
operating voltage 18 Volt
weight incl. battery approx. 7.3 kg
tool measurements 385 x 125 x 80 mm

range of application	up to
Dies, WM-shape for standard-series	300 mm ²
Dies, WM-shape for cable lugs and connectors, flexible copper cables	240 mm ²
Dies, hexagonal-shape for compression cable lugs + connectors	300 mm ²
Dies, hexagonal-shape for Aluminium cable lugs and connectors	300 mm ²
Dies for rounding sector-shaped copper and aluminium conductors	240 mm ²
Dies, mandrel-shape for crimping non insulated terminals DIN 46234+VA+NI	120 mm ²
Dies, for crimping insulated terminals	95 mm ²
Dies square-shape for crimping cord-end-sleeves	240 mm ²

Battery-powered compression tool APW20

without dies



art.-no.: 91143

Battery-powered hydraulic compression tool for crimping cable lugs and connectors up to 300 mm².

advantages:

- 3 years warranty or 20,000 work cycles
- high speed feed with double hydraulic cylinder
- variable speed for positioning of the tool
- ergonomic design for easy and safe operation
- light and compact structure
- 2-component handle with weight balance
- high performance LI-ION Battery 18V
- LED for illuminating the work area

technical data:

compression section max 6-300 mm²
press capacity 60 kN
head rotation 360°
max. stroke 17 mm
operating voltage 18 Volt
weight incl. battery approx. 7.3 kg
tool measurements 385 x 331 x 75 mm

delivery completely with battery, battery charger and supporting loop for transport and safety, transport plastic case

Hand-operated hydraulic compression tool HHW 20 without dies



art.-no.: 91132

Hand-operated hydraulic compression tool for crimping cable lugs and connectors up to **240 mm²**.

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- extremely light, handy and compact construction form
- 180° revolving head with quick opening and closing
- integrated pressure relief valve, false pressings cause no damage at tool nor dies
- universal usage: dies for all versions of cable lugs are available

delivery completely transport plastic case (without dies)

technical data:

press capacity ... ca. 62 kN length396 mm weight..... 2,8 kg

Hydraulic compression head HPW 20 without dies



art.-no.: 90656

Hydraulic compression head for crimping cable lugs and connectors up to **300 mm²**.

advantages:

- light, handy, compact construction
- wide application range
- hinged head, therefore quick insertion and removal of cable lugs and connectors
- quick connection via plug-in coupling free of leakage
- unior APi 20 and HPI 20 are available
- delivery in a transport caseout of plastic

technical data:

hydraulic pressure max. 700 bar (70 MPa)
press capacityca. 60 kN
length 198 mm
weight..... 1,7 kg

Hand-operated hydraulic compression tool MPW 20 without dies



art.-no.: 90250

Hand-operated hydraulic compression tool for crimping cable lugs and connectors up to **300 mm²**.

advantages:

- light, handy, compact construction
- wide application range
- 360° revolving head with quick opening and closing
- infinitely adjustable telescopic handles
- delivery in a transport caseout of plastic

technical data:

press capacityca. 60 kN
length560 bis 830 mm
weight.....3,2 kg

Compression dies for Stilo 20, APW 20, HHW 20, MPW 20 and HPW 20



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors of the standard-series (page 8-18). Not suitable for cable lugs from other manufacturers!

mm ²	art.-no.	mm ²	art.-no.	mm ²	art.-no.
10	91602	50	91606	150	91610
16	91603	70	91607	185	91611
25	91604	95	91608	240	91612
35	91605	120	91609	300	91613



Dies WM-shape

for crimping WEITKOWITZ cable lugs and connectors for **Siemens Norm SN 71322, for finewiring conductors** (page 20-24)

mm ²	art.-no.	mm ²	art.-no.	mm ²	art.-no.
10Sf	91745	50Sf	91749	150Sf	91753
16Sf	91746	70Sf	91750	185Sf	91754
25Sf	91747	95Sf	91751	240Sf	91755
35Sf	91748	120Sf	91752		



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for **finewiring conductors** (page 26-32). Not suitable for cable lugs from other manufacturers!

mm ²	art.-no.	mm ²	art.-no.	mm ²	art.-no.
10f	91638	50f	91642	150f	91646
16f	91639	70f	91643	185f	91647
25f	91640	95f	91644	240f	91648
35f	91641	120f	91645		



Dies WM-shape

for crimping cable lugs and connectors of the **euro-series** (page 34-43).

mm ²	art.-no.	mm ²	art.-no.	mm ²	art.-no.
6	91619	50	91624	185	91611
10	91620	70	91625	240	91612
16	91621	95	91626	300	91613
25	91622	120	91609		
35	91623	150	91610		



Dies hexagonal-shape

for crimping compression copper cable lugs DIN 46235, (page 46-51), compression copper connectors DIN 46267 part 1 (page 53-54), compression aluminium and aluminium/ copper cable lugs and connectors (page 56-64).

die code	Cu mm ²	Al mm ²	art.-no.
5	6	–	91654
6	10	–	91655
8	16	–	91656
10	25	10	91657
12	35	16 + 25	91658
14	50	35	91659
16	70	50	91660
18	95	70	91661
20	120	–	91662
22	150	95 + 120	91663
25	185	150	91664
28	240	185	91665
32	300	240	91666
34	–	300	91667

Compression dies for Stilo 20, APW 20, HHW 20, MPW 20 and HPW 20



Dies mandrel-shape

for crimping noninsulated terminals DIN 46234, pin-terminals DIN 46230 and connectors DIN 46341 part 1 (page 70-76)

mm ²	art.-no.	mm ²	art.-no.
6	91731	50	91736
10	91732	70	91737
16	91733	95	91738
25	91734	120	91739
35	91735		



Dies

for crimping insulated terminals (page 78-82)

mm ²	art.-no.	mm ²	art.-no.
10	91693	50	91697
16	91694	70	91698
25	91695	95	91699
35	91696		



Dies square-shape

for crimping insulated and noninsulated cord-end-sleeves (page 95-103) crimping width: 22 mm

mm ²	art.-no.	mm ²	art.-no.
6	91705	70	91711
10	91706	95	91712
16	91707	120	91713
25	91708	150	91714
35	91709	185	91715
50	91710	240	91716



Dies for round-forming

for rounding sector-shaped copper and aluminium conductors crimping width: 22 mm

mm ² sm*	mm ² se*	art.-no.
10	–	91718
16	–	91719
25	35	91720
35	50	91721
50	70	91722
70	95	91723
95	120	91724
120	150	91725
150	185	91726
185	240	91727
240	300	91728

*sm = stranded conductors, se = solid conductors

Storage box for pressing inserts

For keeping 19 pair of dies and 1 big case for special dies or dies with extremely press width. The sturdy box has two locks and a sturdy carrying handle.

For dies on catalogue page 142 – 166.

art.-no.: 90825



Battery-powered compression tool APW 30

without dies



art.-no.: 91163

delivery completely with crimping tool, battery, battery charger, carry strap, manual, transport case

Battery-powered hydraulic compression tool for crimping cable lugs and connectors up to 400 mm².

Advantages:

- three years warranty or 20,000 working cycles
- extremely quick processing due to a two-stage hydraulic pump
- variable speed for positioning the tool
- ergonomic design for fatigue-free work
- service-friendly, compact design
- two-component handle with optimum weight distribution
- LED to illuminate the working area

technical data:

press range 10-400 mm²
press capacity 80 kN
head rotation: 360°
stroke/opening width 37 mm
operating voltage 18 V
weight incl. battery ca. 5,6 kg
tool measurements 330 x 390 x 75 mm

Hand-operated hydraulic compression tool HHW 30

without dies



art.-no.: 91152

delivery completely with transport case out of plastic

hand-operated hydraulic compression tool for crimping cable lugs and connectors up to 400 mm².

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- wide application range up to 400 mm²
- 360° revolving head with quick opening and closing
- hinged head, therefore trouble-free working even at heavily accessible places
- integrated pressure relief valve, false pressings cause no damage at tool nor dies
- universal usage: dies for all versions of cable lugs are available

technical data:

press capacity: ca. 80 kN length: 550 mm weight: 5,4 kg

Hydraulic compression head HPW 17

without dies



Hydraulic compression head for crimping cable lugs and connectors up to 400 mm². Cutting dies for coarsewiring and finewiring cables up to 28 mm outside diameter are available.

advantages:

- wide application range: cable lugs and connectors 6 - 400 mm²
- light and handy, compact construction
- hinged head, therefore quick insertion and removal of cable lugs and dies
- cutting dies for cables up to 28 mm outside diameter are available
- quick connection via plug-in coupling free of leakage

technical data:

hydraulic pressure... max. 700 bar
press capacity ca. 80 kN
length 300 mm
weight 3,8 kg

art.-no.: 90651

Battery-powered compression tool APW 35

without dies



art.-no.: 91168

delivery completely with crimping tool, battery, battery charger, carry strap, manual, transport case

Battery-powered hydraulic compression tool for crimping cable lugs and connectors up to 300 mm².

advantages:

- three years warranty or 20,000 working cycles
- extremely quick processing due to a two-stage hydraulic pump
- variable speed for positioning the tool
- ergonomic design for fatigue-free work
- service-friendly, compact design
- two-component handle with optimum weight distribution
- LED to illuminate the working area

technical data:

press range 10-300 mm²
 press capacity 80 kN
 head rotation: 360°
 stroke/opening width 37 mm
 operating voltage 18 V
 weight incl. battery ca. 5,5 kg
 tool measurements 330 x 390 x 75 mm

Hand-operated hydraulic compression tool HHW 35

without dies



art.-no.: 91157

technical data:

press capacity: ca. 80 kN length: 580 mm weight: 5,2 kg

hand-operated hydraulic compression tool for crimping cable lugs and connectors up to 300 mm².

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- wide application range up to 400 mm²
- 360° revolving head with quick opening and closing
- hinged head, therefore trouble-free working even at heavily accessible places
- integrated pressure relief valve, false pressings cause no damage at tool nor dies
- universal usage: dies for all versions of cable lugs are available

delivery completely with transport case out of plastic

Hand-operated hydraulic compression tool HPW 15

without dies



Hand-operated hydraulic compression tool for crimping cable lugs and connectors up to 300 mm².

advantages:

- C-head for a quick and easy insertion and a removal of cable lugs and connectors, perfectly suitable for serial crimping
- quick connection because of plug-in coupling free of leakage.

technical data:

hydraulic pressure: max. 700 bar
 press capacity: approx. 80 kN
 length: 335 mm
 weight: 3,6 kg

best.-no.: 90602

Telescop holder PA1-0400

table or wall mounting for stationary working place with changeable hydraulic tool



The illustrated tool is not included in the delivery and can be ordered separately.

The telescope holder is adaptable and be used easily on different working places. The device can be fastened on a job or on the wall. Thereby the working routine is made easier and accelerated.

art-no.: 97139

technical data:

torque moment.....70 Nm
maximum bearing capacity..... 10 kg
pivot radius..... 630 – 920 mm

Clamping jaws for HPW 15 and HPW 17



Clamping jaws for a trouble free clamping of HPW 15 and HPW 17 into a vice.

art.-no.: 90601

Compression dies for APW 30, HHW 30, APW 35, HHW 35, HPW 15 and HPW 17



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors of the **standard-series** (page 7 – 18).

Not suitable for cable lugs from other manufacturers!

mm ²	art.-no.	mm ²	art.-no.
10	90604	120	90266
16	90605	150	90267
25	90606	185	90268
35	90607	240	90269
50	90263	300	90270
70	90264	400	90271
95	90265		

APW 35, HHW 35, HPW 15 only for 10-300 mm²!



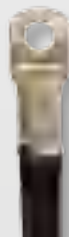
Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for

Siemens Norm SN 71322, finewiring conductors (page 19-24)

mm ²	art.-no.	mm ²	art.-no.
10Sf	91765	95Sf	91771
16Sf	91766	120Sf	91772
25Sf	91767	150Sf	91773
35Sf	91768	185Sf	91774
50Sf	91769	240Sf	91775
70Sf	91770	300Sf	91776

HPW 15, HHW 35, APW 35 only for 10-240Sf mm²!



Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors for

finewiring conductors (page 25 – 32).

Not suitable for cable lugs from other manufacturers!

mm ²	art.-no.	mm ²	art.-no.
10f	90440	95f	90446
16f	90441	120f	90447
25f	90442	150f	90448
35f	90443	185f	90449
50f	90444	240f	90450
70f	90445		



Dies WM-shape

for crimping cable lugs and connectors of the **euro-series** (page 33 - 43).

mm ²	art.-no.	mm ²	art.-no.
6	90431	95	90238
10	90272	120	90266
16	90273	150	90267
25	90234	185	90268
35	90235	240	90269
50	90236	300	90270
70	90237	400	90271

APW 35, HHW 35, HPW 15 only for 6-300 mm²!



Dies

for crimping insulated terminals (page 78 - 82).

mm ²	Bestell-Nr.	mm ²	art.-no.
10	90461	70	90466
16	90462	95	90467
25	90463	120	90468
35	90464	150	90469
50	90465		

APW 35, HHW 35, HPW 15 only for 10-120 mm²!

Compression dies for APW 30, HHW 30, APW 35, HHW 35, HPW 15 and HPW 17



Dies hexagonal-shape

for crimping compression copper cable lugs DIN 46 235 (page 44 - 52),
compression copper connectors DIN 46 267 part 1 (page 53 - 54)
and compression aluminium and aluminium/copper cable lugs and
connectors (page 55 - 64).

die code	Cu mm ²	Al mm ²	art.-no.
5	6	–	90278
6	10	–	90279
8	16	–	90280
10	25	16	90281
12	35	25	90282
14	50	35	90283
16	70	50	90284
18	95	70	90285
20	120	–	90286
22	150	95 + 120	90287
25	185	150	90288
28	240	185	90289
32	300	240	90290
34	–	300	90292

APW 35, HHW 35, HPW 15 only K 5 – K 28!



Dies for compression copper cable lugs 2-conductor-version

for crimping compression copper cable lugs 2-conductor-version (page 52)
crimping width: 12 mm (2 crimpings at each cable lug necessary)

mm ²	art.-no.	mm ²	art.-no.
2 x 70	99805	2 x 120	99641
2 x 95	99640		

Not suitable for APW 35, HHW 35 and HPW 15!



Dies mandrel-shape

for crimping noninsulated terminals DIN 46 234 (page 70 - 73),
pin terminals DIN 46 230 (page 74)
and connectors DIN 46 341 part 1 (page 75)

mm ²	art.-no.	mm ²	art.-no.
6	90478	70	90484
10	90479	95	90485
16	90480	120	90476
25	90481	150	90477
35	90482	185	90488
50	90483	240	90489

APW 35, HHW 35, HPW 15 only 6 – 150 mm²!



Dies square-shape

for crimping insulated / noninsulated cord-end-sleeves (page 95 – 103)
Crimping width: 24 mm (10–120 mm²)
38 mm (150–240 mm²)

mm ²	art.-no.	mm ²	art.-no.
10	90633	95	90639
16	90634	120	90640
25	90635	150	90641
35	90636	185	90642
50	90637	240	90643
70	90638		

Compression dies for APW 30, HHW 30, APW 35, HHW 35, HPW 15 and HPW 17



Dies for compression tab-connectors, H-shape, copper

for crimping compression tab connectors, H-shape (page 54)

crimping width: 70/70 mm² = 12 mm
95/95 mm² = 5 mm
120/120 mm² = 5 mm

mm ²	art.-no.	mm ²	art.-no.
70/70	99805	120/120	99633
95/95	99782		

Not suitable for APW 35, HHW 35 and HPW 15!



Dies mandrel-shape

for cable lugs out of stainless steel (page 68)

mm ²	for use*	art.-no.	mm ²	for use*	art.-no.
1,5-2,5	VA / Cu	91901	50	VA	91908
4-6	VA / Cu	91902	50	Cu	91909
10	VA / Cu	91903	70	VA	91910
16	VA / Cu	91904	70	Cu	91911
25	VA / Cu	91905	95	VA	91912
35	VA	91906	95	Cu	91913
35	Cu	91907			

* VA / Cu = for stainless steel ropes und copper-conductors (finewiring and stranded-precompressed)

VA = only for stainless steel ropes

Cu = only for copper-conductors (finewiring and stranded-precompressed)



Dies for round forming

for rounding sector-shaped copper and aluminium conductors crimping width: 16 mm

mm ² sm*	mm ² se*	art.-no.	mm ² sm*	mm ² se*	art.-no.
10	–	90620	95	120	90626
16	–	90621	120	150	90627
25	35	90622	150	185	90628
35	50	90623	185	240	90629
50	70	90624	240	300	90630
70	95	90625			

*sm = stranded conductors, se = solid conductors



Cutting die

art.-no.: 90654

for coars wiring Al- and Cu-cables without steel insertion up to Ø 28 mm.

art.-no.: 90655

for finewiring copper cables up to Ø 28 mm.

These dies are not suited for cutting solid conductors. Please ask for our special solutions.

Not suitable for APi 35, HPi 35 and HPW 15!

To keep the cutting die, we recommend the assortment box (art.-no.: 90825).

Special tools do we produce to your instructions

for example

Hydraulic compression system with C-head

Special made crimping head with an output force of 200 kN respectively 400 kN for series-production of big cross-sections, for heavy duty developed.

- C-head, ideally for continuous quick working (side loading of connectors)
- knowingly robust designed crimping head, for example for special made crimping dies with big crimping width for quick working, also with big cross-sections of cable lugs and connectors.
- exactly specifications on customer request



or our

Profile cutter with integral hand pump HPS 50

for cutting steel-profile up to 2 mm thickness

You give us your job-profile ...

... **we** offer the solution!

Special tools



Illustration can deviate.

for example APW 40

Battery-powered hydraulic compression tool for crimping cable lugs and connectors up to 400 mm².
technical properties

- 3 years guarantee or 20.000 working cycle
- quick infeed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

Technische Daten:

max. stroke.....	42 mm
head opening	42 mm
crimping forces	130 kN
battery	Lithium-Ionen technology 18V, 3.0 Ah
weight incl. battery.....	approx. 6.5 kg
tool measurements.....	95 x 430 x 310 mm

art.-no: 91198

without crimping dies



or Hydraulic compression head HPW 40

The press head has a press capacity of 130 kN. This special product is perfectly suitable for serial crimping of big cross sections and strong use. Actuation with electro-pump or foot pump.

technical data:

maximum piston stroke.....	42 mm
head notch.....	42 mm
operating pressure.....	700 bar (70MPa)
measurements.....	75 x 120 x 270 mm
press capacity	130 kN
weight.....	4,9 kg

art.-no.: 90603

Crimping dies on request!

Mention **your** processing problem to **us**.

Battery-powered hydraulic cable cutter APW 18 without crimping dies



Battery-powered hydraulic compression tool for crimping cable lugs and connectors up to **1000 mm²**.

technical properties:

- 3 years guarantee or 20.000 working cycle
- quick infeed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

art.-no.: 97222

delivery completely with crimping tool, battery,
battery charger, carry strap, manual, transport case

technical data:

crimping area:..... 10 – 1000 mm²
crimping forces: 130 kN
head rotation: 360°
opening width:..... 42 mm
battery voltage:..... 18 V
weight incl. battery:..... approx. 8.7 kg
tool measurements:..... 430 x 310 x 95 mm

Hydraulic compression system HPW 18 without dies



Hydraulic compression head for crimping cable lugs and connectors up to 1000 mm². With the help of an adaptor all dies of HPW 15 and 17 (up to 95 mm²) can be used

advantages:

- small weight compared to the range of application
- excellent cost-performance ratio
- hinged head, therefore quick insertion and removal of cable lugs and dies
- extendable system for bending, punching and cutting copper and aluminium bus bars
- quick connection via plug-in coupling, free of leakage

technical data:

hydraulic pressure max. 700 bar
press capacity ca. 200 kN
length 385 mm
weight 7,5 kg

The press head can be uncoupled from the cylinder. Both parts are delivered separately (therefore please order separately by using the article numbers named below). The cylinder is also suitable for being connected to the units for punching, bending and cutting aluminium and copper bus bars.

cylinder HPZ 25 art.-no.: 90662
press head HPK 18 art.-no.: 90663

Accessories zu APW 18 und HPW 18

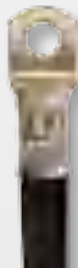


Dies WM-shape

for crimping **WEITKOWITZ** cable lugs and connectors of the **standard-series** (page 8 – 18).

Not suitable for cable lugs from other manufacturers

mm ²	art.-no.	mm ²	art.-no.
120	90670	300	90674
150	90671	400	90675
185	90672	500	90676
240	90673	630	90677



Dies WM-shape

only for processing cable lugs and connectors of the **euro-series** (page 34 – 43).

mm ²	art.-no.	mm ²	art.-no.
120	90670	300	90674
150	90671	400	90675
185	90672	500	90676
240	90673	630	90677



Dies hexagonal-shape

for crimping compression copper cable lugs DIN 46 235 (p. 46 - 51)

compression copper connectors DIN 46 267 part 1 (page 53 - 54)

and compression aluminium and alu/copper cable lugs and connectors (page 56 - 64)

die code	Cu mm ²	Al mm ²	art.-no.
20	120	–	90681
22	150	95 + 120	90682
25	185	150	90683
28	240	185	90684
32	300	240	90685
34	–	300	90686
38	400	–	90687
38	–	400	90678
42	500	–	90688
44	–	500	90679
44	625	–	90690
52	–	625	90680
52	800	–	90691
58	–	800	90689
58	1000	–	90692



Adapter dies

art.-no.: 90693

With the help of this adaptors all crimping dies of HPW 15 and HPW 17 up to 95 mm² (page 164 bis 160) can be used with the compression system HPW 18. (This doesn't apply for cutting dies and dies for h-shape)



Cutting dies

art.-no.: 90694

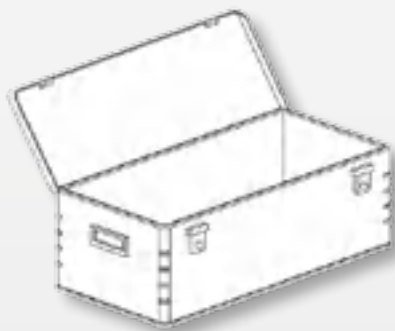
Cutting dies for HPK 18, applicable for

- coarsewiring aluminium and copper cables without steel insertion up to 36 mm Ø
- finewiring copper cables up to Ø 36 mm

These dies are not suited for cutting solid conductors.

Please ask for our special solutions

accessories



Transport case

art.-no.: 90799

Stable transport case made of aluminium sheet for keeping the footpump no. 90401 (page 187) and hydraulic tools. (page 150 ff).

technical data:

measurements inside approx.350 x 750 x 310 mm
measurements outside approx.400 x 800 x 330 mm
weight approx.6,2 kg



clamping jaws for a trouble free climbing of HPZ 25 into a vice.

art.-no.: 90661



Hydraulic cutting tools

Stilo Cut 40

Battery-powered hydraulic hand cable cutter to cut stranded aluminium and copper cables up to Ø40 mm.



Characteristics:

- open cutting head with endless rotation
- light, compact and robust design
- ergonomic design for left- and right-handers
- extremely quick processing due to a three-stage axial piston pump
- automatic pressure limits and monitoring through pressure sensor
- engine shutdown and automatic retract after completed cutting
- manual retract with button
- automatic energy shutdown after 5 minutes
- save of all cuttings and error messages on internal memory
- selections of all cycles and error messages about USB interface
- controlled engine drive to the life extension of gearbox, engine and battery
- multifunctional electronic (sleep-mode; maintenance indication and battery control)
- integrated, intelligent electronics assembly with two multifunctional LED
- precise, repeating exact print alignment by an electronic pressure sensor
- battery charge level indicator directly at the battery
- running supervision of the rest battery load
- integrated service management and software updates about the USB interface
- battery load reaches for 120 cuts

cutting area - stranded

Cu up to max. 1x240 mm ² and/or 4x50 mm ²
Al bis max. 1x500 mm ² bzw. 4x70 mm ²

cutting area

Cu up to max. Ø40 mm
Al up to max. Ø40 mm

technical data

cutting area	Ø 40 mm	time of loading	approx. 30 min.
cutting forces	30 kN	measurements	440 x 124 x 81 mm
RED li-ionen battery	18,0V 1,5 Ah	weight incl. battery.	2,9 kg

art.-no.

description

97208	hydraulic cable cutter STILO CUT 50
91101	replacement battery 18 V, 1.5 Ah

delivery contents:

- hydraulic cable cutter STILO CUT 40
- incl. battery and charger
- manual
- software
- USB-cable
- transport case

Stilo Cut 50

Battery-powered hydraulic hand cable cutter to cut flexible aluminium and copper cables up to Ø50 mm.

Characteristics:

- open cutting head with endless rotation
- light, compact and robust design
- ergonomic design for left- and right-handers
- extremely quick processing due to a three-stage axial piston pump
- automatic pressure limits and monitoring through pressure sensor
- engine shutdown and automatic retract after completed cutting
- manual retract with button
- automatic energy shutdown after 5 minutes
- save of all cuttings and error messages on internal memory
- selections of all cycles and error messages about USB interface
- controlled engine drive to the life extension of gearbox, engine and battery
- multifunctional electronic (sleep-mode; maintenance indication and battery control)
- integrated, intelligent electronics assembly with two multifunctional LED
- precise, repeating exact print alignment by an electronic pressure sensor
- battery charge level indicator directly at the battery
- running supervision of the rest battery load
- integrated service management and software updates about the USB interface
- battery load reaches for 120 cuts

Cutting area – fine-stranded

Cu up to max. 1x240 mm ² and/or 4x50 mm ²
Al up to max. 1x500 mm ² and/or 4x70 mm ²

cutting area - total:

Cu up to max. Ø45 mm
Al up to max. Ø50 mm

technical data

cutting area	Ø 50 mm	time of loading	approx. 30 min.
cutting forces	30 kN	measurements	449 x 124 x 81 mm
RED li-ionen battery	18,0V 1,5 Ah	weight incl. battery	2,9 kg

art.-no.	description
91105	hydraulic cable cutter STILO Cut 50
91101	replacement battery 18V, 1,5 Ah

delivery contents:

- hydraulic cable cutter STILO CUT 50
- battery and charger
- manual
- software
- USB-cable
- transport case



Battery-powered hydraulic cable cutter ASW 25

for cut aluminium and copper cables with steel insertion



art.-no.: 97229

technical properties:

- 3 years guarantee or 20.000 working cycle
- quick infed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

delivery completely with:
cutting tool, battery, battery charger, carry strap,
manual and transport case

technical data

cutting area 25 mm
cutting forces 60 kN
weight incl. battery approx. 3,9 kg

application:		tensile strenght N/mm ²	< Ø 9 mm	Ø 11 mm	Ø 13 mm	Ø 15 mm	Ø 17 mm	Ø 19 mm	Ø 21 mm	Ø 23 mm	Ø 25 mm	Ø 27 mm	Ø 29 mm	Ø 31 mm	Ø 33 mm	Ø 35 mm	Ø 37 mm	Ø 39 mm	Ø 41 mm	Ø 43 mm	Ø 45 mm	Ø 47 mm
copper	rope und cable	<410																				
	round material	<300																				
	round material	<250																				
aluminium	round material	<340																				
	rope und cable	<200																				
	round material	<160																				
Aldrey	cable	<340																				
aluminium/steel	rope	<1800																				
steel	Seile	<2200																				
	Rundmaterial	<600																				
	Rundmaterial	<420																				
	Seile (>200 Drähte)	<180																				

Battery-powered hydraulic cable cutter ASW 45

for cut aluminium and copper cables and as well as aluminium-steel-reinforced cables up to 45 mm
technical properties.



art.-no.: 91183

technical properties:

- 3 years guarantee or 20.000 working cycle
- quick infed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

Delivery completely with cutting tool, battery, battery charger, carry strap, manual, transport case.

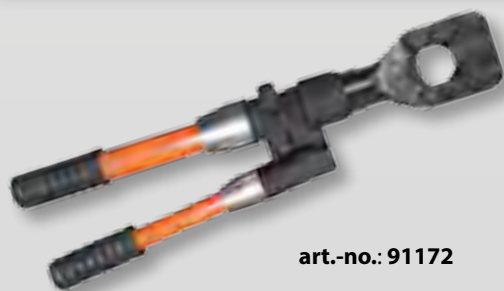
You find additional accessories to the ASW 45 on page 186!

technical data:

cutting area Ø 45 mm head rotation 360° weight incl. battery approx. 5,9 kg
cutting forces 60 kN battery voltage 18 V tool dimensions 435 x 331 x 75 mm

Hydraulic hand cable cutter HSW 45

for cut aluminium and copper cables and as well as aluminium-steel-reinforced cables up to 45 mm



art.-no.: 91172

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- snap closing head, 270° revolving
- large cutting range (you find the information on page 179 at the tool HSW 50 F)

delivery with transport plastic case

technical data:

cutting forces 60 kN length 600 mm weight 7,66 kg

Battery-powered hydraulic cable cutter ASW 50 F

for cut fine-wiring aluminium and copper cables (without steel insertion) up to 50 mm



art.-no.: 91186

technical data:

cutting area Ø 50 mm
cutting forces 60 kN
head rotation 360°
battery voltage 18 V
weight incl. battery approx. 4,9 kg
tool dimensions 447 x 331 x 75 mm

advantages:

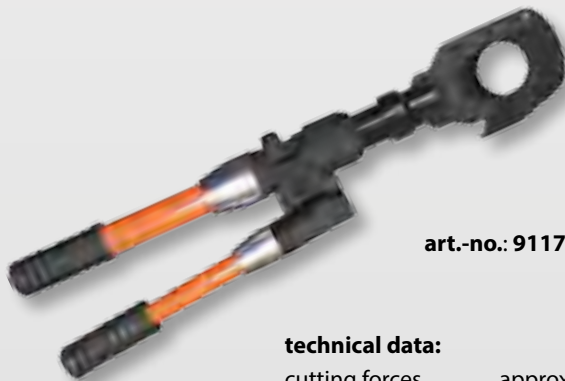
- 3 years guarantee or 20.000 working cycle
- quick infeed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

delivery completely with cutting tool, battery, battery charger, carry strap, manual, transport case

You find additional accessories to the ASW 45 on page 186.

Hydraulic hand cable cutter HSW 50 F

for cut fine-wiring aluminium and copper cables (without steel insertion) up to 50 mm



art.-no.: 91175

technical data:

cutting forces approx. 60 kN
length 610 mm
weight 6,95 kg

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- snap closing head, 270° revolving
- large cutting range (see table below)

delivery with transport plastic case

application: ASW 50 F und HSW 50 F		tensile strenght N/mm ²	< Ø 20 mm	Ø 25 mm	Ø 30 mm	Ø 35 mm	Ø 40 mm	Ø 45 mm	Ø 50 mm	Ø 55 mm
copper	cable	<410								
aluminium	cable	<210								

Hydraulic hand cable cutter PSW 50 F

for cut fine-wiring aluminium and copper cables (without steel insertion) up to 50 mm



art.-no.: 90577

advantages:

- light and compactly construction form
- cutting head with hinged breech block and knife guide
- large cutting range
- clean cut

delivery with transport nylon etui

technical data:

cutting force approx. 60 kN
hydraulic pressure max. 700 bar
length 315 mm
weight 2,8 kg

Battery-powered hydraulic cable cutter ASW 65

for cut aluminium and copper cables (without steel insertion) up to 65 mm



technical data:

cutting forces approx. 44 kN
battery voltage 14,4 Volt
tool dimensions 140 x 610 x 400 mm
weight incl. battery 7,7 kg
battery charger 220–240V, 50–60Hz, 7,2–18V
time of loading approx. 50 minutes

application:		tensile strenght N/mm ²	< Ø 30 mm	Ø 35 mm	Ø 40 mm	Ø 45 mm	Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm
copper	cable	<410									
aluminium	cable	<210									

advantages:

- 3 years guarantee or 20.000 working cycle
- quick infeed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

delivery completely with cutting tool, battery, battery charger, carry strap, manual, transport case

You find additional accessories to the ASW 65 on page 186.

art.-no.: 91193

Hydraulic cutting head PSW 65

for cut aluminium and copper cables (without steel insertion) up to 65 mm



advantages:

- light and compact design
- open cutting head with knife guide
- easy handling by open construction
- connection due to a leakage-free plug-in coupler

delivery completely with transport case

technical data:

cutting area 65 mm
cutting force approx. 44 kN
hydraulic pressure max. 700 bar (70 MPa)
length 330 mm
weight approx. 4,7 kg

art.-no.: 90571

Battery-powered hydraulic cable cutter ASW 85

for cut stranded aluminium and copper cables (without steel insertion) up to 85 mm



technical data:

cutting areaØ 85 mm
cutting forces70 kN
head rotation:endless
battery voltage18 V
weight incl. batteryapprox. 6,7 kg
tool dimensions523 x 331 x 75 mm

application:		tensile strength N/mm ²	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm
ASW 85 F											
copper	cable	<410									
aluminium	cable	<210									

advantages:

- 3 years guarantee or 20.000 working cycle
- quick infed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

delivery completely with cutting tool, battery, battery charger, carry strap, manual, transport case

You find additional accessories to the ASW85 and ASW 85F on page 186!

art.-no.: 97221

also available:

cable cutter ASW 85 F

to cut fine-wiring aluminium and copper cables (without steel insertion) up to 85 mm

art.-no.: 91189

Hydraulic hand cable cutter HSW 85

for cut stranded aluminium and copper cables (without steel insertion) up to 85 mm



application:		tensile strength N/mm ²	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm
copper	cable	<410									
aluminium	cable	<210									

advantages:

- extremely quick processing due to a two-stage hydraulic pump
- snap closing head, 270° revolving
- large cutting range (see table below)
- single-hand control in the high-speed pushing forward by an inner handle

delivery with transport plastic case

technical data:

cutting forcesca. 70 kN
length692 mm
weight12,8 kg

art.-no.: 97053

Battery-powered hydraulic cable cutter ASW 95

for cut aluminium and copper cables (without steel insertion) up to 95 mm



advantages:

- 3 years guarantee or 20.000 working cycle
- quick infeed due to double piston hydraulic system
- variable speed for placing the tool
- ergonomic design for fatigue-free work
- easy to service and compact design
- two-piece component handles with optimal weight distribution
- powerful Li-Ion battery 18V
- LED to illumination of the workspace

delivery completely with cutting tool, battery, battery charger, carry strap, manual, transport case

Technische Daten:

cutting areaØ 95 mm
cutting forces65 kN
head rotation:endless
battery voltage18 V
weight incl. batteryca. 10,1 kg
tool dimensions603 x 345 x 90 mm

art.-no.: 91195

Hydraulic cable cutter PSW 95

for cut aluminium and copper cables (without steel insertion) up to 95 mm



Advantages:

- open, hydraulic cutting head with knife guide
- easy handling thanks to open design
- with stable handle
- extremely large cutting range, see table below
- clean cut

Delivery including plastic case

technical data:

cutting force approx. 65 kN
operation pressure max. 700 bar
length 465 mm
weight 6,9 kg

art.-no.: 90574

application:		tensile strength N/mm ²	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm	Ø 95 mm	Ø 100 mm
copper	cable	<410											
aluminium	cable	<210											

Hydraulic cable cutter HKW 700

for cutting copper- and aluminium conductors **even with steel insertion** up to 70 mm outside diameter
(e.g. coarsewiring copper cables up to about 4x240 mm²)



advantages:

- extremely large cutting force
- hinged head
- extremely stable construction
- with handle

technical data:

press capacity ca. 150 kN
hydraulic pressure: max. 700 bar
length 430 mm
weight 8,3 kg

art.-no.: 90578

Hydraulic cable cutter HKW 1000

for cutting stranded copper- and aluminium conductors without steel insertion up to 95 mm outside diameter
or coarsewiring copper cables up to about 3x185 mm²



advantages:

- head can be fouled
- big cutting range
- clean cut

technical data:

press capacity ca. 80 kN
hydraulic pressure: max. 700 bar
length 530 mm
weight 6,8 kg

art.-no.: 90590

like above but stronger version for cutting copper and aluminium conductors, with or without steel jacket up to 95 mm outside diameter. Output force like above.

Attention:

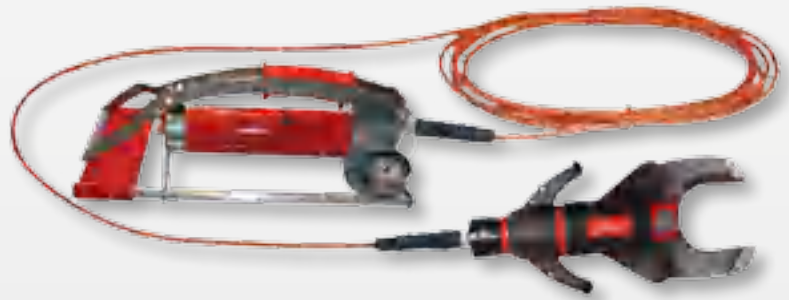
Aluminium conductors with steel-core, steel cables or cables with steel-core cannot be cut.

art.-no.: 90591

Hydraulic safety cutting unit SSA 95 according to DIN EN 50340.

Insulated Cable Shears:

Description of the insulated cable shears: The insulated cable cutter is a device for safe cable cutting when the cable may be live and the absence of tension cannot be checked with complete safety. Such a check is particularly difficult in metallic screened cables. Therefore, before proceeding with any cutting operations, it is essential to take adequate measures to guarantee the operator's safety. One such measure is the use of an insulated cable cutter. This device – conforming to DIN EN 50340 (VDE 0682 part 661) – is made up essentially of a hydraulic pump and a cutting head to which a high pressure non-metallic hose of length 10.5 m is connected by a steady fitting.



Field of application

According to § 6.2 of the safety regulations "Electric Systems and Materials" (BGV A 2, ex VGB 4) and § 6.2 of EN 50 110 standard (VDE 0105 part 100), before carrying out any work on grounding systems for voltages up to 60kV the absence of tension must be guaranteed for the entire duration of the operations. As it is not always possible to make sure there is no tension at the point where we must operate, especially for ground cables, it is essential to avoid the problem by cutting the cable with a special insulated cable cutter and at the same time carrying out a check at the point of inter-ruption, e.g. by checking at the main switchboard.

Equipotential connection – Grounding

For insulated cable cutters the DIN EN 50340 standard requires grounding the cutter head and establishing an equipotential connection between the pump and the ground. These regulations must however be implemented while respecting directives currently applicable in single countries. According to the "BGI 845-ZH1 / 437" directives, for instance, in Germany the cutting head cannot be individually grounded because the networks themselves are already grounded. There must be however an equipotential connection between the pump and the ground.

Electric Arc in a Test Shortcircuit:



photo 1: 200 ms



photo 2: 800 ms

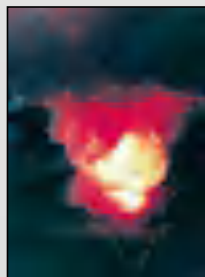


photo 3: 1.200 ms



photo 4: 1.600 ms

The photographs show the development of an electric arc during an experimental short circuit, and show clearly the danger that may threaten operators in the case of work done under tension. Personal injury can be avoided only by using insulated cable cutters.

Hydraulic safety cutting unit SSA 95



application:		tensile strength N/mm ²	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm	Ø 95 mm	Ø 100 mm
copper	cable	<410											
aluminium	cable	<210											

technical data:

cutting force.....ca. 65 kN operating pressure..... 625 bar weight..... 25,5 kg
thrust.....ca. 110 kN dimensions trolley520 x 640 x 365 mm operating temperature -20°C to +40°C

Ideal for safe cutting of copper and aluminium cables up to the maximum allowable diameter for the head being used

technical characteristics:

- light and compact structure
- reduced weight due to the use of light alloys and corrosion resistant materials
- easy use and high stability due to the ergonomic pedal and the non-slip base
- fast feeds by means of a double hydraulic cylinder
- pressure control by pressure gauge
- manual return in any position
- rotary quick coupling with dust cap
- plastic case with integral handle and wheels for easy transport of the entire equipment

art.-no.: 90570

Hydraulic safety cutting unit SSA 95 CPT



application:		tensile strength N/mm ²	< Ø 50 mm	Ø 55 mm	Ø 60 mm	Ø 65 mm	Ø 70 mm	Ø 75 mm	Ø 80 mm	Ø 85 mm	Ø 90 mm	Ø 95 mm	Ø 100 mm
copper	cable	<410											
aluminium	cable	<210											

technical data:

cutting force.....approx. 65 kN operating pressure..... 625 bar weight..... 25,5 kg
thrust.....approx. 110 kN tool dimensions520 x 640 x 365 mm operating temperature -20°C to +40°C

delivery with:

- CPW700EC
- hydraulic cablecutter PSW 95
- 10,5 m high pressure hose
- earthing spike for SSA 95
- earthing cable for SSA 95
- plastic case with integral handle and wheels for easy transport of the entire equipment

advantages:

- very light, compact and robust structure of the pump and cutting
- heads, through the inset from fibreglass plastic and corrosion
- resistant materials
- double piston technology for rapid high pressure feed
- remote control
- multifunktion LED to maintenance and battery state control
- rotary quick coupling with dust cap
- protection IP43

art.-no.: 90569

Accessories to hydraulic battery-powered tools



Replacement battery - Li-Ion
for Stilo1 and Stilo Cut 50 18 V, 1,5 Ah
weight.....0,50 kg
art.-no.91101



Replacement battery - Li-Ion
for battery powered tools 18 V, 3,0 Ah
weight.....0,68 kg
art.-no.91424



battery-adaptor for all battery-powered tools
voltage range.....230V - 18V
art.-no.91426



battery charger
voltage range.....230V - 18V
art.-no.91428



carrying strap for all battery tools from high quality nylon material
art.-no.91129



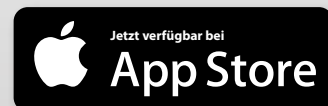
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battery-powered hydraulic pumps and accessories

battery-hydraulic pump Compact CPW700EC art.-no.: 91422



properties, control and monitoring function:

- light, compact and robust structure
- double piston technology for rapid high pressure feed
- quick tool return by high return conveyor volumetric
- pressure supervision with an electronic pressure sensor
- high performance battery (lithium-ion - without memory effect)
- start or drive up and return at the remote control
- state of charge at the battery available
- with remote control 1.5 m
- switch on at the device and with the remote control
- LED-display (green) for correct processing on the device and remote control
- LED-display for battery and disturbance at the device
- automatically energy saving mode after 5 minutes
- save of all crimps and error messages on internal memory (approx. 100.000 cycles)
- read out of all cycles and error messages about USB
- no uncompleted crimping cycles by running supervision of the rest battery load
- control by means of microcontroller
- controlled engine drive for the life rise of gear, engine and battery
- automatic and manual retract, retract stop function
- immediate cutting opening after cut and letting go the button (automatic cutting detection)
- integrated service-management
- software update about USB connection
- temperature monitor
- you can carry the pump with a carrying strap
- you can fasten the remote control at the device, at a belt or carrying strap with clamping bracket or magnet on an even surface.

delivery completely with remote control 1.5 m, flexible high pressure hose 1.5 m, USB-cable, Li-Ionen battery 18V 3.0 Ah, battery-charger device, software (CD), shoulder strap, carry bag with additional pockets.

technical data:

capacity within the range of low pressures < 100 bar: 1.15 lit./min.
 capacity within the range of pressures up to 700 bar: 0.15 lit./min.
 operation pressure 700 bar (70 MPa)
 power 200 W
 battery voltage 18V DC
 battery capacity 3.0 Ah
 operating temperature -20°C / +55°C
 tool dimensions 190 x 290 x 205 mm
 weight approx. 4.6 kg (with battery)

battery-powered hydraulic pumps and accessories



battery-hydraulic pump Compact CPW700 **art.-no.: 91423**

design like CP700EC, but with additional integrated display and following

additional functions

- big display for the supervision, diagnosis and attitudes:
- display of process pressure and set point
- error message (temperature, battery, crimping defect, own **diagnostics**)
- service data
- device parameters
- input and output element aboutl-drive (rotary knob)
- preinstalled standard program for cutting or crimping with:
- automatic or manual return flow
- hold time setting
- instep function by means of an automatic adjustment
- return stop function
- immediate cutting opening after cut and letting go the button
- (automatic cutting detection)
- storable operator program

technical data:

tool dimensions 190 x 290 x 205 mm
weight..... approx. 4,6 kg (with battery)



replacement battery to CPW700EC and CPW700 **18V DC 3.0 Ah** **art.-no.: 91424**



power adaptor to CPW700EC, CPW700, Stilo1, Stilo 20 **and Stilo Cut 50, 230V – 18V** **art.-no.: 91426**



ladder fixing to CPW700EC and CPW700 **art.-no.: 91425**



extension hose to Compact700EC and CPW700

unsuitable to safety cutting machines

1,5 m..... **art.-no.: 97135**
3,0 m..... **art.-no.: 97153**
5,0 m..... **art.-no.: 97194**

Hydraulic pumps and accessories



Electro-hydraulic 3-cylinder-radial-piston-pump with transport cart

our electro-hydraulic pumps are delivered completely with an electrical control, pressure control valve, magnet valve, oil sight glass and 3 meter high-pressure hose. The operating pressure is put normally on 700 bar. The control is effected with a foot pedal. The pedal is equipped with a high-quality 3-point-safety wiring.

All our pumps are delivered without cutting and crimping tool.

The following variants are deliverable:

- operating voltage/pump delivery volume 230V 50Hz / 0.64 l/min. 3x400V 50Hz / 0.82 l/min.
- with transport cart or with rack
- foot pedal with one switch = version without positioning
- foot pedal with two switches = version with positioning

The version with positioning should be used at the tools to processing of copper and aluminium bus bars and the hydraulic puncher HLW 138 (catalogue pages 190-199). The positioning guaranteed a save and point exactly work. We recommend to use the pump (art.-no. 91421) if you buy our hydraulic bus conductor work system BLS 120 (page 195). This tool combination ensures you a high precision.

illustration = art.-no.: 90404

**Further components and special solutions
are available on request.**

transport cart, with positioning, nominal capacity: 0.75 kW,
voltage 3 x 400V 50Hz, delivery rate 0.82 l/min.
weight:..... 31,0 kg
art.-no.: 90404

transport cart, with positioning, nominal capacity: 0.75 kW,
voltage 3 x 400V 50Hz, delivery rate 0.82 l/min.
weight:..... 31,0 kg
art.-no.: 90417

transport cart, nominal capacity: 0.75 kW,
voltage 3 x 400V 50Hz, delivery rate 0.82 l/min.
weight:..... 30,4 kg
art.-no.: 90407

transport cart, with positioning, nominal capacity: 0.75 kW,
voltage 230V 50Hz, delivery rate 0.64 l/min.
weight:..... 33,0 kg
art.-no.: 90413

transport cart, nominal capacity: 0.75 kW,
voltage 230V 50Hz, delivery rate 0.64 l/min.
weight:..... 33,0 kg
art.-no.: 90418



illustration = art.-no.: 90418

Hydraulic pumps and accessories



Electro-hydraulic 3-cylinderradial-piston-pump with rack

rack, with positioning, nominal capacity: 0.75 kW,
voltage 3 x 400V 50Hz, delivery rate 0.82 l/min.
weight.....24,0 kg
art.-no.: 99962

rack, nominal capacity: 0.75 kW,
voltage 3 x 400V 50Hz, delivery rate 0.82 l/min.
weight.....24,0 kg
art.-no.: 90406

illustration = art.-no.: 90415

rack, with positioning, nominal capacity: 0.75 kW,
voltage 230V 50Hz, delivery rate 0.64 l/min.
weight.....30,0 kg
art.-no.: 90416



rack, nominal capacity: 0.75 kW,
voltage 230V 50Hz, delivery rate 0.64 l/min.
weight.....24,0 kg
art.-no.: 90415

rack, with positioning, nominal capacity: 0.75 kW, with automatically pressure switching-off and connection for end switch (for BLS120), voltage 3 x 400V 50Hz, delivery rate 0.82 l/min.
weight.....24,0 kg
art.-no.: 91421

illustration = art.-no.: 91421

Hydraulic foot pump FPW 70, two-stages art.-no.: 91401

Operating pressure max. 700 bar, with safety valve and
3 m high pressure hose

tool dimensions 210 mm x 570 mm x 230 mm
weight.....23,8 kg

delivery includes metal case





**Replacement high pressure hose with steel braided liner,
Anti-kink protection** (no extension hose!)

length: 3 m.....	art.-no.: 90409
length: 5 m.....	art.-no. 99955
length: 10 m	art.-no.: 99956

**Extension hoses available on request.
– recommended max. Total length: 10 m –**



Refill sets to supplement oil losses

Please use only this oil.

Only e-hydraulics and foot pumps (without SSA95)

Hydraulic oil, 1-liter	art.-no.: 90593
Hydraulic oil, 5-liter	art.-no.: 90594

Accumulators and compact pumps

Hydraulic oil, 1-liter	art.-no.: 90557
-------------------------------------	------------------------



Hydraulic punching, bending and cutting tools for bus bars

Hydraulic working system 200 kN



Hydraulic working system, developed by WEITKOWITZ and protected with registered design. It allows the crimping of cable lugs up to 1000 mm² as well as the punching, bending and cutting of copper and aluminium bus bars. Basic item is a cylinder with a hydraulic pressure of 700 bar and a press capacity of 200 kN. This cylinder can be easily connected to:

- a) Press head with changeable dies for cable lugs up to 1000 mm².
- b) Punching unit for punching holes up to 22 mm diameter into solid copper and aluminium bus bars with max. thickness of 12 mm. The immersion depth is 60 mm at the middle of the hole. Therefore bus bars with 120 mm width can be punched concentrically. Two millimetre long, precise depth stops and a tip at the punching pins enable a most precisely punching and a high repeat accuracy.

- c) Bending unit for bending copper and aluminium bus bars up to 120 mm width and 12 mm thickness. The tight bending radius enables a space-saving bending. The currently achieved bending angle can be read of a scale fixed at the tool.
- d) Cutting unit for cutting copper and aluminium bus bars up to 120 mm width and 12 mm thickness.

All components are delivered separately. Since the cylinder is needed only once our customers can assemble a flexible system with an excellent cost-performance ratio for crimping cable lugs as well as bending, cutting and punching bus bars.

Special design on request!

Hydraulic punching unit HLW 120



punching unit HLW 120
for long holes
are available on request

Hydraulic punching unit for punching holes into copper or aluminium bus bars up to 12 mm thickness. The maximum hole depth is 60 mm. Therefore bus bars with 120 mm width can be punched concentrically.

advantages:

- with tapped holes for screwing on a workbench
- for nearly all existing bus bars
- two accurate to a millimetre adjustable depth stops, exact centre marks and punching pins with tip enable a precise punching with a high repeat accuracy

The cylinder can be uncoupled from the punching unit. Both parts are sold separately and therefore must be ordered separately. The cylinder can also be connected to the press head HPK 18, to the bending unit HBW 120 and the cutting unit HSW 120. As a driving unit we recommend our two stage hydraulic pump no. 91401 or our electrohydraulic 3-cylinder-radial-piston-pump with positioning no. 90404.

technical data:

hydraulic pressure max. 700 bar
press capacity ca. 200 kN
length including cylinder 410 mm
weight including cylinder 12 kg

cylinder HPZ 25 art.-no.: 90662
punching unit HLW 120 art.-no.: 90560

Punching pins with matrix for hydraulic punching unit HLW 120, only for punching copper or aluminium bus bars. pin with tip, surface: coated



hole diameter in mm	max. thickness of bus bars from - to (mm)	art.-no
5,5	2 – 6	90561
6,6	4 – 8	90562
9	5 – 10	90563
10,5	5 – 12	99988
11	5 – 12	90564
13,5	5 – 12	90565
14	5 – 12	99936
15,5	5 – 12	90566
17,5	5 – 12	90567
18	5 – 12	99940
21,5	5 – 12	90568

Hydraulic bending unit HBW 120



Hydraulic bending unit for bending solid copper or aluminium bus bars up to 120 mm width and 12 mm thickness.

advantages:

- with tapped holes for screwing on a workbench
- with two lateral parallel-stops for exact angular positioning of bus bars
- with scale for reading off the current bending angle

The cylinder can be uncoupled from the bending unit. Both parts are sold separately and therefore must be ordered separately. The cylinder can also be connected to the press head HPK 18, to the punching unit HLW 120 and to the cutting unit HSW 120. As a driving unit we recommend our two stage hydraulic pump no. 91401 or our electrohydraulic 3-cylinder-radial-piston-pump with positioning no. 90404.

cylinder HPZ 25..... art.-no.: 90662
hydraulic bending unit HBW 120 art.-no.: 90556

technical data:

hydraulic pressure..... max. 700 bar
press capacity ca. 200 kN
length including cylinder 345 mm
weight including cylinder 13,7 kg



Dimensional limit for bending steps with the bending unit HBW 120:
basis height at least 66 mm

total height = basis height + thickness of material

bending angle: 8 mm

Hydraulic cutting unit HSW 120



Hydraulic cutting unit for cutting solid copper and aluminum bus bars up to 120 mm width and 12 mm thickness.

advantages:

- great cutting capacity
- level and precise cut

The cylinder can be uncoupled from the cutting unit. Both parts are sold separately and therefore must be ordered separately. The cylinder can also be connected to the press head HPK 18, to the punching unit HLW 120 and to the bending unit HBW 120.

technical data:

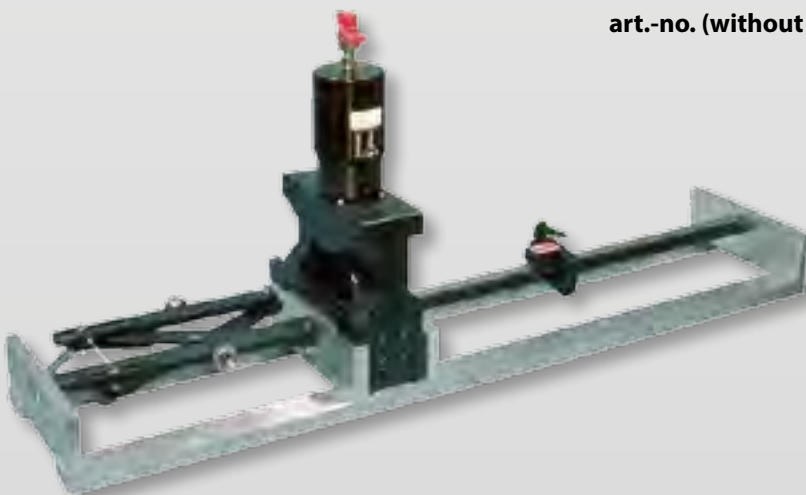
hydraulic pressure..... max. 700 bar
press capacity..... ca. 200 kN
length including Zylinder..... 400 mm
weight including Zylinder:..... 13,1 kg

cylinder HPZ 25..... art.-no.: 90662
cutting unit HSW 120..... art.-no.: 90558

Work bench for HSW 120

Work bench for precise, right angled cutting of copper and aluminium bus bars up to 120 mm width, with scale for segments up to 500 mm length, total length: 925 mm.

art.-no. (without HSW 120): 90559



Hydraulic punching unit HLF 100



Hydraulic punching unit for punching holes into **solid and flexible** bus bars up to 100 mm width and 12 mm thickness, with positioning table and hole-templates for DIN-master gauge for holes.

advantages:

- Two additionally assembled clamping cylinders automatically press the flexible bus bars together before the process of cutting intrinsically starts. This enables punching precise holes free of burr.
- The positioning table combined with the hole template guarantee an exact positioning of bus bars and therefore an absolute repeat accuracy of punchings.

technical data:

hydraulic pressure max. 700 bar
press capacity approx. 200 kN

The cylinder can be uncoupled from the punching unit. Both parts are sold separately and therefore must be ordered separately. The cylinder can also be connected to the bending unit HBW 120, to the cutting unit HSW 120 (only suitable for solid bus bars).

As a driving unit we recommend our two stage hydraulic pump no. 90401 or our electro-hydraulic 3-cylinder-radial-piston-pump with positioning (art.-no.: 90404).

cylinder HPZ 25 art.-no.: 90662
hydraulic punching unit HLF 100 art.-no.: 90581

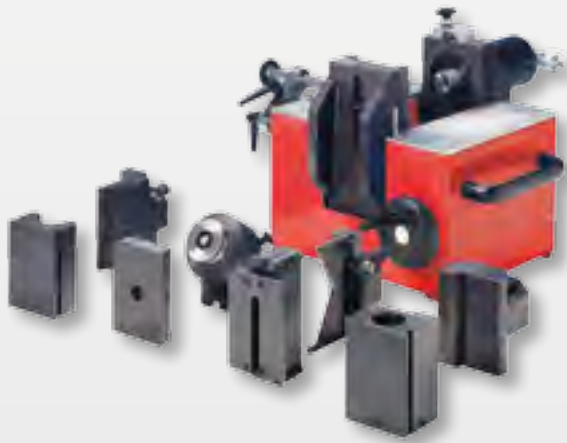


Punching pins with matrix

for hydraulic punching unit HLF 100, only for punching copper- or aluminium bus bars

hole-Ø (in mm)	max. thickness of bus bars from - to	art.- no.
5,5	3 – 5	90579
6,6	3 – 6	90582
9	3 – 8	90583
11	3 – 10	90584
13,5	3 – 12	90585
15,5	3 – 12	90586
17,5	3 – 12	90587

Hydraulic bus conductor work system BLS 120



Hydraulic bus conductor work system for bending, punching, cutting and cranking of copper and aluminium bus bars up to 120 mm width and 12 mm thickness

advantages:

- robust and compact design, suitable for work in the factory and the building sit
- universal tool system: basic device (without accessories)
- suitable for every application case
- around different working tools expandable
- the electrical proximity switch guarantees 100 % bending repeatability
- the work bench adjusts in height with a side stop to make holes without tracing and measuring
- exact crank around the material thickness in one single work step possible
- an easy and quick tool change
- clean and burr-free cut by a special cutter blade geometry
- punching and cutting also of laminated bus bars and earth band possible

hydraulic pumps see catalogue page 191, art.-no.: 91421

technical data:

press capacitymax. 185 kN
hydraulic pressure..... 700 bar
measurements..... approx. 519 x 481 x 343 mm
weight..... 55 kg

basic device (without accessories)

art.-no......**91201**

Accessories for hydraulic bus conductor work system BLS 120



bending die

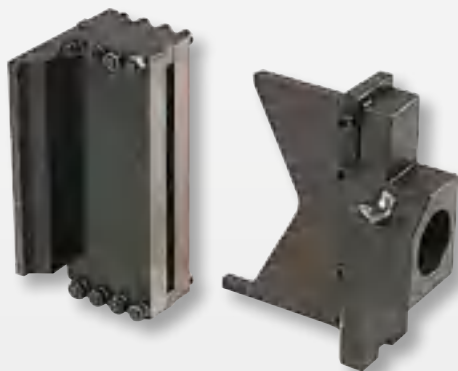
stamp

Bending tool for copper and aluminium bus bars up to max. 120 x 12 mm

	bending radius	bending angle	weight	art.-no.
bending punch*	R5	max. 110°	4.0 kg	91211
bending punch*	R8	max. 110°	4.1 kg	91212
bending punch*	R10	max. 110°	4.4 kg	91213
bending punch*	R20	max. 110°	5.0 kg	91214
back bending punch			3,8 kg	91215
bending die, suitable for stamps R5 to R20			3,3 kg	91210

* bending die is necessary

Accessories for hydraulic bus conductor work system BLS 120



Cutting tool

for **solid** copper and aluminium bus bars up to max. 120 x 12 mm

	weight	art.-no..
cutting tool complete	5,8 kg	91220

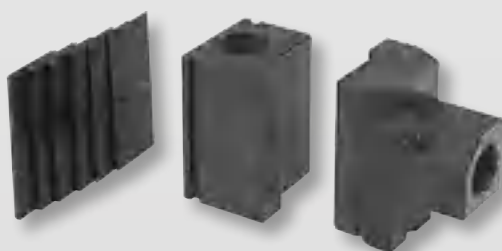


Cutting tool

for **laminated** copper and aluminium bus bars up to max. 120 x 12 mm

	weight	art.-no..
cutting tool complete	9 kg	91225

please note: This cutting tool cannot be used for solid bus bars



Cranking tool

for **solid** copper and aluminium bus bars up to max. 120 x 12 mm

	weight	art.-no.
Cranking tool complete with plates	11 kg	91230

Accessories for hydraulic bus conductor work system BLS 120



Punching tool

for punching solid and laminated copper- and aluminium bus bars
 up to max. 120 x 12 mm
 – for round holes of $\varnothing$ 6.5 up to 21 mm
 – for long holes of $\varnothing$ 6.5 x 13 up to 17 x 20 mm

	weight	art.-no.
punching tool complete (without stamps and matrices)	4,3 kg	91235

Round hole puncher for above-named punching tool

for **solid** and **laminated** copper- and aluminum bus bars up to max. 12 mm



	hole- $\varnothing$ (in mm)	art.-no.
round hole puncher include matrices and blank holder	6,5	91241
	7,0	91243
	8,5	91245
	9	91247
	10	91249
	10,5	91251
	11	91253
	12	91255
	12,5	91257
	13	91259
	14	91261
	14,5	91263
	15	91265
	17	91267
	18	91269
	19	91271
	21	91273

Long hole puncher for above-named punching tool

for **solid** and **laminated** copper- and aluminum bus bars
 up to max. 12 mm thickness



	Loch- $\varnothing$ in (mm)	art.-no.
long hole puncher include matrices and blank holder	6,5 x 13	91277
	6,5 x 21	91279
	8 x 20	91281
	8,5 x 16	91283
	9 x 20	91285
	10,5 x 13	91287
	11 x 20	91289
	13 x 17	91291
	13 x 20	91293
	14 x 20	91295
	17 x 20	91297

Hydraulic puncher HLW 138



Hydraulic puncher HLW 138 for punching holes into sheet steel. Working cylinder complete with tie screw 19 mm and 9.5 mm and a distance bush for the punchers listed below.

Technical data:

hydraulic pressure..... max. 700 bar
weight without puncher..... 3,6 kg

art.-no.: 90500

As a driving unit, we recommend our two stage hydraulic pump FPi70 No. 91401, or an electro-hydraulic 3-cylinder radial piston pump with positioning for accurate work.



Spare tie crew

spare tie crew 9.5 mm

art.-no.: 90550

spare tie crew 19 mm

art.-no.: 90551



Ball-bearing screws for hand operation 9.5 x 50 mm

art.-no.: 90553

Ball-bearing screws for hand operation 19 x 55 mm

art.-no.: 90554

Ball-bearing screws for hand operation 19 x 75 mm

art.-no.: 90555



Anti-abrasion paste

This special paste prevents corrosion and jamming and therefore the premature abrasion of heavy-duty parts. Please apply thinly to all puncher screws with a brush.

tube (7 g)
can (120 g)

art.-no.: 90548

art.-no.: 90549

Punchers

Round punchers



hole-Ø mm	PG- size	metric size	rough drill Ø mm	max. thickness of sheet steel St 37 mm	art.-no.
12,7	PG 7	M 12	11	2	90502
15,2	PG 9	–	11	2	90504
16,2	–	M 16	11	2	90505
18,6	PG 11	–	11	2	90506
20,4	PG 13	M 20	11	2	90508
22,5	PG 16	–	11	2	90510
25,4	–	M 25	11	2	90511
28,3	PG 21	–	11	2	90512
32,5	–	M 32	20,4	3	90513
37	PG 29	–	20,4	3	90514
40,5	–	M 40	20,4	3	90515
47	PG 36	–	20,4	3	90516
50,5	–	M 50	20,4	3	90517
54	PG 42	–	20,4	3	90518
60	PG 48	–	20,4	3	90520
63,5	–	M 63	20,4	3	90521



Square punchers

hole-Ø mm	rough drill Ø mm	max. thickness of sheet steel St 37 mm	art.-no.
46 x 46	28,3	3	90522
50,8 x 50,8	28,3	3	90524
68 x 68	28,3	3	90528
92 x 92	28,3	3	90530



Rectangular punchers

hole-Ø mm	rough drill Ø mm	max. thickness of sheet steel St 37 mm	art.-no.
22 x 30	16,2	2	90534
22 x 42	16,2	2	90536
31,7 x 34,9	16,2	2	90538
68 x 138	30,5	2,5	90540

The standard punchers listed above are not suitable for punching high grade steel (V2A) or similar materials!
 Punchers for high grade steel and special measurements on request!

Innovative earthing terminals with DB and ÖBB certification



press technique earthing



earthing terminals at
base elements



earthing terminals
WEB 1 and WEB 12



WEB 19 with
distance socket



WEB 12 with flat bar
underground construction



V4A 1.4571 stop rail



earthing terminals
with CuStAl 70 mm²
resp. steel rope 95 mm²



WEB 12 with O-type ring
at a tunnel wall



WEB 0 and cable lug
after salt spray test



construction vehicle
earthing



high flexible
cable connection



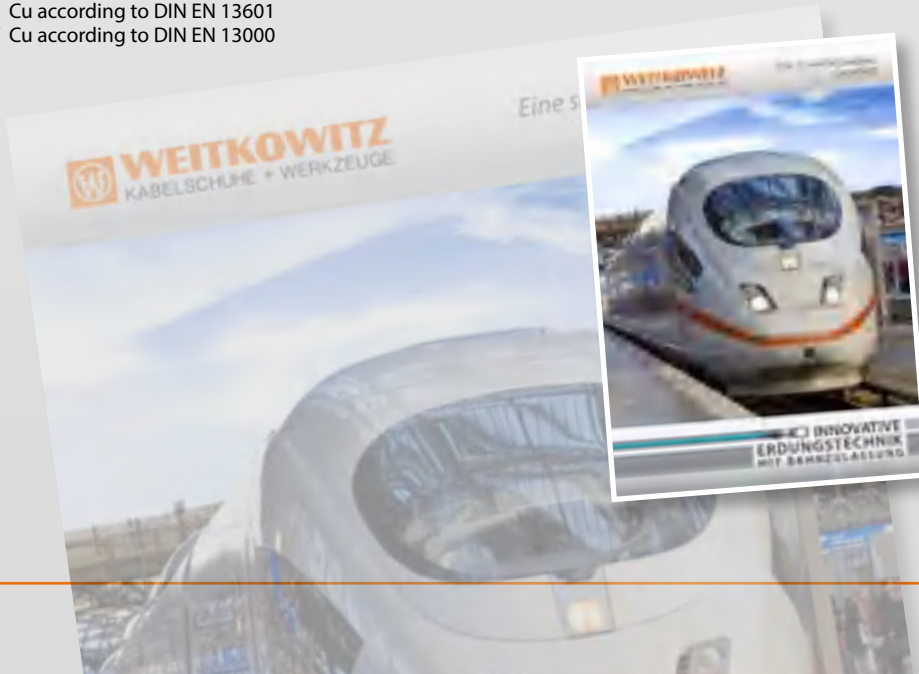
screwed track connector
4 Ebs 15.13.51

Overview

designation	drawing	designation	drawing
WEB 0 connection sleeve out stainless steel V2A Ø 50 mm		WEB 13 / 14 2 cable lugs out of steel with long flange and crimped power cable NYY-O 95 mm² / 70 mm², alternatively PVC-stranded conductor H07V-K 95 mm² / 70 mm²	
WEB 1/8 connection sleeve out of Cu*, tin plated and angle-connection out of steel with crimped power cable NYY-O 95 mm² / 70 mm², alternatively PVC-stranded conductor H07V-K 95 mm² / 70 mm²		Cu**-earthing connector: 4 EBS 15.03.17 2 compression cable lugs according to DIN 46235 with crimped power NYY-O 50 mm² / 70 mm² / 95 mm²	
WEB 2 connection sleeve out of Cu*, tin plated, with crimped iron-rod Ø 16 mm		WEB 15 cable lug out of steel with long flange and crimped power cable NYY-O 50 mm²	
WEB 3 connection sleeve out of Cu*, tin plated, with crimped iron-rod Ø 16 mm.		WEB 16 connection sleeve out of stainless steel V2A Ø 50 mm	
WEB 6/9 2 connection sleeves out of Cu*, tin plated, with crimped power cable NYY-O 95 mm² / 70 mm², alternatively PVC-stranded conductor H07V-K 95 mm² / 70 mm²		bus bar out of Cu*, tin plated	
WEB 7/10 2 angle-connection out of Cu*, tin plated, with crimped power cable NYY-O 95 mm² / 70 mm², alternatively PVC-stranded conductor H07V-K 95 mm² / 70 mm²		earthing bus (potential equalization) out of Cu*, tin plated	
WEB 11/12 connection sleeve out of Cu*, tin plated and cable lug out of steel with long flange and crimped power cable NYY-O 95 mm² / 70 mm², alternatively PVC-stranded conductor H07V-K 95 mm² / 70 mm²			

* Cu according to DIN EN 13601

** Cu according to DIN EN 13000



Innovative earthing terminals with EBA and DB certification.

Ask for our special catalogue in print-version or as pdf-file

21

Crimping instructions for standard-series
WM-crimping

Crimping instructions
Minimum necessary crimping quantity of **WEITKOWITZ** cable lugs and connectors for standard-series.

		Weitkowitz type-designation and article numbers																		
cross section mm	crimping number x width	PW 6/50 90180	PW 6/70 90181	PW 10/120 90185	SHlo.1 91100	HHW 10 91111	AP 10 91120	HPW 10 90653	SHlo.20 91148	MPW 20 90250	HHW 20 91132	APW 20 91143	HPW 20 90656	HHW 30 91152	APW 30 91163	HPW 17 90651	HHW 35 91157	APW 35 91168	HPW 15 90602	HPK 18 90663
6	1 x 5 mm																			
10	1 x 5 mm 1 x 7 mm																			
16	1 x 5 mm 1 x 7 mm																			
25	2 x 5 mm 1 x 9 mm 1 x 10 mm																			
35	2 x 5 mm 1 x 10 mm 1 x 12 mm																			
50	2 x 5 mm 1 x 12 mm																			
70	2 x 5 mm 1 x 12 mm																			
95	2 x 5 mm 1 x 12 mm																			
120	3 x 5 mm 1 x 12 mm																			
150	3 x 5 mm 2 x 7 mm																			
185	3 x 5 mm 2 x 7 mm																			
240	3 x 5 mm 3 x 7 mm																			
300	4 x 5 mm 3 x 7 mm 2 x 13 mm																			
400	4 x 7 mm 2 x 13 mm																			
500	3 x 13 mm																			
630	3 x 13 mm																			

Attention: Take care of the Assembly of cable lugs and connectors (page 207) when processing.
Connectors: Minimum quantity of pressing for each side.

Crimping instructions for DIN 46235-series and DIN 46267-series

Hexagonal-shape-crimping

Crimping instructions
 Minimum necessary crimping quantity of **WEITKOWITZ** cable lugs and connectors
 for DIN 46235-series and DIN 46267-series.

Weitkowitz type- designation and articlenumbers																					
cross section mm	die code	crimping number x width	DW 6/50 90178	DW 6/70 90182	DW 10/120 90189	Stilo 1 91100	HHW 10 91111	AP 10 91120	HPW 10 90653	Stilo 20 91148	MPW 20 90250	HHW 20 91132	APW 20 91143	HPW 20 90656	HHW 30 91152	APW 30 91163	HPW 17 90651	HHW 35 91157	APW 35 91168	HPW 15 90602	HPK 18 90663
6	5	1 x 5 mm																			
		1 x 7 mm																			
10	6	1 x 5 mm																			
		1 x 7 mm																			
16	8	2 x 5 mm																			
		1 x 12 mm																			
25	10	2 x 5 mm																			
		1 x 12 mm																			
35	12	2 x 5 mm																			
		1 x 10 mm																			
		1 x 12 mm																			
50	14	3 x 5 mm																			
		1 x 12 mm																			
70	16	3 x 5 mm																			
		1 x 12 mm																			
95	18	4 x 5 mm																			
		2 x 10 mm																			
120	20	4 x 5 mm																			
		2 x 10 mm																			
150	22	4 x 5 mm																			
		2 x 10 mm																			
185	25	4 x 5 mm																			
		2 x 10 mm																			
240	28	4 x 5 mm																			
		2 x 13 mm																			
300	32	4 x 5 mm																			
		4 x 7 mm																			
		2 x 13 mm																			
400	38	3 x 13 mm																			
500	42	4 x 10 mm																			
625	44	4 x 10 mm																			
800	52	5 x 10 mm																			
1000	58	5 x 10 mm																			

Attention: Take care of the Assembly of cable lugs and connectors (page 207) when processing.
 Connectors: Minimum quantity of pressing for each side.

Crimping instructions for euro-series

WM-crimping

Minimum necessary crimping quantity of **WEITKOWITZ** cable lugs and connectors for euro-series.

		Weitkowitz type-designation and article numbers																		
cross-section mm	crimping number x width	WW 6/50 90179	WW 6/70 90186	WW 10/120 90188	Stilo 1 91100	HHW 10 91111	AP 10 91120	HPW 10 90653	Stilo 20 91148	MPW 20 90250	HHW 20 91132	APW 20 91143	HPW 20 90656	HHW 30 91153	APW 30 91163	HPW 17 90651	HHW 35 91157	APW 35 91168	HPW 15 90602	HPK 18 90663
6	1 x 5 mm																			
	1 x 7 mm																			
10	1 x 5 mm																			
	1 x 7 mm																			
16	2 x 5 mm																			
	1 x 7 mm																			
25	2 x 5 mm																			
	1 x 12 mm																			
35	2 x 5 mm																			
	1 x 10 mm																			
	1 x 12 mm																			
50	2 x 5 mm																			
	1 x 12 mm																			
70	2 x 5 mm																			
	1 x 12 mm																			
95	2 x 5 mm																			
	1 x 12 mm																			
120	3 x 5 mm																			
	1 x 12 mm																			
150	3 x 5 mm																			
	2 x 7 mm																			
185	3 x 5 mm																			
	2 x 7 mm																			
240	3 x 5 mm																			
	3 x 7 mm																			
300	4 x 5 mm																			
	3 x 7 mm																			
400	2 x 13 mm																			
	4 x 7 mm																			
500	2 x 13 mm																			
	3 x 13 mm																			
630	3 x 13 mm																			

Attention: Take care of the Assembly of cable lugs and connectors (page 207) when processing.
Connectors: Minimum quantity of pressing for each side.

Crimping instructions for tubular cable lugs and connectors

for finewiring conductors
WM-crimping

Crimping instructions
Minimum necessary crimping quantity of **WEITKOWITZ** cable lugs and connectors for finewiring conductors.

cross section mm	crimping number x width	Weitkowitz type-designation and article numbers											
		FW 10/70	Stilo 1	HHW 10	AP 10	HPW 10	Stilo 20	MPW 20	HHW 20	APW 20	HPW 20	HHW 30	APW 30
10	1 x 5 mm 1 x 7 mm	90184	91100	91111	91120	90653	91148	90250	91132	91143	90656	91152	91163
16	1 x 5 mm 2 x 5 mm 1 x 10 mm												
25	2 x 5 mm 1 x 10 mm												
35	2 x 5 mm												
50	2 x 5 mm												
70	2 x 5 mm 3 x 5 mm												
95	3 x 5 mm												
120	3 x 5 mm												
150	3 x 5 mm												
185	3 x 5 mm 3 x 7 mm												
240	4 x 5 mm 3 x 7 mm												

Attention: Take care of the Assembly of cable lugs and connectors (page 207) when processing.
Connectors: Minimum quantity of pressing for each side.

Crimping instructions for tubular cable lugs and connectors
for finewiring conductors **Siemens Norm SN 71322**
WM-crimping

Pressanweisung
Minimum necessary crimping quantity of **WEITKOWITZ** cable lugs and connectors for finewiring conductors **Siemens Norm SN 71322** (WM-shape-crimping)

cross section mm	crimping number x width	Weitkowitz type-designation and articlenumbers											
		Stilo 1 91100	HHW 10 91111	AP 10 91120	HHW 20 91132	APW 20 91143	Stilo 20 91148	HPW 15 90602	HPW 17 90651	HHW 30 91152	HHW 35 91157	APW 30 91163	APW 35 91168
10	1 x 7 mm												
16	1 x 7 mm												
25	2 x 5 mm												
	1 x 10 mm												
35	2 x 5 mm												
	1 x 10 mm												
50	2 x 5 mm												
	2 x 7 mm												
	1 x 12 mm												
70	2 x 5 mm												
	2 x 7 mm												
	1 x 12 mm												
95	2 x 7 mm												
120	2 x 7 mm												
150	3 x 5 mm												
185	3 x 5 mm												
240	3 x 5 mm												
	3 x 7 mm												
300	3 x 7 mm												

Attention: Take care of the Assembly of cable lugs and connectors (page 207) when processing.
Connectors: Minimum quantity of pressing for each side.

Crimping instructions for aluminium cable lugs and connectors

Hexagon-shape-crimping

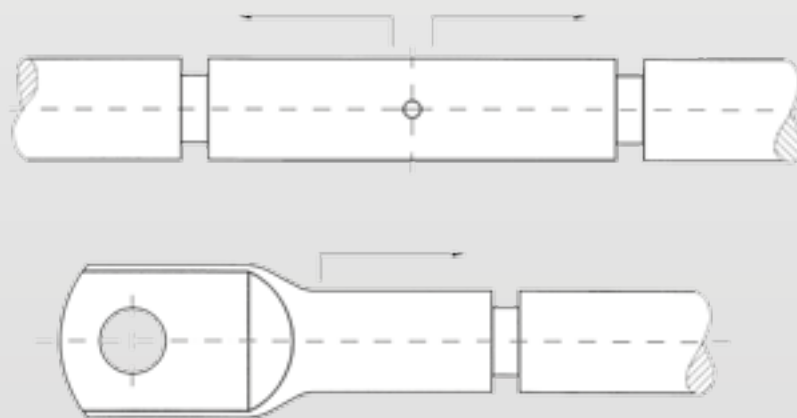
Crimping instructions
Minimum necessary crimping quantity of **WEITKOWITZ** cable lugs and connectors for aluminium-series.

Weitkowitz type-designation and article numbers																					
cross section mm	die code	crimping number x width	DW 6/50 90178	DW 6/70 90182	DW 10/120 90189	Stilo 1 91100	HHW 10 91111	AP 10 91120	HPW 10 90653	Stilo 20 91148	MPW 20 90250	HHW 20 91132	APW 20 91143	HPW 20 90656	HHW 30 91152	APW 30 91163	HPW 17 90651	HHW 35 91157	APW 35 91168	HPW 15 90602	HPK 18 90663
10	10	2 x 5 mm																			
		1 x 12 mm																			
16	10	3 x 5 mm																			
		1 x 12 mm																			
25	12	3 x 5 mm																			
		4 x 5 mm																			
		2 x 10 mm																			
35	14	5 x 5 mm																			
		2 x 12 mm																			
50	16	5 x 5 mm																			
		2 x 12 mm																			
70	18	6 x 5 mm																			
		3 x 10 mm																			
95	22	6 x 5 mm																			
		3 x 10 mm																			
120	22	6 x 5 mm																			
		3 x 10 mm																			
150	25	6 x 5 mm																			
		3 x 10 mm																			
185	28	6 x 5 mm																			
		3 x 13 mm																			
240	32	6 x 5 mm																			
		5 x 7 mm																			
300	34	3 x 13 mm																			
		3 x 13 mm																			
400	38	5 x 5 mm																			
		3 x 16 mm																			
500	44	3 x 16 mm																			
		4 x 20 mm																			
625	52	4 x 20 mm																			
		3 x 20 mm																			
800	58	3 x 20 mm																			
		5 x 20 mm																			

Attention: Take care of the Assembly of cable lugs and connectors (page 207) when processing.
Connectors: Minimum quantity of pressing for each side.

Assembly of cable lugs and connectors – in general –

1. Take the measurements of the cable lugs / connectors and their allocation of cross section out of this catalogue.
2. Cut the cable right-angled to the conductor. Strip off the insulation of the cable. The part to be stripped of has to be as long as the sleeve (measurement a) of the cable lug / connector + about 10%.
3. Before crimping clean the conductor with a wire brush in order to remove dirt and oxidation. Sectorshaped conductors must be rounded before crimping!
4. Insert the noninsulated conductor into the compression sleeve until it reaches the wire stop.
5. Before starting to crimp please check whether conductor and cable lug respectively connector have the same cross section and do fit to each other according to our catalogue.
6. Please check whether crimping tool and crimping dies are suitable for the cable lugs/ connectors you want to crimp. You can take this information for each series and cross section from the manufacturer's catalogue or the operating instructions of the tool.
7. Please pay attention to the quantity and the direction of crimping. If several crimpings are necessary (cp. catalogue and/or operating instruction of the used tool) please follow the illustration below. Start crimping from the end of the cable and proceed in direction to the end of the sleeve (cp. illustration).



For the quantity of crimpings take notice of the preceding charts

Crimping tool recommendation for twin cord-end-sleeves (page 92)

checked in alliance with wire LiYV. H-05-K and H-07V-K (other wires on request)

cross section mm ²	AZ 8 90808	AZ 10 90810	AZ 14 90814	WZ 1 90701	WZ 12 90712	MP 13 90200	AP 10 und HPI 10 91120 / 91111
2 x 0,25	position 0,08 - 10 mm ²	x	x	die for end sleeves 0,5-16 ² die 0,5 - 0,75 ²			
2 x 0,34	position 0,08 - 10 mm ²	x	x	die for end sleeves 0,5-16 ² die 0,5 - 0,75 ²			
2 x 0,5	position 0,08 - 10 mm ²	x	x	die for end sleeves 0,5-16 ² die 1 - 1,5 ²			
2 x 0,75	position 0,08 - 10 mm ²	x	x	die for end sleeves 0,5-16 ² die 1 - 1,5 ²			
2 x 1	position 0,08 - 10 mm ²	x	x	die for end sleeves 0,5-16 ² die 2,5 ²			
2 x 1,5	position 0,08 - 10 mm ²	x	x	die for end sleeves 0,5-16 ² die 2,5 ²			
2 x 2,5	position 0,08 - 10 mm ²		x	die for end sleeves 0,5-16 ² die 4 ²		with die no. 90225	with die no. 91383
2 x 4	position 0,08 - 10 mm ²			die for end sleeves 0,5-16 ² die 6 ²		with die no. 90226	with die no. 91384
2 x 6	position 16 mm ²			die for end sleeves 0,5-16 ² die 10 ²	with die no. 90780	with die no. 90227	with die no. 91385
2 x 10					with die no. 90780	with die no. 90228	with die no. 91386
2 x 16					with die no. 90780	with die no. 90229	with die no. 91387

Electrical characteristics

Maximum allowable current load of cable lugs and connectors
in conjunction with insulated conductors (at ambient temperature 30°C)

nominal cross section (mm ²)	Single cor cable – rubber insulated – PVC insulated – TPE insulated – heat resistant	Multicore cables + cords, excl. home- and portable apparatus – rubber insulated – PVC insulated – TPE insulated – heat resistant	Multicore heavy duty rubber cables minimum 0,6 / 1 kV
	Cu current rating in A	Cu current rating in A	Cu current rating in A
0,75	15	12	–
1	19	15	–
1,5	24	18	23
2,5	32	26	30
4	42	34	41
6	54	44	53
10	73	61	74
16	98	82	99
25	129	108	131
35	158	135	162
50	198	168	202
70	245	207	250
95	292	250	301
120	344	292	–
150	391	335	–
185	448	382	–
240	528	453	–
300	608	523	–
400	726	–	–
500	830	–	–
sources of current ratings:	DIN VDE 0298-4, 2003-08 Table 11 Columne 2	DIN VDE 0298-4, 2003-08 Table 11 Columne 5	DIN VDE 0298-4, 2003-08 Table 15 Columne 4+2

Note:

Design of these tables deviates from VDE 0298-4 design. In case of doubt, appliance of the current issue of the DIN VDE 0298-4 is obligatory.

Above Table values have to be taken into consideration of further applicable converting / derating factors:

- other ambient temperatures: DIN VDE 0298-4
- pay attention to the maximum electric current of the used equipment
- pay attention to the maximum current load of the used cable under consideration of the laying procedure

Technical data / general information

Temperature resistance	informations in ° C
Copper-cable lugs and -connectors without insulation	up to max. 120°C (according to DIN 46 234)
Copper-cable lugs and -connectors with pa-insulation	–55°C to +105°C
Copper-cable lugs and -connectors with PC-insulation	– 40 to + 120
Butt-connectors with shrink insulation: (p. 75)	–10°C to +105°C
Terminals with PVC (polyvinyl chloride) insulation	– 10 to + 70
Terminals with PC (polycarbonate=makrolon) insulation	– 40 to + 100
Terminals with PA (polyamide)-insulation	– 55 to + 100
Brass terminals, tin plated, without insulation	– 55 to + 100
Steel terminals, nickel-plated	max. 250
Cord-end-sleeves with insulation	max. 105
Nickel cable lugs and connectors	max. 500
Cable lugs out of stainless steel	max. 400

Silicone and halogen concentration of insulated connecting material

The following chart shows the concentration of silicone and halogen of insulated connection material delivered by us:

article description	catalogue page	free of silicone	free of halogen
Terminals, ring type	78 – 80	yes	yes
Terminals, fork type	81	yes	yes
Pin-terminals	82	yes	yes
Butt-connectors	82	yes	yes
Parallel-connectors	83	yes	yes
Heat shrinkable-butt splice connectors	83	yes	yes
Closed end connectors	83	yes	yes
Male und female disconnectors partly PVC - insulated	84	yes	no
Male und female disconnectors partly PC - insulated	84	yes	yes
Female disconnectors partly PA - insulated	85	yes	yes
Female disconnectors, fully insulated	85	yes	yes
Piggy back disconnectors PVC - insulated	86	yes	no
Piggy back disconnectors PC - insulated	86	yes	yes
Flag female disconnectors	86	yes	yes
Receptacle disconnectors PVC - insulated	86	yes	no
Bullet disconnectors partly PVC - insulated	87	yes	no
Bullet disconnectors partly PC - insulated	87	yes	yes
Receptacle and bullet disconnectors, fully insulated	87	yes	yes
Insulated housings	89	yes	yes
Insulated male tabs art.-no. 44064, 44067, 44069, 44071, 44073, 44075	91	yes	no
Insulated male tabs no. 44065	91	yes	yes
Insulated male tabs no. 44068	91	yes	yes
Cord-end-sleeves	98 + 99	yes	yes
Twin cord-end-sleeves	100	yes	yes
Cord-end-sleeves for short circuit resistant conductors	100	yes	yes
Aderendhülsen for Tri-Rated Cables	101	yes	yes
Cord-end-sleeves, strip form	104	yes	yes

Technical information for shrinkable tubings

technical information	Typ W 135 B	Typ W 135 gr/ge B	Typ W 135	Typ 135 tr	Typ W 135 3:1	Typ WKS 3:1
material	polyolefine	polyolefine	polyolefine	polyolefine	polyolefine	polyolefine
colour	black	green/yellow	black	transparent	black	black
shrinking proportion	2:1	2:1	2:1	2:1	3:1	3:1
heat resistance	– 55° C to + 125° C	– 55° C to + 125° C	– 55° C to + 135° C	– 55° C to + 135° C	– 55° C to + 135° C	– 55° C to + 110° C (outer sheath)
shrinking temperature	min. 90° C	min. 90° C	min. 110° C	min. 110° C	min. 90° C	min. 95° C
dielectric break-down strength/norm	20kV/mm according IEC 243	20kV/mm according IEC 243	24 kV/mm according VDE 0303T.2	26 kV/mm according VDE 0303T.2	24 kV/mm according VDE 0303T.2	22 kV/mm according VDE 0303T.2
further information	free of silicone UL224/VW1 accredited	free of silicone UL224/VW1 accredited	free of silicone UL224 accredited	free of silicone	free of silicone UL224 accredited	free of silicone

technical changes reserved.

technical information	Typ WDW	Typ W 135 gr/ge	Typ W 135 BL	Typ WHF	Schrumpfschlauch Set-Nr. 90859
material	polyolefine	polyolefine	polyolefine	polyolefine	polyolefine
colour	black	green/yellow	blue	black	diff. colours
shrinking proportion	3:1	3:1	3:1	2:1	2:1
heat resistance	– 55° C to + 110° C	– 55° C to + 135° C	– 55° C to + 135° C	– 40° C to + 105° C	– 55° C to + 135° C
shrinking temperature	min. 120° C	min. 90° C	min. 90° C	min. 115° C	min. 110° C
dielectric break-down strength/norm	20 kV/mm according ASTM-D149	24 kV/mm according VDE 0303T.2	24kV/mm according VDE 0303T.2	24kV/mm according IEC 243	24kV/mm according VDE 0303T.2
further information	free of silicone	free of silicone	free of silicone UL224 accredited	free of silicone	free of silicone UL224 accredited

Technical changes reserved.

The specified wall thickness (mm) on pages 103 – 106 are refer to the wall-thickness after completely shrinking!

copper notations

In line with the harmonisation of European standards the DIN 40500, DIN1787 and DIN 1754 page 1 had been cancelled and replaced by the European standards EN 13599, EN 13600, EN 13601 and EN 13605. Simultaneously the notations of copper materials have changed. The following chart gives an overview:

former notation	new notation	EN-number	standard	copper content at least
E-Cu 58	Cu-ETP	CW004A	DIN EN 13599 DIN EN 13600 DIN EN 13601	99,9%
E-Cu 57	–	–	–	99,9%
SE-Cu	Cu-HCP	CW021A	DIN EN 13600 DIN EN 13599	99,95%
	Cu-PHC	CW020A	DIN EN 13600	99,95%
SF-Cu	Cu-DHP	CW024A	DIN EN 12499	99,9%

We have all our copper notations adjusted to the new European standard. Therefore the names of the materials have changed but our high quality standard hasn't been affected in any way. Furthermore we will exclusively use copper with a copper concentration from at least 99,9%.

Traction - specified value

cross section mm ²	Values for crimpings up to 10 mm ² except cord-end-sleeves (EN 60352 part 2) release 10/2002			Value for blade terminals copper-conductors DIN EN 61210 (VDE 0613 part 6) release 6/2011			cord-end-sleeves	
	traction 100%	130%	150%	traction 100%			cross-section	EN 60947-1 (VDE 0660 part 100) release 04/2008 EN 60999-1 part 12/2000 (from 0,2-35 mm ²) EN 60999-2 part 4/2004 (from 50 mm ²)
0,2				28 N			0,2	10 N
0,34				40 N			0,34	15 N
0,5	60 N	78 N	90 N	56 N			0,5	20 N
0,75	85 N	111 N	128 N	84 N			0,75	30 N
1	108 N	140 N	162 N	108 N			1	35 N
1,5	150 N	195 N	225 N	150 N			1,5	40 N
2,5	230 N	299 N	345 N	230 N			2,5	50 N
4	310 N	403 N	465 N	310 N			4	60 N
6	360 N	468 N	540 N	360 N			6	80 N
10	380 N	494 N	570 N				10	90 N
	Values for copper crimpings from 10 mm ² DIN EN 61238-1 release 3/2004 except cord-end-sleeves (VDE 0220 part 100 cross-section x 60)			Values for aluminium crimpings from 16 mm ² (VDE 0220 part 100 cross-section x 40)			16	100 N
	traction 100%	130%	150%	traction 100%	130%	150%	25	135 N
10	600 N	780 N	900 N				35	190 N
16	960 N	1.248 N	1.440 N	640 N	832 N	960 N	50	236 N
25	1.500 N	1.950 N	2.250 N	1.000 N	1.300 N	1.500 N	70	285 N
35	2.100 N	2.730 N	3.150 N	1.400 N	1.820 N	2.100 N	95	351 N
50	3.000 N	3.900 N	4.500 N	2.000 N	2.600 N	3.000 N	120	427 N
70	4.200 N	5.490 N	6.300 N	2.800 N	3.640 N	4.200 N	150	427 N
95	5.700 N	7.410 N	8.550 N	3.800 N	4.940 N	5.700 N	185	503 N
120	7.200 N	9.360 N	10.800 N	4.800 N	6.240 N	7.200 N	240	578 N
150	9.000 N	11.700 N	13.500 N	6.000 N	7.800 N	9.000 N	300	578 N
185	11.100 N	14.430 N	16.650 N	7.400 N	9.620 N	11.100 N		
240	14.400 N	18.720 N	21.600 N	9.600 N	12.480 N	14.400 N		
300	18.000 N	23.400 N	27.000 N	12.000 N	15.600 N	18.000 N		
400	24.000 N*			16.000 N	20.800 N	24.000 N		
500	30.000 N*			20.000 N	26.000 N	30.000 N		
625	37.500 N*			25.000 N*				
800	48.000 N*			32.000 N*				
1.000	60.000 N*			40.000 N*				

* The maximum value of VDE 0202 T100 is 20.000 N!

To pass the test according to the norm, the conductor in the crimping connection may not slide by 100% of the traction during 60 seconds holding time.

Technical data / Authorisation of cable ties

GENERAL INFORMATION

WEITKOWITZ polyamide cable ties are qualitative high-standard products made in the European Union. We only use pure polyamide 6.6 without adding any recycling compounds. Material and products subject to strict quality controls.

FEATURES

The used polyamide 6.6 is self-extinguishing according to UL 94-V2 and free of halogen and silicon. Water absorption is approx. 2,5% at 23°C and 50% atmospheric moisture.

RESISTANCE AGAINST CHEMICALS

Among other things polyamide are resistant against dissolver, oils, benzin, hydrocarbon, sea water, alcohol, soap- and detergent agents.

CONDITION OF PROCESSING

Temperature of processing during installation: – 15 °C up to + 60 °C

APPLICATION CONDITIONS

Regularly usage temperature after installation for

- Standard cable ties nature and black and cable ties with steel clip: – 40 °C up to + 85 °C
- Heat stabilized cable ties: – 40 °C up to + 130 °C (temporary up to + 145 °C)

PACKAGE AND ADVICE FOR STORAGE

Usually we supply polymide cable ties in welded plastic bags á 100 or 50 pieces. To prevent the cable ties from desiccation the packages should remain close until processing. The ideal storage conditions are a temperature of about 20 °C and an air humidity of about 50%.

AUTHORISATION

With **WEITKOWITZ** cable ties you choose certificated quality:

Institute of Certification		Norm
POLYAMID-CABLE LUGS		
	Underwriters Laboratories UL (USA)	U.L. 94 - Flamability of Plastic Materials (raw material) U.L. 1565 - Wire Positioning Devices (finished product)
	Germanischer Lloyd	IEC 60092-101, MIL-23190 E UL 1565
	RINA	IEC 60092-101 flame retardant
	DET NORSKE VERITAS	IEC 60092-101 BV Rules for the Classification
	BUREAU VERITAS	IEC 60092 series, BV Rules for the Classification of Steel Ships
	Lloyd's Register	UL 94-V2, UL 1565, MIL-S-23190E, IEC 60092-101
	Military Standard (USA) American Defense Dept.	MIL-C-23190 Military Standard
	IMQ	CEI EN 50146-I Ed.2000 and so to the essential requirements of the Policy B.T. 73/23 CEE and 93/68 CEE (mentioned for cable ties nature page 98 + 99)
	IMQ	EN 50146:2000 and so to the essential requirements of the Policy B.T.73/23 CEE and further modifications (mentioned for cable ties with steel clip page102)
		ROHS-conformity tested
STEEL-CABLE LUGS		Norm
	Underwriters Laboratories UL (USA)	Wire Positioning Devices
	DET NORSKE VERITAS	Rules for Classification of Ships and Mobile Offshore Units

Technical changes reserved.

The specific classification of a special kind of cable tie can be taken from the respective product pages.

Technical data / general information

Handling instructions for cable ties

Whenever working with cable ties the power you use to tighten a cable tie is very important. This power added with the load you want to fix results in the so called working load.

$$\text{working load} = \text{tightening power} + \text{constant load}$$

The tightening power should be approx. 10 % of the working load. The working load can be calculated as follows:

$$\text{working load} = \frac{\text{tensile strength according to catalogue}}{\text{safety factor}}$$

Under normal conditions it is sufficient to calculate with a safety factor of two. But if the connection has to stand vibrations, pushes, strong strain or extensions the safety factor must be higher. If the temperature is usually below 0°C or above 40°C a safety factor of 10 is required.

If the constant load (+ 10% tightening power) is higher than the calculated working load of the used cable tie, it is necessary either to use several cable ties or a different cable tie with a higher tensile strength.

If cable ties are tightened by hand it is possible that especially when handling small cable ties, the forces, which occur during tightening the cable tie, are higher than its tensile strength. In this case the cable tie will open up or tear immediately or after a short time. Therefore we recommend using a special cable tie tension tool in order to guarantee a constant and adequate tightening power.

If you have any further questions don't hesitate to contact us.

Printing of plastic cable ties in accordance with your instructions, e.g. for use as a seal

In accordance to your wishes we like to print the cable ties in a foil hot stamping process. The applied lettering is extremely adhesive and scratch resistant. Whether your company name and / or a serial number should be printed, you decide.

You have requirements, **we** deliver fast and cheap

for example:



example
12345

technical data / general information

PULL-OUT-FORCES CONDUCTOR / CABLE LUG:

WEITKOWITZ cable lugs/-connectors which are processed with **WEITKOWITZ** crimping tools according to our crimping instructions have pull-out-forces look on page 211.

Please note, that a proper connection can only be guaranteed when using **WEITKOWITZ** crimping solderless cable connections in conjunction with **WEITKOWITZ** tools.

CRIMPING OF SOLID CONDUCTORS:

Cable lugs, connectors and crimping tools are designed for crimping stranded conductors unless differently indicated in our catalogue. For crimping on solid conductors, please clarify the processing with **WEITKOWITZ** before starting to crimp.

TIGHTENING TORQUES FOR FIXTURE SCREWS:

in accordance to EN60947-1, DIN 43673-1 oder DIN 46200:

size of thread	brass (Cu M10 and more) (Nm)	steel 8.8 (Nm)	stainless steel (Nm)
M5	2	2,5	3
M6	3	4,5	5,5
M8	6	10	15
M10	10	20	30
M12	14	40	60
M14	19	80	120
M16	25		
M20	36		
M24	50		

EXAMINATION OF YOUR WEITKOWITZ CRIMPING TOOLS:

We recommend a yearly examination (with permanent use shorter periods after agreement) of your **WEITKOWITZ**-crimping tools by our service-department. The fixed price contains a test certificate including an annual test badge.

REPAIR AT CRIMPING AND CUTTING TOOLS/MODIFICATION AT TOOLS:

Tools delivered by **WEITKOWITZ** may not be changed in any way. In particular it is not allowed to make diameter holes. For troublefree clamping of hydraulic cylinders into a vice use only the suitable **WEITKOWITZ** jaws. Repairs of tools may only be executed by **WEITKOWITZ** service-departement.

LENDING-SERVICE:

For special problems of connection or the management of special order situations we offer a wide range of lending-tools

Technical changes reserved.

technical data / general information

Conductor cross section comparison

comparable ISO-cross section in mm ²	AWG / MCM	
	AWG	cross section mm ²
0,14	26	0,128
0,2	24	0,205
0,34	22	0,325
0,5	20	0,519
0,75	18	0,823
1	–	–
1,5	16	1,31
2,5	14	2,08
4	12	3,31
6	10	5,27
10	8	8,35
16	6	13,3
25	4	21,2
35	2	33,6
–	1	42,4
50	0	53,4
70	00	67,5
95	000	85,0
–	0000	107,2
120	250 MCM	127
150	300 MCM	152
185	350 MCM	177
240	500 MCM	253
300	600 MCM	304

Colour of insulation

cross section mm ²	colour
0,1 – 0,5	yellow
0,5 – 1	red
1,5 – 2,5	blue
4 – 6	yellow
10	red
16	blue
25	yellow

cross section mm ²	colour
35	red
50	blue
70	yellow
95	red
120	blue
150	yellow

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
11310	20	11469	21	11722	22	11844	24	12706	68
11311	20	11470	21	11723	22	11845	24	12707	68
11312	20	11471	21	11725	22	11846	24	12710	68
11313	20	11510	29	11726	22	11847	24	12711	68
11314	20	11511	29	11727	22	11849	24	12712	68
11315	20	11512	29	11730	22	11850	24	12715	68
11316	20	11513	29	11731	22	11851	24	12716	68
11317	20	11514	29	11732	22	11883	24	12720	68
11318	20	11515	29	11733	22	11884	24	12721	68
11320	20	11516	29	11734	22	11885	23	12722	68
11321	20	11517	29	11735	22	11886	24	12725	68
11322	20	11518	29	11736	22	11889	24	12726	68
11323	20	11520	29	11737	22	11890	24	12727	68
11325	20	11521	29	11738	22	11892	24	12730	68
11326	20	11522	29	11740	22	11894	24	12731	68
11327	20	11523	29	11741	22	11895	24	12732	68
11330	20	11525	29	11742	22	11897	24	12733	68
11331	20	11526	29	11744	22	12000	66	12735	68
11332	20	11527	29	11745	22	12001	66	12736	68
11333	20	11528	29	11746	22	12002	66	12737	68
11334	20	11530	29	11747	22	12009	66	12738	68
11335	20	11531	29	11749	23	12010	66	13000	8, 34
11336	20	11532	29	11750	23	12011	66	13001	8, 34
11337	20	11533	29	11751	23	12012	66	13002	8, 34
11338	20	11535	30	11783	22	12015	66	13005	8, 34
11340	20	11536	30	11784	22	12016	66	13006	8, 34
11341	20	11537	30	11785	22	12017	66	13007	8, 34
11342	20	11538	30	11786	22	12018	66	13008	8, 34
11345	20	11539	30	11789	23	12076	66	13010	8, 34
11346	20	11540	30	11790	23	12077	66	13011	8, 34
11347	20	11541	30	11792	23	12078	66	13012	8, 34
11349	20	11542	30	11794	23	12081	66	13013	8, 34
11350	20	11543	30	11795	23	12082	66	13015	8, 34
11351	20	11545	30	11797	23	12083	66	13016	8, 34
11352	20	11546	30	11810	23	12101	66	13017	8, 34
11355	21	11547	30	11811	23	12102	66	13018	8, 34
11356	21	11548	30	11812	23	12110	66	13020	8
11357	21	11549	30	11813	23	12111	66	13021	8
11358	21	11550	30	11815	23	12112	66	13022	8
11382	20	11551	30	11816	23	12115	66	13023	8
11383	20	11552	30	11817	23	12116	66	13024	8
11384	20	11555	30	11818	23	12117	66	13050	9
11385	20	11556	30	11820	24	12118	66	13051	9
11386	20	11557	30	11821	24	12205	66	13052	9
11389	21	11560	30	11822	24	12206	66	13055	9
11390	21	11561	30	11823	24	12207	66	13056	9
11392	21	11562	30	11825	24	12210	66	13057	9
11393	21	11583	29	11826	24	12211	66	13058	9
11394	21	11584	29	11827	24	12212	66	13060	9
11395	21	11585	29	11830	24	12450	66	13061	9
11397	21	11586	30	11831	24	12454	66	13062	9
11398	21	11710	22	11832	24	12458	66	13063	9
11460	21	11711	22	11833	24	12460	66	13065	9
11461	21	11712	22	11834	24	12462	66	13066	9
11462	21	11713	22	11835	24	12510	68	13067	9
11463	21	11715	22	11836	24	12511	68	13068	9
11464	21	11716	22	11837	24	12512	68	13070	9
11465	21	11717	22	11838	24	12515	68	13071	9
11466	21	11718	22	11840	24	12516	68	13072	9
11467	21	11720	22	11841	24	12517	68	13073	9
11468	21	11721	22	11842	24	12705	68	13076	9

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
13077	9	13178	16, 41	13254	12, 36	13336	14	13520	26
13078	9	13179	16, 41	13255	12, 36	13337	14	13521	26
13081	9	13180	16, 41	13256	12, 36	13338	14	13522	26
13082	9	13181	16, 41	13257	12, 36	13339	14	13523	26
13083	9	13182	16, 41	13259	12, 36	13340	14	13524	26
13086	9	13183	16, 41	13260	12, 36	13341	14	13525	26
13087	9	13184	16, 41	13261	12, 36	13342	14	13526	26
13088	9	13185	16, 41	13262	12, 36	13344	14	13527	26
13100	13, 38	13187	16, 41	13263	12, 36	13345	14	13528	26
13101	13, 38	13188	16, 41	13264	12, 36	13346	14	13530	26
13102	13, 38	13189	16, 41	13265	12, 36	13347	14	13531	26
13105	13, 38	13204	10	13266	12, 36	13348	14	13532	26
13106	13, 38	13205	10	13269	12, 36	13349	14	13533	26
13107	13, 38	13206	10	13270	12, 36	13350	14	13534	27
13108	13, 38	13207	10	13271	12, 36	13351	14	13535	27
13110	13, 38	13208	10	13275	12, 36	13352	14	13536	27
13111	13, 38	13209	10	13276	12, 36	13354	14	13537	27
13112	13, 38	13210	10	13281	11	13355	14	13538	27
13113	13, 38	13211	10	13282	11	13356	14	13539	27
13115	13, 38	13212	10	13283	11	13357	14	13540	27
13116	13, 38	13213	10	13284	11	13360	14, 39	13541	27
13117	13, 38	13214	10	13285	11	13361	14, 39	13542	27
13118	13, 38	13215	10	13286	11	13362	14, 39	13543	27
13120	13	13216	10	13287	11	13381	14	13545	27
13121	13	13217	10	13288	12, 36	13384	14	13546	27
13122	13	13218	10	13289	12, 36	13396	13	13547	27
13123	13	13219	10	13290	12, 36	13410	17	13548	27
13134	15	13220	10	13292	10	13412	17	13549	27
13135	15	13221	10	13293	12, 36	13414	17	13550	27
13136	15	13222	10	13296	10	13416	17	13551	27
13140	15	13223	10	13297	11	13418	17	13552	27
13141	15	13224	10	13298	10	13420	17	13554	17
13142	15	13225	11	13299	11	13450	17, 42	13555	17
13144	15	13226	11	13305	13	13452	17, 42	13556	17
13145	15	13227	11	13306	13	13454	17, 42	13557	17
13146	15	13228	11	13307	13	13456	17, 42	13558	17
13147	15	13229	11	13308	13	13458	17	13560	17
13148	15	13230	11	13309	13	13460	17	13561	17
13150	15	13231	11	13310	13	13462	17	13562	17
13151	15	13232	11	13311	13	13464	17	13563	17
13152	15	13233	11	13312	13	13466	17	13564	17
13153	15	13234	11	13313	13	13468	17	13566	17
13154	15	13235	11	13314	13	13470	17	13567	17
13155	15	13236	11	13315	13	13472	17	13568	17
13156	15	13237	11	13316	13	13474	17	13569	17
13157	15	13238	11	13317	13	13476	17, 42	13570	17
13159	15	13239	11	13318	13	13478	17, 42	13572	17
13160	15	13240	11	13320	14	13480	17, 42	13573	17
13161	15	13241	11	13321	14	13482	17, 42	13574	17
13162	15	13242	11	13322	14	13484	17, 42	13575	17
13165	16	13243	11	13323	14	13486	17, 42	13576	17
13166	16	13244	11	13325	14	13488	17, 42	13581	26
13167	16	13245	11	13326	14	13510	26	13583	26
13169	16	13246	11	13327	14	13511	26	13584	26
13170	16	13247	11	13328	14	13512	26	13585	26
13171	16	13248	11	13330	14	13513	26	13586	27
13172	16	13249	12, 36	13331	14	13514	26	13588	27
13173	16	13250	12, 36	13332	14	13515	26	13589	27
13174	16	13251	12, 36	13333	14	13516	26	13590	27
13175	16	13252	12, 36	13334	14	13517	26	13592	27
13176	16	13253	12, 36	13335	14	13518	26	13593	27

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
13594	27	13689	27	13757	12, 36	13839	14	14216	46
13595	27	13690	27	13759	12, 36	13840	14	14217	46
13597	27	13692	27	13760	12, 36	13841	14	14218	46
13598	27	13693	27	13761	12, 36	13842	14	14219	46
13610	26	13694	27	13762	12, 36	13844	14	14220	46
13611	26	13695	27	13763	12, 36	13845	14	14221	46
13612	26	13697	27	13764	12, 36	13846	14	14222	46
13613	26	13698	27	13765	12, 36	13847	14	14223	46
13614	26	13704	10	13766	12, 36	13848	14	14224	46
13615	26	13705	10	13769	12, 36	13849	14	14225	47
13616	26	13706	10	13770	12, 36	13850	14	14226	47
13617	26	13707	10	13771	12, 36	13851	14	14227	47
13618	26	13708	10	13775	12, 36	13852	14	14228	47
13620	26	13709	10	13776	12, 36	13854	14	14229	47
13621	26	13710	10	13781	11	13855	14	14230	47
13622	26	13711	10	13782	11	13856	14	14231	47
13623	26	13712	10	13783	11	13857	14	14232	47
13624	26	13713	10	13784	11	13860	14	14233	47
13625	26	13714	10	13785	11	13861	14	14234	47
13626	26	13715	10	13786	11	13862	14	14235	47
13627	26	13716	10	13787	11	13881	14	14236	47
13628	26	13717	10	13788	12, 36	13884	14	14237	47
13630	26	13718	10	13789	12, 36	13896	13	14238	47
13631	26	13719	10	13790	12, 36	13952	18, 43	14239	47
13632	26	13720	10	13792	10	13954	18, 43	14240	47
13633	26	13721	10	13793	12, 36	13956	18, 43	14241	47
13634	27	13722	10	13796	10	13958	18	14242	47
13635	27	13723	10	13797	11	13960	18	14243	47
13636	27	13724	10	13798	10	13962	18	14244	48
13637	27	13725	11	13799	11	13964	18	14245	48
13638	27	13726	11	13805	13	13966	18	14246	48
13639	27	13727	11	13806	13	13968	18	14247	48
13640	27	13728	11	13807	13	13970	18	14248	48
13641	27	13729	11	13808	13	13972	18	14249	48
13642	27	13730	11	13809	13	13974	18	14250	48
13643	27	13731	11	13810	13	13976	18, 43	14251	48
13645	27	13732	11	13811	13	13978	18, 43	14252	48
13646	27	13733	11	13812	13	13980	18, 43	14254	48
13647	27	13734	11	13813	13	13982	18, 43	14255	48
13648	27	13735	11	13814	13	14021	46	14256	48
13649	27	13736	11	13815	13	14022	46	14257	48
13650	27	13737	11	13816	13	14023	46	14259	48
13651	27	13738	11	13817	13	14032	52	14260	48
13652	27	13739	11	13818	13	14037	52	14261	48
13660	32	13740	11	13820	14	14041	52	14262	48
13661	32	13741	11	13821	14	14121	46	14263	49
13662	32	13742	11	13822	14	14122	46	14264	49
13663	32	13743	11	13823	14	14123	46	14265	49
13664	32	13744	11	13825	14	14132	52	14266	49
13665	32	13745	11	13826	14	14137	52	14269	49
13666	32	13746	11	13827	14	14141	52	14270	49
13667	32	13747	11	13828	14	14205	46	14271	49
13668	32	13748	11	13830	14	14206	46	14273	49
13669	32	13749	12, 36	13831	14	14207	46	14274	49
13670	32	13750	12, 36	13832	14	14208	46	14275	49
13681	26	13751	12, 36	13833	14	14210	46	14276	49
13683	26	13752	12, 36	13834	14	14211	46	14279	49
13684	26	13753	12, 36	13835	14	14212	46	14280	49
13685	26	13754	12, 36	13836	14	14213	46	14281	49
13686	27	13755	12, 36	13837	14	14214	46	14282	47
13688	27	13756	12, 36	13838	14	14215	46	14283	47

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
14284	47	14420	54	14634	47	14712	50	14888	53
14285	47	14422	54	14635	47	14713	50	14890	53
14286	49	14424	54	14636	47	14714	50	14892	53
14287	48	14458	53	14637	47	14715	50	14966	54
14288	48	14460	53	14638	47	14716	50	14968	54
14289	49	14462	53	14639	47	14717	50	14970	54
14290	46	14464	53	14640	47	14718	50	14972	54
14291	48	14466	53	14641	47	14720	50	14974	54
14292	47	14468	53	14642	47	14721	50	14976	54
14293	47	14470	53	14643	47	14722	50	14978	54
14294	48	14472	53	14644	48	14723	50	14980	54
14295	48	14474	53	14645	48	14725	50	15134	40
14296	49	14476	53	14646	48	14726	50	15135	40
14297	49	14478	53	14647	48	14727	50	15136	40
14305	50	14480	53	14648	48	14728	50	15137	40
14306	50	14482	53	14649	48	14730	50	15139	40
14307	50	14484	53	14650	48	14731	50	15140	40
14311	50	14486	53	14651	48	14732	50	15141	40
14312	50	14488	53	14652	48	14733	50	15142	40
14313	50	14490	53	14654	48	14735	51	15204	34
14314	50	14492	53	14655	48	14736	51	15205	34
14315	50	14514	52	14656	48	14737	51	15206	34
14316	50	14516	52	14657	48	14738	51	15207	34
14317	50	14518	52	14659	48	14740	51	15208	34
14318	50	14520	52	14660	48	14741	51	15209	34
14320	50	14566	54	14661	48	14742	51	15210	34
14321	50	14568	54	14662	48	14743	51	15211	34
14322	50	14570	54	14663	49	14744	51	15212	34
14323	50	14572	54	14664	49	14745	51	15213	34
14325	50	14574	54	14665	49	14746	51	15214	34
14326	50	14576	54	14666	49	14747	51	15215	34
14327	50	14578	54	14669	49	14748	51	15216	34
14328	50	14580	54	14670	49	14749	51	15217	34
14330	50	14605	46	14671	49	14750	51	15218	34
14331	50	14606	46	14673	49	14751	51	15219	34
14332	50	14607	46	14674	49	14752	51	15220	34
14333	50	14608	46	14675	49	14755	51	15221	34
14335	51	14610	46	14676	49	14756	51	15222	34
14336	51	14611	46	14679	49	14757	51	15223	34
14337	51	14612	46	14680	49	14760	51	15224	34
14338	51	14613	46	14681	49	14761	51	15225	34
14340	51	14614	46	14682	47	14762	51	15226	34
14341	51	14615	46	14683	47	14796	51	15227	34
14342	51	14616	46	14684	47	14820	54	15228	34
14343	51	14617	46	14685	47	14822	54	15229	34
14344	51	14618	46	14686	49	14824	54	15230	34
14345	51	14619	46	14687	48	14858	53	15231	34
14346	51	14620	46	14688	48	14860	53	15232	34
14347	51	14621	46	14689	49	14862	53	15234	34
14348	51	14622	46	14690	46	14864	53	15235	34
14349	51	14623	46	14691	48	14866	53	15236	34
14350	51	14624	46	14692	47	14868	53	15237	34
14351	51	14625	47	14693	47	14870	53	15238	34
14352	51	14626	47	14694	48	14872	53	15239	34
14355	51	14627	47	14695	48	14874	53	15240	34
14356	51	14628	47	14696	49	14876	53	15241	35
14357	51	14629	47	14697	49	14878	53	15242	35
14360	51	14630	47	14705	50	14880	53	15243	35
14361	51	14631	47	14706	50	14882	53	15244	35
14362	51	14632	47	14707	50	14884	53	15245	35
14396	51	14633	47	14711	50	14886	53	15246	35

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
15248	35	16146	40	16247	36	16397	39	18356	31
15249	35	16147	40	16248	36	16458	42	18359	31
15250	35	16148	40	16281	35	16464	42	18360	31
15251	35	16150	40	16282	35	16466	42	18361	31
15252	35	16151	40	16283	35	16468	42	18380	31
15253	35	16152	40	16284	35	16470	42	18383	31
15254	35	16153	40	16285	35	16472	42	18384	31
15256	35	16154	40	16286	35	16474	42	18386	31
15257	35	16155	40	16287	36	16958	43	18393	31
15258	35	16156	40	16290	35	16964	43	18394	31
15259	35	16157	40	16292	35	16966	43	18395	31
15260	35	16158	40	16295	34	16968	43	18399	31
15261	35	16160	40	16296	34	16970	43	18430	31
15262	35	16161	40	16297	35	16972	43	18431	31
15263	35	16162	40	16315	38	16974	43	18435	31
15264	35	16163	40	16316	38	18220	37	18436	31
15265	35	16165	41	16317	38	18221	37	18437	31
15266	35	16166	41	16318	38	18224	37	18440	31
15267	35	16167	41	16319	38	18225	37	18441	31
15268	35	16168	41	16320	38	18226	37	18444	31
15269	35	16169	41	16321	38	18229	37	18445	31
15271	35	16170	41	16322	38	18230	37	18446	31
15272	35	16171	41	16323	38	18231	37	18449	31
15273	35	16172	41	16324	39	18232	37	18450	31
15274	35	16173	41	16325	39	18235	37	18451	31
15275	35	16174	41	16326	39	18236	37	18454	31
15276	35	16175	41	16327	39	18237	37	18455	31
15278	36	16176	41	16328	39	18240	37	18456	31
15279	36	16177	41	16329	39	18241	37	18459	31
15280	36	16215	34	16330	39	18244	37	18460	31
15281	36	16216	34	16331	39	18245	37	18461	31
15282	36	16217	34	16332	39	18246	37	18480	31
15283	36	16218	34	16333	39	18247	37	18483	31
15299	34	16219	34	16334	39	18249	37	18484	31
15305	38	16220	35	16335	39	18250	37	18486	31
15306	38	16221	35	16336	39	18251	37	18493	31
15307	38	16222	35	16337	39	18254	37	18494	31
15308	38	16223	35	16338	39	18255	37	18495	31
15309	38	16224	35	16340	39	18256	37	18499	31
15310	38	16225	35	16341	39	18259	37	18530	28
15311	38	16226	35	16342	39	18260	37	18531	28
15312	38	16227	35	16344	39	18261	37	18532	28
15313	38	16228	35	16345	39	18280	37	18535	28
15314	38	16229	35	16346	39	18285	37	18536	28
15460	42	16230	35	16347	39	18290	37	18537	28
15462	42	16231	35	16348	39	18294	37	18540	28
15960	43	16232	35	16349	39	18330	31	18541	28
15962	43	16233	35	16350	39	18331	31	18544	28
16020	34	16234	35	16351	39	18335	31	18545	28
16021	34	16235	35	16352	39	18336	31	18546	28
16022	34	16236	35	16354	39	18337	31	18549	28
16023	34	16237	35	16355	39	18340	31	18550	28
16024	34	16238	35	16356	39	18341	31	18551	28
16025	34	16239	35	16357	39	18344	31	18553	28
16120	38	16240	35	16381	38	18345	31	18554	28
16121	38	16241	35	16382	39	18346	31	18555	28
16122	38	16242	35	16383	39	18349	31	18556	28
16123	38	16243	35	16384	39	18350	31	18559	28
16124	38	16244	36	16385	39	18351	31	18560	28
16125	38	16245	36	16392	38	18354	31	18561	28
16145	40	16246	36	16396	38	18355	31	18580	28

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
18583	28	21250	56	21740	61	21862	64	22248	59
18584	28	21251	56	21741	61	21864	64	22249	59
18586	28	21252	56	21742	61	21865	64	22250	59
18593	28	21254	57	21744	61	21866	64	22251	59
18594	28	21255	57	21745	61	21868	64	22252	59
18595	28	21256	57	21746	61	21870	64	22254	59
18599	28	21257	57	21747	61	21872	64	22255	59
18630	28	21260	57	21748	61	21874	64	22256	59
18631	28	21261	57	21749	61	21876	64	22257	59
18632	28	21262	57	21750	61	21878	64	22260	60
18635	28	21264	57	21751	61	21879	64	22261	60
18636	28	21266	57	21752	61	21880	64	22262	60
18637	28	21268	57	21753	61	21884	64	22264	60
18640	28	21270	57	21755	61	21886	64	22266	60
18641	28	21272	57	21756	61	21887	64	22268	60
18644	28	21273	57	21757	61	21888	64	22270	60
18645	28	21462	58	21758	62	21903	57	22272	60
18646	28	21464	58	21760	62	21906	57	22273	60
18649	28	21466	58	21761	62	21909	57	22312	59
18650	28	21468	58	21762	62	21912	57	22313	59
18651	28	21470	58	21763	62	21915	57	22316	59
18653	28	21472	58	21764	62	21918	57	22317	59
18654	28	21474	58	21765	62	21920	57	22318	59
18655	28	21476	58	21766	62	21921	57	22321	59
18656	28	21478	58	21768	62	21923	57	22322	59
18659	28	21480	58	21769	62	21924	57	22323	59
18660	28	21482	58	21770	62	21926	57	22325	59
18661	28	21484	58	21771	62	21940	62	22326	59
18680	28	21486	58	21773	62	21944	62	22327	59
18683	28	21672	58	21775	62	21948	62	22330	59
18684	28	21674	58	21777	62	21952	62	22331	59
18686	28	21676	58	21802	63	21956	62	22332	59
18693	28	21678	58	21804	63	21960	62	22335	59
18694	28	21680	58	21806	63	21964	62	22336	59
18695	28	21682	58	21808	63	21968	62	22337	59
18699	28	21684	58	21810	63	21972	62	22340	59
21212	56	21686	58	21812	63	21976	62	22341	59
21213	56	21688	58	21814	63	21980	62	22342	59
21216	56	21690	58	21816	63	22212	59	22345	59
21217	56	21692	58	21818	63	22213	59	22346	59
21221	56	21707	61	21820	63	22216	59	22347	59
21222	56	21712	61	21822	63	22217	59	22348	59
21223	56	21713	61	21824	63	22218	59	22349	59
21225	56	21716	61	21826	63	22221	59	22350	59
21226	56	21717	61	21828	63	22222	59	22351	59
21227	56	21718	61	21830	63	22223	59	22352	59
21230	56	21721	61	21832	63	22225	59	22354	59
21231	56	21722	61	21834	63	22226	59	22355	59
21232	56	21723	61	21836	63	22227	59	22356	59
21235	56	21725	61	21838	63	22230	59	22357	59
21236	56	21726	61	21840	63	22231	59	22360	60
21237	56	21727	61	21842	63	22232	59	22361	60
21238	56	21730	61	21844	63	22235	59	22362	60
21240	56	21731	61	21846	63	22236	59	22366	60
21241	56	21732	61	21848	63	22237	59	22368	60
21242	56	21733	61	21850	64	22240	59	22370	60
21245	56	21735	61	21852	64	22241	59	22372	60
21246	56	21736	61	21854	64	22242	59	22373	60
21247	56	21737	61	21856	64	22245	59	41001	70
21248	56	21738	61	21858	64	22246	59	41003	70
21249	56	21739	61	21860	64	22247	59	41005	70

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
41006	70	41072	72	41414	75	42052	79	42430	83
41009	70	41073	72	41416	75	42053	79	42431	83
41010	70	41074	72	41418	75	42054	79	42434	83
41011	70	41075	72	41420	75	42055	79	42436	83
41012	70	41076	72	41422	75	42056	79	42450	82
41013	70	41077	72	41424	75	42057	79	42451	82
41014	70	41078	72	41426	75	42058	79	42454	82
41015	70	41079	72	41450	75	42060	79	42458	82
41016	70	41081	72	41451	75	42061	79	42484	83
41017	70	41082	72	41454	75	42062	79	42486	83
41018	70	41083	72	41458	75	42064	80	42488	83
41019	70	41084	72	41460	75	42065	80	44002	84
41020	70	41086	72	41462	75	42066	80	44003	84
41021	70	41087	72	41464	75	42067	80	44010	84
41022	70	41088	72	41466	75	42068	80	44011	84
41023	70	41089	72	41468	75	42070	80	44012	84
41024	70	41091	72	41470	75	42071	80	44013	84
41025	70	41092	72	41472	75	42072	80	44014	84
41026	70	41093	72	41474	75	42073	80	44015	84
41027	70	41096	71	41476	75	42075	80	44016	84
41028	70	41097	71	42001	78	42076	80	44017	84
41029	70	41098	71	42003	78	42077	80	44018	84
41030	70	41099	71	42005	78	42078	80	44019	84
41031	70	41112	73	42006	78	42081	80	44020	84
41032	70	41113	73	42009	78	42082	80	44021	84
41033	70	41114	73	42010	78	42083	80	44025	86
41034	70	41115	73	42011	78	42097	79	44026	86
41035	70	41117	73	42012	78	42112	81	44031	84
41039	71	41118	73	42013	78	42113	81	44033	84
41040	71	41120	73	42014	78	42114	81	44034	84
41041	71	41121	73	42015	78	42115	81	44035	84
41042	71	41122	73	42016	78	42117	81	44036	84
41043	71	41123	73	42017	78	42118	81	44039	84
41044	71	41125	73	42018	78	42120	81	44040	85
41045	71	41126	73	42019	78	42121	81	44041	85
41046	71	41130	73	42020	78	42122	81	44042	85
41047	71	41131	73	42021	78	42123	81	44043	85
41048	71	41132	73	42022	78	42125	81	44044	85
41049	71	41133	73	42023	78	42126	81	44045	85
41050	71	41140	73	42024	78	42130	81	44046	85
41051	71	41141	73	42025	78	42131	81	44047	85
41052	71	41146	73	42026	78	42132	81	44049	85
41053	71	41147	73	42027	78	42133	81	44056	86
41054	71	41301	74	42028	78	42134	81	44060	86
41055	71	41302	74	42029	78	42140	81	44064	91
41056	71	41304	74	42030	78	42141	81	44065	91
41057	71	41305	74	42031	78	42146	81	44067	91
41058	71	41306	74	42032	78	42147	81	44068	91
41059	71	41308	74	42033	78	42301	82	44069	91
41060	71	41310	74	42034	78	42302	82	44071	91
41061	71	41312	74	42035	78	42304	82	44073	91
41062	71	41314	74	42040	79	42305	82	44075	91
41063	71	41316	74	42041	79	42306	82	44080	85
41064	71	41318	74	42042	79	42308	82	44081	85
41065	71	41320	74	42043	79	42310	82	44083	85
41066	71	41400	75	42045	79	42312	82	44084	85
41067	71	41401	75	42046	79	42314	82	44087	85
41068	71	41404	75	42047	79	42400	83	44090	85
41069	71	41408	75	42048	79	42401	83	44110	88
41070	72	41410	75	42050	79	42404	83	44111	88
41071	72	41412	75	42051	79	42408	83	44112	88

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
44113	88	44631	84	51380	99	51450	96	51544	101
44114	88	44633	84	51381	99	51451	96	51546	101
44116	88	44634	84	51382	99	51452	96	51548	101
44117	88	44635	84	51383	99	51453	96	51600	98
44120	88	44636	84	51384	99	51454	96	51601	98
44134	88	44639	84	51387	99	51455	97	51602	98
44135	88	44640	85	51388	99	51456	96	51603	98
44142	89	44641	85	51390	100	51457	96	51605	98
44143	89	44642	85	51392	100	51458	97	51606	98
44145	89	44643	85	51393	100	51459	97	51611	98
44147	89	44644	85	51394	100	51460	97	51612	98
44151	90	44645	85	51395	100	51461	97	51613	98
44152	90	44646	85	51396	100	51462	97	51616	98
44153	90	44647	85	51397	100	51463	97	51617	98
44155	90	44649	85	51398	100	51464	97	51618	98
44156	90	50011	104	51399	100	51465	97	51619	98
44157	90	50016	104	51400	100	51466	97	51622	98
44158	90	50021	104	51401	100	51467	97	51623	98
44159	90	50026	104	51402	96	51468	97	51624	98
44160	90	50031	104	51404	96	51469	97	51625	98
44161	90	50111	104	51406	97	51470	97	51629	98
44162	90	50116	104	51407	97	51471	97	51630	98
44163	90	50121	104	51408	97	51472	97	51631	98
44166	90	50126	104	51409	97	51473	97	51632	98
44167	90	50216	104	51410	96	51474	97	51635	98
44214	89	50231	104	51411	96	51475	97	51654	99
44217	89	51216	100	51412	96	51476	97	51656	99
44220	89	51220	100	51413	96	51477	97	51660	99
44234	89	51222	100	51414	96	51478	98	51662	99
44235	89	51224	100	51415	96	51479	98	51668	99
44236	89	51226	100	51416	96	51480	98	51670	99
44314	88	51228	100	51418	96	51481	98	51679	99
44317	88	51300	98	51419	96	51482	98	51680	99
44320	88	51301	98	51420	96	51483	98	51681	99
44510	86	51302	98	51421	96	51484	98	51682	99
44512	86	51303	98	51422	96	51485	98	51684	99
44514	86	51305	98	51423	96	51486	98	51687	99
44516	87	51306	98	51424	96	51487	98	51689	99
44518	87	51311	98	51425	96	51488	99	51691	99
44520	87	51317	98	51426	96	51489	99	51693	99
44523	87	51318	98	51427	96	51490	99	51695	99
44526	87	51320	98	51428	96	51491	99	61020	112
44528	87	51322	98	51429	96	51492	99	61022	112
44530	87	51325	98	51430	96	51493	99	61024	112
44560	87	51328	98	51431	96	51494	99	61038	112
44563	87	51334	98	51432	97	51495	99	61040	112
44566	87	51335	98	51433	97	51496	99	61044	112
44610	84	51336	98	51434	97	51497	99	61051	106, 108
44611	84	51342	98	51436	97	51498	99	61053	106
44612	84	51344	98	51437	97	51502	97	61057	106
44613	84	51346	98	51438	97	51504	97	61059	106, 108
44614	84	51348	99	51439	97	51510	100	61062	106
44615	84	51350	99	51440	97	51511	100	61065	106
44616	84	51352	99	51442	96	51512	100	61068	106
44617	84	51356	99	51443	96	51513	100	61071	106
44618	84	51360	99	51444	96	51514	100	61073	106
44619	84	51364	99	51445	96	51516	100	61075	106, 108
44620	84	51368	99	51446	96	51518	100	61077	106
44621	84	51372	99	51447	96	51520	100	61080	106, 108
44625	86	51376	99	51448	96	51540	101	61083	106
44626	86	51379	99	51449	96	51542	101	61086	106

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
61090	106	61383	110	65121	115	90180	150	90327	155
61091	106	61391	110	65124	115	90181	151	90328	155
61095	106	61398	110	65130	115	90182	151	90329	155
61098	106	61602	108	65212	115	90184	151	90330	155
61101	106	61604	108	65215	115	90185	152	90331	155
61104	106	61606	108	65218	115	90186	151	90332	155
61106	106	61608	108	65221	115	90188	152	90333	155
61110	106	61610	108	65224	115	90189	152	90334	155
61116	106	61612	108	65227	115	90234	167	90335	155
61119	106	61614	108	65318	116	90235	167	90336	155
61122	106	61616	108	65321	116	90236	167	90371	155
61151	107, 108	61618	108	65324	116	90237	167	90372	155
61153	107	61620	108	65325	116	90238	167	90373	155
61157	107	61622	108	65327	116	90250	161	90374	155
61159	107, 108	61624	108	65330	116	90263	167	90375	155
61162	107	61626	108	65333	116	90264	167	90376	155
61165	107	61628	108	65336	116	90265	167	90377	155
61168	107	61630	108	65406	116	90266	167	90378	155
61171	107	61632	108	65412	116	90267	167	90379	155
61173	107	61634	108	65415	116	90268	167	90390	155
61175	107, 108	61636	108	65418	116	90269	167	90393	155
61177	107	61638	108	65421	116	90270	167	90394	155
61180	107, 108	61640	108	65424	116	90271	167	90398	155
61183	107	61660	109	65447	114	90272	167	90404	190
61186	107	61662	109	65450	114	90273	167	90406	191
61190	107	61664	109	65453	114	90278	168	90407	190
61191	107	61666	109	65456	114	90279	168	90409	192
61195	107	61668	109	65459	114	90280	168	90413	190
61198	107	61670	109	65462	114	90281	168	90415	191
61201	107	61672	109	65465	114	90282	168	90416	191
61204	107	61674	109	65468	114	90283	168	90417	190
61206	107	61680	109	65471	114	90284	168	90418	190
61210	107	61682	109	65474	114	90285	168	90430	155
61216	107	61684	109	65506	116	90286	168	90431	167
61219	107	61686	109	65512	116	90287	168	90440	167
61222	107	61690	109	65515	116	90288	168	90441	167
61251	110	65001	114	65518	116	90289	168	90442	167
61257	110	65003	114	65521	116	90290	168	90443	167
61259	110	65006	114	65524	116	90292	168	90444	167
61262	110	65009	114	65606	117	90301	155	90445	167
61265	110	65012	114	65609	117	90302	155	90446	167
61275	110	65015	114	65612	117	90303	155	90447	167
61280	110	65018	114	65615	117	90304	155	90448	167
61283	110	65021	114	65618	117	90305	155	90449	167
61291	110	65024	114	65621	117	90306	155	90450	167
61298	110	65027	114	65624	117	90310	155	90461	167
61300	111	65030	114	65630	117	90311	155	90462	167
61302	111	65047	114	65701	115	90312	155	90463	167
61304	111	65050	114	65703	115	90313	155	90464	167
61320	111	65053	114	65706	115	90314	155	90465	167
61324	111	65056	114	65709	115	90315	155	90466	167
61326	111	65059	114	65712	115	90316	155	90467	167
61330	111	65062	114	65715	115	90318	155	90468	167
61332	111	65065	114	65718	115	90319	155	90469	167
61351	110	65068	114	65721	115	90320	155	90476	168
61357	110	65071	114	65724	115	90321	155	90477	168
61359	110	65074	114	65727	115	90322	155	90478	168
61362	110	65106	115	65730	115	90323	155	90479	168
61365	110	65112	115	90131	153	90324	155	90480	168
61375	110	65115	115	90178	150	90325	155	90481	168
61380	110	65118	115	90179	150	90326	155	90482	168

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
90483	168	90578	183	90679	173	90804	131	90893	53
90484	168	90579	198	90680	173	90805	131	90895	142
90485	168	90581	198	90681	173	90806	131	90897	142
90488	168	90582	198	90682	173	90808	132	90899	142
90489	168	90583	198	90683	173	90810	132	90908	146
90491	155	90584	198	90684	173	90812	137	90910	147
90492	155	90585	198	90685	173	90813	137	90913	147
90493	155	90586	198	90686	173	90814	132	90914	146
90494	155	90587	198	90687	173	90815	139, 141	90916	148
90495	155	90590	183	90688	173	90816	138	90919	148
90496	155	90591	183	90689	173	90818	138	90955	120
90500	202	90593	192	90690	173	90821	76, 92,	91010	104
90502	203	90594	192	90691	173		102, 103	91100	154
90504	203	90601	166	90692	173	90823	76, 93,	91101	154, 176,
90505	203	90602	165	90693	173		102, 103		177, 186
90506	203	90603	171	90694	173	90824	102, 103,	91105	177
90508	203	90604	167	90701	124		120	91111	157
90510	203	90605	167	90702	137	90825	92, 163	91120	156
90511	203	90606	167	90708	128	90826	138	91129	186
90512	203	90607	167	90709	129	90829	144	91132	161
90513	203	90620	169	90710	128	90833	145	91143	160
90514	203	90621	169	90712	120	90834	145	91148	160
90515	203	90622	169	90713	136	90835	145	91152	164
90516	203	90623	169	90715	136	90842	144	91157	165
90517	203	90624	169	90719	136	90844	92	91163	164
90518	203	90625	169	90720	127	90845	92	91168	165
90520	203	90626	169	90721	126	90846	93	91172	178
90521	203	90627	169	90722	127	90848	76	91175	179
90522	203	90628	169	90724	129	90849	76	91183	178
90524	203	90629	169	90728	130	90851	93	91186	179
90528	203	90630	169	90742	123	90852	92	91189	181
90530	203	90633	168	90743	123	90853	92	91193	180
90534	203	90634	168	90744	123	90854	103	91195	182
90536	203	90635	168	90755	134	90855	92	91198	171
90538	203	90636	168	90756	134	90856	92	91201	199
90540	203	90637	168	90772	121	90857	93	91210	199
90548	202	90638	168	90773	121	90859	117	91211	199
90549	202	90639	168	90774	121	90860	103	91212	199
90550	202	90640	168	90775	121	90863	102	91213	199
90551	202	90641	168	90776	121	90864	102	91214	199
90553	202	90642	168	90777	121	90865	102	91215	199
90554	202	90643	168	90778	121	90866	102	91220	200
90555	202	90651	164	90779	122	90869	103	91225	200
90556	196	90653	157	90780	122	90872	103	91230	200
90557	192	90654	169	90781	122	90873	103	91235	201
90558	197	90655	169	90782	122	90874	103	91241	201
90559	197	90656	161	90783	123	90875	102	91243	201
90560	195	90661	174	90784	122	90876	18	91245	201
90561	195	90662	172, 195,	90785	122	90877	18, 43, 53	91247	201
90562	195		196, 197,	90786	122	90878	102	91249	201
90563	195		198	90787	123	90879	101	91251	201
90564	195	90663	172	90788	122	90880	101	91253	201
90565	195	90670	173	90789	122	90881	101	91255	201
90566	195	90671	173	90790	121	90882	101	91257	201
90567	195	90672	173	90791	139	90883	101	91259	201
90568	195	90673	173	90793	138	90884	101	91261	201
90569	185	90674	173	90794	136	90885	101	91263	201
90570	184, 185	90675	173	90796	137	90886	101	91265	201
90571	180	90676	173	90797	137	90887	101	91267	201
90574	182	90677	173	90798	136	90888	142	91269	201
90577	179	90678	173	90799	174	90891	43	91271	201

Numerical index

art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page	art.-no.	catalog page
91273	201	91424	186, 189	91623	162	91733	163	91905	169
91277	201	91425	189	91624	162	91734	163	91906	169
91279	201	91426	186, 189	91625	162	91735	163	91907	169
91281	201	91428	186	91626	162	91736	163	91908	169
91283	201	91431	155	91638	162	91737	163	91909	169
91285	201	91432	155	91639	162	91738	163	91910	169
91287	201	91433	155	91640	162	91739	163	91911	169
91289	201	91434	155	91641	162	91745	162	91912	169
91291	201	91435	155	91642	162	91746	162	91913	169
91293	201	91436	155	91643	162	91747	162	91920	137
91295	201	91441	158	91644	162	91748	162	91921	137
91297	201	91442	158	91645	162	91749	162	91922	136
91302	158	91443	158	91646	162	91750	162	91923	136
91303	158	91444	158	91647	162	91751	162	91924	136
91304	158	91445	158	91648	162	91752	162	91935	126
91305	158	91446	158	91654	162	91753	162	91936	126
91306	158	91447	158	91655	162	91754	162	91937	128
91307	158	91448	158	91656	162	91755	162	91943	129
91308	158	91450	159	91657	162	91765	167	91946	130
91309	158	91451	159	91658	162	91766	167	97035	125
91315	158	91452	159	91659	162	91767	167	97036	125
91316	158	91453	159	91660	162	91768	167	97040	141
91317	158	91454	159	91661	162	91769	167	97053	181
91318	158	91455	159	91662	162	91770	167	97135	189
91319	158	91456	159	91663	162	91771	167	97139	166
91330	158	91457	159	91664	162	91772	167	97153	189
91331	158	91458	159	91665	162	91773	167	97180	178
91332	158	91459	159	91666	162	91774	167	97188	125
91333	158	91460	159	91667	162	91775	167	97189	125
91334	158	91465	159	91693	163	91776	167	97194	189
91335	158	91466	159	91694	163	91777	123	97208	176
91336	158	91467	159	91695	163	91778	123	97221	181
91337	158	91468	159	91696	163	91779	123	97222	172
91343	158	91469	159	91697	163	91795	123	99056	130
91344	158	91470	159	91698	163	91796	123	99633	169
91345	158	91471	159	91699	163	91797	123	99640	168
91346	158	91472	159	91705	163	91798	123	99641	168
91347	158	91473	159	91706	163	91799	123	99696	155
91348	158	91480	158	91707	163	91811	138	99754	155
91349	158	91481	158	91708	163	91813	138	99755	155
91350	158	91482	158	91709	163	91821	139, 141	99782	169
91354	159	91483	158	91710	163	91822	139, 141	99805	168, 169
91372	159	91484	158	91711	163	91823	140, 141	99903	127
91373	159	91485	158	91712	163	91824	140, 141	99904	127
91374	159	91486	158	91713	163	91831	144	99905	127
91375	159	91602	162	91714	163	91835	133	99907	127
91376	159	91603	162	91715	163	91837	133	99936	195
91377	159	91604	162	91716	163	91839	133	99940	195
91383	159	91605	162	91718	163	91840	134	99955	192
91384	159	91606	162	91719	163	91842	134	99956	192
91385	159	91607	162	91720	163	91881	139	99962	191
91386	159	91608	162	91721	163	91882	139	99988	195
91387	159	91609	162	91722	163	91883	140		
91388	159	91610	162	91723	163	91884	140		
91389	159	91611	162	91724	163	91891	138		
91390	159	91612	162	91725	163	91893	138		
91391	159	91613	162	91726	163	91899	139, 140		
91401	191	91619	162	91727	163	91901	169		
91421	191	91620	162	91728	163	91902	169		
91422	188	91621	162	91731	163	91903	169		
91423	189	91622	162	91732	163	91904	169		

Allgemeine Verkaufsbedingungen – unternehmerischer Geschäftsverkehr

§ 1 Allgemeines, Geltungsbereich

- (1) Die vorliegenden Allgemeinen Verkaufsbedingungen (AVB) gelten für alle unsere Geschäftsbeziehungen mit unseren Kunden (nachfolgend: „Käufer“). Die AVB gelten nur, wenn der Käufer Unternehmer (§ 14 BGB), eine juristische Person des öffentlichen Rechts oder ein öffentlich-rechtliches Sondervermögen ist.
- (2) Die AVB gelten insbesondere für Verträge über den Verkauf und/oder die Lieferung beweglicher Sachen (im Folgenden auch: „Ware“), ohne Rücksicht darauf, ob wir die Ware selbst herstellen oder bei Zulieferern einkaufen (§§ 433, 651 BGB). Die AVB gelten in ihrer jeweiligen Fassung als Rahmenvereinbarung auch für künftige Verträge über den Verkauf und/oder die Lieferung beweglicher Sachen mit demselben Käufer, ohne dass wir in jedem Einzelfall wieder auf sie hinweisen müssten; über Änderungen unserer AVB werden wir den Käufer in diesem Fall unverzüglich informieren.
- (3) Unsere AVB gelten ausschließlich. Abweichende, entgegenstehende oder ergänzende Allgemeine Geschäftsbedingungen des Käufers werden nur dann und insoweit Vertragsbestandteil, als wir ihrer Geltung ausdrücklich zugestimmt haben. Dieses Zustimmungserfordernis gilt in jedem Fall, beispielsweise auch dann, wenn wir in Kenntnis der AGB des Käufers die Lieferung an ihn vorbehaltlos ausführen.
- (4) Im Einzelfall getroffene, individuelle Vereinbarungen mit dem Käufer (einschließlich Nebenabreden, Ergänzungen und Änderungen) haben in jedem Fall Vorrang vor diesen AVB. Für den Inhalt derartiger Vereinbarungen ist ein schriftlicher Vertrag bzw. unsere schriftliche Bestätigung maßgebend.
- (5) Rechtserhebliche Erklärungen und Anzeigen, die nach Vertragsschluss vom Käufer uns gegenüber abzugeben sind (zB Fristsetzungen, Mängelanzeigen, Erklärung von Rücktritt oder Minderung), bedürfen zu ihrer Wirksamkeit der Schriftform.
- (6) Hinweise auf die Geltung gesetzlicher Vorschriften haben nur klarstellende Bedeutung. Auch ohne eine derartige Klarstellung gelten daher die gesetzlichen Vorschriften, soweit sie in diesen AVB nicht unmittelbar abgeändert oder ausdrücklich ausgeschlossen werden.

§ 2 Vertragsschluss

- (1) Unsere Angebote sind freibleibend und unverbindlich. Dies gilt auch, wenn wir dem Käufer Kataloge, technische Dokumentationen (z. B. Zeichnungen, Pläne, Berechnungen, Kalkulationen, Verweisungen auf DIN-Normen), sonstige Produktbeschreibungen oder Unterlagen – auch in elektronischer Form – überlassen haben.
- (2) Die Bestellung der Ware durch den Käufer gilt als verbindliches Vertragsangebot. Sofern sich aus der Bestellung nichts anderes ergibt, sind wir berechtigt, dieses Vertragsangebot innerhalb von 2 Wochen nach seinem Zugang bei uns anzunehmen.
- (3) Die Annahme kann entweder schriftlich (zB durch Auftragsbestätigung) oder durch Auslieferung der Ware an den Käufer erklärt werden.

§ 3 Lieferfrist und Lieferverzug

- (1) Die Lieferfrist wird individuell vereinbart bzw. von uns bei Annahme der Bestellung angegeben. Sofern dies nicht der Fall ist, beträgt die Lieferfrist ca. 4 Wochen ab Vertragsschluss.
- (2) Sofern wir verbindliche Lieferfristen aus Gründen, die wir nicht zu vertreten haben, nicht einhalten können (Nichtverfügbarkeit der Leistung), werden wir den Käufer hierüber unverzüglich informieren und gleichzeitig die voraussichtliche, neue Lieferfrist mitteilen. Ist die Leistung auch innerhalb der neuen Lieferfrist nicht verfügbar, sind wir berechtigt, ganz oder teilweise vom Vertrag zurückzutreten; eine bereits erbrachte Gegenleistung des Käufers werden wir unverzüglich erstatten. Als Fall der Nichtverfügbarkeit der Leistung in diesem Sinne gilt insbesondere die nicht rechtzeitige Selbstbelieferung durch unseren Zulieferer, wenn wir ein kongruentes Deckungsgeschäft abgeschlossen haben, weder uns noch unseren Zulieferer ein Verschulden trifft oder wir im Einzelfall zur Beschaffung nicht verpflichtet sind.
- (3) Der Eintritt unseres Lieferverzugs bestimmt sich nach den gesetzlichen Vorschriften. In jedem Fall ist aber eine Mahnung durch den Käufer erforderlich. Ist die Nichteinhaltung der Fristen zurückzuführen
- auf höhere Gewalt, z. B. Krieg, Terrorakte, Streik oder ähnliche Ereignisse,
 - auf Virus- oder sonstige Angriffe Dritter auf das IT-System,
 - auf Hindernissen aufgrund von deutschen, US-amerikanischen oder sonstigen Vorschriften des Außenwirtschaftsrechts,
 - auf nicht rechtzeitige oder ordnungsgemäße Belieferung des Lieferanten, verlängern sich die Fristen angemessen.

- (4) Die Rechte des Käufers gem § 8 dieser AVB und unsere gesetzlichen Rechte insbesondere bei einem Ausschluss der Leistungspflicht (z. B. aufgrund Unmöglichkeit oder Unzumutbarkeit der Leistung und/oder Nacherfüllung) bleiben unberührt.

§ 4 Lieferung, Gefahrübergang, Abnahme, Annahmeverzug

- (1) Die Lieferung erfolgt ab Lager, wo auch der Erfüllungsort ist. Auf Verlangen und Kosten des Käufers wird die Ware an einen anderen Bestimmungsort versandt (Versendungskauf). Soweit nicht etwas anderes vereinbart ist, sind wir berechtigt, die Art der Versendung (insbesondere Transportunternehmen, Versandweg, Verpackung) selbst zu bestimmen. Bei Sonderanfertigungen behalten wir uns eine Überlieferung von 10 % der Auftragsmenge vor.
- (2) Die Gefahr des zufälligen Untergangs und der zufälligen Verschlechterung der Ware geht auch bei frachtfreier Lieferung spätestens dann auf den Käufer über,

wenn sie zum Versand gebracht oder abgeholt wurde. Beim Versendungskauf geht die Gefahr des zufälligen Untergangs und der zufälligen Verschlechterung der Ware sowie die Verzögerungsgefahr immer bereits mit Auslieferung der Ware an den Spediteur, den Frachtführer oder der sonst zur Ausführung der Versendung bestimmten Person oder Anstalt über. Soweit eine Abnahme vereinbart ist, ist diese für den Gefahrübergang maßgebend. Auch im Übrigen gelten für eine vereinbarte Abnahme die gesetzlichen Vorschriften des Werkvertragsrechts entsprechend. Der Übergabe bzw. Abnahme steht es gleich, wenn der Käufer im Verzug der Annahme ist.

- (3) Kommt der Käufer in Annahmeverzug, unterlässt er eine Mitwirkungshandlung oder verzögert sich unsere Lieferung aus anderen, vom Käufer zu vertretenden Gründen, so sind wir berechtigt, Ersatz des hieraus entstehenden Schadens einschließlich Mehraufwendungen (zB Lagerkosten) zu verlangen. Hierfür berechnen wir eine pauschale Entschädigung iHv 100 EUR pro Kalendertag, beginnend mit der Lieferfrist bzw. – mangels einer Lieferfrist – mit der Mitteilung der Versandbereitschaft der Ware.

Der Nachweis eines höheren Schadens und unsere gesetzlichen Ansprüche (insbesondere Ersatz von Mehraufwendungen, angemessene Entschädigung, Kündigung) bleiben unberührt; die Pauschale ist aber auf weitergehende Geldansprüche anzurechnen. Dem Käufer bleibt der Nachweis gestattet, dass uns überhaupt kein oder nur ein wesentlich geringerer Schaden als vorstehende Pauschale entstanden ist.

§ 5 Preise und Zahlungsbedingungen

- (1) Sofern im Einzelfall nichts anderes vereinbart ist, gelten unsere jeweils zum Zeitpunkt des Vertragsschlusses aktuellen Preise, und zwar ab Lager, zzgl. gesetzlicher Umsatzsteuer. Den Preisen aller Kupfererzeugnisse liegt eine MK-Notierung von 128,00 EUR per 100 kg zugrunde. Der Cu-Zuschlag berechnet sich aus der Differenz zwischen dieser Preisbasis und der am Tag des Auftragseingangs gültigen MK-Notierung. Wechsel werden nicht angenommen. Für Aufträge mit einem Nettowarenwert unter 100,00 EUR berechnen wir einen Bearbeitungskostenzuschlag von 25,00 EUR.
- (2) Beim Versendungskauf (§ 4 Abs 1) trägt der Käufer die Transport- und Verpackungskosten ab Lager und die Kosten einer ggf. vom Käufer gewünschten Transportversicherung. Sofern wir nicht die im Einzelfall tatsächlich entstandenen Transportkosten in Rechnung stellen, gilt eine Transportkostenpauschale (ausschließlich Transportversicherung) als vereinbart. Etwaige Zölle, Gebühren, Steuern und sonstige öffentliche Abgaben trägt der Käufer. Transport- und alle sonstigen Verpackungen nach Maßgabe der Verpackungsverordnung nehmen wir nicht zurück, sie werden Eigentum des Käufers; ausgenommen sind Paletten.
- (3) Der Kaufpreis ist fällig und zu zahlen innerhalb von 30 Tagen ab Rechnungsstellung und Lieferung bzw. unter Abzug von 2 % Skonto bei Zahlung innerhalb von 10 Tagen ab Rechnungsstellung und Lieferung.
- (4) Mit Ablauf vorstehender Zahlungsfrist kommt der Käufer in Verzug. Der Kaufpreis ist während des Verzugs zum jeweils geltenden gesetzlichen Verzugszinsatz zu verzinsen. Wir behalten uns die Geltendmachung eines weitergehenden erzugschadens vor. Gegenüber Kaufleuten bleibt unser Anspruch auf den kaufmännischen Fälligkeitszins (§ 353 HGB) unberührt.
- (5) Dem Käufer stehen Aufrechnungs- oder Zurückbehaltungsrechte nur insoweit zu, als sein Anspruch rechtskräftig festgestellt oder unbestritten ist. Bei Mängeln der Lieferung bleiben die Gegenrechte des Käufers insbesondere gem § 7 Abs. 6 Satz 2 dieser AVB unberührt.
- (6) Wird nach Abschluss des Vertrags erkennbar, dass unser Anspruch auf den Kaufpreis durch mangelnde Leistungsfähigkeit des Käufers gefährdet wird (z. B. durch Antrag auf Eröffnung eines Insolvenzverfahrens), so sind wir nach den gesetzlichen Vorschriften zur Leistungsverweigerung und – gegebenenfalls nach Fristsetzung – zum Rücktritt vom Vertrag berechtigt (§ 321 BGB). Bei Verträgen über die Herstellung unvertretbarer Sachen (Einzelanfertigungen), können wir den Rücktritt sofort erklären; die gesetzlichen Regelungen über die Entbehrlichkeit der Fristsetzung bleiben unberührt.

§ 6 Eigentumsvorbehalt

- (1) Bis zur vollständigen Bezahlung aller unserer gegenwärtigen und künftigen Forderungen aus dem Kaufvertrag und einer laufenden Geschäftsbeziehung (gesicherte Forderungen) behalten wir uns das Eigentum an den verkauften Waren vor.
- (2) Die unter Eigentumsvorbehalt stehenden Waren dürfen vor vollständiger Bezahlung der gesicherten Forderungen weder an Dritte verpfändet, noch zur Sicherheit übereignet werden. Der Käufer hat uns unverzüglich schriftlich zu benachrichtigen, wenn und soweit Zugriffe Dritter auf die uns gehörenden Waren erfolgen.
- (3) Bei vertragswidrigem Verhalten des Käufers, insbesondere bei Nichtzahlung des fälligen Kaufpreises, sind wir berechtigt, nach den gesetzlichen Vorschriften vom Vertrag zurückzutreten und die Ware auf Grund des Eigentumsvorbehalts und des Rücktritts herauszuverlangen. Zahlt der Käufer den fälligen Kaufpreis nicht, dürfen wir diese Rechte nur geltend machen, wenn wir dem Käufer zuvor erfolglos eine angemessene Frist zur Zahlung gesetzt haben oder eine derartige Fristsetzung nach den gesetzlichen Vorschriften entbehrlich ist.
- (4) Der Käufer ist befugt, die unter Eigentumsvorbehalt stehenden Waren im ordnungsgemäßen Geschäftsgang weiter zu veräußern und/oder zu verarbeiten. In diesem Fall gelten ergänzend die nachfolgenden Bestimmungen.
- (a) Der Eigentumsvorbehalt erstreckt sich auf die durch Verarbeitung, Vermischung oder Verbindung unserer Waren entstehenden Erzeugnisse zu deren vollem Wert,

Allgemeine Verkaufsbedingungen – unternehmerischer Geschäftsverkehr

wobei wir als Hersteller gelten. Bleibt bei einer Verarbeitung, Vermischung oder Verbindung mit Waren Dritter deren Eigentumsrecht bestehen, so erwerben wir Miteigentum im Verhältnis der Rechnungswerte der verarbeiteten, vermischten oder verbundenen Waren. Im Übrigen gilt für das entstehende Erzeugnis das Gleiche wie für die unter Eigentumsvorbehalt gelieferte Ware.

(b) Die aus dem Weiterverkauf der Ware oder des Erzeugnisses entstehenden Forderungen gegen Dritte tritt der Käufer schon jetzt insgesamt bzw. in Höhe unseres etwaigen Miteigentumsanteils gemäß vorstehendem Absatz zur Sicherheit an uns ab. Wir nehmen die Abtretung an. Die in Abs. 2 genannten Pflichten des Käufers gelten auch in Ansehung der abgetretenen Forderungen.

(c) Zur Einziehung der Forderung bleibt der Käufer neben uns ermächtigt. Wir verpflichten uns, die Forderung nicht einzuziehen, solange der Käufer seinen Zahlungsverpflichtungen uns gegenüber nachkommt, nicht in Zahlungsverzug gerät, kein Antrag auf Eröffnung eines Insolvenzverfahrens gestellt ist und kein sonstiger Mangel seiner Leistungsfähigkeit vorliegt. Ist dies aber der Fall, so können wir verlangen, dass der Käufer uns die abgetretenen Forderungen und deren Schuldner bekannt gibt, alle zum Einzug erforderlichen Angaben macht, die dazugehörigen Unterlagen aushändigt und den Schuldnern (Dritten) die Abtretung mitteilt.

(d) Übersteigt der realisierbare Wert der Sicherheiten unsere Forderungen um mehr als 10%, werden wir auf Verlangen des Käufers Sicherheiten nach unserer Wahl freigeben.

§ 7 Mängelansprüche des Käufers

(1) Für die Rechte des Käufers bei Sach- und Rechtsmängeln (einschließlich Falsch- und Minderlieferung sowie unsachgemäßer Montage oder mangelhafter Montageanleitung) gelten die gesetzlichen Vorschriften, soweit im nachfolgenden nichts anderes bestimmt ist. In allen Fällen unberührt bleiben die gesetzlichen Sondervorschriften bei Endlieferung der Ware an einen Verbraucher (Lieferantenregress gem §§ 478, 479 BGB).

(2) In unseren Prospekten, Anzeigen und sonstigen Angebotsunterlagen enthaltene Abbildungen oder Zeichnungen sind nur annähernd maßgebend, soweit die darin enthaltenen Angaben nicht von uns ausdrücklich als verbindlich bezeichnet worden sind.

(3) Für öffentliche Äußerungen des Herstellers oder sonstiger Dritter (z. B. Werbeaussagen) übernehmen wir jedoch keine Haftung.

(4) Die Mängelansprüche des Käufers setzen voraus, dass er seinen gesetzlichen Untersuchungs- und Rügepflichten (§§ 377, 381 HGB) nachgekommen ist. Zeigt sich bei der Untersuchung oder später ein Mangel, so ist uns hiervon unverzüglich schriftlich Anzeige zu machen. Als unverzüglich gilt die Anzeige, wenn sie innerhalb von zwei Wochen erfolgt. Versäumt der Käufer die ordnungsgemäße Untersuchung und/oder Mängelanzeige, ist unsere Haftung für den nicht angezeigten Mangel ausgeschlossen.

(5) Ist die gelieferte Sache mangelhaft, kann der Käufer als Nacherfüllung zunächst nach seiner Wahl Beseitigung des Mangels (Nachbesserung) oder Lieferung einer mangelfreien Sache (Ersatzlieferung) verlangen. Erklärt sich der Käufer nicht darüber, welches der beiden Rechte er wählt, so können wir ihm hierzu eine angemessene Frist setzen. Nimmt der Käufer die Wahl nicht innerhalb der Frist vor, so geht mit Ablauf der Frist das Wahlrecht auf uns über.

(6) Wir sind berechtigt, die geschuldete Nacherfüllung davon abhängig zu machen, dass der Käufer den fälligen Kaufpreis bezahlt.

(7) Der Käufer hat uns die zur geschuldeten Nacherfüllung erforderliche Zeit und Gelegenheit zu geben, insbesondere die beanstandete Ware zu Prüfungszwecken zu übergeben. Im Falle der Ersatzlieferung hat uns der Käufer die mangelhafte Sache nach den gesetzlichen Vorschriften zurückzugeben. Die Nacherfüllung beinhaltet weder den Ausbau der mangelhaften Sache noch den erneuten Einbau, wenn wir ursprünglich nicht zum Einbau verpflichtet waren.

(8) Die zum Zweck der Prüfung und Nacherfüllung erforderlichen, angemessenen Aufwendungen, insbesondere Transport-, Wege-, Arbeits- und Materialkosten (nicht: Ausbau- und Einbaukosten), tragen wir, wenn tatsächlich ein Mangel vorliegt. Stellt sich jedoch ein Mangelbeseitigungsverlangen des Käufers als unberechtigt heraus, können wir die hieraus entstandenen Kosten vom Käufer ersetzt verlangen.

(9) Wenn die Nacherfüllung fehlgeschlagen ist oder eine für die Nacherfüllung vom Käufer zu setzende angemessene Frist erfolglos abgelaufen oder nach den gesetzlichen Vorschriften entbehrlich ist, kann der Käufer vom Kaufvertrag zurücktreten oder den Kaufpreis mindern. Bei einem unerheblichen Mangel besteht jedoch kein Rücktrittsrecht.

(10) Soweit nicht anderweitig geregelt, sind Schadenersatzansprüche bzw. Ersatz vergeblicher Aufwendungen, gleich aus welchem Rechtsgrund, ausgeschlossen, insbesondere wegen Verletzung von Pflichten aus dem Schuldverhältnis und aus unerlaubter Handlung.

§ 8 Rücknahme gelieferter Artikel

(1) Auftragsgemäß gelieferte, fehlerfreie Artikel können nur nach unserer erfolgten Zustimmung und innerhalb von 3 Wochen nach Lieferung zurückgegeben werden. Sonderanfertigungen oder Artikel, die nicht in unserem Katalog enthalten

sind, werden nicht zurückgenommen. Die Rücknahme erfolgt gegen Gutschrift. Die Kosten der Eingangskontrolle und Wiedereinlagerung werden vom Warenwert abgesetzt. Eine Auszahlung des Gutschriftbetrages ist nicht möglich.

§ 9 Sonstige Haftung

(1) Soweit sich aus diesen AVB einschließlich der nachfolgenden Bestimmungen nichts anderes ergibt, haften wir bei einer Verletzung von vertraglichen und außervertraglichen Pflichten nach den einschlägigen gesetzlichen Vorschriften.

(2) Auf Schadensersatz haften wir – gleich aus welchem Rechtsgrund – bei Vorsatz und grober Fahrlässigkeit. Bei einfacher Fahrlässigkeit haften wir nur

a) für Schäden aus der Verletzung des Lebens, des Körpers oder der Gesundheit,

b) für Schäden aus der Verletzung einer wesentlichen Vertragspflicht (Verpflichtung, deren Erfüllung die ordnungsgemäße Durchführung des Vertrags überhaupt erst ermöglicht und auf deren Einhaltung der Vertragspartner regelmäßig vertraut und vertrauen darf); in diesem Fall ist unsere Haftung jedoch auf den Ersatz des vorhersehbaren, typischerweise eintretenden Schadens begrenzt.

(3) Die sich aus Abs. 2 ergebenden Haftungsbeschränkungen gelten nicht, soweit wir einen Mangel arglistig verschwiegen oder eine Garantie für die Beschaffenheit der Ware übernommen haben. Das gleiche gilt für Ansprüche des Käufers nach dem Produkthaftungsgesetz.

(4) Wegen einer Pflichtverletzung, die nicht in einem Mangel besteht, kann der Käufer nur zurücktreten oder kündigen, wenn wir die Pflichtverletzung zu vertreten haben. Ein freies Kündigungsrecht des Käufers (insbesondere gem. §§ 651, 649 BGB) wird ausgeschlossen. Im Übrigen gelten die gesetzlichen Voraussetzungen und Rechtsfolgen.

§ 10 Verjährung

(1) Abweichend von § 438 Abs 1 Nr 3 BGB beträgt die allgemeine Verjährungsfrist für Ansprüche aus Sach- und Rechtsmängeln ein Jahr ab Ablieferung. Soweit eine Abnahme vereinbart ist, beginnt die Verjährung mit der Abnahme.

(2) Handelt es sich bei der Ware jedoch um ein Bauwerk oder eine Sache, die entsprechend ihrer üblichen Verwendungsweise für ein Bauwerk verwendet worden ist und dessen Mangelhaftigkeit verursacht hat (Baustoff), beträgt die Verjährungsfrist gemäß der gesetzlichen Regelung 5 Jahre ab Ablieferung (§ 438 Abs. 1 Nr 2 BGB). Unberührt bleiben auch gesetzliche Sonderregelungen für dingliche Herausgabeansprüche Dritter (§ 438 Abs 1 Nr 1 BGB), bei Arglist des Verkäufers (§ 438 Abs 3 BGB) und für Ansprüche im Lieferantenregress bei Endlieferung an einen Verbraucher (§ 479 BGB).

(3) Die vorstehenden Verjährungsfristen des Kaufrechts gelten auch für vertragliche und außervertragliche Schadensersatzansprüche des Käufers, die auf einem Mangel der Ware beruhen, es sei denn die Anwendung der regelmäßigen gesetzlichen Verjährung (§§ 195, 199 BGB) würde im Einzelfall zu einer kürzeren Verjährung führen. Die Verjährungsfristen des Produkthaftungsgesetzes bleiben in jedem Fall unberührt. Ansonsten gelten für Schadensersatzansprüche des Käufers gem § 8 ausschließlich die gesetzlichen Verjährungsfristen.

§ 11 Rechtswahl und Gerichtsstand

(1) Für diese AVB und alle Rechtsbeziehungen zwischen uns und dem Käufer gilt das Recht der Bundesrepublik Deutschland unter Ausschluss internationalen Einheitsrechts, insbesondere des UN-Kaufrechts. Voraussetzungen und Wirkungen des Eigentumsvorbehalts gem § 6 unterliegen dem Recht am jeweiligen Lageort der Sache, soweit danach die getroffene Rechtswahl zugunsten des deutschen Rechts unzulässig oder unwirksam ist.

(2) Ist der Käufer Kaufmann iSd Handelsgesetzbuchs, juristische Person des öffentlichen Rechts oder ein öffentlich-rechtliches Sondervermögen, ist ausschließlicher – auch internationaler – Gerichtsstand für alle sich aus dem Vertragsverhältnis unmittelbar oder mittelbar ergebenden Streitigkeiten unser Geschäftssitz in Peine. Wir sind jedoch auch berechtigt, Klage am allgemeinen Gerichtsstand des Käufers zu erheben.

§ 12 Salvatorische Klausel

Sollte eine Bestimmung dieses Vertrages und/oder seine Änderungen bzw. Ergänzungen unwirksam sein, so wird dadurch die Wirksamkeit des Vertrages im Übrigen nicht berührt. Die unwirksame Bestimmung wird durch eine wirksame ersetzt, die dem wirtschaftlich Gewollten am nächsten kommt.

Für den PrivatkauF gelten gesonderte Verkaufsbedingungen. Diese können auf unserer Homepage eingesehen bzw. auf Anforderung auch gern zugeschickt werden.

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E-Mail: _____ Ansprechpartner: _____

Leiter-Typ: _____

Querschnitt: _____ **Werkstoff:**

☐ verzinnt	☐ Cu-ETP/Cu-HCP
☐ vernickelt	☐ E-Al 99,5
☐ blank	☐ sonstiges

Liefermenge: _____ Datum: _____

Jahresbedarf: _____

Liefertermin: _____ Unterschrift: _____

Sonstige Wünsche (bitte Skizze oder Zusatzinformationen):

Maße bitte in Millimetern (mm) angeben:

Maß d1	_____	Maß c1	_____
Maß d2	_____	Maß c2	_____
Maß d3	_____	Maß b	_____
Maß d4	_____	Maß s	_____
Maß d5	_____	Maß h	_____
		Winkel w	_____

Anschrift: _____ Gerader Kabelschuh ☐ Gerader Kabelschuh mit zwei Bohrungen ☐	90°-Winkelkabelschuh ☐ 90°-Winkelkabelschuh mit aufgeweiteter Hülse ☐	45°-Winkelkabelschuh ☐ Fahnenkabelkabelschuh ☐
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Querschnitt: _____
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Rohrkabelschuh / Verbinder ☐
Liefermenge: _____ Datum: _____
Jahresbedarf: _____
Liefertermin: _____ Unterschrift: _____

Oberfläche:	Werkstoff:
verzinkt	☐ Cu-ETP/Cu-HCP
vernickelt	☐ E-Al 99,5
blank	☐ sonstiges

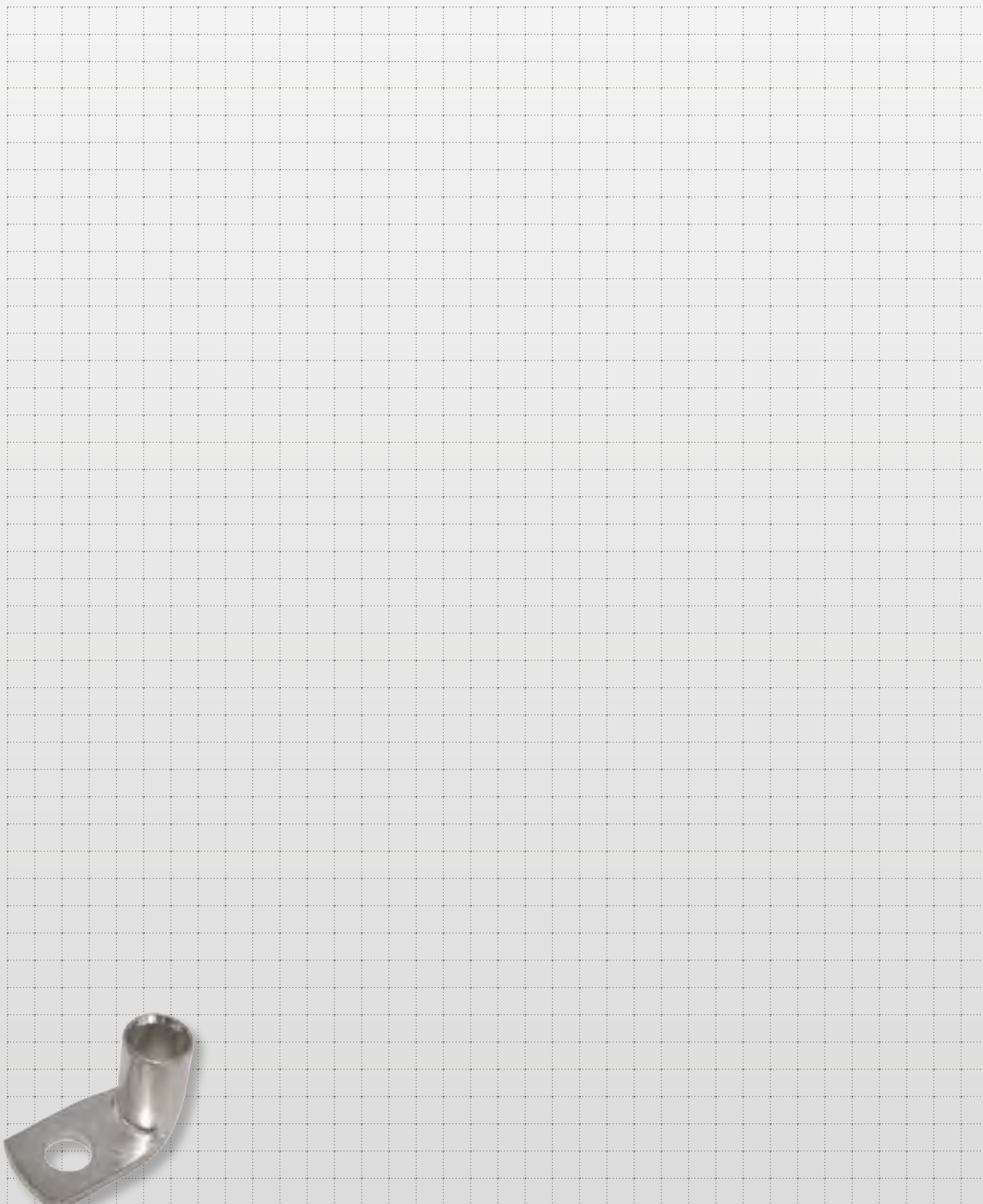
Sonstige Wünsche (bitte Skizze oder Zusatzinformationen):

Maße bitte in Millimetern (mm) angeben:

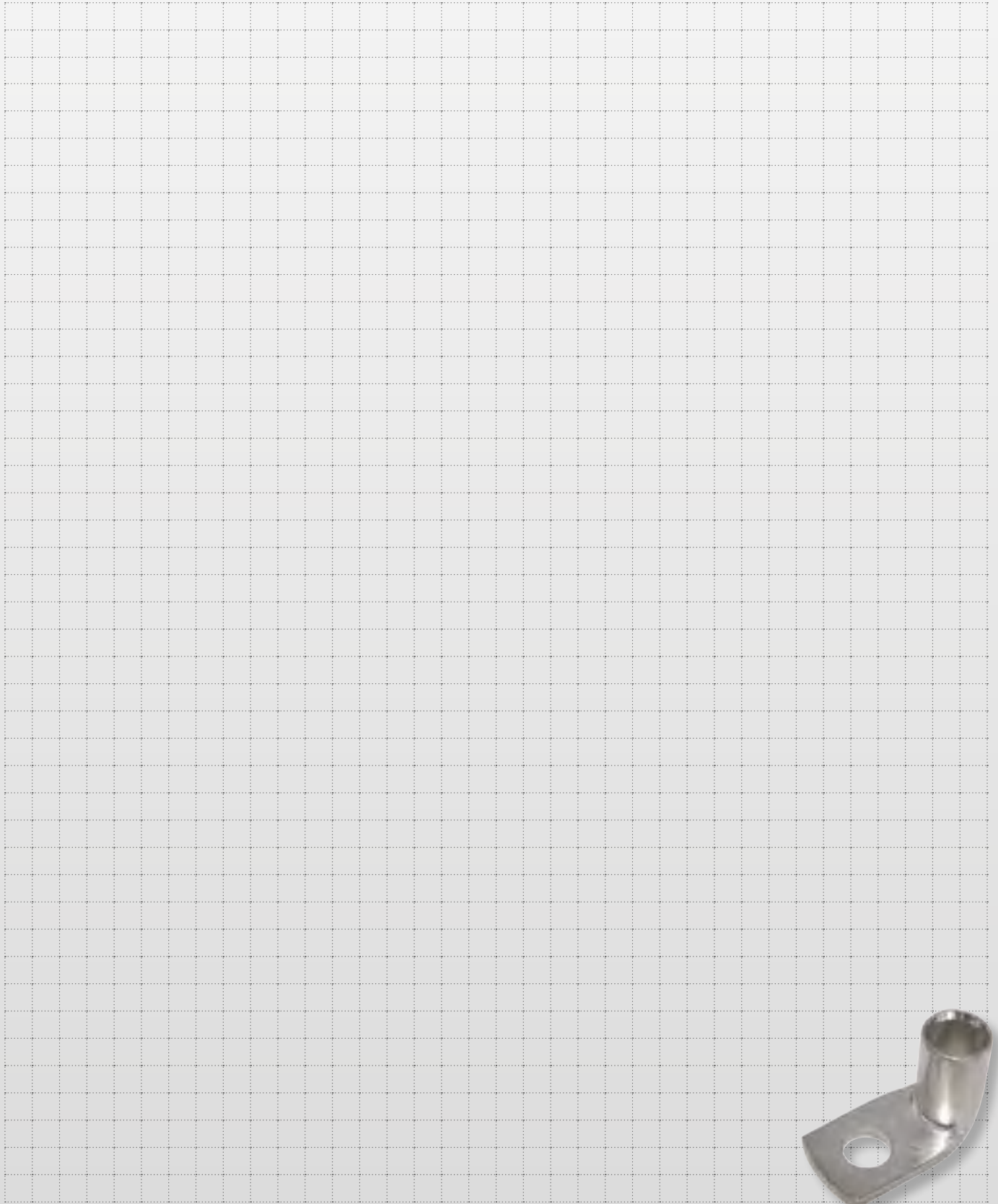
Maß d1	Maß l	Maß c1
Maß d2	Maß l2	Maß c2
Maß d3	Maß l3	Maß b
Maß d4	Maß a	Maß s
Maß d5	Maß a2	Maß h
		Winkel w

Anschrift: _____ Oval-Kabelschuh mit zwei Bohrungen ☐ L-Verbinder ☐	Hakenflansch-Kabelschuh, rechts ☐ Hakenflansch-Kabelschuh, links ☐ Reduzier-verbinder ☐ T-Verbinder ☐	Parallel-verbinder ☐ Aderendhülse ☐
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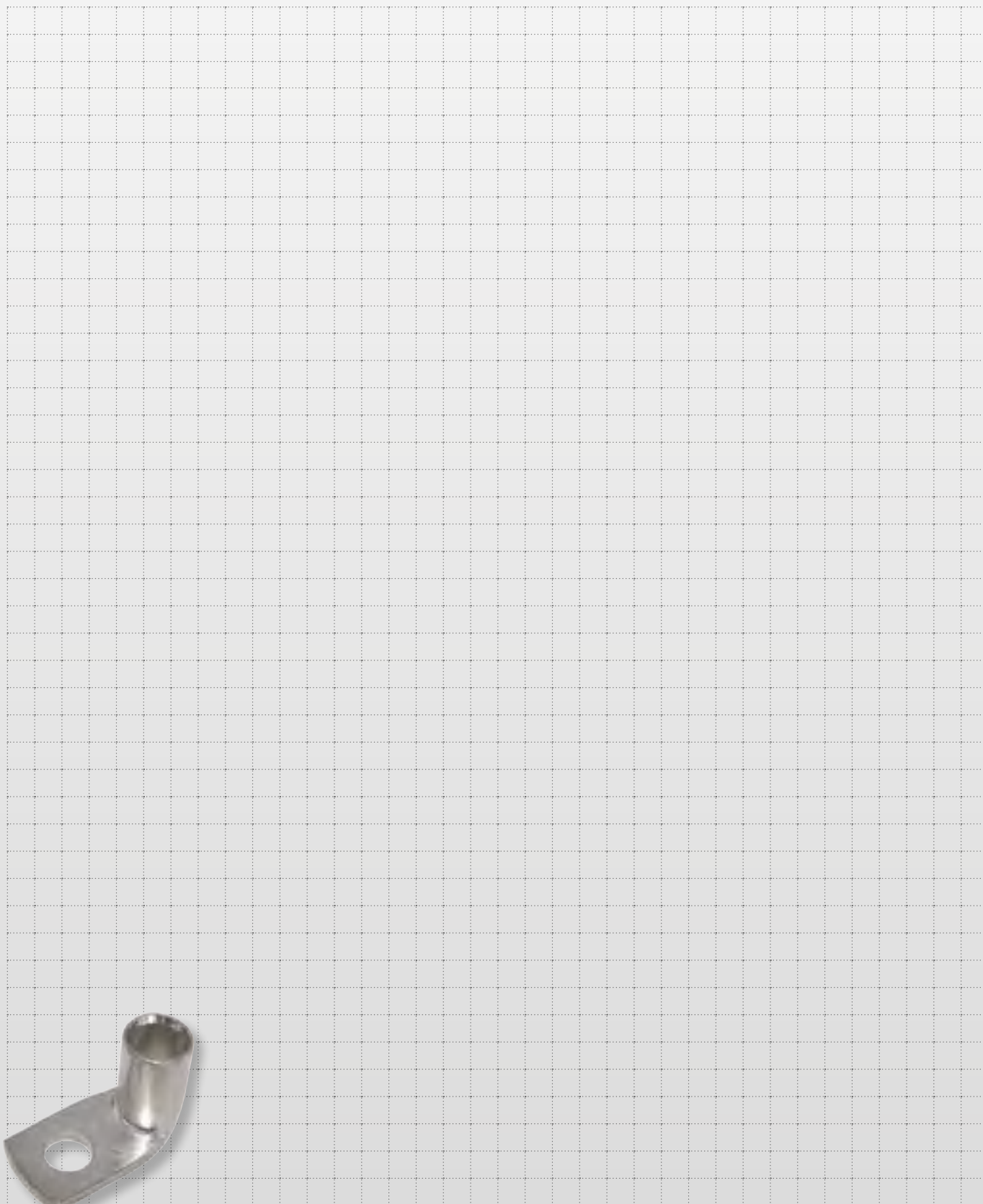
notes



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