



C e m b r e



Certified Quality Management System



Certified Environmental Management System



Certified Occupational Health & Safety Management System



QUALITY POLICY AND OBJECTIVES



This catalogue illustrates the range of our standard products. For each product family we indicate the principal features, and sometimes the most frequent applications and the necessary guidelines for a correct application. Our sales personnel are at your disposal to supply more detailed information and our design and development engineers are available to study new solutions to particular applications.



All Cembre products comply with Directive 2011/65/EU of the European Parliament and Council dated 8 June 2011 (and subsequent amendment).

On 14th December 1990 Cembre SpA Quality Management System was certified by Lloyd's Register of Quality Assurance (LRQA) according to ISO 9002:1987 EN 29002 - 1987 BS 5750: Part 2: 1987 for the manufacture of insulated and uninsulated copper crimping connectors. Then on 22nd December 1992 Cembre SpA was certified ISO 9001 for the design and manufacture of cable accessories, electrical connectors and associated tools. The activities of the main premises in Brescia, the Italian regional offices and the subsidiary companies in Great Britain, France, Spain, Germany and USA are governed by a single Quality System, assessed by Lloyd's Register of Quality as conforming to the ISO 9001:2008 norm, for the design, manufacture and sales of electrical connectors and associated tools, cable accessories, marking systems, tooling and products for railway applications. In house repair, refurbishment and calibration of tooling. This guarantees a homogeneous and high quality level of the products and services that Cembre offers to its customers.

Cembre S.p.A. has recently recognised the need to align its Environmental Management System with the spirit and content of UNI EN ISO 14001: 2004 as fundamental to future development. To this end the company undertook a wide-ranging review of all functions including development and design stages, material selection, usage and manufacturing processes. The resulting definition of operational procedures in line with these aims and provisions has enabled Cembre S.p.A. to achieve Environmental Certification, further highlighting the companies sensitive and careful approach to environmental protection.

Cembre S.p.A. has recently enhanced its business processes with the certification by Lloyd's Register of Quality Assurance, of its Management System for the Health and Safety of Workers,

in accordance with the standard OHSAS18001:2007 (Occupational Health and Safety Management System). The project, launched in early 2011, was strategically designed to facilitate the active participation of all employees at every level in the application of systems management, in order to optimise compliance of risk management capability with regard to laws and regulations concerning the health and safety of workers. All employees have received exhaustive training and are involved, by exercising their individual responsibility and competence, as key players in the identification of residual risk situations and the proposal of corrective solutions. For Cembre then, this certification is not only the proper recognition of the quality of work performed, but also an incentive to maintain a determined competitive advantage in increasingly difficult and aggressive international markets.

Cembre S.p.A. factory in Brescia (ITALY) covers an area of approximately 121.000 sqm

Cembre Ltd.
factory in Curdworth (Birmingham)



**Production
Units**



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MARKET *line* PRODUCTS

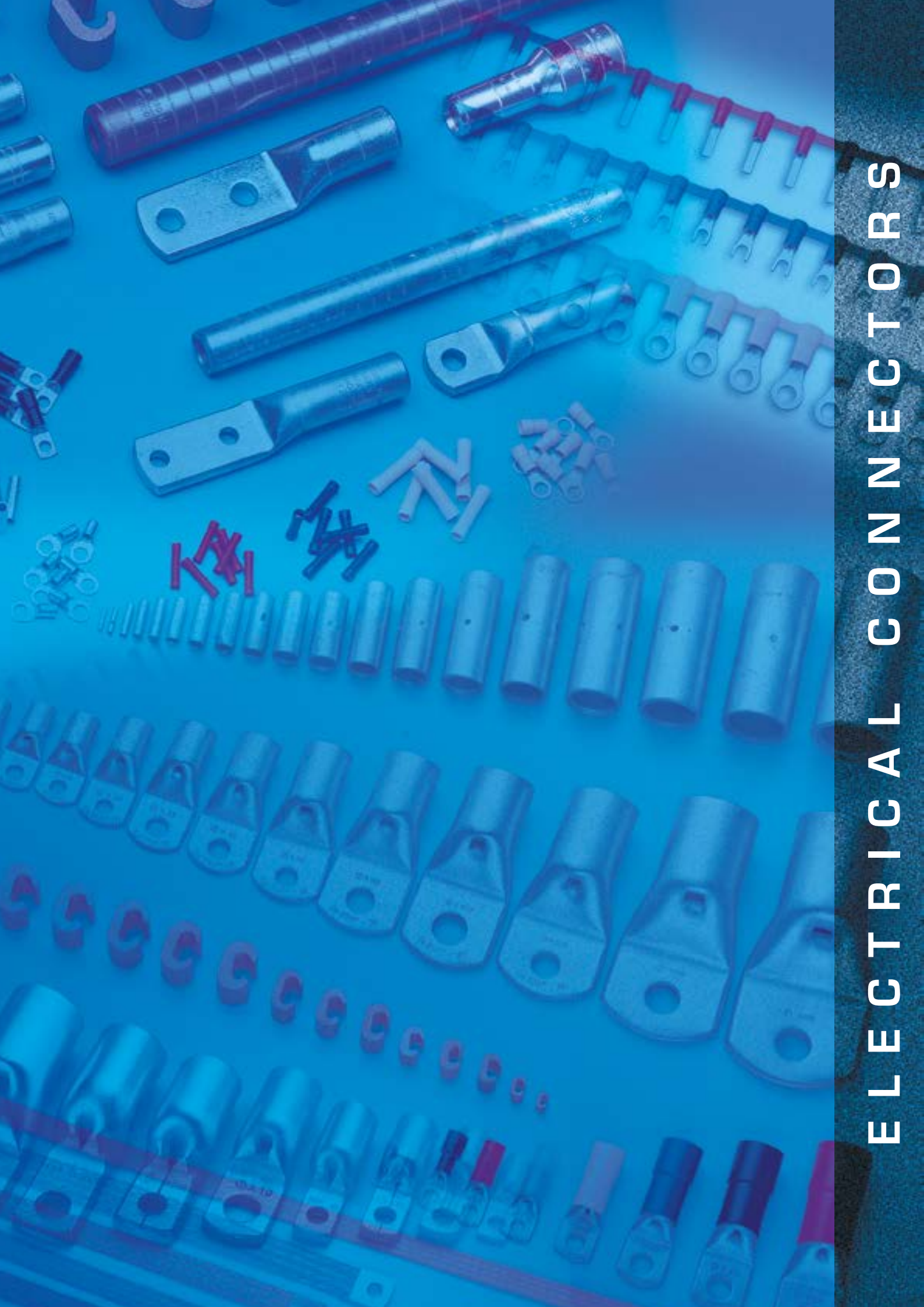
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ELECTRICAL CONNECTORS

HALOGEN FREE INSULATED TERMINALS



File no. E125401

VP RP
BP GP

P range funnel entry

OPERATING
TEMPERATURE
UP TO 115°C

HALOGEN FREE



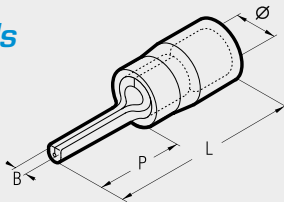
The "P" range of terminals has been designed, to meet the increasing demands for improved safety and reliability of electrical connectors. The Polycarbonate insula-





tion, is a Halogen free, self extinguishing thermoplastic material class VO (UL 94). The unique funnel shaped entry of the insulation sleeve, guarantees total

insertion of the conductor strands into the terminal barrel, creating a secure and reliable, electrical and mechanical connection.

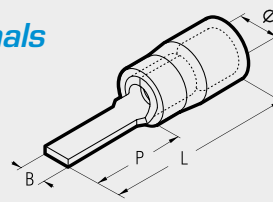
The operating temperature range is - 20 to + 115°C (Surge + 130°C). Recommended crimping tools are shown on pages 98 to 119, 154, 193.





pin terminals



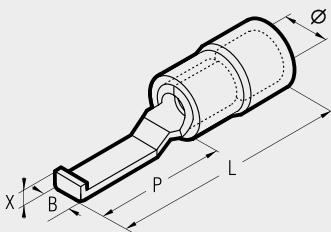
Cond. Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Ø	B	P	L	
 0,2÷0,5 (24÷20)	VP-P 10	3,0	1,0	9,8	20,2	4.000/100
 0,25÷1,5 (22÷16)	RP-P 8	4,0	1,6	7,8	17,9	3.000/100
	RP-P 10	4,0	1,6	9,8	19,9	3.000/100
 1,5÷2,5 (16÷14)	RP-P 12	4,0	1,6	12,0	22,1	3.000/100
	BP-P 8	4,9	1,7	7,8	17,9	3.000/100
	BP-P 10	4,9	1,8	9,8	19,9	3.000/100
 4÷6 (12÷10)	BP-P 12	4,9	1,8	11,8	21,9	3.000/100
	GP-P 10	6,6	2,2	10,4	24,5	1.000/100
	GP-P 12	6,6	2,2	12,6	26,7	1.000/100
	GP-P 14	6,6	2,2	14,6	28,7	1.000/100




blade terminals



Cond. Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Ø	B	P	L	
 0,2÷0,5 (24÷20)	VP-PP 12/19	3,0	1,9	12,4	22,4	4.000/100
 0,25÷1,5 (22÷16)	RP-PP 12	4,0	3,0	12,8	22,9	3.000/100
	RP-PP 12/1	4,0	3,0	11,3	21,4	3.000/100
	RP-PP 12/19	4,0	1,9	13,2	23,3	3.500/100
	RP-PP 12/23	4,0	2,3	13,2	23,3	2.500/100
	RP-PP 14	4,0	3,0	14,8	24,9	2.500/100
 1,5÷2,5 (16÷14)	RP-PP 16/23	4,0	2,3	17,2	27,3	2.500/100
	BP-PP 12	4,9	3,5	12,8	22,9	2.500/100
	BP-PP 12/25	4,9	2,5	13,3	23,4	2.000/100
	BP-PP 12/29	4,9	2,9	13,3	23,4	2.500/100
 4÷6 (12÷10)	BP-PP 16/25	4,9	2,5	17,2	27,3	2.500/100
	GP-PP 12	6,6	4,0	13,3	27,4	1.000/100
	GP-PP 17	6,6	2,9	19,1	33,2	1.000/100

hooked blade terminals



Cond. Size sqmm (AWG)	Ref.	Dimensions mm					Quantity Box/Bag
		Ø	B	P	L	X	
 0,25÷1,5 (22÷16)	RP-PPL 30*	4,0	3,0	17,5	28,3	1,7	3.000/100
	RP-PPL 46*	4,0	4,6	17,5	28,3	1,7	3.000/100
 1,5÷2,5 (16÷14)	BP-PPL 30*	4,9	3,0	17,5	28,3	1,7	2.500/100
	BP-PPL 46*	4,9	4,6	17,5	28,8	1,7	2.500/100
 4÷6 (12÷10)	GP-PPL 46*	6,6	4,6	17,5	32,6	1,9	1.000/100

*Not UL approved

HALOGEN FREE INSULATED TERMINALS

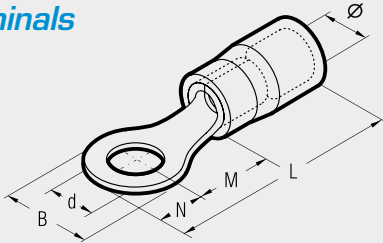


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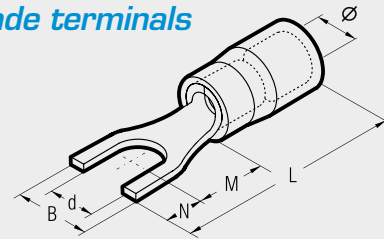
P range funnel entry

VP RP
BP GP

ring terminals



fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Ø	B	M	N	L	d	
0,2÷0,5 (24÷20)	2	*VP-M 2	3,0	5,6	4,5	2,8	17,5	2,2	4.000/100
	3	VP-M 3	3,0	5,6	4,5	2,8	17,5	3,2	4.000/100
	3,5	VP-M 3.5	3,0	5,6	4,5	2,8	17,5	3,7	4.000/100
	4	VP-M 4	3,0	7,0	6,5	3,5	20,2	4,3	4.000/100
	5	VP-M 5	3,0	7,8	7,1	3,9	21,2	5,3	4.000/100
	6	*VP-M 6	3,0	9,4	8,1	4,7	23,0	6,4	4.000/100
0,25÷1,5 (22÷16)	2	*RP-M 2	4,0	5,6	4,5	2,8	17,4	2,2	3.000/100
	3	RP-M 3	4,0	5,6	4,5	2,8	17,4	3,2	3.000/100
	3,5	RP-M 3.5	4,0	5,6	4,5	2,8	17,4	3,7	3.000/100
	3,5	RP-M 3.5/1	4,0	6,2	7,1	3,1	20,2	3,7	3.000/100
	4	RP-M 4	4,0	7,0	6,5	3,5	20,1	4,3	3.000/100
	4	RP-M 4/3	4,0	7,8	7,1	3,9	21,1	4,3	3.000/100
	5	RP-M 5	4,0	7,8	7,1	3,9	21,1	5,3	3.000/100
	6	RP-M 6	4,0	9,4	8,1	4,7	22,9	6,4	2.500/100
1,5÷2,5 (16÷14)	6	RP-M 6/1	4,0	12,0	10,3	6,0	26,4	6,4	2.000/100
	7	RP-M 7	4,0	9,4	8,1	4,7	22,9	7,2	2.500/100
	8	RP-M 8	4,0	12,0	10,3	6,0	26,4	8,4	2.500/100
	10	RP-M 10	4,0	15,5	13,0	7,7	30,9	10,5	2.000/100
	12	RP-M 12	4,0	18,0	15,5	9,0	34,6	13,0	2.000/100
	2	*BP-M 2	4,9	5,6	5,0	2,8	17,9	2,2	2.500/100
	3	BP-M 3	4,9	5,6	5,0	2,8	17,9	3,2	2.500/100
	3,5	BP-M 3.5	4,9	5,6	5,0	2,8	17,9	3,7	3.000/100
	3,5	BP-M 3.5/1	4,9	6,2	6,5	3,1	19,7	3,7	2.500/100
	4	BP-M 4	4,9	8,0	6,5	4,0	20,6	4,3	2.500/100
4÷6 (12÷10)	5	BP-M 5	4,9	8,0	7,5	4,0	21,6	5,3	2.500/100
	6	BP-M 6	4,9	9,4	8,6	4,7	23,4	6,4	2.500/100
	6	BP-M 6/1	4,9	12,0	10,3	6,0	26,4	6,4	2.500/100
	6	*BP-M 6/2	4,9	8,4	5,4	4,2	19,7	6,4	2.500/100
	7	BP-M 7	4,9	10,0	7,8	5,0	22,9	7,2	2.500/100
	8	BP-M 8	4,9	12,0	10,3	6,0	26,4	8,4	1.500/100
	10	BP-M 10	4,9	15,5	13,0	7,7	30,9	10,5	1.500/100
	12	BP-M 12	4,9	18,0	15,5	9,0	34,6	13,0	1.500/100
	3	GP-M 3	6,6	8,0	8,1	4,0	26,2	3,2	1.000/100
	3,5	GP-M 3.5	6,6	8,0	8,1	4,0	26,2	3,7	1.500/100
4	GP-M 4	6,6	9,0	8,1	4,5	26,7	4,3	1.000/100	
5	GP-M 5	6,6	9,0	8,1	4,5	26,7	5,3	1.000/100	
6	GP-M 6	6,6	11,0	11,1	5,5	30,7	6,4	1.000/100	
6	GP-M 6/1	6,6	11,0	8,1	5,5	27,7	6,4	1.000/100	
7	GP-M 7	6,6	11,0	11,1	5,5	30,7	7,2	1.000/100	
8	GP-M 8	6,6	13,6	12,1	6,8	33,0	8,4	1.000/100	
8	*GP-M 8/1	6,6	11,0	8,1	5,5	27,7	8,4	1.000/100	
10	GP-M 10	6,6	13,6	12,1	6,8	33,0	10,5	1.000/100	
10	GP-M 10/1	6,6	15,5	13,8	7,7	35,7	10,5	1.000/100	
12	GP-M 12	6,6	19,0	15,1	9,5	38,7	13,0	500/100	
14	GP-M 14	6,6	21,0	16,1	10,5	40,7	15,0	500/100	
16	GP-M 16	6,6	24,0	17,1	12,0	43,2	17,0	500/100	

Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	
			Ø	B	M	N	L	d		
0,2÷0,5 (24÷20)	3	VP-U 3	3,0	5,5	5,5	4,0	18,7	3,2	4.000/100	
	3,5	VP-U 3.5	3,0	6,0	6,5	3,8	19,5	3,7	4.000/100	
0,25÷1,5 (22÷16)	4	VP-U 4	3,0	6,5	7,5	3,7	20,4	4,3	4.000/100	
	3	RP-U 3	4,0	5,5	5,5	4,0	19,6	3,2	3.000/100	
	3,5	RP-U 3.5	4,0	6,0	6,5	3,8	20,4	3,7	3.000/100	
	3,5	RP-U 3.5/2	4,0	6,4	6,5	3,8	20,4	3,7	3.000/100	
	4	RP-U 4	4,0	6,5	7,5	3,7	21,3	4,3	3.000/100	
	4	RP-U 4/1	4,0	8,5	7,5	3,7	21,3	4,3	3.500/100	
	4	RP-U 4/2	4,0	7,5	7,5	3,7	21,3	4,3	3.500/100	
	5	RP-U 5	4,0	8,5	7,5	3,7	21,3	5,3	3.000/100	
	5	*RP-U 5/1	4,0	9,4	7,5	3,7	21,3	5,3	3.000/100	
	6	RP-U 6	4,0	9,4	8,1	4,7	22,9	6,4	2.000/100	
	6	RP-U 6/1	4,0	12,0	9,2	7,1	26,4	6,4	2.000/100	
	8	RP-U 8	4,0	14,0	10,0	6,3	26,4	8,4	2.000/100	
	10	RP-U 10	4,0	17,5	13,0	7,7	30,9	10,5	1.500/100	
	12	RP-U 12	4,0	20,0	15,5	9,0	34,6	13,0	1.500/100	
	1,5÷2,5 (16÷14)	3	BP-U 3	4,9	5,5	5,5	4,0	19,6	3,2	2.500/100
		3,5	BP-U 3.5	4,9	6,4	6,5	3,8	20,4	3,7	2.500/100
3,5		*BP-U 3.5/1	4,9	7,2	6,5	3,8	20,4	3,7	2.500/100	
4		BP-U 4	4,9	6,5	7,5	3,7	21,3	4,3	2.500/100	
4		BP-U 4/1	4,9	8,5	7,5	3,7	21,3	4,3	3.000/100	
4		BP-U 4/2	4,9	7,5	7,5	3,7	21,3	4,3	2.000/100	
5		BP-U 5	4,9	8,5	7,5	3,7	21,3	5,3	2.000/100	
6		BP-U 6	4,9	9,4	8,1	4,7	22,9	6,4	2.000/100	
6		BP-U 6/1	4,9	12,0	9,2	7,1	26,4	6,4	2.000/100	
8		BP-U 8	4,9	14,0	10,0	6,3	26,4	8,4	1.500/100	
10		BP-U 10	4,9	17,5	13,0	7,7	30,9	10,5	2.000/100	
12		BP-U 12	4,9	20	15,5	9,0	34,6	13,0	1.500/100	
4÷6 (12÷10)		3,5	GP-U 3.5	6,6	7,5	8,5	3,9	26,5	3,7	1.500/100
		4	GP-U 4	6,6	7,5	8,0	4,4	26,5	4,3	1.000/100
		5	GP-U 5	6,6	9,5	8,0	4,4	26,5	5,3	1.000/100
		6	GP-U 6	6,6	10,0	11,0	5,5	30,6	6,4	1.000/100
	8	GP-U 8	6,6	13,5	12,0	8,0	34,1	8,4	1.000/100	
	10	GP-U 10	6,6	15,5	13,0	8,0	35,1	10,5	1.000/100	
	10	GP-U 10/1	6,6	17,5	13,8	7,7	35,7	10,5	1.000/100	
	12	GP-U 12	6,6	21,0	15,1	9,5	38,7	13,0	500/100	

*Made to order

INSULATED CHAIN TERMINALS

CP range with easy entry



CRP
CBP
CGP



HALOGEN FREE
OPERATING TEMPERATURE UP TO 115°C



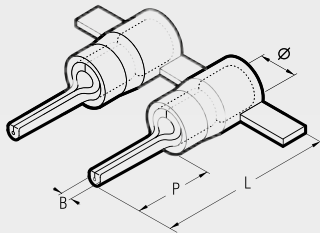
The "CP" range of terminals has been designed to meet the increasing demands for improved safety and reliability of electrical connectors.

Developed for use with production equipment, to give a quick and reliable crimped joint, the Polycarbonate insulation is a Halogen free, self extinguishing thermoplastic material class

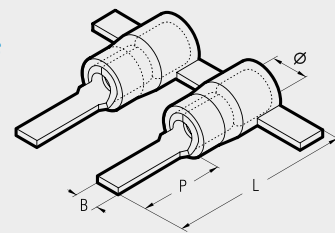
VO (UL 94). The unique funnel shaped entry of the insulation sleeve guarantees total insertion of the conductor strands into the terminal barrel, creating a se-

cure and reliable, electrical and mechanical connection. The operating temperature range is - 20 to + 115°C (Surge + 130°C).

pin terminals



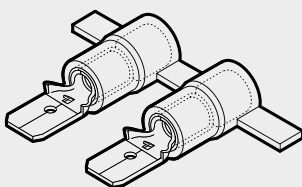
blade terminals



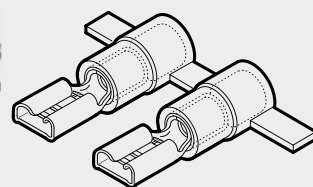
Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity
		Ø	B	P	L	
0,25÷1,5 (22÷16)	CRP-P 8	4,0	1,6	8,0	17,9	2.000
	CRP-P 10	4,0	1,6	10,0	19,9	2.000
	CRP-P 12	4,0	1,6	12,0	22,1	2.000
1,5÷2,5 (16÷14)	CBP-P 8	4,9	1,8	8,0	17,9	1.750
	CBP-P 10	4,9	1,8	10,0	19,9	1.750
	CBP-P 12	4,9	1,8	12,0	21,9	1.750
4÷6 (12÷10)	CGP-P 10	6,6	2,2	10,0	24,5	1.250
	CGP-P 12	6,6	2,2	12,0	26,7	1.250
	CGP-P 14	6,6	2,2	14,0	28,7	1.250

Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity
		Ø	B	P	L	
0,25÷1,5 (22÷16)	CRP-PP 12	4,0	3,0	12,8	22,9	2.000
	*CRP-PP 12/1	4,0	3,0	11,3	21,4	2.000
	*CRP-PP 12/23	4,0	2,3	13,2	23,3	2.000
	CRP-PP 14	4,0	3,0	14,8	24,9	2.000
1,5÷2,5 (16÷14)	CBP-PP 12	4,9	3,5	12,8	22,9	1.750
	*CBP-PP 12/25	4,9	2,5	13,3	23,4	1.750
4÷6 (12÷10)	CGP-PP 12	6,6	4,0	13,3	27,4	1.250
	*CGP-PP 17	6,6	2,9	19,1	33,2	1.250

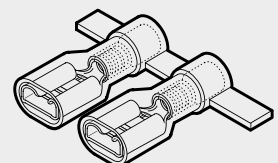
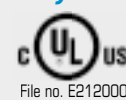
male disconnect terminals



female disconnect terminals



female disconnect terminals fully insulated



Conductor Size sqmm (AWG)	Ref.	Tab mm	Quantity
0,25÷1,5 (22÷16)	CRP-M 608	6,35 x 0,8	2.000
1,5÷2,5 (16÷14)	CBP-M 608	6,35 x 0,8	1.750
4÷6 (12÷10)	CGP-M 608	6,35 x 0,8	1.250

Conductor Size sqmm (AWG)	Ref.	Tab mm	Quantity
0,25÷1,5 (22÷16)	CRP-F 305	2,8 x 0,5	2.000
	CRP-F 308	2,8 x 0,8	2.000
	CRP-F 405	4,8 x 0,5	2.000
	CRP-F 408	4,8 x 0,8	2.000
	CRP-F 608	6,35 x 0,8	2.000
	1,5÷2,5 (16÷14)	CBP-F 405	4,8 x 0,5
CBP-F 408		4,8 x 0,8	1.750
CBP-F 608		6,35 x 0,8	1.750
4÷6 (12÷10)	CGP-F 608	6,35 x 0,8	1.250

Conductor Size sqmm (AWG)	Ref.	Tab mm	Quantity
0,25÷1,5 (22÷16)	CRP-F 405P*	4,8 x 0,5	2.000
	CRP-F 408P*	4,8 x 0,8	2.000
	CRP-F 608P	6,35 x 0,8	1.500
1,5÷2,5 (16÷14)	CBP-F 408P*	4,8 x 0,8	1.500
	CBP-F 608P	6,35 x 0,8	1.500
4÷6 (12÷10)	CGP-F 608P	6,35 x 0,8	1.250

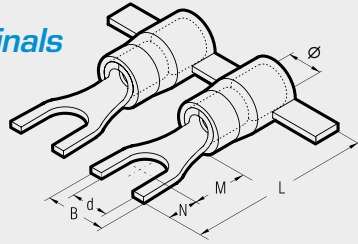
*Not UL approved

*Made to order

INSULATED CHAIN TERMINALS



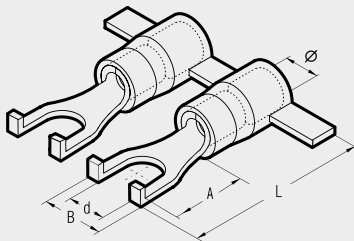
fork/spade terminals



CP range with easy entry

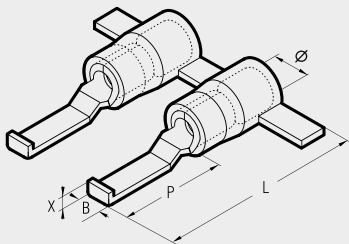
CRP
CBP
CGP

Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm					Quantity	
			Ø	B	M	N	L		d
0,25÷1,5 (22÷16)	3	CRP-U 3	4,0	5,5	5,5	4,0	19,6	3,2	2.000
	3,5	CRP-U 3.5	4,0	6,0	6,5	3,8	20,4	3,7	2.000
	3,5	*CRP-U 3.5/2	4,0	6,4	6,5	3,8	20,4	3,7	2.000
	4	CRP-U 4	4,0	6,5	7,5	3,7	21,3	4,3	2.000
	4	*CRP-U 4/1	4,0	8,5	7,5	3,7	21,3	4,3	2.000
	4	*CRP-U 4/2	4,0	7,5	7,5	3,7	21,3	4,3	2.000
	5	CRP-U 5	4,0	8,5	7,5	3,7	21,3	5,3	2.000
	6	CRP-U 6	4,0	9,4	8,1	4,7	22,9	6,4	2.000
1,5÷2,5 (16÷14)	6	*CRP-U 6/1	4,0	12,0	9,2	7,1	26,4	6,4	2.000
	8	*CRP-U 8	4,0	14,0	10,0	6,3	26,4	8,4	2.000
	3	CBP-U 3	4,9	5,5	5,5	4,0	19,6	3,2	1.750
	3,5	CBP-U 3.5	4,9	6,4	6,5	3,8	20,4	3,7	1.750
	4	CBP-U 4	4,9	6,5	7,5	3,7	21,3	4,3	1.750
	4	*CBP-U 4/1	4,9	8,5	7,5	3,7	21,3	4,3	1.750
	4	*CBP-U 4/2	4,9	7,5	7,5	3,7	21,3	4,3	1.750
	5	CBP-U 5	4,9	8,5	7,5	3,7	21,3	5,3	1.750
4÷6 (12÷10)	6	CBP-U 6	4,9	9,4	8,1	4,7	22,9	6,4	1.750
	3,5	*CGP-U 3.5	6,6	7,5	8,5	3,9	26,5	3,7	1.250
	4	*CGP-U 4	6,6	7,5	8,0	4,4	26,5	4,3	1.250
	5	CGP-U 5	6,6	9,5	8,0	4,4	26,5	5,3	1.250
6	CGP-U 6	6,6	10,0	11,0	5,5	30,6	6,4	1.250	



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm					Quantity
			Ø	B	A	L	d	
1,5÷2,5 (16÷14)	4	CBP-U 4/3L*	4,9	6,5	9,5	14,5	4,3	1.750

hooked blade terminals

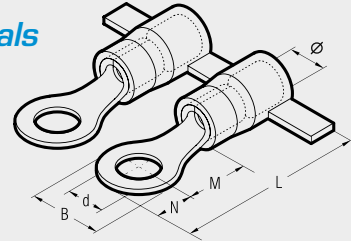


Cond. Size sqmm (AWG)	Ref.	Dimensions mm					Quantity
		Ø	B	P	L	X	
0,25÷1,5 (22÷16)	CRP-PPL30*	4,0	3,0	17,5	28,8	1,7	2.000
1,5÷2,5 (16÷14)	CBP-PPL30*	4,9	3,0	17,5	28,8	1,7	1.750

*Not UL approved

*Made to order

ring terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm					Quantity	
			Ø	B	M	N	L		d
0,25÷1,5 (22÷16)	3	CRP-M 3	4,0	5,6	4,5	2,8	17,4	3,2	2.000
	3,5	CRP-M 3.5	4,0	5,6	4,5	2,8	17,4	3,7	2.000
	3,5	*CRP-M 3.5/1	4,0	6,2	7,1	3,1	20,2	3,7	2.000
	4	CRP-M 4	4,0	7,0	6,5	3,5	20,1	4,3	2.000
	4	*CRP-M 4/3	4,0	7,8	7,1	3,9	21,1	4,3	2.000
	5	CRP-M 5	4,0	7,8	7,1	3,9	21,1	5,3	2.000
	6	CRP-M 6	4,0	9,4	8,1	4,7	22,9	6,4	2.000
	6	*CRP-M 6/1	4,0	12,0	10,3	6,0	26,4	6,4	2.000
1,5÷2,5 (16÷14)	7	CRP-M 7	4,0	9,4	8,1	4,7	22,9	7,2	2.000
	8	CRP-M 8	4,0	12,0	10,3	6,0	26,4	8,4	2.000
	3	CBP-M 3	4,9	5,6	5,0	2,8	17,9	3,2	1.750
	3,5	CBP-M 3.5	4,9	5,6	5,0	2,8	17,9	3,7	1.750
	3,5	*CBP-M 3.5/1	4,9	6,2	6,5	3,1	19,6	3,7	1.750
	4	CBP-M 4	4,9	8,0	6,5	4,0	20,6	4,3	1.750
	5	CBP-M 5	4,9	8,0	7,5	4,0	21,6	5,3	1.750
	6	CBP-M 6	4,9	9,4	8,6	4,7	23,4	6,4	1.750
4÷6 (12÷10)	6	*CBP-M 6/1	4,9	12,0	10,3	6,0	26,4	6,4	1.750
	7	CBP-M 7	4,9	10,0	7,8	5,0	22,9	7,2	1.750
	8	CBP-M 8	4,9	12,0	10,3	6,0	26,4	8,4	1.750
	3	CGP-M 3	6,6	8,0	8,1	4,0	26,2	3,2	1.250
	3,5	CGP-M 3.5	6,6	8,0	8,1	4,0	26,2	3,7	1.250
	4	CGP-M 4	6,6	9,0	8,1	4,5	26,7	4,3	1.250
	5	CGP-M 5	6,6	9,0	8,1	4,5	26,7	5,3	1.250
	6	CGP-M 6	6,6	11,0	11,1	5,5	30,7	6,4	1.250
6	*CGP-M 6/1	6,6	11,0	8,1	5,5	27,7	6,4	1.250	
7	CGP-M 7	6,6	11,0	11,1	5,5	30,7	7,2	1.000	
8	CGP-M 8	6,6	13,6	12,1	6,8	33,0	8,4	1.250	
8	*CGP-M 8/1	6,6	11,0	8,1	5,5	27,7	8,4	1.250	



Interchangeable application heads are available for crimping these terminals with the bench press ELB-3 (see page 122).

PVC INSULATED CRIMP TERMINALS

F range funnel entry



File no. E125401

RF BF
GF



The unique funnel shaped PVC sleeve guarantees total insertion of the conductor strands into the terminal barrel, creating a secure and reliable, electrical and mechanical connection. The internal surface of the

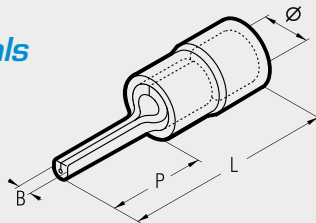
barrel is rifled to improve contact with conductor strands when crimped and to increase tensile strength. The "F" range of terminals offers a wide selection of rings, forks, pins and blades, designed to meet the ever

changing end user requirements.

The operating temperature range is - 20 to + 80°C (Surge + 90°C).

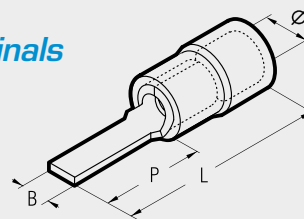
Recommended crimping tools are shown on pages 98 to 119, 154, 193.

pin terminals



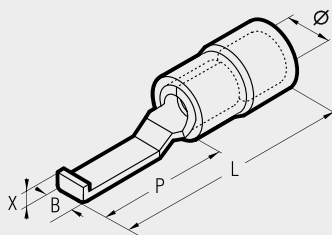
Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Ø	B	P	L	
0,25÷1,5 (22÷16)	RF-P 8	3,9	1,6	8,0	17,9	3.000/100
	RF-P 10	3,9	1,6	10,0	19,9	3.000/100
	RF-P 12	3,9	1,6	12,0	22,1	3.000/100
1,5÷2,5 (16÷14)	BF-P 8	4,9	1,7	8,0	17,9	2.500/100
	BF-P 10	4,9	1,8	10,0	19,9	2.500/100
	BF-P 12	4,9	1,8	12,0	21,9	2.500/100
4÷6 (12÷10)	GF-P 10	6,7	2,2	10,0	24,6	1.000/100
	GF-P 12	6,7	2,2	12,0	26,8	1.000/100
	GF-P 14	6,7	2,2	14,0	28,8	1.000/100

blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Ø	B	P	L	
0,25÷1,5 (22÷16)	RF-PP 12	3,9	3,0	12,8	22,9	3.000/100
	RF-PP 12/1	3,9	3,0	11,3	21,4	3.000/100
	RF-PP 12/19	3,9	1,9	13,2	23,3	3.000/100
	RF-PP 12/23	3,9	2,3	13,2	23,3	2.500/100
	RF-PP 14	3,9	3,0	14,8	24,9	2.500/100
	RF-PP 16/23	3,9	2,3	17,2	27,3	2.500/100
1,5÷2,5 (16÷14)	BF-PP 12	4,9	3,5	12,8	22,9	2.500/100
	BF-PP 12/25	4,9	2,5	13,3	23,4	2.000/100
	BF-PP 12/29*	4,9	2,9	13,3	23,4	2.500/100
	BF-PP 16/25	4,9	2,5	17,2	27,3	2.500/100
4÷6 (12÷10)	GF-PP 12	6,7	4,0	13,3	27,5	1.000/100
	GF-PP 17	6,7	2,9	19,2	33,4	1.000/100

hooked blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm					Quantity Box/Bag
		Ø	B	P	L	X	
0,25÷1,5 (22÷16)	RF-PPL 30*	3,9	3,0	17,5	28,4	1,7	2.500/100
	RF-PPL 46*	3,9	4,6	17,5	28,4	1,7	2.500/100
1,5÷2,5 (16÷14)	BF-PPL 30*	4,9	3,0	17,5	28,4	1,7	2.000/100
	BF-PPL 46*	4,9	4,6	17,5	28,4	1,7	2.000/100
4÷6 (12÷10)	GF-PPL 46*	6,7	4,6	17,5	32,7	1,9	1.000/100

*Not UL approved

PVC INSULATED CRIMP TERMINALS

F range funnel entry

RF BF GF



File no. E125401

VALSTAR V3-F

Robust plastic case with compartments, containing:

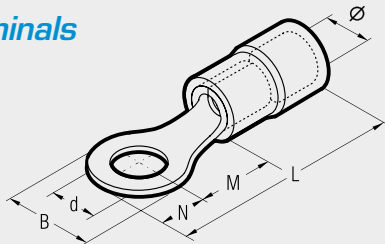
- An assortment of PVC insulated crimp terminals for conductor sizes 0,25 to 6 mm² (22÷10 AWG).
- Tool Crimpstar® HP 3.



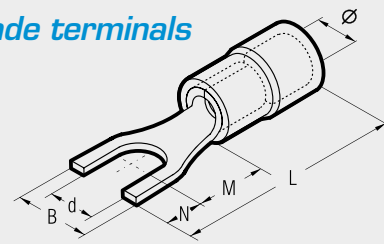
Connectors included:

- Qty 50 terminals RF-U4
- Qty 50 terminals RF-U5
- Qty 50 terminals RF-P10
- Qty 50 terminals BF-U4
- Qty 50 terminals BF-U5
- Qty 50 terminals BF-P10
- Qty 25 terminals GF-U5
- Qty 25 terminals GF-U6
- Qty 25 terminals GF-P12
- Qty 25 connectors PLO6-M
- Qty 25 connectors PL1-M

ring terminals



fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Ø	B	M	N	L	d	
2	*RF-M 2*	3,9	5,6	4,5	2,8	17,4	2,2	3.000/100	
3	RF-M 3	3,9	5,6	4,5	2,8	17,4	3,2	3.000/100	
3,5	RF-M 3,5	3,9	5,6	4,5	2,8	17,4	3,7	3.000/100	
3,5	RF-M 3,5/1	3,9	6,2	7,1	3,1	20,3	3,7	3.000/100	
4	RF-M 4	3,9	7,0	6,5	3,5	20,1	4,3	3.000/100	
4	RF-M 4/3*	3,9	7,8	7,1	3,9	21,1	4,3	3.000/100	
5	RF-M 5	3,9	7,8	7,1	3,9	21,1	5,3	2.500/100	
6	RF-M 6	3,9	9,4	8,1	4,7	22,9	6,4	2.500/100	
6	RF-M 6/1	3,9	12,0	10,3	6,0	26,4	6,4	2.000/100	
7	RF-M 7	3,9	9,4	8,1	4,7	22,9	7,2	2.500/100	
8	RF-M 8	3,9	12,0	10,3	6,0	26,4	8,4	2.000/100	
0,25÷1,5 (22÷16)	10	RF-M 10	3,9	15,5	13,0	7,7	30,9	10,5	1.500/100
0,25÷1,5 (22÷16)	12	RF-M 12	3,9	18,0	15,5	9,0	34,6	13,0	1.500/100
2	*BF-M 2*	4,9	5,6	5,0	2,8	17,9	2,2	3.000/100	
3	BF-M 3	4,9	5,6	5,0	2,8	17,9	3,2	2.500/100	
3,5	BF-M 3,5	4,9	5,6	5,0	2,8	17,9	3,7	2.500/100	
3,5	BF-M 3,5/1	4,9	6,2	6,5	3,1	19,7	3,7	2.500/100	
4	BF-M 4	4,9	8,0	6,5	4,0	20,6	4,3	2.500/100	
5	BF-M 5	4,9	8,0	7,5	4,0	21,6	5,3	2.000/100	
5	BF-M 6	4,9	9,4	8,6	4,7	23,4	6,4	2.000/100	
6	BF-M 6/1	4,9	12,0	10,3	6,0	26,4	6,4	2.000/100	
6	*BF-M 6/2*	4,9	8,4	5,4	4,2	19,7	6,4	2.500/100	
7	BF-M 7	4,9	10,0	7,8	5,0	22,9	7,2	2.000/100	
8	BF-M 8	4,9	12,0	10,3	6,0	26,4	8,4	1.500/100	
1,5÷2,5 (16÷14)	10	BF-M 10	4,9	15,5	13,0	7,7	30,9	10,5	1.500/100
1,5÷2,5 (16÷14)	12	BF-M 12	4,9	18	15,5	9,0	34,6	13,0	1.000/100
3	GF-M 3	6,7	8,0	8,1	4,0	26,3	3,2	1.000/100	
3,5	GF-M 3,5	6,7	8,0	8,1	4,0	26,3	3,7	1.000/100	
4	GF-M 4	6,7	9,0	8,1	4,5	26,8	4,3	1.000/100	
5	GF-M 5	6,7	9,0	8,1	4,5	26,8	5,3	1.000/100	
6	GF-M 6	6,7	11,0	11,1	5,5	30,8	6,4	1.000/100	
6	GF-M 6/1	6,7	11,0	8,1	5,5	27,8	6,4	1.000/100	
7	GF-M 7	6,7	11,0	11,1	5,5	30,8	7,2	1.000/100	
8	GF-M 8	6,7	13,6	12,1	6,8	33,1	8,4	1.000/100	
8	*GF-M 8/1*	6,7	11,0	8,1	5,5	27,8	8,4	1.000/100	
10	GF-M 10	6,7	13,6	12,1	6,8	33,1	10,5	1.000/100	
10	GF-M 10/1	6,7	15,5	13,8	7,7	35,8	10,5	1.000/100	
12	GF-M 12	6,7	19,0	15,1	9,5	38,8	13,0	500/100	
14	GF-M 14	6,7	21,0	16,1	10,5	40,8	15,0	500/100	
4÷6 (12÷10)	16	GF-M 16	6,7	24,0	17,1	12,0	43,3	17,0	500/100

Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Ø	B	M	N	L	d	
3	RF-U 3	3,9	5,5	5,5	4,0	19,6	3,2	3.000/100	
3,5	RF-U 3,5	3,9	6,0	6,5	3,8	20,4	3,7	3.000/100	
3,5	RF-U 3,5/1	3,9	7,2	6,5	3,8	20,4	3,7	3.000/100	
3,5	RF-U 3,5/2*	3,9	6,4	6,5	3,8	20,4	3,7	3.000/100	
4	RF-U 4	3,9	6,5	7,5	3,7	21,3	4,3	3.000/100	
4	RF-U 4/1	3,9	8,5	7,5	3,7	21,3	4,3	3.000/100	
4	RF-U 4/2	3,9	7,5	7,5	3,7	21,3	4,3	3.000/100	
5	RF-U 5	3,9	8,5	7,5	3,7	21,3	5,3	3.000/100	
5	*RF-U 5/1*	3,9	9,4	7,5	3,7	21,3	5,3	3.000/100	
6	RF-U 6	3,9	9,4	8,1	4,7	22,9	6,4	2.000/100	
6	RF-U 6/1	3,9	12,0	9,2	7,1	26,4	6,4	2.500/100	
8	RF-U 8	3,9	14,0	10,0	6,3	26,4	8,4	2.000/100	
0,25÷1,5 (22÷16)	10	RF-U 10	3,9	17,5	13,0	7,7	30,9	10,5	1.500/100
0,25÷1,5 (22÷16)	12	RF-U 12	3,9	20,0	15,5	9,0	34,6	13,0	1.500/100
3	BF-U 3	4,9	5,5	5,5	4,0	19,6	3,2	2.500/100	
3,5	BF-U 3,5	4,9	6,4	6,5	3,8	20,4	3,7	2.500/100	
3,5	*BF-U 3,5/1	4,9	7,2	6,5	3,8	20,4	3,7	3.000/100	
4	BF-U 4	4,9	6,5	7,5	3,7	21,3	4,3	2.500/100	
4	BF-U 4/1	4,9	8,5	7,5	3,7	21,3	4,3	2.000/100	
4	BF-U 4/2	4,9	7,5	7,5	3,7	21,3	4,3	2.000/100	
5	BF-U 5	4,9	8,5	7,5	3,7	21,3	5,3	2.000/100	
5	BF-U 5/2*	4,9	12,0	11,3	5,0	26,3	5,3	1.500/100	
6	BF-U 6	4,9	9,4	8,1	4,7	22,9	6,4	2.000/100	
6	BF-U 6/1	4,9	12,0	9,2	7,1	26,4	6,4	2.000/100	
8	BF-U 8	4,9	14,0	10,0	6,3	26,4	8,4	1.500/100	
1,5÷2,5 (16÷14)	10	BF-U 10	4,9	17,5	13,0	7,7	30,9	10,5	1.000/100
1,5÷2,5 (16÷14)	12	BF-U 12	4,9	20,0	15,5	9,0	34,6	13,0	1.500/100
3,5	GF-U 3,5	6,7	7,5	8,5	3,9	26,6	3,7	1.000/100	
4	GF-U 4	6,7	7,5	8,0	4,4	26,6	4,3	1.000/100	
5	GF-U 5	6,7	9,5	8,0	4,4	26,6	5,3	1.000/100	
6	GF-U 6	6,7	10,0	11,0	5,5	30,7	6,4	1.000/100	
8	GF-U 8	6,7	13,5	12,0	8,0	34,2	8,4	1.000/100	
10	GF-U 10	6,7	15,5	13,0	8,0	35,2	10,5	1.000/100	
10	GF-U 10/1	6,7	17,5	13,8	7,7	35,8	10,5	1.000/100	
12	GF-U 12	6,7	21,0	15,1	9,5	38,8	13,0	500/100	
14	GF-U 14	6,7	23,0	16,1	10,5	40,8	15,0	500/100	
4÷6 (12÷10)	16	GF-U 16	6,7	26,0	17,1	11,5	42,8	17,0	500/100

*Not UL approved

*Made to order

REINFORCED PA 6.6 INSULATED TERMINALS

RKY
BKY
GKY

KY range



'KY' type terminals are designed to offer improved mechanical and electrical integrity under heavy-duty application.

This is achieved via a Copper sleeve located between

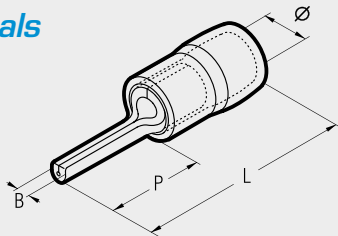
the Copper barrel and Polyamide insulation of the terminal. Then, during crimping, the insulation of the conductor is integrated into the crimp due to the Copper sleeve being deformed

around it to maintain the level of 'grip' required in applications subject to continuous mechanical vibrations (e.g: mobile plant, vehicles, moving components).

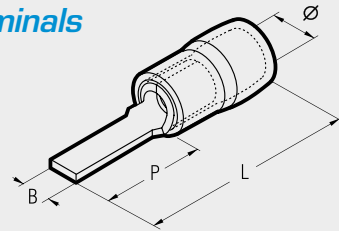
The operating temperature range is - 20 to + 105°C (Surge + 110°C).

Recommended crimping tools are shown on pages 98 to 119, 154, 193.

pin terminals



blade terminals

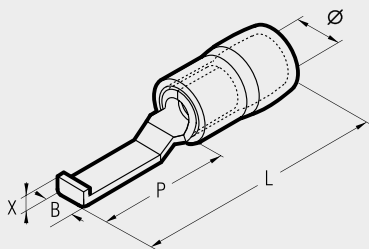


Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Ø	B	P	L	
0,25÷1,5 (22÷16)	RKY-P 8	4,5	1,9	9,0	19,8	3.000/100
	RKY-P 10	4,5	1,9	10,0	20,8	3.500/100
	RKY-P 12	4,5	1,9	12,0	22,8	3.000/100
1,5÷2,5 (16÷14)	BKY-P 8	5,2	1,9	9,0	19,8	3.000/100
	BKY-P 10	5,2	1,9	10,0	20,8	3.000/100
	BKY-P 12	5,2	1,9	12,0	22,8	3.000/100
4÷6 (12÷10)	GKY-P 14	7,0	2,8	14,0	27,0	1.000/100

Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Ø	B	P	L	
0,25÷1,5 (22÷16)	RKY-PP 12	4,5	3,0	13,0	23,8	3.000/100
	RKY-PP 12/19	4,5	2,0	18,0	28,8	3.000/100
	RKY-PP 16/23	4,5	2,2	18,0	28,8	2.500/100
1,5÷2,5 (16÷14)	BKY-PP 12	5,2	3,0	13,0	23,8	2.500/100
	BKY-PP 12/25	5,2	2,4	13,0	23,8	2.000/100
	BKY-PP 16/23	5,2	2,2	18,0	28,8	2.500/100
4÷6 (12÷10)	GKY-PP 12	7,0	4,0	14,0	27,0	1.000/100
	GKY-PP 17	7,0	2,0	18,0	31,0	1.000/100

Consult Cembre for a wider range of pin and blade dimensions.

hooked blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm					Quantity Box/Bag
		Ø	B	P	L	X	
0,25÷1,5 (22÷16)	RKY-PPL 30	4,5	3,0	16,8	28,2	2,1	3.000/100
	RKY-PPL 46	4,5	4,6	16,8	28,2	2,1	3.000/100
1,5÷2,5 (16÷14)	BKY-PPL 30	5,2	3,0	16,8	28,2	2,1	2.500/100
	BKY-PPL 46	5,2	4,6	16,8	28,2	2,1	2.500/100
4÷6 (12÷10)	GKY-PPL 46	7,0	4,6	17,2	30,2	2,4	1.000/100

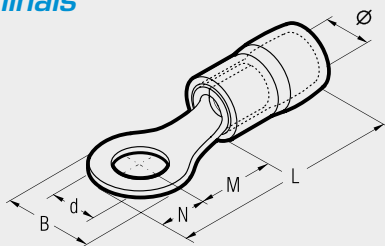
REINFORCED PA 6.6 INSULATED TERMINALS



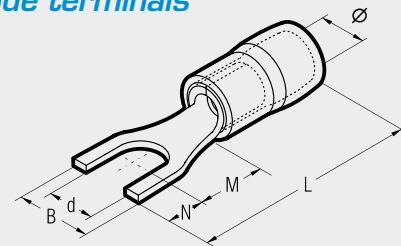
KY range

RKY
BKY
GKY

ring terminals



fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Ø	B	M	N	L	d	
0,25÷1,5 (22÷16)	3	RKY-M 3	4,5	5,5	5,0	2,5	18,5	3,2	3.000/100
	3,5	RKY-M 3.5	4,5	5,5	5,0	2,5	18,5	3,7	3.000/100
	3,5	RKY-M 3.5/1	4,5	6,6	6,3	3,1	20,4	3,7	3.000/100
	4	RKY-M 4	4,5	6,6	6,3	3,1	20,4	4,3	3.000/100
	5	RKY-M 5	4,5	8,0	7,0	3,8	21,8	5,3	3.000/100
	6	RKY-M 6/1	4,5	11,6	11,0	5,8	27,8	6,4	2.000/100
	8	RKY-M 8	4,5	11,6	11,0	5,8	27,8	8,4	2.500/100
	10	RKY-M 10	4,5	13,6	13,9	6,6	31,5	10,5	1.500/100
1,5÷2,5 (16÷14)	12	RKY-M 12	4,5	19,6	16,0	9,4	36,4	13,0	1.500/100
	3	BKY-M 3	5,2	6,6	4,8	3,0	18,8	3,2	2.500/100
	3,5	BKY-M 3.5	5,2	6,6	4,8	3,0	18,8	3,7	2.500/100
	3,5	BKY-M 3.5/1	5,2	6,6	6,3	3,1	20,4	3,7	2.500/100
	4	BKY-M 4	5,2	8,5	7,8	4,0	22,8	4,3	2.500/100
	5	BKY-M 5	5,2	8,5	7,8	4,0	22,8	5,3	2.500/100
	6	BKY-M 6/1	5,2	12,0	11,0	5,8	27,8	6,4	2.500/100
	8	BKY-M 8	5,2	12,0	11,0	5,8	27,8	8,4	1.500/100
4÷6 (12÷10)	10	BKY-M 10	5,2	13,6	13,9	6,6	31,5	10,5	1.500/100
	12	BKY-M 12	5,2	19,2	16,0	9,4	36,4	13,0	1.000/100
	3,5	GKY-M 3.5	7,0	7,2	6,1	3,6	22,7	3,7	1.000/100
	4	GKY-M 4	7,0	9,5	9,1	4,5	26,6	4,3	1.000/100
	5	GKY-M 5	7,0	9,5	9,1	4,5	26,6	5,3	1.000/100
	6	GKY-M 6	7,0	12,0	10,5	6,0	29,5	6,4	1.000/100
	8	GKY-M 8	7,0	15,0	13,5	7,5	34,0	8,4	1.000/100
	10	GKY-M 10	7,0	15,0	13,5	7,5	34,0	10,5	1.000/100
4÷6 (12÷10)	12	GKY-M 12	7,0	19,2	16,0	9,6	38,6	13,0	1.000/100
	14	GKY-M 14	7,0	32,0	25,2	16,0	54,2	15,0	500/100
	16	GKY-M 16	7,0	32,0	25,2	16,0	54,2	17,0	500/100

Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Ø	B	M	N	L	d	
0,25÷1,5 (22÷16)	3	RKY-U 3	4,5	5,7	6,5	4,5	22,0	3,2	2.500/100
	3,5	RKY-U 3.5	4,5	5,7	6,5	4,5	22,0	3,7	2.500/100
	4	RKY-U 4	4,5	6,4	6,5	4,5	22,0	4,3	3.000/100
	5	RKY-U 5	4,5	8,1	6,5	4,5	22,0	5,3	3.000/100
	6	RKY-U 6	4,5	9,5	6,5	4,5	22,0	6,4	2.000/100
	6	RKY-U 6/1	4,5	12,0	11,0	6,0	28,0	6,4	2.000/100
1,5÷2,5 (16÷14)	3	BKY-U 3	5,2	5,7	6,5	4,5	22,0	3,2	2.500/100
	3,5	BKY-U 3.5	5,2	6,0	6,5	4,5	22,0	3,7	2.500/100
	4	BKY-U 4	5,2	6,4	6,5	4,5	22,0	4,3	2.500/100
	5	BKY-U 5	5,2	7,9	6,5	4,5	22,0	5,3	2.500/100
	6	BKY-U 6	5,2	9,3	6,5	4,5	22,0	6,4	2.000/100
	6	BKY-U 6/1	5,2	12,0	11,0	6,0	28,0	6,4	2.000/100
4÷6 (12÷10)	3,5	GKY-U 3.5	7,0	7,2	7,5	3,9	24,4	3,7	1.500/100
	4	GKY-U 4	7,0	7,2	7,5	3,9	24,4	4,3	1.000/100
	5	GKY-U 5	7,0	9,0	7,0	5,5	25,5	5,3	1.000/100
	6	GKY-U 6	7,0	12,0	12,0	6,5	31,5	6,4	1.000/100
	8	GKY-U 8	7,0	14,0	10,5	7,0	30,5	8,4	1.000/100

Consult Cembre for a wider range of pin and blade dimensions.

RF-F BF-F GF-F












Manufactured from Brass strip
- Electrolytically Tin plated
- The operating temperature range is -20 to +115°C (Surge +130°C).
- Recommended crimping tools are shown on pages 98 to 119, 154, 193.










FEMALE DISCONNECT TERMINALS



Polycarbonate insulated terminals - partially reinforced with Copper sleeve

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	 RF-F 305	2,8 x 0,5	3.000/100
	 RF-F 308*	2,8 x 0,8	3.000/100
	 RF-F 405	4,8 x 0,5	2.500/100
1,5÷2,5 (16÷14)	 RF-F 408	4,8 x 0,8	2.500/100
	 BF-F 608	6,35 x 0,8	2.000/100
	 BF-F 405	4,8 x 0,5	2.500/100
4÷6 (12÷10)	 BF-F 408	4,8 x 0,8	2.500/100
	 BF-F 608	6,35 x 0,8	1.500/100
	 GF-F 608	6,35 x 0,8	1.000/100

Polycarbonate fully insulated terminals - partially reinforced with Copper sleeve

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	 RF-F 305P	2,8 x 0,5	2.000/100
	 RF-F 308P*	2,8 x 0,8	2.000/100
	 RF-F 405P	4,8 x 0,5	1.500/100
1,5÷2,5 (16÷14)	 RF-F 408P	4,8 x 0,8	1.500/100
	 RF-F 608P	6,35 x 0,8	1.000/100
	 BF-F 405P	4,8 x 0,5	1.500/100
4÷6 (12÷10)	 BF-F 408P	4,8 x 0,8	2.000/100
	 BF-F 608P	6,35 x 0,8	1.000/100
	 GF-F 608P	6,35 x 0,8	800/100

*Not UL approved

RF-M BF-M GF-M






Manufactured from Brass strip
- Electrolytically Tin plated
- The operating temperature range is -20 to +115°C (Surge +130°C).
- Recommended crimping tools are shown on pages 98 to 119, 154, 193.



MALE DISCONNECT TERMINALS



Polycarbonate insulated terminals - partially reinforced with Copper sleeve

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	 RF-M 608	6,35 x 0,8	3.000/100
1,5÷2,5 (16÷14)	 BF-M 608	6,35 x 0,8	2.500/100
4÷6 (12÷10)	 GF-M 608	6,35 x 0,8	1.000/100

Polycarbonate fully insulated terminals - partially reinforced with Copper sleeve

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	 RF-M 608P*	6,35 x 0,8	1.000/100
1,5÷2,5 (16÷14)	 BF-M 608P*	6,35 x 0,8	1.000/100

*Not UL approved

RF-FM BF-FM RF-B BF-B





Manufactured from Brass strip
- Electrolytically Tin plated
- The operating temperature range is -20 to +115°C (Surge +130°C).
- Recommended crimping tools are shown on pages 98 to 119, 154, 193.

MALE/FEMALE CONNECTORS







Polycarbonate insulated terminals - partially reinforced with Copper sleeve

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	 RF-FM 608	6,35 x 0,8	1.000/100
1,5÷2,5 (16÷14)	 BF-FM 608	6,35 x 0,8	1.500/100

BULLET AND SOCKET CONNECTORS

Polycarbonate insulated terminals - partially reinforced with Copper sleeve

Cond. Size sqmm (AWG)	Ref.	Ø mm	Quantity Box/Bag
0,25÷1,5 (22÷16)	 RF-BM 4*	4	2.500/100
	 RF-BF 4*	4	1.000/100
1,5÷2,5 (16÷14)	 BF-BM 5*	5	2.000/100
	 BF-BF 5*	5	800/100

*Not UL approved

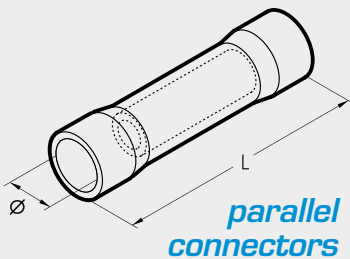


BUTT AND PARALLEL CONNECTORS



File no. E125401

butt connectors



parallel connectors

PVC insulated

Cond. Size sqmm (AWG)	Ref.	Ø mm	L mm	Quantity Box/Bag
0,25÷0,5 (24÷20)	PL 01-M*	3,0	25	3.000/100
0,25÷1,5 (22÷16)	PL 03-M	4,0	25	1.000/100
1,5÷2,5 (16÷14)	PL 06-M	5,0	25	1.500/100
4÷6 (12÷10)	PL 1-M	6,5	32	500/100
0,25÷1,5 (22÷16)	PL 03-P*	4,0	20	3.000/100
1,5÷2,5 (16÷14)	PL 06-P*	5,0	16	2.000/100

*Not UL approved

PL

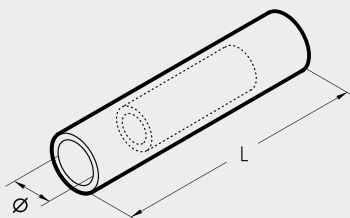


- Manufactured from Copper tube
- Electrolytically Tin plated
 - The operating temperature range is - 20 to + 80°C (Surge + 90°C).
 - Recommended crimping tools are shown on pages 98 to 119, 154, 193.

BUTT CONNECTORS



Polyamide PA6.6 insulated



Cond. Size sqmm (AWG)	Ref.	Øi mm	L mm	Quantity Box/Bag
0,25÷1,5 (22÷16)	NL 03-M	4,0	25,0	1.000/100
1,5÷2,5 (16÷14)	NL 06-M	5,4	25,5	1.500/100
4÷6 (12÷10)	NL 1-M	5,4	32,0	1.000/100
10 (8÷7)	NL 2-M	6,8	43,0	500/100
16 (6÷5)	NL 3-M	7,9	44,0	500/100

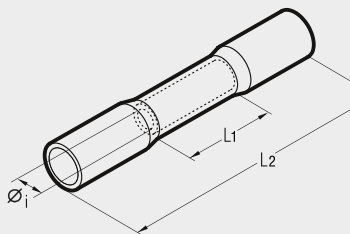
NL-M



- Manufactured from Copper tube
- Electrolytically Tin plated
 - The operating temperature range is - 20 to + 115°C (Surge + 130°C).
 - Recommended crimping tools are shown on pages 98 to 119, 154, 193.



PE HD insulated, heat shrinkable



Cond. Size sqmm (AWG)	Ref.	Ø i mm	L1 mm	L2 mm	Quantity Box/Bag
0,5÷1 (20÷17)	WL 03-M	1,7	15,0	36,0	1.500/100
1,5÷2,5 (16÷14)	WL 06-M	2,3	15,0	36,0	1.000/100
4÷6 (12÷10)	WL 1-M	3,4	15,0	41,0	500/100

WL-M



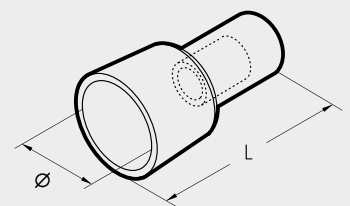
Max operating voltage: 600 V
Shrink temperature: 150 °C
Temperature range: -40 °C to + 105 °C
Protection: IP68

- Manufactured from Copper tube
- Electrolytically Tin plated
 - Heat shrink sleeve with sealant
 - Recommended crimping tools are shown on pages 100, 111.



CLOSE END CONNECTORS

Polyamide PA6.6 insulated



Cond. Size sqmm (AWG)	Ref.	Ø mm	L mm	Quantity Box/Bag
0,25÷1,5 (22÷16)	NL 03-P	9,8	21,0	1.000/100
1,5÷2,5 (16÷14)	NL 06-P	7,9	19,9	1.000/100
1,5÷2,5 (16÷14)	NL 06-PB	6,5	13,6	1.500/100
4÷6 (12÷10)	NL 1-P	10,5	21,5	800/100
4÷6 (12÷10)	NL 1-PG	9,0	17,8	1.000/100

NL-P



- Manufactured from Copper tube
- Electrolytically Tin plated
 - The operating temperature range is - 20 to + 115°C (Surge + 130°C).
 - Recommended crimping tools are shown on pages 98 to 119, 154, 193.

RKF-F BKF-F GK-F



- Manufactured from Brass strip
- Electrolytically Tin plated
- fully reinforced with Copper sleeve, funnel entry
- The operating temperature range is -20°C to $+105^{\circ}\text{C}$ (Surge $+110^{\circ}\text{C}$)
- Recommended crimping tools are shown on pages 98 to 119, 154, 193.

REINFORCED DISCONNECT TERMINALS

for Copper cables



female connectors, fully reinforced with Copper sleeve

PA6.6 insulated terminals

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	RKF-F 305	2,8 x 0,5	3.000/100
	RKF-F 308	2,8 x 0,8	3.500/100
	RKF-F 405	4,8 x 0,5	3.000/100
1,5÷2,5 (16÷14)	RKF-F 408	4,8 x 0,8	2.500/100
	RKF-F 608	6,35 x 0,8	2.500/100
4-6 (12÷10)	BKF-F 405	4,8 x 0,5	3.000/100
	BKF-F 408	4,8 x 0,8	3.000/100
4-6 (12÷10)	BKF-F 608	6,35 x 0,8	2.000/100
	GK-F 608	6,35 x 0,8	1.500/100

PA6.6 fully insulated terminals

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	RKF-F 405P	4,8 x 0,5	1.500/100
	RKF-F 408P	4,8 x 0,8	2.000/100
1,5÷2,5 (16÷14)	RKF-F 608P	6,35 x 0,8	1.000/100
	BKF-F 405P	4,8 x 0,5	2.000/100
4-6 (12÷10)	BKF-F 408P	4,8 x 0,8	2.000/100
	BKF-F 608P	6,35 x 0,8	1.000/100
4-6 (12÷10)	GK-F 608P	6,35 x 0,8	1.000/100

RKF BKF GKF



- Manufactured from Brass strip
- Electrolytically Tin plated
- fully reinforced with Copper sleeve, funnel entry
- The operating temperature range is -20°C to $+105^{\circ}\text{C}$ (Surge $+110^{\circ}\text{C}$)
- Recommended crimping tools are shown on pages 98 to 119, 154, 193.

male connectors, fully reinforced with Copper sleeve - PA6.6 insulated terminals

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	RKF-M 608	6,35 x 0,8	3.000/100
1,5÷2,5 (16÷14)	BKF-M 608	6,35 x 0,8	2.500/100
4-6 (12÷10)	GKF-M 608	6,35 x 0,8	1.000/100

male/female connectors, fully reinforced with Copper sleeve - PA6.6 insulated terminals

Cond. Size sqmm (AWG)	Ref.	Tab Size	Quantity Box/Bag
0,25÷1,5 (22÷16)	RKF-FM 608	6,35 x 0,8	1.500/100
1,5÷2,5 (16÷14)	BKF-FM 608	6,35 x 0,8	1.500/100

bullet and socket connectors fully reinforced with Copper sleeve PA6.6 insulated terminals

Cond. Size sqmm (AWG)	Ref.	Ø mm	Quantity Box/Bag
0,25÷1,5 (22÷16)	RKF-BM 4	4	2.500/100
	RKF-BF 4	4	1.000/100
1,5÷2,5 (16÷14)	BKF-BM 4	4	2.000/100
	BKF-BF 4	4	800/100

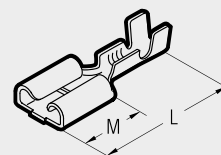
RN-FA BN-FA



- Manufactured from Brass strip
- The operating temperature range is -40 to $+125^{\circ}\text{C}$.
- Recommended crimping tools are shown on pages 104 to 111, 193.

FEMALE CONNECTORS

open barrel



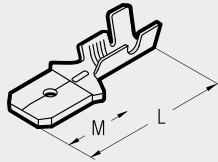
Conductor Size sqmm (AWG)	Ref.	Tab mm	M mm	L mm	Quantity Box/Bag
0,5÷1 (20÷17)	RN-FA 305	2,8 x 0,5	6,3	15,0	6.000/100
	RN-FA 405	4,8 x 0,5	6,3	15,0	5.000/100
	RN-FA 608	6,3 x 0,8	7,7	19,0	3.000/100
1÷2,5 (17÷14)	BN-FA 608	6,3 x 0,8	7,7	19,0	3.000/100
	* BN-FAB 608	6,3 x 0,8	7,7	15,5	1.000/100
	** BN-FAR 608	6,3 x 0,8	7,7	19,0	3.000/100

*flag type **with retainer



MALE CONNECTORS

open barrel



Conductor Size sqmm (AWG)	Ref.	Tab mm	M mm	L mm	Quantity Box/Bag
0,5÷1 (20÷17)	RN-MA 305	2,8 x 0,5	5,8	13,0	6.000/100
	RN-MA 405	4,8 x 0,5	6,3	17,3	5.000/100
	RN-MA 608	6,3 x 0,8	7,9	19,7	4.000/100
1÷2,5 (17÷14)	BN-MA 608	6,3 x 0,8	7,9	20,0	4.000/100

RN-MA BN-MA

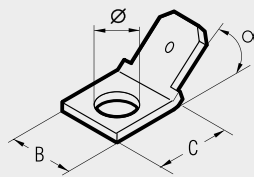


- Manufactured from Brass strip
- The operating temperature range is - 40 to + 125°C.
- Recommended crimping tool is shown on page 104 to 111, 193.



MALE TABS

for board mounting



Ref.	Tab mm	Ø Stud mm	B mm	C mm	α	Quantity Box/Bag
MP 608	6,3 x 0,8	4	8	8,5	0°	5.000/100
MP 608/45	6,3 x 0,8	4	8	8,5	45°	6.000/100
MP 608/90	6,3 x 0,8	4	8	8,5	90°	5.000/100
* MP 608D	6,3 x 0,8	5	8	14	0°	5.000/100

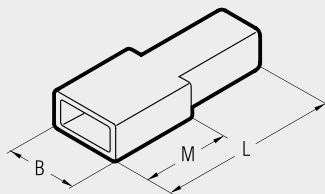
*double tab

MP MPD



- Manufactured from Brass strip
- The operating temperature range is - 40 to + 125°C.

CONNECTOR SLEEVES



Ref.	Connector	B mm	M mm	L mm	Material	Quantity Box/Bag
CFA 300	Female 2,8	5,5	7	18	Polyethylene	3.000/100
* CFA 400	Female 4,8	7,5	9	20	Polyethylene	2.000/100
* CFA 600	Female 6,3	9,0	11	24	Polyethylene	1.500/100
** CFA2 600	Female 6,3	9,0	9	22	Polyethylene	1.500/100
CFAR 600	Female 6,3 frontal insertion with retainer	9,0	12	25	Polyamide 6.6	1.000/100
CFAB 600	Female 6,3 flag	10,0	-	18	Polyamide 6.6	1.000/100
* CMA 600	Male 6,3	12,0	11	22	Polyethylene	1.000/100

CFA CMA



- * For a single cable.
Colours available:
Transparent: no suffix
Red: add suffix R
Black: add suffix N

- ** For twin cables.
Colours available:
Transparent: no suffix
Red: add suffix R
Black: add suffix N
Green: add suffix V
Blue: add suffix B
Yellow: add suffix G

PKD
PKE
PKC
CPKD

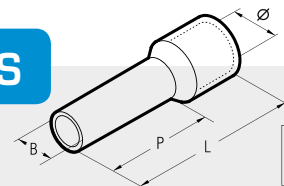


HALOGEN FREE



PA6.6 INSULATED END SLEEVES

for flexible Copper cables



The PKD... range of end sleeves is manufactured from Tin plated electrolytic Copper.

Designed and developed to reinforce fine wire strands when terminating a cable into a connector block.

The PKD series of insulated end sleeves comply with specification DIN 46 228/4.

The operating temperature range is - 20 to + 115°C (Surge + 130°C). Recommended crimping tools are shown on pages 98 to 122, 125, 154, 156, 158, 193.

VALSTAR ND#2/PKD

Comprising:

- a selection of end sleeves PKD conductor size 1÷6 sqmm
- tool ND#2

VALSTAR ND#2/PKE

Comprising:

- a selection of end sleeves PKE conductor size 1÷6 sqmm
- tool ND#2

VALSTAR ND#2/PKC

Comprising:

- a selection of end sleeves PKC conductor size 1÷6 sqmm
- tool ND#2

Conductor Size sqmm	Ref.	Dimensions mm				Insulation Colour	Quantity Box/Bag
		Ø	B	P	L		
0,3÷0,5	PKD 506	2,6	1,4	6,0	12,0	○ white	10.000/500
	PKD 508	2,6	1,4	8,0	14,0		10.000/500
	PKD 510	2,6	1,4	10,0	16,0		10.000/500
0,75	PKD 7506	2,8	1,6	6,0	12,0	○ grey	10.000/500
	PKD 7508	2,8	1,6	8,0	14,0		10.000/500
	PKD 7510	2,8	1,6	10,0	16,0		10.000/500
	PKD 7512	2,8	1,6	12,0	18,0		10.000/500
1	PKD 106	3,0	1,8	6,0	12,0	● red	10.000/500
	PKD 108	3,0	1,8	8,0	14,0		10.000/500
	PKD 110	3,0	1,8	10,0	16,0		10.000/500
1,5	PKD 112	3,0	1,8	12,0	18,0	● black	10.000/500
	PKD 1508	3,5	2,1	8,0	14,0		5.000/500
	PKD 1510	3,5	2,1	10,0	16,0		5.000/500
2,5	PKD 1512	3,5	2,1	12,0	18,0	● blue	5.000/500
	PKD 1518	3,5	2,1	18,0	24,0		5.000/500
	PKD 2508	4,2	2,6	8,0	14,0		5.000/500
4	PKD 2512	4,2	2,6	12,0	18,0	● grey	5.000/500
	PKD 2518	4,2	2,6	18,0	24,0		5.000/500
	PKD 410	4,8	3,3	10,0	18,0		3.000/200
6	PKD 412	4,8	3,3	12,0	20,0	● yellow	3.000/200
	PKD 418	4,8	3,3	18,0	26,0		3.000/200
	PKD 612	6,3	4,0	12,0	20,0		1.500/100
10	PKD 618	6,3	4,0	18,0	26,0	● red	2.000/100
	PKD 1012	7,6	5,0	12,0	22,0		1.000/100
	PKD 1018	7,6	5,0	18,0	28,0		1.000/100
16	PKD 1612	8,8	6,4	12,0	24,0	● blue	800/100
	PKD 1618	8,8	6,4	18,0	28,0		1.000/100
	PKD 25016	11,2	7,9	16,0	30,0		500/50
25	PKD 25022	11,2	7,9	22,0	36,0	● yellow	500/50
	PKD 35016	12,7	8,9	16,0	30,0		400/50
	PKD 35025	12,7	8,9	25,0	39,0		400/50
50	PKD 50020	15,0	11,0	20,0	36,0	● red	200/50
	PKD 50025	15,0	11,0	25,0	41,0		300/50

Conductor Size sqmm	Ref.	Dimensions mm				Insulation Colour	Quantity Box/Bag
		Ø	B	P	L		
0,1÷0,3	PKE 308	1,9	1,1	8,0	12,0	● yellow	20.000/500
0,3÷0,5	PKE 508*	2,6	1,4	8,0	14,0	○ white	10.000/500
0,75	PKE 7508	2,8	1,6	8,0	14,0	● blue	10.000/500
1	PKE 108*	3,0	1,8	8,0	14,0	● red	10.000/500
	PKE 1508*	3,5	2,1	8,0	14,0		5.000/500
1,5	PKE 1510*	3,5	2,1	10,0	16,0	● black	7.500/500
	PKE 1518*	3,5	2,1	18,0	24,0		5.000/500
2,5	PKE 2508	4,2	2,6	8,0	14,0	○ grey	5.000/500
	PKE 2512	4,2	2,6	12,0	18,0		5.000/500
	PKE 2518	4,2	2,6	18,0	24,0		5.000/500
4	PKE 410	4,8	3,3	10,0	18,0	● orange	3.000/200
	PKE 412	4,8	3,3	12,0	20,0		3.000/200
	PKE 418	4,8	3,3	18,0	26,0		3.000/200
6	PKE 612	6,3	4,0	12,0	20,0	● green	1.500/100
	PKE 618	6,3	4,0	18,0	26,0		2.000/100
10	PKE 1012	7,6	5,0	12,0	22,0	● brown	1.000/100
	PKE 1018	7,6	5,0	18,0	28,0		1.000/100
16	PKE 1612	8,8	6,2	12,0	23,0	○ ivory	1.000/100
	PKE 1618	8,8	6,2	18,0	29,0		1.000/100
25	PKE 25016	11,2	7,9	16,0	30,0	● black	500/50
	PKE 25022	11,2	7,9	22,0	36,0		500/50

Polypropylene Insulated chain end sleeves

Developed for use with production equipment to give a quick and reliable crimped joint. Conforms to DIN standard 46 228/4.



Conductor Size sqmm	Ref.	Dimensions mm				Insulation Colour	Quantity Reel
		Ø	B	P	L		
0,3÷0,5	CPKD 508	2,6	1,3	8,0	14,0	○ white	5.000
0,75	CPKD 7508	2,8	1,5	8,0	14,0	○ grey	5.000
1	CPKD 108	3,0	1,7	8,0	14,0	● red	5.000
1,5	CPKD 1508	3,5	2,0	8,0	14,0	● black	5.000
2,5	CPKD 2508	4,2	2,5	8,0	14,0	● blue	3.000

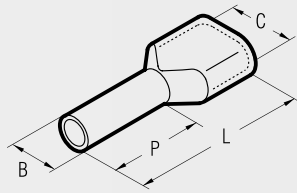
Conductor Size sqmm	Ref.	Dimensions mm				Insulation Colour	Quantity Box/Bag
		Ø	B	P	L		
0,1÷0,3	PKC 306	1,9	1,1	6,0	10,0	● light blue	20.000/500
	PKC 308	1,9	1,1	8,0	12,0		20.000/500
0,3÷0,5	PKC 508	2,6	1,4	8,0	14,0	● orange	10.000/500
	PKC 510	2,6	1,4	10,0	16,0		10.000/500
	PKC 7508	2,8	1,6	8,0	14,0		10.000/500
0,75	PKC 7512	2,8	1,6	12,0	18,0	○ white	10.000/500
	PKC 108	3,0	1,8	8,0	14,0		10.000/500
1	PKC 112	3,0	1,8	12,0	18,0	● yellow	10.000/500
	PKC 1508	3,5	2,1	8,0	14,0		5.000/500
1,5	PKC 1510	3,5	2,1	10,0	16,0	● red	5.000/500
	PKC 1518	3,5	2,1	18,0	24,0		5.000/500
2,5	PKC 2508*	4,2	2,6	8,0	14,0	● blue	5.000/500
	PKC 2512*	4,2	2,6	12,0	18,0		5.000/500
	PKC 2518*	4,2	2,6	18,0	24,0		5.000/500
4	PKC 410*	4,8	3,3	10,0	18,0	○ grey	3.000/200
	PKC 412*	4,8	3,3	12,0	20,0		3.000/200
	PKC 418*	4,8	3,3	18,0	26,0		3.000/200
6	PKC 612	6,3	4,0	12,0	20,0	● black	1.500/100
	PKC 618	6,3	4,0	18,0	26,0		2.000/100
10	PKC 1012	7,6	5,0	12,0	22,0	○ ivory	1.000/100
	PKC 1018	7,6	5,0	18,0	28,0		1.500/100
16	PKC 1612	8,8	6,2	12,0	23,0	● green	800/100
	PKC 1618	8,8	6,2	18,0	29,0		1.000/100
25	PKC 25016	11,2	7,9	16,0	30,0	● brown	500/50
	PKC 25022	11,2	7,9	22,0	36,0		500/50
35	PKC 35016	12,7	8,9	16,0	30,0	● beige	400/50
	PKC 35025	12,7	8,9	25,0	39,0		400/50
50	PKC 50020	15,0	11,0	20,0	36,0	● olive	200/50
	PKC 50025	15,0	11,0	25,0	41,0		250/50
70	PKC 70022	16,0	14,3	22,0	38,0	● yellow	100/25
95	PKC 95025	18,0	15,7	25,0	44,0	● red	100/25
120	PKC 120027	21,0	17,5	27,0	48,0	● blue	100/25

*To DIN standard 46 228/4

"TWIN" PA6.6 INSULATED END SLEEVES



for fine stranded cables



HALOGEN FREE

Conductor Size sqmm	Ref.	Dimensions mm				Insulation Colour	ND#1,ND#2,ND#3, ND#4 and HNKE 50 Compression Aperture	Quantity Box/Bag
		C	B	P	L			
2 x 0,5	PKT 508	4,7x2,6	1,8	8,0	14,0	○ white	1	5.000/500
	PKT 510	4,7x2,6	1,8	10,0	18,0			5.000/500
2 x 0,75	PKT 7508	5,0x2,8	2,1	8,0	15,0	○ grey	1,5	2.500/100
	PKT 7510	5,0x2,8	2,1	10,0	17,0			2.500/100
2 x 1	PKT 108	5,4x3,4	2,4	8,0	16,0	● red	2,5	2.500/100
	PKT 110	5,4x3,4	2,4	10,0	18,0			2.500/100
2 x 1,5	PKT 1508	6,6x3,6	2,6	8,0	16,0	● black	2,5	2.500/100
	PKT 1512	6,6x3,6	2,6	12,0	20,0			2.500/100
2 x 2,5	PKT 2510	7,8x4,2	3,2	10,0	20,0	● blue	4	2.000/100
	PKT 2512	7,8x4,2	3,2	12,0	22,0			1.500/100
2 x 4	PKT 412	8,8x4,9	4,2	12,0	23,0	○ grey	6	1.000/100
2 x 6	PKT 614	10,0x6,9	5,3	14,0	26,0	● yellow	10	800/100
2 x 10	PKT 1014	13,3x7,5	6,2	12,0	24,0	● red	16	500/50
2 x 16	PKT 1614	18,6x9,6	8,9	14,0	30,0	● blue	35	300/50

PKT



Type PKT range of end sleeves is manufactured from Tin plated electrolytic Copper.

Designed to accommodate two cables terminating in the same sleeve.

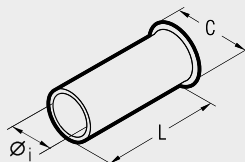
The operating temperature range is - 20 to + 115°C (Surge + 130°C).

Recommended crimping tools are shown on pages 98 to 122, 125, 154, 156, 158, 193.

UNINSULATED END SLEEVES



for flexible Copper cables



Conductor Size sqmm	Ref.	Dimensions mm			Quantity Box/Bag
		Ø	L	C	
0,5	*KE 506 ST	1,0	6,0	2,1	50.000/500
	KE 508 ST	1,0	8,0	2,1	50.000/500
0,75	*KE 7506 ST	1,2	6,0	2,3	50.000/500
	KE 7508 ST	1,2	8,0	2,3	50.000/500
1	*KE 106 ST	1,4	6,0	2,5	25.000/500
	*KE 110 ST	1,4	10,0	2,5	25.000/500
1,5	*KE 1508 ST	1,8	7,0	2,8	25.000/500
	*KE 1510 ST	1,8	10,0	2,8	25.000/500
2,5	*KE 2508 ST	2,3	7,0	3,4	25.000/500
	*KE 2510 ST	2,3	10,0	3,4	15.000/500
4	*KE 410 ST	2,8	9,0	4,0	12.500/500
	*KE 412 ST	2,8	12,0	4,0	12.500/500
6	*KE 610 ST	3,5	10,0	4,7	10.000/500
	*KE 612 ST	3,5	12,0	4,7	7.500/500
10	*KE 616 ST	3,5	15,0	4,7	5.000/500
	*KE 1016 ST	4,5	15,0	5,8	4.000/250
16	*KE 1616 ST	5,8	15,0	7,5	3.000/250
	KE 25015 ST	7,3	15,0	9,5	1.500/100
25	*KE 25018 ST	7,3	18,0	9,5	1.500/100
	KE 35012 ST	8,3	12,0	11,0	1.500/100
35	KE 35015 ST	8,3	15,0	11,0	1.500/100
	*KE 35018 ST	8,3	18,0	11,0	1.000/100

*To DIN standard 46 228/1

KE



KE series end sleeves are manufactured from Tin plated electrolytic Copper.

Designed and developed for use with flexible cables.

Recommended crimping tools are shown on pages 98 to 122, 125, 154, 156, 158, 193.

UNINSULATED TERMINALS



S

S range - brazed seam



S range terminals are manufactured from electrolytic Copper strip and Tin plated. The seam is brazed to

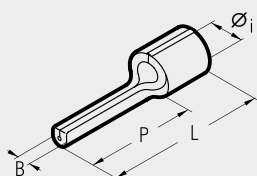
provide uniform mechanical strength.

The terminal barrel is rifled to enhance electrical con-

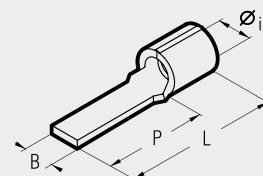
tact and to improve mechanical strength.

Recommended crimping tools are shown on pages 98 to 119, 154.

pin terminals



blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Øi	B	P	L	
0,25÷1,25 (22÷16)	S 1.5-P 8	1,8	1,6	8,0	12,0	8.000/100
	S 1.5-P 10	1,8	1,6	10,0	14,0	8.000/100
	S 1.5-P 12	1,8	1,6	12,0	16,2	8.000/100
1,5÷2,5 (16÷14)	S 2.5-P 8	2,4	1,7	8,0	12,0	7.000/100
	S 2.5-P 10	2,4	1,8	10,0	14,0	7.000/100
	S 2.5-P 12	2,4	1,8	12,0	16,0	7.000/100
4÷6 (12÷10)	S 6-P 10	3,6	2,2	10,0	16,8	4.000/100
	S 6-P 12	3,6	2,2	12,0	19,4	4.000/100
	S 6-P 14	3,6	2,2	14,0	21,0	3.500/100

Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Øi	B	P	L	
0,25÷1,25 (22÷16)	S 1.5-PP 12	1,8	3,0	12,8	17,0	8.000/100
	*S 1.5-PP 12/1	1,8	3,0	11,3	15,5	8.000/100
	S 1.5-PP 12/19	1,8	1,9	13,2	17,4	8.000/100
	S 1.5-PP 14	1,8	3,0	14,8	19,0	8.000/100
1,5÷2,5 (16÷14)	S 2.5-PP 12	2,4	3,5	12,8	17,0	7.000/100
	S 2.5-PP 12/25	2,4	2,5	13,3	17,5	7.000/100
	S 2.5-PP 16/25	2,4	2,5	17,2	21,4	7.000/100
4÷6 (12÷10)	S 6-PP 12	3,6	4,0	13,3	19,7	4.000/100
	S 6-PP 17	3,6	2,9	19,1	25,5	4.000/100

*Made to order

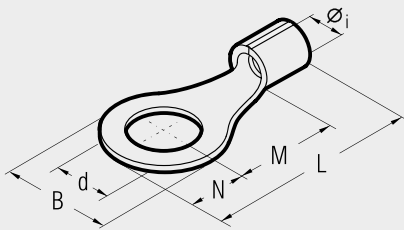


UNINSULATED TERMINALS

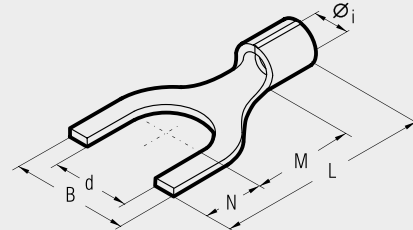
S range - brazed seam

S

ring terminals



fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Øi	B	M	N	L	d	
0,25÷1,25 (22÷16)	2	*S 1.5-M 2	1,8	5,6	4,5	2,8	11,5	2,2	7.000/100
	3	S 1.5-M 3	1,8	5,6	4,5	2,8	11,5	3,2	7.000/100
	3,5	S 1.5-M 3,5	1,8	5,6	4,5	2,8	11,5	3,7	7.000/100
	3,5*	S 1.5-M 3,5/1	1,8	6,2	7,1	3,1	14,4	3,7	7.000/100
	4	S 1.5-M 4	1,8	7,0	6,5	3,5	14,2	4,3	7.000/100
	4*	S 1.5-M 4/3	1,8	7,8	7,1	3,9	15,2	4,3	7.000/100
	5	S 1.5-M 5	1,8	7,8	7,1	3,9	15,2	5,3	7.000/100
	6	S 1.5-M 6	1,8	9,4	8,1	4,7	17,0	6,4	6.000/100
	6	S 1.5-M 6/1	1,8	12,0	10,3	6,0	20,5	6,4	5.000/100
	7	S 1.5-M 7	1,8	9,4	8,1	4,7	17,0	7,2	6.000/100
	8	S 1.5-M 8	1,8	12,0	10,3	6,0	20,5	8,4	4.000/100
	10	S 1.5-M 10	1,8	15,5	13,0	7,7	25,0	10,5	3.000/100
12	S 1.5-M 12	1,8	18,0	15,5	9,0	28,7	13,0	2.000/100	
1,5÷2,5 (16÷14)	3	S 2.5-M 3	2,4	5,6	5,0	2,8	12,0	3,2	6.000/100
	3,5	S 2.5-M 3,5	2,4	5,6	5,0	2,8	12,0	3,7	6.000/100
	3,5*	S 2.5-M 3,5/1	2,4	6,2	6,5	3,1	13,8	3,7	5.000/100
	4	S 2.5-M 4	2,4	8,0	6,5	4,0	14,7	4,3	5.000/100
	5	S 2.5-M 5	2,4	8,0	7,5	4,0	15,7	5,3	5.000/100
	6	S 2.5-M 6	2,4	9,4	8,6	4,7	17,5	6,4	5.000/100
	6	S 2.5-M 6/1	2,4	12,0	10,3	6,0	20,5	6,4	5.000/100
	7	S 2.5-M 7	2,4	10,0	7,8	5,0	17,0	7,2	5.000/100
	8	S 2.5-M 8	2,4	12,0	10,3	6,0	20,5	8,4	4.000/100
	10	S 2.5-M 10	2,4	15,5	13,0	7,7	25,0	10,5	2.500/100
	12	S 2.5-M 12	2,4	18,0	15,5	9,0	28,7	13,0	2.000/100
	4÷6 (12÷10)	3	S 6-M 3	3,6	8,0	8,1	4,0	18,5	3,2
3,5		S 6-M 3,5	3,6	8,0	8,1	4,0	18,5	3,7	3.000/100
4		S 6-M 4	3,6	9,0	8,1	4,5	19,0	4,3	3.000/100
5		S 6-M 5	3,6	9,0	8,1	4,5	19,0	5,3	2.500/100
6		S 6-M 6	3,6	11,0	11,1	5,5	23,0	6,4	2.500/100
6*		S 6-M 6/1	3,6	11,0	8,1	5,5	20,0	6,4	2.500/100
7		S 6-M 7	3,6	11,0	11,1	5,5	23,0	7,2	2.500/100
8		S 6-M 8	3,6	13,6	12,1	6,8	25,3	8,4	2.000/100
8*		S 6-M 8/1	3,6	11,0	8,1	5,5	20,0	8,4	2.500/100
10		S 6-M 10	3,6	13,6	12,1	6,8	25,3	10,5	2.000/100
10		S 6-M 10/1	3,6	15,5	13,8	7,7	28,0	10,5	2.000/100
12		S 6-M 12	3,6	19,0	15,1	9,5	31,0	13,0	1.000/100
14	S 6-M 14	3,6	21,0	16,1	10,5	33,0	15,0	1.000/100	
16	S 6-M 16	3,6	24,0	17,1	12,0	35,5	17,0	1.000/100	
10 (8)	4	S 10-M 4	4,8	11,5	9,0	5,8	23,8	4,3	2.000/100
	5	S 10-M 5	4,8	11,5	9,0	5,8	23,8	5,3	2.000/100
	6	S 10-M 6	4,8	11,5	9,0	5,8	23,8	6,4	2.000/100
	7	S 10-M 7	4,8	11,5	9,0	5,8	23,8	7,2	1.500/100

Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag
			Øi	B	M	N	L	d	
0,25÷1,25 (22÷16)	3	S 1.5-U 3	1,8	5,5	5,5	4,0	13,7	3,2	7.000/100
	3,5	S 1.5-U 3,5	1,8	6,0	6,5	3,8	14,5	3,7	7.000/100
	3,5*	S 1.5-U 3,5/2	1,8	6,4	6,5	3,8	14,5	3,7	7.000/100
	4	S 1.5-U 4	1,8	6,5	7,5	3,7	15,4	4,3	7.000/100
	4*	S 1.5-U 4/1	1,8	8,5	7,5	3,7	15,4	4,3	7.000/100
	4	S 1.5-U 4/2	1,8	7,5	7,5	3,7	15,4	4,3	7.000/100
	5	S 1.5-U 5	1,8	8,5	7,5	3,7	15,4	5,3	7.000/100
	5*	S 1.5-U 5/1	1,8	9,4	7,5	3,7	15,4	5,3	7.000/100
	6	S 1.5-U 6	1,8	9,4	8,1	4,7	17,0	6,4	6.000/100
	6*	S 1.5-U 6/1	1,8	12,0	9,2	7,1	20,5	6,4	6.000/100
	8	S 1.5-U 8	1,8	14,0	10,0	6,3	20,5	8,4	3.000/100
	10	S 1.5-U 10	1,8	17,5	13,0	7,7	25,0	10,5	2.500/100
12	S 1.5-U 12	1,8	20,0	15,5	9,0	28,7	13,0	2.000/100	
1,5÷2,5 (16÷14)	3	S 2.5-U 3	2,4	5,5	5,5	4,0	13,7	3,2	6.000/100
	3,5	S 2.5-U 3,5	2,4	6,4	6,5	3,8	14,5	3,7	6.000/100
	3,5*	S 2.5-U 3,5/12,4	2,4	7,2	6,5	3,8	14,5	3,7	6.000/100
	4	S 2.5-U 4	2,4	6,5	7,5	3,7	15,4	4,3	5.000/100
	4*	S 2.5-U 4/1	2,4	8,5	7,5	3,7	15,4	4,3	6.000/100
	4	S 2.5-U 4/2	2,4	7,5	7,5	3,7	15,4	4,3	6.000/100
	5	S 2.5-U 5	2,4	8,5	7,5	3,7	15,4	5,3	6.000/100
	6	S 2.5-U 6	2,4	9,4	8,1	4,7	17,0	6,4	5.000/100
	6*	S 2.5-U 6/1	2,4	12,0	9,2	7,1	20,5	6,4	4.000/100
	8	S 2.5-U 8	2,4	14,0	10,0	6,3	20,5	8,4	2.500/100
	10	S 2.5-U 10	2,4	17,5	13,0	7,7	25,0	10,5	2.000/100
	12	S 2.5-U 12	2,4	20,0	15,5	9,0	28,7	13,0	2.000/100
4÷6 (12÷10)	3,5	S 6-U 3,5	3,6	7,5	8,5	3,9	18,8	3,7	3.000/100
	4	S 6-U 4	3,6	7,5	8,0	4,4	18,8	4,3	3.000/100
	5	S 6-U 5	3,6	9,5	8,0	4,4	18,8	5,3	2.500/100
	6	S 6-U 6	3,6	10,0	11,0	5,5	22,9	6,4	2.500/100
	8	S 6-U 8	3,6	13,5	12,0	8,0	26,4	8,4	2.000/100
	10	S 6-U 10	3,6	15,5	13,0	8,0	27,4	10,5	2.000/100
	10*	S 6-U 10/1	3,6	17,5	13,8	7,7	28,0	10,5	2.000/100
	12	S 6-U 12	3,6	21,0	15,1	9,5	31,0	13,0	1.000/100
	14	*S 6-U 14	3,6	23,0	16,1	10,5	33,0	15,0	1.000/100
	16	*S 6-U 16	3,6	26,0	17,1	11,5	35,0	17,0	1.000/100

*Made to order

UNINSULATED TERMINALS

RN, BN, GN range - unbrazed



RN
BN
GN



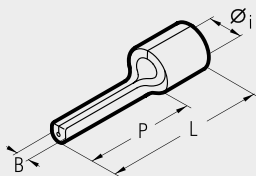
RN, BN, GN range terminals are manufactured from electrolytic Copper strip and

Tin plated.
The seam is unbrazed.
The terminal barrel is rifled

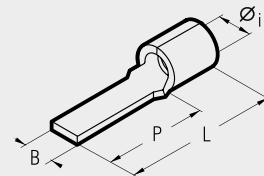
to enhance electrical contact and to improve mechanical strength.

Recommended crimping tools are shown on pages 98 to 119, 154.

pin terminals



blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Øi	B	P	L	
0,25÷1,5 (22÷16)	RN-P 8	1,8	1,6	8,0	12,0	8.000/100
	RN-P 10	1,8	1,6	10,0	14,0	8.000/100
	RN-P 12	1,8	1,6	12,0	16,2	8.000/100
1,5÷2,5 (16÷14)	BN-P 8	2,4	1,7	8,0	12,0	7.000/100
	BN-P 10	2,4	1,8	10,0	14,0	7.000/100
	BN-P 12	2,4	1,8	12,0	16,0	7.000/100
4÷6 (12÷10)	GN-P 10	3,6	2,2	10,0	16,8	4.000/100
	GN-P 12	3,6	2,2	12,0	19,0	4.000/100
	GN-P 14	3,6	2,2	14,0	21,0	3.500/100

Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Øi	B	P	L	
0,25÷1,5 (22÷16)	RN-PP 12	1,8	3,0	12,8	17,0	8.000/100
	RN-PP 12/1	1,8	3,0	11,3	15,5	8.000/100
	RN-PP 12/19	1,8	1,9	13,2	17,4	8.000/100
	RN-PP 14	1,8	3,0	14,8	19,0	8.000/100
	RN-PP 16/23	1,8	2,3	17,2	21,4	8.000/100
1,5÷2,5 (16÷14)	BN-PP 12	2,4	3,5	12,8	17,0	7.000/100
	BN-PP 12/25	2,4	2,5	13,3	17,5	7.000/100
	BN-PP 16/25	2,4	2,5	17,2	21,4	7.000/100
4÷6 (12÷10)	GN-PP 12	3,6	4,0	13,3	19,7	4.000/100
	GN-PP 17	3,6	2,9	19,1	25,5	4.000/100

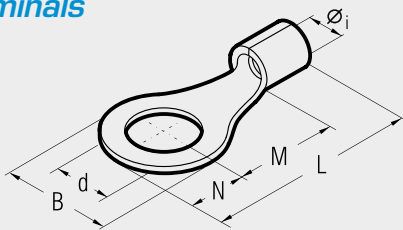


UNINSULATED TERMINALS

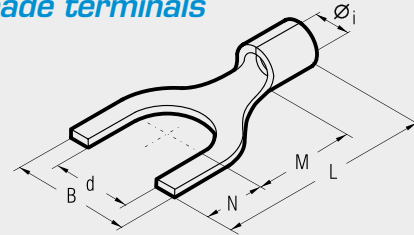
RN, BN, GN range - unbrazed

RN
BN
GN

ring terminals



fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm					Quantity Box/Bag	
			Øi	B	M	N	L		d
0,25÷1,5 (22÷16)	2	*RN-M 2	1,8	5,6	4,5	2,8	11,5	2,2	7.000/100
	3	RN-M 3	1,8	5,6	4,5	2,8	11,5	3,2	7.000/100
	3,5	RN-M 3.5	1,8	5,6	4,5	2,8	11,5	3,7	7.000/100
	3,5	RN-M 3.5/1	1,8	6,2	7,1	3,1	14,4	3,7	7.000/100
	4	RN-M 4	1,8	7,0	6,5	3,5	14,2	4,3	7.000/100
	4	RN-M 4/3	1,8	7,8	7,1	3,9	15,2	4,3	7.000/100
	5	RN-M 5	1,8	7,8	7,1	3,9	15,2	5,3	7.000/100
	6	RN-M 6	1,8	9,4	8,1	4,7	17,0	6,4	6.000/100
	6	RN-M 6/1	1,8	12,0	10,3	6,0	20,5	6,4	4.000/100
	7	RN-M 7	1,8	9,4	8,1	4,7	17,0	7,2	6.000/100
	8	RN-M 8	1,8	12,0	10,3	6,0	20,5	8,4	4.000/100
	10	RN-M 10	1,8	15,5	13,0	7,7	25,0	10,5	3.000/100
12	RN-M 12	1,8	18,0	15,5	9,0	28,7	13,0	2.000/100	
1,5÷2,5 (16÷14)	2	*BN-M 2	2,4	5,6	5,0	2,8	12,0	2,2	6.000/100
	3	BN-M 3	2,4	5,6	5,0	2,8	12,0	3,2	6.000/100
	3,5	BN-M 3.5	2,4	5,6	5,0	2,8	12,0	3,7	6.000/100
	3,5	BN-M 3.5/1	2,4	6,2	6,5	3,1	13,8	3,7	6.000/100
	4	BN-M 4	2,4	8,0	6,5	4,0	14,7	4,3	5.000/100
	5	BN-M 5	2,4	8,0	7,5	4,0	15,7	5,3	5.000/100
	6	BN-M 6	2,4	9,4	8,6	4,7	17,5	6,4	5.000/100
	6	BN-M 6/1	2,4	12,0	10,3	6,0	20,5	6,4	5.000/100
	7	BN-M 7	2,4	10,0	7,8	5,0	17,0	7,2	5.000/100
	8	BN-M 8	2,4	12,0	10,3	6,0	20,5	8,4	4.000/100
	10	BN-M 10	2,4	15,5	13,0	7,7	25,0	10,5	2.500/100
	12	BN-M 12	2,4	18,0	15,5	9,0	28,7	13,0	2.000/100
4÷6 (12÷10)	3	GN-M 3	3,6	8,0	8,1	4,0	18,5	3,2	3.000/100
	3,5	GN-M 3.5	3,6	8,0	8,1	4,0	18,5	3,7	3.000/100
	4	GN-M 4	3,6	9,0	8,1	4,5	19,0	4,3	3.000/100
	5	GN-M 5	3,6	9,0	8,1	4,5	19,0	5,3	2.500/100
	6	GN-M 6	3,6	11,0	11,1	5,5	23,0	6,4	2.500/100
	6	GN-M 6/1	3,6	11,0	8,1	5,5	20,0	6,4	2.500/100
	7	GN-M 7	3,6	11,0	11,1	5,5	23,0	7,2	2.500/100
	8	GN-M 8	3,6	13,6	12,1	6,8	25,3	8,4	2.000/100
	8	*GN-M 8/1	3,6	11,0	8,1	5,5	20,0	8,4	2.500/100
	10	GN-M 10	3,6	13,6	12,1	6,8	25,3	10,5	2.000/100
	10	GN-M 10/1	3,6	15,5	13,8	7,7	28,0	10,5	2.000/100
	12	GN-M 12	3,6	19,0	15,1	9,5	31,0	13,0	1.000/100
14	GN-M 14	3,6	21,0	16,1	10,5	33,0	15,0	1.000/100	
16	GN-M 16	3,6	24,0	17,1	12,0	35,5	17,0	1.000/100	

Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm					Quantity Box/Bag	
			Øi	B	M	N	L		d
0,25÷1,5 (22÷16)	3	RN-U 3	1,8	5,5	5,5	4,0	13,7	3,2	7.000/100
	3,5	RN-U 3.5	1,8	6,0	6,5	3,8	14,5	3,7	7.000/100
	3,5	RN-U 3.5/2	1,8	6,4	6,5	3,8	14,5	3,7	7.000/100
	4	RN-U 4	1,8	6,5	7,5	3,7	15,4	4,3	7.000/100
	4	RN-U 4/1	1,8	8,5	7,5	3,7	15,4	4,3	7.000/100
	4	RN-U 4/2	1,8	7,5	7,5	3,7	15,4	4,3	7.000/100
	5	RN-U 5	1,8	8,5	7,5	3,7	15,4	5,3	5.000/100
	5	*RN-U 5/1	1,8	9,4	7,5	3,7	15,4	5,3	5.000/100
	6	RN-U 6	1,8	9,4	8,1	4,7	17,0	6,4	6.000/100
	6	RN-U 6/1	1,8	12,0	9,2	7,1	20,5	6,4	3.000/100
	8	RN-U 8	1,8	14,0	10,0	6,3	20,5	8,4	2.500/100
	10	RN-U 10	1,8	17,5	13,0	7,7	25,0	10,5	3.000/100
12	RN-U 12	1,8	20,0	15,5	9,0	28,7	13,0	2.000/100	
1,5÷2,5 (16÷14)	3	BN-U 3	2,4	5,5	5,5	4,0	13,7	3,2	6.000/100
	3,5	BN-U 3.5	2,4	6,4	6,5	3,8	14,5	3,7	6.000/100
	3,5	*BN-U 3.5/1	2,4	7,2	6,5	3,8	14,5	3,7	6.000/100
	4	BN-U 4	2,4	6,5	7,5	3,7	15,4	4,3	6.000/100
	4	BN-U 4/1	2,4	8,5	7,5	3,7	15,4	4,3	6.000/100
	4	BN-U 4/2	2,4	7,5	7,5	3,7	15,4	4,3	6.000/100
	5	BN-U 5	2,4	8,5	7,5	3,7	15,4	5,3	5.000/100
	6	BN-U 6	2,4	9,4	8,1	4,7	17,0	6,4	5.000/100
	6	BN-U 6/1	2,4	12,0	9,2	7,1	20,5	6,4	4.000/100
	8	BN-U 8	2,4	14,0	10,0	6,3	20,5	8,4	4.000/100
	10	BN-U 10	2,4	17,5	13,0	7,7	25,0	10,5	3.500/100
	12	BN-U 12	2,4	20,0	15,5	9,0	28,7	13,0	2.000/100
4÷6 (12÷10)	3,5	GN-U 3.5	3,6	7,5	8,5	3,9	18,8	3,7	3.000/100
	4	GN-U 4	3,6	7,5	8,0	4,4	18,8	4,3	3.000/100
	5	GN-U 5	3,6	9,5	8,0	4,4	18,8	5,3	2.500/100
	6	GN-U 6	3,6	10,0	11,0	5,5	22,9	6,4	2.500/100
	8	GN-U 8	3,6	13,5	12,0	8,0	26,4	8,4	2.000/100
	10	GN-U 10	3,6	15,5	13,0	8,0	27,4	10,5	2.000/100
	10	GN-U 10/1	3,6	17,5	13,8	7,7	28,0	10,5	2.000/100
	12	GN-U 12	3,6	21,0	15,1	9,5	31,0	13,0	1.000/100
	14	GN-U 14	3,6	23,0	16,1	10,5	33,0	15,0	1.000/100
	16	GN-U 16	3,6	26,0	17,1	11,5	35,0	17,0	1.000/100

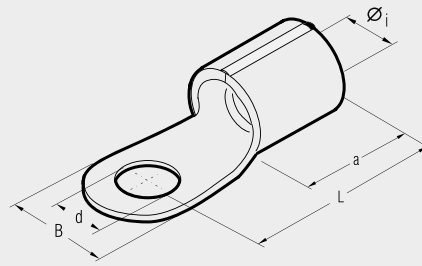
*Made to order

CRIMPING CONNECTORS ACCORDING TO DIN 46234

for Copper cables



Q



Q type connectors are manufactured from electrolytic Copper strip, annealed and surface protected by tin plating; dimensions are compliant with DIN 46234; the sleeve is brazed with a silver-Copper alloy.

Details of the conductor csa and stud diameter are engraved on the palm.

Details of the appropriate crimping tools and dies are shown on page 205.

Consult us for special requirements.

Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm					Quantity Box/Bag	Mechanical Tools	Hydraulic Tools		
			Øi	d	L	B	a					
6÷10	4	Q 10-4	4,5	4,3	16,0	10,0	8,0	1.500/100	HN5	B 35-50MD	HT 51 RH 50 RHM 50 B 500 HT 81-U RHU 81 HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
	5	Q 10-5	4,5	5,3	16,0	10,0	8,0	1.500/100				
	6	Q 10-6	4,5	6,5	17,0	11,0	8,0	1.000/100				
	8	Q 10-8	4,5	8,4	20,0	14,0	8,0	1.000/100				
	10	Q 10-10	4,5	10,5	21,0	18,0	8,0	1.000/100				
10÷16	12	Q 10-12	4,5	13,0	22,0	22,0	8,0	500/100				
	5	Q 16-5	5,8	5,3	20,0	11,0	10,0	1.000/100				
	6	Q 16-6	5,8	6,5	20,0	11,0	10,0	1.000/100				
	8	Q 16-8	5,8	8,4	22,0	14,0	10,0	500/100				
	10	Q 16-10	5,8	10,5	24,0	18,0	10,0	500/100				
16÷25	12	Q 16-12	5,8	13,0	26,0	22,0	10,0	500/100				
	5	Q 25-5	7,5	5,3	25,0	12,0	11,0	500/100				
	6	Q 25-6	7,5	6,5	25,0	12,0	11,0	500/100				
	8	Q 25-8	7,5	8,4	25,0	16,0	11,0	500/100				
	10	Q 25-10	7,5	10,5	26,0	18,0	11,0	500/100				
25÷35	12	Q 25-12	7,5	13,0	31,0	22,0	11,0	500/100				
	16	Q 25-16	7,5	17,0	35,0	28,0	11,0	200/100				
	6	Q 35-6	9,0	6,5	26,0	15,0	12,0	400/100				
	8	Q 35-8	9,0	8,4	26,0	16,0	12,0	400/100				
	10	Q 35-10	9,0	10,5	27,0	18,0	12,0	300/100				
35÷50	12	Q 35-12	9,0	13,0	31,0	22,0	12,0	250/50				
	16	Q 35-16	9,0	17,0	36,0	28,0	12,0	200/50				
	6	Q 50-6	11,0	6,5	34,0	18,0	16,0	200/50				
	8	Q 50-8	11,0	8,4	34,0	18,0	16,0	200/50				
	10	Q 50-10	11,0	10,5	34,0	18,0	16,0	200/50				
50÷70	12	Q 50-12	11,0	13,0	36,0	22,0	16,0	200/50				
	16	Q 50-16	11,0	17,0	40,0	28,0	16,0	200/50				
	6	Q 70-6	13,0	6,5	38,0	22,0	18,0	100/50				
	8	Q 70-8	13,0	8,4	38,0	22,0	18,0	100/50				
	10	Q 70-10	13,0	10,5	38,0	22,0	18,0	100/50				
70÷95	12	Q 70-12	13,0	13,0	38,0	22,0	18,0	100/50				
	16	Q 70-16	13,0	17,0	42,0	28,0	18,0	100/50				
	8	Q 95-8	15,0	8,4	42,0	24,0	20,0	100/25				
	10	Q 95-10	15,0	10,5	42,0	24,0	20,0	100/25				
	12	Q 95-12	15,0	13,0	44,0	24,0	20,0	100/25				
16	Q 95-16	15,0	17,0	70,0	28,0	20,0	100/25					

CRIMPING CONNECTORS ACCORDING TO DIN 46234



for Copper cables



Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm					Quantity Box/Bag	Hydraulic Tools	
			Øi	d	L	B	a		HT 120 and tools and heads with 130 kN crimping force	ECM-HSD
95÷120	8	Q 120-8	16,5	8,4	44,0	24,0	22,0	100/25		
	10	Q 120-10	16,5	10,5	44,0	24,0	22,0	100/25		
	12	Q 120-12	16,5	13,0	44,0	24,0	22,0	100/25		
	16	Q 120-16	16,5	17,0	48,0	28,0	22,0	50/25		
120:150	10	Q 150-10	19,0	10,5	50,0	30,0	24,0	50/25		
	12	Q 150-12	19,0	13,0	50,0	30,0	24,0	50/25		
	16	Q 150-16	19,0	17,0	50,0	30,0	24,0	50/25		
150÷185	10	Q 185-10	21,0	10,5	50,0	36,0	28,0	40/20		
	12	Q 185-12	21,0	13,0	50,0	36,0	28,0	40/20		
	16	Q 185-16	21,0	17,0	50,0	36,0	28,0	30/15		
185÷240	10	Q 240-10	23,5	10,5	56,0	38,0	32,0	15/15		
	12	Q 240-12	23,5	13,0	56,0	38,0	32,0	15/15		
	16	Q 240-16	23,5	17,0	56,0	38,0	32,0	15/15		

Consult us for further information.

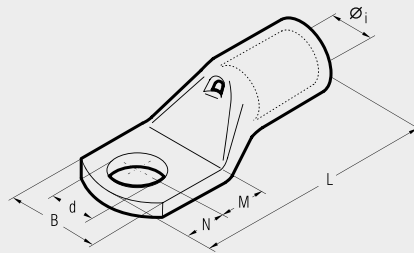
Consult us for special requirements.

A-M



COPPER TUBE CRIMPING LUGS

for Copper conductors



File no. E125401



File no. E125401

A-M series lugs are manufactured from electrolytic Copper tube.

The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

Cembre lugs are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.

In applications subject to vibration, lugs still have to provide a reliable connection and annealing plays a vital role in avoiding cracking or breaks between the barrel and palm.

The presence of an inspection hole facilitates full insertion of the conductor, whilst the barrel length has been designed to allow easy and accurate positioning of the dies during the crimping operation.

Lugs are electrolytically tinned to avoid oxidation. A-M series lugs form an important part of Cembre crimping systems for power carrying conductors, details of the appropriate crimping tools and dies are shown opposite and in detail on pages 196 to 197.

Our technicians are always available to provide any technical advice which may be required.

The enclosed table is only indicative of the range and many variations in stud fixing and palm lengths are also available.

Cond. Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
			Øi	B	M	N	L	d			
0,25÷1,5	3	A 03-M 3*	1,8	6,0	4,5	3,5	16,0	3,2	5.000/100	HN1	B 15MD
		A 03-M 3.5*	1,8	6,5	4,5	3,5	16,0	3,7	5.000/100		
		A 03-M 4*	1,8	6,5	5,0	4,0	17,0	4,3	5.000/100		
		A 03-M 5*	1,8	7,5	5,5	4,5	18,0	5,3	5.000/100		
		A 03-M 6*	1,8	9,0	6,0	5,0	19,0	6,4	5.000/100		
1,5÷2,5	3,5	A 06-M 3*	2,4	6,0	4,5	3,5	17,0	3,2	4.000/100	HN1	B 15MD
		A 06-M 3.5*	2,4	6,5	4,5	3,5	17,0	3,7	4.000/100		
		A 06-M 4*	2,4	7,5	5,0	4,0	18,0	4,3	4.000/100		
		A 06-M 5*	2,4	8,5	5,5	4,5	19,0	5,3	4.000/100		
		A 06-M 6*	2,4	9,0	6,0	5,0	20,0	6,4	4.000/100		
4÷6	4	A 06-M 8*	2,4	12,0	9,0	8,0	26,0	8,4	2.500/100	HN1	B 15MD
		A 1-M 3	3,6	7,5	4,5	3,5	20,5	3,2	2.000/100		
		A 1-M 3.5	3,6	7,5	4,5	3,5	20,5	3,7	2.000/100		
		A 1-M 4	3,6	8,0	5,0	4,0	21,5	4,3	2.000/100		
		A 1-M 5	3,6	9,0	6,5	6,0	25,0	5,3	2.000/100		
10	5	A 1-M 6	3,6	11,0	7,0	6,0	25,5	6,4	2.000/100	HN1	B 15MD
		A 1-M 8	3,6	14,0	9,0	8,0	29,5	8,4	1.500/100		
		A 1-M 10	3,6	16,5	11,0	10,0	33,5	10,5	1.000/100		
		A 2-M 4	4,6	10,0	5,0	4,0	22,5	4,3	1.500/100		
		A 2-M 5	4,6	10,0	6,5	6,0	26,0	5,3	1.500/100		
16	6	A 2-M 6	4,6	11,0	7,0	6,0	26,5	6,4	1.500/100	HN1	B 15MD
		A 2-M 8	4,6	15,0	9,0	8,0	30,5	8,4	1.000/100		
		A 2-M 10	4,6	18,0	11,0	10,0	34,5	10,5	1.000/100		
		A 2-M 12	4,6	19,0	14,0	12,0	39,5	13,2	500/100		
		A 3-M 4	5,8	11,5	5,0	4,0	25,5	4,3	1.000/100		
25	8	A 3-M 5	5,8	11,5	6,5	6,0	29,0	5,3	1.000/100	HN1	B 15MD
		A 3-M 6	5,8	11,5	7,0	6,0	29,5	6,4	1.000/100		
		A 3-M 8	5,8	15,0	9,0	8,0	33,5	8,4	500/100		
		A 3-M 10	5,8	18,0	11,0	10,0	37,5	10,5	500/100		
		A 3-M 12	5,8	20,0	14,0	12,0	42,5	13,2	500/100		
35	10	A 5-M 4	7,0	14,0	5,0	4,0	28,0	4,3	1.000/100	HN1	B 15MD
		A 5-M 5	7,0	14,0	6,5	6,0	31,5	5,3	500/100		
		A 5-M 6	7,0	14,0	7,0	6,0	32,0	6,4	500/100		
		A 5-M 8	7,0	15,0	9,0	8,0	36,0	8,4	500/100		
		A 5-M 10	7,0	18,0	11,0	10,0	40,0	10,5	500/100		
50	12	A 5-M 12	7,0	21,0	14,0	12,0	45,0	13,2	500/100	HN1	B 15MD
		A 7-M 5	8,9	17,0	6,5	6,0	34,0	5,3	500/100		
		A 7-M 6	8,9	17,0	7,0	6,0	34,5	6,4	500/100		
		A 7-M 8	8,9	17,0	9,0	8,0	38,5	8,4	400/100		
		A 7-M 10	8,9	19,0	11,0	10,0	42,5	10,5	400/100		
70	14	A 7-M 12	8,9	21,0	14,0	12,0	47,5	13,2	300/50	HN1	B 15MD
		A 10-M 6	10,0	19,0	8,0	7,0	38,5	6,4	200/50		
		A 10-M 8	10,0	19,0	9,0	8,0	40,5	8,4	200/50		
		A 10-M 10	10,0	20,0	11,5	9,5	44,5	10,5	200/50		
		A 10-M 12	10,0	21,0	12,0	12,0	47,5	13,2	200/50		
70	16	A 10-M 14	10,0	25,0	16,0	14,0	55,5	15,0	200/50	HN1	B 15MD
		A 10-M 16	10,0	26,0	18,0	16,0	59,5	17,0	200/50		
		A 14-M 6	11,3	21,0	8,0	7,0	44,0	6,4	200/50		
		A 14-M 8	11,3	21,0	9,0	8,0	46,0	8,4	200/50		
		A 14-M 10	11,3	21,0	11,0	10,0	50,0	10,5	200/50		
70	12	A 14-M 12	11,3	22,0	14,0	12,0	55,0	13,2	150/50	HN1	B 15MD
		A 14-M 14	11,3	25,0	16,0	14,0	59,0	15,0	100/50		
		A 14-M 16	11,3	26,0	18,0	16,0	63,0	17,0	100/50		

*Not UL approved

COPPER TUBE CRIMPING LUGS

for Copper conductors

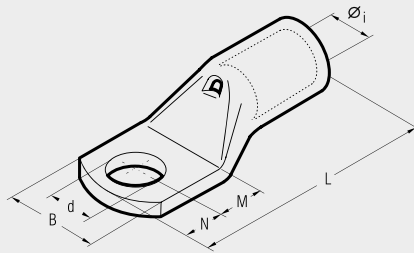
A-M



File no. E125401



File no. E125401



Cond. Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
			Øi	B	M	N	L	d			
95	6	A 19-M 6	13,5	25,0	8,0	7,0	50,5	6,4	100/25	TN-120 SE** B 35-45MD B 35-50MD HT 45-E	HT 51 B 55 RH 50 B 500 HT 81-U RHU 81 HT 120 and tools and heads with 130 kN crimping force ECW-H3D RHU 920
		A 19-M 8	13,5	25,0	9,0	8,0	52,5	8,4	100/25		
	70	A 19-M 10	13,5	25,0	11,0	10,0	56,5	10,5	100/25		
		A 19-M 12	13,5	25,0	14,0	12,0	61,5	13,2	100/25		
	95	A 19-M 14	13,5	25,0	16,0	14,0	65,5	15,0	100/25		
		A 19-M 16	13,5	27,0	18,0	16,0	69,5	17,0	100/25		
A 19-M 20		13,5	29,5	22,0	20,0	77,5	21,0	50/25			
120		95	A 24-M 8	15,2	28,5	9,0	8,0	54,0	8,4		
	A 24-M 10		15,2	28,5	11,0	10,0	58,0	10,5	100/25		
	120	A 24-M 12	15,2	28,5	14,0	12,0	63,0	13,2	100/25		
		A 24-M 14	15,2	28,5	16,0	14,0	67,0	15,0	50/25		
		A 24-M 16	15,2	28,5	18,0	16,0	71,0	17,0	50/25		
150	120	A 24-M 20	15,2	30,0	22,0	20,0	79,0	21,0	50/25		
		150	A 30-M 8	16,7	31,5	13,0	11,0	69,0	8,4		
	A 30-M 10		16,7	31,5	13,0	11,0	69,0	10,5	50/25		
	A 30-M 12		16,7	31,5	16,0	14,0	75,0	13,2	50/25		
	185	150	A 30-M 14	16,7	31,5	18,0	16,0	79,0	15,0		
A 30-M 16			16,7	31,5	19,0	17,0	81,0	17,0	50/25		
185		A 30-M 20	16,7	31,5	22,0	20,0	87,0	21,0	50/25		
		240	A 37-M 8	19,2	35,5	13,0	11,0	76,0	8,4		
A 37-M 10	19,2		35,5	13,0	11,0	76,0	10,5	40/20			
A 37-M 12	19,2		35,5	16,0	14,0	82,0	13,2	40/20			
A 37-M 14	19,2		35,5	18,0	16,0	86,0	15,0	30/15			
240	185	A 37-M 16	19,2	35,5	19,0	17,0	88,0	17,0	30/15		
		A 37-M 20	19,2	35,5	22,0	20,0	94,0	21,0	30/15		
	240	A 48-M 8	21,1	39,0	13,0	11,0	77,5	8,4	30/15		
		A 48-M 10	21,1	39,0	13,0	11,0	77,5	10,5	30/15		
300	240	A 48-M 12	21,1	39,0	14,0	12,0	79,5	13,2	30/15		
		A 48-M 14	21,1	39,0	18,0	16,0	92,0	15,0	30/15		
	300	A 48-M 16	21,1	39,0	19,0	17,0	94,0	17,0	30/15		
		A 48-M 20	21,1	39,0	22,0	20,0	100,0	21,0	30/15		
400	300	A 60-M 10	23,7	44,0	20,0	11,0	96,0	10,5	20/10		
		A 60-M 12	23,7	44,0	20,0	14,0	99,0	13,2	20/10		
	400	A 60-M 14	23,7	44,0	22,0	16,0	103,0	15,0	20/10		
		A 60-M 16	23,7	44,0	22,0	19,0	106,0	17,0	20/10		
500	300	A 60-M 20	23,7	44,0	24,0	23,0	112,0	21,0	20/10		
		A 80-M 12	27,0	51,0	22,0	19,0	113,0	13,2	20/5		
	400	A 80-M 14	27,0	51,0	22,0	19,0	113,0	15,0	15/5		
		A 80-M 16	27,0	51,0	22,0	19,0	113,0	17,0	20/5		
630	500	A 80-M 20	27,0	51,0	24,0	23,0	119,0	21,0	15/5		
		A 100-M 16	30,3	56,5	22,0	19,0	117,0	17,0	15/1		
800	630	A 100-M 20	30,3	56,5	24,0	23,0	123,0	21,0	15/1		
		A 120-M 16♦	33,4	61,6	22,0	19,0	128,0	17,0	12/1		
1000	800	A 120-M 20♦	33,4	61,6	24,0	23,0	134,0	21,0	10/1		
		A 160-M 16♦	38,0	72,0	24,0	19,0	141,0	17,0	6/1		
1000	800	A 160-M 20♦	38,0	72,0	24,0	23,0	145,0	21,0	6/3		
		A 200-M 16♦	44,0	80,0	24,0	19,0	158,0	17,0	6/1		
1000	800	A 200-M 20♦	44,0	80,0	24,0	23,0	162,0	21,0	6/1		

*Actual conductor section may require a larger lug eg for 120mm² size use A30-... lug.

**See page 113

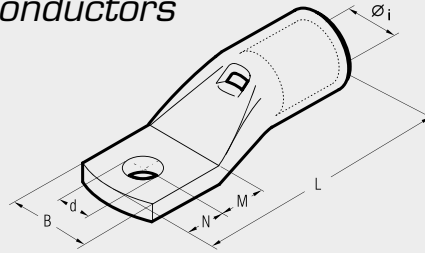
♦Not UL approved

A-M



RING TONGUE TERMINALS WITH CONTAINED PALM

for L.V. circuit breakers
for Copper conductors



File no. E125401



File no. E125401

This range of terminals features contained palm width and has been specifically developed for application on L.V. circuit breakers with reduced space terminal blocks. The contained palm width allows an immediate and easier installation. Cembre terminals are manufactured from electrolytic Copper tube.

The specifically designed section of the barrel and the choice of principal dimensions are optimising the best combination of mechanical strength and electrical conductivity. These terminals are annealed to guarantee optimum ductility and are electrolytically Tin plated to avoid oxidation. The barrel is provided with an internal taper to ease the introduction of the conductor; furthermore, its length grants a comfortable and correct positioning between dies, during crimping operations. Each palm is marked with the Cembre logo and part number.

Cond. Size Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm							Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
			Øi	B	M	N	L	d				
10	5	A 2-M 5/9	4,6	9,0	6,5	6,0	26,0	5,3	1000/100	HNG HN-A25	B 15MD	
16	5	A 3-M 5/9	5,8	9,0	6,5	6,0	29,0	5,3	1000/100			
25	5	A 5-M 5/9	7,0	9,0	6,5	6,0	31,5	5,3	500/100	TN 70 SE	B 35-45MD B 35-50MD HT 45-E	
35	6	A 7 B-M 6/11.5	8,9	11,5	8,0	7,0	36,5	6,4	400/100			
50	6	A 10 B-M 6/11.5	10,0	11,5	8,0	7,0	40,5	6,4	200/50	TN 120 SE	HT 51 B 55 RH 50 B 500 HT 81-U RHU 81	
70	6	A 14 B-M 6/11.5	11,3	11,5	8,0	7,0	44,0	6,4	200/50			
95	8	A 19 B-M 8/15.5	13,5	15,5	9,0	8,0	52,5	8,4	100/25	HT 120 and tools and heads with 130 kN crimping force EDWH3D		
120	8	A 24 B-M 8/19	15,2	19,0	14,0	9,0	60,0	8,4	100/25			
150	10	A 24 B-M 10/19	15,2	19,0	14,0	9,0	60,0	10,5	100/25	EDWH3D		
	8	A 30 B-M 8/19	16,7	19,0	18,0	9,0	70,0	8,4	50/25			
185	10	A 30 B-M 10/19	16,7	19,0	18,0	9,0	70,0	10,5	50/25	EDWH3D		
	10	A 37 B-M 10/24.5	19,2	24,5	18,0	9,0	77,0	10,5	50/25			
240	10	A 48-M 10/31	21,1	31,0	13,0	9,0	80,0	10,5	30/15	EDWH3D		
	12	A 48-M 12/31	21,1	31,0	16,0	12,0	86,0	13,2	30/15			
	16	A 48-M 16/31	21,1	31,0	19,0	17,0	94,0	17,0	30/15			
300	10	A 60 B-M 10/31	23,7	31,0	16,0	12,0	95,0	10,5	20/10	EDWH3D		
	12	A 60 B-M 12/31	23,7	31,0	16,0	12,0	95,0	13,2	20/10			

Details of the appropriate crimping tools and dies are shown on pages 196 to 197.



COPPER TUBE CRIMPING LUGS ANGLED 90°

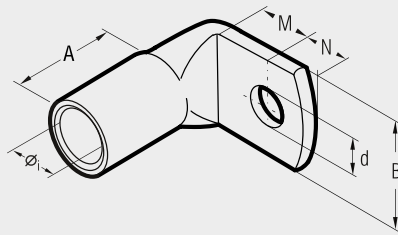
for Copper conductors



File no. E125401



File no. E125401



A-L



Cond. Size sqmm	Ø Stud mm	Ref.	Dimensions mm							Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
			Øi	B	M	N	A	d				
6	6	A 1-L 6*	3,6	11,0	7,0	6,0	9,5	6,4	2.000/100	HMT	B 15MD	
	5	A 2-L 5	4,6	10,0	6,5	6,0	10,5	5,3	1.500/100			
10	6	A 2-L 6	4,6	11,0	7,0	6,0	10,5	6,4	1.500/100	HMS	B 35-50MD	
	8	A 2-L 8	4,6	15,0	9,0	8,0	10,5	8,4	500/100			
16	5	A 3-L 5	5,8	11,5	6,5	6,0	12,0	5,3	1.000/100	HN4E5	HT 45E	
	6	A 3-L 6	5,8	11,5	7,0	6,0	12,0	6,4	1.000/100			
	8	A 3-L 8	5,8	15,0	9,0	8,0	12,0	8,4	1.000/100			
	10	A 3-L 10	5,8	18,0	11,0	10,0	12,0	10,5	500/100			
25	6	A 5-L 6	7,0	14,0	7,0	6,0	13,0	6,4	500/100	TN 70 SE	HT 51 B 55	
	8	A 5-L 8	7,0	15,0	9,0	8,0	13,0	8,4	500/100			
	10	A 5-L 10	7,0	18,0	11,0	10,0	13,0	10,5	500/100			
35	6	A 7-L 6	8,9	17,0	7,0	6,0	15,5	6,4	500/100	TN 120 SE**	RH 50 B 500	
	8	A 7-L 8	8,9	17,0	9,0	8,0	15,5	8,4	300/100			
	10	A 7-L 10	8,9	19,0	11,0	10,0	15,5	10,5	400/100			
	12	A 7-L 12	8,9	21,0	14,0	12,0	15,5	13,2	300/100			
50	6	A 10-L 6	10,0	19,0	8,0	7,0	16,5	6,4	300/100	HT 81-U RHU 81	ECOM-H30	
	8	A 10-L 8	10,0	19,0	9,0	8,0	16,5	8,4	300/100			
	10	A 10-L 10	10,0	20,0	11,5	9,5	16,5	10,5	200/50			
	12	A 10-L 12	10,0	21,0	12,0	12,0	16,5	13,2	200/50			
70	8	A 14-L 8	11,3	21,0	9,0	8,0	20,0	8,4	200/50	RHU 520	HT 120 and tools and heads with 130 kN crimping force	
	10	A 14-L 10	11,3	21,0	11,0	10,0	20,0	10,5	200/50			
	12	A 14-L 12	11,3	22,0	14,0	12,0	20,0	13,2	150/50			
95	16	A 14-L 16	11,3	26,0	18,0	16,0	20,0	17,0	150/50			
	8	A 19-L 8	13,5	25,0	9,0	8,0	24,5	8,4	100/25			
	10	A 19-L 10	13,5	25,0	11,0	10,0	24,5	10,5	100/25			
120	12	A 19-L 12	13,5	25,0	14,0	12,0	24,5	13,2	100/25			
	10	A 24-L 10	15,2	28,5	11,0	10,0	25,5	10,5	50/25			
150	12	A 24-L 12	15,2	28,5	14,0	12,0	25,5	13,2	50/25			
	10	A 30-L 10	16,7	31,5	13,0	11,0	28,5	10,5	50/25			
185	12	A 30-L 12	16,7	31,5	16,0	14,0	28,5	13,2	50/25			
	10	A 37-L 10	19,2	31,5	13,0	11,0	31,5	10,5	50/25			
240	12	A 37-L 12	19,2	31,5	16,0	14,0	31,5	13,2	50/25			
	12	A 48-L 12	21,1	39,0	16,0	14,0	33,0	13,2	30/15			
300	12	A 60-L 12	23,7	39,0	20,0	14,0	42,0	13,2	20/10			
	12	A 60-L 12	23,7	39,0	20,0	14,0	42,0	13,2	20/10			

*Actual conductor section may require a larger lug eg for 120mm² size use A30-... lug.

**See page 113

♦Not UL approved

A-L series lugs angled 90° are manufactured from electrolytic Copper tube. The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

Cembre lugs are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.

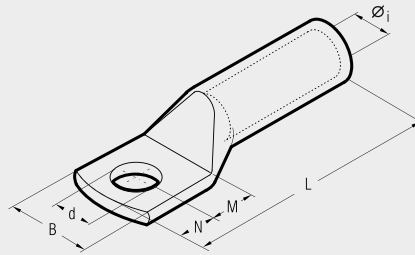
In applications subject to vibration, terminals still have to perform a reliable connection, annealing plays a vital role in avoiding cracking or breaks between the barrel and palm.

The presence of an inspection hole facilitates full insertion of the conductor, whilst the barrel length has been designed to allow easy and accurate positioning of the dies during the crimping operation.

Lugs are electrolytically tinned to avoid oxidation. Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

HEAVY DUTY COPPER TUBE TERMINALS

2A-M



2A-M series terminals are made from high purity Copper tube, and are annealed.

They feature a double length barrel for enhanced electrical and mechanical performance in heavy duty applications.

The absence of an inspection hole prevents the entry of water or moisture into the crimped joint making these terminals suitable for outdoor applications.

The terminals are electrolytically Tin plated to prevent atmospheric corrosion.

Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

2A-2M series terminals with double stud hole palm are also available, please consult us.



Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools	Hydraulic Tools	
			Øi	B	M	N	L	d				
16	8	2 A 3-M 8	5,8	15,0	9,0	8,0	43,5	8,4	600/100	HN5	B 15MD	
	10	2 A 3-M 10	5,8	18,0	11,0	10,0	47,5	10,5	500/100			
25	8	2 A 5-M 8	7,0	15,0	9,0	8,0	51,0	8,4	400/100	HN-A25		
	10	2 A 5-M 10	7,0	18,0	11,0	10,0	55,0	10,5	300/50			
35	12	2 A 5-M 12	7,0	21,0	14,0	12,0	60,0	13,2	300/50	TN 70 SE		
	8	2 A 7-M 8	8,9	17,0	9,0	8,0	53,0	8,4	250/50			
50	10	2 A 7-M 10	8,9	19,0	11,0	10,0	57,0	10,5	250/50	TN 70 SE		
	12	2 A 7-M 12	8,9	21,0	14,0	12,0	62,0	13,2	200/50			
63	10	2 A 10-M 10	10,0	20,0	11,0	10,0	63,0	10,5	200/50	TN 120 SE*		
	12	2 A 10-M 12	10,0	21,0	14,0	12,0	68,0	13,2	150/50			
70	14	2 A 10-M 14	10,0	25,0	16,0	14,0	72,0	15,0	150/50	TN 120 SE*	B 35-45MD	
	16	2 A 10-M 16	10,0	26,0	18,0	16,0	76,0	17,0	150/50			
95	10	2 A 14-M 10	11,3	21,0	11,0	10,0	70,0	10,5	100/50	TN 120 SE*	B 35-50MD	HT 45-E
	14	2 A 14-M 14	11,3	22,0	14,0	12,0	75,0	13,2	100/50			
120	16	2 A 14-M 16	11,3	25,0	16,0	14,0	79,0	15,0	100/50	TN 120 SE*		
	12	2 A 19-M 12	13,5	25,0	14,0	12,0	81,5	13,2	75/25			
125	14	2 A 19-M 14	13,5	25,0	16,0	14,0	85,5	15,0	75/25	TN 120 SE*		
	16	2 A 19-M 16	13,5	27,0	18,0	16,0	90,5	17,0	75/25			
150	20	2 A 19-M 20	13,5	29,5	22,0	20,0	97,5	21,0	75/25	TN 120 SE*		
	10	2 A 24-M 10	15,2	28,5	11,0	10,0	82,0	10,5	50/25			
185	12	2 A 24-M 12	15,2	28,5	14,0	12,0	87,0	13,2	50/25	TN 120 SE*		
	14	2 A 24-M 14	15,2	28,5	16,0	14,0	91,0	15,0	50/25			
240	16	2 A 24-M 16	15,2	28,5	18,0	16,0	95,0	17,0	50/25	TN 120 SE*		
	20	2 A 24-M 20	15,2	30,0	22,0	20,0	103,0	21,0	50/25			
300	10	2 A 30-M 10	16,7	31,5	13,0	11,0	92,0	10,5	50/25	TN 120 SE*		
	12	2 A 30-M 12	16,7	31,5	16,0	14,0	98,0	13,2	30/15			
350	14	2 A 30-M 14	16,7	31,5	18,0	16,0	102,0	15,0	30/15	TN 120 SE*		
	16	2 A 30-M 16	16,7	31,5	19,0	17,0	104,0	17,0	30/15			
400	20	2 A 30-M 20	16,7	31,5	22,0	20,0	110,0	21,0	30/15	TN 120 SE*		
	12	2 A 37-M 12	19,2	35,5	16,0	14,0	108,0	13,2	30/15			
450	14	2 A 37-M 14	19,2	35,5	18,0	16,0	112,0	15,0	30/15	TN 120 SE*		
	16	2 A 37-M 16	19,2	35,5	19,0	17,0	114,0	17,0	30/15			
500	20	2 A 37-M 20	19,2	35,5	22,0	20,0	120,0	21,0	30/15	TN 120 SE*		
	12	2 A 48-M 12	21,1	39,0	16,0	14,0	109,0	13,2	20/5			
550	14	2 A 48-M 14	21,1	39,0	18,0	16,0	113,0	15,0	20/5	TN 120 SE*		
	16	2 A 48-M 16	21,1	39,0	19,0	17,0	115,0	17,0	20/5			
600	20	2 A 48-M 20	21,1	39,0	22,0	20,0	121,0	21,0	25/5	TN 120 SE*		
	12	2 A 60-M 12	23,7	44,0	20,0	14,0	129,5	13,2	20/5			
650	14	2 A 60-M 14	23,7	44,0	22,0	16,0	133,5	15,0	20/5	TN 120 SE*		
	16	2 A 60-M 16	23,7	44,0	22,0	19,0	136,5	17,0	20/5			
700	20	2 A 60-M 20	23,7	44,0	24,0	23,0	142,5	21,0	20/5	TN 120 SE*		
	12	2 A 80-M 12	27,0	51,0	22,0	19,0	140,0	13,2	15/5			
750	14	2 A 80-M 14	27,0	51,0	22,0	19,0	140,0	15,0	10/5	TN 120 SE*		
	16	2 A 80-M 16	27,0	51,0	22,0	19,0	140,0	17,0	10/5			
800	20	2 A 80-M 20	27,0	51,0	24,0	23,0	146,0	21,0	15/5	TN 120 SE*		
	16	2 A 100-M 16	30,3	56,5	22,0	19,0	147,0	17,0	10/1			
850	20	2 A 100-M 20	30,3	56,5	24,0	23,0	153,0	21,0	10/1	TN 120 SE*		
	16	2 A 120-M 16	33,4	61,5	22,0	19,0	159,0	17,0	20/1			
900	20	2 A 120-M 20	33,4	61,5	24,0	23,0	165,0	21,0	20/1	TN 120 SE*		
	16	2 A 160-M 16	38,0	72,0	24,0	23,0	187,0	21,0	12/1			
1000	20	2 A 200-M 20	44,0	80,0	24,0	23,0	202,0	21,0	6/1	TN 120 SE*		

*See page 113

HT 120 and tools and heads with 130 kN crimping force
ECW-H3D
RHU 520

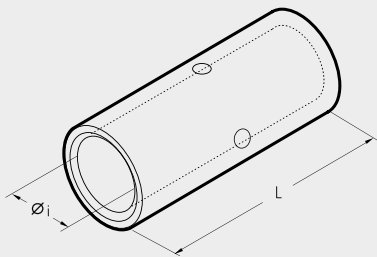
THROUGH CONNECTORS



File no. E125401



File no. E125401



L-M



Conductor Size sqmm		Ref.	Dimensions mm		Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
low stranded	Flexible		Øi	L			
0,25÷1,5	0,25÷1,5	L 03-M*	1,8	15	6.000/100	HN 1	B 15MD
1,5÷2,5	1,5÷2,5	L 06-M*	2,4	15	4.000/100		
4÷6	4÷6	L 1-M*	3,6	22	2.000/100	HN 5	B 35-45MD
10	10	L 2-M	4,6	25	1.000/100		
16	16	L 3-M	5,8	27	1.000/100	HN A25	B 35-50MD
25	25	L 5-M	7,0	29	500/100		
35	25÷35	L 7-M	8,9	33	400/100	TN 70 SE	HT 45-E
50	35÷50	L 10-M	10,0	37	200/50		
70	50÷70	L 14-M	11,3	39	200/50	TN 120 SE*	HT 51 B 55
95	70÷95	L 19-M	13,5	43	100/25		
120	95÷120	L 24-M	15,2	47	100/25	B 35-45MD	RH 50 B 500
150	120÷150	L 30-M	16,7	58	50/25		
185	150÷185	L 37-M	19,2	64	50/25	B 35-50MD	HT 81-U RHU 81
240	185÷240	L 48-M	21,1	75	30/15		
300	240÷300	L 60-M	23,7	90	20/10	HT 120 and tools and heads with 130 kN crimping force	ECWH3D
400	300÷400	L 80-M	27,0	94	20/5		
500	400÷500	L 100-M	30,3	98	12/1	RHU 520	
630	500÷630	L 120-M*	33,4	105	12/1		
800	600	L 160-M*	38,0	112	9/1		
1000	800	L 200-M*	44,0	120	6/1		

*See page 113

*Not UL approved

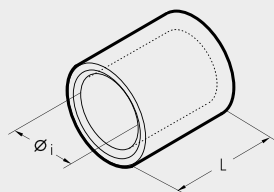
L-M range of connectors are designed for jointing low voltage conductors.

Made of electrolytic Copper tube having the same dimension as A-M series lugs: L-M connectors are annealed and electrolytically Tin plated.

They feature an internal taper at both ends to ease the introduction of the conductor and a central stop to ensure correct positioning.

Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

PARALLEL CONNECTORS



L-P



Total Conductor Size sqmm		Ref.	Dimensions mm		Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
low stranded	Flexible		Øi	L			
0,25÷1,5	0,25÷1,5	L 03-P	1,8	6,0	10.000/100	HN 1	B 15MD
1,5÷2,5	1,5÷2,5	L 06-P	2,4	6,0	5.000/100		
4÷6	4÷6	L 1-P	3,6	9,0	3.000/100	HN 5	B 35-45MD
10	10	L 2-P	4,6	10,5	3.000/100		
16	16	L 3-P	5,8	11,5	2.000/100	HN A25	B 35-50MD
25	25	L 5-P	7,0	13,0	1.500/100		
35	25÷35	L 7-P	8,9	14,0	500/100	TN 70 SE	HT 45-E
50	35÷50	L 10-P	10,0	16,0	500/100		
70	50÷70	L 14-P	11,3	18,0	500/100	TN 120 SE*	HT 51 B 55
95	70÷95	L 19-P	13,5	19,0	300/50		
120	95÷120	L 24-P	15,2	22,0	200/50	B 35-45MD	RH 50 B 500
150	120÷150	L 30-P	16,7	26,5	100/50		
185	150÷185	L 37-P	19,2	26,5	100/50	B 35-50MD	HT 81-U RHU 81
240	185÷240	L 48-P	21,1	34,0	60/15		
300	240÷300	L 60-P	23,7	43,0	50/25	HT 120 and tools and heads with 130 kN crimping force	ECWH3D
						RHU 520	

*See page 113

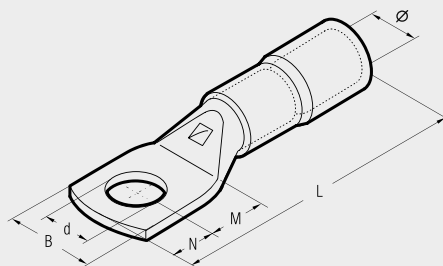
Made of electrolytic Copper tube, having the same dimensions as A-M series lugs, L-P connectors are annealed and electrolytically Tin plated.

They feature an internal taper to ease the introduction of the conductor.

Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

POLYAMIDE PA6.6 INSULATED COPPER TUBE LUGS

ANE-M



ANE-M series lugs are manufactured from electrolytic Copper tube annealed and Tin plated.

The interior of the PA6.6 insulated sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.

It also eliminates the need to insulate the terminal using either tape or heat shrinkable tubing. Furthermore the PA6.6 sleeve avoids the possibility of conductor breakage at the barrel entrance.

The operating temperature range is - 20 to + 115°C (Surge + 130°C).

In order to achieve the best electrical and mechanical performance it is suggested that they are crimped using dies and tools specifically developed for this purpose by Cembre.

Details of the appropriate crimping tools and dies are shown on pages 198 to 199.

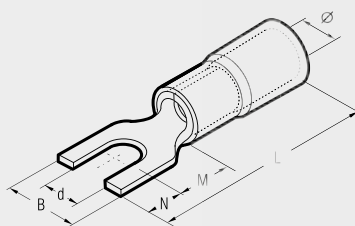
Cond. Size Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools	Hydraulic Tools	
			Ø	B	M	N	L	d				
10	4	ANE 2-M 4	8,0	10,0	5,0	4,0	34,1	4,3	500/100	HN3	B 15MD	
	5	ANE 2-M 5	8,0	10,0	6,5	6,0	37,6	5,3	500/100			
	6	ANE 2-M 6	8,0	11,0	7,0	6,0	38,1	6,4	500/100			
	8	ANE 2-M 8	8,0	15,0	9,0	8,0	42,1	8,4	500/100			
	10	ANE 2-M 10	8,0	18,0	11,0	10,0	46,1	10,5	500/100			
	12	ANE 2-M 12	8,0	19,0	14,0	12,0	51,1	13,2	500/100			
16	4	ANE 3-M 4	9,2	11,5	5,0	4,0	38,6	4,3	500/100	HN4	B 35-50MD	
	5	ANE 3-M 5	9,2	11,5	6,5	6,0	42,1	5,3	500/100			
	6	ANE 3-M 6	9,2	11,5	7,0	6,0	42,6	6,4	500/100			
	8	ANE 3-M 8	9,2	15,0	9,0	8,0	46,6	8,4	500/100			
	10	ANE 3-M 10	9,2	18,0	11,0	10,0	50,6	10,5	400/100			
	12	ANE 3-M 12	9,2	20,0	14,0	12,0	55,6	13,2	300/100			
25	4	ANE 5-M 4	11,1	14,0	5,0	4,0	41,0	4,3	300/100	TNM 70	B 500	B 55
	5	ANE 5-M 5	11,1	14,0	6,5	6,0	44,5	5,3	300/100			
	6	ANE 5-M 6	11,1	14,0	7,0	6,0	45,0	6,4	300/100			
	8	ANE 5-M 8	11,1	15,0	9,0	8,0	49,0	8,4	300/100			
	10	ANE 5-M 10	11,1	18,0	11,0	10,0	53,0	10,5	300/100			
	12	ANE 5-M 12	11,1	21,0	14,0	12,0	58,0	13,2	250/50			
35	6	ANE 7-M 6	13,6	17,0	7,0	6,0	50,0	6,4	200/50	TNM 120	RH 50	ECW-H3D
	8	ANE 7-M 8	13,6	17,0	9,0	8,0	54,0	8,4	200/50			
	10	ANE 7-M 10	13,6	19,0	11,0	10,0	58,0	10,5	200/50			
	12	ANE 7-M 12	13,6	21,0	14,0	12,0	63,0	13,2	200/50			
	6	ANE 10-M 6	13,8	19,0	8,0	7,0	53,0	6,4	200/50			
	8	ANE 10-M 8	13,8	19,0	9,0	8,0	55,0	8,4	150/50			
50	10	ANE 10-M 10	13,8	20,0	11,5	9,5	59,0	10,5	150/50	HT 51	HT 120 and tools and heads with 130 kN crimping force	
	12	ANE 10-M 12	13,8	21,0	12,0	12,0	62,0	13,2	150/50			
	6	ANE 14-M 6	15,8	21,0	8,0	7,0	61,0	6,4	100/25			
	8	ANE 14-M 8	15,8	21,0	9,0	8,0	63,0	8,0	100/25			
	10	ANE 14-M 10	15,8	21,0	11,0	10,0	67,0	10,5	100/25			
	12	ANE 14-M 12	15,8	22,0	14,0	12,0	72,0	13,2	100/25			
70	14	ANE 14-M 14	15,8	25,0	16,0	14,0	76,0	15,0	100/25	HT 120		
	8	ANE 19-M 8	18,0	25,0	9,0	8,0	73,0	8,4	50/25			
	10	ANE 19-M 10	18,0	25,0	11,0	10,0	77,0	10,5	50/25			
	12	ANE 19-M 12	18,0	25,0	14,0	12,0	82,0	13,2	50/25			
	14	ANE 19-M 14	18,0	25,0	16,0	14,0	86,0	15,0	50/25			
	16	ANE 19-M 16	18,0	27,0	18,0	16,0	80,0	17,0	50/25			
120	10	ANE 24-M 10	20,0	28,5	11,0	10,0	77,7	10,5	50/25	HT 120		
	12	ANE 24-M 12	20,0	28,5	14,0	12,0	86,5	13,2	50/25			
	14	ANE 24-M 14	20,0	28,5	16,0	14,0	88,5	15,0	50/25			
	16	ANE 24-M 16	20,0	28,5	18,0	16,0	90,5	17,0	50/25			
	12	ANE 30-M 12	23,0	31,5	16,0	14,0	101,0	13,2	30/15			
	14	ANE 30-M 14	23,0	31,5	18,0	16,0	105,0	15,0	30/15			
150	16	ANE 30-M 16	23,0	31,5	19,0	17,0	107,0	17,0	30/15	HT 120		
	20	ANE 30-M 20	23,0	31,5	22,0	20,0	113,0	21,0	30/15			



POLYAMIDE PA6.6 INSULATED FORK TERMINALS



File no. E125401



ANE-U



Conductor Size Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools		Hydraulic Tools							
			Ø	B	M	N	L	d		HNN 3	HNN 4	TNN 70	TNN 120	B 15MD	B 35-50MD	HT 51 RH 50	B 500 B 65	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
10	4	ANE 2-U 4	8,0	9,8	7,5	7,0	35,1	4,3	500/100										
	5	ANE 2-U 5	8,0	11,5	7,5	7,0	35,1	5,3	500/100										
16	4	ANE 3-U 4	9,2	10,0	10,0	8,0	41,1	4,3	500/100										
	5	ANE 3-U 5	9,2	11,5	10,0	8,0	41,1	5,3	500/100										

The operating temperature range is - 20 to + 115°C (Surge + 130°C).

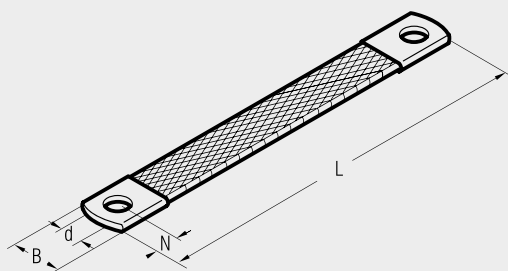
In order to achieve the best electrical and mechanical performance it is suggested that they are crimped using dies and tools specifically developed for this purpose by Cembre.

Details of the appropriate crimping tools and dies are shown on pages 198 to 199.

ANE-U series terminals are made from electrolytic Copper, rolled, Tin plated and brazed.

The interior of the PA6.6 insulated sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.

FLEXIBLE BRAIDS



FL



Size sqmm	Ø Stud mm	Ref.	Dimensions mm				Quantity
			B	N	L	d	
10	8	FL 10-150	17	10	150	8,5	50
	8	FL 10-200	17	10	200	8,5	50
	8	FL 10-250	17	10	250	8,5	50
	8	FL 16-150	17	10	150	8,5	50
	8	FL 16-200	17	10	200	8,5	50
16	8	FL 16-250	17	10	250	8,5	50
	8	FL 16-320	17	10	320	8,5	50
	8	FL 16-350	17	10	350	8,5	50
	8	FL 16-420	17	10	420	8,5	25
	8	FL 16-570	17	10	570	8,5	25
	8	FL 16-660	17	10	660	8,5	25
25	8	FL 25-150	21	10	150	8,5	50
	8	FL 25-200	21	10	200	8,5	50
	8	FL 25-250	21	10	250	8,5	50
	8	FL 25-300	21	10	300	8,5	50

Flexible braids are manufactured from electrolytic Copper wire.

Braids of different conductor sizes or lengths are available on request. Standard finish - bright Copper.

Flexible braids can be supplied Tin plated, in this case add the suffix "ST" to reference.

E.g.:
- FL 10-150 (Bright Copper)
- FL 10-150-ST (Tin plated)

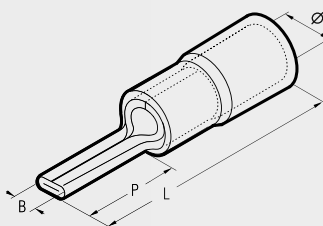
ANE-P



POLYAMIDE PA6.6 INSULATED PIN TERMINALS



File no. E125401



ANE-P series terminals are made from electrolytic Copper, rolled, Tin plated and brazed. The interior of the PA6.6 insulated sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.

The operating temperature range is - 20 to + 115°C (Surge + 130°C).

In order to achieve the best electrical and mechanical performance it is suggested that they are crimped using dies and tools specifically developed for this purpose by Cembre.

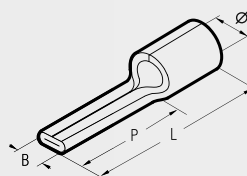
Conductor Size Flexible sqmm	Ref.	Dimensions mm				Quantity Box/Bag	Mechanical Tools				Hydraulic Tools		
		Ø	B	P	L		HNN 3	HNN 4	TNW 70	TNW 120	B 15MD	B 35-50MD HT 51 RH 50 B 500 B 55	HT 120 and tools and heads with 130 kN crimping force
10	ANE 2-P 12	8,0	4,3	14,5	35,1	500/100							
16	ANE 3-P 14	9,2	5,5	18,0	41,1	500/100							
25	ANE 5-P 16	11,1	7,0	20,3	45,0	300/100							
35	ANE 7-P 20	13,6	8,0	24,5	55,0	200/50							

Details of the appropriate crimping tools and dies are shown on pages 198 to 199.

A-P



UNINSULATED PIN CONNECTORS



A-P series pin connectors are designed to terminate conductors into contact blocks.

They are manufactured from Copper strip, rolled, brazed and Tin plated.

Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

Cond. Size sqmm	Ref.	Dimensions mm				Quantity Box/Bag	Mechanical Tools				Hydraulic Tools						
		low stranded	flexible*	Ø1	B		P	L	HN 1	HN 5	HN-A25	TN 70 SE	TN 120 SE	B 15MD	B 35-45MD B 35-50MD HT 45-E	HT 51 RH 50 B 500 B 55	HT 120 and tools and heads with 130 kN crimping force
10	10 A 2-P 12			4,8	4,3	14,5	23,5	1.000/100									
16	16 A 3-P 14			5,9	5,5	18,0	28,0	1.500/100									
25	25 A 5-P 16			7,0	7,0	20,3	32,0	1.000/100									
35	25÷35 A 7-P 20			8,9	8,0	24,5	39,0	500/100									
50	35÷50 A 10-P 25			10,0	9,5	26,0	45,0	250/50									
70	50÷70 A 14-P 30			11,5	11,0	31,0	55,0	200/50									

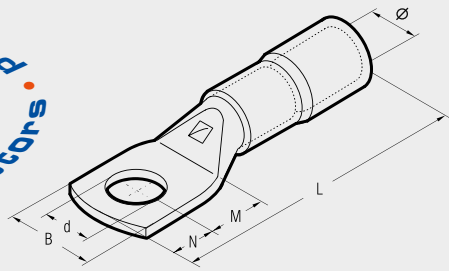
POLYAMIDE PA6.6 INSULATED COPPER TUBE LUGS



for extra flexible Copper conductors

ANE-M

for fine stranded
SPECIAL
flexible conductors



Conductor Size Extra Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools	Hydraulic Tools		
			Ø	B	M	N	L	d					
35	6	ANE 9-M 6/15	13,6	15,0	8,0	7,0	54,0	6,4	200/50	TMM 70	B 95-50MD B 55		
	8	ANE 9-M 8	13,6	17,0	9,0	8,0	56,0	8,4	200/50				
	10	ANE 9-M 10	13,6	18,5	11,0	10,0	60,0	10,5	150/50				
	12	ANE 9-M 12	13,6	21,0	14,0	12,0	65,0	13,2	150/50				
50	6	ANE 12-M 6/15	15,7	15,0	8,0	7,0	59,5	6,4	100/25			TMM 120	HT 51 RH 50 B 500 B 55 ECW-H3D
	8	ANE 12-M 8	15,7	19,8	9,0	8,0	61,5	8,4	100/25				
	10	ANE 12-M 10	15,7	19,8	11,0	10,0	65,5	10,5	100/25				
	10	ANE 12-M 10/19	15,7	19,0	11,0	10,0	65,5	10,5	100/25				
70	12	ANE 12-M 12	15,7	22,0	14,0	12,0	70,5	13,2	100/25				
	6	ANE 17-M 6	17,9	23,0	8,0	7,0	63,8	6,4	100/25				
	8	ANE 17-M 8	17,9	23,0	9,0	8,0	65,8	8,4	100/25				
	10	ANE 17-M 10	17,9	23,0	11,0	10,0	69,8	10,5	50/25				
	10	ANE 17-M 10/19	17,9	19,0	11,0	10,0	69,8	10,5	100/25				
	12	ANE 17-M 12	17,9	23,0	14,0	12,0	74,8	13,2	50/25				
95	14	ANE 17-M 14	17,9	25,0	15,5	12,0	76,3	15,0	50/25				
	16	ANE 17-M 16	17,9	27,0	16,5	13,5	78,8	17,0	50/25				
	8	ANE 20-M 8	20,0	27,0	9,0	8,0	70,6	8,4	50/25				
	10	ANE 20-M 10	20,0	27,0	11,0	10,0	74,6	10,5	50/25				
	12	ANE 20-M 12	20,0	27,0	14,0	12,0	79,6	13,2	50/25				
120	14	ANE 20-M 14	20,0	27,0	15,5	12,0	81,1	15,0	50/25				
	16	ANE 20-M 16	20,0	27,0	16,5	13,5	83,6	17,0	50/25				
	10	ANE 29-M 10	22,4	30,0	11,0	10,0	81,5	10,5	50/25				
	12	ANE 29-M 12	22,4	30,0	14,0	12,0	86,5	13,2	50/25				
	14	ANE 29-M 14	22,4	30,0	15,5	12,0	88,5	15,0	50/25				
150	16	ANE 29-M 16	22,4	30,0	16,5	13,5	90,5	17,0	50/25				
	20	ANE 29-M 20	22,4	30,0	22,0	20,0	102,5	21,0	50/25				
	12	ANE 35-M 12	25,0	34,2	16,0	14,0	95,0	13,2	30/15				
	14	ANE 35-M 14	25,0	34,2	18,0	16,0	99,0	15,0	30/15				
	16	ANE 35-M 16	25,0	34,2	19,0	17,0	101,0	17,0	30/15				
	20	ANE 35-M 20	25,0	34,2	22,0	20,0	107,0	21,0	30/15				

These lugs are particularly recommended for use with extra flexible conductors on for instance, welding machines.

ANE-M series lugs are manufactured from electrolytic Copper tube annealed and Tin plated.

The interior of the PA6.6 insulated sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.

It also eliminates the need to insulate the terminal using either tape or heat shrinkable tubing.

Furthermore the PA6.6 sleeve avoids the possibility of conductor breakage at the barrel entrance.

The operating temperature range is - 20 to + 115°C (Surge + 130°C).

In order to achieve the best electrical and mechanical performance it is suggested that they are crimped using dies and tools specifically developed for this purpose by Cembre.

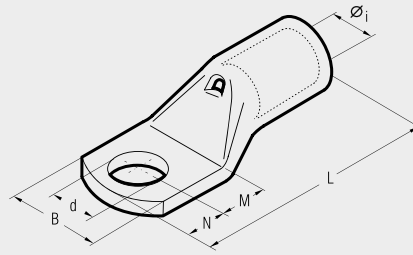
Details of the appropriate crimping tools and dies are shown on pages 198 to 199.

A-M



COPPER TUBE CRIMPING LUGS

for extra flexible Copper conductors



for fine stranded
SPECIAL
flexible conductors

These lugs are particularly recommended for use with extra flexible conductors on for instance, welding machines.

A-M series lugs are designed to suit panel applications.

The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

Cembre lugs are annealed to guarantee optimum ductility and electrolytically Tin plated to avoid oxidation.

The presence of an inspection hole facilitates full insertion of the conductor.

Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

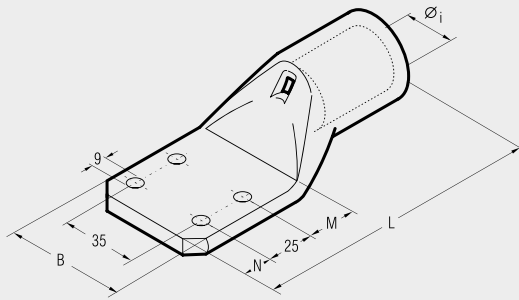
Conductor Size Extra Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
			Øi	B	M	N	L	d			
35	6	A 9-M 6/15	9,3	15,0	8,0	7,0	38,5	6,4	400/100	TN 70 SE	TN 120 SE B 35-45MD B 35-50MD HT 45E
	8	A 9-M 8	9,3	17,0	9,0	8,0	40,5	8,4	400/100		
	10	A 9-M 10	9,3	18,5	11,0	10,0	44,5	10,5	400/100		
	12	A 9-M 12	9,3	21,0	14,0	12,0	49,5	13,2	300/50		
50	6	A 12-M 6/15	11,0	15,0	8,0	7,0	40,5	6,4	200/50		
	8	A 12-M 8	11,0	19,3	9,0	8,0	42,5	8,4	200/50		
	10	A 12-M 10	11,0	19,3	11,0	10,0	46,5	10,5	200/50		
	10	A 12-M 10/19	11,0	19,0	11,0	10,0	46,5	10,5	200/50		
70	12	A 12-M 12	11,0	22,0	14,0	12,0	51,5	13,2	200/50		
	6	A 17-M 6	13,0	23,0	8,0	7,0	45,0	6,4	200/50		
	8	A 17-M 8	13,0	23,0	9,0	8,0	47,0	8,4	150/50		
	10	A 17-M 10	13,0	23,0	11,0	10,0	51,0	10,5	150/50		
95	10	A 17-M 10/19	13,0	19,0	11,0	10,0	51,0	10,5	200/50		
	12	A 17-M 12	13,0	23,0	14,0	12,0	56,0	13,2	150/50		
	14	A 17-M 14	13,0	25,0	15,5	12,0	57,5	15,0	150/25		
	16	A 17-M 16	13,0	27,0	16,5	13,5	60,0	17,0	150/25		
120	8	A 20-M 8	15,0	27,0	9,0	8,0	50,0	8,4	100/25		
	10	A 20-M 10	15,0	27,0	11,0	10,0	54,0	10,5	100/25		
	12	A 20-M 12	15,0	27,0	14,0	12,0	59,0	13,2	100/25		
	14	A 20-M 14	15,0	27,0	15,5	12,0	60,5	15,0	100/25		
150	16	A 20-M 16	15,0	27,0	16,5	13,5	63,0	17,0	100/25		
	8	A 29-M 8	16,5	30,0	9,0	8,0	53,5	8,4	100/25		
	10	A 29-M 10	16,5	30,0	11,0	10,0	57,5	10,5	100/25		
	12	A 29-M 12	16,5	30,0	14,0	12,0	62,5	13,2	100/25		
185	14	A 29-M 14	16,5	30,0	15,5	12,0	64,0	15,0	100/25		
	16	A 29-M 16	16,5	30,0	16,5	13,5	66,5	17,0	100/25		
	20	A 29-M 20	16,5	30,0	22,0	20,0	78,5	21,0	75/25		
	10	A 35-M 10	19,2	34,2	13,0	11,0	65,5	10,5	50/25		
240	12	A 35-M 12	19,2	34,2	16,0	14,0	71,5	13,2	50/25		
	14	A 35-M 14	19,2	34,2	18,0	16,0	75,5	15,0	50/25		
	16	A 35-M 16	19,2	34,2	19,0	17,0	77,5	17,0	50/25		
	20	A 35-M 20	19,2	34,2	22,0	20,0	83,5	21,0	50/25		
300	10	A 40-M 10	21,0	37,5	13,0	11,0	73,0	10,5	30/15		
	12	A 40-M 12	21,0	37,5	16,0	14,0	79,0	13,2	30/15		
	14	A 40-M 14	21,0	37,5	18,0	16,0	83,0	15,0	30/15		
	16	A 40-M 16	21,0	37,5	19,0	17,0	85,0	17,0	30/15		
350	20	A 40-M 20	21,0	37,5	22,0	20,0	91,0	21,0	30/15		

HT 51 RH 50 B 500 B 55
HT 81-U RHU 81
HT 120 and tools and heads with 130 kN crimping force
ECW-H3D
RHU 520

COPPER TUBE LUGS 4-ESI FIXING



A-4ESI



Conductor Size sqmm	Ref.	Dimensions mm					Quantity Box/Bag	Hydraulic Tools					
		Øi	B	M	N	L		HT 51	B 55	RH 50	B500	HT 81-U	RHU 81
185	A 37-4ESI	19,2	61	20	15	124	20/10						
240	A 48-4ESI	21,1	61	20	15	128	20/10						
300	A 60-4ESI	23,7	61	20	15	133	15/5						
400	A 80-4ESI	27,0	61	20	15	134	15/5						
500	A 100-4ESI	30,3	61	20	15	139	10/5						
630	A 120-4ESI	33,4	61	20	15	144	10/5						
800	A 160-4ESI	38,0	61	20	15	158	8/1						

A-4ESI series lugs are made from high purity electrolytic Copper tube, annealed and Tin plated. The four hole stud fixing in accordance with E.A. specifications ensures compatibility with most transformer fixing arrangements. Details of the appropriate crimping tools and dies are shown on pages 196 to 197.

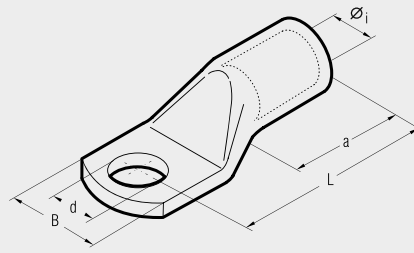


COPPER TUBE CRIMPING LUGS ACCORDING TO DIN 46235

for Copper conductors



DR



DR series lugs are manufactured from electrolytic Copper tube and designed to obtain high electrical conductivity combined with the mechanical strength required to resist vibration and pull out.

Cembre lugs are annealed and Tin plated for improved surface protection.

The annealing process optimises the structural features of the material allowing easier crimping and greater resistance to mechanical stresses.

Dimensions are according to DIN 46235.

The barrel entrance of the lug is chamfered to allow easy conductor insertion, while its length facilitates precise positioning in the crimping die.

Each lug is marked with:

- Cembre logo and part code.
- conductor type and csa (mm²).
- Stud Ø (mm).
- crimping die code

Details of the appropriate crimping tools and dies are shown on page 205.

Consult us for special requirements

Conductor Size sqmm	Ø Stud mm	Ref.	Code	Dimensions mm					Quantity Box/Bag	Mechanical Tools	Hydraulic Tools																		
				Øi	d	L	B	a																					
6	5	DR6-5	5	3,7	5,3	24,0	8,5	10,0	800/100	HIN025	B 15MD																		
	6	DR6-6	5	3,7	6,4	24,0	9,0	10,0	800/100																				
	8	DR6-8*	5	3,7	8,4	26,0	13,0	10,0	800/100																				
10	5	DR10-5	6	4,4	5,3	27,5	10,0	10,0	800/100						TND 6-70														
	6	DR10-6	6	4,4	6,4	27,0	10,0	10,0	800/100																				
	8	DR10-8*	6	4,4	8,4	28,0	13,0	10,0	800/100																				
16	10	DR10-10*	6	4,4	10,5	28,5	15,0	10,0	800/100											TND 10-120	B 35-45MD B 35-50MD	HT 45-E	HT 51 RH 50 B 500 HT 81-U RHU 81	HT 120 and tools with 130 kN crimping force ECW43D RHU 920					
	5	DR16-5*	8	5,5	5,3	36,0	13,0	20,0	400/100																				
	6	DR16-6	8	5,5	6,4	36,0	13,0	20,0	400/100																				
25	8	DR16-8	8	5,5	8,4	37,0	13,0	20,0	400/100																TND 10-120				
	10	DR16-10	8	5,5	10,5	40,0	16,5	20,0	400/100																				
	12	DR16-12*	8	5,5	13,0	41,0	19,0	20,0	400/100																				
35	6	DR25-6	10	7,0	6,4	39,0	14,6	20,0	400/100	TND 10-120																			
	8	DR25-8	10	7,0	8,4	39,5	16,0	20,0	400/100																				
	10	DR25-10	10	7,0	10,5	40,0	16,0	20,0	200/100																				
50	12	DR25-12	10	7,0	13,0	40,5	18,0	20,0	200/100						TND 10-120	B 35-45MD B 35-50MD	HT 45-E	HT 51 RH 50 B 500 HT 81-U RHU 81	HT 120 and tools with 130 kN crimping force ECW43D RHU 920										
	6	DR35-6*	12	8,2	6,4	42,5	17,5	20,0	200/100																				
	8	DR35-8	12	8,2	8,4	42,0	17,0	20,0	200/100																				
70	10	DR35-10	12	8,2	10,5	43,0	19,0	20,0	200/100											TND 10-120									
	12	DR35-12	12	8,2	13,0	43,0	21,0	20,0	200/100																				
	16	DR35-16*	12	8,2	17,0	44,0	28,0	20,0	200/100																				
95	6	DR50-6*	14	10,0	6,4	52,0	20,0	28,0	100/25																TND 10-120				
	8	DR50-8	14	10,0	8,4	52,0	20,0	28,0	100/25																				
	10	DR50-10	14	10,0	10,5	53,0	22,0	28,0	100/25																				
120	12	DR50-12	14	10,0	13,0	53,0	24,0	28,0	100/25	TND 10-120																			
	16	DR50-16	14	10,0	17,0	57,0	28,0	28,0	100/25																				
	8	DR70-8	16	11,5	8,4	56,0	24,0	28,0	50/25																				
150	10	DR70-10	16	11,5	10,5	56,0	24,0	28,0	50/25						TND 10-120														
	12	DR70-12	16	11,5	13,0	56,0	24,0	28,0	50/25																				
	16	DR70-16	16	11,5	17,0	60,0	30,0	28,0	50/25																				
185	20	DR70-20*	16	11,5	21,0	84,5	30,0	28,0	50/25											TND 10-120									
	8	DR95-8*	18	13,5	8,4	65,0	28,0	35,0	50/25																				
	10	DR95-10	18	13,5	10,5	66,0	28,0	35,0	50/25																				
240	12	DR95-12	18	13,5	13,0	66,0	28,0	35,0	50/25																TND 10-120				
	16	DR95-16	18	13,5	17,0	65,5	32,0	35,0	50/25																				
	20	DR95-20*	18	13,5	21,0	71,0	33,0	35,0	50/25																				
280	8	DR120-8*	20	15,5	8,4	70,0	31,0	35,0	50/25	TND 10-120																			
	10	DR120-10	20	15,5	10,5	70,0	31,0	35,0	50/25																				
	12	DR120-12	20	15,5	13,0	70,5	31,0	35,0	50/25																				
350	16	DR120-16	20	15,5	17,0	70,0	31,5	35,0	50/25						TND 10-120														
	20	DR120-20	20	15,5	21,0	72,0	36,0	35,0	50/25																				
	10	DR150-10	22	17,0	10,5	79,0	34,0	35,0	50/25																				
450	12	DR150-12	22	17,0	13,0	78,5	34,0	35,0	50/25											TND 10-120									
	16	DR150-16	22	17,0	17,0	78,0	34,0	35,0	50/25																				
	20	DR150-20	22	17,0	21,0	78,0	38,0	35,0	50/25																				
600	10	DR185-10	25	19,0	10,5	83,0	37,0	40,0	25/25																TND 10-120				
	12	DR185-12	25	19,0	13,0	82,5	37,0	40,0	25/25																				
	16	DR185-16	25	19,0	17,0	82,0	37,0	40,0	25/25																				
800	20	DR185-20	25	19,0	21,0	83,0	40,0	40,0	25/25	TND 10-120																			
	10	DR240-10*	28	21,5	10,5	92,0	42,0	40,0	20/10																				
	12	DR240-12	28	21,5	13,0	92,0	42,5	40,0	20/10																				
1000	16	DR240-16	28	21,5	17,0	92,0	42,5	40,0	20/10						TND 10-120														
	20	DR240-20	28	21,5	21,0	92,0	45,0	40,0	20/10																				

* Non-standard; dimensions of the tube according to DIN 46.235

COPPER TUBE CRIMPING LUGS ACCORDING TO DIN 46235



for Copper conductors

DR

Conductor Size sqmm	Ø Stud mm	Ref.	Code	Dimensions mm					Quantity Box/Bag	Hydraulic Tools		
				Øi	d	L	B	a				
300	12	DR300-12*	32	24,5	13,0	104,0	47,0	50,0	10/5	RH 50 B 500	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D RHU 520
	16	DR300-16	32	24,5	17,0	100,0	48,0	50,0	10/5			
	20	DR300-20	32	24,5	21,0	100,0	47,0	50,0	10/5			
400	12	DR400-12*	38	27,5	13,0	117,0	55,0	70,0	5/5			
	16	DR400-16	38	27,5	17,0	117,0	55,0	70,0	5/5			
	20	DR400-20	38	27,5	21,0	117,0	55,0	70,0	5/5			
500	12	DR500-12*	42	31,0	13,0	130,0	60,0	70,0	5/5			
	16	DR500-16*	42	31,0	17,0	130,0	60,0	70,0	5/5			
	20	DR500-20	42	31,0	21,0	130,0	60,0	70,0	5/5			
625	20	DR625-20	44	34,5	21,0	135,0	63,0	80,0	5/5			

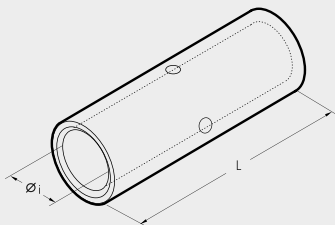
* Non-standard; dimensions of the tube according to DIN 46235

Consult us for special requirements

CRIMPING THROUGH CONNECTORS ACCORDING TO DIN 46267 T.1



for Copper cables



DSV



Conductor Size sqmm	Ref.	Code	Dimensions mm		Quantity Box/Bag	Mechanical Tools	Hydraulic Tools			
			Øi	L						
6	DSV 6	5	3,7	30	1.200/100	HNP25 TND 6-70 TND 10-120	B 15MD	B 35-45MD B 35-50MD HT 45-E HT 51 RH 50 B 500 HT 81J RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D RHU 520
10	DSV 10	6	4,4	30	1.200/100					
16	DSV 16	8	5,5	50	400/100					
25	DSV 25	10	7,0	50	200/100					
35	DSV 35	12	8,2	50	200/100					
50	DSV 50	14	10,0	56	200/50					
70	DSV 70	16	11,5	56	100/50					
95	DSV 95	18	13,5	70	100/50					
120	DSV 120	20	15,5	70	50/25					
150	DSV 150	22	17,0	80	50/25					
185	DSV 185	25	19,0	85	25/25					
240	DSV 240	28	21,5	90	15/15					
300	DSV 300	32	24,5	100	10/5					
400	DSV 400	38	27,5	150	10/5					
500	DSV 500	42	31,0	160	5/5					
625	DSV 625	44	34,5	160	5/5					

DSV series through connectors are manufactured from electrolytic Copper tube, annealed and surface protected by tin plating. Internal and external dimensions match those of DR series lugs. Chamfered ends and a central stop provide easy and correct insertion of the conductor. Details of the appropriate crimping tools and dies are shown on page 205.

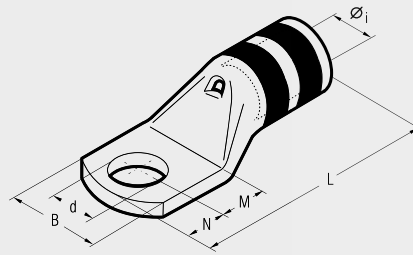
Consult us for special requirements

C



COLOUR CODED COPPER CRIMPING LUGS

for Copper conductors



File no. E125401

C series lugs are manufactured from electrolytic Copper tube.

The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

Cembre lugs are annealed to guarantee optimum ductility, an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.

In applications subject to vibration, terminals have to perform a reliable connection, the annealing process plays a vital role in avoiding cracking or breaks between the barrel and palm.

The presence of an inspection hole facilitates full insertion of the conductor. The barrel length has been designed to allow easy and accurate positioning of the dies during the crimping operation.

Lugs are electrolytically tinned to avoid oxidation.

The tongue is clearly marked with wire size and die index for Cembre tools.

UL listed for US and Canada per UL486A up to 35 KV.

C series lugs are an important part of Cembre crimping systems for power carrying conductors.

Details of the appropriate crimping tools and dies are shown on page 204.

Cembre technicians are available to provide technical advice as required.

Please consult Cembre for products not listed.

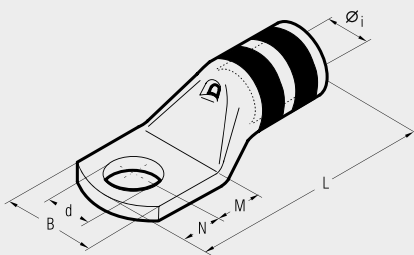
Cond. Size sqmm	Conductor AWG		Ø Stud mm	Ref.	Dimensions mm						Colour Code	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools		
	Size	Navy			Øi	B	M	N	L	d						
10	8	23	4	C8-8	4,6	10,0	5,0	4,0	22,5	4,3	RED	600/50	B15MD			
			5	C8-10	4,6	10,0	6,5	6,0	26,0	5,3		600/50				
			6	C8-14	4,6	11,0	7,0	6,0	26,5	6,4		600/50				
			8	C8-516	4,6	15,0	9,0	8,0	30,5	8,4		600/50				
			10	C8-38	4,6	18,0	11,0	10,0	34,5	10,5		600/50				
			12	C8-12	4,6	19,0	14,0	12,0	39,5	13,2		600/50				
16	6	40	4	C6-8	5,8	11,5	5,0	4,0	25,5	4,3	BLUE	600/50			TN 120 SE	B35-50MD
			5	C6-10	5,8	11,5	6,5	6,0	29,0	5,3		600/50				
			6	C6-14	5,8	11,5	7,0	6,0	29,5	6,4		600/50				
			8	C6-516	5,8	15,0	9,0	8,0	33,5	8,4		600/50				
			10	C6-38	5,8	18,0	11,0	10,0	37,5	10,5		600/50				
			12	C6-12	5,8	20,0	14,0	12,0	42,5	13,2		600/50				
25	4	40	4	C4-8	6,2	12,5	5,0	4,0	25,5	4,3	GREY	600/50	TN 70 SE	HT 51 RH 50 B 500		
			5	C4-10	6,2	12,5	6,5	6,0	29,0	5,3		600/50				
			6	C4-14	6,2	12,5	7,0	6,0	29,5	6,4		600/50				
			8	C4-516	6,2	15,0	9,0	8,0	33,5	8,4		600/50				
			10	C4-38	6,2	18,0	11,0	10,0	37,5	10,5		400/50				
			12	C4-12	6,2	20,0	14,0	12,0	42,5	13,2		400/50				
35	2	60	4	C3-8	7,0	14,0	5,0	4,0	28,0	4,3	WHITE	600/50			HT 120 and tools and heads with 130 kN crimping force	ECWH3D
			5	C3-10	7,0	14,0	6,5	6,0	31,5	5,3		600/50				
			6	C3-14	7,0	14,0	7,0	6,0	32,0	6,4		600/50				
			8	C3-516	7,0	15,0	9,0	8,0	36,0	8,4		600/50				
			10	C3-38	7,0	18,0	11,0	10,0	40,0	10,5		400/50				
			12	C3-12	7,0	21,0	14,0	12,0	45,0	13,2		400/50				
50	1/0	100	5	C2-10	7,6	17,0	6,5	6,0	33,0	5,3	BROWN	400/50	RHU 520			
			6	C2-14	7,6	17,0	7,0	6,0	33,5	6,4		400/50				
			8	C2-516	7,6	17,0	9,0	8,0	37,5	8,4		400/50				
			10	C2-38	7,6	19,0	11,0	10,0	41,5	10,5		400/50				
			12	C2-12	7,6	21,0	14,0	12,0	46,5	13,2		200/50				
			16	C2-0-58	10,0	26,0	18,0	16,0	59,5	17,0		200/25				
70	2/0	125	6	C1-14	8,9	17,0	7,0	6,0	34,5	6,4	GREEN	400/50			TN 120 SE	B35-50MD
			8	C1-516	8,9	17,0	9,0	8,0	38,5	8,4		400/50				
			10	C1-38	8,9	19,0	11,0	10,0	42,5	10,5		400/50				
			12	C1-12	8,9	21,0	14,0	12,0	47,5	13,2		200/50				
			6	C1/0-14	10,0	19,0	8,0	7,0	40,5	6,4		200/25				
			8	C1/0-516	10,0	19,0	9,0	8,0	42,5	8,4		200/25				
95	3/0	150	10	C1/0-38	10,0	20,0	11,0	10,0	46,5	10,5	PINK	200/25	TN 70 SE	B35-50MD		
			12	C1/0-12	10,0	21,0	14,0	12,0	51,5	13,2		200/25				
			14	C1/0-916	10,0	25,0	16,0	14,0	55,5	15,0		200/25				
			16	C1/0-58	10,0	26,0	18,0	16,0	59,5	17,0		200/25				
			6	C2/0-14	11,3	21,0	8,0	7,0	44,0	6,4		200/25				
			8	C2/0-516	11,3	21,0	9,0	8,0	46,0	8,4		200/25				
			10	C2/0-38	11,3	21,0	11,0	10,0	50,0	10,5	BLACK	200/25			TN 120 SE	B35-50MD
			12	C2/0-12	11,3	22,0	14,0	12,0	55,0	13,2		200/25				
			14	C2/0-916	11,3	25,0	16,0	14,0	59,0	15,0		100/25				
			16	C2/0-58	11,3	26,0	18,0	16,0	63,0	17,0		100/25				
			20	C2/0-34	11,3	29,5	22,0	20,0	75,0	21,0		100/25				
			6	C3/0-14	12,4	23,0	8,0	7,0	45,0	6,4		200/25				
			8	C3/0-516	12,4	23,0	9,0	8,0	47,0	8,4	ORANGE	200/25	TN 120 SE	B35-50MD		
			10	C3/0-38	12,4	23,0	11,0	10,0	51,0	10,5		100/25				
			12	C3/0-12	12,4	24,0	14,0	12,0	56,0	13,2		100/25				
			14	C3/0-916	12,4	27,0	16,0	14,0	60,0	15,0		100/25				
			16	C3/0-58	12,4	28,0	18,0	16,0	64,0	17,0		100/25				
			20	C3/0-34	12,4	31,5	22,0	20,0	72,0	21,0		100/25				

COLOUR CODED COPPER CRIMPING LUGS

for Copper conductors



File no. E125401



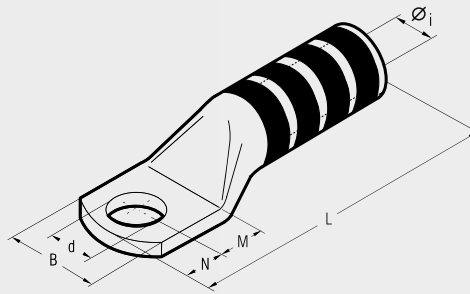
C

Cond. Size sqmm	Conductor AWG		Ref.	Dimensions mm						Colour Code	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools	
	Size	Navy		Ø Stud mm	Øi	B	M	N	L					d
4/0	200	6	C4/0-14	13,5	25,0	8,0	7,0	50,5	6,4	PURPLE	100/25	TN 120 SE B3550MD	HT 120 and tools and heads with 130 kN crimping force ECW-H3D RHU 520	
		8	C4/0-516	13,5	25,0	9,0	8,0	52,5	8,4		100/25			
		10	C4/0-38	13,5	25,0	11,0	10,0	56,5	10,5		100/25			
		12	C4/0-12	13,5	25,0	14,0	12,0	61,5	13,2		100/25			
		14	C4/0-916	13,5	25,0	16,0	14,0	65,5	15,0		100/25			
		16	C4/0-58	13,5	27,0	18,0	16,0	69,5	17,0		50/25			
		20	C4/0-34	13,5	29,5	22,0	20,0	77,5	21,0		50/25			
120	250 MCM	6	C250-14	15,2	28,5	8,0	7,0	52,0	6,4	YELLOW	100/25			
		8	C250-516	15,2	28,5	9,0	8,0	54,0	8,4		100/25			
		10	C250-38	15,2	28,5	11,0	10,0	58,0	10,5		100/25			
		12	C250-12	15,2	28,5	14,0	12,0	63,0	13,2		50/25			
		14	C250-916	15,2	28,5	16,0	14,0	67,0	15,0		50/25			
		16	C250-58	15,2	28,5	18,0	16,0	71,0	17,0		50/25			
		20	C250-34	15,2	30,0	22,0	20,0	79,0	21,0		50/25			
150	300 MCM	8	C300-516	16,7	31,5	13,0	11,0	69,0	8,4	WHITE	40/10			
		10	C300-38	16,7	31,5	13,0	11,0	69,0	10,5		40/10			
		12	C300-12	16,7	31,5	16,0	14,0	75,0	13,2		40/10			
		14	C300-916	16,7	31,5	18,0	16,0	79,0	15,0		40/10			
		16	C300-58	16,7	31,5	19,0	17,0	81,0	17,0		40/10			
		20	C300-34	16,7	31,5	22,0	20,0	87,0	21,0		40/10			
		22	C300-78	16,7	31,5	24,0	23,0	92,0	23,0		40/10			
185	350 MCM	10	C350-38	17,6	33,0	13,0	11,0	70,5	10,5	RED	40/20			
		12	C350-12	17,6	33,0	16,0	14,0	76,5	13,2		40/20			
		14	C350-916	17,6	33,0	18,0	16,0	80,5	15,0		40/20			
		16	C350-58	17,6	33,0	19,0	17,0	82,5	17,0		40/20			
		20	C350-34	17,6	33,0	22,0	20,0	88,5	21,0		40/20			
		22	C350-78	17,6	37,0	24,0	23,0	93,5	23,0		30/15			
		400	400 MCM	10	C400-38	19,2	35,5	13,0	11,0		76,0			10,5
12	C400-12			19,2	35,5	16,0	14,0	82,0	13,2	40/20				
14	C400-916			19,2	35,5	18,0	16,0	86,0	15,0	40/20				
16	C400-58			19,2	35,5	19,0	17,0	88,0	17,0	40/20				
20	C400-34			19,2	35,5	22,0	20,0	94,0	21,0	40/20				
22	C400-78			19,2	35,5	24,0	23,0	99,0	23,0	40/20				
240	500 MCM			10	C500-38	21,1	39,0	13,0	11,0	82,0	10,5	BROWN	30/15	
		12	C500-12	21,1	39,0	16,0	14,0	88,0	13,2	30/15				
		14	C500-916	21,1	39,0	18,0	16,0	92,0	15,0	30/15				
		16	C500-58	21,1	39,0	19,0	17,0	94,0	17,0	30/15				
		20	C500-34	21,1	39,0	22,0	20,0	100,0	21,0	20/10				
		22	C500-78	21,1	39,0	24,0	23,0	105,0	23,0	20/10				
		300	600 MCM	12	C600-12	23,7	44,0	20,0	14,0	99,0	13,2		GREEN	20/10
14	C600-916			23,7	44,0	22,0	16,0	103,0	15,0	20/10				
16	C600-58			23,7	44,0	22,0	19,0	106,0	17,0	20/10				
20	C600-34			23,7	44,0	24,0	23,0	112	21,0	10/5				
22	C600-78			23,7	44,0	24,0	23,0	112,0	23,0	10/5				
750	MCM			12	C750-12	26,0	48,0	22,0	19,0	113,0	13,2	BLACK		10/5
				16	C750-58	26,0	48,0	22,0	19,0	113,0	17,0			10/5
		20	C750-34	26,0	48,0	24,0	23,0	119,0	21,0	10/5				
		22	C750-78	26,0	48,0	24,0	23,0	119,0	23,0	10/5				

CL

COLOUR CODED COPPER CRIMPING LUGS

one hole long barrel for Copper conductors



CL series lugs are manufactured from electrolytic Copper tube for use in heavy duty applications.

The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

Cembre lugs are annealed to guarantee optimum ductility which is an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.

In applications subject to vibration, terminals have to perform a reliable connection, the annealing process plays a vital role in avoiding cracking or breaks between the barrel and palm.

The long barrel provides better mechanical pull-out strength.

Lugs are electrolytically plated to avoid oxidation.

The tongue is clearly marked with wire size and die index for Cembre tools.

UL listed for US and Canada per UL486A up to 35 KV.

CL series lugs are an important part of Cembre crimping systems for power carrying conductors. Details of the appropriate crimping tools and dies are shown on page 204.

Cembre technicians are available to provide technical advice as required.

Please consult Cembre for products not listed.

Cond. Size sqmm	Conductor AWG		Ø Stud mm	Ref.	Dimensions mm						Colour Code	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools						
	Size	Navy			Øi	B	M	N	L	d										
10	8	23	5	CL8-10	4,6	10,0	6,5	6,0	37,5	5,3	RED	400/50	TN 70 SE	B15MD						
			6	CL8-14	4,6	11,0	7,0	6,0	38,0	6,4		400/50								
			10	CL8-38	4,6	18,0	11,0	10,0	46,0	10,5		400/50								
16	6	20	5	CL6-10	5,8	11,5	6,5	6,0	40,0	5,3	BLUE	400/50			TN 120 SE	B35-50MD				
			6	CL6-14	5,8	11,5	7,0	6,0	40,5	6,4		400/50								
			12	CL6-12	5,8	20,0	14,0	12,0	53,5	13,2		400/50								
25	4	40	5	CL4-10	6,2	12,5	6,5	6,0	47,0	5,3	GREY	400/50					TN 120 SE	B35-50MD		
			6	CL4-14	6,2	12,5	7,0	6,0	47,5	6,4		400/50								
			10	CL4-38	6,2	18,0	11,0	10,0	55,5	10,5		400/50								
			12	CL4-12	6,2	20,0	14,0	12,0	60,5	13,2		400/50								
35	2	60	6	CL3-14	7,0	14,0	7,0	6,0	47,5	6,4	BROWN	200/100							TN 70 SE	B35-50MD
			8	CL3-516	7,0	15,0	9,0	8,0	51,5	8,4		200/100								
			10	CL3-38	7,0	18,0	11,0	10,0	55,5	10,5		200/100								
			12	CL3-12	7,0	21,0	14,0	12,0	60,5	13,2		200/100								
50	1/0	100	5	CL2-10	7,6	17,0	6,5	6,0	46,0	5,3	GREEN	200/50	TN 120 SE	B35-50MD						
			8	CL2-14	7,6	17,0	7,0	6,0	46,5	6,4		200/50								
			8	CL2-516	7,6	17,0	9,0	8,0	50,5	8,4		200/50								
			12	CL2-12	7,6	21,0	14,0	12,0	59,5	13,2		200/50								
70	2/0	125	5	CL1-10	8,9	17,0	6,5	6,0	48,0	5,3	PINK	200/50			TN 120 SE	B35-50MD				
			8	CL1-516	8,9	17,0	9,0	8,0	52,5	8,4		200/50								
			12	CL1-12	8,9	21,0	14,0	12,0	61,5	13,2		200/50								
			5	CL1/0-10	10,0	19,0	8,0	7,0	53,5	5,3		100/50								
95	3/0	150	8	CL1/0-516	10,0	19,0	9,0	8,0	55,5	8,4	BLACK	100/50					TN 120 SE	B35-50MD		
			10	CL1/0-38	10,0	20,0	11,0	10,0	59,5	10,5		100/50								
			10	CL1/0-12	10,0	21,0	14,0	12,0	64,5	13,2		100/50								
			12	CL2/0-38	11,3	21,0	11,0	10,0	67,5	10,5		100/50								
120	250 MCM	250	12	CL2/0-12	11,3	22,0	14,0	12,0	72,5	13,2	ORANGE	100/50	TN 120 SE	B35-50MD						
			10	CL4/0-38	13,5	25,0	11,0	10,0	73,5	10,5		60/30								
			12	CL4/0-12	13,5	25,0	14,0	12,0	78,5	13,2		60/30								
150	300 MCM	300	12	CL250-12	15,2	28,5	14,0	12,0	84,0	13,2	PURPLE	50/25							TN 120 SE	B35-50MD
			12	CL300-12	16,7	31,5	16,0	14,0	98,0	13,2		30/15								
185	350 MCM	350	12	CL400-12	19,2	35,5	16,0	14,0	107,0	13,2	YELLOW	10/5			TN 120 SE	B35-50MD				
			16	CL400-58	19,2	35,5	19,0	17,0	113,0	17,0		20/10								
			12	CL500-12	21,1	39,0	16,0	14,0	108,0	13,2		20/10								
			16	CL500-58	21,1	39,0	19,0	17,0	114,0	17,0		20/10								
240	500 MCM	400	12	CL600-12	23,7	44,0	20,0	14,0	128,5	13,2	BLACK	10/5					TN 120 SE	B35-50MD		
			16	CL600-58	23,7	44,0	22,0	19,0	135,5	17,0		10/5								
300	600 MCM	500	12	CL750-12	26,0	48,0	22,0	19,0	140,5	13,2	GREEN	10/5								
			16	CL750-58	26,0	48,0	22,0	19,0	140,5	17,0		10/5								

Also available with inspection hole.

In case of order, add suffix IH to the part number.

E.g.: CL250IH-12

HT 120 and tools and heads with 130 kN crimping force
ECWH3D
RHU 520

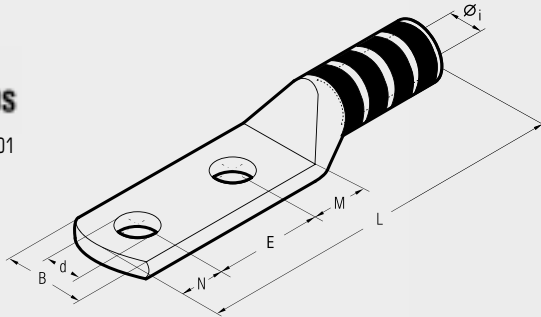
COLOUR CODED COPPER CRIMPING LUGS



double hole long barrel for Copper conductors



File no. E125401



CL-D

Cond. Size sqmm	Conductor AWG	Ø Stud mm	Ref.	Dimensions mm							Colour Code	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
				Øi	B	M	E	N	L	d				
10	8	23	6 CL8-D14	4,6	11,0	7,0	16,0	6,0	53,0	6,4	RED	400/50	B15MD	
			6 CL8-D141	4,6	11,0	7,0	19,0	6,0	56,0	6,4	RED	400/50		
			10 CL8-D38	4,6	18,0	11,0	25,5	10,0	70,5	10,5	RED	400/50		
16	6	23	6 CL6-D14	5,8	11,5	7,0	16,0	6,0	54,5	6,4	BLUE	400/50	B15MD	
			6 CL6-D141	5,8	11,5	7,0	19,0	6,0	57,5	6,4	BLUE	400/50		
			10 CL6-D38	5,8	18,0	11,0	25,5	10,0	72,0	10,5	BLUE	400/50		
25	4	40	12 CL6-DN	5,8	20,0	14,0	44,5	12,0	96,0	13,2	BLUE	400/50	B15MD	
			6 CL4-D14	6,2	12,5	7,0	16,0	6,0	62,0	6,4	GREY	200/50		
			6 CL4-D141	6,2	12,5	7,0	19,0	6,0	65,0	6,4	GREY	200/50		
25	4	40	10 CL4-D38	6,2	18,0	11,0	25,5	10,0	79,5	10,5	GREY	200/50	B15MD	
			12 CL4-DN	6,2	20,0	14,0	44,5	12,0	103,5	13,2	GREY	200/50		
			10 CL3-D38	7,0	18,0	11,0	25,5	10,0	79,5	10,5	WHITE	200/50		
35	2	60	12 CL3-DN	7,0	21,0	14,0	44,5	12,0	103,5	13,2	WHITE	200/50	B15MD	
			6 CL2-D14	7,6	17,0	7,0	16,0	6,0	61,0	6,4	BROWN	200/50		
			6 CL2-D141	7,6	17,0	7,0	19,0	6,0	64,0	6,4	BROWN	200/50		
35	2	60	10 CL2-D38	7,6	19,0	11,0	25,5	10,0	78,5	10,5	BROWN	100/50	TN 70 SE	
			12 CL2-DN38	7,6	19,0	11,0	44,5	10,0	97,5	10,5	BROWN	100/50		
			12 CL2-DN	7,6	21,0	14,0	44,5	12,0	102,5	13,2	BROWN	100/50		
50	1/0	75	10 CL1-D14	8,9	17,0	7,0	16,0	6,0	63,0	6,4	GREEN	200/50	TN 120 SE	
			6 CL1-D141	8,9	17,0	7,0	19,0	6,0	66,0	6,4	GREEN	200/50		
			10 CL1-D38	8,9	19,0	11,0	25,5	10,0	80,5	10,5	GREEN	100/25		
50	1/0	100	12 CL1-DN	8,9	21,0	14,0	44,5	12,0	104,5	13,2	GREEN	100/25	TN 120 SE	
			6 CL1/O-D14	10,0	19,0	7,9	16,0	7,0	68,0	6,4	PINK	100/25		
			6 CL1/O-D141	10,0	19,0	7,9	19,0	7,0	71,0	6,4	PINK	100/25		
70	2/0	125	10 CL1/O-D38	10,0	20,0	10,9	25,5	10,0	83,5	10,5	PINK	100/25	TN 120 SE	
			12 CL1/O-DN	10,0	21,0	14,0	44,5	12,0	107,5	13,2	PINK	100/25		
			6 CL2/O-D14	11,3	21,0	7,8	16,0	7,0	76,0	6,4	BLACK	60/30		
70	2/0	125	6 CL2/O-D141	11,3	21,0	7,8	19,0	7,0	79,0	6,4	BLACK	60/30	TN 120 SE	
			10 CL2/O-D38	11,3	21,0	11,0	25,5	10,0	91,5	10,5	BLACK	60/30		
			12 CL2/O-DN	11,3	22,0	14,0	44,5	12,0	115,5	13,2	BLACK	60/30		
95	3/0	150	6 CL3/O-D141	12,4	23,3	8,0	19,0	7,0	82,0	6,4	ORANGE	60/30	TN 120 SE	
			10 CL3/O-D38	12,4	23,3	11,0	25,5	10,0	94,5	10,5	ORANGE	60/30		
			12 CL3/O-DN	12,4	24,0	14,0	44,5	12,0	118,5	13,2	ORANGE	60/30		
120	250	200	6 CL4/O-D141	13,5	25,0	13,0	19,0	11,0	94,0	6,4	PURPLE	50/25	TN 120 SE	
			10 CL4/O-D38	13,5	25,0	11,0	25,5	10,0	97,5	10,5	PURPLE	50/25		
			10 CL4/O-DN38	13,5	25,0	11,0	44,5	10,0	116,5	10,5	PURPLE	50/25		
120	250	200	12 CL4/O-DN	13,5	25,0	14,0	44,5	12,0	121,5	13,2	PURPLE	50/25	TN 120 SE	
			10 CL250-D38	15,2	28,5	11,0	25,5	10,0	103,0	10,5	YELLOW	40/20		
			12 CL250-DN	15,2	28,5	14,0	44,5	12,0	127,0	13,2	YELLOW	40/20		
150	300	300	10 CL300-D38	16,7	31,5	13,0	25,5	11,0	116,0	10,5	WHITE	30/15	TN 120 SE	
			12 CL300-DN	16,7	31,5	16,0	44,5	14,0	141,0	13,2	WHITE	30/15		
			6 CL350-D141	17,6	33,0	13,0	19,0	11,0	109,5	6,4	RED	30/15		
185	350	350	10 CL350-D38	17,6	33,0	13,0	25,5	11,0	116,0	10,5	RED	30/15	TN 120 SE	
			12 CL350-DN	17,6	33,0	16,0	44,5	14,0	141,0	13,2	RED	30/15		
			6 CL400-D141	19,2	35,5	13,0	19,0	11,0	118,5	6,4	BLUE	20/10		
240	500	400	10 CL400-D38	19,2	35,5	13,0	25,5	11,0	125,0	10,5	BLUE	20/10	TN 120 SE	
			12 CL400-DN	19,2	35,5	16,0	44,5	14,0	150,0	13,2	BLUE	20/10		
			6 CL500-D141	21,1	39,0	13,0	19,0	11,0	119,5	6,4	BROWN	20/10		
300	600	MCM	10 CL500-D38	21,1	39,0	13,0	25,5	11,0	126,0	10,5	BROWN	10/5	TN 120 SE	
			12 CL500-DN	21,1	39,0	16,0	44,5	14,0	151,0	13,2	BROWN	10/5		
			10 CL600-D38	23,7	44,0	20,0	25,5	11,0	149,5	10,5	GREEN	20/5		
300	750	MCM	12 CL600-DN	23,7	44,0	20,0	44,5	14,0	171,5	13,2	GREEN	20/5	TN 120 SE	
			10 CL750-DN38	26,0	48,0	20,0	44,5	11,0	173,5	10,5	BLACK	15/5		
			10 CL750-D38	26,0	48,0	20,0	25,5	11,0	154,5	10,5	BLACK	15/5		
300	750	MCM	12 CL750-DN	26,0	48,0	20,0	44,5	14,0	176,5	13,2	BLACK	15/5	TN 120 SE	

CL series lugs are manufactured from electrolytic Copper tube.

The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.

Cembre lugs are annealed to guarantee optimum ductility, an absolute necessity for connectors which will have to withstand the severe deformation arising when compressed and any bending of the palm during installation.

In applications subject to vibration, terminals have to perform a reliable connection, the annealing process plays a vital role in avoiding cracking or breaks between the barrel and palm.

The barrel length has been designed to allow easy and accurate positioning of the dies during the crimping operation.

Lugs are electrolytically tin-plated to avoid oxidation.

The tongue is clearly marked with wire size and die index for Cembre tools.

UL listed for US and Canada per UL486A up to 35 KV.

CL series lugs are an important part of Cembre crimping systems for power carrying conductors. Details of the appropriate crimping tools and dies are shown on page 204.

Cembre technicians are available to provide technical advice as required.

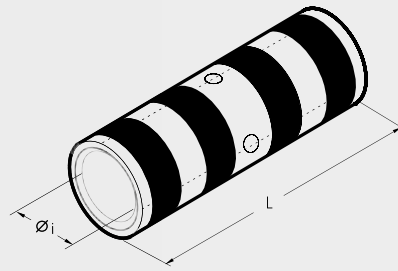
Please consult Cembre for products not listed.

BSCL



COLOUR CODED SPLICES

long barrel



File no. E125401

BSCL range of connectors are designed for jointing low voltage conductors in heavy duty applications. Made of electrolytic Copper tube having the same dimension as C and CL series lugs, BSCL connectors are annealed and electrolytically Tin plated. They feature an internal taper at both ends to ease the introduction of the conductor and a central stop to ensure correct positioning. **UL listed for US and Canada per UL486A up to 35 KV.**

Appropriate crimping tools and dies are shown in details on page 204.

Conductor Size sqmm	Conductor Size AWG	Ref.	Dimensions mm		Colour Code	Quantity Box/Bag	Mechanical Tools		Hydraulic Tools	
			Øi	L						
10	8	BSCL8	4,6	50,5	RED	600/150	HV1			
16	6	BSCL6	5,8	50,5	BLUE	400/100	HNS		B15MD	
25	4	BSCL4	6,2	60,5	GREY	200/100				
	3	BSCL3	7,0	60,5	WHITE	200/50		TN 70 SE		
35	2	BSCL2	7,6	60,5	BROWN	200/50				
	1	BSCL1	8,9	65,5	GREEN	200/50		TN 120 SE		
50	1/0	BSCL1/0	10,0	73,0	PINK	200/50			B35-50MD	
70	2/0	BSCL2/0	11,3	79,0	BLACK	100/50			HT 51 RH 50 B 500	
95	3/0	BSCL3/0	12,4	79,0	ORANGE	80/40			ECW-H3D	
	4/0	BSCL4/0	13,5	85,5	PURPLE	50/25			RHU 520	
120	250 MCM	BSCL250	15,2	85,5	YELLOW	50/25				
150	300 MCM	BSCL300	16,7	104,5	WHITE	40/20				
185	350 MCM	BSCL350	17,6	104,5	RED	40/20				
	400 MCM	BSCL400	19,2	111,0	BLUE	20/10				
240	500 MCM	BSCL500	21,1	117,0	BROWN	20/10				
300	600 MCM	BSCL600	23,7	139,5	GREEN	20/10				
	750 MCM	BSCL750	26,0	149,0	BLACK	10/10				

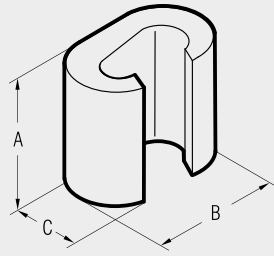
HT 120 and tools and heads with 130 kN crimping force

ECW-H3D

RHU 520



SLEEVE CONNECTORS



C-C



tin plated version

Conductor Size sqmm		Ref.	Dimensions mm			Quantity Box/Bag	Mechanical Tools	Hydraulic Tools								
Run	Tap		A	B	C											
6÷2,5	6÷1,5	C 6-C 6 ST	9,0	9,8	6,4	1.000/100	HP4-C10	B 35-45MD	B 35-50MD	HT 45-E	B 500	B 55	RH 50	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW4H3D
10	10÷1,5	C 10-C 10 ST	12,0	12,6	8,4	500/100										
16	16÷1,5	C 16-C 16 ST	17,0	19,4	12,0	500/100										
25÷16	10÷1,5	C 25-C 10 ST	17,0	19,8	13,0	400/50										
25	25÷16	C 25-C 25 ST	17,0	21,4	13,0	300/50										
40÷35	16÷1,5	C 35-C 16 ST	21,0	24,6	15,4	200/25										
40÷35	40÷25	C 35-C35 ST	21,0	26,6	15,6	200/25										
50	25÷10															
70÷63	25÷1,5	C 70-C 25 N ST	21,0	26,4	17,5	200/25										
50	25÷4	C 50-C 25 ST	25,0	32,9	21,0	100/25										
50	50÷35	C 50-C 50 ST	26,0	33,0	21,0	100/25										
70÷50	40÷4	C 70-C 35 ST	28,0	33,0	21,0	100/25										
70÷50	70÷35	C 70-C 70 ST	28,0	34,0	21,0	100/25										
100÷95	40÷4	C 95-C 35 ST	29,0	40,6	26,0	50/25										
100÷95	70÷40	C 95-C 70 ST	29,0	41,0	26,0	50/25										
100÷95	100÷63	C 95-C 95 ST	29,0	41,0	26,0	50/25										
125÷110	125÷25	C 120-C 120 ST	30,0	45,0	28,0	50/25										
160÷150	125÷25	C 150-C 120 ST	31,0	45,0	28,0	50/25										
150	150÷63	C 150-C 150 ST	30,0	45,0	28,0	50/25										
185	100÷16	C 185-C 95 ST	31,0	45,0	28,0	50/25										
185÷120	185÷120	C 185-C 185 ST	22,6	68,0	34,0	30/15										
240÷150	120÷95	C 240-C 120 ST	22,6	68,0	34,0	30/15										

"C" connectors are manufactured from high purity copper profiles and are suitable for a variety of uses either to create an earthing network or tapping off from overhead distribution lines. Each connector is marked as follows:

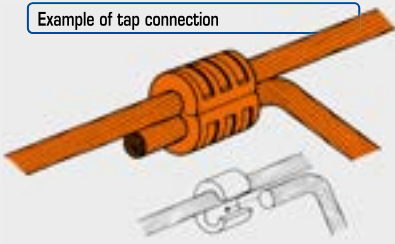
- Cembre trade mark
- Reference number
- Conductor size-Run
- Conductor size-Tap
- Number of crimps
- Die reference.

Details of the appropriate crimping tools and dies are shown on page 200.

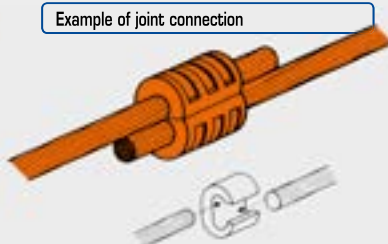
bright surface version

Conductor Size sqmm		Ref.	Dimensions mm			Quantity Box/Bag	Mechanical Tools	Hydraulic Tools								
Run	Tap		A	B	C											
6÷2,5	6÷1,5	C 6-C 6	9,0	9,8	6,4	1.000/100	HP4-C10	B 35-45MD	B 35-50MD	HT 45-E	B 500	B 55	RH 50	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW4H3D
10	10÷1,5	C 10-C 10	12,0	12,6	8,4	500/100										
16	16÷1,5	C 16-C 16	17,0	19,4	12,0	500/100										
25÷16	10÷1,5	C 25-C 10	17,0	19,8	13,0	400/50										
25	25÷16	C 25-C 25	17,0	21,4	13,0	300/50										
40÷35	16÷1,5	C 35-C 16	21,0	24,6	15,4	200/25										
40÷35	40÷25	C 35-C35	21,0	26,6	15,6	200/25										
50	25÷10															
70÷63	25÷1,5	C 70-C 25 N	21,0	26,4	17,5	200/25										
50	25÷4	C 50-C 25	25,0	32,9	21,0	100/25										
50	50÷35	C 50-C 50	26,0	33,0	21,0	100/25										
70÷50	40÷4	C 70-C 35	28,0	33,0	21,0	100/25										
70÷50	70÷35	C 70-C 70	28,0	34,0	21,0	100/25										
100÷95	40÷4	C 95-C 35	29,0	40,6	26,0	50/25										
100÷95	70÷40	C 95-C 70	29,0	41,0	26,0	50/25										
100÷95	100÷63	C 95-C 95	29,0	41,0	26,0	50/25										
125÷110	125÷25	C 120-C 120	30,0	45,0	28,0	50/25										
160÷150	125÷25	C 150-C 120	31,0	45,0	28,0	50/25										
150	150÷63	C 150-C 150	30,0	45,0	28,0	50/25										
185	100÷16	C 185-C 95	31,0	45,0	28,0	50/25										
185÷120	185÷120	C 185-C 185	22,6	68,0	34,0	30/15										
240÷150	120÷95	C 240-C 120	22,6	68,0	34,0	30/15										

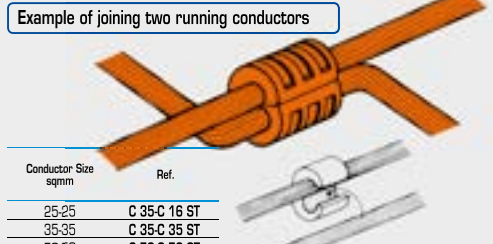
Example of tap connection



Example of joint connection

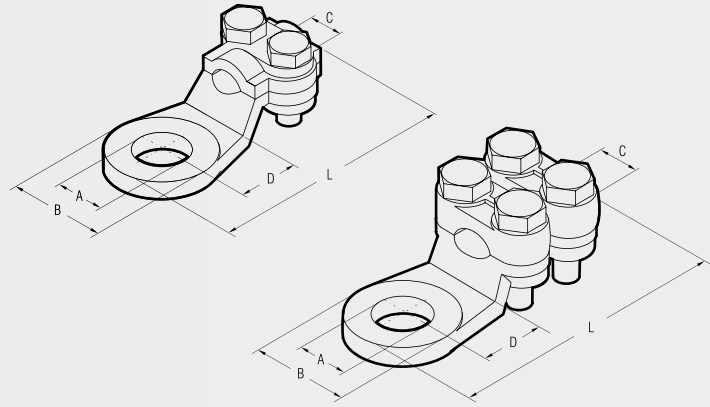


Example of joining two running conductors



Conductor Size sqmm	Ref.
25-25	C 35-C 16 ST
35-35	C 35-C 35 ST
50-50	C 70-C 70 ST
63-63	C 95-C 70 ST
70-70	
95-95	C 150-C 120 ST
120-120	
125-125	C 150-C 150
120-120	
125-125	C 185-C 95 ST

MECHANICAL FIXING LUGS



Material:
Brass CB754S EN 1982
Nickel plated.
Zinc plated Steel bolts.

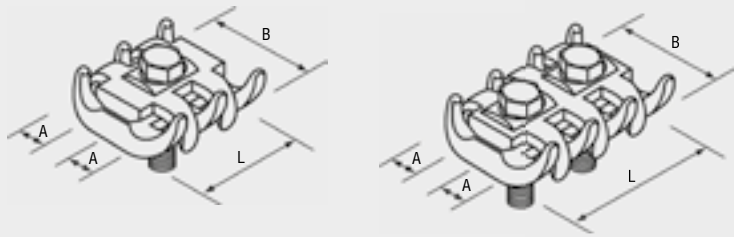
2 bolt fixing lugs

Conductor Size sqmm	Ref.	A bolt	Dimensions mm				Quantity
			B	C	D	L	
16	2155	M8	18,0	4,5	12,5	39	100
16	2171	M10	18,0	4,5	12,5	39	100
25	2156	M8	19,5	6,0	13,0	43	100
25	2172	M10	19,5	6,0	13,0	43	100
35	2157	M12	23,0	7,0	15,0	49	50
35	2173	M14	23,0	7,0	15,0	49	50
50	2174	M14	25,0	8,0	17,0	56	50

4 bolt fixing lugs

Conductor Size sqmm	Ref.	A bolt	Dimensions mm				Quantity
			B	C	D	L	
50	2158	M12	23,5	8	16,0	57	50
75	2160	M12	28,0	10	20,0	65	25
75	2176	M16	28,0	10	20,0	65	25
100	2161	M12	31,0	13	17,0	66	25
125	2162	M15	33,0	14	18,0	71	25
150	2163	M14	34,0	16	19,5	75	25
175	2164	M15	36,0	16	21,0	78	25

CABLE CLAMPS



Single bolt fixing

Conductor Size sqmm	Ref.	Ø A for cable mm	Dimensions mm		Quantity
			B	L	
6÷16	2323	3÷ 5	24	20	50
16÷50	2326	5÷ 8	30	25	50
35÷70	2329	7÷12	40	30	25

Material:
Brass CB754S EN 1982
Zinc plated Steel bolts.
Zinc plated Steel nut.

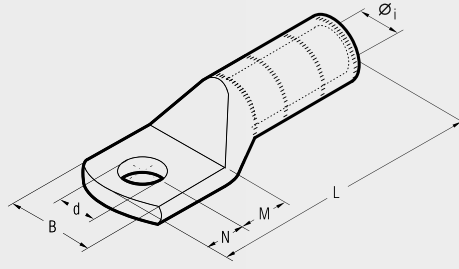
2 bolt fixing

Conductor Size sqmm	Ref.	Ø A for cable mm	Dimensions mm		Quantity
			B	L	
6÷16	2333	3÷ 5	27	32	50
16÷50	2336	5÷ 8	32	40	50
35÷70	2339	7÷12	40	44	25
50÷95	2342	8÷14	48	48	10
70÷150	2344	12÷16	51	53	10
150÷300	2346*	16÷22	66	66	5

* Stainless Steel bolts

HIGH VOLTAGE COPPER TERMINALS

CA-M 2A-M



Series CA-M and 2A-M terminals are designed for high voltage applications up to 33 kV.

They are manufactured from high purity copper tube, annealed and tin plated.

The extended barrel enhances both electrical and mechanical performance. The absence of an inspection hole prevents moisture entry into the crimped joint and makes these terminals suitable for outdoor applications.

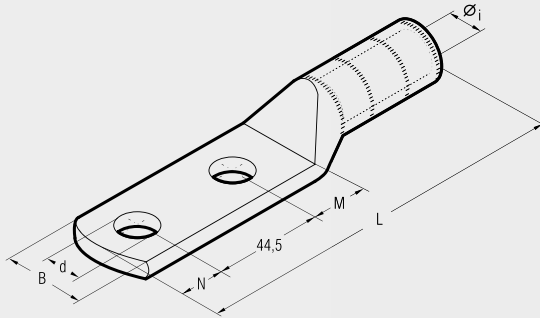
Details of the appropriate crimping tools and dies are shown on page 200.

Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Hydraulic Tools				
			Øi	B	M	N	L	d						
25 R	8	CA 25-M 8	6,8	14,0	9	8	65,0	8,4	300/50	B35-50MD	HT 51	RH 50	B 500	B 55
	10	CA 25-M 10	6,8	18,0	13	11	72,0	10,5	200/50					
	12	CA 25-M 12	6,8	21,0	16	14	78,0	13,2	200/50					
30 RC/S ÷ 40 S	12	CA 40 S-M 12	8,2	21,0	16	14	79,0	13,2	150/50					
	16	CA 40 S-M 16	8,2	26,0	19	17	85,0	17,0	100/50					
50 RC	12	CA 50 R-M 12	8,7	20,5	16	14	79,0	13,2	150/50					
	16	CA 50 S-M 16	9,5	21,0	16	14	79,0	13,2	150/50					
50 S	16	CA 50 S-M 16	9,5	26,0	19	17	85,0	17,0	100/50					
	12	CA 70 S-M 12	11,0	28,0	16	14	81,2	13,2	50/25					
63 S ÷ 70 S	16	CA 70 S-M 16	11,0	30,0	19	17	87,2	17,0	50/25					
	12	CA 95 R-M 12	12,0	28,0	16	14	91,0	13,2	50/25					
80 S ÷ 95 RC	14	CA 95 R-M 14	12,0	28,0	18	16	95,0	15,0	50/25					
	12	CA 95 S-M 12	13,5	28,0	16	14	91,0	13,2	50/25					
95 S ÷ 100 S	14	CA 95 S-M 14	13,5	29,0	18	16	94,5	15,0	50/25					
	16	CA 95 S-M 16	13,5	30,0	20	17	97,0	17,0	50/25					
	12	CA 150 R-M 12	15,0	31,0	16	14	97,0	13,2	30/15					
120 RC/S ÷ 150 RC	14	CA 150 R-M 14	15,0	31,0	18	16	101,0	15,0	30/15					
	12	CA 150 S-M 12	16,5	32,0	16	14	97,0	13,2	30/15					
150 S ÷ 160 RC	14	CA 150 S-M 14	16,5	32,0	18	16	101,0	15,0	30/15					
	160 S ÷ 200 RC	14	CA 200 R-M 14	17,0	32,5	18	16	101,0	15,0					
200 S ÷ 240 RC	14	CA 240 R-M 14	19,2	43,0	18	16	107,0	15,0	15/5					
	240 S ÷ 315 RC	14	CA 315 R-M 14	21,5	43,0	18	16	105,0	15,0					
315 S	14	CA 315 S-M 14	23,7	44,0	18	16	105,0	15,0	15/5					
	14	2 A 80-M 14	27,0	51,0	22	19	140,0	15,0	15/5					
400 R	16	2 A 80-M 16	27,0	51,0	22	19	140,0	17,0	15/5					
	20	2 A 80-M 20	27,0	51,0	24	23	146,0	21,0	15/5					
500 R	16	2 A 100-M 16	30,3	56,5	22	19	147,0	17,0	10/1					
	20	2 A 100-M 20	30,3	56,5	24	23	153,0	21,0	10/1					
600 R ÷ 630 R	16	2 A 120-M 16	33,4	61,5	22	19	159,0	17,0	20/1					
	20	2 A 120-M 20	33,4	61,5	24	23	165,0	21,0	20/1					

R = Round conductors RC = Round Compact conductors S = Sector shaped conductors

HIGH VOLTAGE TERMINALS

two hole fixing



CA-2M 2A-2M



Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Hydraulic Tools						
			Øi	B	M	N	L	d								
25 R	8	CA 25-2 M 8	6,8	14,0	10	11	113,5	8,4	200/50	B35-50MD	HT 51	RH 50	B 500			
	12	CA 25-2 M 12	6,8	21,0	16	14	122,5	13,2	150/50							
30 RC/S ÷ 40 S	12	CA 40 S-2 M 12	8,2	21,5	16	14	123,5	13,2	100/50					RHU 81		
50 RC	12	CA 50 R-2 M 12	8,7	20,5	16	14	123,5	13,2	100/50							
50 S	12	CA 50 S-2 M 12	9,5	21,0	16	14	123,5	13,2	100/50					HT 81-J		
63 S ÷ 70 S	12	CA 70 S-2 M 12	11,0	27,0	16	14	127,7	13,2	50/25							
80 S ÷ 95 RC	14	CA 95 R-2 M 14	12,0	28,0	18	16	139,5	15,0	30/15						HT 120 and tools and heads with 130 kN crimping force	
95 S ÷ 100 S	14	CA 95 S-2 M 14	13,5	29,0	18	16	139,5	15,0	30/15							
120 RC/S ÷ 150 RC	14	CA 150 R-2 M 14	15,0	31,0	18	16	145,5	15,0	30/15							ECM-H3D
150 S ÷ 160 RC	14	CA 150 S-2 M 14	16,5	32,0	18	16	145,5	15,0	30/15							
160 S ÷ 200 RC	14	CA 200 R-2 M 14	17,0	32,5	18	16	145,0	15,0	30/15							RHU 520
200 S ÷ 240 RC	14	CA 240 R-2 M 14	19,2	43,0	18	16	151,5	15,0	15/5							
240 S ÷ 315 RC	14	CA 315 R-2 M 14	21,5	43,0	18	16	149,5	15,0	20/5							HT 120 and tools and heads with 130 kN crimping force
315 S	14	CA 315 S-2 M 14	23,7	44,0	18	16	149,5	15,0	20/5							
400 R	12	2 A 80-2 M 12	27,0	51,0	20	14	177,5	13,2	15/5							
	14	2 A 80-2 M 14	27,0	51,0	22	16	181,5	15,0	15/5							
500 R	16	2 A 80-2 M 16	27,0	51,0	22	19	184,5	17,0	15/5							
	14	2 A 100-2 M 14	30,3	56,5	22	16	182,5	15,0	10/5							
600 R ÷ 630 R	16	2 A 100-2 M 16	30,3	56,5	22	19	185,5	17,0	10/5							
	14	2 A 120-2 M 14	33,4	61,5	22	16	200,5	15,0	15/5							
			16	2 A 120-2 M 16	33,4	61,5	22	19	202,5	17,0	15/5					

R = Round conductors RC = Round Compact conductors S = Sector shaped conductors

CA-2M and 2A-2M Copper Tube Terminal Lugs are designed for high voltage applications up to 33kV. Manufactured from high purity copper tube, annealed and tin-plated. The extended barrel enhances electrical and mechanical performance.

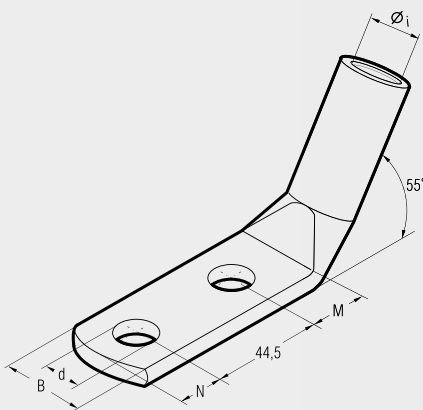
The absence of an inspection hole prevents moisture entry into the crimped joint.

Featuring an extended palm with two fixing holes at 44.5 mm centres.

Details of the appropriate crimping tools and dies are shown on page 200.

HIGH VOLTAGE TERMINALS

two hole fixing



2A-2M/55°



Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Hydraulic Tools		
			Øi	B	M	N	d					
400 R	14	2 A 80 - 2 M 14/55°	27,0	51,0	22	16	15	10/5	HT 120 and tools and heads with 130 kN crimping force	ECM-H3D	RHU 520	
600 R ÷ 630 R	14	2 A 120 - 2 M 14/55°	33,4	61,5	22	16	15	15/3				

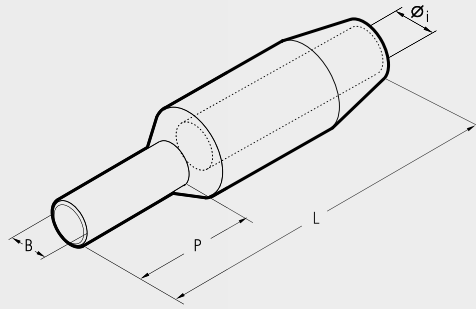
R = Round conductors

The 2A-2M/55° Copper Tube Terminal Lugs have the same characteristics as the CA-2M and 2A-2M ranges, with the additional feature of the palm bent at 55°.

Details of the appropriate crimping tools and dies are shown on page 200.

HIGH VOLTAGE STALK CONNECTORS

MT-C



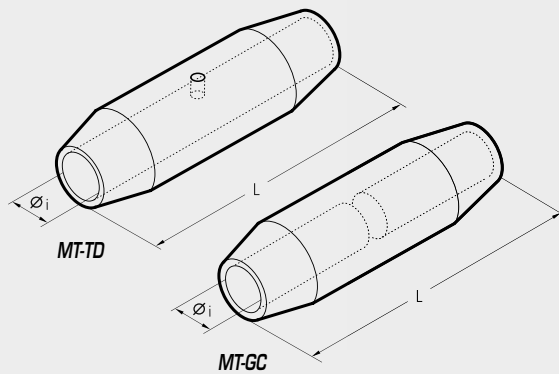
MT-C series connectors are designed for high voltage applications up to 33 kV. They are manufactured from high purity copper, annealed and tin plated. The extended barrel enhances both electrical and mechanical performance. The stalk or pin makes these connectors ideal for terminating conductors into contact blocks. Details of the appropriate crimping tools and dies are shown on page 200.

Conductor Size sqmm	Ref.	Dimensions mm				Quantity Box/Bag	Hydraulic Tools									
		Øi	B	P	L											
25 R	MT 25-C 8	6,8	8	35	80	90/3	B35-50MD	HT 51	RH 50	B 500	B 55	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
30 RC/S ÷ 40 S	MT 40 S-C 8	8,2	8	35	80	90/3										
	MT 40 S-C 10	8,2	10	35	80	90/3										
	MT 40 S-C 14-80	8,2	14	80	123	30/3										
50 RC	MT 50 R-C 8	8,8	8	35	80	90/3										
	MT 50 R-C 10	8,8	10	35	80	90/3										
	MT 50 S-C 8	9,5	8	35	80	90/3										
50 S	MT 50 S-C 10	9,5	10	35	80	90/3										
	MT 50 S-C 14-80	9,5	14	80	123	30/3										
	63 S ÷ 70 S	MT 70 S-C 10	11,2	10	35	90										
80 S ÷ 95 RC	MT 95 R-C 10	12,0	10	45	110	60/3										
	MT 95 R-C 12	12,0	12	45	110	60/3										
	MT 95 S-C 10	13,5	10	45	110	60/3										
95 S ÷ 100 S	MT 95 S-C 12	13,5	12	45	110	60/3										
	MT 95 S-C 14-80	13,5	14	80	145	60/3										
	120 RC/S ÷ 150 RC	MT 150 R-C 12	15,0	12	45	110										
150 S ÷ 160 RC	MT 150 R-C 16	15,0	16	45	110	30/3										
	MT 150 S-C 12	16,5	12	45	110	60/3										
	MT 150 S-C 14-80	16,5	14	80	145	45/3										
160 S ÷ 200 RC	MT 150 S-C 16	16,5	16	45	110	60/3										
	MT 200 R-C 10	17,0	10	45	110	30/3										
	MT 200 R-C 16	17,0	16	45	110	30/3										
200 S ÷ 240 RC	MT 240 R-C 12	19,5	12	50	115	30/3										
	MT 240 R-C 16	19,5	16	50	115	30/3										
	240 S ÷ 315 RC	MT 315 R-C 16	21,5	16	50	115	30/3									
315 S	MT 315 S-C 16	24,0	16	60	130	30/3										

R = Round conductors RC = Round Compact conductors S = Sector shaped conductors

HIGH VOLTAGE COPPER THROUGH CONNECTORS

MT-TD MT-GC



Conductor Size sqmm	Ref.	Ref.	Dimensions mm		Quantity Box/Bag	Hydraulic Tools				
			øi	L						
25 R	MT 25-TD	MT 25-GC	6,8	60	90/3	B35-S0M/D	RH 50	B 500	B 55	RHU 81
30 RC/S ÷ 40 S	MT 40 S-TD	MT 40 S-GC	8,2	60	90/3					
50 RC	MT 50 R-TD	MT 50 R-GC	8,7	60	90/3					
50 S	MT 50 S-TD	MT 50 S-GC	9,5	60	90/3					
63 S ÷ 70 S	MT 70 S-TD	MT 70 S-GC	11,0	70	30/3					
80 S ÷ 95 RC	MT 95 R-TD	MT 95 R-GC	12,0	80	30/3					
95 S ÷ 100 S	MT 95 S-TD	MT 95 S-GC	13,5	80	30/3					
120 RC/S ÷ 150 RC	MT 150 R-TD	MT 150 R-GC	15,0	80	30/3					
150 S ÷ 160 RC	MT 150 S-TD	MT 150 S-GC	16,5	80	30/3					
160 S ÷ 200 RC	MT 200 R-TD	MT 200 R-GC	17,0	100	30/3					
200 S ÷ 240 RC	MT 240 R-TD	MT 240 R-GC	19,2	100	30/3	HT 120 and tools and heads with 130 kN crimping force	ECM-H3D	RHU 520		
240 S ÷ 315 RC	MT 315 R-TD	MT 315 R-GC	21,5	100	30/3					
315 S	MT 315 S-TD	MT 315 S-GC	23,7	100	30/3					
400 R	MT 400-TD		27,0	120	15/3					
500 R	MT 500-TD		30,3	118	15/3					
600 R ÷ 630 R	MT 630-TD		33,4	130	9/3					

R = Round conductors RC = Round Compact conductors S = Sector shaped conductors

MT-TD and MT-GC series connectors are designed to join conductors in high voltage applications up to 33 kV.

They are manufactured from high purity copper, annealed and tin plated.

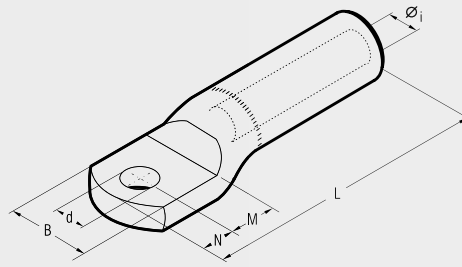
MT-GC series feature a solid stop which forms a barrier between the two conductors being joined, this prevents the migration of oils or greases, which may be present, in one cable contaminating the other cable.

MT-TD connectors are unblocked and are suitable for joining cables of the same type.

Details of the appropriate crimping tools and dies are shown on page 200.

ALUMINIUM TERMINALS

AA-M



AA-M series terminals are made from Aluminium of a purity equal to or greater than 99,5%.

They are designed to accept a variety of conductor forms especially low stranded compacted conductors.

Non circular conductors may require pre-rounding prior to introduction to the terminal.

Barrels are capped and filled with grease so as to avoid oxidation of the Aluminium.

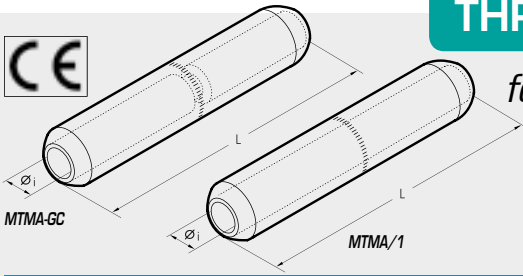
Details of the appropriate crimping tools and dies are shown on page 201.

Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Hydraulic Tools	
			Øi	B	M	N	L	d			
16	8	AA 16-M 8	5,5	21	13	11	77,0	8,4	60/3	HT 131-UC RHU 131-C B 1300-UC	
25	8	AA 25-M 8	6,5	21	13	11	77,0	8,4	60/3		
35	8	AA 35-M 8	8,0	23	13	11	77,5	8,4	60/3		
	10	AA 35-M 10	8,0	23	13	11	77,5	10,5	60/3		
50	12	AA 50-M 12	9,0	26	16	14	91,0	13,2	60/3		
	14	AA 50-M 14	9,0	26	18	16	95,0	15,0	60/3		
70	12	AA 70-M 12	11,0	27	16	14	91,0	13,2	45/3		
	14	AA 70-M 14	11,0	27	18	16	95,0	15,0	45/3		
95	12	AA 95-M 12	12,5	27	16	14	91,0	13,2	45/3		
	14	AA 95-M 14	12,5	27	18	16	95,0	15,0	45/3		
120	12	AA 120-M 12	13,7	35	16	14	115,0	13,2	30/3		
	14	AA 120-M 14	13,7	35	18	16	119,0	15,0	30/3		
150	12	AA 150-M 12	15,5	34	16	14	115,0	13,2	30/3		
	14	AA 150-M 14	15,5	34	18	16	119,0	15,0	30/3		
185	12	AA 185-M 12	17,0	42	20	14	122,0	13,2	18/3		
	14	AA 185-M 14	17,0	42	22	16	126,0	15,0	18/3		
240	12	AA 240-M 12	19,5	44	20	14	122,0	13,2	15/3		
	14	AA 240-M 14	19,5	44	22	16	126,0	15,0	15/3		
300	12	AA 300-34 M 12	22,5	47	22	14	130,0	13,2	15/3	HT120 HT131-C RHC 131	ECW-H3D
	14	AA 300-34 M 14	22,5	47	22	16	132,0	15,0	15/3		
	16	AA 300-34 M 16	22,5	47	22	17	133,0	17,0	15/3		
400	16	AA 300-M 16	23,3	54	19	17	172,0	17,0	12/3	RHU 230-630	
500	16	AA 400-M 16	26,0	56	19	17	172,0	17,0	12/3		
500	16	AA 500-40 M 16	29,1	57	22	19	177,0	17,0	12/3		
630	16	AA 630-M 16	32,5	70	22	19	177,0	17,0	9/3		



THROUGH CONNECTORS

for Aluminium conductors



MTMA-GC MTMA/1

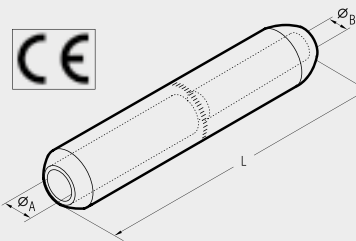


Conductor Size sqmm	Ref.	Ref.	Dimensions mm		Quantity Box/Bag	Hydraulic Tools	
			Øi	L			
10	MTMA 10-GC		4,3	90,5	60/3	HT 1311JC RHU 131-C B 1300-JC	
16	MTMA 16-GC	MTMA 16/1	5,5	90,5	60/3		
25	MTMA 25-GC	MTMA 25/1	6,5	90,5	60/3		
35	MTMA 35-GC	MTMA 35/1	8,0	90,5	60/3		
	MTMA 35-20-GC		8,0	106,5	30/3		
50	MTMA 50-GC	MTMA 50/1	9,0	106,5	30/3		
70	MTMA 70-GC	MTMA 70/1	11,0	106,5	30/3		
95	MTMA 95-GC		12,5	110,0	30/3		
		MTMA 95/1	12,5	106,5	30/3		
120	MTMA 120-GC	MTMA 120/1	13,7	133,0	30/3		
150	MTMA 150-GC		15,5	135,0	30/3		
		MTMA 150/1	15,5	133,5	30/3		
185	MTMA 185-GC	MTMA 185/1	17,0	143,5	15/3		
240	MTMA 240-GC	MTMA 240/1	19,5	143,5	15/3		
300	MTMAD 300-GC		22,5	144,5	15/3		
		MTMAD 300/1	22,5	135,0	15/3	HT120 HT131-C RHC 131	
	MTMA 300-GC		23,3	218,0	15/3	ECW-H3D	
400		MTMA 400/1	26,0	218,0	15/3		
500	MTMA 500-GC		29,1	218,5	15/3	RHU 230-630	
500		MTMA 500-40/1	29,1	218,0	12/3		
630		MTMA 630/1	32,5	218,5	12/3		

MTMA-GC series through connectors are made from Aluminium of a purity equal to or greater than 99,5%. They feature a solid stop which creates a barrier between the two sides of conductors to be joined. Barrels are capped and filled with grease so as to avoid oxidation of the connector. MTMA/1 series through connectors are unblocked and are suitable for joining cables of the same type. Details of the appropriate crimping tools and dies are shown on pages 202-203.

REDUCER THROUGH CONNECTORS

for Aluminium or copper conductors



MTMA-GC



Conductor Size sqmm		Ref.	Dimensions mm			Quantity Box/Bag	Hydraulic Tools	
Side A Al	Side B Al/Cu		ØA	ØB	L			
16	10	MTMA 16-10-GC	5,5	4,3	90,5	60/3	HT 1311JC RHU 131-C B 1300-JC	
25	10	MTMA 25-10-GC	6,5	4,3	90,5	60/3		
	16	MTMA 25-16-GC	6,5	5,5	90,5	60/3		
50	25	MTMA 50-25-GC	9,0	6,5	106,5	30/3		
	35	MTMA 50-35-GC	9,0	8,0	106,5	30/3		
70	35	MTMA 70-35-GC	11,0	8,0	106,5	30/3		
	50	MTMA 70-50-GC	11,0	9,0	106,5	30/3		
95	50	MTMA 95-50-GC	12,5	9,0	109,4	30/3		
	70	MTMA 95-70-GC	12,5	11,0	106,5	30/3		
120	70	MTMA 120-70-GC	13,7	11,0	133,0	30/3		
	95	MTMA 120-95-GC	13,7	12,5	133,0	30/3		
150	70	MTMA 150-70-GC	15,5	11,0	133,0	30/3		
	95	MTMA 150-95-GC	15,5	12,5	134,4	30/3		
185	120	MTMA 150-120-GC	15,5	13,7	133,0	30/3		
	150	MTMA 185-120-GC	17,0	13,7	143,5	15/3		
240	150	MTMA 185-150-GC	17,0	15,5	143,5	15/3		
	185	MTMA 240-150-GC	19,5	15,5	143,5	15/3		
300	185	MTMA 240-185-GC	19,5	17,0	143,5	15/3		
	95	MTMAD 300-95-GC	22,5	12,5	144,5	15/3		
400	150	MTMAD 300-150-GC	22,5	15,5	144,5	15/3	HT120 HT131-C RHC 131	
	185	MTMAD 300-185-GC	22,5	17,0	144,5	15/3	ECW-H3D	
500	240	MTMAD 300-240-GC	22,5	19,5	144,5	15/3		
	240	MTMA 400-240-GC	26,0	19,5	218,0	15/3	RHU 230-630	
300	MTMA 400-300-GC	26,0	23,3	218,0	15/3			
500	300	MTMA 500-300-GC	29,1	23,3	218,5	12/3		
	400	MTMA 500-400-GC	29,1	26,0	218,5	12/3		

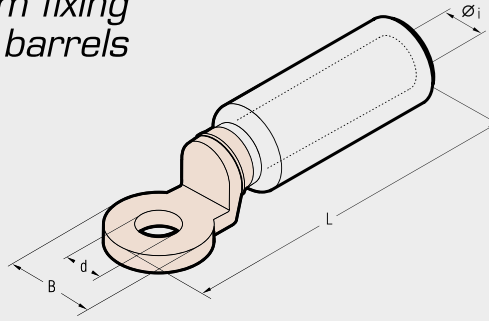
MTMA-GC series reducer through connectors are manufactured to the same specification as MTMA-GC series through connectors. Details of the appropriate crimping tools and dies are shown on pages 202-203.

CAA-M



BIMETALLIC CONNECTORS

*copper palm fixing
Aluminium barrels*



The barrels of series CAA-M connectors are made from Aluminium of a purity equal to or greater than 99,5%. The barrel is friction welded to the palm thus achieving the best possible transition between the copper palm and Aluminium barrel. Barrels are capped and filled with grease so as to avoid oxidation of the Aluminium.

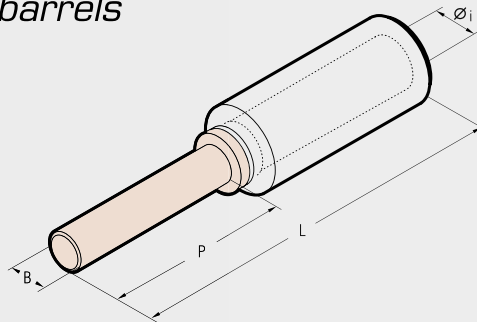
Details of the appropriate crimping tools and dies are shown on pages 201, 203.

Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm				Quantity Box/Bag	Hydraulic Tools	
			Øi	B	L	d			
10	12	CAA 10-M 12	4,3	24	87,0	13,0	90/3	HT 131-UC RHU 131-C B 1300-UC	
16	12	CAA 16-M 12	5,5	24	87,0	13,0	90/3		
25	12	CAA 25-M 12	6,5	24	87,0	13,0	90/3		
35	12	CAA 35-M 12	8,0	24	87,0	13,0	90/3		
	12	CAA 35-20-M 12	8,0	24	87,0	13,0	60/3		
50	12	CAA 50-M 12	9,0	24	87,0	13,0	60/3		
70	12	CAA 70-M 12	11,0	24	87,0	13,0	60/3		
95	12	CAA 95-M 12	12,5	24	87,0	13,0	60/3		
120	12	CAA 120-M 12	13,7	31	111,0	13,0	30/3		
150	12	CAA 150-M 12	15,5	31	111,0	13,0	30/3		
185	12	CAA 185-M 12	17,0	35	116,0	13,0	24/3		
240	12	CAA 240-M 12	19,5	35	116,0	13,0	18/3		
300	12	CAA 300-34 M 12	22,5	35	120,0	13,0	15/3		
	16	CAA 300-34 M 16	22,5	35	120,0	17,0	15/3		
400	16	CAA 300-M 16	23,3	35	152,5	16,5	12/3		
	16	CAA 400-M 16	26,0	35	152,5	16,5	12/3		
500	16	CAA 500-M 16 TNBD	29,1	35	152,5	16,5	12/3		
630	8	CAA 630-4 M 8	32,5	60	192,0	4 x 9,0*	9/3		

* 4 holes with 30 mm between axes

BIMETALLIC CONNECTORS

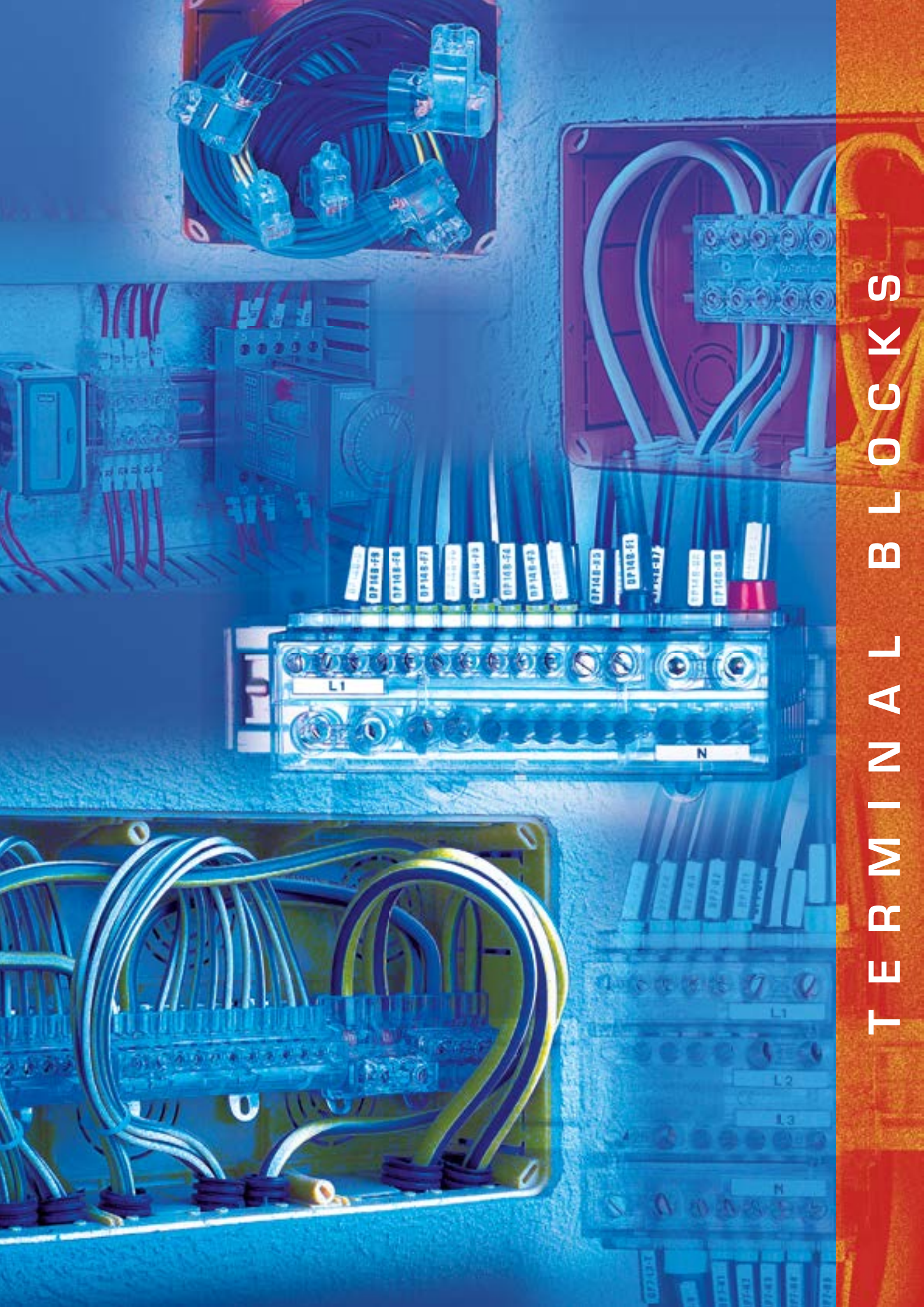
*copper pin
Aluminium barrels*



The barrels of series MTA-C connectors are made from Aluminium of a purity equal to or greater than 99,5%. The barrel is friction welded to the pin thus achieving the best possible transition between the copper pin and Aluminium barrel. Barrels are capped and filled with grease so as to avoid oxidation of the Aluminium.

Details of the appropriate crimping tools and dies are shown on pages 201, 203.

Conductor Size sqmm	Ref.	Dimensions mm				Quantity Box/Bag	Hydraulic Tools	
		Øi	B	P	L			
16	MTA 16-C	5,5	8	30	82	90/3	HT 131-UC RHU 131-C B 1300-UC	
25	MTA 25-C	6,5	8	30	82	90/3		
35	MTA 35-C	8,0	8	30	82	90/3		
50	MTA 50-C	9,0	12	45	97	60/3		
70	MTA 70-C	11,0	12	45	97	60/3		
95	MTA 95-C	12,5	12	45	97	60/3		
120	MTA 120-C	13,7	14	55	125	30/3		
150	MTA 150-C	15,5	14	55	125	30/3		
185	MTA 185-C	17,0	14	55	125	24/3		
240	MTA 240-C	19,5	14	55	125	24/3		



TERMINAL BLOCKS

Z6

SINGLE POLE TERMINAL BLOCKS

indirect clamping
nominal section 6 sqmm



The "Z...D" version has been designed for mounting on DIN rails



3, 5, 6 and 10 way, single pole terminal blocks for conductor section 1 to 6 sqmm. Self contained and robust, they are quick and easy to install for both industrial and domestic use. The indirect clamping of the "ZETA più" terminal blocks guarantees a low and stable contact resistance. Indirect clamping eliminates damage to the conductor strands. The easy-entry receptacles also grant a fast and reliable insertion of the cable.

Ref.	No. of Ways	Connecting Capacity sqmm	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
Z6-3	3	(3 way) 1÷6	450	85	IP 20	V-0 (UL 94)	23x23xh27,5	15	30
Z6-3D							23x40xh36,5	18,5	10
Z6-5	5	(5 way) 1÷6	450	85	IP 20	V-0 (UL 94)	35x23xh27,5	23	20
Z6-5D							35x40xh36,5	26,5	10
Z6-6	6	(6 way) 1÷6	450	85	IP 20	V-0 (UL 94)	23x43xh28,5	26	15
Z6-6D							23x53xh33	31	10
Z6-10	10	(10 way) 1÷6	450	85	IP 20	V-0 (UL 94)	35x43xh28,5	41	10
Z6-10D							35x53xh33	46	15

D= Version with clamp for DIN rail

- Technical features:**
- Self-extinguishing Polycarbonate body
 - Tempered Steel clamps
 - Electrolytically tin plated copper interconnections

Z16

SINGLE POLE TERMINAL BLOCKS

indirect clamping
nominal section 16 sqmm



3, 4, 5, 8 and 12 way, single pole terminal blocks. Ideal for use as an equipotential bonding connector for both industrial and domestic use.

Ref.	No. of Ways	Connecting Capacity sqmm	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
Z16-3	3	16	450	85	IP 20	V-0 (UL 94)	38x31,3xh38	52	20
Z16-3D							38x50xh44	55,5	15
Z16-4	4	16	450	85	IP 20	V-0 (UL 94)	27x54xh37	50	15
Z16-4D							27x58xh43	54	10
Z16-5N	5	16	450	85	IP 20	V-0 (UL 94)	61x31,5xh38	64,5	10
Z16-5ND							61x50xh44	68	4
Z16-8	8	(2 way) 16 + (6 way) 6	450	85	IP 20	V-0 (UL 94)	35,5x50xh36,5	50	15
Z16-8D							35,5x57xh42	56	10
Z16-12	12	(2 way) 16 + (10 way) 6	450	85	IP 20	V-0 (UL 94)	104,5x32,5xh36,5	115	8
Z16-12D							104,5x50xh42	125	5

D= Version with clamp for DIN rail



SINGLE POLE TERMINAL BLOCKS

indirect clamping
nominal section 35 sqmm

Z35



Z35-3



Z35-4



Z35-6

Ref.	No. of Ways	Connecting Capacity sqmm	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
Z35-3	3	35	450	85	IP 20	V-0 (UL 94)	53x48,5xh42	110	10
Z35-3D							53x50xh48	114	5
Z35-4	4	35	450	85	IP 20	V-0 (UL 94)	37x85xh42	129	5
Z35-4D							37x85xh48	133	5
Z35-6	6	(2 way) 35 +	450	85	IP 20	V-0 (UL 94)	83x41xh43	130	8
Z35-6D	(2+4)	(4 way) 16					83x49xh52	140	5

D= Version with clamp for DIN rail

3, 4 and 6 way, single pole terminal blocks. Ideal for use as an equipotential bonding connector for both industrial and domestic use.



SINGLE POLE TERMINAL BLOCKS

indirect clamping
for earthing applications

Z35 Z50



Z50-10D



Z35T-11
Z35T-11D



Z35-26D















Ref.	No. of Ways	Connecting Capacity sqmm	Maximum Operating Temperature °C	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
Z35T-11	11	(1 way) 35 +	85	V-0 (UL 94)	58x43xh42	70	10
Z35T-11D	(1+10)	(10 way) 6			58x53xh47	75	
Z35-26D	26	(2 way) 35 +	85	V-0 (UL 94)	151x52xh48	379	4
	(2+24)	(24 way) 10					
Z50-10D	10	(2 way) 50 +	85	V-0 (UL 94)	77,5x55xh49	320	6
	(2+8)	(8 way) 25					

D= Version with clamp for DIN rail

10, 11 and 26 way, single pole terminal blocks. Ideal for use as an equipotential bonding connector for both industrial and domestic use.

CONNECTING CAPACITY OF TERMINAL BLOCKS

TERMINAL BLOCKS TYPE "ZETA più"






TYPE		NOMINAL SECTION	No. OF WAYS X NOMINAL SECTION	CONNECTING CAPACITY OF EACH WAY* No. of Conductors x Section	MARKINGS
Z6-3	Z6-3D	6 ²	3 x 6 ²	1 x 6 ² R/F	   
Z6-5	Z6-5D	6 ²	5 x 6 ²	1 x 4 ² R/F	
Z6-6	Z6-6D	6 ²	6 x 6 ²	1÷2 x 2,5 ² R/F	
Z6-10	Z6-10D	6 ²	10 x 6 ²	1÷2 x 1,5 ² R/F 1÷4 x 1 ² R/F	
Z16-3	Z16-3D	16 ²	3 x 16 ²	1 x 16 ² R/F 1 x 10 ² R/F 1÷2 x 6 ² R/F 1÷3 x 4 ² R/F 1÷4 x 2,5 ² R/F 1÷8 x 1,5 ² R/F	   
Z16-4	Z16-4D	16 ²	4 x 16 ²	1 x 16 ² F 1 x 10 ² F 1÷2 x 6 ² F 1÷3 x 4 ² F 1÷4 x 2,5 ² F 1÷8 x 1,5 ² F	
Z16-5N	Z16-5ND	16 ²	5 x 16 ²	1 x 16 ² R/F 1 x 10 ² R/F 1÷2 x 6 ² R/F 1÷3 x 4 ² R/F 1÷4 x 2,5 ² R/F 1÷8 x 1,5 ² R/F	 
Z16-8	Z16-8D	16 ² /6 ²	2 x 16 ²	1 x 16 ² R/F 1 x 10 ² R/F 1÷2 x 6 ² R/F 1÷3 x 4 ² R/F 1÷4 x 2,5 ² R/F 1÷8 x 1,5 ² R/F	
Z16-8	Z16-8D	16 ² /6 ²	6 x 6 ²	1 x 6 ² R/F 1 x 4 ² R/F 1÷2 x 2,5 ² R/F 1÷2 x 1,5 ² R/F 1÷4 x 1 ² R/F	 
Z16-12	Z16-12D	16 ² /6 ²	2 x 16 ²	1 x 16 ² F 1 x 10 ² F 1÷2 x 6 ² F 1÷3 x 4 ² F 1÷4 x 2,5 ² F	
Z16-12	Z16-12D	16 ² /6 ²	10 x 6 ²	1 x 6 ² F 1 x 4 ² F 1÷2 x 2,5 ² F 1÷2 x 1,5 ² F 1÷4 x 1 ² F	 

*A mixture of conductor sizes may be connected to the terminal block provided that the sum of their sections is less than the nominal section.

R = Rigid conductor F = Flexible conductor

CONNECTING CAPACITY OF TERMINAL BLOCKS

TERMINAL BLOCKS TYPE "ZETA più"

TYPE	NOMINAL SECTION	No. OF WAYS X NOMINAL SECTION	CONNECTING CAPACITY OF EACH WAY* No. of Conductors x Section	MARKINGS
Z35-3 Z35-3D	35 ²	3 x 35 ²	1 x 35 ² R/F 1 x 25 ² R/F 1÷2 x 16 ² R/F 1÷3 x 10 ² R/F 1÷5 x 6 ² R/F	CE 
Z35-4 Z35-4D	35 ²	4 x 35 ²	1 x 35 ² F 1 x 25 ² F 1÷2 x 16 ² F 1÷3 x 10 ² F 1÷6 x 6 ² F	CE 
Z35-6 Z35-6D	35 ² /16 ²	2 x 35 ²	1 x 35 ² R/F 1 x 25 ² R/F 1÷2 x 16 ² R/F 1÷3 x 10 ² R/F 1÷6 x 6 ² F	CE   
		4 x 16 ²	1 x 16 ² R/F 1 x 10 ² R/F 1÷2 x 6 ² R/F 1÷3 x 4 ² R/F 1÷5 x 2,5 ² F	
Z35T-11 Z35T-11D	35 ² /6 ²	1 x 35 ²	1 x 35 ² R/F 1 x 25 ² R/F 1 x 16 ² R/F 1 x 10 ² R/F	CE 
		10 x 6 ²	1 x 6 ² R/F 1 x 4 ² R/F 1÷2 x 2,5 ² R/F 1÷2 x 1,5 ² R/F 1÷4 x 1 ² R/F	
Z35-26D	35 ² /10 ²	2 x 35 ²	1 x 35 ² R/F 1 x 25 ² R/F 1÷2 x 16 ² R/F 1÷3 x 10 ² R/F 1÷6 x 6 ² R/F	CE   
		24 x 10 ²	1 x 10 ² R/F 1 x 6 ² R/F 1÷2 x 4 ² R/F 1÷4 x 2,5 ² R/F	
Z50-10D	50 ² /25 ²	2 x 50 ²	1 x 50 ² R/F 1 x 35 ² R/F 1÷2 x 25 ² R/F 1÷4 x 16 ² R/F	CE ** 
		8 x 25 ²	1 x 25 ² R/F 1÷2 x 16 ² R/F 1÷3 x 10 ² R/F 1÷6 x 6 ² R/F 1÷9 x 4 ² R/F	

*A mixture of conductor sizes may be connected to the terminal block provided that the sum of their sections is less than the nominal section.

R = Rigid conductor F = Flexible conductor

MARKINGS:



Istituto italiano del Marchio di Qualità type approval



Lloyd's Register of Shipping type approval



Registro Italiano Navale type approval

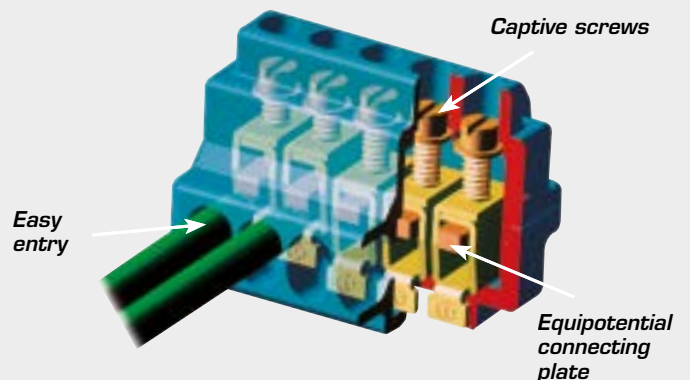


** EN 60947-7-1: 2002

CONFORM TO:

Directives 2006/95/CE

EN 60998-1: 2004 and
EN 60998-2-1: 2004 Norms



Z-DP

POWER DISTRIBUTION BLOCK

indirect clamping

type
ZETAblock®

FOUR POLE
100 A

TWO POLE
125 A

FOUR POLE
125 A

FOUR POLE
160 A



Z 25-DP7-100



Z 35-DP14B-125



Z 35-DP14-125



Z 50-DP12-160

100, 125 and 160A, 2-4 pole distribution blocks with 7, 14 and 12 ways per pole respectively.

Accepting a wide cable CSA range (1 - 50 sqmm) and of compact size, ZETA blocks are ideal for control cabinets and distribution panels.

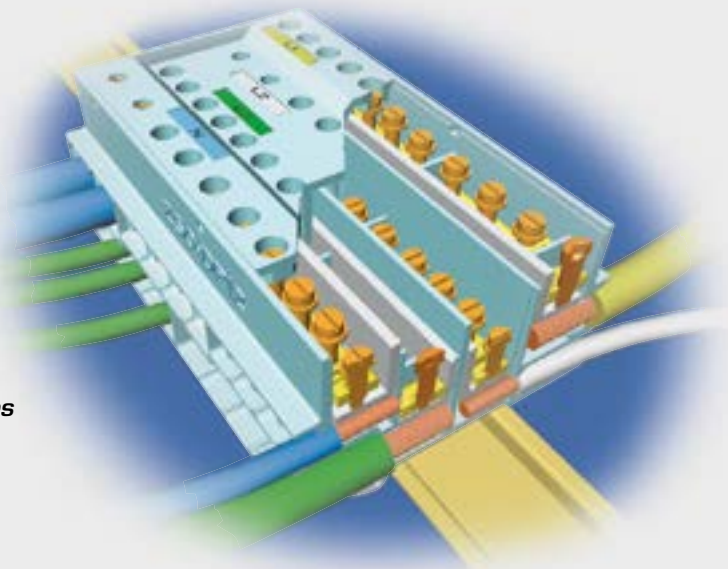
The lateral arrangement of terminals on upper and lower faces (Z35-DP14B one face only), simplifies connection and promotes tidy, homogeneous cable routing to assist subsequent wiring operations.

Easy entry apertures provide quick, effective cable insertion while the indirect clamping feature eliminates damage to cable strands and assures a low, stable contact resistance.

Ref.	No. of poles	No. of Ways per pole	Nominal CSA for each pole sqmm	Maximum operating voltage U _i	Impulse voltage U _{imp}	Maximum operating current I _n	Allowable short duration fault current I _{scw}	Maximum allowed peak fault current I _{pk}	Self Extinguishing Specification	Dimensions mm	Weight g	Qty
Z 25-DP7-100	4	7 (2+5)	(2 way) 25 + (5 way) 6	800 V	8 kV	100 A	3 kA	18 kA	V-0 (UL 94)	70x84xh45	290	2
Z 35-DP14-125	4	14 (2+2+10)	(2 way) 35 + (2 way) 16 + (10 way) 6	800 V	8 kV	125 A	4,2 kA	18 kA	V-0 (UL 94)	137x83xh46	700	1
Z 35-DP14B-125	2	14 (2+2+10)	(2 way) 35 + (2 way) 16 + (10 way) 6	800 V	8 kV	125 A	4,2 kA	18 kA	V-0 (UL 94)	137x44xh46	360	2
Z 50-DP12-160	4	12 (2+4+6)	(2 way) 50 + (4 way) 25 + (6 way) 16	800 V	8 kV	160 A	6 kA	18 kA	V-0 (UL 94)	150x84xh48	780	1

Technical features:

- Self extinguishing antishock Polycarbonate body
- Tempered Steel captive clamping screws and plates
- Electrolytically tin plated copper interconnectors



type
ZETAblock®

POWER DISTRIBUTION BLOCK







indirect clamping

Z-DP



CONNECTING CAPACITY OF POWER DISTRIBUTION BLOCK

POWER DISTRIBUTION BLOCK TYPE "ZETAblock"

TYPE	NOMINAL SECTION	No. OF WAYS x NOMINAL SECTION	CONNECTING CAPACITY OF EACH WAY No. of Conductors x Section	MARKINGS
Z25-DP7-100	25 ² /6 ²	2 x 25 ²	1 x 25 ² F 1 x 16 ² F 1÷2 x 10 ² F	  25-6 apmm
		5 x 6 ²	1 x 6 ² F 1 x 4 ² F 1÷2 x 2,5 ² F 1÷2 x 1,5 ² F 1÷4 x 1 ² F	
Z35-DP14-125 Z35-DP14B-125	35 ² /16 ² /6 ²	2 x 35 ²	1 x 35 ² F 1 x 25 ² F 1÷2 x 16 ² F 1÷3 x 10 ² F	  25-16-6 apmm
		2 x 16 ²	1 x 16 ² F 1 x 10 ² F 1÷2 x 6 ² F 1÷3 x 4 ² F 1÷4 x 2,5 ² F	
		10 x 6 ²	1 x 6 ² F 1 x 4 ² F 1÷2 x 2,5 ² F 1÷2 x 1,5 ² F 1÷4 x 1 ² F	
Z50-DP12-160	50 ² /25 ² /16 ²	2 x 50 ²	1 x 50 ² F 1 x 35 ² F 1÷2 x 25 ² F	  50-25-16 apmm
		4 x 25 ²	1 x 25 ² F 1 x 16 ² F 1÷2 x 10 ² F	
		6 x 16 ²	1 x 16 ² F 1 x 10 ² F 1÷2 x 6 ² F	

F = Flexible conductor

MARKINGS:



Istituto italiano del Marchio
di Qualità type approval

CONFORM TO:

Directives 2006/95/CE

EN 60947-7-1: 2002 Norms

ONE WAY TERMINAL BLOCKS



Z-1

indirect clamping

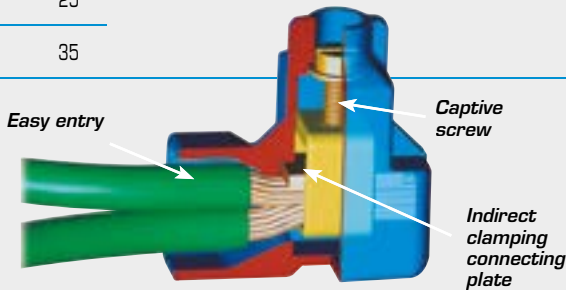


Ref.	Connecting Capacity sqmm	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity Box/Bag
Z2.5-1	2,5	450	85	IP 20	V-0 (UL 94)	7,6x20xh23,5	3	500/25
Z6-1	6					11,5x28xh29	6	250/25
Z10-1	10					15,6x32xh32,5	11	100/10
Z16-1	16					18x34xh38	15	100/10
Z25-1	25					20,8x42,5xh43,5	29	50/10
Z35-1	35					25x45xh51,5	37	40/10

One way, single pole terminal blocks for conductors sections from 0.5 to 35 sqmm. Self contained and robust, they are ideal for the fast and safe installation for industrial and domestic applications.

The indirect clamping of the "ZETAmini" terminal blocks guarantees a low and stable contact resistance.

The easy-entry receptacle also grants a fast and reliable insertion of the cable.



Technical features:

- Self-extinguishing Polycarbonate body
- Electrolytically Zinc plated, tempered Steel clamp and screw

- Electrolytically tin plated Steel connection plate

CONNECTING CAPACITY OF TERMINAL BLOCKS

TYPE	NOMINAL SECTION	CONNECTING CAPACITY *		MARKINGS
		No. of Conductors x Section		
Z2.5-1	2,5 ²	2 x 2,5 ² R/F 2 ÷ 3 x 1,5 ² R/F 2 ÷ 5 x 1,0 ² R/F	2 ÷ 6 x 0,75 ² R/F 2 ÷ 10 x 0,5 ² R/F 2 ÷ 18 x Ø0,4 ÷ 0,6 mm communication type wire	CE, Lloyd's Register, Registro Italiano Navale, IEC, UL, T 85°C P 20
Z6-1	6 ²	2 x 6 ² R/F 2 ÷ 3 x 4 ² R/F 2 ÷ 4 x 2,5 ² R/F 2 ÷ 6 x 1,5 ² R/F 2 ÷ 6 x 1 ² R/F	2 ÷ 10 x 0,75 ² R/F 2 ÷ 12 x 0,5 ² R/F (1 x 6 ²) + (4 x 1,5 ²) (1 x 6 ²) + (2 x 2,5 ²)	CE, Lloyd's Register, Registro Italiano Navale, IEC, UL, T 85°C P 20
Z10-1	10 ²	2 x 10 ² R/F 2 ÷ 3 x 6 ² R/F 2 ÷ 5 x 4 ² R/F 2 ÷ 8 x 2,5 ² R/F (1 x 6 ²) + (1 x 4 ²) + (2 x 2,5 ²) + (3 x 1,5 ²)	2 ÷ 12 x 1,5 ² R/F 2 ÷ 20 x 1 ² R/F 2 ÷ 25 x 0,75 ² R/F	CE, Lloyd's Register, Registro Italiano Navale, IEC, UL, T 85°C P 20
Z16-1	16 ²	2 x 16 ² R/F 2 ÷ 3 x 10 ² R/F 2 ÷ 5 x 6 ² R/F	2 ÷ 8 x 4 ² R/F 2 ÷ 12 x 2,5 ² R/F 2 ÷ 18 x 1,5 ² R/F	CE, Lloyd's Register, Registro Italiano Navale, IEC, UL, T 85°C P 20
Z25-1	25 ²	2 x 25 ² R/F 2 ÷ 3 x 16 ² R/F 2 ÷ 4 x 10 ² R/F	2 ÷ 8 x 6 ² R/F 2 ÷ 11 x 4 ² R/F 4 ÷ 16 x 2,5 ² R/F	CE, Lloyd's Register, Registro Italiano Navale, IEC, UL, T 85°C P 20
Z35-1	35 ²	2 x 35 ² R/F 2 ÷ 3 x 25 ² R/F 2 ÷ 4 x 16 ² R/F 2 ÷ 7 x 10 ² R/F	2 ÷ 11 x 6 ² R/F 4 ÷ 17 x 4 ² R/F 5 ÷ 28 x 2,5 ² R/F	CE, Lloyd's Register, Registro Italiano Navale, IEC, UL, T 85°C P 20

*A mixture of conductor sizes may be connected to the terminal block provided that the sum of their sections is less than twice the nominal section.

R = Rigid conductor

F = Flexible conductor

MARKINGS:

Lloyd's Register of Shipping type approval

Registro Italiano Navale type approval



Istituto italiano del Marchio di Qualità type approval

CONFORM TO:

Directives 2006/95/CE

EN 60998-1: 2004 and EN 60998-2-1: 2004 Norms

CS4 CONNECTORS

for PV conductors

CS4



New



Certificate No R60040256



CS411 - CS412
FREE version



CS420
FIXED version



CS4 range

Ref.	Description	Flexible Conductor Size sqmm	Cable External Ø mm	Quantity Box/Bag
CS411	free connector set	2,5 - 4 - 6	4,4 ÷ 5,8	100/10
CS412	free connector set	2,5 - 4 - 6	5,8 ÷ 7,2	100/10
CS420	fixed connector set	2,5 - 4 - 6	4,4 ÷ 7,2	100/10

CS4 connectors are ideal for the connection of copper conductors in photovoltaic installations. Recommended crimping tools are shown on pages 105, 110, 111, 154.

accessories

Ref.	Description	Quantity Box/Bag
CS4 KEY	Disconnection tool - for easy working on inverters and string boxes	100/10
CS4 MFC	Sealing cap for male and female connector	1.000/100
CS4 GR	Rear gasket for fixed connectors	1.000/100

Technical features:

rated voltage	1000 VDC
rated impulse voltage	8 kV
rated insulation voltage	4 kV
rated input current	30 A
reference standard	EN 50521:2008
application class	Class A
protection class	Class II
pollution class	3
over voltage category	III
lower ambient temperature	-40 °C
upper ambient temperature	+85 °C
upper temperature limit	105 °C
type of conductor	Flexible
termination type	Crimped
cable clamp type	Ø min. 4,4 ± 0,2 mm Ø max. 7,2 ± 0,2 mm
number of poles	1
conductor size	2,5 - 4,0 and 6,0 mm ²
degree of protection	IP 67
rewirable	no
cable nut tightening torque	1,5 Nm

CS4 MFC



CS4 GR



CS4 KEY



CS4



CS4 CONNECTORS

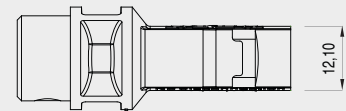
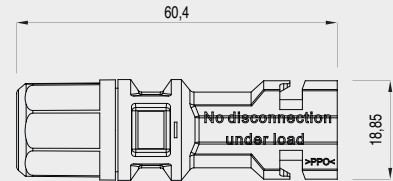
for PV conductors

free connector male

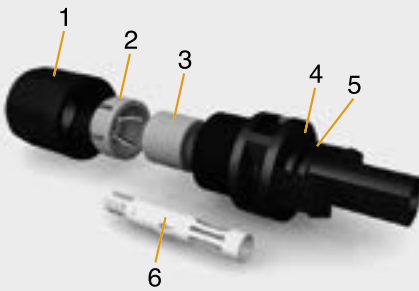


Ref.	Flexible Cond. Size sqmm	Cable External Ø mm
CS411M	2,5 - 4 - 6	4,4 ÷ 5,8
CS412M		5,8 ÷ 7,2

Part	Description
1	Threaded locking ring (PPO)
2	Strain relief (Acetal Resin)
3	Grommet (EPDM)
4	Body connector male (PPO)
5	Male terminal (Cu alloy)

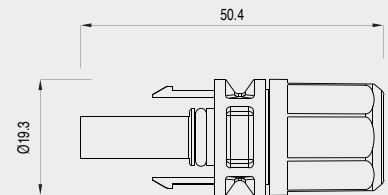


free connector female



Ref.	Flexible Cond. Size sqmm	Cable External Ø mm
CS411F	2,5 - 4 - 6	4,4 ÷ 5,8
CS412F		5,8 ÷ 7,2

Part	Description
1	Threaded locking ring (PPO)
2	Strain relief (Acetal Resin)
3	Grommet (EPDM)
4	Body connector female (PPO)
5	O-ring (EPDM)
6	Female terminal (Cu alloy)

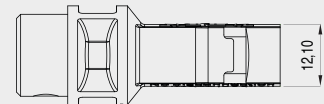
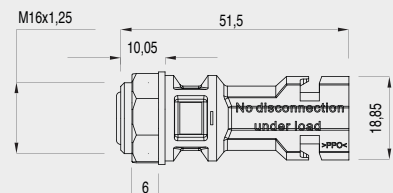


fixed connector male



Ref.	Flexible Cond. Size sqmm	Cable External Ø mm
CS420M	2,5 - 4 - 6	4,4 ÷ 7,2

Part	Description
1	Nut (PPO)
2	Gasket (NBR)
3	Body connector male (PPO)
4	Male terminal (Cu alloy)

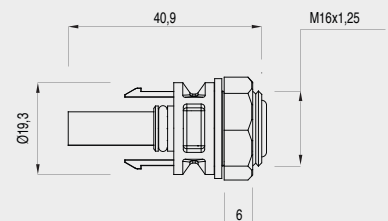


fixed connector female



Ref.	Flexible Cond. Size sqmm	Cable External Ø mm
CS420F	2,5 - 4 - 6	4,4 ÷ 7,2

Part	Description
1	Nut (PPO)
2	Gasket (NBR)
3	O-ring (EPDM)
4	Body connector female (PPO)
5	Female terminal (Cu alloy)





CABLE GLANDS AND ACCESSORIES

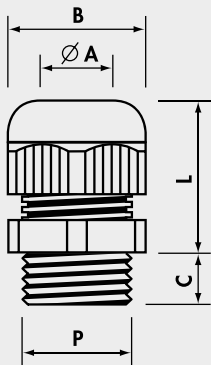
MAXIblock® CABLE GLANDS

Polyamide PA6.6

1900



Material: POLYAMIDE PA6.6
self-extinguishing class V2 (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Sealing ring: NEOPRENE® 50 sh A
Protection: IP 68
Colour: RAL 7035 light grey,
RAL 9005 black, RAL 7001 dark
grey



MAXIblock® standard

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1900.M12	M12x1,5	12,2	3,5- 7	15	8	18-22	100
1900.M16	M16x1,5	16,2	5 -10	19	8	22-27	100
1900.M20	M20x1,5	20,5	7 -13	25	9	24-30	100
1900.M25	M25x1,5	25,4	10 -17	30	10	28-39	50
1900.M32	M32x1,5	32,5	13 -21	36	10	33-44	25
1900.M40	M40x1,5	40,5	19 -28	46	10	36-45	15
1900.M50	M50x1,5	50,5	27 -35	55	12	43-52	10
1900.M63	M63x1,5	64,0	34 -45	66	12	45-55	5

Add to Ref: N for Black, G for Dark Grey

MAXIblock® reduced cable entry

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1910.M12	M12x1,5	12,2	2- 5	15	8	18-22	100
1910.M16	M16x1,5	16,2	3- 7	19	8	22-27	100
1910.M20	M20x1,5	20,5	5-10	25	9	24-30	100
1910.M25	M25x1,5	25,4	7-13	30	10	28-39	50
1910.M32	M32x1,5	32,5	8-14	36	10	33-44	25
1910.M40	M40x1,5	40,5	15-23	46	10	36-45	15
1910.M50	M50x1,5	50,5	21-29	55	12	43-52	10
1910.M63	M63x1,5	64,0	27-39	66	12	45-55	5

Add to Ref: N for Black, G for Dark Grey

MAXIblock® extended thread

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1901.M12	M12x1,5	12,2	3,5- 7	15	15	18-22	100
1901.M16	M16x1,5	16,2	5 -10	19	15	22-27	100
1901.M20	M20x1,5	20,5	7 -13	25	15	24-30	50
1901.M25	M25x1,5	25,4	10 -17	30	15	30-41	50
1901.M32	M32x1,5	32,5	13 -21	36	15	33-44	25
1901.M40	M40x1,5	40,5	19 -28	46	18	36-45	15
1901.M50	M50x1,5	50,5	27 -35	55	18	43-52	10
1901.M63	M63x1,5	64,0	34 -45	66	18	45-55	5

Add to Ref: N for Black, G for Dark Grey

MAXIblock® CABLE GLANDS

Polyamide PA6.6

1900

MAXIblock® standard

Pg thread DIN 40 430

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1900.07	Pg 7	12,7	3,5- 7	15	8	18-22	100
1900.09	Pg 9	15,5	5 - 8	19	8	22-26	100
1900.11	Pg11	18,8	5 -10	22	8	23-28	100
1900.13	Pg13,5	20,5	7 -12	24	9	24-29	100
1900.16	Pg16	22,6	10 -14	27	10	26-31	50
1900.21	Pg21	28,5	13 -18	33	12	30-35	50
1900.29	Pg29	37,2	18 -25	42	12	33-39	25
1900.36	Pg36	47,2	20 -32	53	14	42-49	10
1900.42	Pg42	54,2	28 -38	60	14	42-50	5
1900.48	Pg48	60,0	37 -45	66	15	45-55	5

Add to Ref: N for Black, G for Dark Grey

MAXIblock® reduced cable entry

Pg thread DIN 40 430

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1910.07	Pg 7	12,7	2- 5	15	8	18-22	100
1910.09♦	Pg 9	15,5	2- 6	19	8	22-26	100
1910.11	Pg11	18,8	4- 7	22	8	23-28	100
1910.13	Pg13,5	20,5	5-10	24	9	24-29	100
1910.16♦	Pg16	22,6	6-12	27	10	26-31	50
1910.21	Pg21	28,5	9-15	33	12	30-35	50
1910.29♦	Pg29	37,2	12-20	42	12	33-39	25
1910.36	Pg36	47,2	18-26	53	14	42-49	10
1910.42	Pg42	54,2	25-31	60	14	42-50	5
1910.48♦	Pg48	60,0	27-39	66	15	45-55	5

Add to Ref: N for Black

MAXIblock® extended thread

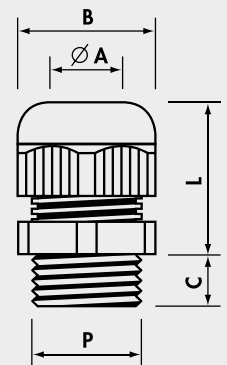
Pg thread DIN 40 430

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1901.07	Pg 7	12,7	3,5- 7	15	15	18-22	100
1901.09	Pg 9	15,5	5 - 8	19	15	22-26	100
1901.11	Pg11	18,8	5 -10	22	15	23-28	100
1901.13	Pg13,5	20,5	7 -12	24	15	24-29	100
1901.16	Pg16	22,6	10 -14	27	15	26-31	50
1901.21	Pg21	28,5	13 -18	33	15	30-35	50
1901.29	Pg29	37,2	18 -25	42	15	33-39	25
1901.36	Pg36	47,2	20 -32	53	18	42-49	10
1901.42	Pg42	54,2	28 -38	60	18	42-50	5
1901.48	Pg48	60,0	37 -45	66	18	45-55	5

Add to Ref: N for Black



Material: POLYAMIDE PA6.6 self-extinguishing class V2 (UL 94)
 Temperature range:
 -20°C to +90°C (continuous)
 Sealing ring: NEOPRENE® 50 sh A
 Protection: IP 68
 Colour: RAL 7035 light grey,
 RAL 9005 black, RAL 7001 dark grey



♦Not UL approved

MAXIblock® CABLE GLANDS

Polyamide PA6.6

MAXIblock® standard factory fitted with locknuts with collar

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

1900/X



Material: POLYAMIDE PA6.6
self-extinguishing class V2 (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Sealing ring: NEOPRENE® 50 sh A
Protection: IP 68
Colour: RAL 7035 light grey,



Ref.	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
1900.M12/X	M12x1,5	12,2	3,5- 7	15	8	18-22	100/10
1900.M16/X	M16x1,5	16,2	5 -10	19	8	22-27	100/10
1900.M20/X	M20x1,5	20,5	7 -13	25	9	24-30	50/10
1900.M25/X	M25x1,5	25,4	10 -17	30	10	28-39	30/10
1900.M32/X	M32x1,5	32,5	13 -21	36	10	33-44	20/10
1900.M40/X	M40x1,5	40,5	19 -28	46	10	36-45	10/5
1900.M50/X	M50x1,5	50,5	27 -35	55	12	43-52	10/5
1900.M63/X	M63x1,5	64,0	34 -45	66	12	45-55	5/5

Pg thread DIN 40 430

Ref.	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
1900.07/X	Pg 7	12,7	3,5- 7	15	8	18-22	100/10
1900.09/X	Pg 9	15,5	5 - 8	19	8	22-26	100/10
1900.11/X	Pg11	18,8	5 -10	22	8	23-28	100/10
1900.13/X	Pg13,5	20,5	7 -12	24	9	24-29	50/10
1900.16/X	Pg16	22,6	10 -14	27	10	26-31	30/10
1900.21/X	Pg21	28,5	13 -18	33	12	30-35	20/10
1900.29/X	Pg29	37,2	18 -25	42	12	33-39	20/10
1900.36/X	Pg36	47,2	20 -32	53	14	42-49	10/5
1900.42/X	Pg42	54,2	28 -38	60	14	42-50	5/5
1900.48/X	Pg48	60,0	37 -45	66	15	45-55	5/5

1900



Material: POLYAMIDE PA6.6
self-extinguishing class V2 (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Sealing ring: NEOPRENE® 50 sh A
Protection: IP 68
Colour: RAL 7035 light grey,
RAL 9005 black

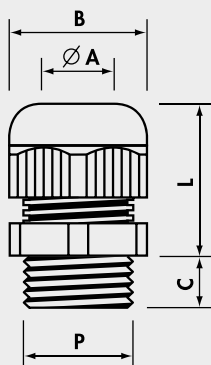


MAXIblock® standard

BSP thread ISO 228/1

Ref. Grey	P Light	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1900.14	G1/4"	13,5	3- 6,5	15	8	18-22	100
1900.38	G3/8"	17,0	4- 8	19	8	22-26	100
1900.12	G1/2"	21,5	7-12	24	10	24-29	100
1900.34	G3/4"	27,0	13-18	33	12	30-35	50

Add to Ref: N for Black



spiralblock® CABLE GLANDS

Polyamide PA6.6



1500



spiralblock® standard

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1500.M12	M12x1,5	12,2	3,5- 7	15	8	57	100
1500.M16	M16x1,5	16,2	5 -10	19	8	79	50
1500.M20	M20x1,5	20,5	7 -13	25	9	90	25
1500.M25	M25x1,5	25,4	10 -17	30	10	120	20
1500.M32	M32x1,5	32,5	13 -21	36	10	140	10

Add to Ref: N for Black

spiralblock® standard

Pg thread DIN 40 430

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1500.07	Pg 7	12,7	3,5- 7	15	8	57	100
1500.09	Pg 9	15,5	5 - 8	19	8	68	100
1500.11	Pg11	18,8	5 -10	22	8	80	50
1500.13	Pg13,5	20,5	7 -12	24	10	90	50
1500.16	Pg16	22,6	10 -14	27	10	100	25
1500.21	Pg21	28,5	13 -18	33	12	112	20

Add to Ref: N for Black

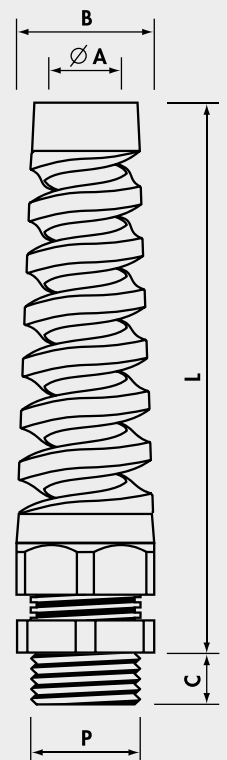
spiralblock® standard

BSP thread ISO 228/1

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1500.14	G1/4"	13,5	3- 6,5	15	8	57	100
1500.38	G3/8"	17,0	4- 8	19	9	68	100
1500.12	G1/2"	21,5	7-12	24	10	90	50
1500.34	G3/4"	27,0	13-18	33	12	112	20

Add to Ref: N for Black

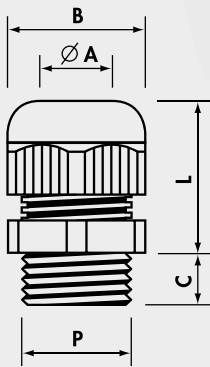
Material: POLYAMIDE PA6.6 self-extinguishing class V2 (UL 94)
 Temperature range: -20°C to +90°C (continuous)
 Sealing ring: NEOPRENE® 50 sh A
 Protection: IP 68
 Colour: RAL 7035 light grey, RAL 9005 black



4900



Material: POLYAMIDE PA6.6
 self-extinguishing class V2 (UL 94)
 Safety level: Ex e IIC/Ex tb IIIC
 according to
 EN 60079-0 : 2009
 EN 60079-7 : 2007
 EN 60079-31 : 2009
 Areas of utilisation: 1 & 2, 21 & 22
 Temperature range:
 -20°C to +75°C (continuous)
 Sealing ring: NEOPRENE®
 Protection: IP 65
 Colour: RAL 7035 light grey



MAXIblock® ATEX CABLE GLANDS

Polyamide PA6.6



II 2 GD

Certificate No IMQ ATEX 028X

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
4900.M12	M12x1,5	12,2	3,5- 6,5	15	8	18-22	100
4900.M16	M16x1,5	16,2	6,5-10	19	8	22-27	100
4900.M20	M20x1,5	20,5	9 -13	25	9	24-30	100
4900.M25	M25x1,5	25,4	11 -17	30	10	28-39	50
4900.M32	M32x1,5	32,5	16 -21	36	10	33-44	25
4900.M40	M40x1,5	40,5	21 -28	46	10	36-45	15
4900.M50	M50x1,5	50,5	27 -35	55	12	43-52	10
4900.M63	M63x1,5	64,0	35 -42	66	12	45-55	5

extended thread

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
4901.M12	M12x1,5	12,2	3,5- 6,5	15	15	18-22	100
4901.M16	M16x1,5	16,2	6,5-10	19	15	22-27	100
4901.M20	M20x1,5	20,5	9 -13	25	15	24-30	50
4901.M25	M25x1,5	25,4	11 -17	30	15	30-41	50
4901.M32	M32x1,5	32,5	16 -21	36	15	33-44	25
4901.M40	M40x1,5	40,5	21 -28	46	18	36-45	15
4901.M50	M50x1,5	50,5	27 -35	55	18	43-52	10
4901.M63	M63x1,5	64,0	35 -42	66	18	45-55	5

Pg thread DIN 40 430

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
4900.07	Pg 7	12,7	3,5- 6,5	15	8	18-22	100
4900.09	Pg 9	15,5	6,5- 8	19	8	22-26	100
4900.11	Pg11	18,8	8 -10	22	8	23-28	100
4900.13	Pg13,5	20,5	9 -12	24	9	24-29	100
4900.16	Pg16	22,6	10 -14	27	10	26-31	50
4900.21	Pg21	28,5	14 -18	33	12	30-35	50
4900.29	Pg29	37,2	18 -22	42	12	33-39	25
4900.36	Pg36	47,2	22 -32	53	14	42-49	10
4900.42	Pg42	54,2	28 -38	60	14	42-50	5
4900.48	Pg48	60,0	38 -45	66	15	45-55	5

extended thread

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A mini-max (mm)	B Spanner (mm)	C (mm)	L min-max (mm)	Quantity
4901.07	Pg 7	12,7	3,5- 6,5	15	15	18-22	100
4901.09	Pg 9	15,5	6,5- 8	19	15	22-26	100
4901.11	Pg11	18,8	8 -10	22	15	23-28	100
4901.13	Pg13,5	20,5	9 -12	24	15	24-29	100
4901.16	Pg16	22,6	10 -14	27	15	26-31	50
4901.21	Pg21	28,5	14 -18	33	15	30-35	50
4901.29	Pg29	37,2	18 -22	42	15	33-39	25
4901.36	Pg36	47,2	22 -32	53	18	42-49	10
4901.42	Pg42	54,2	28 -38	60	18	42-50	5
4901.48	Pg48	60,0	38 -45	66	18	45-55	5

COMPRESSION CABLE GLANDS

Polyamide PA6

1700
1400



Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner (mm)	B2 Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
1709	Pg 7	12,7	5,5- 7	15	16	8	16-20	300/100
*1700	Pg 9	15,5	6,5- 8,5	17	20	8	19-22	200/100
*1701	Pg11	18,8	8 -10	19	22	8	21-25	100/100
*1702	Pg13,5	20,5	8 -11	21	24	9	22-26	100/100
1703	Pg16	22,6	11 -14	23	27	10	24-33	50/50
1704	Pg21	28,5	14,5-18	30	33	11	25-32	50/25
1705	Pg29	37,2	19 -26	40	42	11	27-32	20/10
1706	Pg36	47,2	30 -34	50	53	14	33-42	10/10
1707	Pg42	54,2	30 -38	55	60	13	37-48	5/5
1708	Pg48	60,0	38 -44	60	65	14,5	37-48	5/5

*Add to Ref: N for Black

Material: POLYAMIDE PA6
self-extinguishing class VO (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Sealing ring: PVC 50 sh A
Protection: IP 54
Colour: RAL 7035 light grey,
RAL 9005 black

BSP thread ISO 228/1

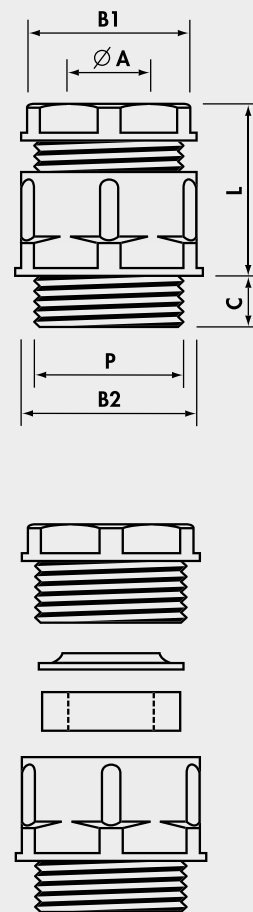
Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner (mm)	B2 Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
1400	G1/4"	13,5	5,5- 7	15	16	8	16-20	300/100
*1401	G3/8"	17,0	6,5- 8,5	17	20	8	19-22	200/100
*1401B	G3/8"	17,0	8 -10	19	22	8	18-24	100/100
*1401C	G3/8"	17,0	10 -12	22	24	9	22-26	100/100
*1402	G1/2"	21,5	8 -11	21	24	9	22-26	100/100
1403	G5/8"	23,5	11 -14	23	27	10	24-33	50/50
1404	G3/4"	27,0	14,5-18	30	33	11	25-32	50/25
1405	G1"	34,0	17 -22	34	38	11,5	27-35	20/10
1407	G1"1/2	48,0	30 -34	50	53	14	33-42	10/10
1408	G2"	60,0	38 -44	60	65	14,5	37-48	5/5

*Add to Ref: N for Black

Metric thread M 1.5 pitch CEI EN 60423

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner (mm)	B2 Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
1730M20	M20x1,5	20,5	8-11	21	24	9	22-26	100

*Add to Ref: N for Black



1700T



Material: POLYAMIDE PA6
 self-extinguishing class VO (UL 94)
 Temperature range:
 -20°C to +90°C (continuous)
 Protection: IP 54
 Colour: RAL 7035 light grey,
 RAL 9005 black

COMPRESSION CABLE GLANDS

Polyamide PA6

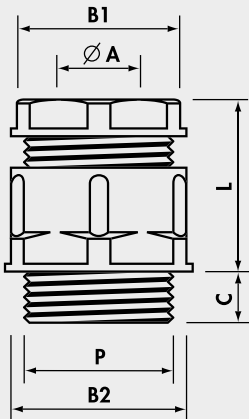
Compression cable glands

special Internal blanking disc: PVC 50 sh

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner (mm)	B2 Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
* 1700T	Pg 9	15,5	6,5- 8,5	17	20	8	19-22	200/100
* 1701T	Pg11	18,8	8 -10	19	22	8	21-25	100/100
* 1702T	Pg13,5	20,5	8 -11	21	24	9	22-26	100/100

*Add to Ref: N for Black



Compression cable gland - reduced cable entry

Sealing ring: CHLOROPRENE, concentric, multi-sector

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref Light Grey	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner (mm)	B2 Spanner (mm)	C (mm)	L min-max (mm)	Quantity
1702CONC	Pg13,5	20,5	5,5-13	21	24	9	22-26	100

Add to Ref: N for Black

POLYSTYRENE CABLE GLANDS

Polystyrene PS

1700P



Cable Glands

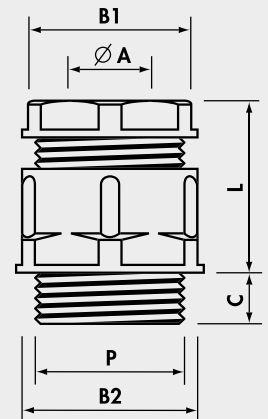
Sealing ring: PVC 50 sh A - Protection: IP 54

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner (mm)	B2 Spanner (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
1700P	Pg9	15,5	7 - 8,5	17	20	8	19-22	200/100
* 1701P	Pg11	18,8	8 -10	19	22	8	21-25	100/100
* 1702P	Pg13,5	20,5	8 -11	21	24	9	22-26	100/100
1703P	Pg16	22,6	11 -14	24	27	10	24-33	50/50
1704P	Pg21	28,5	14,5-18	30	33	11	25-32	50/25

*Add to Ref: N for Black

Material: POLYSTYRENE PS
 Temperature range:
 -20°C to +60°C (continuous)
 Colour: RAL 7035 light grey,
 RAL 9005 black



MAXIbrass® CABLE GLANDS

Nickel Plated Brass



2900

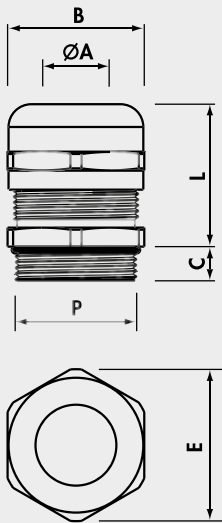


Material:
NICKEL PLATED BRASS
(CuZn 40 Pb 3)
Sealing-ring: NEOPRENE®
Cable grip insert:
POLYAMIDE PA6.6
O-Ring: NITRILE 70 sh A
(factory fitted)
Protection: IP 68
Temperature range:
-25°C to +100°C (continuous)

MAXIbrass® standard

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

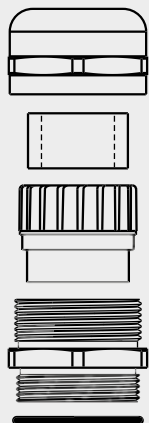
Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2900.M12N	M12x1,5	12,2	3 - 7	16	18	6,5	16-20	100
2900.M16N	M16x1,5	16,2	4,5-10	20	23	7,0	20-25	100
2900.M20N	M20x1,5	20,5	7 -13	24	27	8,0	20-27	50
2900.M25N	M25x1,5	25,4	10 -17	29	32	8,0	24-30	50
2900.M32N	M32x1,5	32,5	11 -21	36	40	9,0	27-34	25
2900.M40N	M40x1,5	40,5	19 -28	45	50	9,0	34-42	10
2900.M50N	M50x1,5	50,5	26 -35	54	60	10,0	35-43	8
2900.M63N	M63x1,5	64,0	34 -45	67	74	15,0	40-52	5



MAXIbrass® reduced cable entry

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2910.M12N	M12x1,5	12,2	1 - 5	16	18	6,5	16-20	100
2910.M16N	M16x1,5	16,2	2,5- 7	20	23	7,0	20-25	100
2910.M20N	M20x1,5	20,5	5 -10	24	27	8,0	20-27	50
2910.M25N	M25x1,5	25,4	6 -13	29	32	8,0	24-30	50
2910.M32N	M32x1,5	32,5	7 -14	36	40	9,0	27-34	25
2910.M40N	M40x1,5	40,5	13 -23	45	50	9,0	34-42	10
2910.M50N	M50x1,5	50,5	20 -29	54	60	10,0	35-43	8
2910.M63N	M63x1,5	64,0	27 -39	67	74	15,0	40-52	5



MAXIbrass® CABLE GLANDS

Nickel Plated Brass

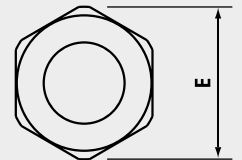
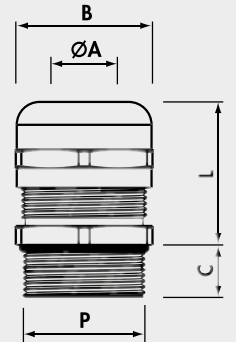
2900



MAXIbrass® extended thread

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

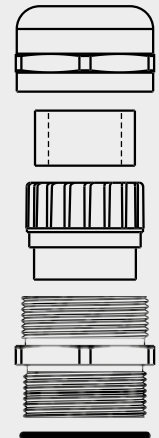
Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2901.M12N	M12x1,5	12,2	3 - 7	16	18	12	16-20	100
2901.M16N	M16x1,5	16,2	4,5-10	20	23	12	20-25	100
2901.M20N	M20x1,5	20,5	7 -13	24	27	12	20-27	50
2901.M25N	M25x1,5	25,4	10 -17	29	32	12	24-30	50
2901.M32N	M32x1,5	32,5	11 -21	36	40	15	27-34	25
2901.M40N	M40x1,5	40,5	19 -28	45	50	15	34-42	10
2901.M50N	M50x1,5	50,5	26 -35	54	60	15	35-43	8



MAXIbrass® extended thread and reduced cable entry

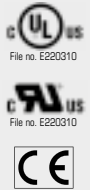
Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2911.M12N	M12x1,5	12,2	1 - 5	16	18	12	16-20	100
2911.M16N	M16x1,5	16,2	2,5- 7	20	23	12	20-25	100
2911.M20N	M20x1,5	20,5	5 -10	24	27	12	20-27	50
2911.M25N	M25x1,5	25,4	6 -13	29	32	12	24-30	50
2911.M32N	M32x1,5	32,5	7 -14	36	40	15	27-34	25
2911.M40N	M40x1,5	40,5	13 -23	45	50	15	34-42	10
2911.M50N	M50x1,5	50,5	20 -29	54	60	15	35-43	8



MAXIbrass® CABLE GLANDS

Nickel Plated Brass



2900

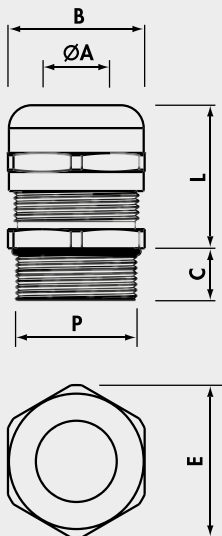


Material:
NICKEL PLATED BRASS
(CuZn 40 Pb 3)
Sealing-ring: NEOPRENE®
Cable grip insert:
POLYAMIDE PA6.6
O-Ring: NITRILE 70 sh A
(factory fitted)
Protection: IP 68
Temperature range:
-25°C to +100°C (continuous)

MAXIbrass® standard

Pg thread DIN 40 430

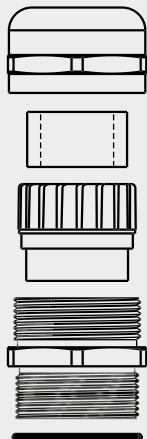
Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2900.07N	Pg 7	12,7	3 - 7	16	18	5,0	16-20	100
2900.09N	Pg 9	15,5	4 - 8	17	19	6,0	17-23	100
2900.11N	Pg11	18,8	4,5-10	20	23	6,0	20-25	100
2900.13N	Pg13,5	20,5	5 -12	22	25	6,5	20-26	50
2900.16N	Pg16	22,6	7 -13	24	27	6,5	20-27	50
2900.21N	Pg21	28,5	10 -17	30	33	7,0	24-30	50
2900.29N	Pg29	37,2	17 -25	40	45	8,0	30-37	25
2900.36N	Pg36	47,2	20 -32	50	55	8,0	38-48	10
2900.42N	Pg42	54,2	28 -38	57	63	10,0	39-48	5
2900.48N	Pg48	60,0	34 -45	67	74	15,0	40-52	5



MAXIbrass® reduced cable entry

Pg thread DIN 40 430

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2910.07N	Pg 7	12,7	1 - 5	16	18	5,0	16-20	100
2910.09N	Pg 9	15,5	2 - 6	17	19	6,0	17-23	100
2910.11N	Pg11	18,8	2,5- 7	20	23	6,0	20-25	100
2910.13N	Pg13,5	20,5	4 -10	22	25	6,5	20-26	50
2910.16N	Pg16	22,6	5 -10	24	27	6,5	20-27	50
2910.21N	Pg21	28,5	6 -13	30	33	7,0	24-30	50
2910.29N	Pg29	37,2	11 -20	40	45	8,0	30-37	25
2910.36N	Pg36	47,2	18 -26	50	55	8,0	38-48	10
2910.42N	Pg42	54,2	24 -31	57	63	10,0	39-48	5
2910.48N	Pg48	60,0	27 -39	67	74	15,0	40-52	5



MAXIbrass® CABLE GLANDS

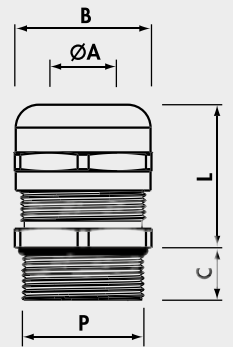
Nickel Plated Brass

2900

MAXIbrass® extended thread

Pg thread DIN 40 430

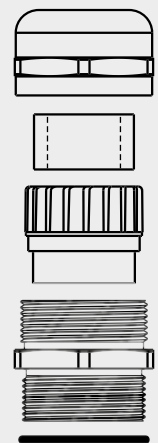
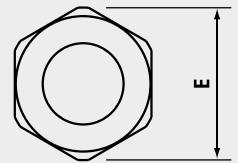
Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2901.07N	Pg 7	12,7	3 - 7	16	18	12	16-20	100
2901.09N	Pg 9	15,5	4 - 8	17	19	12	17-23	100
2901.11N	Pg11	18,8	4,5-10	20	23	12	20-25	100
2901.13N	Pg13,5	20,5	5 -12	22	25	12	20-26	50
2901.16N	Pg16	22,6	7 -13	24	27	12	20-27	50
2901.21N	Pg21	28,5	10 -17	30	33	12	24-30	50
2901.29N	Pg29	37,2	17 -25	40	45	15	30-37	25
2901.36N	Pg36	47,2	20 -32	50	55	15	38-48	10
2901.42N	Pg42	54,2	28 -38	57	63	15	39-48	5



MAXIbrass® extended thread and reduced cable entry

Pg thread DIN 40 430

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
2911.07N	Pg 7	12,7	1 - 5	16	18	12	16-20	100
2911.09N	Pg 9	15,5	2 - 6	17	19	12	17-23	100
2911.11N	Pg11	18,8	2,5- 7	20	23	12	20-25	100
2911.13N	Pg13,5	20,5	4 -10	22	25	12	20-26	50
2911.16N	Pg16	22,6	5 -10	24	27	12	20-27	100
2911.21N	Pg21	28,5	6 -13	30	33	12	24-30	50
2911.29N	Pg29	37,2	11 -20	40	45	15	30-37	25
2911.36N	Pg36	47,2	18 -26	50	55	15	38-48	10
2911.42N	Pg42	54,2	24 -31	57	63	15	39-48	5



MAXIbrass® ATEX CABLE GLANDS

5900



Nickel Plated Brass



II 2 GD

Temperature range: -25°C to +75°C (continuous)
Protection: IP 65

Certificate No IMQ ATEX 028X

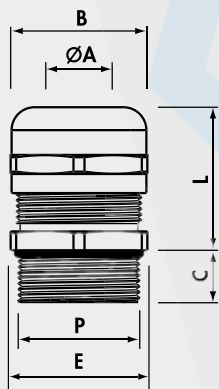
Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Material: NICKEL PLATED BRASS
Sealing-ring: NEOPRENE®
Cable grip insert: POLYAMIDE PA6.6
O-Ring: NITRILE 70 sh A (factory fitted)
Safety level: Ex e IIC/Ex tb IIIC
according to
EN 60079-0 : 2009
EN 60079-7 : 2007
EN 60079-31 : 2009
Areas of utilisation: 1 & 2, 21 & 22

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
5900.M12N	M12x1,5	12,2	3 - 6,5	16	18	6,5	16-20	100
5900.M16N	M16x1,5	16,2	6,5-10	20	23	7,0	20-25	100
5900.M20N	M20x1,5	20,5	10 -13	24	27	8,0	20-27	50
5900.M25N	M25x1,5	25,4	11 -17	29	32	8,0	24-30	50
5900.M32N	M32x1,5	32,5	14 -21	36	40	9,0	27-34	25
5900.M40N	M40x1,5	40,5	21 -27	45	50	9,0	34-42	10
5900.M50N	M50x1,5	50,5	26 -35	54	60	10,0	35-43	8
5900.M63N	M63x1,5	64,0	35 -42	67	74	15,0	40-52	5

extended thread

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity
5901.M12N	M12x1,5	12,2	3 - 6,5	16	18	12	16-20	100
5901.M16N	M16x1,5	16,2	6,5-10	20	23	12	20-25	100
5901.M20N	M20x1,5	20,5	10 -13	24	27	12	20-27	50
5901.M25N	M25x1,5	25,4	11 -17	29	32	12	24-30	50
5901.M32N	M32x1,5	32,5	14 -21	36	40	12	27-34	25
5901.M40N	M40x1,5	40,5	21 -27	45	50	12	34-42	10
5901.M50N	M50x1,5	50,5	26 -35	54	60	12	35-43	8



EMC CABLE GLANDS

Nickel Plated Brass

Protection: IP 68, 5 bar

Temperature range:
-30°C to +120°C (continuous)



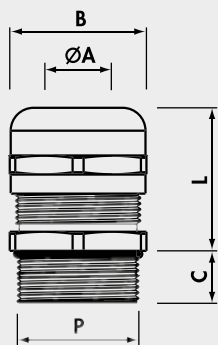
20M3



Material: NICKEL PLATED BRASS
(CuZn 40 Pb 3)
Sealing-ring: CLOROPRENE (CR)
Cable grip insert: PA6.6
O-Ring: (NBR) (factory fitted)

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

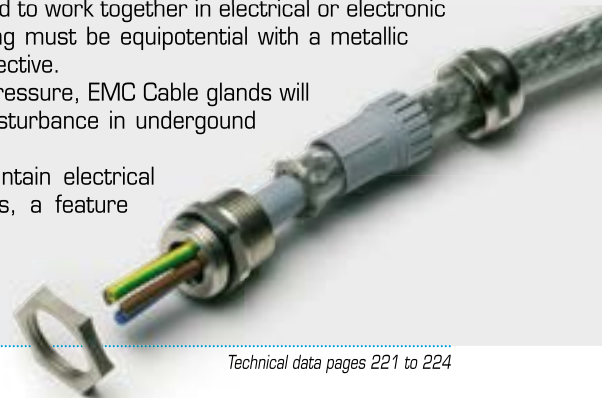
Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	C (mm)	L max (mm)	Quantity Box/Bag
20M3M1261N	M12x1,5	12,2	3 - 6,5	14	5	22	300/100
20M3M1661N	M16x1,5	16,2	5,5-10	17	5,5	24,5	200/100
20M3M2061N	M20x1,5	20,5	8 -13	22	6	27	100/50
20M3M2561N	M25x1,5	25,4	11 -18	30	7	31	50/25
20M3M3261N	M32x1,5	32,5	15 -21	34	8	33	30/10
20M3M4061N	M40x1,5	40,5	19 -27	44	8	40	20/10
20M3M5061N	M50x1,5	50,5	26 -35	55	9	48	10/5
20M3M6361N	M63x1,5	64,0	39 -48	66	10	50	5/5



EMC Cable glands and locknuts are designed to work together in electrical or electronic applications where a metallic cable shielding must be equipotential with a metallic enclosure, in accordance with the EMC directive.

Offering IP68 ingress protection at 5 bar pressure, EMC Cable glands will maintain shielding from electromagnetic disturbance in underground applications.

EMC locknuts have serrated teeth to maintain electrical contact through paint or surface coatings, a feature which also enhances vibration resistance.



Technical data pages 221 to 224



COMPRESSION CABLE GLANDS

Brass

2003
2002
2001

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner Head (mm)	B2 Spanner Body (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
2003M1221N	M12x1,5	12,2	4 - 6	13	14	5	13-16	500/100
2003M1621N	M16x1,5	16,2	8 -10	15	17	5	14-17	200/100
2003M2021N	M20x1,5	20,5	10 -12	20	22	6	16-19	150/50
2003M2521N	M25x1,5	25,4	17 -19	28	30	7	19-23	50/50
2003M3221N	M32x1,5	32,5	26 -28	37	39	8	21-25	100/50
2003M4021N	M40x1,5	40,5	33 -35	47	50	8	24-30	20/20
2003M5021N	M50x1,5	50,5	39 -41	54	57	9	28-34	10/5
2003M6321N	M63x1,5	64,0	43 -45	60	66/68	10	30-36	10/5

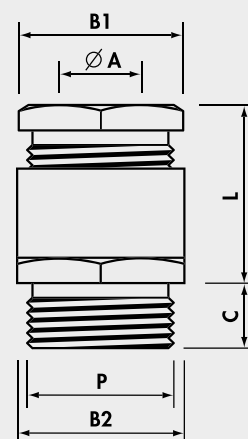


Material: Metric & Pg threads
NICKEL PLATED BRASS
(CuZn 40 Pb 3)
BSP thread - PLAIN BRASS
Protection: IP 54
Sealing ring:
Metric thread - RUBBER 55sh A
Pg thread - RUBBER 55 sh A
BSP thread - PVC 50 sh A

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner Head (mm)	B2 Spanner Body (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
200200721N	Pg 7	12,7	5 - 7	13	14	5	13-16	400/100
200200921N	Pg 9	15,5	8 -10	15	17	6	14-17	300/100
200201121N	Pg11	18,8	8 -10	18	20	6	14-18	200/50
200201321N	Pg13,5	20,5	10 -12	20	22	6,5	16-19	100/50
200201621N	Pg16	22,6	12 -14	22	24	6,5	17-20	50/50
200202121N	Pg21	28,5	17 -19	28	30	7	19-23	50/50
200202921N	Pg29	37,2	26 -28	37	40	8	21-25	15/15
200203621N*	Pg36	47,2	33 -35	47	50	9	24-30	10/10
200204221N	Pg42	54,2	39 -41	54	57	10	28-34	10/10
200204821N*	Pg48	60,0	43 -45	60	64	10	36-45	10/10

* Double sealing ring



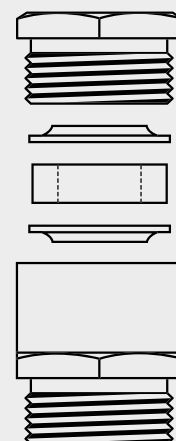
BSP thread ISO 228/1

Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner Head (mm)	B2 Spanner Body (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
200101441	G1/4"	13,5	5,5 - 7	13	15	6,5	14-17	400/100
207101441	G1/4"	13,5	5,5 - 7	13	∅15	6,5	14-17	400/100
200103841	G3/8"	17,0	6,5 - 8,5	17	19	7,5	15-19	200/100
200101241	G1/2"	21,5	8 -11	21	23	8	17-23	100/100
200105841	G5/8"	23,5	11 -14	23	25	8,5	20-24	100/50
200103441	G3/4"	27,0	14,5-17,5	27	29	9	20-26	50/50
200110041	G1"	34,0	18 -22	34	36	10	23-28	25/25
200111841	G1"1/8	38,0	21 -26	38	40	10,5	23-28	25/25
200111441	G1"1/4	42,0	28 -32	42	45	11,5	25-31	20/20
200111241	G1"1/2	48,0	32 -36	48	50	11,5	28-35	20/20
200120041	G2"	60,0	38 -42	60	64	13,5	31-37	10/10
• 200121221*	G2"1/2	76,0	44 -57	80	80	20	32-37	5/5
• 200130021	G3"	89,0	67 -69	95	95	20	42-52	5/5

Add to Ref: N for NICKEL PLATED BRASS

• Sealing ring: CLOROPRENE

* Concentric sealing ring



MAXIinox CABLE GLANDS



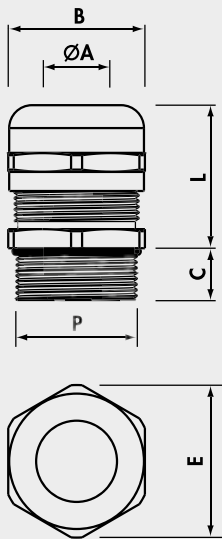
7900
7900A



Stainless Steel 303 (X8 CrNiS 18-9)

Stainless Steel 316L (X2 CrNiMo 17-12-2)

Material:
STAINLESS STEEL 303/316L
Sealing-ring: NEOPRENE®
Cable grip insert:
POLYAMIDE PA6.6
O-Ring: NITRILE 70 sh A
(factory fitted)
Protection: IP 68
Temperature range:
-25°C to +100°C (continuous)



MAXIinox Stainless Steel AISI 303

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Stainless Steel AISI 303	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
7900.M12	M12x1,5	12,2	3 - 7	16	18	6,5	16-20	90/30
7900.M16	M16x1,5	16,2	4,5-10	20	23	7,0	20-25	120/30
7900.M20	M20x1,5	20,5	7 -13	24	27	8,0	20-27	75/25
7900.M25	M25x1,5	25,4	10 -17	29	32	8,0	24-30	40/20
7900.M32	M32x1,5	32,5	11 -21	36	40	9,0	27-34	15
7900.M40	M40x1,5	40,5	19 -28	45	50	9,0	34-42	15
7900.M50	M50x1,5	50,5	26 -35	54	60	10,0	35-43	10
7900.M63	M63x1,5	64,0	34 -45	67	74	15,0	40-52	5

MAXIinox Stainless Steel AISI 316L

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

Stainless Steel AISI 316L	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
7900A.M12	M12x1,5	12,2	3 - 7	16	18	6,5	16-20	60/20
7900A.M16	M16x1,5	16,2	4,5-10	20	23	7,0	20-25	80/20
7900A.M20	M20x1,5	20,5	7 -13	24	27	8,0	20-27	60/20
7900A.M25	M25x1,5	25,4	10 -17	29	32	8,0	24-30	30/15
7900A.M32	M32x1,5	32,5	11 -21	36	40	9,0	27-34	12
7900A.M40	M40x1,5	40,5	19 -28	45	50	9,0	34-42	10
7900A.M50	M50x1,5	50,5	26 -35	54	60	10,0	35-43	7
7900A.M63	M63x1,5	64,0	34 -45	67	74	15,0	40-52	5



MAXIinox CABLE GLANDS

Stainless Steel 303 (X8 CrNiS 18-9)

Stainless Steel 316L (X2 CrNiMo 17-12-2)

7900 7900A

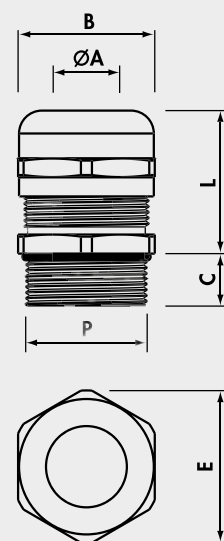


MAXIinox Stainless Steel AISI 303

Pg thread DIN 40 430

Stainless Steel AISI 303	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
7900.07	Pg 7	12,7	3 - 7	16	18	5,0	16-20	90/30
7900.09	Pg 9	15,5	4 - 8	17	19	6,0	17-23	90/30
7900.11	Pg11	18,8	4,5-10	20	23	6,0	20-25	60/30
7900.13	Pg13,5	20,5	5 -12	22	25	6,5	20-26	90/30
7900.16	Pg16	22,6	7 -13	24	27	6,5	20-27	60/30
7900.21	Pg21	28,5	10 -17	30	33	7,0	24-30	40/20
7900.29	Pg29	37,2	17 -25	40	45	8,0	30-37	30/15
7900.36	Pg36	47,2	20 -32	50	55	8,0	38-48	10
7900.42	Pg42	54,2	28 -38	57	63	10,0	36-46	5
7900.48	Pg48	60,0	34 -45	67	74	15,0	40-52	5

Material: STAINLESS STEEL 303/316L
 Sealing-ring: NEOPRENE®
 Cable grip insert: POLYAMIDE PA6.6
 O-Ring: NITRILE 70 sh A (factory fitted)
 Protection: IP 68
 Temperature range: -25°C to +100°C (continuous)



MAXIinox Stainless Steel AISI 316L

Pg thread DIN 40 430

Stainless Steel AISI 316L	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity Box/Bag
7900A.07	Pg 7	12,7	3 - 7	16	18	5,0	16-20	60/20
7900A.09	Pg 9	15,5	4 - 8	17	19	6,0	17-23	60/20
7900A.11	Pg11	18,8	4,5-10	20	23	6,0	20-25	100/20
7900A.13	Pg13,5	20,5	5 -12	22	25	6,5	20-26	100/20
7900A.16	Pg16	22,6	7 -13	24	27	6,5	20-27	40/20
7900A.21	Pg21	28,5	10 -17	30	33	7,0	24-30	60/15
7900A.29	Pg29	37,2	17 -25	40	45	8,0	30-37	20/10
7900A.36	Pg36	47,2	20 -32	50	55	8,0	38-48	7
7900A.42	Pg42	54,2	28 -38	57	63	10,0	36-46	5
7900A.48	Pg48	60,0	34 -45	67	74	15,0	40-52	5

LOCKNUTS WITH COLLAR

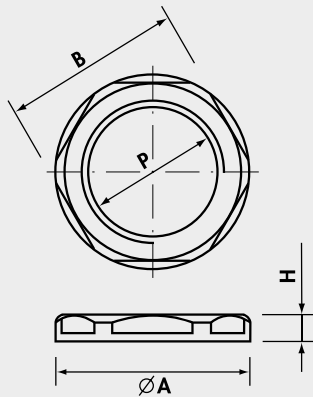
Polyamide PA6 or PA6.6

1143
1142
1141



Metric thread M 1.5 pitch CEI EN 60423

Material: POLYAMIDE PA6 or 6.6
self-extinguishing class V2 (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Colour: RAL 7035 light grey,
RAL 9005 black,
RAL 7001 dark grey



Ref. Light Grey	P	Ø A (mm)	B Spanner (mm)	H (mm)	Quantity Box/Bag
1143M12	M12X1,5	18,5	17	5	1.000/100
1143M16	M16X1,5	24	22	5	600/100
1143M20	M20X1,5	29	27	6	400/100
1143M25	M25X1,5	35,5	32	6	100
1143M32	M32X1,5	45	41	7	50
1143M40	M40X1,5	55	50	7	30
1143M50	M50X1,5	65	60	8	30
1143M63	M63X1,5	82	75	8	15

Add to Ref: N for Black, G for Dark Grey

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	Ø A (mm)	B Spanner (mm)	H (mm)	Quantity Box/Bag
1142007	Pg 7	21	19	5	100
1142009	Pg 9	24	22	5	700/100
1142011	Pg11	26	24	5	500/100
1142013	Pg13,5	29	27	6	400/100
1142016	Pg16	33	30	6	100
1142021	Pg21	39	36	7	200/50
1142029	Pg29	50	46	7	50
1142036	Pg36	66	60	8	30
1142042	Pg42	73	65	8	25
1142048	Pg48	78	70	8	20

Add to Ref: N for Black, G for Dark Grey

BSP thread ISO 228/1

Ref. Light Grey	P	Ø A (mm)	B Spanner (mm)	H (mm)	Quantity Box/Bag
1141012	G1/2"	29	27	6	400/100
1141112	G1"1/2	66	60	8	30
1141200	G2"	78	70	8	20

Add to Ref: N for Black

LOCKNUTS WITHOUT COLLAR

Polyamide PA6 or PA6.6

1112
1710
1410



Metric thread M 1.5 pitch CEI EN 60423

Ref. Light Grey	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
1112	M12X1,5	17	5	1.000/100
1116	M16X1,5	22	5	700/100
1120	M20X1,5	27	6	400/100
1125	M25X1,5	32	6	100
1132	M32X1,5	41	7	50
1140	M40X1,5	50	7	30
1150	M50X1,5	60	8	30
1163	M63X1,5	75	8	15

Add to Ref: N for Black

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
* 1719E17	Pg 7	17	5	1.000/100
1719	Pg 7	19	5	100
1710	Pg 9	22	5	700/100
1711	Pg11	24	5	500/100
1712	Pg13,5	27	6	400/100
1713	Pg16	30	6	100
△*1714E34	Pg21	34	7	200/100
1714	Pg21	36	7	200/100
1715	Pg29	46	7,5	100/50

Add to Ref: N for Black

△ Light Grey only

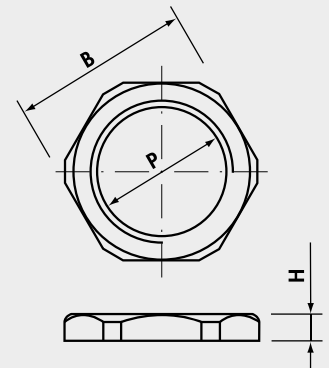
* Not DIN 46 320

BSP thread ISO 228/1

Ref. Light Grey	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
1410	G1/4"	19	5	800/100
1411	G3/8"	23	6	600/100
1412	G1/2"	27	6	400/100
1413	G5/8"	30	6	100
1414	G3/4"	34	7	200/100
1415	G1"	40	7	50

Add to Ref: N for Black

Material:
POLYAMIDE PA6 or 6.6
self-extinguishing class V2 (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Colour: RAL 7035 light grey,
RAL 9005 black



2033
2032
2031

LOCKNUTS

Brass



Metric thread M 1.5 pitch CEI EN 60423

Ref. Nickel Plated Brass	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
2033M12N	M12X1,5	16	2,8	2.000/100
2033M16N	M16X1,5	19	2,8	1.000/100
2033M20N	M20X1,5	24	3	600/100
2033M25N	M25X1,5	30	4,0	400/50
2033M32N	M32X1,5	36	4	250/25
2033M40N	M40X1,5	45	5,0	150/10
2033M50N	M50X1,5	60	5	100/10
2033M63N	M63X1,5	70	5,5	50/5

Pg thread DIN 40 430 - Dimensions DIN 46 320

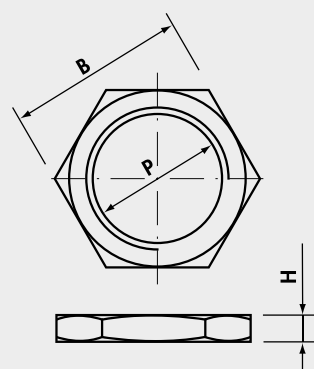
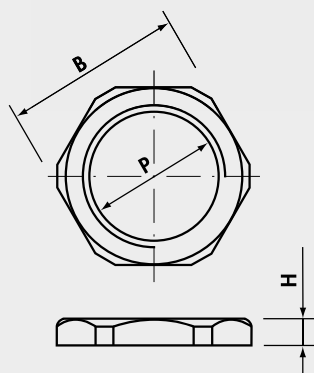
Ref. Nickel Plated Brass	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
2032007N	Pg 7	16*	2,8	1.500/100
2032009N	Pg 9	18	2,8	1.500/100
2032011N	Pg11	21	3	1.000/100
2032013N	Pg13,5	23	3	1.000/100
2032016N	Pg16	26	3	600/100
2032021N	Pg21	32	3,5	500/100
2032029N	Pg29	41	4	300/100
2032036N	Pg36	51	5	100/10
2032042N	Pg42	60	5	50/10
2032048N	Pg48	64	5,5	50/10

*Different dimension to DIN 46320

BSP thread ISO 228/1

Ref. Plain Brass	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
2031014	G1/4"	16	3	2.400/100
2031038	G3/8"	19	3	2.000/100
2031012	G1/2"	24	3,5	1.000/100
2031058	G5/8"	26	4	500/50
2031034	G3/4"	30	4	500/50
2031100	G1"	37	4	250/25
2031118	G1"1/8	41	4,5	100/25
2031114	G1"1/4	45	4,5	200/20
2031112	G1"1/2	52	5,5	100/20
2031200	G2"	64	7	50/10
2031212	G2"1/2	80	7	20/5
2031300	G3"	95	8	20/5

Add to Ref: N for NICKEL PLATED BRASS



EMC LOCKNUTS

Nickel Plated Brass

20N3

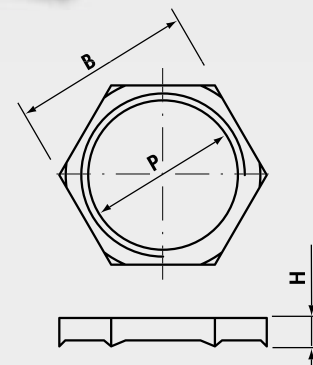


EMC Locknuts

Material: NICKEL PLATED BRASS (CuZn 40 Pb 3)

Metric thread M 1.5 pitch CEI EN 60423

Ref. Nickel Plated Brass	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
20N3M12N	M12X1,5	15	4,1	1000/100
20N3M16N	M16X1,5	19	4,2	1000/100
20N3M20N	M20X1,5	24	4,2	500/100
20N3M25N	M25X1,5	30	4,8	400/100
20N3M32N	M32X1,5	36	5,4	200/100
20N3M40N	M40X1,5	46	6,2	100/50
20N3M50N	M50X1,5	60	7	50/50
20N3M63N	M63X1,5	70	7	50/25



MAXInox LOCKNUTS

Stainless Steel 303 (X8 CrNiS 18-9)

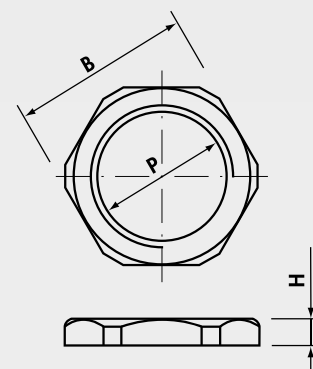
Stainless Steel 316L (X2 CrNiMo 17-12-2)

7032 7033



Metric thread M 1.5 pitch CEI EN 60423

Stainless Steel AISI 303	Stainless Steel AISI 316L	P	B Spanner (mm)	H (mm)	AISI 303 Quantity Box/Bag	AISI 316L Quantity Box/Bag
7033M12	7033AM12	M12X1,5	16	2,8	450/30	300/20
7033M16	7033AM16	M16X1,5	20	2,8	450/30	300/20
7033M20	7033AM20	M20X1,5	24	3,5	250/25	200/20
7033M25	7033AM25	M25X1,5	29	4	160/20	120/15
7033M32	7033AM32	M32X1,5	36	4	105/15	84/12
7033M40	7033AM40	M40X1,5	45	5	60/15	40/10
7033M50	7033AM50	M50X1,5	57	5	40/10	28/7
7033M63	7033AM63	M63X1,5	70	5,5	32/8	20/5



Pg thread DIN 40 430

Stainless Steel AISI 303	Stainless Steel AISI 316L	P	B Spanner (mm)	H (mm)	AISI 303 Quantity Box/Bag	AISI 316L Quantity Box/Bag
7032007	7032A007	Pg 7	16	2,8	450/30	300/20
7032009	7032A009	Pg 9	20	2,8	450/30	300/20
7032011	7032A011	Pg11	22	3	300/30	200/20
7032013	7032A013	Pg13,5	22	3	300/30	200/20
7032016	7032A016	Pg16	27	3	240/30	160/20
7032021	7032A021	Pg21	32	3,5	160/20	150/15
7032029	7032A029	Pg29	41	4	60/15	40/10
7032036	7032A036	Pg36	50	5	40/10	28/7
7032042	7032A042	Pg42	60	5	40/10	20/5
7032048	7032A048	Pg48	64	5,5	32/8	20/5

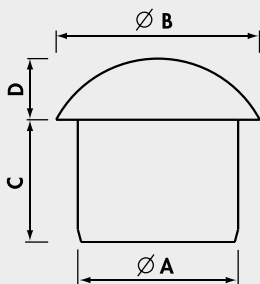
INTERNAL PLUGS FOR CABLE GLANDS

TCP

Polyamide PA6.6



Material: POLYAMIDE PA6.6
 self-extinguishing class V2 (UL 94)
 Temperature range:
 -20°C to +90°C (continuous)
 Colour: RAL 9005 black
 Application:
 Blanking the cable entry of
MAXIblock[®], **MAXIbrass**[®] and
MAXIinox cable glands and
 maintaining IP 68.



Plugs

Ref.	Suitable for		Ø A (mm)	Ø B (mm)	C (mm)	D (mm)	Quantity Box/Bag
	MAXIblock [®]	MAXIbrass [®] MAXIinox					
TCP5	M12R + Pg7R	M12R	4,5	8,5	10,8	4,5	3.000/100
TCP10	Pg9R	Pg9R	6	12	12	4,5	2.000/100
TCP12	M12 + Pg7	M12 + Pg7	6,8	12	12	4,5	1.000/100
	M16R + Pg11R	M16R + Pg11R					
TCP15	Pg9	Pg9	8	11	11,5	5	1.500/100
TCP18	M16 + Pg11	M16 + Pg11	9,5	12,5	13	5	1.500/100
TCP20	M20R	M20R	10	15	14	6	800/100
	Pg13,5 + Pg13,5R Pg16R	Pg13 + Pg13,5R Pg16R					
TCP25	M20 + Pg16	M20 + Pg16	12,5	17	15	8	400/100
TCP30	M25R + M32R	M25R + M32R	12,5	22,5	18	9	300/100
	Pg21R	Pg21R					
TCP35	M25 + Pg21	M25 + Pg21	16	19,5	18	8	300/100
TCP40	M32	M32	19	22,5	19	9	150/50
TCP45	M40R + Pg29 + Pg36R	M40R + Pg29	22	30	20	10	100/50
TCP50	M40 + M50R + Pg42R	M40 + M50R	27,5	38	25	12	50/25
TCP55	Pg36	Pg36	31,5	36,5	23,5	12	50/25
TCP60	M50	M50	34,5	40	23,5	12	50/25
TCP65	M63R + Pg42 + Pg48R	M63R + Pg42	37,5	48	26,5	12	30/15
TCP70	M63 + Pg48	M63 + Pg48	43	48	26,5	12	30/15

R: reduced cable entry

MULTI-ENTRY SEALS & PLUGS FOR CABLE GLANDS

36 TGM

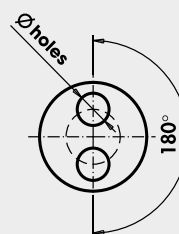
Material: NEOPRENE® 70 sh A
 Temperature range:
 -40°C to +130°C
 Protection: IP 68
 Colour: RAL 9005 black
 Application:
 IP68 sealing of multiple cables entering
MAXIblock®, **MAXIbrass**® or
MAXIinox cable glands.



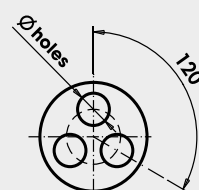
Multi-entry seals

Ref.	Suitable for		n° entries	Ø Dia entry (mm)	Quantity Box/Bag
	MAXIblock ®	MAXIbrass ® MAXIinox			
36A3M1623	M16 + Pg11	M16 + Pg11	2	3	1.500/100
36A3M1624	M16 + Pg11	M16 + Pg11	2	4	1.000/100
36A3M16322	M16 + Pg11	M16 + Pg11	3	2,2	1.500/100
36A3M2025	M20 + Pg13,5	M20 + Pg13,5 + Pg16	2	5	500/100
36A3M2034	M20 + Pg13,5	M20 + Pg13,5 + Pg16	3	4	500/100
36A3M20356	M20 + Pg13,5	M20 + Pg13,5 + Pg16	3	5,6	500/100
36A3M2526	M25	M25 + Pg21	2	6	300/50
36A3M2536	M25	M25 + Pg21	3	6	300/50
36A3M2537	M25	M25 + Pg21	3	7	300/50
36A3M2545	M25	M25 + Pg21	4	5	300/50
36A3M2546	M25	M25 + Pg21	4	6	300/50
36A3M2554	M25	M25 + Pg21	5	4	300/50
36A3M3228	M32	M32	2	8	150/50
36A3M3239	M32	M32	3	9	150/50
36A3M32465	M32	M32	4	6,5	150/50
36A3M3248	M32	M32	4	8	150/50
36A3M4078	M40	M40	7	8	100/100
36A3M40106	M40	M40	10	6	100/100
36A3M5088	M50	M50	8	8	50/50
36C201629	Pg16	-	2	3+9	400/50

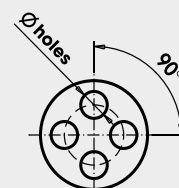
2 ENTRIES



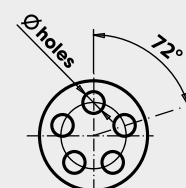
3 ENTRIES



4 ENTRIES



5 ENTRIES

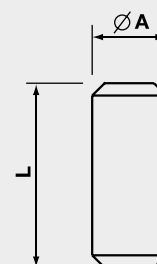


Material: POLYAMIDE PA6.6
 Temperature range:
 -20°C to +90°C (continuous)
 Colour: RAL 7035 light grey

Application:
 Plugging unused entries
 in multi-entry seals and
 maintaining IP68.

Multi-entry seal plugs

Ref.	Suitable for Seal	Ø A	L	Quantity Box/Bag
		(mm)	(mm)	
TGM38	36A3M1623	3	10	5.000/100
TGM48	36A3M1624 + 36A3M2034 + 36A3M2554	4	8	5.000/100
TGM58	36A3M2025	5	8	5.000/100
TGM513	36A3M2545	5	13	2.500/50
TGM613	36A3M2526 + 36A3M2536 + 36A3M40106	6	13	2.000/50
TGM713	36A3M2537	7	13	2.000/50
TGM817	36A3M3248 + 36A3M5088 + 36A3M4078	8	17	100



ENTRY THREAD ADAPTERS

Nickel Plated Brass

Entry thread enlargers

Metric thread M 1.5 pitch CEI EN 60423

Ref.	P EXT	P INT	Ø A (mm)	C (mm)	H (mm)	Quantity Box/Bag
20931216N	M12X1,5	M16X1,5	18	5	15,5	500/100
20931620N	M16X1,5	M20X1,5	22	5	17,5	300/100
20932025N	M20X1,5	M25X1,5	27	6	20	150/50
20932532N	M25X1,5	M32X1,5	34	7	22,5	100/50
20932540N	M25X1,5	M40X1,5	42	7	23,5	50/50
20933240N	M32X1,5	M40X1,5	42	8	24,5	50/50
20933250N	M32X1,5	M50X1,5	52	8	27,5	25/25
20934050N	M40X1,5	M50X1,5	52	8	27,5	25/25
20935063N	M50X1,5	M63X1,5	66	9	31	20/10

Entry thread reducers

Metric thread M 1.5 pitch CEI EN 60423

Ref.	P EXT	P INT	Ø A (mm)	C (mm)	H (mm)	Quantity Box/Bag
20431612N	M16X1,5	M12X1,5	18	5	7,5	1.000/100
20432012N	M20X1,5	M12X1,5	22	6	9	600/100
20432016N	M20X1,5	M16X1,5	22	6	9	500/100
20432512N	M25X1,5	M12X1,5	27	7	10	300/50
20432516N	M25X1,5	M16X1,5	27	7	10	300/50
20432520N	M25X1,5	M20X1,5	27	7	10	300/100
20433220N	M32X1,5	M20X1,5	34	8	11	100/25
20433225N	M32X1,5	M25X1,5	34	8	11	200/50
20434025N	M40X1,5	M25X1,5	43	8	11,5	100/25
20434032N	M40X1,5	M32X1,5	43	8	11,5	100/25
20435032N	M50X1,5	M32X1,5	53	9	12,5	50/10
20435040N	M50X1,5	M40X1,5	53	9	12,5	50/25
20436340N	M63X1,5	M40X1,5	66	10	14	30/10
20436350N	M63X1,5	M50X1,5	66	10	14	30/10

Entry thread converters - Metric to Pg

Ref.	P EXT	P INT	Fig.	Ø A (mm)	C (mm)	H (mm)	Quantity Box/Bag
20A42011N	M20X1,5	Pg11	1	22	6,5	17,5	300/100
20A42016N	M20X1,5	Pg16	1	24	6,5	20	200/50
20A42513N	M25X1,5	Pg13,5	2	27	7	10	300/50
20A42516N	M25X1,5	Pg16	2	27	7	10	300/50
20A43216N	M32X1,5	Pg16	2	36	8	11,5	100/25
20A43221N	M32X1,5	Pg21	2	36	8	11,5	100/25

Entry thread converters - Pg to Metric

Ref.	P EXT	P INT	Fig.	Ø A (mm)	C (mm)	H (mm)	Quantity Box/Bag
20A40916N	Pg 9	M16X1,5	1	20	6	15	400/100
20A41120N	Pg11	M20X1,5	1	22	6	16	300/100
20A41320N	Pg13,5	M20X1,5	1	24	6,5	16,5	200/50
20A41620N	Pg16	M20X1,5	2	24	6,5	9,5	50/50
20A42120N	Pg21	M20X1,5	2	30	7	10	100/100
20A42125N	Pg21	M25X1,5	2	30	7	10	100/100
20A42925N	Pg29	M25X1,5	2	39	8	11,5	50/50

2093
2043
20A4



Material: NICKEL PLATED BRASS
(CuZn 40 Pb 3)

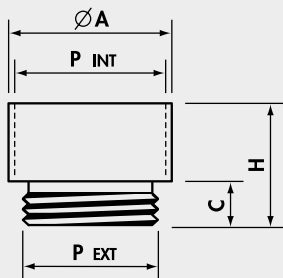


Fig. 1

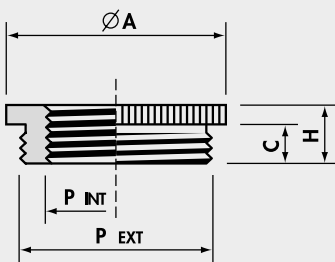


Fig. 2

ENTRY THREAD ADAPTERS

Nickel Plated Brass

1800
2042

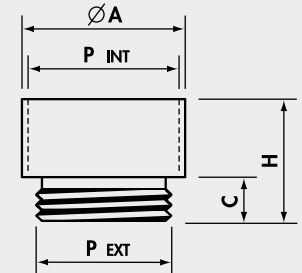


Entry thread enlargers

Pg thread DIN 40 430 - Dimensions DIN 46 320-K

Ref.	P EXT	P INT	Ø A (mm)	C (mm)	H (mm)	Quantity Box/Bag
180709	Pg 7	Pg 9	17	5	15	600/100
180911	Pg 9	Pg11	20	6	16,5	500/100
180913	Pg 9	Pg13,5	22	6	17,5	300/100
181113	Pg11	Pg13,5	22	6	17,5	300/100
181116	Pg11	Pg16	24	6	18,5	100/50
181316	Pg13,5	Pg16	24	6,5	19	200/50
181321	Pg13,5	Pg21	30	6,5	21	150/50
181621	Pg16	Pg21	30	6,5	21	100/25
182129	Pg21	Pg29	39	7	23	75/25
182936	Pg29	Pg36	50	8	27,5	30/10
183642	Pg36	Pg42	57	9	31	20/10
184248	Pg42	Pg48	64	10	33	20/10

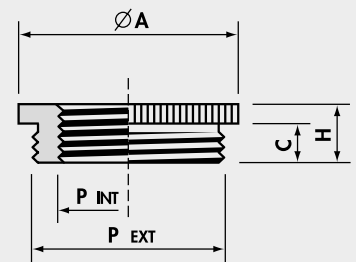
Material: NICKEL PLATED BRASS
(CuZn 40 Pb 3)



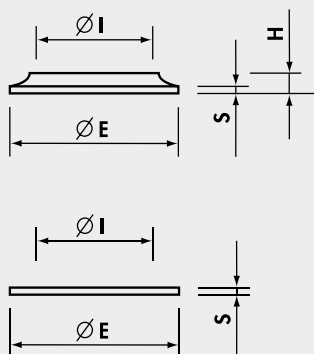
Entry thread reducers

Pg thread DIN 40 430 - Dimensions DIN 46 320-H

Ref.	P EXT	P INT	Ø A (mm)	C (mm)	H (mm)	Quantity Box/Bag
20420907N	Pg 9	Pg 7	17	6	8,5	800/100
20421107N	Pg11	Pg 7	20	6	8,5	600/100
20421109N	Pg11	Pg 9	20	6	8,5	600/100
20421307N	Pg13,5	Pg 7	22	6,5	9	600/100
20421309N	Pg13,5	Pg 9	22	6,5	9	600/100
20421311N	Pg13,5	Pg11	22	6,5	9	600/100
20421607N	Pg16	Pg 7	24	6,5	9,5	300/50
20421609N	Pg16	Pg 9	24	6,5	9,5	400/100
20421611N	Pg16	Pg11	24	6,5	9,5	400/100
20421613N	Pg16	Pg13,5	24	6,5	9,5	400/100
20422111N	Pg21	Pg11	30	7	10	200/50
20422113N	Pg21	Pg13,5	30	7	10	200/50
20422116N	Pg21	Pg16	30	7	10	200/50
20422916N	Pg29	Pg16	39	8	11,5	100/25
20422921N	Pg29	Pg21	39	8	11,5	100/25
20423621N	Pg36	Pg21	50	9	12,5	50/25
20423629N	Pg36	Pg29	50	9	12,5	50/25
20424229N	Pg42	Pg29	57	10	14	50/25
20424236N	Pg42	Pg36	57	10	14	50/25
20424836N	Pg48	Pg36	64	10	14	50/25
20424842N	Pg48	Pg42	64	10	14	50/25



6010



Compression washers

Material: Zinc plated STEEL UNI 5961/84

Ref.	Fits thread	Ø E (mm)	Ø I (mm)	H (mm)	S (mm)	Quantity Box/Bag
6010.14	G1/4"	11	8	1,1	0,5	15.000/1.000
6010.38	G3/8"	14,5	10	1,8	0,5	5.000/1.000
6010.12	Pg13,5 + G1/2"	18	14	1,5	0,5	4.000/1.000
6010.58	Pg16 + G5/8"	20	15,5	2	0,5	3.000/1.000
6010.34	G3/4"	24	18,5	2	0,5	2.500/500
6010.01	G1"	30	24,5	2	0,5	1.500/500
6010.114	G1"1/4	38	33,5	2	0,5	1.000/500
6010.11	Pg11	17	12	1,9	0,5	5.000/1.000
6010.21	Pg21	26,5	20	2,3	0,5	2.000/500
6010.29	Pg29 + G1"1/8	35	26,5	2	0,5	1.000/500
6010.36	Pg36 + G1"1/2	45	38	-	0,8	750/250
6010.42	Pg42	51	42,5	2,3	0,5	500/250
6010.48	Pg48 + G2"	56	47,5	3	0,5	400/100

SEALING RINGS

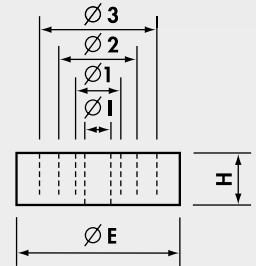
1880 1890



Concentric sealing rings *Material: BUTADIENE-NITRILE NBR with concentric perforations*

Ref.	Suitable only for Cable Glands IP54 (1700... 2002...)	Ø E (mm)	Ø 3 (mm)	Ø 2 (mm)	Ø 1 (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag		
1880	Pg9 + M16	13,3	-	-	-	10	7,5	5,5	1.500/100	
1881	Pg11	16,5	-	-	-	12,5	10	7,5	6	1.000/100
1882	Pg13,5 + M20 + G1/2"	18,3	-	-	-	12,5	10	7,5	6	800/100
1883	Pg16 + G5/8"	20,4	-	-	15	12,5	10	7,5	7	600/100
1884	Pg21 + M25	26,0	-	-	19	16	13	10	8	300/100
1884A	Pg21 + M25	26,0	-	-	20,5	18	15	10,5	8	300/100
*1885	Pg29 + M32 + G1 1/8"	34,7	-	-	27	24	21	18	9,5	150/50
1886	Pg36 + G1 1/2" + M40	44,7	-	-	33	30	27	24	12	100/50
*1887	Pg42 + M50	51,7	-	-	39	36	33	30	14	50/25
1888/5	Pg48 + G2" + M63	57,0	45	41	37	33	29	24	14	75/25
*1888	Pg48 + G2" + M63	57,0	-	-	45	42	39	36	14	75/25

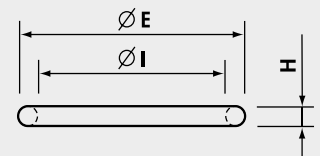
*material: RUBBER NR



O-rings

Material: BUTADIENE-NITRILE 70 sh

Ref.	Fits thread	Ø E (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag
1889	M12	12,81	9,25	1,78	1.000
1890	Pg7 + G1/4"	14,38	10,82	1,78	5.000/1.000
1890A	M16 + Pg9 + G3/8"	15,98	12,42	1,78	5.000/1.000
1891	Pg11	19,16	15,60	1,78	5.000/1.000
1891A	M20	20,73	17,17	1,78	5.000/1.000
1892	Pg13,5 + G1/2"	22,33	18,77	1,78	5.000/1.000
1892A	Pg16 + G5/8"	23,91	20,35	1,78	5.000/1.000
1892B	M25	25,51	21,95	1,78	5.000/1.000
1893	Pg21	28,68	25,12	1,78	3.000/500
1893A	M32	30,00	26,00	2,00	500
1925,3	G3/4"	30,31	25,07	2,62	1.000/500
1894	G1"	35,06	29,82	2,62	1.000/500
1895	M40 + Pg29 + G1 1/8"	39,84	34,60	2,62	1.000/500
1896	G1 1/4"	43,01	37,77	2,62	500
1897	Pg36 + G1 1/2"	49,36	44,12	2,62	800/100
1898	Pg42 + G1 3/4"	55,71	50,47	2,62	800/100
1899	Pg48 + G2"	62,06	56,82	2,62	100
1899A	G2 1/2"	76,50	69,44	3,53	100/1
1899B	G3"	92,60	81,92	5,34	100/1



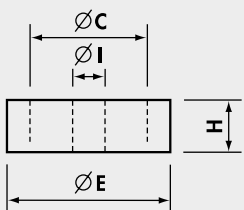
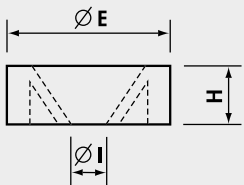
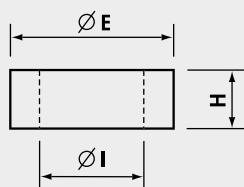
SEALING RINGS

PVC 50 sh A

341
342
343
344



Material: PVC 50 sh A



Cylindrical sealing rings

Ref.	Fits thread	C (mm)	Ø E (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag
3411014	G1/4"	-	10,9	6,7	6	1.500/100
3411038	G3/8" + M16	-	14,5	8,5	6	1.000/100
3411012	Pg13,5 + G1/2" + M20	-	18	11	7,5	500/100
3412016	Pg16 + G5/8"	-	20	14	7,5	300/100
3422016	Pg16 + G5/8"	-	20	10	7,5	300/100
3411034	G3/4"	-	23,5	17,5	8	300/100
3411100	G1"	-	29	22	10	200/100
3412011	Pg11	-	16,5	10	7	1.000/100
3412021	Pg21 + M25	-	26	18	8,5	300/100
3422021	Pg21 + M25	-	26	13	8,5	250/50
3412029	Pg29 + G1"1/8 + M32	-	35	26	10	200/100

Membrane sealing rings

Ref.	Fits thread	C (mm)	Ø E (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag
3431100	G1"	-	29	15	9,5	200/100

Double sealing rings

Ref.	Fits thread	C (mm)	Ø E (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag
3441012	G1/2" + Pg13,5 + M20	13	18,5	8	6,5	500/100
3441034	G3/4"	17	23	12,5	8,5	300/100

SEALING RINGS

357 FD

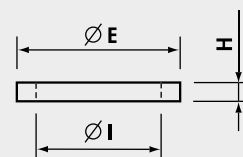


Material: BUTADIENE-NITRILE NBR 70 sh A

Temperature range: -20°C to +70°C

Colour: RAL 7035 light grey

Ref.	Fits thread	Ø E (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag
3572007	Pg7	16,5	11,5	1	4.000/100
3572011	Pg11	23	17,5	1	2.500/100
35720131	Pg13,5 + M20X1,5 + G1/2"	27,5	20,5	1,4	1.000/100
3572013	Pg13,5	30	20,5	2,2	1.000/100
3572016	Pg16	29	23	2	1.000/100
3572021	Pg21	33,5	27	3	500/100
3573M16	M16X1,5	20,5	16,3	1	3.000/100
3573M20	M20X1,5 + Pg13,5 + G1/2"	25,5	20,5	1	4.000/100
3573M25	M25X1,5	30,5	25,5	1	2.000/100
3573M32	M32X1,5	40,5	32,5	1	1.500/100



Material: NEOPRENE® 80 sh A

Temperature range: -25°C to +100°C

Colour: RAL 9005 black

Ref.	Fits thread	Ø E (mm)	Ø I (mm)	H (mm)	Quantity Box/Bag
FD M12	M12	16	10	1,2	2.500/50
FD 7	Pg7 + G1/4"	17	11,3	1,2	3.000/50
FD 9	Pg9	20	13,9	1,2	2.000/50
FD M16	M16 + G3/8"	20	15,5	1,2	2.000/50
FD 11	Pg11	23	17,1	1,2	2.000/50
FD M20	M20	24	18	1,2	2.000/50
FD 13,5	Pg13,5 + G1/2"	25	19	1,2	2.500/50
FD 16	Pg16 + G5/8"	27	21	1,2	1.500/50
FD M25	M25	31	23	1,2	1.000/20
FD 21	Pg21 + G3/4"	34,5	27	1,5	1.000/25
FD M32	M32 + G1"	40	30	1,5	600/20
FD 29	Pg29 + G1"1/8"	45	35,2	1,5	500/25
FD M40	M40 + G1"1/4"	48	38	1,5	500/20
FD 36	Pg36 + G1"1/2"	56	45,2	1,5	250/25
FD M50	M50	55	47,5	1,0	10
FD 42	Pg42 + G1"3/4"	62	52	1,0	10
FD 48	Pg48 + G2"	68	58	1,0	10
FD M63	M63	68	60,5	1,0	500/5

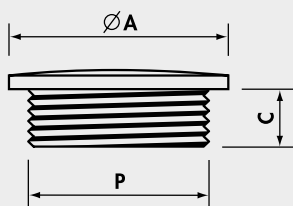
ENTRY PLUGS

Polyamide PA6

1053
1052



Material: POLYAMIDE PA6
reinforced with fibreglass
self-extinguishing class VO (UL 94)
Temperature range:
-20°C to +90°C (continuous)
Protection: IP 54
Colour: RAL 7035 light grey,
RAL 9005 black



Metric thread M 1.5 pitch CEI EN 60423

Ref. Light Grey	P	Ø A (mm)	C (mm)	Quantity
1053M12	M12X1,5	15	6	100
1053M16	M16X1,5	20	6	100
1053M20	M20X1,5	25	7	100
1053M25	M25X1,5	30	7	100
1053M32	M32X1,5	37	9	50
1053M40	M40X1,5	47	9	30
1053M50	M50X1,5	58	10	20
1053M63	M63X1,5	72	12	10

Add to Ref: N for Black

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	Ø A (mm)	C (mm)	Quantity Box/Bag
1052007	Pg 7	15	6	100
1052009	Pg 9	19	6	100
1052011	Pg11	22	7	100
1052013	Pg13,5	25	7	100
1052016	Pg16	27	7	100
1052021	Pg21	33	9	50
1052029	Pg29	44	9	100/50
1052036	Pg36	55	10	20
1052042	Pg42	62	10	10
1052048	Pg48	69	12	10

Add to Ref: N for Black

ENTRY PLUGS

Polystyrene PS

1253
1840



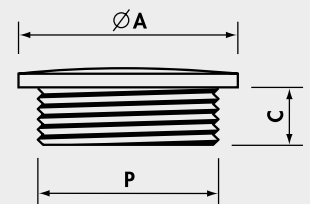
Protection: IP 54

Metric thread M 1.5 pitch CEI EN 60423

Ref. Light Grey	P	Ø A (mm)	C (mm)	Quantity
1253M12	M12X1,5	15	6	100
1253M16	M16X1,5	20	6	100
1253M20	M20X1,5	25	7	100
1253M25	M25X1,5	30	7	100
1253M32	M32X1,5	37	9	50
1253M40	M40X1,5	47	9	30
1253M50	M50X1,5	58	10	20
1253M63	M63X1,5	72	12	10

Add to Ref: N for Black

Material: POLYSTYRENE PS
Temperature range:
-20°C to +60°C (continuous)
Colour: RAL 7035 light grey,
RAL 9005 black



Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	Ø A (mm)	C (mm)	Quantity Box/Bag
1840	Pg 7	15	6	100
1841	Pg 9	19	6	100
1842	Pg11	22	7	100
1843	Pg13,5	25	7	100
1844	Pg16	27	7	100
1845	Pg21	33	9	50
1846	Pg29	44	9	100/50
1847	Pg36	55	10	20
1848	Pg42	62	10	10
1849	Pg48	69	12	10

Add to Ref: N for Black

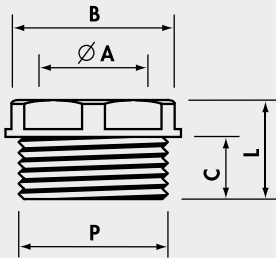
1700

ENTRY BUSHES

Polyamide PA6



Material: POLYAMIDE PA6
 self-extinguishing class VO (UL 94)
 Temperature range:
 -20°C to +90°C (continuous)
 Colour: RAL 7035 light grey,
 RAL 9005 black



Entry bushes

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	ØA (mm)	B Spanner (mm)	C (mm)	L (mm)	Quantity Box/Bag
* 1700.2	Pg 9	10	16	9	14	600/100
* 1701.2	Pg11	11,5	19	10	15	300/100
* 1702.2	Pg13,5	13,5	21	11	16,5	300/100
1703.2	Pg16	16	23	12,5	18,5	200/100
1704.2	Pg21	22	30	12	17,5	100/50
1705.2	Pg29	27	40	15	22	50/50

BSP thread ISO 228/1

* 1830	G1/4"	8,5	15	8,5	13,5	800/100
* 1831	G3/8"	11,5	17	9	14	300/100
* 1832	G1/2"	13	21	11	16,5	300/100

Metric thread M 1.5 pitch CEI EN 60423

△1835G	M16X1,5	11,5	17	9	14	100/100
* 1836	M20X1,5	13,5	21	11	16,5	300/100

* Add to Ref: N for Black

△ Dark Grey only

Blind entry bushes

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	ØA (mm)	B Spanner (mm)	C (mm)	L (mm)	Quantity Box/Bag
* 1702.5	Pg13,5	-	21	11	17	300/100
1703.5	Pg16	-	23	12,5	18,5	200/100

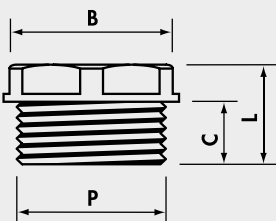
BSP thread ISO 228/1

* 1861	G3/8"	-	17	9	14	600/100
* 1862	G1/2"	-	21	11	16,5	200/100

Metric thread M 1.5 pitch CEI EN 60423

* 1866	M20X1,5	-	21	11	17	100
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*Add to Ref: N for Black



ENTRY PLUGS AND BUSHES

Brass

2053
2052
2021

Entry plugs

Metric thread M 1.5 pitch CEI EN 60423

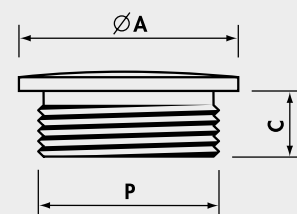
Ref. Nickel Plated Brass	P	Ø A (mm)	C (mm)	Quantity Box/Bag
2053M12N	M12X1,5	14	5	1,500/100
2053M16N	M16X1,5	18	5	1,000/100
2053M20N	M20X1,5	22	6,5	500/100
2053M25N	M25X1,5	28	7	200/100
2053M32N	M32X1,5	35	8	150/25
2053M40N	M40X1,5	44	8,5	100/25
2053M50N	M50X1,5	54	9	50/25
2053M63N	M63X1,5	67	10	25/25

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Nickel Plated Brass	P	Ø A (mm)	C (mm)	Quantity Box/Bag
2052007N	Pg 7	14	5	1,500/100
2052009N	Pg 9	17	6	1,000/100
2052011N	Pg11	20	6	500/100
2052013N	Pg13,5	22	6,5	500/100
2052016N	Pg16	24	6,5	500/100
2052021N	Pg21	30	7	200/50
2052029N	Pg29	39	8	100/25
2052036N	Pg36	50	9	50/25
2052042N	Pg42	57	10	25/25
2052048N	Pg48	64	10	25/25



Material: Entry plugs - NICKEL PLATED BRASS (CuZn 40 Pb 3)
Entry bushes - PLAIN BRASS
Protection: Entry plugs - IP 54

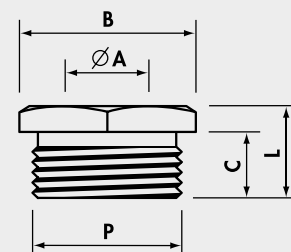


Entry bushes

BSP thread ISO 228/1

Ref. Brass	P	Ø A (mm)	B Spanner (mm)	C (mm)	L (mm)	Quantity Box/Bag
2021014	G1/4"	10	13	6	8,5	1,000/100
2021038	G3/8"	12	17	7,5	10,5	800/100
2021012	G1/2"	16	21	9,5	13	400/100
2021058	G5/8"	18	23	10	13,5	250/50
2021034	G3/4"	21	27	10	14	200/50
2021100	G1"	26,5	34	11	15,5	100/50
2021118	G1"1/8	31	38	12	16,5	100/25
2021114	G1"1/4	35	42	13	18	50/25
2021112	G1"1/2	41,5	48	13	18,5	50/25
2021200	G2"	51,5	60	13,5	19,5	25/25

Add to Ref: N for NICKEL PLATED BRASS



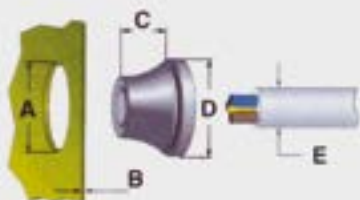
RUTASEAL GROMMETS



RS



Material: EPDM
 halogen-free and chemical resistant
 Temperature range: -40°C to +110°C
 Protection: IP 67
 Colour: RAL 7001 light grey
 Application:
 IP67 sealing of cables and conduits
 in Metric and Pg threaded entries
 through material thickness 0,5-4 mm



Fits Metric thread

Ref.	Fits Threaded Entry	Dimensions					Quantity Box/Bag
		A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	
RS0407.M12	M12	12,5	0,5 - 2	5,6	20,0	4 - 7	2,000/50
RS0509.M16	M16	16,5	1 - 4	11,0	21,0	5 - 9	2,000/50
RS0813.M20	M20/Pg13,5	20,5	1 - 4	13,4	25,5	8 - 13	3,000/50
RS1117.M25	M25	25,5	1 - 4	15,3	30,5	11 - 17	2,000/50
RS1520.M32	M32	32,5	1 - 4	18,6	38,5	15 - 20	1,000/25
RS1928.M40	M40	40,5	1 - 4	21,7	48,5	19 - 28	600/25
RS2735.M50	M50	50,5	1 - 4	25,0	60,5	27 - 35	250/10

Fits Pg thread

Ref.	Fits Threaded Entry	Dimensions					Quantity Box/Bag
		A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	
RS0305.07	Pg 7	12,5	0,5 - 2	5,4	20,0	3 - 5	2,000/50
RS0507.09	Pg 9	16,0	1 - 4	10,3	21,0	5 - 7	2,000/50
RS0710.11	Pg11	19,0	1 - 4	12,7	24,0	7 - 10	3,000/50
RS1014.16	Pg16	23,0	1 - 4	14,7	28,0	10 - 14	2,000/50
RS1420.21	Pg21	29,0	1 - 4	17,6	35,0	14 - 20	1,000/25
RS2026.29	Pg29	38,0	1 - 4	20,0	46,0	20 - 26	600/25
RS2635.36	Pg36	48,0	1 - 4	23,9	58,0	26 - 35	250/10

3600

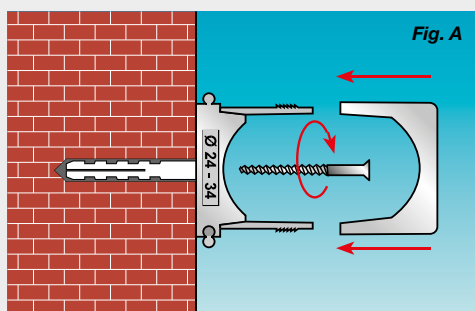


Material: ABS self-extinguishing class VO (UL94) UV stabilised
 Glow wire resistance: 750° C (CEI EN 60695-2-1)
 Temperature range:
 -20°C to +80°C (continuous)
 Colour: RAL 7035 light grey

SICURclips

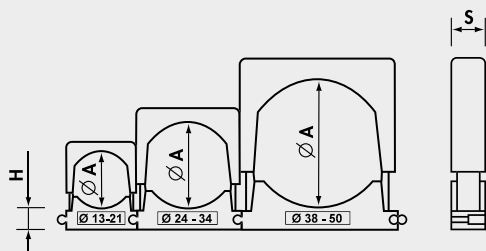
modular retaining clips - ABS

Application: Fix SICURclip base to surface using dia. 5 - 6 mm screw (Ref. Fig. A).
 Insert cable, tubing or flexible conduit.
 Fit adjustable cover and press to secure.
 Modular SICURclips of the same or different size may easily be joined together.



SICURclips for cable, tubing & flexible conduit

Ref.	Ø A min-max (mm)	H (mm)	S (mm)	Quantity
3601	13-21	8,5	16	100
3602	24-34	8,5	16	50
3603	38-50	8,5	16	25





MECHANICAL AND PNEUMATIC TOOLS

HP 1



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HP 1

Crimp style:



Crimping range:	PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 0,2 to 2,5 sqmm
Dimensions:	
Length (closed handles)	234,5 mm
Width (closed handles)	73,0 mm
Height	18,3 mm
Weight:	512 g
Package dimensions:	240 x 81 x 25 mm



HP 3



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HP 3

Crimp style:



Crimping range:	PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 0,25 to 6 sqmm
Dimensions:	
Length (closed handles)	234,5 mm
Width (closed handles)	73,0 mm
Height	18,3 mm
Weight:	498 g
Package dimensions:	240 x 81 x 25 mm



HNN 3



Technical features:



Crimpstar[®] HNN 3

Crimping range:	PA6.6 insulated terminals and connectors for conductor sizes 1,5 to 10 sqmm
Dimensions:	
Length (closed handles)	234,5 mm
Width (closed handles)	73,0 mm
Height	18,3 mm
Weight:	491 g
Package dimensions:	240 x 81 x 25 mm

Crimp style:



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.



HNN 4



Technical features:



Crimpstar[®] HNN 4

Crimping range:	PA6.6 insulated terminals and connectors for conductor sizes 10 and 16 sqmm
Dimensions:	
Length (closed handles)	234,5 mm
Width (closed handles)	73,0 mm
Height	18,3 mm
Weight:	492 g
Package dimensions:	240 x 81 x 25 mm

Crimp style:



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.



MECHANICAL TOOLS *Crimpstar*[®] RANGE

HPH 1



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HPH 1

Crimp style:



Through connectors
PE HD insulated, heat shrinkable.
for conductor sizes 0,5 to 6 sqmm
and PA6.6 connectors NL-M, NL-P
for conductor sizes 0,25 to 6 mm²

Crimping range:

Dimensions:

Length (closed handles) 234,5 mm

Width (closed handles) 73,0 mm

Height 18,3 mm

Weight: 512 g

Package dimensions: 240 x 81 x 25 mm



HNKE 4



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HNKE 4

Crimp style:



End sleeves
for conductor sizes 0,5 to 4 sqmm

Crimping range:

Dimensions:

Length (closed handles) 236 mm

Width (closed handles) 73,0 mm

Height 18,3 mm

Weight: 516 g

Package dimensions: 240 x 81 x 25 mm



MECHANICAL TOOLS *Crimpstar*[®] RANGE

HNKE 16



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:

Crimpstar[®] HNKE 16

Crimp style:



Crimping range:	End sleeves for conductor sizes 4 to 16 mm ²
Dimensions:	
Length (closed handles)	236 mm
Width (closed handles)	73,0 mm
Height	18,3 mm
Weight:	491 g
Package dimensions:	240 x 81 x 25 mm



HNKE 50



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:

Crimpstar[®] HNKE 50

Crimp style:



Crimping range:	End sleeves for conductor sizes 25 - 35 - 50 mm ²
Dimensions:	
Length (closed handles)	234,5 mm
Width (closed handles)	73,0 mm
Height	18,3 mm
Weight:	590 g
Package dimensions:	240 x 81 x 25 mm



MECHANICAL TOOLS *Crimpstar*[®] RANGE

HN 1



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HN 1

Crimp style:



Uninsulated terminals and connectors for conductor sizes 0,25 to 10 sqmm

Crimping range:

Dimensions:

Length (closed handles) 234,5 mm

Width (closed handles) 73,0 mm

Height 18,3 mm

Weight: 480 g

Package dimensions:

240 x 81 x 25 mm



HN 5



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HN 5

Crimp style:



Uninsulated terminals and connectors for conductor sizes 10 and 16 sqmm

Crimping range:

Dimensions:

Length (closed handles) 234,5 mm

Width (closed handles) 73,0 mm

Height 18,3 mm

Weight: 489 g

Package dimensions:

240 x 81 x 25 mm



MECHANICAL TOOLS *Crimpstar*[®] RANGE

HN-A25



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HN-A25

Crimping range:	Uninsulated terminals and connectors A-M, L-M and L-P series for conductor sizes 10 to 25 mm ²
Dimensions:	
Length (closed handles)	229 mm
Width (closed handles)	78,6 mm
Height	18,3 mm
Weight:	500 g
Package dimensions:	240 x 81 x 25 mm

Crimp style:



HN-D25



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HN-D25

Crimping range:	Cu tube lugs DR (DIN 46235) and through connectors DSV (DIN 46267) for conductor sizes 10 to 25 sqmm
Dimensions:	
Length (closed handles)	229 mm
Width (closed handles)	78,6 mm
Height	18,3 mm
Weight:	500 g
Package dimensions:	240 x 81 x 25 mm

Crimp style:



MECHANICAL TOOLS *Crimpstar*[®] RANGE

HF 1



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HF 1

Crimping range:

Dimensions:

Length (closed handles)

Width (closed handles)

Height

Weight:

Package dimensions:

Crimp style:



Open barrel brass terminals for conductors sizes 0,5 to 4 sqmm (not BN-FAB/FAR type)

234,5 mm

73,0 mm

18,3 mm

509 g

240 x 81 x 25 mm



HF 2



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:



Crimpstar[®] HF 2

Crimping range:

Dimensions:

Length (closed handles)

Width (closed handles)

Height

Weight:

Package dimensions:

Crimp style:



Open barrel brass terminals for conductors sizes 0,08 to 1,3 sqmm (28 to 16 AWG)

234,5 mm

73,0 mm

18,3 mm

497 g

240 x 81 x 25 mm



MECHANICAL TOOLS *Crimpstar*® RANGE

HX 1



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

Technical features:

Crimpstar® HX 1

Crimp style:



Crimping range:

Coaxial connectors type
RG58, RG59, RG62 and RG 71

Dimensions:

Length (closed handles) 234,5 mm

Width (closed handles) 73,0 mm

Height 18,3 mm

Weight: 481 g

Package dimensions: 240 x 81 x 25 mm



Specific positioner
for Cembre CS4
connectors

HN-CS4



Technical features:

Crimpstar® HN-CS4

Crimp style:



Crimping range:

Cembre CS4 connectors
for conductors sizes 2,5 - 4 - 6 sqmm

Dimensions:

Length (closed handles) 231 mm

Width (closed handles) 78,6 mm

Height 46 mm

Weight: 650 g

Package dimensions: 230 x 85 x 50 mm



Manual tool, compact and easy to use, equipped with:

- treated steel crimp jaws with high mechanical properties.
- factory-set ratchet for crimping control (automatic handle opening upon completion of crimping operation).
- Emergency release lever which, if necessary, opens the crimp jaws before their complete closure.
- Ergonomically designed non-slip moulded plastic grips.

MECHANICAL TOOLS *nd*[®] RANGE

ND#1



A generation of tools, with a unique mechanism to reduce operator effort. Small and compact, with ergonomically designed handles for ease of operation.

High quality materials combined with advanced design and manufacturing technology, produce a reliable tool with a guaranteed consistent, crimping operation.

Technical features:

ND#1	Crimp style:	
Crimping range:	Insulated and uninsulated end sleeves for conductors sizes 0,3 to 1,5 sqmm	
Dimensions:		
Length (closed handles)	190 mm	
Width (closed handles)	72 mm	
Height	21 mm	
Weight:	470 g	

ND#2



Technical features:

ND#2	Crimp style:	
Crimping range:	Insulated and uninsulated end sleeves for conductors sizes 1 to 6 sqmm	
Dimensions:		
Length (closed handles)	190 mm	
Width (closed handles)	72 mm	
Height	21 mm	
Weight:	470 g	

ND#3



Technical features:

ND#3	Crimp style:	
Crimping range:	Insulated and uninsulated end sleeves for conductors sizes 6 to 16 sqmm	
Dimensions:		
Length (closed handles)	190 mm	
Width (closed handles)	72 mm	
Height	21 mm	
Weight:	470 g	

ND#4



Technical features:

ND#4	Crimp style:	
Crimping range:	Insulated and uninsulated end sleeves for conductors sizes 0,5 to 4 sqmm	
Dimensions:		
Length (closed handles)	190 mm	
Width (closed handles)	72 mm	
Height	21 mm	
Weight:	470 g	

Package dimensions: 195 x 76 x 20 mm



MECHANICAL TOOLS ZKE RANGE

Crimp style:



ZKE 6-F

Tool for crimping end sleeves
0,5 to 6 sqmm
front insertion

Crimp style:



ZKE 610

Single aperture, ratchet controlled tool
for crimping end sleeves,
0,08 to 10 sqmm
side insertion

Crimp style:



ZKE 2

For end sleeves
0,5 to 16 sqmm

MECHANICAL TOOLS HP4 RANGE

HP4-R

Professional manual mechanical tool with ratchet mechanism that prevents the handles from opening again before reaching the ratchet.

Equipped with a positioning device to reduce the operator's effort and facilitate proper crimping of the conductor. According to the different thicknesses of the conductor insulation, the crimping on the insulation can be carried out by adjusting the jaws through three different settings:

1) strong, 2) medium, 3) light.

The tool is particularly easy to use thanks to its shape and handle coating.

At the end of the crimping the outer surface of the conductor is automatically stamped with the following crimping code:

one point for red conductor sizes from 0.25 to 1.5 mm²



Construction features:

- Special treated and externally protected steel body, ratchet and handles.
- Handle coating in soft red PVC plastic.

Technical features:



HP4-R

Crimping range:	PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 0,25 to 1,5 sqmm
Dimensions:	
Length (closed handles)	265 mm
Width (closed handles)	80 mm
Weight:	500 g
Package dimensions:	330 x 110 x 50 mm

Crimp style:



HP4-B

Professional manual mechanical tool with ratchet mechanism that prevents the handles from opening again before reaching the ratchet.

Equipped with a positioning device to reduce the operator's effort and facilitate proper crimping of the conductor. According to the different thicknesses of the conductor insulation, the crimping on the insulation can be carried out by adjusting the jaws through three different settings:

1) strong, 2) medium, 3) light.

The tool is particularly easy to use thanks to its shape and handle coating.

At the end of the crimping the outer surface of the conductor is automatically stamped with the following crimping code:

two points for blue conductor sizes from 1.5 to 2.5 mm²



Construction features:

- Special treated and externally protected steel body, ratchet and handles.
- Handle coating in soft blue PVC plastic.

Technical features:



HP4-B

Crimping range:	PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 1,5 to 2,5 sqmm
Dimensions:	
Length (closed handles)	265 mm
Width (closed handles)	80 mm
Weight:	500 g
Package dimensions:	330 x 110 x 50 mm

Crimp style:



MECHANICAL TOOLS HP4 RANGE



Construction features:

- Special treated and externally protected steel body, ratchet and handles.
- Handle coating in soft yellow PVC plastic.



HP4-G

Professional manual mechanical tool with ratchet mechanism that prevents the handles from opening again before reaching the ratchet.

Equipped with a positioning device to reduce the operator's effort and facilitate proper crimping of the conductor. According to the different thicknesses of the conductor insulation, the crimping on the insulation can be carried out by adjusting the jaws through three different settings:

1) strong, 2) medium, 3) light.

The tool is particularly easy to use thanks to its shape and handle coating.

At the end of the crimping the outer surface of the conductor is automatically stamped with the following crimping code:

three points for yellow conductor from 4 to 6 sqmm

Technical features:

HP4-G

Crimp style:



Crimping range:

PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 4 to 6 sqmm

Dimensions:

Length (closed handles)

320 mm

Width (closed handles)

105 mm

Weight:

810 g

Package dimensions:

330 x 110 x 50 mm



HP4-C10

Professional manual mechanical tool with ratchet mechanism that prevents the handles from opening again before reaching the ratchet.

The tool is particularly easy to use thanks to its shape and handle coating.

Construction features:

- Specially treated and externally protected steel body, ratchet and handles.

- Handle coating in soft yellow PVC.

Technical features:

HP4-C10

Crimp style:



Crimping range:

For sleeve connectors type C6-C6 and C10-C10

Dimensions:

Length (closed handles)

325 mm

Width (closed handles)

105 mm

Weight:

730 g

Package dimensions:

330 x 110 x 50 mm



MECHANICAL TOOL HWE1

WITH INTERCHANGEABLE DIES

New

HWE1

A robust and reliable tool designed to optimise the installers time and effort. A single tool body with a range of interchangeable dies allows a quick and simple transfer from one cable/connector combination to another, across a range of applications.

Technical features

- Length: 240 mm
- Weight: 590 g
- Automatic opening of handles following completion of the crimping operation
- Dull Nickel finish
- Anti-slip handle grips



Rapid insertion/extraction of dies without using other tools



Also available:

HWE1 KIT

comprising:

- HWE1 Manual mechanical tool
- WF16 die
- IT6 die
- all contained in a sturdy plastic case with extra compartments for interchangeable dies



INTERCHANGEABLE DIES TO ORDER SEPARATELY

INSULATED AND UNINSULATED END SLEEVES

WF16

Size 0,5 ÷ 16 mm²

INSULATED CONNECTORS RED, BLUE AND YELLOW

IT6

Size 0,5 ÷ 6 mm²

PHOTOVOLTAIC CONNECTORS (MULTI-CONTACT)

MC3

Size 4 ÷ 6 mm²

MC4

Size 4 ÷ 6 mm²

INSULATED AND UNINSULATED END SLEEVES

WF6

Size 0,5 ÷ 6 mm²

WF35

Size 16 ÷ 35 mm²

UNINSULATED CABLE LUGS

NIT10

Size 0,5 ÷ 10 mm²

OPEN BARREL BRASS CONNECTORS

OB2.5P

Size 0,5 and 2,5 mm²

SUB-D 075

Size 0,05 and 0,75 mm²

SUB-D 050

Size 0,08 and 0,5 mm²

COAXIAL CONNECTORS

C59

RG58, RG59, RG62



See page 115 for HB 11 cable stripper

New

DIES FOR PHOTOVOLTAIC CONNECTORS



4300-3540
MC3 Multi Contact

4300-3539
MC4 Multi Contact

4300-3541
Tyco Solarlok

See page 115 for **HB 11** cable stripper

Technical features

- Length: 234 mm
- Weight: 460 g
- Automatic opening of handles following completion of the crimping operation
- Colour: black

To assist correct die selection, the type of connector is illustrated on each die.

Each die also carries an illustration of the steps in each crimping process, to assist in achieving the best result.

INTERCHANGEABLE DIES TO ORDER SEPARATELY

INSULATED TERMINALS RED, BLUE, YELLOW AND GREEN

4300-3129	4300-3128
Size 0,5 ÷ 2,5 mm ² (Red - Blue)	Size 4 ÷ 6 mm ² (Yellow) Size 0,1 ÷ 0,4 mm ² (Green)

CONNECTORS WITH HEAT SHRINKABLE INSULATION

4300-3258	4300-3262
Size 0,5 ÷ 2,5 mm ² (Red - Blue)	Size 4 ÷ 6 mm ² (Yellow) Size 0,32 ÷ 0,75 mm ² (Green)

UNINSULATED CONNECTORS

4300-3137	4300-3241
Size 0,75 ÷ 2,5 mm ²	Size 4 ÷ 10 mm ²

CONTACTS FOR MULTI POLAR CONNECTORS (eg. ILME, HTS, CONTACT)

4300-3147	4300-3148
Size 0,14 ÷ 4 mm ²	Size 6 ÷ 10 mm ²

INSULATED AND UNINSULATED END SLEEVES

4300-3127	4300-3153	4300-3154
Size 0,25 ÷ 10 mm ²	Size 16 ÷ 25 mm ²	Size 35 ÷ 50 mm ²

OPEN BARREL CONNECTORS

4300-3146
Size 0,5 ÷ 6 mm ²

BNC/TNC CONNECTORS FOR COAXIAL CABLES

4300-3136	4300-3140
RG 58, 59, 62, 71	RG 174, 179

TV - SATELLITE RECEIVER CONNECTORS

4300-3138
RG 6, 59

PHONE CONNECTORS

4300-3144	4300-3132
RJ 45 (LARGE)	RJ 11 (SMALL)

PHOTOVOLTAIC CONNECTORS (MULTI-CONTACT)

4300-3540	4300-3539	4300-3541
MC3	MC4	Tyco Solarlok
Size 2,5 - 4/6 mm ²	Size 2,5/4/6 mm ²	Size 2,5/4/6 mm ²

Modular die storage housings are easily combined for convenient transportation



Modular die pack

A robust and reliable tool designed to optimise the installers time and effort.

A single tool body with a range of interchangeable dies allows a quick and simple transfer from one cable/connector combination to another, across a wide range of applications.

Modular dies may be inserted/extracted without using any tools and are connected in pairs for speed and convenience.



IDT tool pack



VALSTAR R3 IDT

To order separately - sturdy plastic case designed to store an IDT tool and up to 10 modular dies.

MECHANICAL TOOLS TN RANGE

TN 70SE

Professional manual mechanical tool suitable for crimping A-M Cu lugs and non-insulated L-M and L-P connectors.

Heat treated steel crimp jaws.
Easily adjustable die positioning by knurled screw and reference vernier scale.
Handles made from anti-slip plastic with hilt.



Technical features:



TN 70SE

Crimp style:



Crimping range:

*Uninsulated terminals and connectors for conductor sizes 6 R/F to 70 R/F mm²

Dimensions:

Length (closed handles)

450 mm

Width (closed handles)

127 mm

Weight:

2 kg

*R= Rigid conductor F= Flexible conductor

TNN 70

Professional manual mechanical tool suitable for the crimping of wire terminals and PA 6.6 insulated connectors.

Heat treated steel crimp jaws.
Easily adjustable die positioning by knurled screw and reference vernier scale.
Handles made from anti-slip plastic with hilt.



Technical features:



TNN 70

Crimp style:



Crimping range:

*Polyamide PA6.6 insulated terminals and connectors for conductor sizes 10 F to 70 F mm²

Dimensions:

Length (closed handles)

450 mm

Width (closed handles)

127 mm

Weight:

2 kg

*F= Flexible conductor

MECHANICAL TOOLS TN RANGE

TN 120SE



Professional manual mechanical tool suitable for crimping A-M Cu lugs and non-insulated L-M and L-P connectors. Heat treated steel crimp jaws. Easily adjustable die positioning by knurled screw and reference vernier scale. Handles made from anti-slip plastic with hilt.

Technical features:

TN 120SE

Crimp style:



Crimping range:

*Uninsulated terminals and connectors for conductor sizes 10 R/F to 120 R/150 F mm²

Dimensions:

Length (closed handles)

700 mm

Width (closed handles)

170 mm

Weight:

3 kg

*R= Rigid conductor F= Flexible conductor

TNN 120



Professional manual mechanical tool suitable for the crimping of wire terminals and PA 6.6 insulated connectors. Heat treated steel crimp jaws. Easily adjustable die positioning by knurled screw and reference vernier scale. Handles made from anti-slip plastic with hilt.

Technical features:

TNN 120

Crimp style:



Crimping range:

*Polyamide PA6.6 insulated terminals and connectors for conductor sizes 10 F to 120 F mm²

Dimensions:

Length (closed handles)

700 mm

Width (closed handles)

170 mm

Weight:

3 kg

*F= Flexible conductor

MECHANICAL TOOLS TND RANGE

TND 6-70

Mechanical tools equipped with rotating dies with hexagonal imprint compliant with **DIN 480863** suitable to crimp copper lugs according to **DIN 46235** and through connectors according to **DIN 46267 T.1** (refer to page 36-37), Particularly sturdy and easy to handle.



Technical features:



TND 6-70

Crimp style:



Crimping range:

Uninsulated terminals and connectors according to **DIN 46235** and **DIN 46267 T.1** for conductor sizes 6 to 70 mm²

Dimensions:

Length (closed handles)

515 mm

Width (closed handles)

132 mm

Weight:

2 kg

TND 10-120

Mechanical tools equipped with rotating dies with hexagonal imprint compliant with **DIN 480863** suitable to crimp copper lugs according to **DIN 46235** and through connectors according to **DIN 46267 T.1** (refer to page 36-37), Particularly sturdy and easy to handle.



Technical features:



TND 10-120

Crimp style:



Crimping range:

Uninsulated terminals and connectors according to **DIN 46235** and **DIN 46267 T.1** for conductor sizes 10 to 120 mm²

Dimensions:

Length (closed handles)

665 mm

Width (closed handles)

162 mm

Weight:

3,7 kg

CABLE CUTTERS

KT



KT 1

Cutting Capacity - Section Cond. sqmm

Rigid	Multi-Cond.	Flexible
Cu 16 Al 35	Cu 50 Al 50	Cu 70



KT 2

Cutting Capacity - Section Cond. sqmm

Rigid	Multi-Cond.	Flexible
Cu 16 Al 50	Cu 70 Al 70	Cu 95



KT 5

Hand operated tool for cutting cables up to max section 25 sqmm



KT 3

For cutting cables Ø max 32 mm
Weight: 0,59 kg
Length: 255 mm



KT 4

For cutting cables Ø max 52 mm
Weight: 0,89 kg
Length: 310 mm

511

5116660250

For cutting cables Ø max 18 mm
Weight: 1,5 kg
Length: 600 mm

5116660500

For cutting cables Ø max 25.4 mm
Weight: 3 kg
Length: 800 mm



WIRE STRIPPERS

HB 6



Wire strippers, including stripping die for PVC insulated cables 0,02 to 10 sqmm

Interchangeable stripping dies available upon request:



4320-0864, flat blade suitable for: PVC from 0,02 to 10 sqmm



4320-0866, rounded blades suitable for: PVC from 4 to 16 sqmm



4320-0865, 'V' blades suitable for: PTFE from 0,1 to 4 sqmm



HB 11



For photovoltaics insulated cables 2,5 to 6 sqmm stripping length 8,5 mm

SCISSORS

New

SC 1



Electricians scissors with high tensile steel blades allowing for excellent strength and performance. Specially micro-serrated blades for anti-slip purpose. Handles are made from dual component materials.



SC 3X

Multi-purpose scissors with high hardness blades (56 HRC) and anti slide serrations. The moulded plastic handles combine a rigid structure with a softer material for finger comfort. Cutting of flexible conductors up to 35 mm²



SC 4X

New

Multi-purpose scissors with high hardness blades (56 HRC) and anti slide serrations. The moulded plastic handles combine a rigid structure with a softer material for finger comfort. Cutting of flexible conductors up to 50 mm²

CABLE STRIPPING TOOLS

HB 13UE

Universal cable stripping tool for external sleeves of Low/Medium Voltage cables \varnothing 12,7 to 63,5 mm and primary insulator in XLPE max \varnothing 38,1 mm



HB 12N

For vulcanised extruded semiconductor

HB12N cable stripping tool removes the semiconductor layer by being manually rotated around the cable while lateral advancement is achieved automatically. Safe and convenient, it can be used on cables with a semi-con diameter between 18 - 60 mm.

- Sturdy frame in anodised Aluminium alloy and Steel.
- Special Steel blade with precise cutting depth regulation.
- Stripping operation can start at any point along the conductor.
- Bearing mounted rollers provide smooth cutting action.



- With "REVERSE" function, which allows the removal of semiconductor up to 7 mm thick from the sheath of the cable.
- Double speed for each direction.



The **HB 12N** kit includes:

- HB 12N cable stripping tool
- sturdy plastic case

HB 2

Cable stripping tool for circular cables \varnothing 4,5 to 28,5 mm



HB 10

Insulated knife has an interchangeable straight blade and plastic blade protector that folds into the handle. Ergonomic handle made of anti shock plastic material



HB 9

Insulated knife, with curved blade and protective cover. Suitable for insulation and screen removal, equipped with blade guide to avoid damage to strands. Handle is made of a bi-component plastic material.



HAND TOOL FOR CUTTING AND SEALING FLEXIBLE CONDUIT

KTS 1632



Cuts and seals flexible plastic conduit in a single operation. Lightweight and easy to operate. Suitable for flexible conduits from Ø16 to Ø32 mm.

Length: 230 mm
Width: 58 mm
Thickness: 32 mm.
Weight: 0,32 kg.



PC 1

Plastic pipe cutting tool
 Cutting capacity: Ø 6 to Ø 42 mm.

Body:
 die-cast aluminium alloy
Blade material:
 hardened Carbon Steel

FRAME-TYPE HOLE PUNCHING TOOL FOR CABLE TRUNKING

MT-FC48N

Table denotes the punch/die set reference, for each hole size.
 Suitable for punching holes in mild steel, fibreglass or plastic material, up to 2 mm thick.

Hole dimensions					Maximum thickness of mild steel (mm)	Code
Nominal	Ø (inch)	Pg	ISO	Inch		
15,5	.610	Pg9	-	-	2	RD 15.5 SS-FC
16,2	.638	-	ISO-16	-		RD 16.2 SS-FC
17,5	.689	-	-	-		RD 17.5 SS-FC
18,8	.740	Pg11	-	-		RD 18.8 SS-FC
19,1	.752	-	-	-		RD 19.1 SS
20,5	.807	Pg 13,5	ISO-20	-		RD 20.5 SS
22,6	.890	Pg16	-	-		RD 22.6 SS
23,8	.937	-	-	5/8"		RD 23.8 SS
25,4	1.000	-	ISO-25	-		RD 25.4 SS
27,0	1.063	-	-	3/4"		RD 27.0 SS
28,5	1.122	Pg21	-	-		RD 28.5 SS
30,5	1.201	-	-	7/8"		RD 30.5 SS
31,8	1.252	-	-	-		RD 31.8 SS
32,5	1.279	-	ISO-32	-		RD 32.5 SS
34,6	1.362	-	-	-		RD 34.6 SS
37,2	1.464	Pg29	-	-		RD 37.2 SS
38,1	1.500	-	-	-		RD 38.1 SS
40,5	1.594	-	ISO-40	-		RD 40.5 SS-FC
41,3	1.626	-	-	-		RD 41.3 SS-FC
42,5	1.673	-	-	1"1/4"		RD 42.5 SS-FC
43,2	1.701	-	-	-		RD 43.2 SS-FC
44,5	1.752	-	-	-		RD 44.5 SS-FC
47,2	1.858	Pg36	-	-		RD 47.2 SS-FC



VAL P30
 Supplied in a robust plastic case.

Lightweight and easy to operate, designed for punching holes up to 47,2 mm diameter in the side wall of trunking without the need for pre drilling.

Max centre of hole to edge of trunking: 53,5 mm

Length : 251,5 mm
Width: 224 mm
Thickness : 66 mm
Weight: 3,28 kg



BENCH PRESSTOOLS



BENCH PRESS TOOLS



PNB-1

INTERCHANGEABLE DIES (to be ordered separately)

Die Set	Guard*	Connector Type	Nominal Conductor Size sqmm
PV-1	PU-1	Insulated connectors	green 0,2÷0,5
PR-1			red 0,25÷1,5
PB-1			blue 1,5÷2,5
PG-1			yellow 4÷6
KE 0.75-1	PK-1	End Sleeves	0,3 - 0,5 - 0,75
KE 2.5-1			1 - 1,5 - 2,5
KE 10-1			4 - 6 - 10
MTT 16-50	ME-1		16
MTT 25-50			25
N1-1	PU-1	A 03-M.. S 1.5-..	0,25 - 1,5
		A 06-M.. S 2.5-..	1,5 - 2,5
		A 1-M.. S 6-..	4 - 6
ME 1-50	PU-1		A1-M.. 4 - 6
ME 2-50			A2-M.. S10-M.. 10
ME 3-50	ME-1	Uninsulated copper lugs	A3-M.. 16
ME 5-50			A5-M.. 25
ME 7-50			A7-M.. 35
ME 9-50			A9-M.. 50
ME 10-50			A10-M.. 50
ME 12-50			A12-M.. 50
MN 2RF-50			MN RF-1
MN 3RF-50	ANE3-M.. 16		
MN 5RF-50	ANE5-M.. 25		
MN 7RF-50	ANE7-M.. 35		
			ANE9-M.. 35

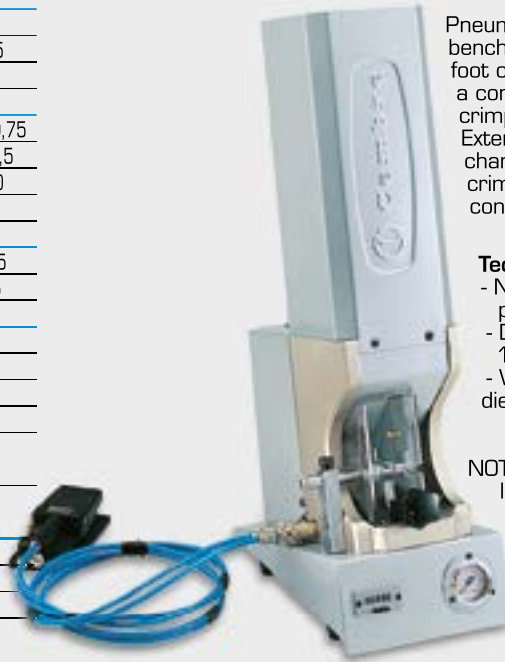
* Supplied as standard with the machine

Pneumo-hydraulic, production bench press, controlled by a foot operated pedal, provides a consistent and reliable crimped connection. Extensive range of interchangeable dies available for crimping a wide variety of connectors.

Technical details:

- Nominal operating pressure: 6 bar
- Dimensions LxDxH: 180x320x700 mm
- Weight: 23 kg (without dies)

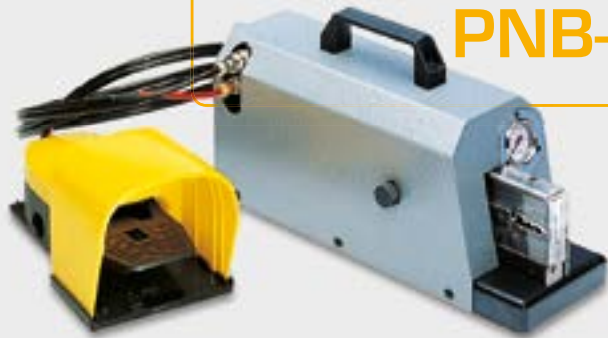
NOTE: for applications not listed, please contact Cembre.



PNB-3

Tool	Connector Type	Conductor Size sqmm
PNB-3P*	Insulated connectors red, blue and yellow	0,25÷6
PNB-3PD	Insulated terminals and butt connectors - frontal insertion	0,25÷6
PNB-3N1	Uninsulated terminals	0,25÷10
PNB-3N5	Uninsulated terminals	10÷16
PNB-3NN3	Polyamide insulated terminals	1,5÷10
PNB-3NN4	Polyamide insulated terminals	10÷16
PNB-3F/M	Bullet connectors	0,5÷2,5

* Will also crimp Polycarbonate fully-insulated terminals if fitted with PNB3F/M positioner; available as an optional accessory.



Technical details:

- Normal operating pressure: 6±7 bar
- Dimensions LxDxH: 130x370x195 mm
- Weight: 10,3 kg

Pneumatic bench press operated by foot pedal for crimping terminals and connectors 0,25 to 16 sqmm.



PNB-4KE

Tool	Connector Type	Conductor Size sqmm
PNB-4KE	End Sleeves type PK. and type KE	0,3÷10

Technical details:

- Nominal operating pressure: 6 bar
- Dimensions LxDxH: 120x160x300mm
- Weight: 6 kg



Pneumatic bench press, controlled by a foot operated pedal. Supplied with a multi-aperture die suitable for crimping insulated and uninsulated end sleeves from 0,3 to 10 sqmm. Compact and efficient. Easy to operate, producing a secure and reliable crimped connection.

ELECTRICAL CRIMPING TOOL

ECT-KE2.5N

Portable



Portable electrical crimping tool for end sleeves 0,14 to 2,5 sqmm with 13 mm crimp length. Crimping occurs automatically when the end sleeve activates an internal pressure switch.

Technical details:

- Supply voltage: 220/230V 50Hz
- Maximum operating temperature: 40 °C
- Crimp length: 13 mm

Tool	Connector Type	Conductor Size sqmm
ECT-KE2.5N	End Sleeves type PK.. and type KE	0.14÷2.5



PNEUMATIC CRIMPING TOOLS

Hand held - PNB series



PNB-6KE PNB-7KE

Technical details:

PNB-6KE

Crimping range	0,25 ÷ 2,5 sqmm / 24 ÷ 14 AWG
Weight	400 g
Dimensions	Ø 44 x 200 mm
Spiral hose length	2 m

PNB-7KE

Crimping Range	4 ÷ 10 sqmm / 12 ÷ 8 AWG
Weight	400 g
Dimensions	Ø 44 x 200 mm
Spiral hose length	2 m

PNB-6KE and PNB-7KE hand tools facilitate the rapid crimping of insulated end sleeves while avoiding the operator discomfort associated with ordinary manual tools.

Lightweight and easy to use, these tools are ideal for panel building applications and component assembly.

Both tools are designed to be maintenance-free and need no routine calibration. A 4-6 bar air supply is required for connection via the quick coupler fitted to the hose supplied with the tool.



PNEUMATIC CRIMPING TOOLS

Bench mounted tools with foot pedal - PNB series

PNB-6KE-T
PNB-7KE-T



PNB-6KE-T

Crimping range	0,25 ÷ 2,5 sqmm / 24 ÷ 14 AWG
Weight	1000 g
Dimensions	Ø 140 x 200 x 70 mm
Inclusive of spiral hose, foot pedal and bench mount with storage	

Technical details:

PNB-7KE-T

Crimping Range	4 ÷ 10 sqmm / 12 ÷ 8 AWG
Weight	1000 g
Dimensions	Ø 140 x 200 x 70 mm
Inclusive of spiral hose, foot pedal and bench mount with storage	



PNB-6KE-T and **PNB-7KE-T** have bench mounts with storage and are foot pedal operated to allow operators to have both hands free when assembling cable harnesses.

Both tools are designed to be maintenance-free and need no routine calibration. A 4-6 bar air supply is required for connection via the quick coupler fitted to the hose supplied with the tool.

BENCH PRESS

ELB-3

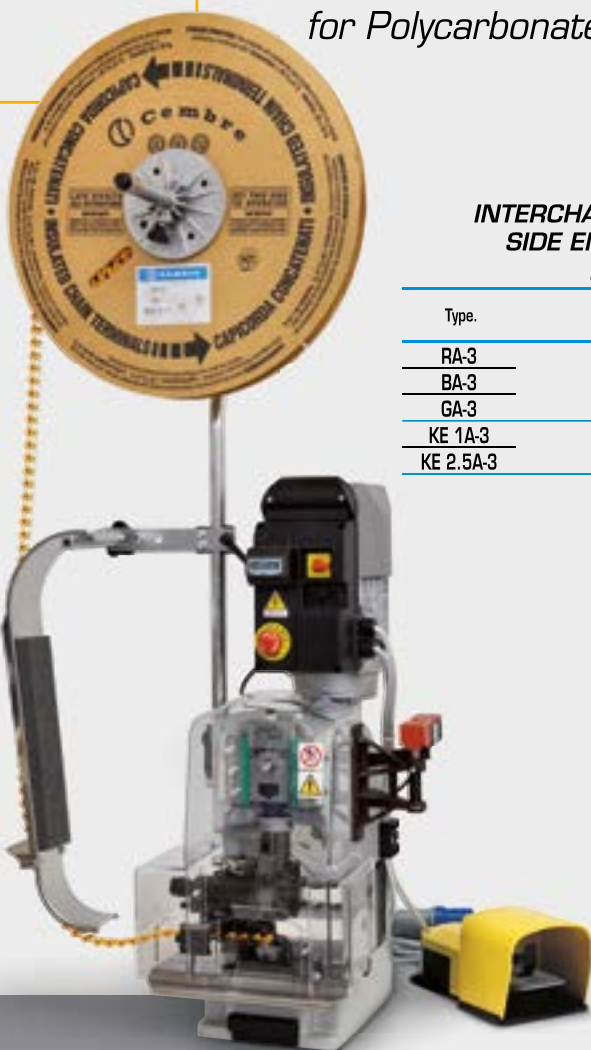
for Polycarbonate insulated chain connectors



Electro-pneumatic, production bench press, controlled by a foot operated pedal. Producing a consistent and reliable crimped connection. Interchangeable application heads available to suit the complete range of polycarbonate insulated connectors.

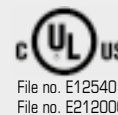
Technical details:

- Air supply: 6 bar (90 psi)
- Dimensions LxDxH: 180x250x620mm
- Weight: 41 kg (without application heads)
- Motor:
 - Power 0,55 kW / 0,75 HP
 - Supply Voltage 220 V / 50 Hz
 - Speed 2.800 r.p.m



INTERCHANGEABLE APPLICATION HEADS, SIDE ENTRY WITH PNEUMATIC FEED (ORDER AS REQUIRED)

Type.	Connectors	Conductor Size sqmm
RA-3	Polycarbonate insulated chain terminals	red
BA-3		blue
GA-3		yellow
KE 1A-3	Insulated chain end sleeves	0,5÷1
KE 2.5A-3		1÷2,5



HAZARD FREE

OPERATING TEMPERATURE UP TO 115°C



See pages 6-7 and 16 for types and features of the insulated chain connectors and end sleeves.



HYDRAULIC CRIMPING TOOLS AND CUTTERS

HYDRAULIC CRIMPING TOOL

HT 45-E

general features

Crimping force kN	Dimensions mm		Weight kg
	length	width	
50	346	130	2,0

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	"C" sleeve connectors	H.V. lugs and splices
150	35	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P1*	445x290xh95	1,2	✳	—

*Suitable for storage of the tool and 20 sets of dies.

Lightweight and compact, this tool is ideal for the compression of connectors on over head lines and other general applications.

Having the benefit of spring loaded handles, the dies can be advanced using only one hand; therefore leaving the other hand free to position the connector.

For ease of operation and comfort of the operator, the tool head can be fully rotated through 180 degrees.

The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, and a pressure releasing system can easily be operated at any stage of the compression.



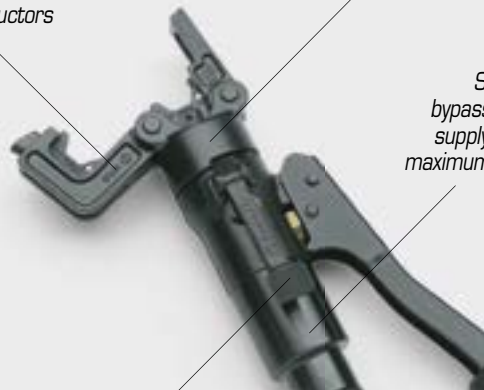
The operator can advance the dies using only one hand, leaving the other hand free to position the connector.

Openable head, ideal for derivations from running conductors

180° rotatable head, to work in the most comfortable position

Safety valve bypassing the oil supply when the maximum pressure is reached

Pressure releasing system, that can be operated at any stage.



HYDRAULIC CRIMPING TOOL

general features

Crimping force kN	Dimensions mm		Weight kg
	length	width	
50	380	130	2,7

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	End sleeves	"C" sleeve Connectors
240	120	120	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P1*	445x290x95	1,2	✳	—

* Suitable for storage of the tool and 20 sets of dies.

HT 51-KV version also available for Power Supply Companies



New design two speed hydraulic tool, lightweight and compact, this tool is ideal for working in confined spaces. Having the benefit of spring loaded handles, the dies can be advanced using only one hand; therefore leaving the other hand free to position the connector.

For ease of operation and comfort of the operator, the tool head can be fully rotated through 180 degrees. The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, and a pressure release system can easily be operated at any stage of the compression.

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
50	700	196	75	1,6

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	End sleeves	"C" sleeve Connectors
300	120	120	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P1*	445x290x95	1,2	✳	—
Canvas bag 007	350x105	0,13	—	✳

* Suitable for storage of the tool and 20 sets of dies.



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176) RH 50 is suitable for installing the same range of connectors as HT 51.

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
50	700	210	70	1,6

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	End sleeves
300	120	120

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P1*	445x290x95	1,2	✳	—
Canvas bag 007	350x105	0,13	—	✳

* Suitable for storage of the tool and 20 sets of dies.



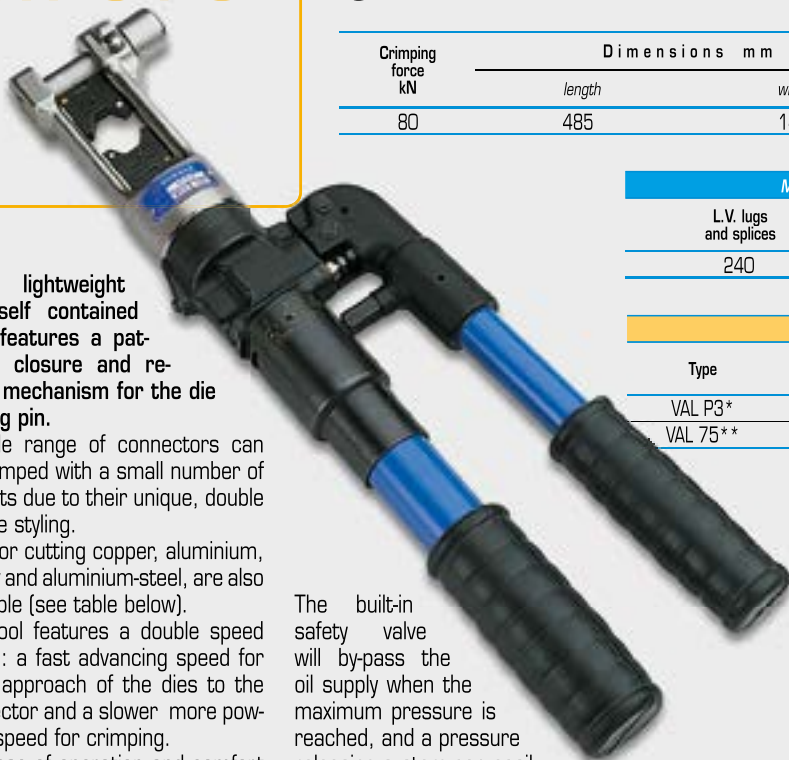
Particularly suitable for high volume bench crimping.

Hydraulic press-head complete with quick automatic coupler for connection to hydraulic pump with working pressure of 700 bar max, (see page 172-176). RHM50 is suitable for installing the same range of connectors as RH50.

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

HYDRAULIC CRIMPING TOOL

HT 81-U



This lightweight and self contained tool, features a patented closure and release mechanism for the die locking pin.

A wide range of connectors can be crimped with a small number of die sets due to their unique, double groove styling.

Dies for cutting copper, aluminium, aldrej and aluminium-steel, are also available (see table below).

The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping.

For ease of operation and comfort of the operator the tool head can be fully rotated through 180 degrees.

The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, and a pressure releasing system can easily be operated at any stage of the compression.

general features

Crimping force kN	Dimensions mm		Weight Kg
	length	width	
80	485	141	3,4

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	"C" sleeve connectors	H.V. lugs and splices
240	100	200

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P3*	620x380xh135	2,5	✳	—
VAL 75**	270x80xh30	0,15	—	✳

* Suitable for storage of the tool and three VAL 75.

** Suitable for storing five sets of dies.



HYDRAULIC PRESSHEAD

RHU 81



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

This lightweight and self contained head, features a patented closure and release mechanism for the die locking pin.

The head is easy to use and is ideally suited for crimping in confined spaces.

RHU81 is suitable for installing the same range of connectors as HT 81-U.

general features

Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
80	700	235	91	1,9



MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	"C" sleeve connectors	H.V. lugs and splices
240	100	200

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 007	350x105	0,13	—	✳

HT 81-U and RHU 81 ACCESSORIES FOR CUTTING CONDUCTORS

Die Type	Cutting Capacity	Conductor Type
	Ø 16 mm	Cu, Alu, Aldrej and Alu-Steel
MB2-80U	This die is suitable to cut steel conductors ($R \leq 160 \text{ daN/mm}^2$) having the most common strandings, i.e.: 19 x 1,2 = Ø est. 6,0 mm 7 x 3,0 = Ø est. 9,0 mm 19 x 2,1 = Ø est. 10,5 mm 19 x 2,3 = Ø est. 11,5 mm	
MB3-80U	Suitable to cut aluminium strands of 150 mm ² aluminium-steel conductors, without damage to the steel core	



These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

HYDRAULIC CRIMPING TOOL

general features

HT 120

Crimping force kN	Dimensions mm		Weight kg
	length	width	
120	488	138	5,7

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs	H.V. Splices
400	240	185	400	400*

* limited to the cable insulation diameter

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P3*	620x380x135	2,5	✳	—

*Suitable for storage of the tool and 14 sets of dies.



The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, and a pressure release system can easily be operated at any stage of the compression.



This lightweight and self contained tool will accept the semi-circular slotted dies, common to most 130 kN tools.

It is particularly suitable for installing crimp type electrical connectors for overhead line applications.

The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping.

For ease of operation and comfort of the operator the tool head can be fully rotated through 180 degrees.

HT 120-KV
version also available for
Power Supply Companies



Die release system, protected from accidental operation

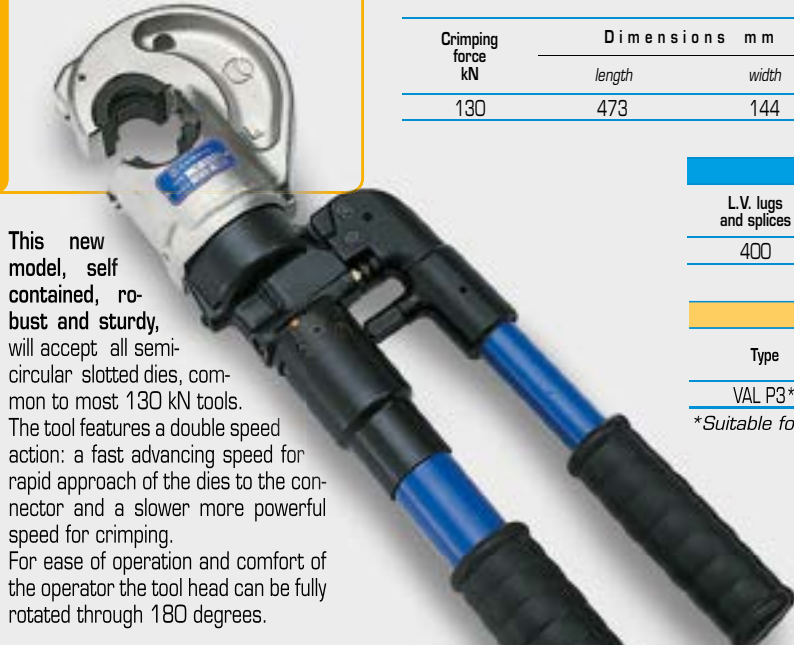
HT 120 features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping.



Pressure release trigger, which can be operated at any stage of the compression.

HYDRAULIC CRIMPING TOOL

HT 131-C



This new model, self contained, robust and sturdy, will accept all semi-circular slotted dies, common to most 130 kN tools. The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping. For ease of operation and comfort of the operator the tool head can be fully rotated through 180 degrees.

general features

Crimping force kN	Dimensions mm		Jaw Opening mm	Weight kg
	length	width		
130	473	144	25	5,5

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs	H.V. Splices
400	240	185	400	400*

* limited to the cable insulation diameter

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P3*	620x380xh135	2,5	✳	—

*Suitable for storage of the tool and 14 sets of dies

The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, and the pressure release system can easily be operated at any stage of compression.



HYDRAULIC PRESSHEADS

RHC 131



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176) This new design with improved mechanical features,

general features

Crimping force kN	Max operating pressure bar	Dimensions mm		Jaw Opening mm	Weight kg
		length	width		
130	700	232	124	25	3,8



MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs	H.V. Splices
400	240	185	400	400*

* limited to the cable insulation diameter

STORAGE

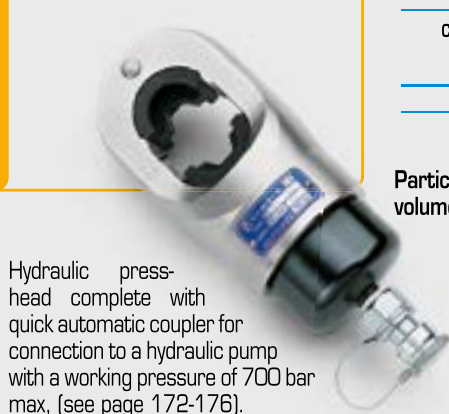
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P26*	445x290xh115	1,2	—	✳

*Suitable for storage of the head and 14 sets of dies

is suitable for installing the same range of connectors as HT 131-C.



RHM 132



Hydraulic press-head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

general features

Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
130	700	216	80	3,1



Particularly suitable for high volume bench crimping.

MAIN APPLICATIONS - max section mm²

L.V. lugs	Insulated terminals	H.V. lugs
400	240	400

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P26*	445x290xh115	1,2	—	✳

*Suitable for storage of the head and 14 sets of dies



These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

HYDRAULIC CRIMPING TOOL

general features

Crimping force kN	Dimensions mm		Jaw Opening mm	Weight kg
	length	width		
130	538	144	42	7,0

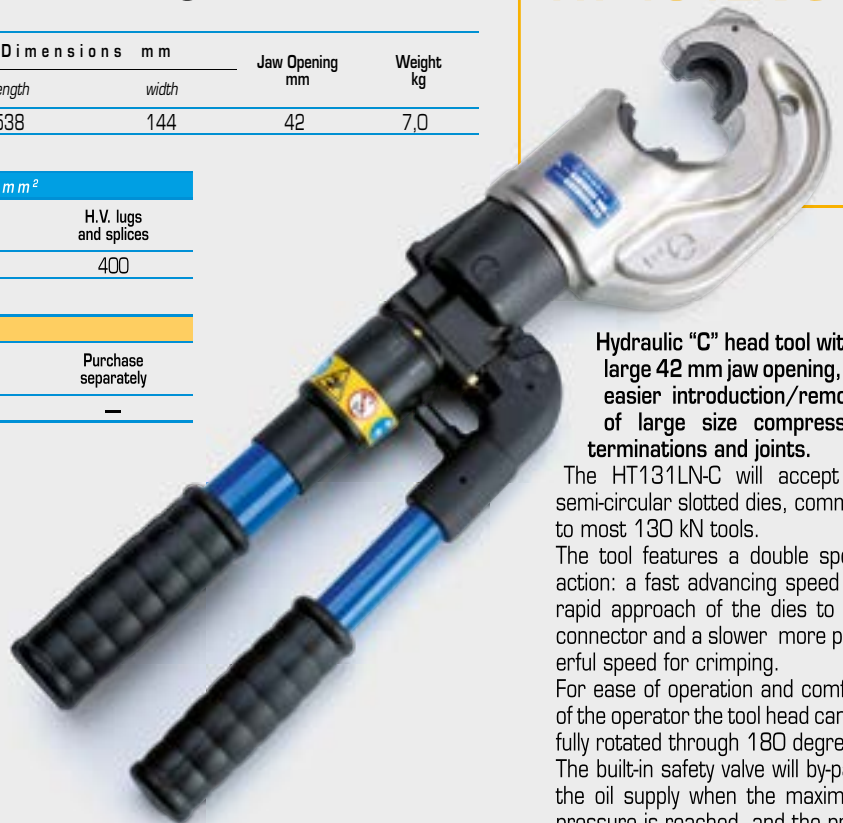
MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices
400	240	185	400

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P3*	620x380xh135	2,5	⌘	—

*Suitable for storage of the tool and 12 sets of dies



Hydraulic "C" head tool with a large 42 mm jaw opening, for easier introduction/removal of large size compression terminations and joints.

The HT131LN-C will accept all semi-circular slotted dies, common to most 130 kN tools.

The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping.

For ease of operation and comfort of the operator the tool head can be fully rotated through 180 degrees. The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, and the pressure release system can easily be operated at any stage of compression.

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Jaw Opening mm	Weight kg
		length	width		
130	700	298	122	42	5,4

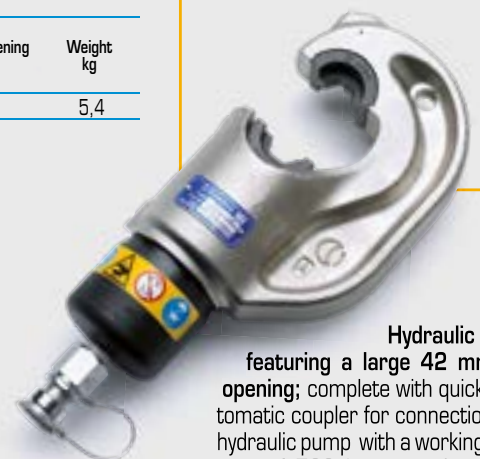
MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices
400	240	185	400

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P26*	445x290xh115	1,2	—	⌘

*Suitable for storage of the head and 14 sets of dies



RHC 131LN

Hydraulic head featuring a large 42 mm jaw opening; complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176). Is suitable for installing the same range of connectors as HT 131LN-C.

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

HT 131-UC

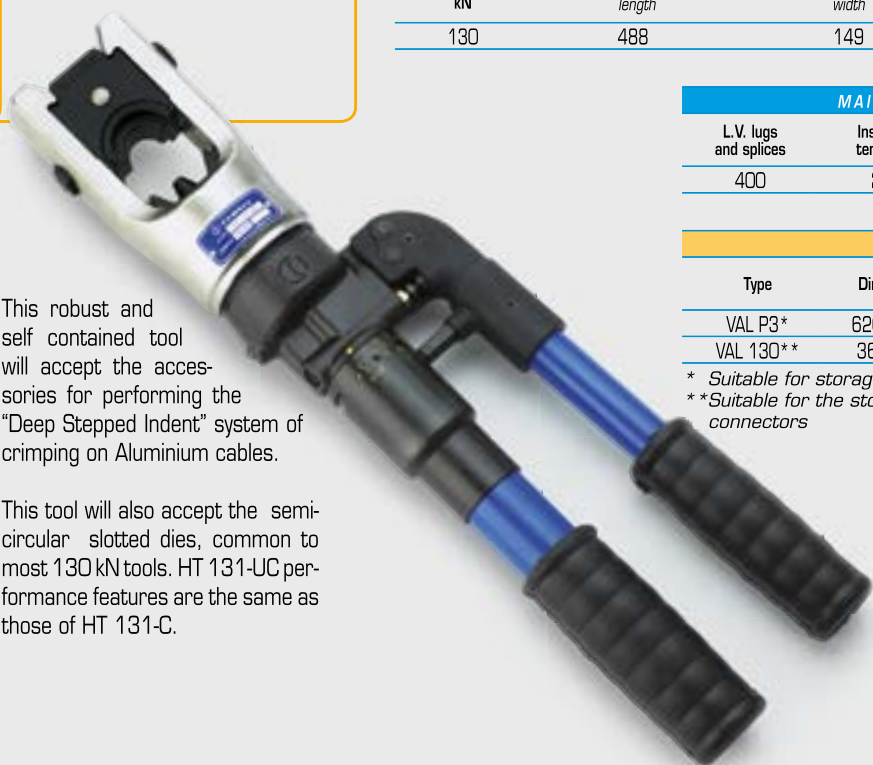
HYDRAULIC CRIMPING TOOL

general features

Crimping force kN	Dimensions mm		Weight kg
	length	width	
130	488	149	5,4

This robust and self contained tool will accept the accessories for performing the "Deep Stepped Indent" system of crimping on Aluminium cables.

This tool will also accept the semi-circular slotted dies, common to most 130 kN tools. HT 131-UC performance features are the same as those of HT 131-C.



MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices	Alu lugs and splices
400	240	185	400	300

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P3*	620x380xh135	2,5	✳	—
VAL 130**	360x280xh48	3,0	—	✳

* Suitable for storage of the tool and 14 sets of semi-circular slotted dies
 ** Suitable for the storage of accessories for crimping Aluminium connectors



HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
130	700	245	89	3,7

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

RHU 131-C is suitable for installing the same range of connectors as HT 131-UC.



MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices	Alu lugs and splices
400	240	185	400	300

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P26*	445x290xh115	1,2	—	✳
VAL 130**	360x280xh48	3,0	—	✳
VAL 130-U***	450x305xh80	5,0	—	✳

* Suitable for storage of the head and 14 sets of dies
 ** Suitable for the storage of accessories for crimping Aluminium connectors
 *** Suitable for storage of the head, semi-circular slotted dies and dies for crimping Aluminium connectors



VAL 130



VAL 130-U



VAL P26

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

HYDRAULIC PRESSHEAD



general features

Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
230	700	290	120	5,5

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices
630	300	240	630

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL ECW-H3D*	345x305xh90	4,2	—	*

* Suitable for storage of the head and 10 sets of dies

ECW-H3D ACCESSORIES FOR CUTTING CONDUCTORS

Die Type	Cutting Capacity	Conductor Type
WT2-3D	Ø 20 mm	Cu, Alu, Aldrey and Alu-Steel
	Ø 20 mm	Extra flexible Steel with ≥ 200 strands
This die is suitable to cut Steel conductors (R ≤ 160 daN/mm ²) having the most common strandings, i.e.: 19 x 1,2 = Ø est. 6,0 mm 7 x 3,0 = Ø est. 9,0 mm 19 x 2,1 = Ø est. 10,5 mm 19 x 2,3 = Ø est. 11,5 mm		



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

Adaptor type **AU230-130D** is available as an optional extra enabling the head to utilise the semi-circular slotted dies which are common to most 130 kN tools. Also available is a series of dies for the compression of DIN electrical connectors, and a die for cutting Copper, Aluminium, aldrej, Aluminium-Steel and Steel conductors.



HYDRAULIC PRESSHEAD



general features

Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
230	700	320	110	6,4

MAIN APPLICATIONS - max section mm²

Alu lugs and splices	Cu lugs and splices
500	630

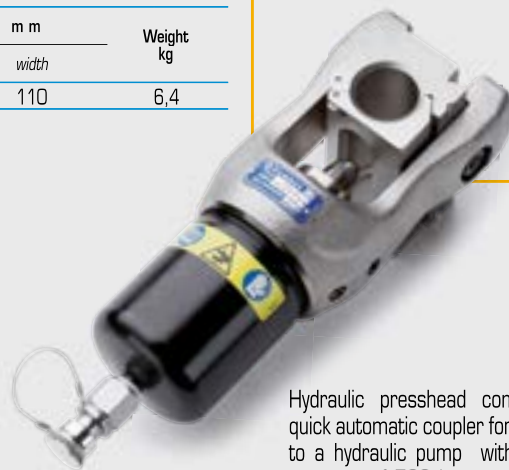
STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 231*	470x273xh96	7,2	*	—

* Suitable for storage of the head and dies for Aluminium compression



RHU 231

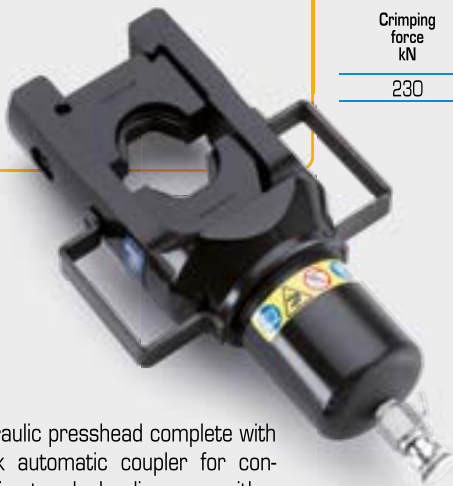


Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

For crimping up to 500 sqmm Aluminium.

Dies are available also for crimping Copper connectors.

RHU 230-630



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

It allows for crimping up to 630 sqmm Aluminium (according to HN 68 S90).

Adapters **AU 230-130-C/N**, and **AU 230-PS/E**, are available as an optional extra enabling the head to utilise the semicircular slotted dies which are common to most 130 kN tools.

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
230	700	365	193	9,0

MAIN APPLICATIONS - max section mm²

CU lugs and splices	Alu lugs and splices	"C" sleeve connectors	H.V. lugs and splices
400	630	185	400

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 230-630*	405x230xh145	3,5	✳	—
VAL MAT 230-630*	290x260xh70	3,1	—	✳

* Suitable for storage of the head

** Suitable for storage of the accessories



VAL MAT 230-630



VAL 230-630

RHU 450



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
450	700	260	120	10,3

MAIN APPLICATIONS - Hexagonal crimp according to DIN 48083 max section mm²

Cu	Al	Al/St
1000	1000	680/85

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 450*	285x212xh124	2,8	✳	—

* Suitable for storage of the head



Adaptor type **AU 450-130 D** is available as an optional extra enabling the head to utilise the semi-circular slotted dies which are common to most 130 kN tools.

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
520	700	306	200	18,0

MAIN APPLICATIONS - max section mm²

Lugs and splices	H.V. overhead lines
1200	630

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 520*	384x231xh145	3,2	—	✳
VAL MAT 520**	500x310xh68	5,1	—	✳

* Suitable for storage of the head

** Suitable for storage of 10 sets of dies



VAL MAT 520



VAL 520

RHU 520



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

Adaptor type **AU520-130C** is available as an optional extra enabling the head to utilise the semi-circular slotted dies which are common to most 130 kN tools.

RHU 600

HYDRAULIC PRESSHEAD

general features



Crimping force kN	Max operating pressure bar	Dimensions with support mm		Weight with support kg
		length	width	
600	700	447	241	22.4

MAIN APPLICATIONS

- "U" Alcoa series die and "L" Burndy series die, etc.
- Aluminium and Copper max size 2156 MCM

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 600*	480x235xh260	8,6	✳	—

* Suitable for storage of the head



VAL 600

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

HYDRAULIC PRESSHEAD



general features

RHU 1000

Crimping force kN	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
1.100	700	414	278	50,6

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 1000*	334x244xh435	12	✳	—

*Suitable for storage of the head



VAL 1000

New

Operable from single or double acting hydraulic power source



Lifting eye; screwed into the base of the cylinder; allows easy transportation of the head in aerial operation.

RHU 1000 is a 1.100 kN hydraulic presshead for full tension, transmission and substation connections, complete with quick automatic coupler for connection to hydraulic pumps with a working pressure of 700 bar max, (see pages 172-176).

The standard version must be operated by a single acting pump; possibility to convert from single to double acting by substitution of the breather valve with a female quick coupling. RHU1000 will accept all semi-circular slotted dies common to most

100 ton heads as the Alcoa ones. The die cap is removable for an easy connector positioning; the upper part of the cap automatically rotates during the die changing process to present the correct positioning of the die. Lifting eye included.

Insertion of the upper die:



After substitution of the dies, insert the die cap into the head.



Pull the pin.



The upper part of the cap automatically rotates...



...to the correct position.

INDUSTRIAL APPLICATION
HT-TC051



Hand operated hydraulic tool specifically designed to cut Copper, Aluminium and Telecommunications cable having a max overall diameter of 50 mm. The tool features a double speed action: a fast advancing speed for rapid approach of the blades to the cable and a slower more powerful speed for cutting. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The head can be easily opened to allow the cutting of run-

ning cables. The head can rotate through 90 degrees, to enable the operator to work in the most comfortable position. HT-TC051 features an automatic

HYDRAULIC CUTTING TOOL

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
50	497	129	4,38

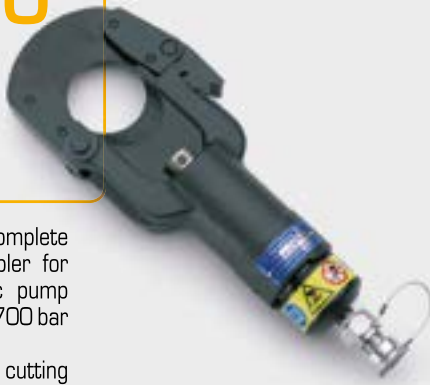
STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas Bag 010	545x160	0,15	✳	—

safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.



INDUSTRIAL APPLICATION
TC 050



Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176) TC050 features the same cutting capability as HT-TC051.

HYDRAULIC CUTTING HEAD

general features



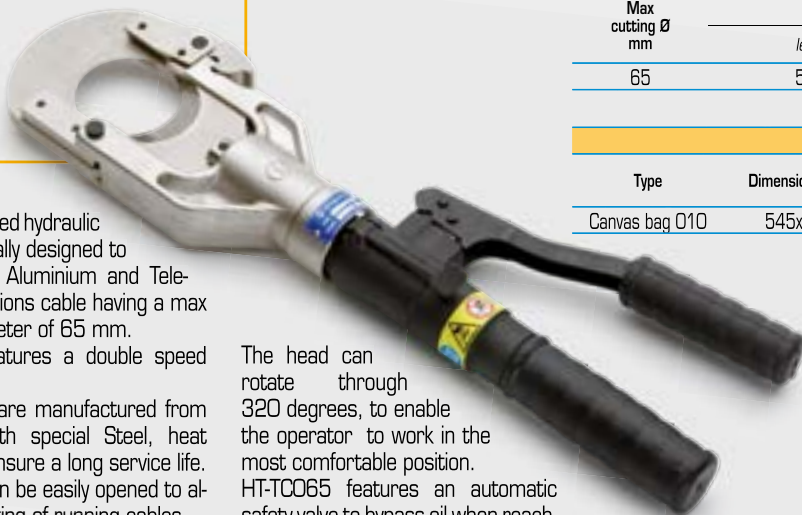
Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
50	700	325	112	3,2

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 011	360x137	0,13	✳	—



INDUSTRIAL APPLICATION
HT-TC065



Hand operated hydraulic tool specifically designed to cut Copper, Aluminium and Telecommunications cable having a max overall diameter of 65 mm. The tool features a double speed action. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The head can be easily opened to allow the cutting of running cables.

The head can rotate through 320 degrees, to enable the operator to work in the most comfortable position. HT-TC065 features an automatic safety valve to bypass oil when reach-

HYDRAULIC CUTTING TOOL

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
65	523	129	5

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 010	545x160	0,15	✳	—

ing maximum pressure; a pressure release device can also be operated at any stage of operation.



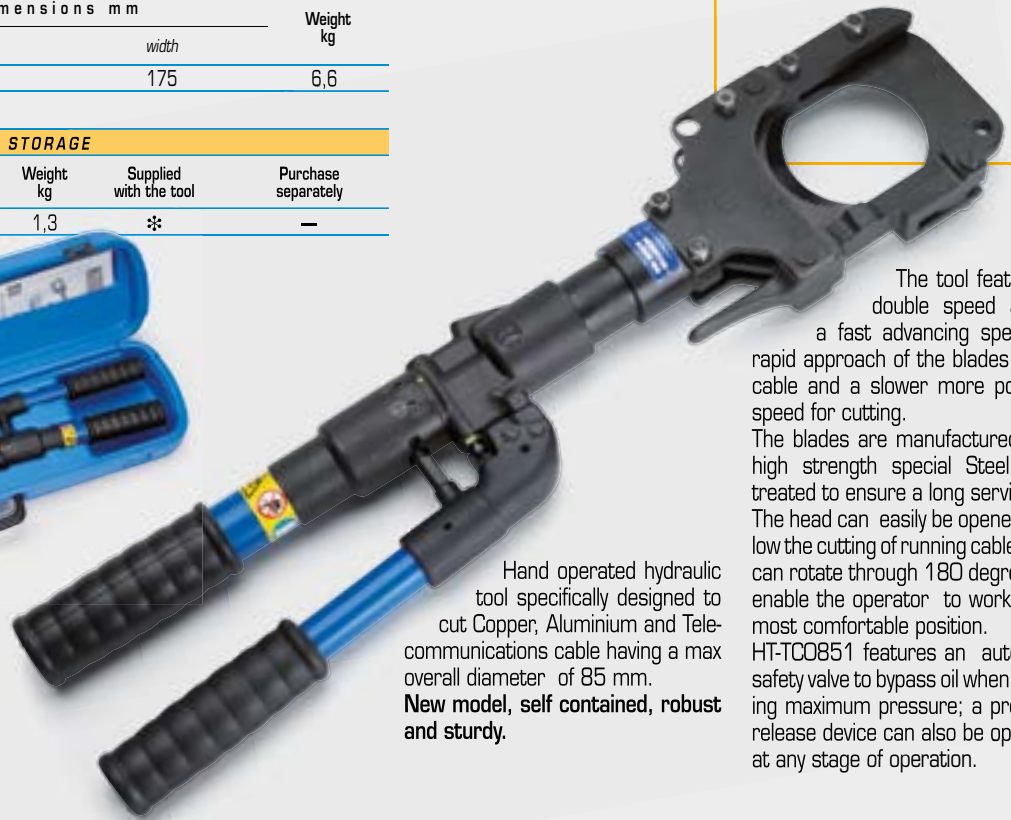
HYDRAULIC CUTTING TOOL

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
85	652,5	175	6,6

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P7	727x202xh115	1,3	✳	—



Hand operated hydraulic tool specifically designed to cut Copper, Aluminium and Telecommunications cable having a max overall diameter of 85 mm.
New model, self contained, robust and sturdy.

INDUSTRIAL APPLICATION HT-TC0851

The tool features a double speed action: a fast advancing speed for rapid approach of the blades to the cable and a slower more powerful speed for cutting. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The head can easily be opened to allow the cutting of running cables, and can rotate through 180 degrees, to enable the operator to work in the most comfortable position. HT-TC0851 features an automatic safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.

HYDRAULIC CUTTING HEAD

general features



Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight Kg
		length	width	
85	700	409	135	4,9

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL TC 085	465x155xh65	2,4	✳	—



Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176)

TC085 features the same cutting capability as HT-TC0851.

INDUSTRIAL APPLICATION TC 085

INDUSTRIAL APPLICATION
TC 096

HYDRAULIC CUTTING HEAD

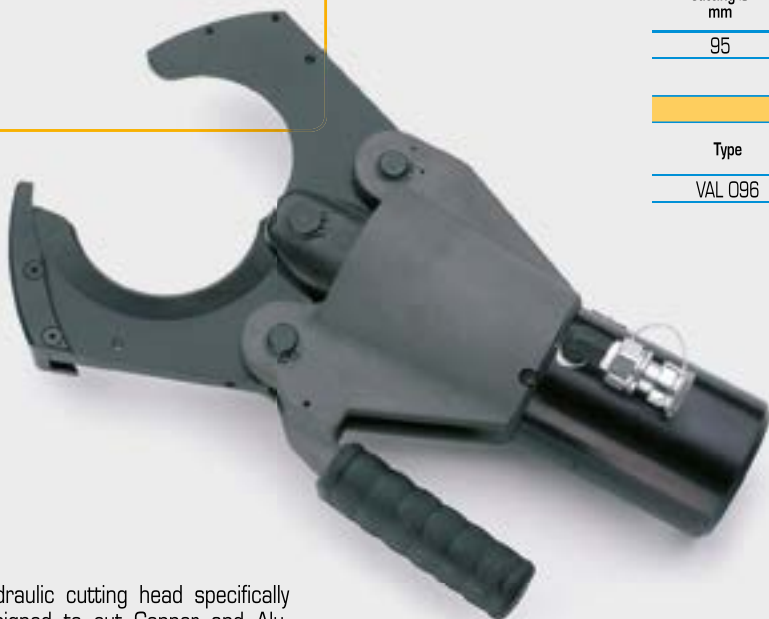


general features

Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
95	700	397	249	7,9

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 096	450x265xh145	6,8	✳	—



Hydraulic cutting head specifically designed to cut Copper and Aluminium cable having a max overall diameter of 95 mm.

The head is complete with a quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).



Handle designed for ease of operation



HYDRAULIC CUTTING HEAD

general features

INDUSTRIAL APPLICATION
TC 120

Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
120	700	536	175	9,5

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL TC 120	590x209xh84	4,9	✳	—



Hydraulic cutting head specifically designed to cut Copper, Aluminium and Telecommunications cable having a max overall diameter of 120 mm.

The head can easily be opened to cut running cables, and the handle allows the most comfortable positioning of the head onto the cable to be cut.

The head is complete with a quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

TC 120 cutting capacity - a few examples:

Cable type	TC 120 cutting capacity - a few examples:
	3x150 mm ² Steel armoured Ø80 mm
	1000 mm ² Cu - EPR rubber insulated; Ø85 mm
	1000 mm ² Cu - EPR rubber insulated + lead sheath; Ø92 mm
	1000 mm ² Cu - EPR rubber insulated + lead sheath + PE sheath; Ø100 mm
	240 mm ² EPR rubber insulated



Handle designed for ease of operation



Opening head, to allow cutting of running cables

OVERHEAD LINE APPLICATION
HT-TC026



Hand operated hydraulic tool specifically designed to cut Copper, Alu, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 25 mm. The tool features a double speed action: a fast advancing speed for rapid approach of the blades to the cable and a slower more powerful speed for cutting. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The head can rotate through 180 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow the cutting of running cables. HT-TC026 features an automatic safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.

HYDRAULIC CUTTING TOOL

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
25	382	129	3,2

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 001	430x155	0,15	✳	—



CUTTING CAPACITY

	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm)	
			HT-TC026 TC 025	HT-TC026Y B-TC250
ROPE & CONDUCTORS	COPPER	≤ 41	25	
	ALUMINIUM	≤ 20	25	
	ALMELEC	≤ 34	25	
	STEEL	≤ 180	INDICATIVE EXAMPLES: 7 x 3,0 : Ø est. = 9,0 mm 19 x 2,1 : Ø est. = 10,5 mm 19 x 2,2 : Ø est. = 11,0 mm 19 x 2,3 : Ø est. = 11,5 mm	
	MULTI STRANDS STEEL (STRANDS Qty ≥ 200)	≤ 180	18	
RODS	ACSR	≤ 180	25 INDICATIVE EXAMPLES: 26 x 2,50 + 7 x 1,95 : Ø est. = 15,85 26 x 3,06 + 7 x 2,38 : Ø est. = 19,38 26 x 3,60 + 7 x 2,80 : Ø est. = 22,80	
	STEEL	≤ 60	13	
		≤ 42	16	
	COPPER	≤ 30	20	
	≤ 25	23		
	≤ 16	25		

OVERHEAD LINE APPLICATION
TC 025



Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176)

TC025 has the same cutting capability as HT-TC026.

HYDRAULIC CUTTING HEAD

general features

Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
25	700	213	82	2,0

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 007	350x105	0,13	✳	—



HYDRAULIC CUTTING TOOL

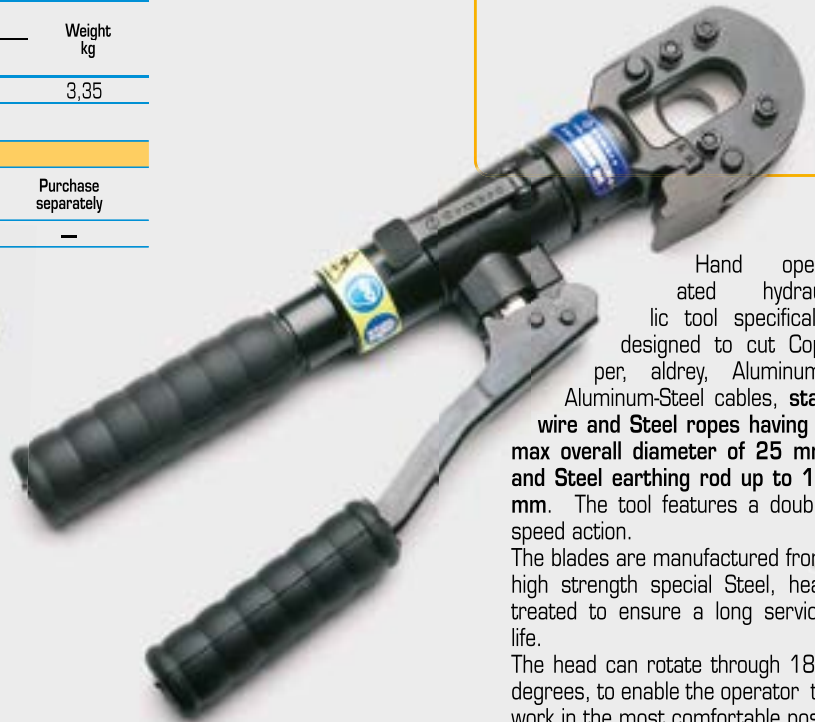
general features

OVERHEAD LINE APPLICATION HT-TC026Y

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
25	394,5	129	3,35

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas Bag 001	430x155	0,15	✳	—



Hand operated hydraulic tool specifically designed to cut Copper, aldre, Aluminum, Aluminum-Steel cables, **stay wire and Steel ropes having a max overall diameter of 25 mm and Steel earthing rod up to 16 mm.** The tool features a double speed action.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life.

The head can rotate through 180 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow the cutting of running cables. HT-TC026Y features an automatic safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.

Ideal for earthing rod and stay wire

HT-TC026Y cutting capacity - a few examples:

Ø		EARTHING RODS AND STAY WIRES
mm	in.	
12,7	1/2"	STEEL EARTHING ROD, COPPER PLATED; Tensile strength = 79 daN/mm ²
14,2	/	STEEL EARTHING ROD, COPPER PLATED; Tensile strength = 69 daN/mm ²
15,6	/	STEEL EARTHING ROD; Tensile strength = 69 daN/mm ²
15,9	5/8"	STEEL EARTHING ROD, COPPER PLATED (CON ED - ILLINOIS); Tensile strength = 57 daN/mm ²
15,9	5/8"	STEEL EARTHING ROD, COPPER PLATED (CON ED - STATEN ISLAND); Tensile strength = 78 daN/mm ²
19	3/4"	STEEL EARTHING ROD, COPPER PLATED; Tensile strength = 74 daN/mm ²
9,15 (3,05x7)	/	STAY WIRE
10,8 (3,6x7)	/	STAY WIRE (PORTLAND GENERAL ELECTRIC)
11,1 (3,7x7)	/	STAY WIRE (PORTLAND GENERAL ELECTRIC)
12,3 (4,1x7)	/	STAY WIRE (PORTLAND GENERAL ELECTRIC)
12,6 (4,2x7)	/	STAY WIRE (PORTLAND GENERAL ELECTRIC)

HYDRAULIC CUTTING TOOL

general features

OVERHEAD LINE APPLICATION HT-TC041



Hand operated hydraulic tool specifically designed to cut Copper, Alu, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 40 mm.

New model, even more self contained, robust and sturdy.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The head can rotate through 180 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables.

HT-TC041 features an automatic safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.



Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
40	550	144	5,8

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P7	727x202xh115	1,3	✳	—

CUTTING CAPACITY			
MATERIAL	TENSILE STRENGTH (daN/mm ²)	MAX CUTTING DIAMETER (mm)	
		HT-TC 041 TC 04	B-TC450
COPPER	≤ 41	40	45
ALUMINIUM	≤ 20	40	45
ALMELEC	≤ 34	40	45
ROPE & CONDUCTORS	STEEL	INDICATIVE EXAMPLES: 7 x 3,0 : Ø est. = 9,0 mm 19 x 2,1 : Ø est. = 10,5 mm 19 x 2,3 : Ø est. = 11,5 mm	
	MULTI STRANDS STEEL (STRANDS Q.TY ≥ 200)	18	
	ACSR	40	45
RODS	STEEL	INDICATIVE EXAMPLES: 26 x 2,50 + 7 x 1,95 : Ø est. = 15,85 26 x 3,06 + 7 x 2,38 : Ø est. = 19,38 26 x 3,60 + 7 x 2,80 : Ø est. = 22,80 54 x 3,50 + 19 x 2,10 : Ø est. = 31,50 54 x 4,36 + 19 x 2,62 : Ø est. = 39,20	
	STEEL	≤ 60	18
	STEEL	≤ 42	20
	COPPER	≤ 30	30
	ALUMINIUM	≤ 16	40

HYDRAULIC CUTTING HEAD

general features

OVERHEAD LINE APPLICATION TC 04



Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176)
TC04 has the same cutting capability as HT-TC041.

Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
40	700	311	100	4,0

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 04	350x125xh68	2,0	✳	—



HYDRAULIC CUTTING TOOL

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
50	503	129	4,7

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas Bag 010	545x160	0,15	✳	—



OVERHEAD LINE APPLICATION HT-TC051Y

Hand operated hydraulic tool specifically designed to cut Copper, Aluminum, Aluminum-Steel cables (ACSR) having a max overall diameter of 50 mm.

The HT-TC051Y is provided with a two stage hydraulic system, which advances the blades quickly to the cable. This proven system saves operator time and effort.

The HT-TC051Y is provided with an automatic safety valve to bypass oil when reaching max pressure.

This means safety to the operator and protection to the blades.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The shape of the blades provides a "clean" cut.

The head can be opened to allow cutting of running cables and ropes.

The head rotates 90 degrees allowing the operator to perform the cut in the most comfortable position.

The tool is supplied complete with canvas bag 010 for protection and storage when not in use.

Not suitable for cutting stay wire, Steel rope or earthing rod.

HYDRAULIC CUTTING HEAD

general features



Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
50	700	331	112	3,3

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 011	360x137	0,13	✳	—



OVERHEAD LINE APPLICATION TC 050Y

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176).

TC 050Y features the same cutting capability as HT-TC051Y.

Not suitable for cutting stay wire, Steel rope or earthing rod.

OVERHEAD LINE APPLICATION
HT-TC055



Hand operated hydraulic tool specifically designed to cut Copper, Al, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 55 mm.

The HT-TC055 is provided with a two stage hydraulic system, which advances the blades quickly to the cable. This proven system saves operator time and effort. The HT-TC055 is provided with an automatic safety valve to bypass oil when reaching max pressure. This means safety to the operator and protection to the blades. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The shape of the blades provides a "clean" cut.

The head can be opened to allow cutting of running cables and ropes. The head rotates 330 degrees allowing the operator to perform the cut in the most comfortable position. The tool is supplied complete with plastic case VAL P7 for protection and storage when not in use.



HYDRAULIC CUTTING TOOL

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	width	
55	595	144	8,3

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P7	727x202x115	1,3	*	—

CUTTING CAPACITY				
MATERIAL	TENSILE STRENGTH (daN/mm ²)	MAX CUTTING DIAMETER (mm)		
		HT-TC055 TC 055 B-TC550		
COPPER	≤ 41	55		
ALUMINIUM	≤ 20	55		
ALMELEC	≤ 34	55		
STEEL	≤ 180	INDICATIVE EXAMPLES: 7 x 3,0 : Ø est. = 9,0 mm 19 x 2,1 : Ø est. = 10,5 mm 19 x 2,3 : Ø est. = 11,5 mm		
		MULTI STRANDS STEEL (STRANDS Q.TY ≥ 200)	≤ 180	22
		ACSR	≤ 180	50 INDICATIVE EXAMPLES: 26 x 2,50 + 7 x 1,95 : Ø est. = 15,85 26 x 3,06 + 7 x 2,38 : Ø est. = 19,38 26 x 3,60 + 7 x 2,80 : Ø est. = 22,80 26 x 4,44 + 7 x 3,45 : Ø est. = 28,14 54 x 3,50 + 19 x 2,10 : Ø est. = 31,50 54 x 4,36 + 19 x 2,62 : Ø est. = 39,20 83 x 4,60 + 16 x 2,80 : Ø est. = 50,00
GUY WIRE (GW15-9/16-188)	Extra high strength grade	7 x 4,77 : Ø est. = 14,30 mm		
RODS	STEEL	≤ 60	20	
	STEEL	≤ 42	22	
	COPPER	≤ 30	34	
	COPPER	≤ 25	38,5	
ALUMINIUM	≤ 16	50		

OVERHEAD LINE APPLICATION
TC 055



Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 172-176) TC055 has the same cutting capability as HT-TC055.

HYDRAULIC CUTTING HEAD

general features



Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
55	700	357	134	6,6

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL TC055	384x231x145	3,7	*	—



SPECIAL TOOLS



Type	Max piercing Ø mm	Max centre of hole to edge of trunking (mm)	Max operating pressure bar	Dimensions mm		Weight kg
				length	width	
RH-FC 48N	47,2	53,5	700	259,5	147,5	3,7

Storage type	Dimensions mm	Weight kg
VAL P30*	315x300x95	0,93

*Supplied with the head

Hole Dimensions				Maximum thickness of mild Steel (mm)	Code
Nominal Ø (mm)	Ø (inch)	Pg	ISO		
15,5	.610	Pg9	-	2	RD 15.5 SS-FC
16,2	.638	-	ISO-16		RD 16.2 SS-FC
17,5	.689	-	-		RD 17.5 SS-FC
18,8	.740	Pg11	-		RD 18.8 SS-FC
19,1	.752	-	-		RD 19.1 SS
20,5	.807	Pg13,5	ISO-20		RD 20.5 SS
22,6	.890	Pg16	-		RD 22.6 SS
23,8	.937	-	-		RD 23.8 SS
25,4	1.000	-	ISO-25		RD 25.4 SS
27,0	1.063	-	-		RD 27.0 SS
28,5	1.122	Pg21	-		RD 28.5 SS
30,5	1.201	-	-		RD 30.5 SS
31,8	1.252	-	-		RD 31.8 SS
32,5	1.279	-	ISO-32		RD 32.5 SS
34,6	1.362	-	-		RD 34.6 SS
37,2	1.464	Pg29	-		RD 37.2 SS
38,1	1.500	-	-		RD 38.1 SS
40,5	1.594	-	ISO-40		RD 40.5 SS-FC
41,3	1.626	-	-		RD 41.3 SS-FC
42,5	1.673	-	-		RD 42.5 SS-FC
43,2	1.701	-	-		RD 43.2 SS-FC
44,5	1.752	-	-		RD 44.5 SS-FC
47,2	1.858	Pg36	-		RD 47.2 SS-FC

general features

Frame-type hole punching head RH-FC48N

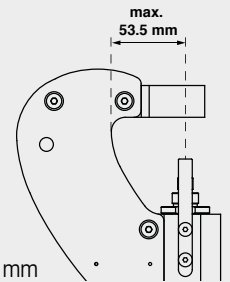


Table denotes the punch/die set reference, for each hole size. Suitable for punching holes in mild Steel, fibreglass or plastic material, up to 2 mm thick.

Hydraulic head complete with automatic quick coupler, designed for punching holes from 15,5 up to 47,2 mm diameter in the side wall of trunking without the need for pre drilling. For operation, the head must be joined to a hydraulic pump developing a pressure of 700 bar (see page 172-176).

VAL P30

Supplied in a robust plastic case.



Max centre of hole to edge of trunking: 53,5 mm



Type	Max piercing Ø mm	Max hole distance from bar edge (mm)	Max operating pressure bar	Dimensions mm		Weight kg
				length	width	
RHT 160	21	30	700	240	153	6,5
RHT 160-60N	21	60	700	240	181	9,2

Storage type	Dimensions mm	Weight kg
VAL 160*	283x180x100	2,3

*Supplied with the head



Piercing heads RHT



Hydraulic head complete with automatic quick coupler, for piercing holes of various diameters in Copper, Aluminium and Steel bars with max. thickness of 10 mm.

This compact and handy tool is widely used for transformer room connections, control switch boards and power plants.

For operation the head must be joined to a hydraulic pump developing a pressure of 700 bar (see page 172-176).

Available accessories (to be ordered separately):

Piercing Ø mm	6,5	8,5	9	10,5	11	13	13,5	14	15	17	19	21
Set die - indenter	RT 6,5	RT 8,5	RT 9	RT 10,5	RT 11	RT 13	RT 13,5	RT 14	RT 15	RT 17	RT 19	RT 21

MAX. THICKNESS

Hole diameter (mm)	6,5	8,5	9	10,5	11	13	13,5	14	15	17	19	21
Max thickness strep in Copper	10	10	10	10	10	10	10	10	10	10	8	8
Max thickness strep in Steel	10	10	10	10	10	9	9	9	8	7	6	4
Punch die/set	RT 6,5	RT 8,5	RT 9	RT 10,5	RT 11	RT 13	RT 13,5	RT 14	RT 15	RT 17	RT 19	RT 21

SPECIAL TOOLS



Puller-type hole punching tool HT-FL75

general features

New



Hand operated hydraulic tool specifically designed for hole punching stainless Steel, mild Steel, fibreglass and plastic sheet materials up to 3,5 mm thickness. Compact, lightweight and easy to handle.

The balanced punching head pivots 180deg through a full 360deg rotation for ease of use in confined spaces.

The tool is supplied complete with plastic case VAL P28 for protection and storage when not in use.

Supplied with Pullers TD-11, TD-19 and spiral bit Ø 11,5 mm.

For the punch-die selection chart see page 170.



Universal joint allows punching head to pivot 180deg over a full 360deg rotation.

Max punching Ø mm	Dimensions mm		Weight kg
	length	width	
140	452	129	3,67

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P28	620x360x138	2,4	✳	—



Puller-type hole punching head RH-FL75



Hydraulic head, for hole punching stainless Steel, mild Steel, fibreglass and plastic sheet materials up to 3,5 mm thickness.

Compact and lightweight, easy to handle in confined spaces due to a rotating 90deg quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max (see page 172-176).

Supplied with Pullers TD-11, TD-19 and spiral bit Ø 11,5 mm.

For the punch-die selection chart see page 170.

Max punching Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	width	
140	700	163	106	1,9

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the head	Purchase separately
VAL P29	448x288x105	1,4	✳	—





SPECIAL TOOLS

general features

Nut splitting heads RHTD

RHTD 1724

Suitable for splitting nuts mm	Max operating pressure bar	Weight kg
16 (M10) ÷ 27 (M18)	700	1,76

RHTD 3241

Suitable for splitting nuts mm	Max operating pressure bar	Weight kg
27 (M18) ÷ 41 (M27)	700	4,6

RHTD 3241-T

Suitable for splitting square and hexagonal nuts or fastening bushes mm	Max operating pressure bar	Weight kg
27 (M18) ÷ 41 (M27)	700	4,9

STORAGE

Type	Dimensions mm	Weight kg
VAL P4*	315x300x95	0,93

*Supplied with the head



VAL P4

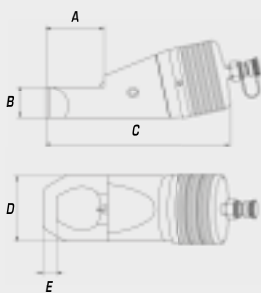
Supplied in a robust plastic case.



Hydraulic nut splitting head complete with automatic quick coupler. For operating the head must be joined to a hydraulic pump developing a pressure of 700 bar (see page 172-176).

DIMENSIONS mm:

	RHTD 3241	RHTD 1724	RHTD 3241T
A	66	40,5	77
B	36	25	41
C	208	150,5	222
D	75,5	54	75,5
E	16	7,5	21,5



TOOL SETTING FOR RHTD

DOUBLE BLADE					SINGLE BLADE				
Moving blade and fixed blade marked "B"					Moving blade marked "B" - Blind plated marked "C"				
Hexagonal Nuts		Square Nuts		Fastening Bushes*		Hexagonal Nuts		Square Nuts	
	mm		mm		\varnothing_A	\varnothing_B		mm	\varnothing
27	M 18	27	M18	1/2"	.807"	32	M 22	32	M 22
30	M 20	30	M 20	5/8"	1.010"	34	M 22	36	M 24
32	M 22	32	M 22	3/4"	1.200"	36	M 24	41	M 27
34	M 22	36	M 24	7/8"	1.375"	41	M 27		
36	M 24	41	M 27	1"	1.575"				
41	M 27			1 1/8"	1.770"				

*Blades for cutting FASTENING BUSHES are specially shaped.

ACCESSORIES

Flexible hoses

TF 300-Q 38 FM

3 m length flexible hose fitted with an automatic female quick coupler and a male quick coupler.

TF 600-Q 38 FM

6 m length flexible hose fitted with an automatic female quick coupler and a 3/8" NPT male threaded bush.

TF 300-Q 38 F

3 m length flexible hose equipped with automatic female quick coupler at one end and male threading at the other end.



High pressure flexible hoses for joining hydraulic heads to pumps. In addition to the standard versions listed below alternative hose lengths are available, please consult us:

Quick couplers



Q 38-M

Q 38-M

Male automatic coupler for hydraulic heads.



Q 38-F

Q 38-F

Female automatic coupler for hydraulic pumps and flexible hoses.



Q 38-MS

Q 38-MS

Male automatic coupler for flexible hoses.

STANDARD VERSIONS



I 38-M

I 38-M

Male automatic coupler for insulated hydraulic heads.



I 38-F

I 38-F

Female automatic coupler for insulated hydraulic pumps and flexible hoses.



I 38-MS

I 38-MS

Male automatic coupler for insulated flexible hoses.

INSULATED VERSIONS

MPC 1



Pressure checking device MPC 1

The MPC1 device, complete with test adapter set, is used to measure the maximum oil pressure on all Cembre tools.

MPC 2



Crimping force gauge MPC 2

The MPC2 device, complete with test die set, to measure the maximum force developed by Cembre tools:

HT 131-C, HT 131LN-C, HT 120, HT 120-KV, RHC 131, RHC 131-KV, RHC 131LN, B 131-C, B 131-C-KV, B 131LN-C, B 131LN-C-KV, B 135-C, B 135-C-KV, B 135LN-C, B 135LN-C-KV.

MPC 4



Crimping force gauge MPC 4

The MPC4 device, complete with test die set, to measure the maximum force developed by Cembre tools:

ECW-H3D, RHU240-3D-850, RHU 300-3D

MPC 7



Crimping force gauge MPC 7

The MPC7 device, complete with test die set, to measure the maximum force developed by Cembre tools:

HT45, HT 51, HT 51-KV, HT 51L, HT 51L-KV, RH 50, HT 61, RH 61, B15D (use adaptor available separately), B 35-45D, B 35-50D, B 46, B 51, B 51-KV, B 51L, B 51L-KV, B 54D, B 55, B 55-KV, B 62.



CORDLESS HYDRAULIC TOOLS

18.0 V CORDLESS TOOL FEATURES

- ① Head rotates through 180°.
- ② Switch protected against accidental operation.
- ③ Pressure release button.
- ④ Slot-in battery with release button.
- ⑤ LED lighting of the working area.
- ⑥ Motor ventilation.
- ⑦ Bi-component body for increased impact resistance.
- ⑧ Multifunction OLED display with touch button.
- ⑨ Improved balance for better handling.
- ⑩ Anatomically shaped grip for greater comfort.
- ⑪ 18.0 V - 4.0 Ah Li-Ion high power batteries.



LED lighting of the working area



Anatomical shape for improved comfort grip



Automatic slot-in battery with release button



Multifunction OLED display with touch button



18.0 V CORDLESS TOOL FEATURES

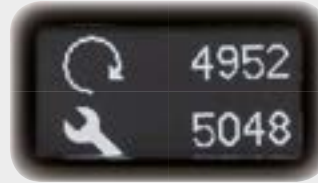
Multifunction OLED display:



Crimping pressure and force being generated for confirmation of adherence to norms and best practice



Battery power availability



Tool service required to maintain optimum condition



General operating information

SUPPLIED WITH

- 1 CB 1840L, 18.0 V - 4.0 Ah Li-Ion high power battery (2 pcs.)
 - 2 ASC 30-36 EU 27044000 Battery charger.
(INPUT 220-240 V / 50-60 Hz; OUTPUT 12-42 V DC / 3.0 A max.)
 - 3 Shoulder strap.
- Plastic or metal carrying case.



B 500 Acoustic Noise

(Directive 2006/42/EC, annexe 1, point 1.7.4.2 letter u)

- The weighted continuous acoustic pressure level equivalent A at the workplace L_{pA} is equal to **73 dB (A)**
- The maximum value of the weighted acoustic displacement pressure C at the workplace L_{pCpeak} is less than **< 94,5 dB (C)**
- The acoustic power level emitted by the machine L_{WA} is equal to **79 dB (A)**

Risks due to vibration

(Directive 2006/42/EC, annexe 1, point 2.2.1.1)

Tests performed in accordance with specifications UNI ENV 25349 and UNI EN 28662 pt. 1, in operating conditions more severe than normal, certify that the weighed root mean square, in frequency of the acceleration the upper limbs are exposed to, for each biodynamic reference axis, does not exceed **0,575 m/sec²**.

18.0 V CORDLESS TOOL FEATURES

- 1 Head rotates for ease of operation in confined spaces
- 2 Switch protected against accidental operation
- 3 Pressure release button
- 4 Slot-in battery with release button
- 5 Battery condition displayed to show the residual battery power
- 6 Motor ventilation.
- 7 The tools are fitted with a maximum pressure valve to indicate a correct crimping operation or the full extent of the ram travel.
- 8 Can be operated with one hand
- 9 Durable moulded body offering high resistance to wear and damage in all operating conditions.
- 10 Extremely quiet in operation with very little vibration.
- 11 Improved balance for better handling.
- 12 Anatomically shaped grip for greater comfort.
- 13 18.0 V - 2.0 Ah Li-Ion high power batteries.

New



**18.0V
2.0Ah
Li-Ion**

**NEW
18V Li-Ion
BATTERY**

SUPPLIED WITH

- 1 CB 1820L, 18.0 V - 2.0 Ah Li-Ion high power battery (2 pcs.)
- 2 ASC 30-36 EU 27044000 Battery charger.
(INPUT 220-240 V / 50-60 Hz; OUTPUT 12-42 V DC / 3.0 A max.)
- Plastic carrying case.



B 15MD Acoustic Noise

(Directive 2006/42/EC, annexe 1, point 1.7.4.2 letter u)

- The weighted continuous acoustic pressure level equivalent A at the workplace L_{pA} is equal to **72.9 dB (A)**
- The maximum value of the weighted acoustic displacement pressure C at the workplace L_{pCpeak} is less than **< 130 dB (C)**
- The acoustic power level emitted by the machine L_{WA} is equal to **77.8 dB (A)**

Risks due to vibration

(Directive 2006/42/EC, annexe 1, point 2.2.1.1)

Tests performed in accordance with specifications UNI ENV 25349 and UNI EN 28662 pt. 1, in operating conditions more severe than normal, certify that the weighed root mean square, in frequency of the acceleration the upper limbs are exposed to, for each biodynamic reference axis, does not exceed 2.5 m/sec².

14.4 V CORDLESS TOOL FEATURES

- Cordless tooling can be operated with one hand.
- Balanced tool for greater control.
- Head rotates for ease of operation in confined spaces.
- Battery condition displayed after every crimping operation and battery insertion to show the residual battery power.
- The tools are fitted with a maximum pressure valve to indicate a correct crimping operation or the full extent of the blade travel.
- Extremely quiet in operation with very little vibration.
- Durable moulded body offering high resistance to wear and damage in all operating conditions.



- The plastic or Steel carrying case can accommodate the tool and all the accessories.

Common features:



double speed action:
a rapid approach speed
and a slower more powerful
speed for crimping or cutting.



14.4V
3.0Ah
Li-Ion

new more powerful Li-Ion battery
14.4V - 3.0Ah; reduced memory
effect, better environmental
compatibility, lighter.



SUPPLIED WITH

- 1 **CB 1430L** 14.4 V 3.0 Ah Li-Ion high power battery (2 pcs.).
- 2 **CFC 230N** Battery charger.
(INPUT 230 V/50-60 Hz; OUTPUT 7.2-18 V DC)
- 3 Shoulder strap.

- Plastic/Metal carrying case suitable for storage of the tool, accessories and dies (depending on tool type).



OPTIONAL ACCESSORIES

- 4 **BPS 230.14** mains power supply.
Main features: INPUT 230V~ 50-60Hz; OUTPUT 14,4V $\overline{\text{---}}$
thermal and short circuit protection.
Current supply: up to 5A extended use; 23A for 50 s; 30A for 8 s.
- 5 **ESC 600** cable for connection to a 12V DC external power supply/vehicle battery length 6 m (suitable only for tools with 12V DC socket).
- 6 **CFC 12-24ICN** car battery charger.
(INPUT 12-24 V DC; OUTPUT 7.2-18 V DC)



B-55 Acoustic Noise

(Directive 2006/42/EC, annexe 1, point 1.7.4.2 letter u)

- The weighted continuous acoustic pressure level equivalent A at the workplace L_{pA} is equal to **75 dB (A)**
- The maximum value of the weighted acoustic displacement pressure C at the workplace L_{pCpeak} is less than **< 130 dB (C)**
- The acoustic power level emitted by the machine L_{WA} is equal to **85.3 dB (A)**

Risks due to vibration

(Directive 2006/42/EC, annexe 1, point 2.2.1.1)

Tests performed in accordance with specifications UNI ENV 25349 and UNI EN 28662 pt. 1, in operating conditions more severe than normal, certify that the weighed root mean square, in frequency of the acceleration the upper limbs are exposed to, for each biodynamic reference axis, does not exceed **2.5 m/sec²**.

B 15MD

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

general features



Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
15	337	133	81	18.0V 2.0Ah	1,74

**18.0V
2.0Ah
Li-Ion**

New

**NEW
18V Li-Ion
BATTERY**



Can be operated with one hand. Balanced for greater control. Head rotates by 340° for ease of operation in confined spaces. The tool is fitted with a maximum pressure valve.

MAIN APPLICATIONS - max section mm²

Copper lugs and splices	Insulated terminals	End sleeves
0,25 - 16	0,25 - 16	0,3 - 35

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315x116	1,5	✳	—

The tool is supplied as:

- Basic tool with battery and wrist strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Extremely quiet, minimal vibration. Durable moulded body offering high resistance to wear and damage in all operating conditions.

New Li-Ion 18.0V 2.0Ah High Power battery. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button.

Supplied in a robust plastic case to accommodate the tool and all the accessories.

Two batteries and charger included. Many different interchangeable crimping dies available. Operating temperature: -15 à +50 °C

Many different interchangeable crimping dies available

CRIMPING DIES AVAILABLE				
Conductor size mm ²	Conductor size (AWG)	Connector type	DIE SET	
0,25 ÷ 16	22 ÷ 6	A... ; L...-M ; L...-P ; S... ; RN... ; BN... ; GN...	MA03/3-15	☺
1,5 ÷ 10	16 ÷ 8	A... ; L...-M ; L...-P	ME03/2-15	☺
10 ÷ 16	8 ÷ 6	A... ; 2A... ; L...-M ; L...-P	ME2/3-15	
4 ÷ 10	12 ÷ 8	T... (NF C 20130 style) ; L...-T	MS4/10-15	
10 ÷ 16	8 ÷ 6	T... (NF C 20130 style) ; L...-T	MS10/16-15	
10 ÷ 16	8 ÷ 6	HR... ; HSV...	MH10/16-15	☺
6 ÷ 16	10 ÷ 6	DR... (DIN 46235 style) ; DSV... (DIN 46267 T1 style)	MK5/8-15	
10 ÷ 16	8 ÷ 6	ANE... ; AN... ; IN... ; EN...	NN4-15	☺
0,25 ÷ 6	22 ÷ 10	R... ; B... ; G... (not suffix P) ; PL... ; NL...	RBG-15	☺
0,25 ÷ 6	22 ÷ 10	R... ; B... ; G... (not suffix P, RF/BF-BF)	RBV-15 with positioner	
0,3 ÷ 4	22 ÷ 12	PKE ; PKC ; PKD ; PKT ; KE	KE4-15	☺
4 ÷ 16	12 ÷ 6	PKE ; PKC ; PKD ; PKT ; KE	KE16-15	
16 ÷ 35	6 ÷ 2	PKE ; PKC ; PKD ; PKT ; KE	KE35-15	
2,5 - 4 - 6	14 - 12 - 10	CS4 (per impianti fotovoltaici) ☼	MCS4-15	☺



Battery condition display



Interchangeable die sets



Ergonomically designed operating switch



Automatic slot-in battery

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL



general features

B 35-45MD

**18.0V
2.0Ah
Li-Ion**

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
35	354	133	81	18.0V 2.0Ah	2,19

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	"C" sleeve Connectors	H.V. lugs and splices
150	35	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315x116	1,5	✳	—

The tool is supplied as:

- Basic tool with battery and wrist strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Can be operated with one hand. Balanced for greater control. Head rotates 180° for ease of operation in confined spaces. Fitted with a maximum pressure valve. Extremely quiet, minimal vibration. Durable moulded body offering high resistance to wear and damage in all operating conditions. New Li-Ion 18.0V 2.0Ah High Power battery.

The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. Supplied in a robust plastic case to accommodate the tool and all the accessories. Two batteries and charger included. B35-45MD accepts many of the dies common to 45 kN Cembre crimping tools.

B35-45MD specific dies available for crimping 120 mm² and 150 mm². Application field as shown in the table above. For further details please refer to tables of page 196-205. Operating temperature: -15 à +50 °C



New

**NEW
18V Li-Ion
BATTERY**

Wide-opening head, ideal for derivations from running conductors



Motor ventilation



Head rotates 180° for ease of operation



Pressure release button



Sculptured body for optimum comfort

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 35-50MD

general features



Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
35	387	133	81	18.0V 2.0Ah	2,6

**18.0V
2.0Ah
Li-Ion**

New

**NEW
18V Li-Ion
BATTERY**



Can be operated with one hand. Balanced for greater control. Head rotates 180° for ease of operation in confined spaces. Fitted with a maximum pressure valve. Extremely quiet, minimal vibration. Durable moulded body offering high resistance to wear and damage in all operating conditions.

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	End sleeves	"C" sleeve Connectors
150	50	95	35

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315x116	1,5	✳	—

The tool is supplied as:

- Basic tool with battery and wrist strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

New Li-Ion 18.0V 2.0Ah High Power battery.

The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button.

Supplied in a robust plastic case to accommodate the tool and all the accessories.

Two batteries and charger included. B35-50MD accepts many of the dies common to 50 kN Cembre crimping tools.

B35-50MD specific dies available for crimping 120 mm² and 150 mm².

Application field as shown in the table above. For further details please refer to tables of page 196-205.

Operating temperature: -15 à +50 °C



Wide-opening head, ideal for derivations from running conductors



Battery condition display



Pressure release button



Switch ergonomically designed



Automatic slot-in battery

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL



general features

B 54MD-D6

18.0V
2.0Ah
Li-Ion

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
54	458	133	81	18.0V 2.0Ah	2,95

MAIN APPLICATIONS - max section AWG

Copper lugs and splices	Aluminum lugs and splices	Aluminum H taps
300 MCM	4/0	4/0 - 4/0

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P45	497x370x137	2,3	✳	—
VAL MAT-W	175x96x45	0,93	—	✳

The tool is supplied as:

- Basic tool with battery and wrist strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Stick tool shape for better handling. Can be operated with one hand. Balanced for greater control. Jaws rotate by 180° for ease of operation in confined spaces. The tool is fitted with a maximum pressure valve. Extremely quiet, minimal vibration. Durable moulded body offering high resistance to wear and damage in all operating conditions. New Li-Ion 18V 2Ah High Power battery.

The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. Supplied in a robust plastic case for storing the tool and all accessories. Two batteries and charger included. Standard interchangeable crimping jaw: **CDD6** with "D3" groove to accept all "W" style crimping dies + "BG" fixed groove. Operating temperature: -15 à +50 °C

New

The professional tool ideal for OH lines and residential service applications.



NEW
18V Li-Ion
BATTERY

VAL MAT-W



Available as optional accessories:
VAL MAT-W metal case for storing 12 Index die sets, fits into VAL-P45.

CDD6 jaws

With "D3" groove to accept all "W" style crimping dies + "BG" fixed groove.

CDD6-8 jaws

With "D3" groove to accept all "W" style crimping dies + "O" fixed groove.

CMB1 jaws

Cutting jaws for: one-time disposable lock hasps, 4AWG Alumoweld; ACSR 4/0

CMB2 jaws

Cutting jaws for:
- # 8 Copperweld
- 4/0 Cu.
- 336 MCM Aluminium
- 477 MCM ACSR (Str. 26/7)

CMB3 jaws

Cutting jaws for:
- 1/4" Guy Wire
- 5/16" Guy Wire

INTERCHANGEABLE CRIMPING JAWS

CAT. No	GROOVES	CRIMPING DIE COMPATIBILITY
CDD6	"D3" TO ACCEPT ALL "W" STYLE CRIMPING DIES + "BG" FIXED GROOVE	FCI Burndy Green lee IlSCO
CDD6-8	"D3" TO ACCEPT ALL "W" STYLE CRIMPING DIES + "O" FIXED GROOVE	Huskie Panduit
CMB1	Cutting jaws for: one-time disposable lock hasps; 4AWG Alumoweld; ACSR 4/0	
CMB2	Cutting jaws for: # 8 Copperweld; 4/0 Cu.; 336 MCM Aluminium; 477 MCM ACSR (Str. 26/7)	
CMB3	Cutting jaws for: 1/4" Guy Wire ; 5/16" Guy Wire	

Canvas Bag 013

Sturdy canvas bag, suitable for storing the cutting jaws



Jaws rotate 180°



Detail of the quick jaw change device.

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 500

New



**NEW
18V Li-Ion
BATTERY**

general features



Nominal Compression Force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
63	300	343	83	18.0 V 4.0 Ah	4,2



**18.0V
4.0Ah
LI-ION**

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	End sleeves	"C" sleeve Connectors
300	120	120	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP35	500x480x128	3,1	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 20 die sets



The next generation of Cembre cordless hydraulic tools represents a significantly advantageous evolution from current models.

Born of the renowned B51 type crimping tool, the 63 kN B500 is suitable for a wide range of connectors up to 240 sqmm using die sets common to the Cembre 50 kN tooling range.

New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater crimping speed and crimping force result from a revitalised hydraulic system with double speed action: a rapid approach of the dies to the connector then a slower, more powerful speed for crimping.

A maximum pressure sensor and pressure relief valve assure greater precision and repeatability of the pressure cycle and double the provision for operator safety.

The OLED display provides essential real time tool operating information data including:

- Crimping pressure and force being generated, for confirmation of adherence to norms and best practice
- Battery power availability
- Tool identification, LED work light state, reset, no. of operational and service crimping cycles
- Tool service required to maintain optimum condition.

Designed with improved balance, B500 is easily manageable during the crimping process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage.

Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface.

Operating temperature:
-15 to +50 ° C

New



B 500-KV
version also available for
Power Supply Companies

LED lighting of the working area



Anatomically shaped grip for improved comfort



Multifunction OLED display with touch button



Slot-in battery with release button



These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

14.4 V CORDLESS HYDRAULIC CRIMPING TOOL



general features

B 55



**14.4V
3.0Ah
Li-Ion**

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
55	358	302	94	14.4 V 3.0 Ah	4,7

MAIN APPLICATIONS - max section mm²

Copper lugs and splices	Insulated terminals	End sleeves	"C" sleeve Connectors
240	120	120	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P9	543x412x130	2,2	*	—

The tool is supplied as:

- Basic tool with battery, wrist strap and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories



14.4 V cordless hydraulic crimping tool, lightweight and balanced for single hand operation. The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the connector and a slower more powerful speed for crimping. The crimping head can rotate through 180° for ease of operation.

The B 55, with adapter AU55-50, will accept all Cembre 50 kN dies; with adapter AU55-W it will accept "W" dies.

Fitted with a maximum hydraulic pressure valve.

Complete with a display which, after every operation and battery insertion, indicates the residual battery power.

Extremely quiet in operation, with very little vibration.

Ergonomically designed with a sculptured body for operator comfort.

With adapter AU55-50 for accepting Cembre dies.



Cembre die

AU55-50 adapter

With adapter AU55-W for accepting "W" dies.



"W" die

AU55-W adapter

Suitable for installing the same range of connectors of B 55, B 55-KV tool is provided with additional coatings to protect the operator and tool against accidental brush contact with energised conductors.

Particularly suitable for Power Supply Companies.



B 55-KV

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 1350-C

New

general features



Nominal Compression Force kN	Dimensions mm			Jaw Opening mm	Battery Li-Ion	Weight kg (with battery)
	length	height	width			
132	338	344	83	25	18.0 V 4.0 Ah	6,4



**18.0V
4.0Ah
Li-Ion**

The next generation of Cembre cordless hydraulic tools represents a significantly advantageous evolution from current models. Born of the renowned B135-C type crimping tool, B1350-C is suitable for a wide range of connectors up to 400 sqmm using die sets common to the Cembre 130 kN tooling range. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater crimping speed and crimping force result from a revitalised hydraulic system with double speed action: a rapid approach of the dies to the connector then a slower, more powerful speed for crimping.

A maximum pressure sensor and pressure relief valve assure greater precision and repeatability of the



**NEW
18V Li-Ion
BATTERY**

pressure cycle and double the provision for operator safety.

The OLED display provides essential real time tool operating information data including:

- Crimping pressure and force being generated, for confirmation of adherence to norms and best practice
- Battery power availability
- Tool identification, LED work light state, reset, no. of operational

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs	H.V. Splices
400	240	185	400	400*

* limited to the cable insulation diameter

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP36	500x480x128	3,1	*	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 7 die sets



and service crimping cycles - Tool service required to maintain optimum condition.

Designed with improved balance, B1350-C is easily manageable during the crimping process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage.

Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED light-

ing of the working area. Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface.

Operating temperature: -15 to +50 ° C

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 1350L-C

New

general features



Crimping force kN	Dimensions mm			Jaw Opening mm	Battery Li-Ion	Weight kg (with battery)
	length	height	width			
132	395	372	83	42	18.0 V 4.0 Ah	8,2



**18.0V
4.0Ah
Li-Ion**

B1350L-C version, featuring a large 42 mm jaw opening, for an easier introduction/removal of large size compression terminations and joints.



**NEW
18V Li-Ion
BATTERY**

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs and splices
400	240	185	400

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP36	500x480x128	3,1	*	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 7 die sets



These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL



general features

B 1350-UC

New



**18.0V
4.0Ah
Li-Ion**

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
132	351	369	83	18.0 V 4.0 Ah	5,9

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs and splices	Alu lugs and splices
400	240	185	400	300

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP36	500x480x128	3,1	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 7 die sets



The next generation of Cembre cordless hydraulic tools represents a significantly advantageous evolution from current models. Born of the renowned B135-UC type crimping tool, B1350-UC will accept the accessories for performing the "Deep Stepped Indent" system of crimping on Aluminium cables. The B1350-UC will accept all semi-circular slotted dies, common to most 12 tons tools (U dies). New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater crimping

speed and crimping force result from a revitalised hydraulic system with double speed action: a rapid approach of the dies to the connector then a slower, more powerful speed for crimping. A maximum pressure sensor and pressure relief valve assure greater precision and repeatability of the pressure cycle and double the provision for operator safety. The OLED display provides essential real time tool operating information

data including:

- Crimping pressure and force being generated, for confirmation of adherence to norms and best practice
- Battery power availability
- Tool identification, LED work light state, reset, no. of operational and service crimping cycles
- Tool service required to maintain optimum condition.

Designed with improved balance, B1350-UC is easily manageable

during the crimping process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface.

Operating temperature:
-15 to +50 ° C

**NEW
18V Li-Ion
BATTERY**



LED lighting of the working area



Multifunction
OLED display
with touch button



Anatomically
shaped grip for
improved comfort



Slot-in battery with
release button

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 1300-C

New

general features



Crimping force kN	Dimensions mm			Jaw Opening mm	Battery Li-Ion	Weight kg (with battery)
	length	height	width			
132	406	239	102,5	25	18.0 V - 4.0 Ah	6,5



**18.0V
4.0Ah
Li-Ion**



**NEW
18V Li-Ion
BATTERY**

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs	H.V. Splices
400	240	185	400	400*

* limited to the cable insulation diameter

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P41	691x456x176	4,0	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 12 die sets



The next generation of Cembre cordless hydraulic tools represents a significantly advantageous evolution from current models.

Born of the renowned B131-C type crimping tool, B1300-C is suitable for a wide range of connectors up to 400 sqmm using die sets common to the Cembre 130 kN tooling range.

New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater crimping speed and crimping force result from a revitalised hydraulic system with double speed action: a rapid approach of the dies to the connector then a slower, more powerful speed for crimping.

A maximum pressure sensor and pressure relief valve assure greater precision and repeatability of the pressure cycle and double the provision for operator safety.

The OLED display provides essential real time tool operating information data including:

- Crimping pressure and force being generated, for confirmation of adherence to norms and best practice
- Battery power availability
- Tool identification, LED work light state, reset, no. of operational and service crimping cycles
- Tool service required to maintain optimum condition.

Designed with improved balance, B1300-C is easily manageable during the crimping process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage.

Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area.

Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface.

Operating temperature: -15 to +50 °C



New

B 1300-C-KV
version also available for Power Supply Companies

Anatomically shaped grip for improved comfort



New

B 1300L-C-KV
version also available for Power Supply Companies



LED lighting of the working area



Slot-in battery with release button



Multifunction OLED display with touch button

These tools are supplied without dies. For die selection, please refer to chart on pages 196 to 205

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL



general features



18.0V
4.0Ah
Li-Ion

Crimping force kN	Dimensions mm			Jaw Opening mm	Battery Li-Ion	Weight kg (with battery)
	length	height	width			
132	471	239	102,5	42	18.0 V - 4.0 Ah	8,0

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs and splices
400	240	185	400

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P41	691x456x176	4,0	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 12 die sets

Also available in the B1300L-C version, featuring a large 42 mm jaw opening, for an easier introduction/removal of large size compression terminations and joints.



New

NEW
18V Li-Ion
BATTERY

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL



general features



18.0V
4.0Ah
Li-Ion

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
132	423	239	102,5	18.0 V - 4.0 Ah	6,5

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve Connectors	H.V. lugs and splices	Alu lugs and splices
400	240	185	400	300

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P41	691x456x176	4,0	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and 12 die sets



New

NEW
18V Li-Ion
BATTERY

The next generation of Cembre cordless hydraulic tools represents a significantly advantageous evolution from current models. Born of the renowned B131-UC type crimping tool, B1300-UC will accept the accessories for performing the "Deep Stepped Indent" system of crimping on Aluminium cables. The B1300-UC will accept all semi-circular slotted dies, common to most 12 tons tools (U dies). New Li-Ion 18 V 4 Ah batteries

offer a higher capacity than 14.4 V 3 Ah, while greater crimping speed and crimping force result from a revitalised hydraulic system with double speed action: a rapid approach of the dies to the connector then a slower, more powerful speed for crimping. A maximum pressure sensor and pressure relief valve assure greater precision and repeatability of the pressure cycle and double the provision for operator safety. The OLED display provides essential

real time tool operating information data including:

- Crimping pressure and force being generated, for confirmation of adherence to norms and best practice
- Battery power availability
- Tool identification, LED work light state, reset, no. of operational and service crimping cycles
- Tool service required to maintain optimum condition.

Designed with improved balance,

B1300-UC is easily manageable during the crimping process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface. Operating temperature: -15 to +50 °C

OVERHEAD LINE APPLICATION
B35M-TC025

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

general features



**18.0V
2.0Ah
Li-Ion**

New

Can be operated with one hand. Balanced for greater control. Head rotates 180° for ease of operation in confined spaces. Fitted with a maximum pressure valve. Extremely quiet, minimal vibration. Durable moulded body offering high resistance to wear and damage in all operating conditions. New Li-Ion 18V 2Ah High Power battery. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. Supplied in a robust plastic case to accommodate the tool and all the accessories. Two batteries and charger included. Operating temperature: -15 to +50 °C



**NEW
18V Li-Ion
BATTERY**

The tool is supplied as:

- Basic tool with battery and wrist strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Max cutting Ø mm	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
25	391	133	81	18.0V 2.0 Ah	3,1

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315x116	1,5	✳	—

CUTTING CAPACITY

MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm)
		B35M-TC025
ROPE & CONDUCTORS	COPPER ≤ 41	25
	ALUMINIUM ≤ 20	25
	ALMELEC ≤ 34	25
	STEEL ≤ 180	INDICATIVE EXAMPLES: 19 x 2,1 : Ø est. = 10,5 mm 19 x 2,2 : Ø est. = 11,0 mm
	MULTI STRANDS STEEL (STRANDS Qty ≥ 200) ≤ 180	-
RODS	ACSR ≤ 180	25 INDICATIVE EXAMPLES: 26 x 2,50 + 7 x 1,95 : Ø est. = 15,85 26 x 3,06 + 7 x 2,38 : Ø est. = 19,38 26 x 3,60 + 7 x 2,80 : Ø est. = 22,80
	STEEL ≤ 60	10
	STEEL ≤ 42	-
	COPPER ≤ 30	-
	ALUMINIUM ≤ 25	16
ALUMINIUM ≤ 16	25	

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

general features



**18.0V
4.0Ah
Li-Ion**

New

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Al, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 25 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah,



**NEW
18V Li-Ion
BATTERY**

while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed action. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. The head can rotate through 180 degrees,

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Max cutting Ø mm	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
25	300	337	83	18.0 V 4.0 Ah	4,65



STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP37	500x480x128	3,1	✳	—

to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables. Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC250 is easily manageable during the cutting process and, by the use of bi-component plastics, has a



shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. For cutting capacity data see page 140. Operating temperature: -15 to +50 °C

18.0 V CORDLESS HYDRAULIC CUTTING TOOL



general features



**18.0V
4.0Ah
Li-Ion**

Max cutting Ø mm	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	height	width		
45	407	401	88	18.0 V 4.0 Ah	6,7

OVERHEAD LINE APPLICATION
B-TC450

New

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP37	500x480x128	3,1	✳	—



The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Next generation of 18.0V cordless hydraulic cutting tool specifically designed to cut Copper, alloy, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 45 mm.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life.

New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed action.

The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button.

The head can rotate through 180 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables. Fitted with a maximum hydraulic pressure valve.

Designed with improved balance, B-TC450 is easily manageable during the cutting process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage.

Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area.



**NEW
18V Li-Ion
BATTERY**

For cutting capacity data see page 142.

Operating temperature:
-15 to +50 ° C

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION
B-TC500Y

New



Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Aluminium, Aluminium-Steel cables (ACSR) having a max overall diameter of 50 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed action.

**NEW
18V Li-Ion
BATTERY**

The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. The head can rotate through 90 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables.

general features

Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
50	405	398	83	18.0 V 4.0 Ah	5,8



**18.0V
4.0Ah
Li-Ion**

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP37	500x480x128	3,1	*	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories



Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC500Y is easily manageable during the cutting process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage.

Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Operating temperature: -15 to +50 °C

Not suitable for cutting stay wire, Steel rope or earthing rod.

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION
B-TC550

New



Next generation of 18.0 V cordless hydraulic cutting tool. Specifically designed to cut Copper, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 55 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and

**NEW
18V Li-Ion
BATTERY**

cutting force result from a revitalised hydraulic system with double speed action. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button.

general features

Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
55	441	424	87	18.0 V 4.0 Ah	8,9



**18.0V
4.0Ah
Li-Ion**

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL B-TC950	565x410x132	6,7	*	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery • Battery charger
- Metal carrying case suitable for storing the tool and accessories



The head can rotate through 320 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables. Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC550 is easily manageable during the cutting process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage.

Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. For cutting capacity data see page 144. Operating temperature: -15 to +50 °C

18.0 V CORDLESS HYDRAULIC CUTTING TOOL



general features



18.0V
4.0Ah
Li-Ion

Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
50	405	398	83	18.0 V 4.0 Ah	5,8

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP37	500x480x128	3,1	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Aluminium and telecommunication cable having a max overall diameter of 50 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed



action. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. The head can rotate through 90 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables.

Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC500 is easily manageable during the cutting process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Operating temperature: -15 to +50 °C



INDUSTRIAL APPLICATION
B-TC500

New

NEW
18V Li-Ion
BATTERY

18.0 V CORDLESS HYDRAULIC CUTTING TOOL



general features



18.0V
4.0Ah
Li-Ion

Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
65	429	415	83	18.0 V 4.0 Ah	6,4

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP37	500x480x128	3,1	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Aluminium and telecommunication cable having a max overall diameter of 65 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed



action. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. The head can rotate through 335 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables.

Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC650 is easily manageable during the cutting process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Operating temperature: -15 to +50 °C



INDUSTRIAL APPLICATION
B-TC650

New

NEW
18V Li-Ion
BATTERY

INDUSTRIAL APPLICATION
B-TC650-SC



New

NEW 18V Li-Ion BATTERY

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Aluminium and telecommunication cable having a max overall diameter of 65 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. The open head and the "scissor" movement of the blades facilitate the cutting of running cables. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed action. The battery is equipped with LED indicators to show the remain-

ing battery life at any time by pressing the adjacent button. The head can rotate through 180 degrees, to enable the operator to work in

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

general features



Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
65	503	464	105	18.0V 4.0Ah	7,7



**18.0V
4.0Ah
Li-Ion**

STORAGE

Type	Dimensions in.	Weight kg	Supplied with the tool	Purchase separately
VAL B-TC950	565x410x132	6,7	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Metal carrying case suitable for storing the tool and accessories



the most comfortable position, and can easily be opened to allow cutting of running cables. Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC650-SC is easily manageable during the cutting process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while

additional convenience and safety are provided by LED lighting of the working area. Operating temperature: -15 to +50 °C

INDUSTRIAL APPLICATION
B-TC950



New

NEW 18V Li-Ion BATTERY

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Aluminium and telecommunication cable having a max overall diameter of 95 mm. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater cutting speed and cutting force result from a revital-

ised hydraulic system with double speed action. The battery is equipped with LED indicators to show the remaining battery life

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

general features



Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
95	518	468	83	18.0V 4.0Ah	7,8



**18.0V
4.0Ah
Li-Ion**

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL B-TC950	565x410x132	6,7	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Metal carrying case suitable for storing the tool and accessories



at any time by pressing the adjacent button. The head can rotate through 335 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow cutting of running cables. Fitted with a maximum hydraulic pressure valve. Designed with improved balance, B-TC950 is easily manageable during the cutting process and, by the

use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area. Operating temperature: -15 to +50 °C

14.4 V CORDLESS HYDRAULIC FRAME-TYPE HOLE PUNCHING TOOL



general features



**14.4V
3.0Ah
Li-Ion**

Max hole punch Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
47,2	354	302	94	14.4 V 3.0 Ah	5,6

B-FC48N

New

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P9	543x412x130	2,2	✳	—

The tool is supplied as:

- Basic tool with battery, wrist strap and shoulder strap
- Spare battery
- Battery charger
- Plastic carrying case suitable for storing the tool and accessories



14.4 V cordless hydraulic tool for punching holes from 15,5 up to 47,2 mm diameter in the side wall of trunking without the need for pre drilling. Lightweight and balanced for single-hand operation.

The tool features a double speed action: a fast advancing speed for rapid approach of the dies to the material and a slower, more powerful speed for punching.



Li-Ion BATTERY

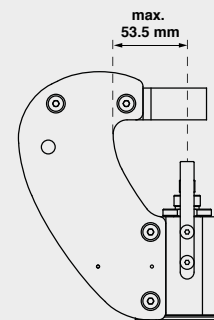
The punching head can rotate through 180° for ease of operation.

Complete with a display which, after every operation and battery insertion, indicates the residual battery power.

Extremely quiet in operation, with very little vibration.

Ergonomically designed with a sculptured body for operator comfort. Also available in the hand operated mechanical version MT-FC48N.

For the punch/die set reference see table.



Max centre of hole to edge of trunking: 53,5 mm

Table denotes the punch/die set reference, for each hole size. Suitable for punching holes in mild Steel, fibreglass or plastic material, up to 2 mm thick.

Hole Dimensions					Maximum thickness of mild Steel (mm)	Code
Nominal	Ø (mm)	Ø (inch)	Pg	ISO		
15,5	.610	Pg9	-	-	2	RD 15.5 SS-FC
16,2	.638	-	ISO-16	-		RD 16.2 SS-FC
17,5	.689	-	-	-		RD 17.5 SS-FC
18,8	.740	Pg11	-	-		RD 18.8 SS-FC
19,1	.752	-	-	-		RD 19.1 SS
20,5	.807	Pg 13,5	ISO-20	-		RD 20.5 SS
22,6	.890	Pg16	-	-		RD 22.6 SS
23,8	.937	-	-	5/8"		RD 23.8 SS
25,4	1.000	-	ISO-25	-		RD 25.4 SS
27,0	1.063	-	-	3/4"		RD 27.0 SS
28,5	1.122	Pg21	-	-		RD 28.5 SS
30,5	1.201	-	-	7/8"		RD 30.5 SS
31,8	1.252	-	-	-		RD 31.8 SS
32,5	1.279	-	ISO-32	-		RD 32.5 SS
34,6	1.362	-	-	-		RD 34.6 SS
37,2	1.464	Pg29	-	-		RD 37.2 SS
38,1	1.500	-	-	-		RD 38.1 SS
40,5	1.594	-	ISO-40	-		RD 40.5 SS-FC
41,3	1.626	-	-	-		RD 41.3 SS-FC
42,5	1.673	-	-	1"1/4"		RD 42.5 SS-FC
43,2	1.701	-	-	-		RD 43.2 SS-FC
44,5	1.752	-	-	-		RD 44.5 SS-FC
47,2	1.858	Pg36	-	-		RD 47.2 SS-FC

18.0 V CORDLESS HYDRAULIC PULLER-TYPE HOLE PUNCHING TOOL

general features



B-FL750



New

NEW 18V Li-Ion BATTERY

New Li-Ion 18 V 4 Ah batteries offer a higher capacity than 14.4 V 3 Ah, while greater punch speed and punching force result from a revitalised hydraulic system with double speed action. The battery is equipped with LED indicators to show the remaining battery life at any time by pressing the adjacent button. The balanced punching head pivots 180deg through a full 360deg rotation for ease of use in confined spaces. Fitted with a maximum hydraulic pressure valve.

Next generation of 18.0 V cordless hydraulic tool specifically designed for hole punching stainless Steel, mild Steel, fibreglass and plastic sheet materials up to 3,5 mm thickness.

Max punching Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	height	width		
Ø 140	363	366	83	18.0 V 4.0 Ah	5,1



**18.0V
4.0Ah
Li-Ion**

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL FCL	565x410x132	6,7	✳	—

The tool is supplied as:

- Basic tool with battery and shoulder strap
- Spare battery
- Battery charger
- Puller TD-11
- Puller TD-19
- Spiral bit Ø 11,5 mm

- Metal carrying case suitable for storing the tool and accessories



Designed with improved balance, B-FL750 is easily manageable during the punching process and, by the use of bi-component plastics, has a shell with high resistance to wear and damage. Rubber grip inserts, low noise and minimal vibration aid operator comfort while additional convenience and safety are provided by LED lighting of the working area.

Operating temperature: -15 to +50 °C

PUNCHING ACCESSORIES AVAILABLE

ROUND PUNCH

Hole diameter				Material max thickness		Pilot hole Ø (mm)	Code			
Nominal	Pg	ISO	Stainless Steel	Mild Steel	KIT (Punch+die)		Punch	Die	Puller	
Ø (mm)	Ø (inch)									
15,5	.610	Pg9	-	-	2,5 mm (0,1 in.)	11,5	RD 15.5SS	P-RD15.5SS	M-RD15.5SS	TD-11
16,2	.638	-	ISO-16	-			RD 16.2SS	P-RD16.2SS	M-RD16.2SS	
17,5	.689	-	-	-			RD 17.5SS	P-RD17.5SS	M-RD17.5SS	
18,8	.740	Pg11	-	-			RD 18.8SS	P-RD18.8SS	M-RD18.8SS	
19,1	.752	-	-	-			RD 19.1SS	P-RD19.1SS	M-RD19.1SS	
20,5	.807	Pg13,5	ISO-20	-			RD 20.5SS	P-RD20.5SS	M-RD20.5SS	
22,6	.890	Pg16	-	-			RD 22.6SS	P-RD22.6SS	M-RD22.6SS	
23,8	.937	-	-	-			RD 23.8SS	P-RD23.8SS	M-RD23.8SS	
25,4	1.000	-	ISO-25	-			RD 25.4SS	P-RD25.4SS	M-RD25.4SS	
27,0	1.063	-	-	-			RD 27SS	P-RD27SS	M-RD27SS	
28,5	1.122	Pg21	-	-			RD 28.5SS	P-RD28.5SS	M-RD28.5SS	
30,5	1.201	-	-	-			RD 30.5SS	P-RD30.5SS	M-RD30.5SS	
28,5	1.122	Pg 21	-	-			RD 28.5SS-19	P-RD28.5SS-19	M-RD28.5SS-19	
30,5	1.201	-	-	-			RD 30.5SS-19	P-RD30.5SS-19	M-RD30.5SS-19	
31,8	1.252	-	-	-			RD 31.8SS	P-RD31.8SS	M-RD31.8SS	
32,5	1.279	-	ISO-32	-			RD 32.5SS	P-RD32.5SS	M-RD32.5SS	
34,6	1.362	-	-	-			RD 34.6SS	P-RD34.6SS	M-RD34.6SS	
37,2	1.464	Pg29	-	-			RD 37.2SS	P-RD37.2SS	M-RD37.2SS	
38,1	1.500	-	-	-			RD 38.1SS	P-RD38.1SS	M-RD38.1SS	
40,5	1.594	-	ISO-40	-			RD 40.5SS	P-RD40.5SS	M-RD40.5SS	
41,3	1.626	-	-	-	RD 41.3SS	P-RD41.3SS	M-RD41.3SS			
42,5	1.673	-	-	-	RD 42.5SS	P-RD42.5SS	M-RD42.5SS			
43,2	1.701	-	-	-	RD 43.2SS	P-RD43.2SS	M-RD43.2SS			
44,5	1.752	-	-	-	RD 44.5SS	P-RD44.5SS	M-RD44.5SS			
47,2	1.858	Pg36	-	-	RD 47.2SS	P-RD47.2SS	M-RD47.2SS			
50,5	1.988	-	ISO-50	-	RD 50.5SS	P-RD50.5SS	M-RD50.5SS			
54,2	2.134	Pg42	-	-	RD 54.2SS	P-RD54.2SS	M-RD54.2SS			
60,0	2.362	Pg48	-	-	RD 60SS	P-RD60SS	M-RD60SS			
64,0	2.520	-	ISO-63	-	RD 64SS	P-RD64SS	M-RD64SS			
65,0	2.559	-	-	-	RD 65SS	P-RD65SS	M-RD65SS			
76,0	2.992	-	-	-	RD 76SS	P-RD76SS	M-RD76SS			
80,5	3.169	-	-	-	RD 80.5SS	P-RD80.5SS	M-RD80.5SS			
89,0	3.503	-	-	-	RD 89SS	P-RD89SS	M-RD89SS			
100,0	3.937	-	-	2	RD 100SS	P-RD100SS	M-RD100SS			
120,0	4.724	-	-	1,5	RD 120SS	P-RD120SS	M-RD120SS			

* Puller included in the kit

SQUARE PUNCH

Hole size		Material max thickness (mm)		Pilot hole Ø (mm)	Code
Nominal		Stainless Steel	Mild Steel		
Ø (mm)	Ø (inch)				
21,0 x 21,0	.827 x .827	2,0	2,0	12,0	RD 21X21
46,0 x 46,0	1.811 x 1.811	1,5	1,5	22,5	RD 46X46
68,0 x 68,0	2.677 x 2.677	1,0	1,0	28,5	RD 68X68
92,0 x 92,0	3.622 x 3.622	1,0	1,0	28,5	RD 92X92
126,0 x 126,0	4.960 x 4.960	1,0	1,0	28,5	RD 126X126
138,0 x 138,0	5.433 x 5.433	1,0	1,0	28,5	RD 138X138

RECTANGULAR PUNCH

Hole size		Material max thickness (mm)		Pilot hole Ø (mm)	Code
Nominal		Stainless Steel	Mild Steel		
Ø (mm)	Ø (inch)				
18,0 x 46,0	.709 x 1.811	2,0	2,0	16,5	RD 18X46
22,0 x 46,0	.866 x 1.811	2,0	2,0	16,5	RD 22X46
35,0 x 86,0	1.377 x 3.385	1,5	1,5	26,5	RD 35X86
35,0 x 112,0	1.377 x 4.409	1,5	1,5	26,5	RD 35X112
36,0 x 46,0	1.417 x 1.811	2,0	2,0	16,5	RD 36X46
37,0 x 54,0	1.456 x 2.125	2,0	2,0	16,5	RD 37X54
37,0 x 67,0	1.456 x 2.637	2,0	2,0	16,5	RD 37X67
37,0 x 88,0	1.456 x 3.464	2,0	2,0	16,5	RD 37X88
37,0 x 104,0	1.456 x 4.094	2,0	2,0	16,5	RD 37X104
37,0 x 115,0	1.456 x 4.527	2,0	2,0	16,5	RD 37X115
46,0 x 54,0	1.811 x 2.126	2,0	2,0	22,5	RD 46X54
46,0 x 72,0	1.811 x 2.835	2,0	2,0	22,5	RD 46X72
46,0 x 107,0	1.811 x 4.212	2,0	2,0	22,5	RD 46X107

Stainless Steel = Rm= 700 N/mm² - Mild Steel = Rm= 500 N/mm²

USE OF NON-CEMBRE PUNCHING ACCESSORIES

Code	Punch & Die	Pilot hole Ø mm
KIT TRD-9,4C (*)	KLAUKE, GREENLEE 3/8" - 24 UNF	Ø 9.7
KIT TRD-M11C (*)	IMB, BM, COSMEC (M11x1.5)	Ø 11.5
TD-M16C	IMB, BM, COSMEC (M16x1.5)	Ø 16.5 or KIT RD17.5SS

(*) The washer supplied with the KIT must be threaded onto the draw stud and positioned between the head and the die to allow the die to rest correctly.

Universal joint allows punching head to pivot 180deg over a full 360deg rotation.





HYDRAULIC PUMPS AND UNITS

HYDRAULIC PUMPS

PO 7000

Foot operated double speed pump, developing a maximum pressure of 700 bar.

The pump is supplied with 3 m long high pressure flexible hose complete with female self-lock quick coupler.

Pressure can be withdrawn at any time during operation by depressing the release lever.

A solid shaped stand gives the pump stability during operation.



Operating pressure bar	Dimensions mm			Weight kg
	length	width	height	
700	680	200	163	9,8

Storage type	Dimensions mm	Weight kg
VAL P21*	820x430x290	6,74

*Supplied with the pump



CPP-0

The CPP-0 air hydraulic power unit intensifies an air supply of 6-8 bar (87-115 psi) to a power crimping or cutting force of up to 700 bar (10.000 psi) depending upon the input pressure.

The control pedal allows for advancing and pressure release at any stage of the operation.

The unit is provided with a 2 m high pressure flexible hose, including a 3/8" NPT female self-lock quick coupler.



Operating pressure bar	Dimensions mm			Weight kg
	length	width	height	
700	320	150	200	6,8

HYDRAULIC PUMPS

CPE-1

CPE-1-110



Operating pressure bar	Dimensions mm			Weight kg
	length	width	height	
700	372	223	482	21

The pump is supplied with:

- high pressure flexible hose with male and female automatic quick coupler
- remote hand controller
- external supply connection cable

Available as optional accessories:

- Remote foot controller **RCP-B70**.
- Transportation trolley **CS-CPE-1**
- Control handle integrated with 3 m length flex hoses **ERCH-WH**



Electrically driven hydraulic pump, powered by a 230V / 50-60Hz single-phase electric motor. The remote hand controller allows advancement and pressure release on completion of the crimping operation. The mechanically actuated emergency button located on the pump body allows the pressure release at any time in case of power shortage.

Also available **CPE-1-110** version for 110-115V / 50-60Hz. Both models are IP 55 rated.



RCP-B70



CS-CPE-1



PORTABLE ELECTRO-HYDRAULIC PUMPS B70M-P24 RANGE

BATTERY OPERATED

Easily accessible oil top-up inlet



Remote electrical hand or foot controller connection (not KV version)



Remote pneumatic hand controller connection (KV version only)



**24V
3.1Ah
Ni-MH**



Powerful 24V Ni-MH rechargeable battery



Battery residual power level display



Manual pressure release button



24V dc external power supply socket with protective cap



High pressure hose connects to automatic self-lock quick coupling with protective cap

Variously supplied with different versions:



HYDRAULIC PUMPS

B70M-P24



Operating pressure bar	Dimensions mm			Weight kg
	length	width	height	
700	390	163	323	9,2*

*without accessories



B70M-P24

- 1 Portable electro-hydraulic pump, 24V dc battery for independent use, developing 700 bar pressure; equipped with an integral socket for connection to an external 24 V dc supply
- 2 **BH2433** Battery 24V dc 3.1Ah
- 3 **DC24** External battery charger
- 4 Shoulder strap
- 5 Canvas holdall for carrying accessories
- 6 3 m flexible hose complete with male + female 3/8" NPT self-lock quick couplers
- 7 **ERCH** Remote control



Operating pressure bar	Dimensions mm			Weight kg
	length	width	height	
700	390	163	323	9,2*

*without accessories



B70M-P24-CH

B70M-P24-CH

- 1 Portable electro-hydraulic pump, 24V dc battery for independent use, developing 700 bar pressure; equipped with an integral socket for connection to an external 24 V dc supply
- 2 **BH2433** Battery 24V dc 3.1Ah
- 3 **DC24** External battery charger
- 4 Shoulder strap
- 5 Canvas holdall for carrying accessories
- 6 **ERCH-WH** Remote hand controller integrated with 3 m length flexible hose complete with male + female 3/8" NPT self-lock quick couplers



Operating pressure bar	Dimensions mm			Weight kg
	length	width	height	
700	390	163	323	9,2*

*without accessories



B70M-P24-KV

B70M-P24-KV

- 1 Portable electro-hydraulic pump, 24V dc battery for independent use. Equipped with high dielectric insulated oil and automatic "insulated" lock quick coupler to allow connection only with insulated hoses.
- 2 **BH2433** Battery 24V dc 3.1Ah.
- 3 **DC24** External battery charger.
- 4 Shoulder strap
- 5 Canvas holdall for carrying accessories.
- 6 **PRCH** Remote pneumatic hand controller

Insulated heads suitable for use with this pump are generally supplied complete with high pressure insulated hoses; if necessary the hose can be purchased separately.

ACCESSORIES FOR B70M-P24

ESC 300CEE
CONNECTING CABLE WITH 24V dc CEE TYPE PLUG
(for power from an external source, length 3 meters)



ESC 600
CONNECTING CABLE WITH CROCODILE CLIPS
(for power from an external source, length 6 meters)



BPS 230.24
network power supply (not for intensive use)
INPUT 230V ac 50-60Hz; OUTPUT 24V dc
thermal and short circuit protection.
Current supply: up to 4A extended use;
18A for 50 s; 25A for 8 s.



EPS 115-230.24
network power supply
SUPPLY IN: 110/240V
ac autorange
50-60Hz; 700W
SUPPLY OUT: 24V dc; 30A max



ERCH-WH
Remote hand controller
integrated with 3 m
length flexible hose



Operating
push-button

Pressure release button

TRS-B70
CANVAS RUCKSACK
(for carrying the pump)



SH-B70
HOOK
(for hanging the pump
from a ladder)



VAL-P18
Durable transport
case for pump and
accessories.



RCP-B70
PORTABLE REMOTE
FOOT CONTROL



HYDRAULIC UNITS

(pump PO 7000 + head RHC 131)

Crimping force kN	Dimensions pump mm	Dimensions head mm	Weight kg
130	680x200xh163	232x124	13,6

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices
400	240	185	400

Storage type	Dimensions mm	Weight kg
VAL P21*	820x430xh290	6,74

*Supplied with the unit, suitable for storage of 24 semi-circular slotted dies



Hydraulic units are obtained by combining the double stage hydraulic foot pump with the various hydraulic press heads featured on previous

pages. The use of the double speed pump considerably reduces operating time.

CP 1131



(pump PO 7000 + head RHU 131-C)

Crimping force kN	Dimensions pump mm	Dimensions head mm	Weight kg
130	680x200xh163	245x89	13,5

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices	Alu lugs and splices
400	240	185	400	300

Storage type	Dimensions mm	Weight kg
VAL P21*	820x430xh290	6,74

*Supplied with the unit, suitable for storage of 24 semi-circular slotted dies and accessories for crimping Aluminium connectors



CPU 1131-C



(pump PO 7000 + head ECW-H3D)

Crimping force kN	Dimensions pump mm	Dimensions head mm	Weight kg
230	680x200xh163	290x120	15,3

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices	Insulated terminals	"C" sleeve connectors	H.V. lugs and splices
630	300	240	630

Storage type	Dimensions mm	Weight kg
VAL P21*	820x430xh290	6,74

*Supplied with the unit, suitable for storage of 24 semi-circular slotted dies and adaptors and dies specific for head ECW-H3D



CPU 1230-3D



HYDRAULIC CUTTING UNITS

CP 1096



(pump **PO 7000** + head **TC 096**)

Max cutting Ø mm	Dimensions pump mm	Dimensions head mm	Weight kg
95	680x200x163	397x249	17,7
Storage type	Dimensions mm	Weight kg	
VAL CP 096*	785x430x175	14,0	

*Supplied with the unit

Units CP-W-KV



GS approval
n. ET 13045



Hydraulic units provide protection against short circuit when cutting accidentally live L.V. / M.V. cables with nominal voltage up to 60 kV.

Unit Type	Max cutting Ø mm	Dimensions pump	Dimensions head	Weight kg
CP 1086-W-1000-KV	85	680x200x163	405x143	16,6
CP 1096-W-1000-KV	95	680x200x163	407x245	19,0
CP 1120-W-1000-KV	120	680x200x163	556x185	20,2

Storage case type	Dimensions mm	Weight kg
VAL CPO96-W*	785x430x175	12,6

*Supplied with the unit



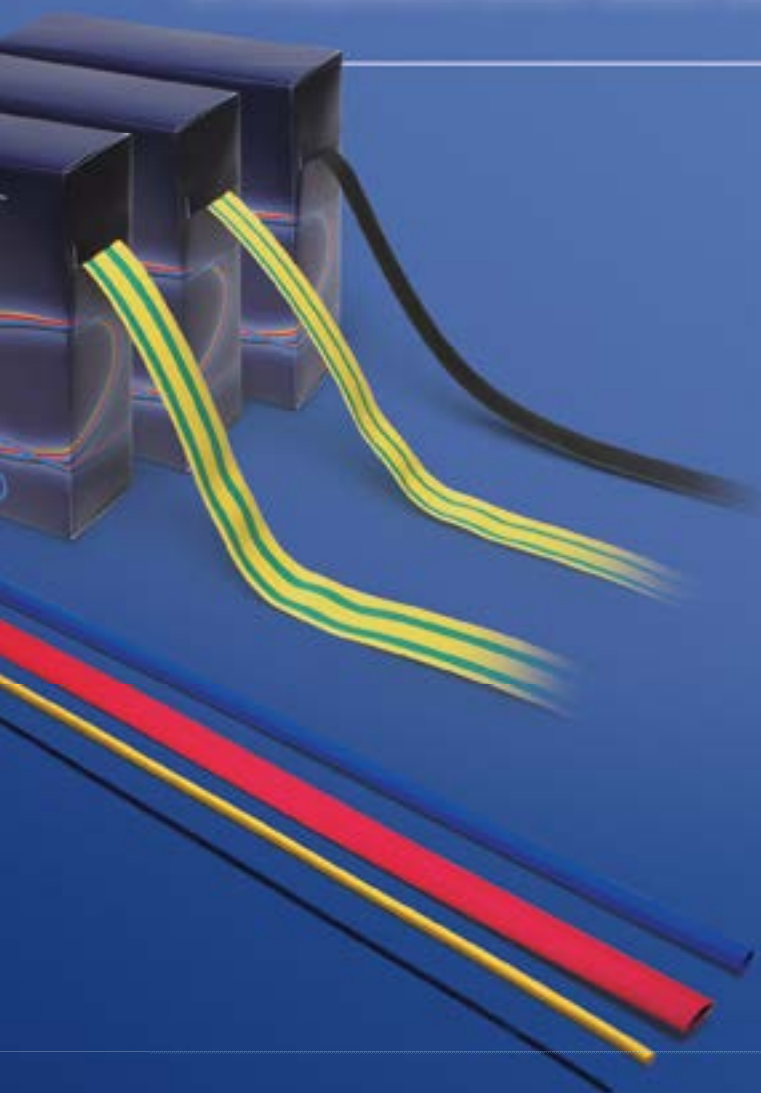
Available as optional accessories:

- EK100 earth cable for the pump (1 m length)
- EK500P earth cable for the head (5 m length) with earth rod and canvas bag





In this section of the catalogue you can find selected products at competitive price which complement our traditional range



MARKETLINE PRODUCTS

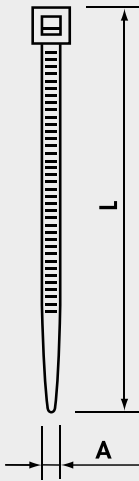
CABLE TIES

G series, PA6.6 Polyamide

G



Material: PA6.6 Polyamide
 Self-extinguishing V2 (UL 94)
 Humidity absorption:
 2,5% (at 50% relative humidity)
 Operating temperature:
 From -40°C to +85°C (continuous)
 From -40°C to +120°C (short periods)
 Resistant to:
 oils, greases, oil products, chlorinated solvents.
 Colour: Natural or Black (Ral 2005)



Black ties have higher UV resistance due to increased carbon black loading

Natural ties offer rapid installation due to the low friction coefficient of the material

Cable Ties in PA6.6

Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
G80X2.4	80	2,4	15	8	100
G80X2.4N					1000
G80X2.4/M			16		100
G80X2.4N/M					1000
G90X2.4	90	2,5	22		100
G90X2.4N					1000
G100X2.5			30		100
G100X2.5N					1000
G100X2.5/M	100	33	1000		
G100X2.5N/M			1000		
G120X2.5			40	100	
G120X2.5N				1000	
G140X2.5	140	3,6	53	100	
G140X2.5N				1000	
G140X2.5/M			65	1000	
G140X2.5N/M				1000	
G160X2.5	160	18	18	100	
G160X2.5N				1000	
G160X2.5/M				1000	
G160X2.5N/M				1000	
G200X2.5	200	2,8	76	100	
G200X2.5N				1000	
G200X2.5/M				14	100
G200X2.5N/M					1000
G250X2.8	250	3,6	18	100	
G250X2.8N				1000	
G300X2.8				30	100
G300X2.8N					1000
G120X3.6	120	3,6	18	100	
G120X3.6N				1000	
G140X3.6				33	100
G140X3.6N					1000
G140X3.6/M	140	35	18	100	
G140X3.6N/M				1000	
G150X3.6				44	100
G150X3.6N					1000
G180X3.6	180	3,6	18	100	
G180X3.6N				1000	
G200X3.6				53	1000
G200X3.6N					1000
G200X3.6/M	200	65	18	1000	
G200X3.6N/M				1000	
G250X3.6				76	100
G250X3.6N					1000
G300X3.6	300	3,6	18	100	
G300X3.6N				1000	
G300X3.6/M				102	1000
G300X3.6N/M					1000
G370X3.6	370	4,8	22	100	
G370X3.6N				1000	
G120X4.8				24	100
G120X4.8N					1000
G160X4.8	160	3,6	18	100	
G160X4.8N				1000	
G190X4.8				46	100
G190X4.8N					1000
G190X4.8/M	190	50	22	1000	
G190X4.8N/M				1000	
G200X4.8				60	100
G200X4.8N					1000
G200X4.8/M	200	60	22	1000	
G200X4.8N/M				1000	
G250X4.8				70	1000
G250X4.8N					1000
G280X4.8	280	4,8	22	1000	
G280X4.8N				1000	
G300X4.8				76	1000
G300X4.8N					1000
G370X4.8	370	5,6	26	1000	
G370X4.8N				1000	
G390X4.8				105	1000
G390X4.8N					1000
G430X4.8	430	6,3	32	1000	
G430X4.8N				1000	

Minimum order: 1.000 pcs

Minimum order: 100 pcs



CABLE TIES

G series, PA6.6 Polyamide

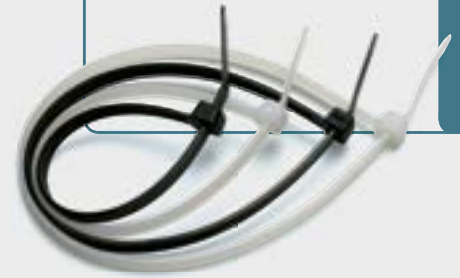
G

Cable Ties in PA6.6

Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity								
G450X4.8	450	4,8	116	22	100								
G450X4.8N													
G530X4.8													
G530X4.8N	530	7,6	140	80									
G150X7.6													
G150X7.6N													
G200X7.6	200	9,0	50			115							
G200X7.6N													
G250X7.6													
G250X7.6N	250	12,6	65				100						
G300X7.6													
G300X7.6N													
G370X7.6	370	12,6	76					100					
G370X7.6N													
G430X7.6													
G430X7.6N	430	12,6	102						100				
G530X7.6													
G530X7.6N													
G430X9.0	430	12,6	140							100			
G430X9.0N													
G530X9.0													
G530X9.0N	530	12,6	110								100		
G710X9.0													
G710X9.0N													
G780X9.0	780	12,6	190									100	
G780X9.0N													
G830X9.0													
G830X9.0N	830	12,6	228										100
G920X9.0													
G920X9.0N													
G1020X9.0	1020	12,6	239		100								
G1020X9.0N													
G1220X9.0													
G1220X9.0N	1220	12,6	263	100									
G230X12.6													
G230X12.6N													
G380X12.6	380	12,6	295			100							
G380X12.6N													
G480X12.6													
G480X12.6N	480	12,6	365				100						
G580X12.6													
G580X12.6N													
G730X12.6	730	12,6	50					100					
G730X12.6N													
G880X12.6													
G880X12.6N	880	12,6	106						100				
G1030X12.6													
G1030X12.6N													
G1030X12.6N	1030	12,6	120							100			
G730X12.6													
G880X12.6													
G880X12.6N	880	12,6	152								100		
G1030X12.6													
G1030X12.6N													
G1030X12.6N	1030	12,6	204									100	
G880X12.6													
G880X12.6N													
G1030X12.6	1030	12,6	248										100
G1030X12.6N													
G1030X12.6N													
G1030X12.6N	1030	12,6	295		100								
G1030X12.6N													
G1030X12.6N													

Minimum order: 100 pcs

Note: In Type, N = Black



Angled tongue to facilitate easy introduction into the buckle

Rounded corners for increased safety



CABLE TIES

G series, PA6.6 Polyamide, VO (UL94)

G VO

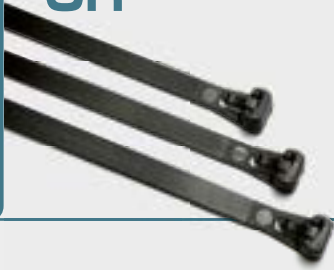
Cable Ties in PA6.6 - VO (UL94)

Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity	Minimum Order Qty
G90X2.4 VO	90	2,4	16	8	100	1000
G100X2.5/M VO	100		22			
G140X2.5/M VO	140		33			
G200X2.5/M VO	200	3,6	53	18	1000	
G150X3.6 VO	150		35			
G200X4.8/M VO	200		50			
G370X4.8 VO	370	4,8	102	22	100	100
G430X4.8 VO	430		110			
G710X9.0 VO	710		190			

Same features as G series except: self-extinguishing VO (UL 94)

Recommended tools are shown on page 194

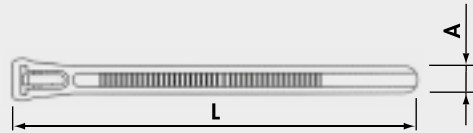
GR



Same features as G series.
Easy installation without tools.
Released by pressure on the tongue.
Suitable for temporary locking.

CABLE TIES

GR series, PA6.6 Polyamide



HALOGEN FREE

Releasable cable ties in PA6.6

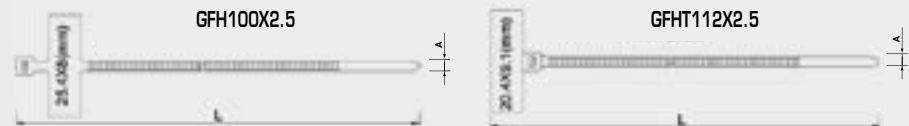
Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
GR100X7.6N	100	7,6	20	22,2	100
GR120X7.6N	120		30		
GR150X7.6N	150		35		
GR200X7.6N	200		50		
GR250X7.6N	250		66		
GR300X7.6N	300		80		
GR370X7.6N	370		102		

GFH



Same features as G series.
Quick and easy identification of bundled conductors.
Write on panel with Felt tip pen.

GFH series, PA6.6 Polyamide



HALOGEN FREE

Markable cable ties in PA6.6

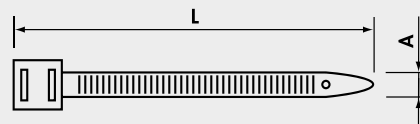
Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
GFH100X2.5	100	2,5	18	8,1	100
GFHT112X2.5	112				

1600



Material: Elastomerized Polymer on Polyamide base
Self-extinguishing HB (UL94)
Halogen free
Operating temperature:
From -45°C to + 85°C (continuous)
From -45°C to + 120°C (short periods)
Resistant to:
UV, salt atmosphere, oils, greases, oil products
Colour: Black

1600 series,
Elastomerized Polymer on Polyamide base



HALOGEN FREE

Cable Ties in PA12 Polyamide

Type	Head Type	L (mm)	A (mm)	Min. Bundle Ø (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
1618.90	single	180	9	15	40	40	100
1626.90	double	260	9	30	60	55	100
1636.90	double	360	9	30	93	55	100
1651.90	double	510	9	70	140	55	100
1676.90	double	760	9	70	220	55	100

Recommended tools are shown on page 194

CABLE TIES

in Stainless Steel AISI 304

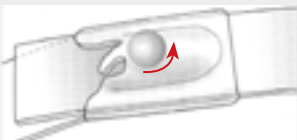
GX



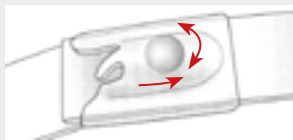
Cable Ties in Stainless Steel

Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
GX200X4.5	200	4,5	50	46	100
GX300X4.5	300		76		
GX370X4.5	370		102		
GX520X4.5	520		156		
GX370X7.9	370	7,9	102	114	
GX680X7.9	680		207		
GX1020X7.9	1020		312		

Material: Stainless Steel AISI 304
 Unique ball locking mechanism that allows simple and rapid installation and secure locking.
 Operating temperature: From -80°C to +500°C
 High tensile strength.
 Non-flammability.
 High resistance to acetic acid, alkalies, sulphuric acid, corrosion, etc.
 In general very resistant to most hostile environments.



Insert the tongue into the buckle. The internal locking ball rolls freely as the tie is tightened.



Once the correct tension is reached, use the specific tool to trim the tongue. The ball then wedges into the buckle locking it tightly against both the top and bottom of the tie.



AB
CC
SS

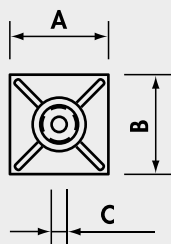


ACCESSORIES

PA6.6 Polyamide

Material: PA6.6 Polyamide
Self-extinguishing V2 (UL 94)
Humidity absorption:
2,5% (at 50% relative humidity)
Operating temperature:
From -40°C to +85°C (continuous)
From -40°C to +120°C (short periods)

Resistant to:
oils, bases, greases, oil products,
chlorinated solvents.
Colour: Natural



Self adhesive cable tie bases in PA6.6

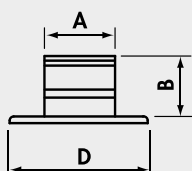
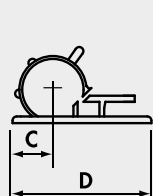
Type	Max Tie (mm)	A (mm)	B (mm)	C (mm)	H (mm)	Fixing screw hole Ø (mm)	Quantity
AB 13*	2,8	13,0	13,0	3,2	3,2	-	100
AB 19*	3,6	19,0	19,0	4,0	4,4	3,1	100
AB 28*	4,8	28,0	28,0	5,3	5,7	5,5	100

*Add to Ref: N for Black



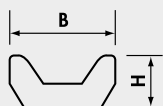
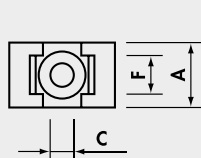
Self adhesive cable clips in PA6.6

Type	Cable Ø (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Quantity
CC 8.9	8-9	9,0	12,0	8,0	21,5	100
CC 9.12	9-12	12,0	15,0	8,2	21,5	100



Cable tie saddle clamps in PA6.6

Type	Max Tie (mm)	A (mm)	B (mm)	C (mm)	F (mm)	H (mm)	Quantity
SS 4.8-3.7	4,8	9,5	15	3,7	5,0	7,2	100
SS 4.8-4.5	4,8	9,5	15	4,5	5,0	7,2	100
SS 9.4.5	9	16,0	22	4,5	9,2	9,7	100
SS 9.5	9	16,0	22	5,0	9,2	9,7	100
SS 9.6.4	9	16,0	22	6,4	9,2	9,7	100



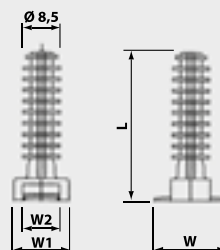
GH8



ACCESSORIES

PA6.6 Polyamide

Same features as G series.
Push into Ø 8 mm hole.
Cable tie inserted through slot in head.



Stud fixing for cable ties in PA6.6

Type	W (mm)	W1 (mm)	W2 (mm)	L (mm)	Fixing hole Ø (mm)	Quantity
GH8	20	15	10	40,5	8	100

TERMOBLOCK HEAT-SHRINKABLE TUBING

flame-retardant Polyolefin
shrinkage ratio 2÷1

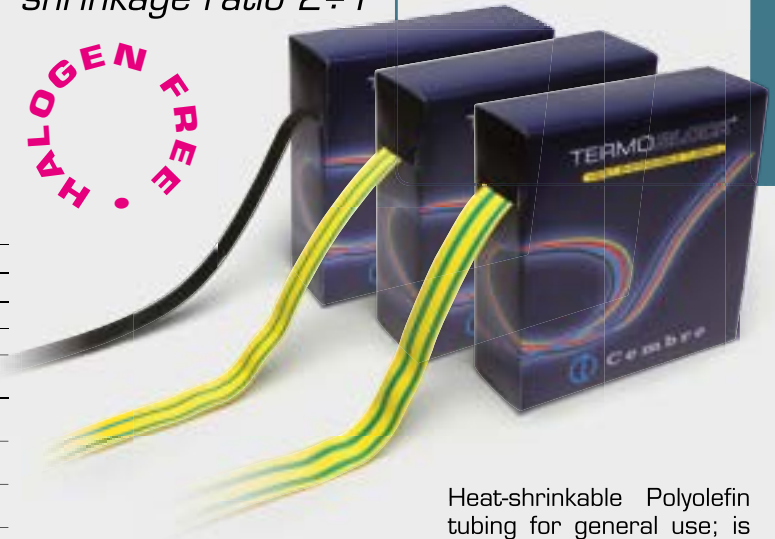
TBS

General characteristics:

- **Operating temperature:** -55°C + 125°C
- **Minimum shrinkage temperature:** 70°C
- **Temperature for complete shrinkage:** 110°C
- **RoHS compliant**
- **Colours:** Black, Red, Blue, Yellow/Green.
- **Packaging:** Roll in Dispenser Box

Technical Specifications:		
Property	Test Method	Performance
Traction resistance (MPa):	ASRM D2671	≥10.4
Elongation at failure (%):	ASRM D2671	≥200
Traction resistance after heat aging (MPa):	UL 224 158°Cx168hr	≥7.3
Elongation at failure after heat aging (%):	UL 224 158°Cx168hr	≥100
Heat resistance:	UL 224 250°Cx4hr	No failure
Low temperature flexibility:	UL 224 -30°Cx4hr	No failure
Dielectric strength (kv/mm):	IEC 243	≥15
Insulation resistance:	600V UL 224	No perforation at 2500V
Volume resistance (Ω.cm):	IEC 93	≥1x10 ¹⁴
Corrosive action:	UL 224 158°Cx168hr	Not corrosive
Copper compatibility:	UL 224 158°Cx168hr	Not corrosive
Flammability:	UL 224	VW-1

HALOGEN FREE



Heat-shrinkable Polyolefin tubing for general use; is environmentally neutral, flexible, not inflammable and offers fast heat shrinkage and stable performance.

Main uses include insulation and protection of electrical conductors, connectors and terminations; protection of metal tubes from corrosion; protection of antennae and various identification applications.

Ref.	Colour		Internal Ø before shrinking	Internal Ø after shrinking	Reel Length
TBS16x20BK	BLACK	●	1,6 mm	0,8 mm	20 m
TBS24x20BK	BLACK	●	2,4 mm	1,2 mm	20 m
TBS32x10BK	BLACK	●	3,2 mm	1,6 mm	10 m
TBS48x10BK	BLACK	●	4,8 mm	2,4 mm	10 m
TBS64x10BK	BLACK	●	6,4 mm	3,2 mm	10 m
TBS95x10BK	BLACK	●	9,5 mm	4,8 mm	10 m
TBS127x10BK	BLACK	●	12,7 mm	6,4 mm	10 m
TBS190x5BK	BLACK	●	19 mm	9,5 mm	5 m
TBS254x5BK	BLACK	●	25,4 mm	12,7 mm	5 m
TBS16x20RE	RED	●	1,6 mm	0,8 mm	20 m
TBS24x20RE	RED	●	2,4 mm	1,2 mm	20 m
TBS32x10RE	RED	●	3,2 mm	1,6 mm	10 m
TBS48x10RE	RED	●	4,8 mm	2,4 mm	10 m
TBS64x10RE	RED	●	6,4 mm	3,2 mm	10 m
TBS95x10RE	RED	●	9,5 mm	4,8 mm	10 m
TBS127x10RE	RED	●	12,7 mm	6,4 mm	10 m
TBS190x5RE	RED	●	19,0 mm	9,5 mm	5 m
TBS254x5RE	RED	●	25,4 mm	12,7 mm	5 m
TBS16x20BU	BLUE	●	1,6 mm	0,8 mm	20 m
TBS24x20BU	BLUE	●	2,4 mm	1,2 mm	20 m
TBS32x10BU	BLUE	●	3,2 mm	1,6 mm	10 m
TBS48x10BU	BLUE	●	4,8 mm	2,4 mm	10 m
TBS64x10BU	BLUE	●	6,4 mm	3,2 mm	10 m
TBS95x10BU	BLUE	●	9,5 mm	4,8 mm	10 m
TBS127x10BU	BLUE	●	12,7 mm	6,4 mm	10 m
TBS190x5BU	BLUE	●	19,0 mm	9,5 mm	5 m
TBS254x5BU	BLUE	●	25,4 mm	12,7 mm	5 m
TBS16x20Y/G	YELLOW/GREEN	●	1,6 mm	0,8 mm	20 m
TBS24x20Y/G	YELLOW/GREEN	●	2,4 mm	1,2 mm	20 m
TBS32x10Y/G	YELLOW/GREEN	●	3,2 mm	1,6 mm	10 m
TBS48x10Y/G	YELLOW/GREEN	●	4,8 mm	2,4 mm	10 m
TBS64x10Y/G	YELLOW/GREEN	●	6,4 mm	3,2 mm	10 m
TBS95x10Y/G	YELLOW/GREEN	●	9,5 mm	4,8 mm	10 m
TBS127x10Y/G	YELLOW/GREEN	●	12,7 mm	6,4 mm	10 m
TBS190x5Y/G	YELLOW/GREEN	●	19 mm	9,5 mm	5 m
TBS254x5Y/G	YELLOW/GREEN	●	25,4 mm	12,7 mm	5 m



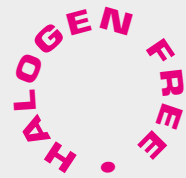
TSS

TERMOSTRIP HEAT-SHRINKABLE TUBING

flame-retardant Polyolefin
shrinkage ratio 2÷1



File no. E472117



Heat-shrinkable Polyolefin tubing strip for general use; is environmentally neutral, flexible, not inflammable and offers fast heat shrinkage and stable performance.

Main uses include insulation and protection of electrical conductors, connectors and terminations; protection of metal tubes from corrosion; protection of antennae and various identification applications.

For general characteristics and technical specifications see page 185.

- **Colours:** Black, Red, White, Blue, Transparent, Yellow, Green, Grey, Brown, Yellow/Green.
- **Packaging:** Strips in Box

Ref.	Colour		Internal Ø before shrinking	Internal Ø after shrinking	Strip Length	Quantity Strips per box
TSS24BK	BLACK	●	2.4 mm	1.2 mm	1,22 m	30
TSS32BK	BLACK	●	3.2 mm	1.6 mm	1,22 m	30
TSS48BK	BLACK	●	4.8 mm	2.4 mm	1,22 m	30
TSS64BK	BLACK	●	6.4 mm	3.2 mm	1,22 m	30
TSS95BK	BLACK	●	9.5 mm	4.8 mm	1,22 m	20
TSS127BK	BLACK	●	12.7 mm	6.4 mm	1,22 m	15
TSS190BK	BLACK	●	19 mm	9.5 mm	1,22 m	10
TSS254BK	BLACK	●	25.4 mm	12.7 mm	1,22 m	6
TSS380BK	BLACK	●	38 mm	19 mm	1,22 m	4
TSS510BK	BLACK	●	51 mm	25.4 mm	1,22 m	2
TSS24RE	RED	●	2.4 mm	1.2 mm	1,22 m	30
TSS32RE	RED	●	3.2 mm	1.6 mm	1,22 m	30
TSS48RE	RED	●	4.8 mm	2.4 mm	1,22 m	30
TSS64RE	RED	●	6.4 mm	3.2 mm	1,22 m	30
TSS95RE	RED	●	9.5 mm	4.8 mm	1,22 m	20
TSS127RE	RED	●	12.7 mm	6.4 mm	1,22 m	15
TSS190RE	RED	●	19 mm	9.5 mm	1,22 m	10
TSS254RE	RED	●	25.4 mm	12.7 mm	1,22 m	6
TSS380RE	RED	●	38 mm	19 mm	1,22 m	4
TSS510RE	RED	●	51 mm	25.4 mm	1,22 m	2
TSS24WH	WHITE	○	2.4 mm	1.2 mm	1,22 m	30
TSS32WH	WHITE	○	3.2 mm	1.6 mm	1,22 m	30
TSS48WH	WHITE	○	4.8 mm	2.4 mm	1,22 m	30
TSS64WH	WHITE	○	6.4 mm	3.2 mm	1,22 m	30
TSS95WH	WHITE	○	9.5 mm	4.8 mm	1,22 m	20
TSS127WH	WHITE	○	12.7 mm	6.4 mm	1,22 m	15
TSS190WH	WHITE	○	19 mm	9.5 mm	1,22 m	10
TSS254WH	WHITE	○	25.4 mm	12.7 mm	1,22 m	6
TSS380WH	WHITE	○	38 mm	19 mm	1,22 m	4
TSS510WH	WHITE	○	51 mm	25.4 mm	1,22 m	2
TSS24BU	BLUE	●	2.4 mm	1.2 mm	1,22 m	30
TSS32BU	BLUE	●	3.2 mm	1.6 mm	1,22 m	30
TSS48BU	BLUE	●	4.8 mm	2.4 mm	1,22 m	30
TSS64BU	BLUE	●	6.4 mm	3.2 mm	1,22 m	30
TSS95BU	BLUE	●	9.5 mm	4.8 mm	1,22 m	20
TSS127BU	BLUE	●	12.7 mm	6.4 mm	1,22 m	15
TSS190BU	BLUE	●	19 mm	9.5 mm	1,22 m	10
TSS254BU	BLUE	●	25.4 mm	12.7 mm	1,22 m	6
TSS380BU	BLUE	●	38 mm	19 mm	1,22 m	4
TSS510BU	BLUE	●	51 mm	25.4 mm	1,22 m	2
TSS24TR	TRANSPARENT	○	2.4 mm	1.2 mm	1,22 m	30
TSS32TR	TRANSPARENT	○	3.2 mm	1.6 mm	1,22 m	30
TSS48TR	TRANSPARENT	○	4.8 mm	2.4 mm	1,22 m	30
TSS64TR	TRANSPARENT	○	6.4 mm	3.2 mm	1,22 m	30
TSS95TR	TRANSPARENT	○	9.5 mm	4.8 mm	1,22 m	20
TSS127TR	TRANSPARENT	○	12.7 mm	6.4 mm	1,22 m	15
TSS190TR	TRANSPARENT	○	19 mm	9.5 mm	1,22 m	10
TSS254TR	TRANSPARENT	○	25.4 mm	12.7 mm	1,22 m	6
TSS380TR	TRANSPARENT	○	38 mm	19 mm	1,22 m	4
TSS510TR	TRANSPARENT	○	51 mm	25.4 mm	1,22 m	2

TERMOSTRIP HEAT-SHRINKABLE TUBING

*flame-retardant Polyolefin
shrinkage ratio 2÷1*

TSS

Ref.	Colour		Internal Ø before shrinking	Internal Ø after shrinking	Strip Length	Quantity Strips per box
TSS24YE	YELLOW	●	2.4 mm	1.2 mm	1,22 m	30
TSS32YE	YELLOW	●	3.2 mm	1.6 mm	1,22 m	30
TSS48YE	YELLOW	●	4.8 mm	2.4 mm	1,22 m	30
TSS64YE	YELLOW	●	6.4 mm	3.2 mm	1,22 m	30
TSS95YE	YELLOW	●	9.5 mm	4.8 mm	1,22 m	20
TSS127YE	YELLOW	●	12.7 mm	6.4 mm	1,22 m	15
TSS190YE	YELLOW	●	19 mm	9.5 mm	1,22 m	10
TSS254YE	YELLOW	●	25.4 mm	12.7 mm	1,22 m	6
TSS380YE	YELLOW	●	38 mm	19 mm	1,22 m	4
TSS510YE	YELLOW	●	51 mm	25.4 mm	1,22 m	2
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TSS24GN	GREEN	●	2.4 mm	1.2 mm	1,22 m	30
TSS32GN	GREEN	●	3.2 mm	1.6 mm	1,22 m	30
TSS48GN	GREEN	●	4.8 mm	2.4 mm	1,22 m	30
TSS64GN	GREEN	●	6.4 mm	3.2 mm	1,22 m	30
TSS95GN	GREEN	●	9.5 mm	4.8 mm	1,22 m	20
TSS127GN	GREEN	●	12.7 mm	6.4 mm	1,22 m	15
TSS190GN	GREEN	●	19 mm	9.5 mm	1,22 m	10
TSS254GN	GREEN	●	25.4 mm	12.7 mm	1,22 m	6
TSS380GN	GREEN	●	38 mm	19 mm	1,22 m	4
TSS510GN	GREEN	●	51 mm	25.4 mm	1,22 m	2
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TSS24GY	GREY	●	2.4 mm	1.2 mm	1,22 m	30
TSS32GY	GREY	●	3.2 mm	1.6 mm	1,22 m	30
TSS48GY	GREY	●	4.8 mm	2.4 mm	1,22 m	30
TSS64GY	GREY	●	6.4 mm	3.2 mm	1,22 m	30
TSS95GY	GREY	●	9.5 mm	4.8 mm	1,22 m	20
TSS127GY	GREY	●	12.7 mm	6.4 mm	1,22 m	15
TSS190GY	GREY	●	19 mm	9.5 mm	1,22 m	10
TSS254GY	GREY	●	25.4 mm	12.7 mm	1,22 m	6
TSS380GY	GREY	●	38 mm	19 mm	1,22 m	4
TSS510GY	GREY	●	51 mm	25.4 mm	1,22 m	2
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TSS24BR	BROWN	●	2.4 mm	1.2 mm	1,22 m	30
TSS32BR	BROWN	●	3.2 mm	1.6 mm	1,22 m	30
TSS48BR	BROWN	●	4.8 mm	2.4 mm	1,22 m	30
TSS64BR	BROWN	●	6.4 mm	3.2 mm	1,22 m	30
TSS95BR	BROWN	●	9.5 mm	4.8 mm	1,22 m	20
TSS127BR	BROWN	●	12.7 mm	6.4 mm	1,22 m	15
TSS190BR	BROWN	●	19 mm	9.5 mm	1,22 m	10
TSS254BR	BROWN	●	25.4 mm	12.7 mm	1,22 m	6
TSS380BR	BROWN	●	38 mm	19 mm	1,22 m	4
TSS510BR	BROWN	●	51 mm	25.4 mm	1,22 m	2
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TSS32Y/G	YELLOW/GREEN	●	3.2 mm	1.6 mm	1,22 m	30
TSS48Y/G	YELLOW/GREEN	●	4.8 mm	2.4 mm	1,22 m	30
TSS64Y/G	YELLOW/GREEN	●	6.4 mm	3.2 mm	1,22 m	30
TSS95Y/G	YELLOW/GREEN	●	9.5 mm	4.8 mm	1,22 m	20
TSS127Y/G	YELLOW/GREEN	●	12.7 mm	6.4 mm	1,22 m	15
TSS190Y/G	YELLOW/GREEN	●	19 mm	9.5 mm	1,22 m	10
TSS254Y/G	YELLOW/GREEN	●	25.4 mm	12.7 mm	1,22 m	6
TSS380Y/G	YELLOW/GREEN	●	38 mm	19 mm	1,22 m	4

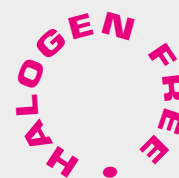
TERMOCOIL HEAT-SHRINKABLE TUBING

TCS

flame-retardant Polyolefin
shrinkage ratio 2÷1



File no. E472117



Heat-shrinkable Polyolefin tubing coil for general use; is environmentally neutral, flexible, not inflammable and offers fast heat shrinkage and stable performance.

Main uses include insulation and protection of electrical conductors, connectors and terminations; protection of metal tubes from corrosion; protection of antennae and various identification applications.

For general characteristics and technical specifications see page 185.

- **Colours:** Black, Red, White, Blue, Yellow, Green, Yellow/Green.
- **Packaging:** Coil on Reel

Ref.	Colour		Internal Ø before shrinking	Internal Ø after shrinking	Coil Length
TCS12X200BK	BLACK	●	1,2 mm	0,6 mm	200 m
TCS16X200BK	BLACK	●	1,6 mm	0,8 mm	200 m
TCS24X200BK	BLACK	●	2,4 mm	1,2 mm	200 m
TCS32X200BK	BLACK	●	3,2 mm	1,6 mm	200 m
TCS48X100BK	BLACK	●	4,8 mm	2,4 mm	100 m
TCS64X100BK	BLACK	●	6,4 mm	3,2 mm	100 m
TCS95X100BK	BLACK	●	9,5 mm	4,8 mm	100 m
TCS127X100BK	BLACK	●	12,7 mm	6,4 mm	100 m
TCS160X100BK	BLACK	●	16 mm	8,0 mm	100 m
TCS190X100BK	BLACK	●	19 mm	9,5 mm	100 m
TCS254X50BK	BLACK	●	25,4 mm	12,7 mm	50 m
TCS320X50BK	BLACK	●	32 mm	16,0 mm	50 m
TCS381X50BK	BLACK	●	38,1 mm	19,0 mm	50 m
TCS508X25BK	BLACK	●	50,8 mm	25,4 mm	25 m
TCS762X25BK	BLACK	●	76,2 mm	38,1 mm	25 m
TCS1016X25BK	BLACK	●	101,6 mm	50,8 mm	25 m
TCS1260X25BK	BLACK	●	126 mm	63,0 mm	25 m
TCS1500X25BK	BLACK	●	150 mm	75,0 mm	25 m
TCS16X200RE	RED	●	1,6 mm	0,8 mm	200 m
TCS24X200RE	RED	●	2,4 mm	1,2 mm	200 m
TCS32X200RE	RED	●	3,2 mm	1,6 mm	200 m
TCS48X100RE	RED	●	4,8 mm	2,4 mm	100 m
TCS64X100RE	RED	●	6,4 mm	3,2 mm	100 m
TCS95X100RE	RED	●	9,5 mm	4,8 mm	100 m
TCS127X100RE	RED	●	12,7 mm	6,4 mm	100 m
TCS190X100RE	RED	●	19 mm	9,5 mm	100 m
TCS254X50RE	RED	●	25,4 mm	12,7 mm	50 m
TCS16X200WH	WHITE	○	1,6 mm	0,8 mm	200 m
TCS24X200WH	WHITE	○	2,4 mm	1,2 mm	200 m
TCS32X200WH	WHITE	○	3,2 mm	1,6 mm	200 m
TCS48X100WH	WHITE	○	4,8 mm	2,4 mm	100 m
TCS64X100WH	WHITE	○	6,4 mm	3,2 mm	100 m
TCS95X100WH	WHITE	○	9,5 mm	4,8 mm	100 m
TCS127X100WH	WHITE	○	12,7 mm	6,4 mm	100 m
TCS190X100WH	WHITE	○	19 mm	9,5 mm	100 m
TCS254X50WH	WHITE	○	25,4 mm	12,7 mm	50 m
TCS16X200BU	BLUE	●	1,6 mm	0,8 mm	200 m
TCS24X200BU	BLUE	●	2,4 mm	1,2 mm	200 m
TCS32X200BU	BLUE	●	3,2 mm	1,6 mm	200 m
TCS48X100BU	BLUE	●	4,8 mm	2,4 mm	100 m
TCS64X100BU	BLUE	●	6,4 mm	3,2 mm	100 m
TCS95X100BU	BLUE	●	9,5 mm	4,8 mm	100 m
TCS127X100BU	BLUE	●	12,7 mm	6,4 mm	100 m
TCS190X100BU	BLUE	●	19 mm	9,5 mm	100 m
TCS254X50BU	BLUE	●	25,4 mm	12,7 mm	50 m

TERMOCOIL HEAT-SHRINKABLE TUBING

*flame-retardant Polyolefin
shrinkage ratio 2÷1*

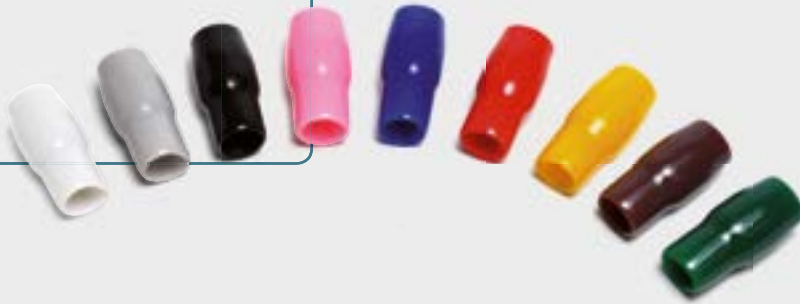
TCS

Ref.	Colour		Internal Ø before shrinking	Internal Ø after shrinking	Coil Length
TCS16X200YE	YELLOW	●	1,6 mm	0,8 mm	200 m
TCS24X200YE	YELLOW	●	2,4 mm	1,2 mm	200 m
TCS32X200YE	YELLOW	●	3,2 mm	1,6 mm	200 m
TCS48X100YE	YELLOW	●	4,8 mm	2,4 mm	100 m
TCS64X100YE	YELLOW	●	6,4 mm	3,2 mm	100 m
TCS95X100YE	YELLOW	●	9,5 mm	4,8 mm	100 m
TCS127X100YE	YELLOW	●	12,7 mm	6,4 mm	100 m
TCS190X100YE	YELLOW	●	19 mm	9,5 mm	100 m
TCS254X50YE	YELLOW	●	25,4 mm	12,7 mm	50 m
TCS16X200GN	GREEN	●	1,6 mm	0,8 mm	200 m
TCS24X200GN	GREEN	●	2,4 mm	1,2 mm	200 m
TCS32X200GN	GREEN	●	3,2 mm	1,6 mm	200 m
TCS48X100GN	GREEN	●	4,8 mm	2,4 mm	100 m
TCS64X100GN	GREEN	●	6,4 mm	3,2 mm	100 m
TCS95X100GN	GREEN	●	9,5 mm	4,8 mm	100 m
TCS127X100GN	GREEN	●	12,7 mm	6,4 mm	100 m
TCS190X100GN	GREEN	●	19 mm	9,5 mm	100 m
TCS254X50GN	GREEN	●	25,4 mm	12,7 mm	50 m
TCS32X200Y/G	YELLOW / GREEN	●	3,2 mm	1,6 mm	200 m
TCS48X100Y/G	YELLOW / GREEN	●	4,8 mm	2,4 mm	100 m
TCS64X100Y/G	YELLOW / GREEN	●	6,4 mm	3,2 mm	100 m
TCS95X100Y/G	YELLOW / GREEN	●	9,5 mm	4,8 mm	100 m
TCS127X100Y/G	YELLOW / GREEN	●	12,7 mm	6,4 mm	100 m
TCS190X100Y/G	YELLOW / GREEN	●	19 mm	9,5 mm	100 m
TCS254X50Y/G	YELLOW / GREEN	●	25,4 mm	12,7 mm	50 m
TCS381X50Y/G	YELLOW / GREEN	●	38,1 mm	19,0 mm	50 m
TCS508X25Y/G	YELLOW / GREEN	●	50,8 mm	25,4 mm	25 m

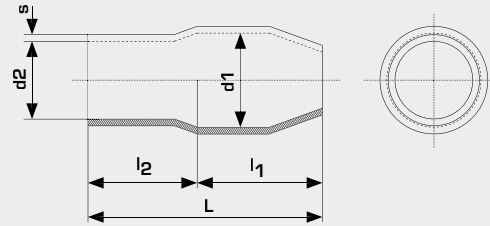
ES

INSULATED COVERS

For uninsulated connectors



Insulated covers in PVC for general use with Cembre A-M copper tube lugs characterised by environmental tolerance, flexibility, not inflammability & stable performance. Widely used for the insulation and protection of connections and electrical terminations.



General features:

- **Material:** PVC
- **Self extinguishing (UL94):** VO
- **Working temperature:** 85 °C
- **Colours:** red, yellow, blue, green, black, grey, white, brown, pink.

Ref.	Connectors A-M*	d1 Ø	d2 Ø	l ₁ ±1	l ₂ ±1	L ± 2	s ± 0.2	Quantity	Minimum Order Qty
ES03..	A03	3.3	3.1	7.0	8.0	15.0	0.6	100	3.000
ES06..	A06	4.5	3.7	8.0	8.0	16.0	0.7	100	
ES1..	A1	5.7	4.1	9.0	9.0	18.0	0.8	100	
ES2..	A2	7.2	6.2	11.0	10.0	21.0	1.0	100	1.000
ES3..	A3	10.0	8.0	15.0	13.0	28.0	1.1	100	
ES5..	A5	12.0	9.5	15.0	14.0	29.0	1.2	100	
ES10..	A7, A9, A10	14.0	11.8	17.0	17.0	34.0	1.4	100	500
ES14..	A12, A14	17.0	13.9	22.0	20.0	42.0	1.5	100	
ES19..	A17, A19	19.0	16.0	25.0	21.0	46.0	1.5	50	
ES24..	A20, A24	22.0	18.0	31.0	24.0	55.0	1.7	50	200
ES30..	A29, A30	24.0	20.0	32.0	28.0	60.0	1.8	50	
ES37..	A35, A37	26.0	22.0	34.0	31.0	65.0	1.8	50	
ES40..	A40, A48**	32.2	24.0	38.0	31.0	69.0	2.0	50	100
ES48..	A48**	36.5	27.2	42.0	33.0	75.0	2.0	50	
ES80..	A60, A80	36.7	30.0	42.0	33.0	75.0	2.0	25	

Dimensions are in mm

Add the suffix corresponding to the selected colour to the reference:

-BU blue, **-GY** grey, **-BR** brown, **-BK** black, **-WH** white, **-RE** red, **-GN** green, **-YE** yellow, **-PK** pink

* See A-M type copper tube lugs on pages 24-25, 34

** Depending on the diameter of the insulated cable

CAST RESIN JOINTS

cast resin, low voltage through joints

N

SHELLS

Manufactured from transparent synthetic material which allows a visual check of the connections before and after casting.

The halves of the shell are joined by snap closures which avoid further fixing or sealing.

Shells are left on after casting to provide additional protection against mechanical abrasion, chemical agents and severe weather conditions.

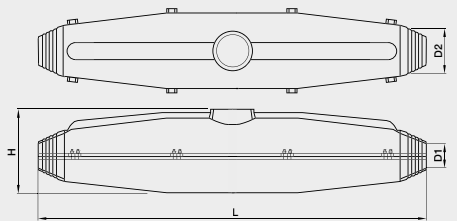


STRAIGHT JOINTS

Type	Dimensions mm				Cable Diameter mm	Indicative Cable Section ⁽²⁾ mm ²
	L	H	D1 ⁽¹⁾	D2 ⁽¹⁾		
N11	200	50	8	26	8 - 25	4C x 1,5 ÷ 10
N12	260	67	16	32	16 - 31	4C x 10 ÷ 25
N13	360	75	21	38	21 - 36	4C x 35 ÷ 50
N14	400	100	26	41	26 - 39	4C x 50 ÷ 70
N15	530	130	35	56	35 - 54	4C x 95 ÷ 150
N16	700	150	47	74	45 - 72	4C x 185 ÷ 300

⁽¹⁾ Internal dimension of the shell

⁽²⁾ Indicative cable sections are approximate and concern only harmonised, PVC or Rubber insulated cables at a working voltage of 0,6/1 kV

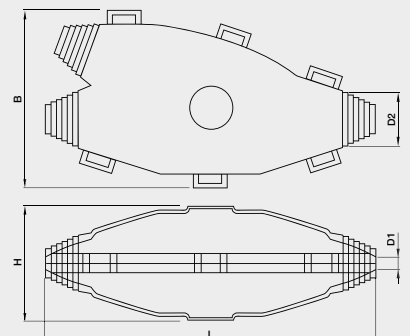


BRANCH JOINTS

Type	Dimensions mm					Cable Diameter mm	Indicative Cable Section ⁽²⁾ mm ²	
	L	H	B	D1 ⁽¹⁾	D2 ⁽¹⁾		Run	Tap
NY00	150	47	70	11	20	11 - 20	4C x 1,5 ÷ 2,5	4C x 1,5
NY0	175	60	94	6	22	6 - 21	4C x 4 ÷ 10	4C x 4
NY1	225	75	110	9	26	9 - 24	4C x 6 ÷ 25	4C x 16

⁽¹⁾ Internal dimension of the shell

⁽²⁾ Indicative cable sections are approximate and concern only harmonised, PVC or Rubber insulated cables at a working voltage of 0,6/1 kV



CAST RESIN JOINTS

cast resin, low voltage through joints

CAST RESIN TECHNOLOGY

PUR-cast resin technology was introduced to seal and protect power, signal and telephone cable joints.

This new generation of two component cast resin has been developed for the most demanding environments and circumstances.

Cembre cast resin joints meet the requirements of EN50393 and DIN VDE 57291-2 (VDE0291).

Quick setting properties in humid or even cold conditions make it a fast and reliable solution.

No external measuring or mixing is required as this takes place within an Aluminium foil pouch, avoiding spillage and errors during installation.

Unmixed resin components have a 48 month shelf-life even in the most difficult storage conditions.

Shells are made of durable PET resulting in good hydrophobic properties and excellent impact resistance, while good adhesion to PVC and metals assures a watertight seal.

Technical characteristic	Test result	Requirement of DIN VDE 0291
Pot life @		
5°C	35 min	
23°C	20 min	product conforms ± 30%
35°C	15 min	
Reactant open cup flash point	> 200 °C	> 55
Tensile strength	≥ 8.0 Mpa	≥ 5.0
Hot aging	- 5 Shore A	- 7
Adhesive	> 1500 CP. S	-
Elongation at break	≥ 100%	≥ 50%
Gel time for 300 ml @	23 °C	
Pouch >1000 ml	26 min	product conforms ± 10%
Pouch <1000 ml	17 min	product conforms ± 10%
Max. reaction temp.	60 °C / 333 K	product conforms ± 10%
Total vol. variability when hardening	6 %	max. 6.5 %
Cast resin component open cup flash point	> 200 °C	> 100
Density	1.07 g / cm ³	-
Impact strength	> 10 kJ / m ²	> 10 kJ / m ²
Hardness	75 Shore A	min. 20 Shore D
Expansion coefficient in temp. range 20-50°C	5.9 x 10 ⁻⁴ K ⁻¹	product conforms ± 15%
Thermal conductivity	0.2W x m ⁻¹ x K ⁻¹	product conforms ± 20%
Flammability	Class II c	acc. to DIN VDE 0304, part 3
Water absorption 42 days@50°C	360 mg	max. 400 mg
Electrolytic corrosion	A1	-
Voltage test @		no breakdown @ test voltage
23°C	> 20 kV	> 20 kV
80°C	> 10 kV	> 20 kV
Dielectric dissipation factor @		
23°C and 50 Hz	0.08	max. 0.1
23°C and 1k Hz	0.05	-
Relative permittivity		
@ 23°C and 50 Hz	5	< 6
@ 23°C and 1k Hz	5.1	-
Tracking resistance	KA 3c	min KA 3c
After 28 days of immersion in 90°C water		
Tensile strength	8.2N/mm ²	≥ 65% of initial value
Elongation at break	60%	≥ 65% of initial value
Hardness	47 Shore	≥ 80% of initial value

MECHANICAL TOOLS



MLL 1

For crimping insulated terminals, 0,25 to 6 sqmm



MLL 90

Single aperture, ratchet controlled tool for crimping female connectors, open barrel, flag type 1 to 2,5 sqmm side insertion



MLRJ1

For crimping plugs RJ 11; RJ 12; RJ 14; RJ 22; RJ 45. With cutting and wire-stripping blades



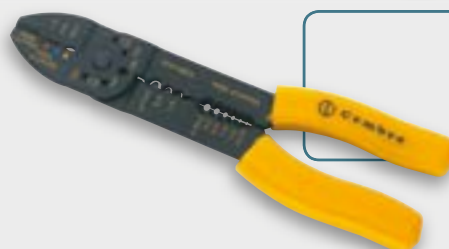
MLS 1

For crimping end sleeves 0,25 to 6 sqmm



MLS 2

For crimping end sleeves 6 to 16 sqmm



ZP2

For crimping insulated and uninsulated connectors, 0,25 to 6 sqmm

MECHANICAL TOOLS

HB 5

Wire stripper,
for PVC insulated cables
0,25 to 6 sqmm



HB 7

A versatile tool for cutting,
crimping, and stripping.
Range: 0,2 to 6 sqmm



HB 8

Wire stripper,
for PVC
insulated cables
0,2 to 6 sqmm



CABLE TIE TOOLS

53130

Type 5313022048
For plastic cable ties
from 2,2 to 4,8 mm
Automatic cutting
Weight : 0,2 kg
Length: 165 mm



55270

Type 5527030079
For stainless steel cable ties
width up to 7,9 mm
With cutting device
Weight: 0,56 kg
Length: 180 mm



55230

Type 5523036090
For plastic cable ties
from 4,8 to 9 mm
Manual cutting
Weight : 0,3 kg
Length: 195 mm



TAPE RULES

FLS

FLS3 3 metres long
FLS5 5 metres long
Robust metal case with comfortable ergonomic
shape and protective mouldings for professional use.
Nylon coated tape for long-life corrosion and
abrasion resistance.
End hook magnet for increased user convenience.
Self-locking on extension, double release button for
controlled retraction.
FLS3 Weight : 166 g – Tape width : 16 mm
FLS5 Weight : 252 g – Tape width : 19 mm



Supplied in individual blister
or as a display of 12 units
for FLS3 and FLS5



DIE SELECTOR CHART

APPLICATION	CONDUCTOR		CONNECTOR		HYDRAULIC TOOLS													HYDRAULIC TOOLS																		
					B 15MD			B 35-45MD			B 35-50MD			HT 45-E			HT 51 B 500			RH 50 B 55			HT 81-U RHU 81			HT 120 and tools and heads with 130 kN crimping force			ECW-H3D			RHU 520				
					TERMINAL	SPLICE	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR
COPPER CONDUCTORS	0,25 ÷ 2,5	A 03-M. A 06-M.		L 03M / L 03P L 06M / L 06P	ME03/2-15 MA03/3-15																															
	4 ÷ 6	A 1-M. A 1-L.		L 1-M L 1-P	ME03/2-15 MA03/3-15	MA 1	PA 1	ME 1	MA 1-50	PA 1-50	ME 1-50	MA 1	PA 1	ME 1		MA 1-50	PA 1-50	ME 1-50																		
	10	A 2-M. A 2-L. A 2-P12		L 2-M L 2-P	ME03/2-15 ME2/3-15 MA03/3-15	MA 2.3		ME 2	MA 2.3-50		ME 2-50	MA 2.3		ME 2		MA 2.3-50		ME 2-50		ME 2.19-U	MA 2-C		ME 2-C													
	16	A 3-M. A 3-L. A 3-P14	2A 3-M.	L 3-M L 3-P	ME2/3-15 MA03/3-15		PA 5	ME 3		PA 5-50	ME 3-50		PA 5	ME 3			PA 5-50	ME 3-50	MA 3.5-U	ME 3.14-U	MA 3-C		ME 3-C													
	25	A 5-M. A 5-L. A 5-P16	2A 5-M.	L 5-M L 5-P		MA 5		ME 5	MA 5-50		ME 5-50	MA 5		ME 5		MA 5-50		ME 5-50			MA 5-C	PA 10-C	ME 5-C													
	35	25* 35	A 7-M. A 7-L. A 7-P20	2A 7-M.	L 7-M L 7-P		MA 7	PA 10	ME 7	MA 7-50	PA 10-50	ME 7-50	MA 7	PA 10	ME 7		MA 7-50	PA 10-50	ME 7-50	MA 7.14-U		MA 7-C		ME 7-C												
	50	35* 50	A 10-M. A 10-L. A 10-P25	2A 10-M.	L 10-M L 10-P		MA 10		ME 10	MA 10-50		ME 10-50	MA 10		ME 10		MA 10-50		ME 10-50	MA 10.19-U	ME 10.24-U	MA 10-C		ME 10-C												
	70	50* 70	A 14-M. A 14-L. A 14-P30	2A 14-M.	L 14-M L 14-P				ME 14	MA 14-50	PA 19-50	ME 14-50			ME 14		MA 14-50	PA 19-50	ME 14-50	MA 14.19-U	ME 14.14-U	MA 14-C		ME 14-C												
	95	70* 95	A 19-M. A 19-L.	2A 19-M.	L 19-M L 19-P				ME 19	MA 19-50		ME 19-50			ME 19		MA 19-50		ME 19-50	MA 19.19-U	ME 2.19-U	MA 19-C	PA 24-C	ME 19-C												
	120	95* 120	A 24-M. A 24-L.	2A 24-M.	L 24-M L 24-P				ME 24	MA 24-50	PA 24-50	ME 24-50			ME 24		MA 24-50	PA 24-50	ME 24-50	MA 24-U	ME 10.24-U	MA 24-C		ME 24-C												
	150	120* 150	A 30-M. A 30-L.	2A 30-M.	L 30-M L 30-P				ME 30L			ME 30L-50			ME 30				ME 30-50	MA 30.80-U	ME 30-U	MA 30-C		ME 30-C												
	185	150* 185	A 37-M. A 37-L. A 37-4ESI	2A 37-M.	L 37-M L 37-P														ME 37-50	MA 37-U	ME 37-U	MA 37-C	PA 48-C	ME 37-C												
	240	185* 240	A 48-M. A 48-L. A 48-4ESI	2A 48-M.	L 48-M L 48-P														ME 48-50	MA 48-U	ME 48-U	MA 48-C		ME 48-C												
	300	240 300	A 60-M. A 60-L. A 60-4ESI	2A 60-M.	L 60-M L 60-P														ME 60-50**			MA 60-C	PA 60-C	ME 60-C												
	400	300 400	A 80-M. A 80-4ESI	2A 80-M.	L 80-M																		ME 80-C													
	500	400 500	A 100-M. A 100-4ESI	2A 100-M.	L 100-M																		MA 100-3D	PA 100-3D	ME 100-3D	MA 100-520	PA 120-520	ME 100-520								
	630	500 630	A 120-M. A 120-4ESI	2A 120-M.	L 120-M																		MA 120-3D	PA 120-3D	ME 120-3D	MA 120-520		ME 120-520								
	800	630	A 160-M. A 160-4ESI	2A 160-M.	L 160-M																				MA 160-520	PA 200-520	ME 160-520		ME 160-520							
1000	800	A 200-M.	2A 200-M.	L 200-M																				MA 200-520		ME 200-520		ME 200-520								
EXTRA FLEXIBLE COPPER CONDUCTORS	35	A 9-M.				MA 9	PA 10	ME 9	MA 9-50	PA 10-50	ME 9-50	MA 9	PA 10	ME 9		MA 9-50	PA 10-50	ME 9-50	MA 9.17-U	ME 9.20-U	MA 9-C	PA 10-C	ME 9-C													
	50	A 12-M.						ME 12	MA 12-50		ME 12-50			ME 12		MA 12-50		ME 12-50	MA 12.20-U	ME 12.17-U	MA 12-C		ME 12-C													
	70	A 17-M.						ME 17	MA 17-50	PA 19-50	ME 17-50			ME 17		MA 17-50	PA 19-50	ME 17-50	MA 17.17-U	ME 12.17-U	MA 17-C	PA 24-C	ME 17-C													
	95	A 20-M.						ME 20	MA 20-50		ME 20-50			ME 20		MA 20-50		ME 20-50	MA 12.20-U	ME 9.20-U	MA 20-C		ME 20-C													
	120	A 29-M.						ME 29			ME 29-50			ME 29				ME 29-50	MA 29.80-U	ME 29-U	MA 29-C		ME 29-C													
	150	A 35-M.																ME 35-50	MA 35-U	ME 35-U	MA 35-C	PA 48-C	ME 35-C													
	185	A 40-M.																ME 40-50	MA 40-U	ME 40-U	MA 40-C		ME 40-C													

Hexagonal crimp (use one size up with fine stranded conductors, E.G.: 95³ fine stranded use A19-.. + ME 19 or A 20-.. + ME 20)

Indent crimp























































































* Contact Cembre for appropriate die set

N.B.: Number inside symbol indicates the number of crimps on A-M barrel

** Only for B 500 and RH 50.






DIE SELECTOR CHART


DIE SELECTOR CHART

APPLICATION	CONDUCTOR	CONNECTOR					HYDRAULIC TOOLS										
							B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51 B 500	RH 50 B 55	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force			ECW-H3D
	Conductor Size Flex sqmm	TERMINAL					DIE SET		DIE SET		DIE SET		NEST	INDENTOR	DIE SET	NEST	INDENTOR
 ANE..M..  ANE..P..  ANE..U..	10	ANE 2-M..	ANE 2-P12	ANE 2-U..			NN4-15 		MN 2 RF-50 		MN 2 RF-50 		MN 2-C 	PN 7-C 	MN 2 R-F-C 	Adaptor AU 230-130 D with die set MN..C and indentor PN..C or with die set MN..R-F-C and die set MN..F-C	
	16	ANE 3-M..	ANE 3-P14	ANE 3-U..				MN 3 RF-50 		MN 3 RF-50 		MN 3-C 			MN 3 R-F-C 		
	25	ANE 5-M..	ANE 5-P16					MN 5 RF-50 		MN 5 RF-50 		MN 5-C 			MN 5 R-F-C 		
	35	ANE 7-M..	ANE 7-P20					MN 7 RF-50 		MN 7 RF-50 		MN 7-C 			MN 7 R-F-C 		
	50	ANE 10-M..						MN 10 RF-50 		MN 10 RF-50 		MN 10-C 			MN 10 R-F-C 		
	70	ANE 14-M..								MN 14 RF-50 		MN 14-C 		MN 14 R-F-C 			
	95	ANE 19-M..								MN 19 RF-50 		MN 19-C 		MN 19 R-F-C 			
	120	ANE 24-M..								MN 24 RF-50 		MN 24-C 		MN 24 R-F-C 			
	150	ANE 30-M..										MN 30-C 		MN 30 R-F-C 			
	 ANE..M..	35	ANE 9-M..							MN 7 RF-50 		MN 7 RF-50 		MN 9-C 	PN 14-C 		MN 7 R-F-C 
50		ANE 12-M..					MN 12 F-50 		MN 12 F-50 		MN 12-C 		MN 12 F-C 				
70		ANE 17-M..							MN 17 F-50 		MN 17-C 		MN 17 F-C 				
95		ANE 20-M..							MN 20 F-50 		MN 20-C 		MN 20 F-C 				
120		ANE 29-M..									MN 29-C 		MN 29 F-C 				
150		ANE 35-M..									MN 35-C 		MN 35 F-C 				
 PK ...  KE ...	0,3 ÷ 4	PKD 506 ÷ PKD 418	PKE 508 ÷ PKE 418	PKC 508 ÷ PKC 418	KE 506 ÷ KE 412			KE 4-15 									
	4 ÷ 16	PKD 410 ÷ PKD 1618	PKE 410 ÷ PKE 1618	PKC 410 ÷ PKC 1618	KE 410 ÷ KE 1616			KE 16-15 									
	16	PKD 16..	PKE 16..	PKC 16..	KE 16..			KE 35-15 	MTT 16-50 		MTT 16-50 						
	25	PKD 25..	PKE 25..	PKC 25..	KE 25..		MTT 25-50 			MTT 25-50 							
	35	PKD 35..		PKC 35..	KE 35..		MTT 35-50 			MTT 35-50 							
	50	PKD 50..		PKC 50..					MTT 50-50 		MTT 50-50 						
	70			PKC 70..					MTT 70-50 		MTT 70-50 						
	95			PKC 95..					MTT 95-50 		MTT 95-50 						
	120			PKC 120..							MTT 120-50 						
 PKT ...	2 x 0,5	PKT 508 PKT 510						KE 4-15 									
	2 x 0,75	PKT 7508 PKT 7512															
	2 x 1	PKT 108 PKT 112															
	2 x 1,5	PKT 1508 PKT 1512															
	2 x 2,5	PKT 2510 PKT 2512							KE 4-15  KE 16-15 								
	2 x 4	PKT 412							KE 16-15 								
	2 x 6	PKT 614															
	2 x 10	PKT 1014							KE 16-15  KE 35-15 		MTT 16-50 		MTT 16-50 				
	2 x 16	PKT 1614							KE 35-15 		MTT 35-50 		MTT 35-50 				

 Incident crimp  Radial crimp  Trapezium crimp

DIE SELECTOR CHART

APPLICATION	CONDUCTOR		CONNECTORS				HYDRAULIC TOOLS									
							B 35-45MD	B 35-50MD	HT 45-E	HT 51 B 500	RH 50 B 55	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520	
c.-c.-ST  c.-c.- 	Conductor Size sqmm		CONNECTOR	CONNECTOR			DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	
	Run	Tap														
	6 ÷ 2,5	6 ÷ 1,5	C 6 - C 6 ST	C 6 - C 6			MC 6 (1)	MC 6-50 (1)	MC 6 (1)	MC 6-50 (1)	MC 6.25-U (1)					
	10	10 ÷ 1,5	C 10 - C 10 ST	C 10 - C 10			MC 10 (1)	MC 10-50 (1)	MC 10 (1)	MC 10-50 (1)	MC 10-U (1)	MC 10-C (1)	Adaptor AU 230-130 D with die set MC.-C	Adaptor AU 520-130 C with die set MC.-C		
	16	16 ÷ 1,5	C 16 - C 16 ST	C 16 - C 16												
	25 ÷ 16	10 ÷ 1,5	C 25 - C 10 ST	C 25 - C 10			MC 25 (2)	MC 25-50 (2)	MC 25 (2)	MC 25-50 (2)	MC 6.25-U MC 25-U (1)	MC 25-C (1)				
	25	25 ÷ 16	C 25 - C 25 ST	C 25 - C 25												
	40 ÷ 35	16 ÷ 1,5	C 35 - C 16 ST	C 35 - C 16												
	40 ÷ 35	40 ÷ 25	C 35 - C 35 ST	C 35 - C 35			MC 35 (2)	MC 35-50 (2)	MC 35 (2)							
	50	25 ÷ 10														
	70 ÷ 63	25 ÷ 1,5	C 70 - C 25N ST	C 70 - C 25N												
	50	25 ÷ 4	C 50 - C 25 ST	C 50 - C 25												
	*50	50 ÷ 35	C 50 - C 50 ST	C 50 - C 50												
	*70 ÷ 50	40 ÷ 4	C 70 - C 35 ST	C 70 - C 35						*MC 70-50 (3)	MC 70-80-U (3)	MC 70-C (3)	MC 70-3D (1)			
	*70 ÷ 50	70 ÷ 35	C 70 - C 70 ST	C 70 - C 70												
	100 ÷ 95	40 ÷ 4	C 95 - C 35 ST	C 95 - C 35												
	100 ÷ 95	70 ÷ 40	C 95 - C 70 ST	C 95 - C 70							MC 95-80-U (3)	MC 95-C (3)	MC 95-3D (1)			
	100 ÷ 95	100 ÷ 63	C 95 - C 95 ST	C 95 - C 95												
	125 ÷ 110	125 ÷ 25	C 120 - C 120 ST	C 120 - C 120												
	160 ÷ 150	125 ÷ 25	C 150 - C 120 ST	C 150 - C 120								MC 185-C (3)	MC 185-3D (1)			
150	150 ÷ 63	C 150 - C 150 ST	C 150 - C 150													
185	100 ÷ 16	C 185 - C 95 ST	C 185 - C 95													
185 ÷ 120	185 ÷ 120	C 185 - C 185 ST	C 185 - C 185													
240 ÷ 150	120 ÷ 95	C 240 - C 120 ST	C 240 - C 120									MC 240-3D (1)				
MT.-TD  CA.-M. CA.-2M.  MT.-C. 	Conductor Size sqmm		TERMINALS		TERMINALS			DIE SET		DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	
	25 R		MT 25 - TD	MT 25 - GC	CA 25 - M..	CA 25 - 2M..	MT 25 - C..		MMT 25-50 (1)		MMT 25-50 (1)	MMT 25-U (1)	MMT 25-C (1)	Adaptor AU 230-130 D with die set MMT.-C	Adaptor AU 520-130 C with die set MMT.-C	
	35 RC/S ÷ 40 S		MT 40 S - TD	MT 40 S - GC	CA 40 S - M..	CA 40 S - 2M..	MT 40 S - C..									
	50 RC		MT 50 R - TD	MT 50 R - GC	CA 50 R - M..	CA 50 R - 2M..	MT 50 R - C..		MMT 50-50 (1)		MMT 50-50 (1)	MMT 50-U (1)	MMT 50-C (1)			
	50 S		MT 50 S - TD	MT 50 S - GC	CA 50 S - M..	CA 50 S - 2M..	MT 50 S - C..									
	63 S ÷ 70 S		MT 70 S - TD	MT 70 S - GC	CA 70 S - M..	CA 70 S - 2M..	MT 70 S - C..									
	80 S ÷ 95 RC		MT 95 R - TD	MT 95 R - GC	CA 95 R - M..	CA 95 R - 2M..	MT 95 R - C..				MMT 95-50 (1)	MMT 95-U (1)	MMT 95-C (1)			
	95 S ÷ 100 S		MT 95 S - TD	MT 95 S - GC	CA 95 S - M..	CA 95 S - 2M..	MT 95 S - C..									
	120 RC/S ÷ 150 RC		MT 150 R - TD	MT 150 R - GC	CA 150 R - M..	CA 150 R - 2M..	MT 150 R - C..									
	150 S ÷ 160 RC		MT 150 S - TD	MT 150 S - GC	CA 150 S - M..	CA 150 S - 2M..	MT 150 S - C..				MMT 200-50 (1)	MMT 200-U (1)	MMT 200-C (1)			
	160 S ÷ 200 RC		MT 200 R - TD	MT 200 R - GC	CA 200 R - M..	CA 200 R - 2M..	MT 200 R - C..									
	200 S ÷ 240 RC		MT 240 R - TD	MT 240 R - GC	CA 240 R - M..	CA 240 R - 2M..	MT 240 R - C..									
	240 S ÷ 315 RC		MT 315 R - TD	MT 315 R - GC	CA 315 R - M..	CA 315 R - 2M..	MT 315 R - C..					MMT 315-C (1)				
	315 S		MT 315 S - TD	MT 315 S - GC	CA 315 S - M..	CA 315 S - 2M..	MT 315 S - C..									
400 R		MT 400 - TD		2A 80 - M..	2A 80 - 2M..						ME 80-C (1)	ME 80-3D (1)	ME 80-520 (1)			
500 R		MT 500 - TD		2A 100 - M..	2A 100 - 2M..							ME 100-3D (1)	ME 100-520 (1)			
600 R ÷ 630 R		MT 630 - TD		2A 120 - M..	2A 120 - 2M..							ME 120-3D (1)	ME 120-520 (1)			










 Hexagonal crimp


 Oval crimp

 Circular crimp

* When using die set type MC70-50, the conductors marked with a star must be annealed.

DIE SELECTOR CHART FOR DEEP STEPPED INDENTING WITH CONTAINING DIES

APPLICATIONS	CONDUCTOR	CONNECTORS			HYDRAULIC TOOLS			
					HYDRAULIC TOOLS	HT 131-UC	RHU 131-C	B 1350-UC
 	Conductor Size sqmm	LUGS			DIE HOLDER	DIE		INDENTOR
	10	CAA 10 - M..			AU 130-150	MV 35 	MUA 35 	PS 130-35/E
	16	CAA 16 - M..	MTA 16 - C					
	25	CAA 25 - M..	MTA 25 - C					
	35	CAA 35 - M..	MTA 35 - C					
	50	CAA 50 - M..	MTA 50 - C					
	70	CAA 70 - M..	MTA 70 - C..					
	95	CAA 95 - M..	MTA 95 - C..		AU 130-240	MV 95 	MUA 95 	PS 130-95/E
	120	CAA 120 - M..	MTA 120 - C..					
	150	CAA 150 - M..	MTA 150 - C..					
	185	CAA 185 - M..	MTA 185 - C..					
	240	CAA 240 - M..	MTA 240 - C..					
300	CAA 300 - 34 - M..							
	Conductor Size sqmm	LUGS			DIE HOLDER	DIE		INDENTOR
	16	AA 16 - M..			AU 130-150	MUA 35 	PS 130-35/E	
	25	AA 25 - M..						
	35	AA 35 - M..						
	50	AA 50 - M..						
	70	AA 70 - M..						
	95	AA 95 - M..						
	120	AA 120 - M..			AU 130-240	MUA 95 	PS 130-95/E	
	150	AA 150 - M..						
	185	AA 185 - M..						
	240	AA 240 - M..						
	300	AA 300 - 34 - M..						
300	AA 300 - 34 - M..							

 Indent crimp

DIE SELECTOR CHART FOR DEEP STEPPED INDENTING WITH CONTAINING DIES

























Conductor Size sqmm	SPLICES		Conductor Size sqmm		SPLICES	HYDRAULIC TOOLS HT 131-UC RHU 131-C B 1350-UC B 1300-UC			
			Al	Al/Cu		DIE HOLDER	DIE	INDENTOR	
10	MTMA 10-GC					AU 130-150	MVM 35	MUA 35	PS 130-35/E
16	MTMA 16-GC	MTMA 16/1	16	10	MTMA 16-10 GC				
25	MTMA 25-GC	MTMA 25/1	25	10	MTMA 25-10 GC				
			25	16	MTMA 25-16 GC				
35	MTMA 35-GC	MTMA 35/1							
50	MTMA 50-GC	MTMA 50/1	50	25	MTMA 50-25 GC				
			50	35	MTMA 50-35 GC				
70	MTMA 70-GC	MTMA 70/1	70	35	MTMA 70-35 GC				
			70	50	MTMA 70-50 GC				
95	MTMA 95-GC	MTMA 95/1	95	50	MTMA 95-50 GC				
			95	70	MTMA 95-70 GC				
120	MTMA 120-GC	MTMA 120/1	120	70	MTMA 120-70 GC				
			120	95	MTMA 120-95 GC				
150	MTMA 150-GC	MTMA 150/1	150	70	MTMA 150-70 GC				
			150	95	MTMA 150-95 GC				
			150	120	MTMA 150-120 GC				
185	MTMA 185-GC	MTMA 185/1	185	120	MTMA 185-120 GC				
			185	150	MTMA 185-150 GC				
240	MTMA 240-GC	MTMA 240/1	240	150	MTMA 240-150 GC				
			240	185	MTMA 240-185 GC				
300	MTMAD 300-GC	MTMAD 300/1	300	185	MTMAD 300-185 GC				
			300	240	MTMAD 300-240 GC				
					AU 130-240	MVM 240	MUA 240	PS 130-240/E	
						MUA 300-34			




MTMA...GC

PRE-ROUNDERS SELECTION			DIES DESCRIPTION	DIES SEQUENCE	
ALUMINIUM CONDUCTOR SIZE sqmm	PRE-ROUNDER	DIE-SUPPORT		CONDUCTOR ROUNDING	CRIMPING
			<p>1) AU 130-.. DIE-HOLDER Used to house dies and pre-rounders.</p> <p>2) UP 130-.. PRE-ROUNDERS Used to round aluminium sectoral conductors in order to introduce them into circular connectors. Each pre-rounder is made of two parts: the upper part is housed in die-holder AU 130-.. and the lower part is locked onto AC 130-P.. die support.</p> <p>3) AC 130-P.. DIE SUPPORT Houses lower part of pre-rounder UP 130-..</p> <p>4) MUA... DIES Containing dies.</p> <p>5) PS 130-../E INDENTORS Such indentors are specifically engineered for deep indentation of aluminium conductors of any stranding configuration.</p>	<p>1</p>	<p>1</p>
25	UP 130-25	AC 130-P		<p>2</p>	<p>4</p>
35	UP 130-35			<p>3</p>	<p>5</p>
50	UP 130-50				
70	UP 130-70				
95	UP 130-95				
120	UP 130-120				
150	UP 130-150				
185	UP 130-185				
240	UP 130-240				

DIE SELECTOR CHART

APPLICATIONS	CONDUCTOR	CONNECTORS		HYDRAULIC TOOLS									
				HT 120 and tools and heads with 130 kN crimping force	HT 131-UC B 1350-UC		RHU 131-C B 1300-UC		ECW-H3D	RHU 230-630			
					HEXAGONAL CRIMP	INDENT CRIMP			HEXAGONAL CRIMP	INDENT CRIMP			
	Conductor Size sqmm	LUGS		DIE SET	DIE HOLDER	DIE	INDENTOR	DIE SET	ADAPTOR	DIE	INDENTOR		
 CAA..M..	300	CAA 300-34 - M..		MK34L-C 	AU 130-240	MUA 300-34 	PS 130-240/E	MK34-3D 					
	300	CAA 300 - M16						MK38-3D 	AU 230-630	MV 230-400 MC5E 	PS 230-400 5E		
	400	CAA 400 - M16								MV 230-630 MC6E 	PS 230-630 6E		
	500	CAA 500 - M16 TNBD											
	630	CAA 630 - 4M8							MK46-3D 				
 AA..M..	300	AA 300 - 34 - M..		MK34L-C 	AU 130-240	MUA 300-34 	PS 130-240/E	MK34-3D 					
	300	AA 300 - M16						MK38-3D 	AU 230-630	MUA 230-630-400 	PS 230-400 5E		
	400	AA 400 - M16								MUA 230-630-630 	PS 230-630 6E		
	500	AA 500 - 40 - M16											
	630	AA 630 - M16							MK46-3D 				
 MTMA..	300	MTMAD 300/1	300	95	MTMAD 300-95-GC	MK34L-C 	AU 130-240	MUA 300-34 	PS 130-240/E	MK34-3D 			
				150	MTMAD 300-150-GC								
	185	MTMAD 300-185-GC											
	240	MTMAD 300-240-GC											
	300	MTMA 300-GC								MK38-3D 	AU 230-630	MVM 230-400 MJ5E 	PS 230-400 5E
	400	MTMA 400/1	400	240	MTMA 400-240-GC								
	400	MTMA 400/1	400	300	MTMA 400-300-GC								
	500	MTMA 500-40/1											
	500	MTMA 500-GC	500	300	MTMA 500-300-GC					MK46-3D 	AU 230-630	MVM 230-630 MJ6E 	PS 230-630 6E
400				MTMA 500-400-GC									
630	MTMA 630/1												



































 Indent crimp

 Hexagonal crimp




ALUMINIUM CONDUCTORS

DIE SELECTOR CHART

HYDRAULIC TOOLS



APPLICATIONS	CONDUCTOR			CONNECTOR			HYDRAULIC TOOLS					
	Conductor Size sqmm	Conductor Size AWG	Conductor Size Navy	LUGS	SPLICES	B 15MD	B35-50MD	HT 51 RH 50 B 500	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520	
						DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	
C...	10	8	23	C8..	CL8..	BSCL8	ME03/2-15  ME2/3-15  MA03/3-15 		MY 2-50 		MY 2-C 	
	16	6		C6..	CL6..	BSCL6	ME2/3-15  MA03/3-15 		MY 3-50 		MY 3-C 	
	25	4	40	C4..	CL4..	BSCL4			MY 4-50 		MY 4-C 	
CL...		3	50	C3..	CL3..	BSCL3			MY 5-50 		MY 5-C 	
	35	2	60	C2..	CL2..	BSCL2			MY 6-50 		MY 6-C 	
		1	75	C1..	CL1..	BSCL1			MY 7-50 		MY 7-C 	
	50	1/0	100	C1/0..	CL1/0..	BSCL1/0			MY 10-50 		MY 10-C 	Adaptador
	70	2/0	125	C2/0..	CL2/0..	BSCL2/0			MY 14-50 		MY 14-C 	AU 230-130 D
	95	3/0	150	C3/0..	CL3/0..	BSCL3/0			MY 16-50 		MY 16-C 	con matriz
		4/0	200	C4/0..	CL4/0..	BSCL4/0			MY 19-50 		MY 19-C 	MY.-C
		250 MCM	250	C250..	CL250..	BSCL250			MY 24-50 		MY 24-C 	
		300 MCM	300	C300..	CL300..	BSCL300			MY 30L-50 		MY 30-C 	
		350 MCM	350	C350..	CL350..	BSCL350					MY 36-C 	
BSCL..		400 MCM	400	C400..	CL400..	BSCL400					MY 37-C 	
	240	500- MCM		C500..	CL500..	BSCL500					MY 48-C 	
	300	600 MCM		C600..	CL600..	BSCL600					MY 60-C 	
		750 MCM		C750..	CL750..	BSCL750					MY 76-C 	

COPPER CONDUCTORS

 Circular crimp  Hexagonal crimp  Indent crimp

N.B.: Number inside symbol indicates the number of crimps for C short barrel lugs only

DIE SELECTOR CHART

APPLICATIONS		CONDUCTOR		CONNECTORS		HYDRAULIC TOOLS													
						B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51 RHM 50	RH 50 B 500	HT 81-U	RHU 81 °	HT 120 and tools and heads with 130 kN crimping force		ECW-H3D			
		LUGS	SPLICES	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE	INDENTOR	DIE	INDENTOR				
 G.	DIN 46234	6÷10	Q10..			MQ10-50	1	MQ10-50	1	MQ10-50	1	MGM10-C	1						
		10÷16	Q16..			MQ16-50	1	MQ16-50	1	MQ16-50	1	MGM16-C	1						
		16÷25	Q25..			MQ25-50	1	MQ25-50	1	MQ25-50	1	MGM25-C	1						
		25÷35	Q35..			MQ35-50	2	MQ35-50	2	MQ35-50	2	MGM35-C	1						
		35÷50	Q50..			MQ50-50	2	MQ50-50	2	MQ50-50	2	MGM50-C	1						
		50÷70	Q70..			MQ70-50	2	MQ70-50	2	MQ70-50	2	MGM70-C	1						
		70÷95	Q95..									MGM95-C	1						
		95÷120	Q120..									MGM120-C	1						
		120÷150	Q150..									MGM150-C	1						
		150÷185	Q185..									MGM185-C	1						
185÷240	Q240..									MGM240-C	1								
 DR.	DIN 46235 - 46267 T.1	6	DR6..	DSV6	MK5/8-15	MK5	1	MK5-50	1	MK5	1	MK5-50	1	MK5-50	1	MK5-C	1		
		10	DR10..	DSV10		MK6	1	MK6-50	1	MK6	1	MK6-50	1	MK6-50	1	MK6-50	1	MK6-C	1
		16	DR16..	DSV16		MK8	2	MK8-50	2	MK8	2	MK8-50	2	MK8-50	2	MK8-50	2	MK8-C	1
		25	DR25..	DSV25		MK10	2	MK10-50	2	MK10	2	MK10-50	2	MK10-50	2	MK10-50	2	MK10-C	1
		35	DR35..	DSV35		MK12	2	MK12-50	2	MK12	2	MK12-50	2	MK12-50	2	MK12-50	2	MK12-C	1
		50	DR50..	DSV50		MK14	3	MK14-50	3	MK14	3	MK14-50	3	MK14-50	3	MK14-50	3	MK14-C	2
		70	DR70..	DSV70		MK16	3	MK16-50	3	MK16	3	MK16-50	3	MK16-50	3	MK16-50	3	MK16-C	2
		95	DR95..	DSV95		MK18	4	MK18-50	4	MK18	4	MK18-50	4	MK18-50	4	MK18-50	4	MK18-C	2
		120	DR120..	DSV120		MK20	4	MK20-50	4	MK20	4	MK20-50	4	MK20-50	4	MK20-50	4	MK20-C	2
		150	DR150..	DSV150		MK22L	4	MK22L-50	4	MK22L	4	MK22-50	4	MK22-50	4	MK22-50	4	MK22-C	2
		185	DR185..	DSV185								MK25-50	5	MK25-50	5	MK25-50	5	MK25-C	2
		240	DR240..	DSV240								MK28-50	5	MK28-50	5	MK28-50	5	MK28-C	4
		300	DR300..	DSV300								MK32-50**	6				MK32-C	4	
		400	DR400..	DSV400															
500	DR500..	DSV500																	
625	DR625..	DSV625																	

⊗ Hexagonal crimp

⊙ Indent crimp

NB: for through connectors this is the number of crimps per conductor

° Tools type HT 81-U and RHU 81 with adaptor type 6780232 can use the same dies of HT 51 but are equipped with spring type 6522051.

** Only for B 500 and RH 50.

REFERENCE/CODE CROSS-REFERENCE CHART

Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
1052007	3005900	1143M16	3005220	1500.M12	3002205	1831N	3004116	1900.21	3001035
1052007N	3005901	1143M16G	3005222	1500.M12N	3002206	1832	3004120	1900.21G	3001037
1052009	3005903	1143M16N	3005221	1500.M16	3002210	1832N	3004121	1900.21N	3001036
1052009N	3005904	1143M20	3005225	1500.M16N	3002211	1835G	3004222	1900.21/X	3001092
1052011	3005906	1143M20G	3005227	1500.M20	3002215	1836	3004225	1900.29	3001040
1052011N	3005907	1143M20N	3005226	1500.M20N	3002216	183642	3017690	1900.29G	3001042
1052013	3005909	1143M25	3005230	1500.M25	3002220	1836N	3004226	1900.29N	3001041
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36A3M2025	3016920	5900.M50N	3012822	7900A.M16	3010152	A19-M14	2260270	A5-M5	2190070
36A3M2034	3016922	5900.M63N	3012824	7900A.M20	3010154	A19-M16	2260310	A5-M5/9	2190075
36A3M20356	3016923	5901.M12N	3012850	7900A.M25	3010156	A19-M20	2260390	A5-M6	2190110
36A3M2526	3016930	5901.M16N	3012852	7900A.M32	3010158	A19-M6	2260110	A5-M8	2190150
36A3M2536	3016932	5901.M20N	3012854	7900A.M40	3010160	A19-M8	2260150	A5-P16	2191510
36A3M2537	3016934	5901.M25N	3012856	7900A.M50	3010162	A19B-M8/15.5	2260163	A60-M10	2350030
36A3M2545	3016936	5901.M32N	3012858	7900A.M63	3010164	A1-M10	2103270	A60-M12	2350070
36A3M2546	3016937	5901.M40N	3012860	A1-L6	2103200	A1-M3	2103030	A60-M14	2350150
36A3M2554	3016938	5901.M50N	3012862	A2-L5	2170820	A1-M3.5	2103070	A60-M16	2350190
36A3M3228	3016944	6010.01	3016090	A2-L6	2170830	A1-M4	2103110	A60-M20	2350230
36A3M3239	3016946	6010.11	3016090	A2-L8	2170850	A1-M5	2103150	A60B-M10/31	2350033
36A3M32465	3016945	6010.12	3016040	A3-L5	2180620	A1-M6	2103190	A60B-M12/31	2350072
36A3M3248	3016943	6010.14	3016010	A3-L6	2180630	A1-M8	2103230	A7-M10	2200190
36A3M4078	3016952	6010.21	3016080	A3-L8	2180640	A20-M10	2270270	A7-M12	2200230
36A3M40106	3016954	6010.29	3016100	A3-L10	2180659	A20-M12	2270310	A7-M5	2200070
36A3M5088	3016968	6010.34	3016060	A5-L6	2190670	A20-M14	2270350	A7-M6	2200110
36C201629	3016982	6010.36	3016110	A5-L8	2190710	A20-M16	2270390	A7-M8	2200150
4300-3127	2590942	6010.38	3016020	A5-L10	2190750	A20-M8	2270230	A7-P20	2201750
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4300-3132	2590957	6010.58	3016050	A7-L10	2200790	A24-M10	2280150	A80-M14	2360070
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4300-3137	2590934	7032007	3010604	A10-L6	2220605	A24-M14	2280230	A80-M20	2360150
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4900.48	3002737	7033M63	3010666	A06-M6	2101190	A30B-M8/19	2300080	AA300-34-M16	2743215
4900.M12	3002750	7033AM12	3010670	A06-M8	2101230	A35-M10	2310265	AA400-M16	2743310
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4900.M32	3002762	7033AM32	3010678	A10-M16	2220270	A35-M20	2310390	AA630-M16	2743370
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4901.29	3002928	7900.29	3010030	A12-M6/15	2230210	A3-M4	2180030	AB28N	3041535
4901.36	3002931	7900.36	3010035	A12-M8	2230230	A3-M5	2180110	AC130-P	2615531
4901.42	3002934	7900.42	3010040	A120-M16	2372070	A3-M5/9	2180120	ANE10-M6	2439350
4901.48	3002937	7900.48	3010045	A120-M20	2372150	A3-M6	2180150	ANE10-M8	2439360
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4901.M16	3002953	7900A.09	3010062	A14-M12	2240270	A3-P14	2180830	ANE10-M12	2439380
4901.M20	3002956	7900A.11	3010064	A14-M14	2240310	A40-M10	2330230	ANE12-M10	2442220
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5900.M12N	3012810	7900.M25	3010119	A17-M14	2250350	A48-M16/31	2340238	ANE17-M10/19	2447265
5900.M16N	3012812	7900.M32	3010122	A17-M16	2250860	A48-M20	2340310	ANE17-M12	2447270

REFERENCE/CODE CROSS-REFERENCE CHART

Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
ANE17-M14	2447280	B1300-C-KV	2599388	BKY-P10	2145932	BSCL2/0	2489545	C4-516	2395540
ANE17-M16	2447290	B1300-UC	2599365	BKY-P12	2145934	BSCL250	2489560	C4-8	2395420
ANE17-M6	2447240	B1300L-C	2599358	BKY-PP12	2145940	BSCL3	2489525	C500-12	2397940
ANE17-M8	2447250	B1300L-C-KV	2599380	BKY-PP12/25	2145942	BSCL3/0	2489550	C500-34	2398000
ANE19-M8	2449510	B1350-C	2599320	BKY-PP16/23	2145944	BSCL300	2489565	C500-38	2397920
ANE19-M10	2449520	B1350-C-KV	2599340	BKY-PP30	2145950	BSCL350	2489570	C500-58	2397980
ANE19-M12	2449530	B1350L-C	2599327	BKY-PP46	2145952	BSCL4	2489520	C500-78	2398020
ANE19-M14	2449540	B1350L-C-KV	2599345	BKY-U3	2145900	BSCL4/0	2489555	C500-916	2397960
ANE19-M16	2449550	B1350-UC	2599335	BKY-U3.5	2145903	BSCL400	2489575	C600-12	2398120
ANE2-M10	2408840	B35-45MD	2599893	BKY-U4	2145906	BSCL500	2489580	C600-34	2398180
ANE2-M12	2408845	B35-50MD	2599906	BKY-U5	2145909	BSCL6	2489515	C600-58	2398160
ANE2-M4	2408820	B35M-TC025	2599515	BKY-U6	2145912	BSCL600	2489585	C600-78	2398200
ANE2-M5	2408825	B500	2596205	BKY-U6/1	2145914	BSCL750	2489590	C600-916	2398140
ANE2-M6	2408830	B54MD-D6	2599975	BN-FA608	3031640	BSCL8	2489510	C6-10	2395240
ANE2-M8	2408835	B55	2598990	BN-FAB608	3031660	C1/0-12	2396280	C6-12	2395320
ANE2-P12	2408850	B55-KV	2598984	BN-FAR608	3031680	C1/0-14	2396220	C6-14	2395260
ANE2-U4	2408860	B70M-P24	2596120	BN-M10	2152390	C1/0-38	2396260	C6-38	2395300
ANE2-U5	2408865	B70M-P24-CH	2596136	BN-M12	2152430	C1/0-516	2396240	C6-516	2395280
ANE20-M10	2451320	B70M-P24-KV	2596127	BN-M2	2152010	C1/0-58	2396320	C6-8	2395220
ANE20-M12	2451330	BA-3	2598424	BN-M3	2152030	C1/0-916	2396300	C750-12	2398320
ANE20-M14	2451340	BF-BF5	2053630	BN-M3.5	2152070	C1-12	2396080	C750-34	2398380
ANE20-M16	2451350	BF-BM5	2053660	BN-M3.5/1	2152110	C1-14	2396020	C750-58	2398360
ANE20-M8	2451310	BF-F405	2053560	BN-M4	2152150	C1-38	2396060	C750-78	2398400
ANE24-M10	2453530	BF-F405P	2053565	BN-M5	2152190	C1-516	2396040	C8-10	2395040
ANE24-M12	2453550	BF-F408	2053570	BN-M6	2152230	C2/0-12	2396480	C8-12	2395120
ANE24-M14	2453570	BF-F408P	2053575	BN-M6/1	2152270	C2/0-14	2396420	C8-14	2395060
ANE24-M16	2453590	BF-F608	2053610	BN-M7	2152310	C2/0-34	2396540	C8-38	2395100
ANE29-M10	2456010	BF-F608P	2053620	BN-M8	2152350	C2/0-38	2396460	C8-516	2395080
ANE29-M12	2456030	BF-FM608	2053690	BN-MA608	3031740	C2/0-516	2396440	C8-8	2395020
ANE29-M14	2456050	BF-M10	2052390	BN-P10	2153190	C2/0-58	2396520	C10-C10	2490070
ANE29-M16	2456070	BF-M12	2052430	BN-P12	2153230	C2/0-916	2396500	C120-C120	2490630
ANE29-M20	2456090	BF-M2	2052010	BN-P8	2153150	C2-10	2395820	C150-C120	2490670
ANE3-M10	2415840	BF-M3	2052030	BN-PP12	2153270	C2-12	2395900	C150-C150	2490690
ANE3-M12	2415850	BF-M3.5	2052070	BN-PP12/25	2153310	C2-14	2395840	C16-C16	2490110
ANE3-M4	2415800	BF-M3.5/1	2052110	BN-PP16/25	2153350	C2-38	2395880	C185-C185	2490745
ANE3-M5	2415810	BF-M4	2052150	BN-U10	2152910	C250-12	2397080	C185-C95	2490710
ANE3-M6	2415820	BF-M5	2052190	BN-U12	2152950	C250-14	2397020	C240-C120	2490760
ANE3-M8	2415830	BF-M6	2052230	BN-U3	2152630	C250-34	2397140	C25-C10	2490150
ANE3-P14	2415860	BF-M6/1	2052270	BN-U3.5	2152670	C250-38	2397060	C25-C25	2490190
ANE3-U4	2415870	BF-M6/2	2052280	BN-U3.5/1	2152680	C250-516	2397040	C25-C16	2490230
ANE3-U5	2415875	BF-M608	2053650	BN-U4	2152710	C250-58	2397120	C35-C35	2490270
ANE30-M12	2458320	BF-M608P	2053655	BN-U4/1	2152730	C250-78	2397160	C50-C25	2490350
ANE30-M14	2458350	BF-M7	2052310	BN-U4/2	2152732	C250-916	2397100	C50-C50	2490390
ANE30-M16	2458370	BF-M8	2052350	BN-U5	2152750	C2-516	2395860	C59	8420035
ANE30-M20	2458390	BF-P10	2053250	BN-U6	2152790	C3/0-12	2396680	C6-C6	2490030
ANE35-M12	2460010	BF-P12	2053290	BN-U6/1	2152830	C3/0-14	2396620	C70-C25N	2490310
ANE35-M14	2460030	BF-P8	2053210	BN-U8	2152870	C3/0-34	2396740	C70-C35	2490430
ANE35-M16	2460050	BF-PP12	2053330	BP-M10	2046345	C3/0-38	2396660	C70-C70	2490470
ANE35-M20	2460070	BF-PP12/25	2053370	BP-M12	2046350	C3/0-516	2396640	C95-C35	2490510
ANE5-M10	2418540	BF-PP12/29	2053380	BP-M2	2046305	C3/0-58	2396720	C95-C70	2490550
ANE5-M12	2418550	BF-PP16/25	2053410	BP-M3	2046310	C3/0-916	2396700	C95-C95	2490590
ANE5-M4	2418500	BF-PPL30	2053460	BP-M3.5	2046315	C300-12	2397360	C10-C10ST	2492070
ANE5-M5	2418510	BF-PPL46	2053465	BP-M3.5/1	2046316	C300-34	2397420	C120-C120ST	2492630
ANE5-M6	2418520	BF-U10	2052910	BP-M4	2046320	C300-38	2397340	C150-C120ST	2492670
ANE5-M8	2418530	BF-U12	2052950	BP-M5	2046325	C300-516	2397320	C150-C150ST	2492690
ANE5-P16	2418560	BF-U3	2052630	BP-M6	2046330	C300-58	2397400	C16-C16ST	2492110
ANE7-M6	2422300	BF-U3.5	2052670	BP-M6/1	2046331	C300-78	2397440	C185-C185ST	2492745
ANE7-M8	2422310	BF-U3.5/1	2052671	BP-M6/2	2046332	C300-916	2397380	C185-C95ST	2492710
ANE7-M10	2422320	BF-U4	2052710	BP-M7	2046335	C3-10	2395640	C240-C120ST	2492760
ANE7-M12	2422330	BF-U4/1	2052720	BP-M8	2046340	C3-12	2395720	C25-C10ST	2492150
ANE7-P20	2422360	BF-U4/2	2052730	BP-P10	2046415	C3-14	2395660	C25-C25ST	2492190
ANE9-M10	2430170	BF-U5	2052750	BP-P12	2046420	C3-38	2395700	C35-C16ST	2492230
ANE9-M12	2430180	BF-U5/2	2052765	BP-P8	2046410	C350-12	2397540	C35-C35ST	2492270
ANE9-M6/15	2430150	BF-U6	2052790	BP-PP12	2046440	C350-34	2397600	C50-C25ST	2492350
ANE9-M8	2430160	BF-U6/1	2052830	BP-PP12/25	2046445	C350-38	2397520	C50-C50ST	2492390
ASC30-36 EU	2598485	BF-U8	2052870	BP-PP12/29	2046450	C350-58	2397580	C6-C6ST	2492030
AU130-150	2615560	BH2433	2596105	BP-PP16/25	2046455	C350-78	2397620	C70-C25NST	2492310
AU130-240	2615590	BKF-BF4	2053632	BP-PPL30	2046470	C350-916	2397560	C70-C35ST	2492430
AU230-130D	2636960	BKF-BM4	2053662	BP-PPL46	2046475	C3-516	2395680	C70-C70ST	2492470
AU230-630	2680300	BKF-F405	2053562	BP-U10	2046565	C3-8	2395620	C95-C35ST	2492510
AU520-130C	2648230	BKF-F405P	2053567	BP-U12	2046570	C4/0-12	2396880	C95-C70ST	2492550
AU55-50	2672515	BKF-F408	2053572	BP-U3	2046510	C4/0-14	2396820	C95-C95ST	2492590
AU55-W	2672511	BKF-F408P	2053577	BP-U3.5	2046515	C4/0-34	2396940	CA150R-2M14	2533010
B-FC48N	2598870	BKF-F608	2053612	BP-U3.5/1	2046516	C4/0-38	2396860	CA150R-M12	2532810
B-FL750	2598865	BKF-F608P	2053622	BP-U4	2046530	C4/0-516	2396840	CA150R-M14	2532850
B-TC250	2596266	BKF-FM608	2053692	BP-U4/1	2046531	C4/0-58	2396920	CA150S-2M14	2533330
B-TC450	2599405	BKF-M608	2053652	BP-U4/2	2046540	C4/0-916	2396900	CA150S-M12	2533210
B-TC500	2598827	BKY-M3	2145842	BP-U5	2046545	C400-12	2397740	CA150S-M14	2533250
B-TC500Y	2598815	BKY-M3.5	2145845	BP-U6	2046555	C400-34	2397800	CA200R-2M14	2533570
B-TC550	2599420	BKY-M3.5/1	2145847	BP-U6/1	2046556	C400-38	2397720	CA200R-M14	2533530
B-TC650	2599440	BKY-M4	2145853	BP-U8	2046560	C400-58	2397780	CA240R-2M14	2533850
B-TC650-SC	2599430	BKY-M5	2145856	BPS230.14	2598500	C400-78	2397820	CA240R-M14	2533770
B-TC950	2599460	BKY-M6/1	2145862	BPS230.24	2596093	C400-916	2397760	CA25-2M12	2530210
B-TD1724	2598955	BKY-M8	2145871	BPS230.96	2598497	C4-10	2395440	CA25-2M8	2530130
B-TD3241-T	2598958	BKY-M10	2145874	BSCL1	2489535	C4-12	2395520	CA25-M10	2530050
B15MD	2599837	BKY-M12	2145878	BSCL1/0	2489540	C4-14	2395460	CA25-M12	2530090
B1300-C	2599350	BKY-P8	2145930	BSCL2	2489530	C4-38	2395500	CA25-M8	2530010

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Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
CA315R-2M14	2534430	CFA600	3031928	CL2IH-14	2396008	CL500IH-58	2398114	CRP-U3.5	2076085
CA315R-M14	2534330	CFAB600	3031970	CL2IH-38	2396014	CL500IH-916	2398111	CRP-U3.5/2	2076090
CA315S-2M14	2534610	CFAR600	3031956	CL2IH-516	2396011	CL600-12	2398285	CRP-U4	2076095
CA315S-M14	2534530	CFC12-24ICN	2598492	CL3/0-12	2396794	CL600-58	2398291	CRP-U4/1	2076100
CA40S-2M12	2530510	CFC230N	2598490	CL3/0-D141	2396761	CL600-D38	2398270	CRP-U4/2	2076105
CA40S-M12	2530450	CGP-F608	2076845	CL3/0-D38	2396770	CL600-DN	2398275	CRP-U5	2076110
CA40S-M16	2530490	CGP-F608P	2076850	CL3/0-DN	2396775	CL600IH-12	2398305	CRP-U6	2076115
CA50R-2M12	2530870	CGP-M3	2076610	CL3/OIH-12	2396811	CL600IH-34	2398314	CRP-U6/1	2076120
CA50R-M12	2530790	CGP-M3.5	2076615	CL3/OIH-14	2396805	CL600IH-58	2398311	CRP-U8	2076125
CA50S-2M12	2531190	CGP-M4	2076625	CL3/OIH-34	2396817	CL600IH-916	2398308	CS411	3032100
CA50S-M12	2531110	CGP-M5	2076635	CL3/OIH-38	2396809	CL6-10	2395385	CS411-F	3032150
CA50S-M16	2531150	CGP-M6	2076640	CL3/OIH-516	2396807	CL6-12	2395397	CS411-M	3032151
CA70-M12	2531870	CGP-M6/1	2076645	CL3/OIH-58	2396815	CL6-14	2395388	CS412	3032115
CA70S-2M12	2531510	CGP-M608	2076860	CL3/OIH-916	2396813	CL6-D14	2395360	CS412-F	3032160
CA70S-M12	2531430	CGP-M7	2076650	CL300-12	2397491	CL6-D141	2395361	CS412-M	3032161
CA70S-M16	2531470	CGP-M8	2076660	CL300-D38	2397470	CL6-D38	2395370	CS420	3032130
CA95R-2M14	2532230	CGP-M8/1	2076665	CL300-DN	2397475	CL6-DN	2395375	CS420-F	3032180
CA95R-M12	2532150	CGP-P10	2076755	CL300IH-12	2397509	CL6IH-10	2395405	CS420-M	3032181
CA95R-M14	2532190	CGP-P12	2076760	CL300IH-34	2397515	CL6IH-12	2395417	CS4-MFC	3032058
CA95S-2M14	2532610	CGP-P14	2076765	CL300IH-38	2397507	CL6IH-14	2395408	CS4-GR	3032070
CA95S-M12	2532450	CGP-PP12	2076780	CL300IH-516	2397505	CL6IH-38	2395414	CS4-KEY	3032010
CA95S-M14	2532490	CGP-PP17	2076790	CL300IH-58	2397513	CL6IH-516	2395411	CS-CPE-1	2592748
CA95S-M16	2532500	CGP-U3.5	2076685	CL300IH-916	2397511	CL750-12	2398485	DC24	2596100
CAA10-M12	2760005	CGP-U4	2076695	CL3-12	2395797	CL750-58	2398488	DR6-5	2387910
CAA120-M12	2760310	CGP-U5	2076710	CL3-14	2395788	CL750-D38	2398470	DR6-6	2387920
CAA150-M12	2760350	CGP-U6	2076715	CL3-38	2395794	CL750-DN	2398475	DR6-8	2387930
CAA16-M12	2760012	CL1/0-10	2396385	CL350-12	2397688	CL750-DN38	2398471	DR10-5	2388000
CAA185-M12	2760430	CL1/0-12	2396397	CL350-D141	2397661	CL750IH-12	2398505	DR10-6	2388005
CAA240-M12	2760590	CL1/0-38	2396394	CL350-D38	2397670	CL750IH-34	2398511	DR10-8	2388010
CAA25-M12	2760030	CL1/0-516	2396391	CL350-DN	2397675	CL750IH-58	2398508	DR10-10	2388015
CAA300-M16	2760710	CL1/0-D14	2396360	CL350IH-12	2397708	CL8-10	2395183	DR16-5	2388025
CAA300-34-M12	2760680	CL1/0-D141	2396361	CL350IH-34	2397717	CL8-14	2395186	DR16-6	2388030
CAA300-34-M16	2760715	CL1/0-D38	2396370	CL350IH-38	2397705	CL8-38	2395192	DR16-8	2388040
CAA35-M12	2760070	CL1/0-DN	2396375	CL350IH-58	2397714	CL8-D14	2395160	DR16-10	2388050
CAA35ADN	2762260	CL1/OIH-10	2396405	CL350IH-916	2397711	CL8-D141	2395161	DR16-12	2388060
CAA400-M16	2760750	CL1/OIH-12	2396413	CL3-516	2395791	CL8-D38	2395170	DR25-6	2388110
CAA50-M12	2760110	CL1/OIH-14	2396407	CL3-D38	2395770	CL8IH-10	2395203	DR25-8	2388120
CAA500-M16-TNBD	2760852	CL1/OIH-38	2396411	CL3-DN	2395775	CL8IH-12	2395215	DR25-10	2388130
CAA630-4M8	2760950	CL1/OIH-516	2396409	CL3IH-10	2395805	CL8IH-14	2395206	DR25-12	2388140
CAA70-M12	2760150	CL1/OIH-58	2396417	CL3IH-12	2395817	CL8IH-38	2395212	DR25-16	2388160
CAA95-M12	2760190	CL1/OIH-916	2396415	CL3IH-14	2395808	CL8IH-516	2395209	DR35-6	2388210
Canvas Bag 001	2593300	CL1-10	2396183	CL3IH-38	2395814	CMA600	3031984	DR35-8	2388220
Canvas Bag 007	2593295	CL1-12	2396191	CL3IH-516	2395811	CMB1	2599943	DR35-10	2388230
Canvas Bag 010	2593298	CL1-516	2396187	CL4/0-12	2396994	CMB2	2599945	DR35-12	2388240
Canvas Bag 011	2593299	CL1-D14	2396160	CL4/0-38	2396991	CP1086-W-1000-KV	2597905	DR35-16	2388246
Canvas Bag 013	2593294	CL1-D141	2396161	CL4/0-D141	2396961	CP1096	2597700	DR50-6	2388250
CB1430L	2598494	CL1-D38	2396170	CL4/0-D38	2396970	CP1096-W-1000-KV	2597695	DR50-8	2388255
CB1820L	2598495	CL1-DN	2396175	CL4/0-DN	2396975	CP1120-W-1000-KV	2597958	DR50-10	2388260
CB1840L	2598493	CL1IH-10	2396205	CL4/0-DN38	2396971	CP1131	2610120	DR50-12	2388270
CB9620H	2598503	CL1IH-12	2396217	CL4/OIH-12	2397011	CPE-1	2592751	DR50-14	2388280
CBA96-144	2598508	CL1IH-14	2396208	CL4/OIH-14	2397005	CPE-1-110	2592752	DR50-16	2388290
CBP-F405	2076535	CL1IH-38	2396214	CL4/OIH-34	2397017	CPKD108	2808582	DR70-8	2388320
CBP-F408	2076540	CL1IH-516	2396211	CL4/OIH-38	2397009	CPKD1508	2808587	DR70-10	2388330
CBP-F408P	2076543	CL2/0-12	2396594	CL4/OIH-516	2397007	CPKD2508	2808592	DR70-12	2388340
CBP-F608	2076545	CL2/0-38	2396591	CL4/OIH-58	2397015	CPKD508	2808573	DR70-14	2388350
CBP-F608P	2076550	CL2/0-D14	2396560	CL4/OIH-916	2397013	CPKD7508	2808578	DR70-16	2388360
CBP-M3	2076310	CL2/0-D141	2396561	CL400-12	2397888	CPP-0	2592671	DR70-20	2388380
CBP-M3.5	2076315	CL2/0-D38	2396570	CL400-58	2397894	CPU1131-C	2610150	DR95-8	2388390
CBP-M3.5/1	2076320	CL2/0-DN	2396575	CL400-D141	2397861	CPU1230-3D	2630200	DR95-10	2388395
CBP-M4	2076325	CL2/OIH-12	2396611	CL400-D38	2397870	CRP-F305	2076225	DR95-12	2388400
CBP-M5	2076335	CL2/OIH-14	2396605	CL400-DN	2397875	CRP-F308	2076230	DR95-14	2388410
CBP-M6	2076340	CL2/OIH-34	2396617	CL400IH-12	2397908	CRP-F405	2076235	DR95-16	2388420
CBP-M6/1	2076345	CL2/OIH-38	2396609	CL400IH-34	2397917	CRP-F405P	2076237	DR95-20	2388430
CBP-M608	2076560	CL2/OIH-516	2396607	CL400IH-38	2397905	CRP-F408	2076240	DR120-8	2388450
CBP-M7	2076350	CL2/OIH-58	2396615	CL400IH-58	2397914	CRP-F408P	2076242	DR120-10	2388460
CBP-M8	2076355	CL2/OIH-916	2396613	CL400IH-916	2397911	CRP-F608	2076245	DR120-12	2388470
CBP-P10	2076455	CL2-10	2395985	CL4-10	2395585	CRP-F608P	2076250	DR120-16	2388490
CBP-P12	2076460	CL2-12	2395997	CL4-12	2395597	CRP-M3	2076010	DR120-20	2388500
CBP-P8	2076450	CL2-14	2395988	CL4-14	2395588	CRP-M3.5	2076015	DR150-10	2388530
CBP-PP12	2076480	CL250-12	2397204	CL4-38	2395594	CRP-M3.5/1	2076020	DR150-12	2388540
CBP-PP12/25	2076490	CL250-D38	2397180	CL4-D14	2395560	CRP-M4	2076025	DR150-16	2388560
CBP-PPL30	2076498	CL250-DN	2397185	CL4-D141	2395561	CRP-M4/3	2076030	DR150-20	2388570
CBP-U3	2076380	CL250IH-12	2397229	CL4-D38	2395570	CRP-M5	2076035	DR185-10	2388600
CBP-U3.5	2076385	CL250IH-14	2397220	CL4-DN	2395575	CRP-M6	2076040	DR185-12	2388610
CBP-U4	2076395	CL250IH-34	2397238	CL4IH-10	2395605	CRP-M6/1	2076045	DR185-16	2388620
CBP-U4/1	2076400	CL250IH-38	2397226	CL4IH-12	2395617	CRP-M608	2076260	DR185-20	2388630
CBP-U4/2	2076405	CL250IH-516	2397223	CL4IH-14	2395608	CRP-M7	2076050	DR240-10	2388710
CBP-U4/3L	2076408	CL250IH-58	2397235	CL4IH-38	2395614	CRP-M8	2076055	DR240-12	2388720
CBP-U5	2076410	CL250IH-916	2397232	CL4IH-516	2395611	CRP-P10	2076155	DR240-16	2388730
CBP-U6	2076415	CL2-516	2395991	CL500-12	2398088	CRP-P12	2076160	DR240-20	2388740
CC8.9	3041630	CL2-D14	2395960	CL500-58	2398094	CRP-P8	2076150	DR300-10	2388780
CC9.12	3041632	CL2-D141	2395961	CL500-D141	2398061	CRP-PP12	2076180	DR300-12	2388790
CDD6	2599940	CL2-D38	2395970	CL500-D38	2398070	CRP-PP12/1	2076185	DR300-16	2388810
CDD6-8	2599941	CL2-DN	2395975	CL500-DN	2398075	CRP-PP12/23	2076190	DR300-20	2388820
CFA2600	3031942	CL2-DN38	2395971	CL500IH-12	2398108	CRP-PP14	2076195	DR400-12	2388870
CFA300	3031900	CL2IH-10	2396005	CL500IH-34	2398117	CRP-PPL30	2076205	DR400-16	2388890
CFA400	3031914	CL2IH-12	2396017	CL500IH-38	2398105	CRP-U3	2076080	DR400-20	2388900

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Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
DR500-12	2388950	ES40-BK	2470482	FD42	3017366	G200X3.6	3041765	G880X12.6N	3041946
DR500-16	2388970	ES48-BK	2470483	FD48	3017368	G200X3.6N	3041766	G1030X12.6	3041950
DR500-20	2388980	ES80-BK	2470484	FD7	3017350	G200X3.6/M	3041767	G1030X12.6N	3041951
DR625-12	2389030	ES03-WH	2470490	FD9	3017352	G200X3.6N/M	3041768	GA-3	2598429
DR625-16	2389050	ES06-WH	2470491	FDM12	3017375	G250X3.6	3041770	GF-F608	2055630
DR625-20	2389060	ES1-WH	2470492	FDM16	3017374	G250X3.6N	3041771	GF-F608P	2055650
DSV6	2489010	ES2-WH	2470493	FDM20	3017377	G300X3.6	3041775	GF-M10	2054250
DSV10	2489015	ES3-WH	2470494	FDM25	3017379	G300X3.6N	3041776	GF-M10/1	2054290
DSV16	2489020	ES5-WH	2470495	FDM32	3017381	G300X3.6/M	3041777	GF-M12	2054330
DSV25	2489025	ES10-WH	2470496	FDM40	3017383	G300X3.6N/M	3041778	GF-M14	2054370
DSV35	2489030	ES14-WH	2470497	FDM50	3017385	G370X3.6	3041780	GF-M16	2054410
DSV50	2489035	ES19-WH	2470498	FDM63	3017387	G370X3.6N	3041781	GF-M3	2054010
DSV70	2489040	ES24-WH	2470499	FL10-150	2510070	G120X4.8	3041785	GF-M3.5	2054030
DSV95	2489045	ES30-WH	2470500	FL10-200	2510150	G120X4.8N	3041786	GF-M4	2054070
DSV120	2489050	ES37-WH	2470501	FL10-250	2510190	G160X4.8	3041790	GF-M5	2054110
DSV150	2489055	ES40-WH	2470502	FL16-150	2510470	G160X4.8N	3041791	GF-M6	2054150
DSV185	2489060	ES48-WH	2470503	FL16-200	2510550	G190X4.8	3041795	GF-M6/1	2054160
DSV240	2489065	ES80-WH	2470504	FL16-250	2510590	G190X4.8N	3041796	GF-M608	2055670
DSV300	2489070	ES03-RE	2470510	FL16-320	2510670	G190X4.8/M	3041797	GF-M7	2054170
DSV400	2489075	ES06-RE	2470511	FL16-350	2510690	G190X4.8N/M	3041798	GF-M8	2054210
DSV500	2489080	ES1-RE	2470512	FL16-420	2510710	G200X4.8	3041800	GF-M8/1	2054220
DSV625	2489085	ES2-RE	2470513	FL16-570	2510750	G200X4.8N	3041801	GF-P10	2055310
ECT-KE2.5N	2598933	ES3-RE	2470514	FL16-660	2510790	G200X4.8/M	3041802	GF-P12	2055350
ECW-H3D	2630073	ES5-RE	2470515	FL25-150	2510950	G200X4.8/M VO	3041804	GF-P14	2055370
EK100	2597990	ES10-RE	2470516	FL25-200	2511070	G200X4.8N/M	3041803	GF-PP12	2055390
EK500P	2597992	ES14-RE	2470517	FL25-250	2511110	G250X4.8	3041805	GF-PP17	2055430
ELB-3	2598422	ES19-RE	2470518	FL25-300	2511190	G250X4.8N	3041806	GF-PLP46	2055465
EPS115-230.24	2596091	ES24-RE	2470519	FL10-150ST	2518510	G250X4.8/M	3041807	GF-U10	2054810
ERCH	2596112	ES30-RE	2470520	FL10-200ST	2518550	G250X4.8N/M	3041808	GF-U10/1	2054850
ERCH-WH	2596114	ES37-RE	2470521	FL10-250ST	2518590	G280X4.8	3041810	GF-U12	2054890
ES03-BU	2470410	ES40-RE	2470522	FL16-150ST	2518870	G280X4.8N	3041811	GF-U14	2054930
ES06-BU	2470411	ES48-RE	2470523	FL16-200ST	2518910	G300X4.8	3041815	GF-U16	2054970
ES1-BU	2470412	ES80-RE	2470524	FL16-250ST	2518950	G300X4.8N	3041816	GF-U3.5	2054610
ES2-BU	2470413	ES03-GN	2470530	FL16-320ST	2518990	G370X4.8	3041820	GF-U4	2054650
ES3-BU	2470414	ES06-GN	2470531	FL16-350ST	2519030	G370X4.8 VO	3041824	GF-U5	2054690
ES5-BU	2470415	ES1-GN	2470532	FL16-420ST	2519070	G370X4.8N	3041821	GF-U6	2054730
ES10-BU	2470416	ES2-GN	2470533	FL16-570ST	2519150	G390X4.8	3041825	GF-U8	2054770
ES14-BU	2470417	ES3-GN	2470534	FL16-660ST	2519170	G390X4.8N	3041826	GFHT112X2.5	3042805
ES19-BU	2470418	ES5-GN	2470535	FL25-150ST	2519530	G430X4.8	3041830	GFH100X2.5	3042810
ES24-BU	2470419	ES10-GN	2470536	FL25-200ST	2519570	G430X4.8 VO	3041834	GH8	3041550
ES30-BU	2470420	ES14-GN	2470537	FL25-250ST	2519610	G430X4.8N	3041831	GK-F608	2145500
ES37-BU	2470421	ES19-GN	2470538	FL25-300ST	2519690	G450X4.8	3041835	GK-F608P	2145502
ES40-BU	2470422	ES24-GN	2470539	FLS3	3026810	G450X4.8N	3041836	GKF-M608	2055672
ES48-BU	2470423	ES30-GN	2470540	FLS5	3026815	G530X4.8	3041840	GKY-M3.5	2145982
ES80-BU	2470424	ES37-GN	2470541	G80X2.4	3041700	G530X4.8N	3041841	GKY-M4	2145985
ES03-GY	2470430	ES40-GN	2470542	G80X2.4N	3041701	G150X7.6	3041845	GKY-M5	2145988
ES06-GY	2470431	ES48-GN	2470543	G80X2.4/M	3041702	G150X7.6N	3041846	GKY-M6	2145991
ES1-GY	2470432	ES80-GN	2470544	G80X2.4N/M	3041703	G200X7.6	3041850	GKY-M8	2145994
ES2-GY	2470433	ES03-YE	2470550	G90X2.4	3041705	G200X7.6N	3041851	GKY-M10	2145997
ES3-GY	2470434	ES06-YE	2470551	G90X2.4N	3041706	G250X7.6	3041855	GKY-M12	2146000
ES5-GY	2470435	ES1-YE	2470552	G90X2.4 VO	3041709	G250X7.6N	3041856	GKY-M14	2146003
ES10-GY	2470436	ES2-YE	2470553	G100X2.5	3041710	G300X7.6	3041860	GKY-M16	2146006
ES14-GY	2470437	ES3-YE	2470554	G100X2.5N	3041711	G300X7.6N	3041861	GKY-P14	2146040
ES19-GY	2470438	ES5-YE	2470555	G100X2.5/M	3041712	G370X7.6	3041865	GKY-PP12	2146045
ES24-GY	2470439	ES10-YE	2470556	G100X2.5/M VO	3041714	G370X7.6N	3041866	GKY-PP17	2146047
ES30-GY	2470440	ES14-YE	2470557	G100X2.5N/M	3041713	G430X7.6	3041870	GKY-PLP46	2146055
ES37-GY	2470441	ES19-YE	2470558	G120X2.5	3041715	G430X7.6N	3041871	GKY-U3.5	2146020
ES40-GY	2470442	ES24-YE	2470559	G120X2.5N	3041716	G530X7.6	3041875	GKY-U4	2146023
ES48-GY	2470443	ES30-YE	2470560	G140X2.5	3041720	G530X7.6N	3041876	GKY-U5	2146026
ES80-GY	2470444	ES37-YE	2470561	G140X2.5N	3041721	G430X9.0	3041880	GKY-U6	2146029
ES03-BR	2470450	ES40-YE	2470562	G140X2.5/M	3041722	G430X9.0N	3041881	GKY-U8	2146032
ES06-BR	2470451	ES48-YE	2470563	G140X2.5/M VO	3041724	G530X9.0	3041885	GN-M10	2154250
ES1-BR	2470452	ES80-YE	2470564	G160X2.5	3041725	G530X9.0N	3041886	GN-M10/1	2154290
ES2-BR	2470453	ES03-PK	2470570	G160X2.5N	3041726	G710X9.0	3041890	GN-M12	2154330
ES3-BR	2470454	ES06-PK	2470571	G160X2.5/M	3041727	G710X9.0N	3041891	GN-M14	2154370
ES5-BR	2470455	ES1-PK	2470572	G160X2.5N/M	3041728	G710X9.0 VO	3041894	GN-M16	2154410
ES10-BR	2470456	ES2-PK	2470573	G200X2.5	3041730	G780X9.0	3041895	GN-M3	2154010
ES14-BR	2470457	ES3-PK	2470574	G200X2.5N	3041731	G780X9.0N	3041896	GN-M3.5	2154030
ES19-BR	2470458	ES5-PK	2470575	G200X2.5/M	3041732	G830X9.0	3041900	GN-M4	2154070
ES24-BR	2470459	ES10-PK	2470576	G200X2.5/M VO	3041734	G830X9.0N	3041901	GN-M5	2154110
ES30-BR	2470460	ES14-PK	2470577	G200X2.5N/M	3041733	G920X9.0	3041905	GN-M6	2154150
ES37-BR	2470461	ES19-PK	2470578	G250X2.8	3041735	G920X9.0N	3041906	GN-M6/1	2154160
ES40-BR	2470462	ES24-PK	2470579	G250X2.8N	3041736	G1020X9.0	3041910	GN-M7	2154170
ES48-BR	2470463	ES30-PK	2470580	G300X2.8	3041740	G1020X9.0N	3041911	GN-M8	2154210
ES80-BR	2470464	ES37-PK	2470581	G300X2.8N	3041741	G1220X9.0	3041915	GN-M8/1	2154220
ES03-BK	2470470	ES40-PK	2470582	G120X3.6	3041745	G1220X9.0N	3041916	GN-P10	2155250
ES06-BK	2470471	ES48-PK	2470583	G120X3.6N	3041746	G230X12.6	3041920	GN-P12	2155290
ES1-BK	2470472	ES80-PK	2470584	G140X3.6	3041750	G230X12.6N	3041921	GN-P14	2155310
ES2-BK	2470473	ESC300CEE	2596110	G140X3.6N	3041751	G380X12.6	3041925	GN-PP12	2155330
ES3-BK	2470474	ESC600	2599001	G140X3.6/M	3041753	G380X12.6N	3041926	GN-PP17	2155370
ES5-BK	2470475	F1-15	2599865	G140X3.6N/M	3041752	G480X12.6	3041930	GN-U10	2154850
ES10-BK	2470476	FD11	3017354	G150X3.6	3041755	G480X12.6N	3041931	GN-U10/1	2154890
ES14-BK	2470477	FD13.5	3017356	G150X3.6N	3041756	G580X12.6	3041935	GN-U12	2154930
ES19-BK	2470478	FD16	3017358	G150X3.6 VO	3041759	G580X12.6N	3041936	GN-U14	2154970
ES24-BK	2470479	FD21	3017360	G180X3.6	3041760	G730X12.6	3041940	GN-U16	2155010
ES30-BK	2470480	FD29	3017362	G180X3.6N	3041761	G730X12.6N	3041941	GN-U3.5	2154650
ES37-BK	2470481	FD36	3017364			G880X12.6	3041945	GN-U4	2154690

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Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
GN-U5	2154730	HT120	2610420	L7-M	2480250	MA3-C	2610820	ME19-50	2676100
GN-U6	2154770	HT120-KV	2610430	L7-P	2485190	MA3.5-U	2600210	ME19-C	2614219
GN-U8	2154810	HT131-C	2610416	L80-M	2480890	MA30-80-U	2600380	ME2	2652030
GP-M10	2046645	HT131-UC	2610436	M108-520	2648752	MA30-C	2610940	ME2/3-15	2599876
GP-M10/1	2046646	HT131-LN-C	2610419	M108-C	2611860	MA35-C	2610950	ME2-50	2676010
GP-M12	2046650	HT45-E	2650040	M108.215-U	26603723	MA35-U	2600390	ME2-C	2614201
GP-M14	2046655	HT51	2670610	M110-520	2648754	MA37-C	2610960	ME2.19-U	2604750
GP-M16	2046660	HT51-KV	2670611	M113	2651130	MA37-U	2600410	ME20	2652230
GP-M3	2046610	HT81-U	2600036	M113-50	2675855	MA40-C	2610970	ME20-50	2676110
GP-M3.5	2046615	HWE-1	8420010	M113-C	2611870	MA40-U	2600430	ME200-520	2648558
GP-M4	2046620	HX1	2590298	M113.173-U	2603730	MA48-C	2610980	ME20-C	2614221
GP-M5	2046625	I38-F	2593863	M118	2651150	MA48-U	2600450	ME24	2652250
GP-M6	2046630	I38-M	2593858	M118-50	2675860	MA5	2650150	ME24L	2652251
GP-M6/1	2046631	I38-MS	2593862	M118-C	2611910	MA5-50	2675662	ME24-50	2676120
GP-M7	2046635	IDT	2590920	M118.158-U	2603725	MA5-C	2610830	ME24L-50	2676121
GP-M8	2046640	IT6	8420016	M140	2651170	MA60-C	2610990	ME24-C	2614223
GP-M8/1	2046641	KE0.75-1	2591050	M140-50	2675870	MA7	2650170	ME29	2652260
GP-P10	2046715	KE10-1	2591049	M140-C	2612010	MA7-50	2675664	ME29-50	2676130
GP-P12	2046720	KE1016ST	2803150	M140.190-U	2603800	MA7-C	2610840	ME29-C	2614225
GP-P14	2046725	KE106ST	2802310	M145-520	2648770	MA7.14-U	2600250	ME29-U	2604870
GP-PP12	2046740	KE110ST	2802390	M158	2651200	MA80-3D	2631770	ME3	2652050
GP-PP17	2046750	KE1508ST	2802510	M158-50	2675880	MA80-520	2645671	ME3-50	2676020
GP-PPL46	2046755	KE1510ST	2802550	M158-C	2612130	MA9	2650180	ME3-C	2614203
GP-U10	2046865	KE16-15	2599861	M160-520	2648771	MA9-50	2675665	ME3.14-U	2604770
GP-U10/1	2046866	KE1616ST	2803190	M173	2651210	MA9-C	2610850	ME30	2652270
GP-U12	2046870	KE1A-3	2598430	M173-50	2675890	MA9.17-U	2600270	ME30L	2652271
GP-U14	2046875	KE2.5-1	2591048	M173-C	2612230	MB2-80U	2604350	ME30-50	2676140
GP-U16	2046880	KE2.5A-3	2598432	M173L-C	2612240	MB3-80U	2604400	ME30L-50	2676141
GP-U3.5	2046825	KE25015ST	2803455	M190-50	2675900	MCO	2650490	ME30-C	2614227
GP-U4	2046830	KE25018ST	2803460	M190-520	2648772	MCO-U	2603510	ME30-U	2604890
GP-U5	2046845	KE2508ST	2802670	M190-C	2612330	MCO2-U	2603550	ME35-50	2676150
GP-U6	2046855	KE2510ST	2802710	M208-C	2612420	MC10	2650530	ME35-C	2614229
GP-U8	2046860	KE35-15	2599862	M208-U	2603780	MC10-50	2675610	ME35-U	2604910
GR100X7.6N	3042620	KE35012ST	2803470	M215-50	2675910	MC10-C	2611100	ME37-50	2676160
GR120X7.6N	3042625	KE35015ST	2803475	M215-520	2648773	MC10-U	2600610	ME37-C	2614231
GR150X7.6N	3042630	KE35018ST	2803480	M215-C	2612490	MC185-3D	2632030	ME37-U	2604930
GR200X7.6N	3042635	KE4-15	2599860	M220-520	2648774	MC185-C	2611150	ME40-50	2676165
GR250X7.6N	3042640	KE410ST	2802870	M232-C	2612590	MC2	2650500	ME40-C	2614233
GR300X7.6N	3042645	KE412ST	2802910	M255-520	2648776	MC240-3D	2632035	ME40-U	2604950
GR370X7.6N	3042650	KE506ST	2802030	M295-520	2648780	MC25	2650550	ME48-50	2676170
GX200X4.5	3042245	KE508ST	2802070	M340-520	2648784	MC25-50	2675620	ME48-C	2614235
GX300X4.5	3042250	KE610ST	2802990	M440-520	2648840	MC25-C	2611110	ME48-U	2604970
GX370X4.5	3042255	KE612ST	2803030	M540-520	2648910	MC25-U	2600650	ME5	2652070
GX370X7.9	3042260	KE616ST	2803070	M70	2651090	MC3	8420018	ME5-50	2676030
GX520X4.5	3042257	KE7506ST	2802110	M70-50	2675800	MC35	2650570	ME5-C	2614205
GX680X7.9	3042265	KE7508ST	2802150	M70-C	2611590	MC35-50	2675630	ME5.7-U	2604790
GX1020X7.9	3042270	KITHWE1	8420012	M70.140-U	2603710	MC35-C	2611120	ME60-C	2614237
HB2	2591308	KITTRD-9.4C	2685015	M75	2651100	MC35-U	2600690	ME7	2652090
HB5	2591318	KITTRD-M11C	2685016	M75-50	2675805	MC4	8420019	ME7-50	2676040
HB6	2591285	KT1	2591319	M75-C	2611650	MC6	2650510	ME7-C	2614207
HB7	2591310	KT2	2591320	M75.96-U	2603715	MC6-50	2675605	ME80-3D	2634930
HB8	2591284	KT3	2591275	M96	2651110	MC6.25-U	2600630	ME80-520	2648550
HB9	2591336	KT4	2591277	M96-50	2675850	MC70-3D	2632010	ME80-C	2614239
HB10	2591337	KT5	2591279	M96-C	2611800	MC70-50	2675640	ME9	2652110
HB11	2591343	KTS1632	2590700	MA03/3-15	2599870	MC70-80U	2600720	ME9-50	2676050
HB12N	2591345	L03-M	2480020	MA1	2650110	MC70-C	2611130	ME9-C	2614209
HB13UE	2591347	L03-P	2485010	MA1-50	2675658	MC95-3D	2632020	ME9.20-U	2604810
HF1	2590900	L06-M	2480050	MA10	2650190	MC95-80U	2600730	MFB13-40	2598040
HF2	2590905	L06-P	2485040	MA10-50	2675666	MC95-C	2611140	MFB50-63	2598045
HN1	2590300	L10-M	2480330	MA10-C	2610860	MCCC16-C	2617050	MH10/16-15	2599886
HN5	2590291	L10-P	2485270	MA10.19-U	2600290	MCCC25-C	2617070	MK17S-C	2614307
HNA25	2590401	L100-M	2480930	MA100-3D	2631790	MCCC35-C	2617090	MK14-3D	2634781
HNGS4	2590024	L120-M	2481010	MA100-520	2645690	MCCC50-C	2617110	MK16-3D	2634783
HND25	2590403	L14-M	2480410	MA12-50	2675668	MCS4-15	2599868	MK18-3D	2634785
HNKE4	2590299	L14-P	2485350	MA12-C	2610870	ME03/2-15	2599875	MK20-3D	2634786
HNKE16	2590329	L160-M	2481050	MA12.20-U	2600310	ME1	2652010	MK22-3D	2634787
HNKE50	2590342	L19-M	2480490	MA120-3D	2631810	ME1-50	2676005	MK25-3D	2634788
HNN3	2590296	L19-P	2485430	MA120-520	2645711	ME10	2652130	MK28-3D	2634790
HNN4	2590292	L1-M	2480090	MA14-50	2675670	ME10-50	2676060	MK32-3D	2634800
HP1	2590500	L1-P	2485070	MA14-C	2610880	ME10-C	2614211	MK34-3D	2634810
HP1-1	2590502	L200-M	2481090	MA160-520	2645731	ME10.24-U	2604830	MK38-3D	2634830
HP3	2590531	L24-M	2480570	MA17-50	2675672	ME100-3D	2634940	MK42-3D	2634850
HP3-1	2590532	L24-P	2485510	MA17-C	2610890	ME100-520	2648552	MK44-3D	2634870
HP4-B	2590032	L2-M	2480130	MA19-50	2675674	ME12	2652150	MK46-3D	2634880
HP4-C10	2590040	L2-P	2485100	MA19-C	2610900	ME12-50	2676070	MK5/8-15	2599890
HP4-G	2590033	L30-M	2480650	MA19-U	2600320	ME12-C	2614213	MK5	2651575
HP4-R	2590031	L30-P	2485590	MA2-C	2610810	ME12.17-U	2604850	MK6	2651580
HPH-1	2590029	L37-M	2480730	MA2.3	2650130	ME120-3D	2634950	MK8	2651610
HT-FL75	2665030	L37-P	2485670	MA2.3-50	2675660	ME120-520	2648554	MK10	2651640
HT-TC026	2591406	L3-M	2480170	MA20-50	2675675	ME14	2652170	MK12	2651670
HT-TC026Y	2591408	L3-P	2485130	MA20-C	2610910	ME14-50	2676080	MK14	2651700
HT-TC041	2591426	L48-M	2480810	MA200-520	2645750	ME14-C	2614215	MK16	2651730
HT-TC051	2591472	L48-P	2485680	MA24-50	2675676	ME160-520	2648556	MK18	2651750
HT-TC051Y	2591475	L5-M	2480210	MA24-C	2610920	ME17	2652190	MK20	2651770
HT-TC055	2591445	L5-P	2485160	MA24-U	2600330	ME17-50	2676090	MK5-50	2675360
HT-TC065	2591477	L60-M	2480850	MA29-C	2610930	ME17-C	2614217	MK6-50	2675370
HT-TC0851	2591496	L60-P	2485690	MA29.80-U	2600360	ME19	2652210	MK8-50	2675390

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Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
MK10-50	2675410	MN7RF-C	2610766	MT95S-C12	2544570	MV35	2616150	PG-1	2591047
MK12-50	2675430	MN80-3D	2631450	MT95S-C14-80	2546230	MV95	2616160	PKC1012	2809490
MK14-50	2675450	MN9-C	2610551	MT95S-GC	2541850	MVM150	2616310	PKC1018	2809500
MK16-50	2675470	MP608	3031810	MT95S-TD	2540470	MVM230-400 MJSE	2680910	PKC108	2809390
MK18-50	2675490	MP608/45	3031815	MTA16-C	2770001	MVM230-630 MJ6E	2680920	PKC112	2809400
MK20-50	2675510	MP608/90	3031820	MTA25-C	2770020	MVM240	2616320	PKC1508	2809410
MK22-50	2675530	MP608D	3031830	MTA35-C	2770030	MVM35	2616290	PKC1510	2809415
MK22L	2651791	MPC1	2595201	MTA50-C	2770310	MVM95	2616300	PKC1518	2809420
MK22L-50	2675534	MPC2	2595203	MTA70-C	2770550	MY10-50	2677340	PKC1612	2809510
MK25-50	2675550	MPC4	2595208	MTA95-C	2770830	MY10-C	2613380	PKC1618	2809520
MK28-50	2675560	MPC7	2595221	MTA120-C	2771510	MY14-50	2677345	PKC25016	2809530
MK28-60	2671460	MQ10-50	2675010	MTA150-C	2771710	MY14-C	2613385	PKC25022	2809540
MK32-50	2675564	MQ16-50	2675013	MTA185-C	2772150	MY16-50	2677350	PKC2508	2809430
MK6-C	2614250	MQ25-50	2675016	MTA240-C	2773010	MY16-C	2613390	PKC2512	2809435
MK8-C	2614260	MQ35-50	2675019	MTMA10-GC	2720025	MY19-50	2677355	PKC2518	2809440
MK10-C	2614270	MQ50-50	2675021	MTMA120-70-GC	2721410	MY19-C	2613395	PKC306	2809320
MK12-C	2614280	MQ70-50	2675024	MTMA120-95-GC	2721450	MY24-50	2677360	PKC308	2809330
MK14-C	2614290	MQM10-C	2610661	MTMA120-GC	2720272	MY24L-50	2677362	PKC35016	2809550
MK16-C	2614300	MQM16-C	2610662	MTMA150-120-GC	2721630	MY24-C	2613400	PKC35025	2809560
MK18-C	2614310	MQM25-C	2610663	MTMA150-70-GC	2721550	MY2-50	2677310	PKC410	2809452
MK20-C	2614320	MQM35-C	2610664	MTMA150-95-GC	2721590	MY2-C	2613350	PKC412	2809455
MK22-C	2614330	MQM50-C	2610665	MTMA150-GC	2720330	MY30-50	2677365	PKC418	2809460
MK25-C	2614340	MQM70-C	2610666	MTMA16-10-GC	2720560	MY30L-50	2677366	PKC50020	2809570
MK28-C	2614350	MQM95-C	2610667	MTMA16-GC	2720035	MY30-C	2613405	PKC50025	2809575
MK32-C	2614360	MQM120-C	2610668	MTMA185-120-GC	2721900	MY30-50	2677315	PKC508	2809350
MK34L-C	2614371	MQM150-C	2610669	MTMA185-150-GC	2721910	MY36-50	2677370	PKC510	2809360
MLL1	2590802	MQM185-C	2610670	MTMA185-GC	2720360	MY36-C	2613410	PKC612	2809470
MLL90	2590812	MQM240-C	2610671	MTMA240-GC	2720410	MY37-50	2677375	PKC618	2809480
MLRJ1	2590815	MGS16-C	2610752	MTMA240-150-GC	2722050	MY37-C	2613415	PKC70022	2809595
MLS1	2590805	MGS35-C	2610753	MTMA240-185-GC	2722090	MY3-C	2613355	PKC7508	2809370
MLS2	2590807	MGS70-C	2610754	MTMA25-10-GC	2720575	MY4-50	2677320	PKC7512	2809380
MMT200-50	2676388	MGS150-C	2610755	MTMA25-16-GC	2720580	MY48-50	2677380	PKC95025	2809600
MMT200-C	2611190	MGS240-C	2610756	MTMA25-GC	2720090	MY48-C	2613420	PKC120027	2809605
MMT200-U	2601170	MS4/10-15	2599880	MTMA300-GC	2720430	MY4-C	2613360	PKD1012	2808915
MMT25-50	2676380	MS10/16-15	2599881	MTMA35-20-GC	2720135	MY5-50	2677325	PKD1018	2808917
MMT25-C	2611160	MT-FC48N	2685903	MTMA35-GC	2720130	MY5-C	2613365	PKD106	2808870
MMT25-U	2601050	MT150R-C12	2545010	MTMA400-240-GC	2722245	MY60-C	2613425	PKD108	2808872
MMT315-C	2611200	MT150R-C16	2545090	MTMA400-300-GC	2722250	MY6-50	2677330	PKD110	2808874
MMT50-50	2676382	MT150R-GC	2541870	MTMA50-25-GC	2720650	MY6-C	2613370	PKD112	2808876
MMT50-C	2611170	MT150R-TD	2540550	MTMA50-35-GC	2720660	MY7-50	2677335	PKD1508	2808880
MMT50-U	2601090	MT150S-C12	2545310	MTMA50-GC	2720152	MY76-C	2613430	PKD1510	2808882
MMT95-50	2676384	MT150S-C14-80	2546270	MTMA500-GC	2720515	MY7-C	2613375	PKD1512	2808884
MMT95-C	2611180	MT150S-C16	2545350	MTMA500-300-GC	2722260	N1-1	2591059	PKD1518	2808886
MMT95-U	2601130	MT150S-GC	2541910	MTMA500-400-GC	2722270	N11	2581310	PKD1612	2808920
MN10-C	2610560	MT150S-TD	2540630	MTMA70-35-GC	2720940	N12	2581312	PKD1618	2808922
MN10RF-50	2676250	MT200R-C10	2545540	MTMA70-50-GC	2720980	N13	2581314	PKD25016	2808925
MN10RF-C	2610768	MT200R-C16	2545550	MTMA70-GC	2720195	N14	2581316	PKD25022	2808927
MN12-C	2610570	MT200R-GC	2542030	MTMA95-50-GC	2721030	N15	2581318	PKD2508	2808890
MN12F-50	2676260	MT200R-TD	2540670	MTMA95-70-GC	2721070	N16	2581320	PKD2512	2808892
MN12F-C	2610770	MT240R-C12	2545710	MTMA95-GC	2720232	ND1	2590080	PKD2518	2808894
MN14-C	2610580	MT240R-C16	2545750	MTMA16/1	2720031	ND2	2590082	PKD35016	2808930
MN14RF-50	2676270	MT240R-GC	2542110	MTMA25/1	2720071	ND3	2590084	PKD35025	2808932
MN14RF-C	2610772	MT240R-TD	2540710	MTMA35/1	2720111	ND4	2590086	PKD410	2808900
MN17-C	2610591	MT25-C8	2543030	MTMA50/1	2720160	NIT10	8420017	PKD412	2808902
MN17F-50	2676280	MT25-GC	2541570	MTMA70/1	2720191	NLO3-M	2469328	PKD418	2808904
MN17F-C	2610774	MT25-TD	2540150	MTMA95/1	2720250	NLO3-P	2110870	PKD50020	2808935
MN19-C	2610600	MT315R-C16	2545950	MTMA120/1	2720280	NLO6-M	2469330	PKD50025	2808937
MN19RF-50	2676285	MT315R-GC	2542150	MTMA150/1	2720320	NLO6-P	2111950	PKD506	2808850
MN19RF-C	2610776	MT315R-TD	2540750	MTMA185/1	2720370	NLO6-PB	2111960	PKD508	2808852
MN2-C	2610511	MT315S-C16	2545990	MTMA240/1	2720400	NL1-M	2469350	PKD510	2808854
MN20-C	2610610	MT315S-GC	2542290	MTMAD300/1	2720460	NL1-P	2113970	PKD612	2808910
MN20F-50	2676290	MT315S-TD	2540790	MTMA400/1	2720475	NL1-PG	2113990	PKD618	2808912
MN20F-C	2610778	MT400-TD	2540830	MTMA500-40/1	2720509	NL2-M	2469390	PKD7506	2808860
MN24-C	2610620	MT40S-C10	2543410	MTMA630/1	2720530	NL3-M	2469430	PKD7508	2808862
MN24RF-50	2676295	MT40S-C14-80	2546070	MTMAD300-GC	2720440	NN4-15	2599867	PKD7510	2808864
MN24RF-C	2610780	MT40S-C8	2543400	MTMAD300-95-GC	2722121	NY00	2581322	PKD7512	2808866
MN29-C	2610625	MT40S-GC	2541610	MTMAD300-150-GC	2722140	NYO	2581324	PKE1012	2809190
MN29F-C	2610782	MT40S-TD	2540190	MTMAD300-185-GC	2722160	NY1	2581326	PKE1018	2809200
MN29F-50	2676210	MT500-TD	2540870	MTMAD300-240-GC	2722220	OB2.5P	8420034	PKE108	2809090
MN29F-C	2610760	MT50R-C10	2543650	MTT16-50	2677220	PA1	2650230	PKE1508	2809110
MN3-C	2610520	MT50R-C8	2543610	MTT25-50	2677230	PA1-50	2675680	PKE1510	2809115
MN30-C	2610630	MT50R-GC	2541690	MTT35-50	2677240	PA10	2650290	PKE1518	2809120
MN30RF-C	2610784	MT50R-TD	2540270	MTT50-50	2677250	PA10-50	2675686	PKE1612	2809210
MN35-C	2610635	MT50S-C10	2543850	MTT70-50	2677260	PA10-C	2611010	PKE1618	2809220
MN35F-C	2610786	MT50S-C14-80	2546110	MTT95-50	2677270	PA100-3D	2631930	PKE25016	2809230
MN37-C	2610640	MT50S-C8	2543810	MTT120-50	2677275	PA120-3D	2631950	PKE25022	2809240
MN37RF-C	2610788	MT50S-GC	2541650	MUA150	2616050	PA120-520	2645600	PKE2508	2809130
MN3RF-50	2676220	MT50S-TD	2540230	MUA230-630-400	2680129	PA19-50	2675694	PKE2512	2809135
MN3RF-C	2610762	MT630-TD	2540890	MUA230-630-630	2680130	PA200-520	2645610	PKE2518	2809140
MN48-C	2610650	MT70S-C10	2544050	MUA240	2616070	PA24-50	2675696	PKE308	2809030
MN48RF-C	2610790	MT70S-GC	2541730	MUA300-34	2616090	PA24-C	2611020	PKE410	2809152
MN5-C	2610530	MT70S-TD	2540350	MUA35	2616010	PA48-C	2611030	PKE412	2809155
MN5RF-50	2676230	MT95R-C10	2544290	MUA95	2616030	PA5	2650250	PKE418	2809160
MN5RF-C	2610764	MT95R-C12	2544330	MV150	2616170	PA5-50	2675682	PKE508	2809050
MN60-C	2610660	MT95R-GC	2541770	MV230-400 MC5E	2680860	PA60-C	2611040	PKE612	2809170
MN7-C	2610540	MT95R-TD	2540390	MV230-630 MC6E	2680870	PB-1	2591046	PKE618	2809180
MN7RF-50	2676240	MT95S-C10	2544530	MV240	2616180	PC-1	2590705	PKE7508	2809070

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Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
PKT1014	2809870	Q120-8	2167540	RF-F308P	2051585	RKY-M12	2145718	RP-U5	2046245
PKT108	2809790	Q120-10	2167545	RF-F405	2051600	RKY-P8	2145782	RP-U5/1	2046246
PKT110	2809795	Q120-12	2167550	RF-F405P	2051605	RKY-P10	2145783	RP-U6	2046255
PKT1508	2809810	Q120-16	2167555	RF-F408	2051590	RKY-P12	2145784	RP-U6/1	2046256
PKT1512	2809820	Q150-10	2167610	RF-F408P	2051595	RKY-PP12	2145790	RP-U8	2046260
PKT1614	2809880	Q150-12	2167615	RF-F608	2051610	RKY-PP12/19	2145792	RS0305.07	3008006
PKT2510	2809830	Q150-16	2167620	RF-F608P	2051620	RKY-PP16/23	2145793	RS0407.M12	3008050
PKT2512	2809840	Q185-10	2167680	RF-FM608	2051690	RKY-PPL30	2145795	RS0507.09	3008008
PKT412	2809850	Q185-12	2167685	RF-M10	2050390	RKY-PPL46	2145798	RS0509.M16	3008052
PKT508	2809760	Q185-16	2167690	RF-M12	2050430	RKY-U3	2145730	RS0710.11	3008010
PKT510	2809765	Q240-10	2167750	RF-M2	2050010	RKY-U3.5	2145733	RS0813.M20	3008054
PKT614	2809860	Q240-12	2167755	RF-M3	2050030	RKY-U4	2145736	RS1014.16	3008012
PKT7508	2809770	Q240-16	2167760	RF-M3.5	2050070	RKY-U5	2145739	RS1117.M25	3008056
PKT7510	2809775	Q38-F	2593861	RF-M3.5/1	2050110	RKY-U6	2145742	RS1420.21	3008014
PLO1-M	2049510	Q38-M	2593859	RF-M4	2050150	RKY-U6/1	2145743	RS1520.M32	3008058
PLO3-M	2051850	Q38-MS	2593860	RF-M4/3	2050170	RN-FA305	3031610	RS1928.M40	3008060
PLO3-P	2051860	RA-3	2598428	RF-M5	2050190	RN-FA405	3031615	RS2026.29	3008016
PLO6-M	2053850	RBG-15	2599850	RF-M6	2050230	RN-FA608	3031620	RS2635.36	3008018
PLO6-P	2053860	RBV-15	2599852	RF-M6/1	2050270	RN-M10	2150430	RS2735.M50	3008062
PL1-M	2055870	RCP-B70	2596116	RF-M608	2051650	RN-M12	2150470	RT11	2592480
PN14-C	2610710	RD100SS	2685623	RF-M608P	2051655	RN-M2	2150010	RT10.5	2592470
PN24-C	2610720	RD120SS	2685624	RF-M7	2050310	RN-M3	2150030	RT21	2592550
PN37-C	2610730	RD126X126	2685669	RF-M8	2050350	RN-M3.5	2150070	RT13	2592490
PN48-C	2610740	RD138X138	2685670	RF-P10	2051250	RN-M3.5/1	2150110	RT13.5	2592495
PN60-C	2610750	RD15.5SS	2685560	RF-P12	2051290	RN-M4	2150150	RT14	2592500
PN7-C	2610700	RD15.5SS-FC	2685550	RF-P8	2051210	RN-M4/3	2150170	RT15	2592510
PN80-3D	2631460	RD16.2SS	2685562	RF-PP12	2051330	RN-M5	2150190	RT17	2592530
PNB-1	2591040	RD16.2SS-FC	2685552	RF-PP12/1	2051340	RN-M6	2150230	RT6.5	2592430
PNB-3F/M	2591088	RD17.5SS	2685564	RF-PP12/19	2051370	RN-M6/1	2150270	RT8.5	2592450
PNB-3N1	2591092	RD17.5SS-FC	2685554	RF-PP12/23	2051380	RN-M7	2150350	RT9	2592460
PNB-3N5	2591096	RD18.8SS	2685566	RF-PP14	2051410	RN-M8	2150390	S10-M4	2165130
PNB-3NN3	2591094	RD18.8SS-FC	2685556	RF-PP16/23	2051450	RN-MA305	3031710	S10-M5	2165150
PNB-3NN4	2591095	RD18X46	2685654	RF-PPL30	2051460	RN-MA405	3031715	S10-M6	2165190
PNB-3P	2591090	RD19.1SS	2685568	RF-PPL46	2051465	RN-MA608	3031720	S10-M7	2165230
PNB-3P1	2591084	RD20.5SS	2685570	RF-U10	2050950	RN-P10	2151270	S1.5-M10	2160390
PNB-3PD	2591091	RD21X21	2685650	RF-U12	2050990	RN-P12	2151310	S1.5-M12	2160430
PNB-4KE	2591251	RD22.6SS	2685572	RF-U3	2050630	RN-P8	2151230	S1.5-M2	2160010
PNB-6KE	2591260	RD22X46	2685656	RF-U3.5	2050670	RN-PP12	2151350	S1.5-M3	2160030
PNB-6KE-T	2591262	RD23.8SS	2685574	RF-U3.5/1	2050680	RN-PP12/1	2151370	S1.5-M3.5	2160070
PNB-7KE	2591268	RD25.4SS	2685576	RF-U3.5/2	2050681	RN-PP12/19	2151390	S1.5-M3.5/1	2160110
PNB-7KE-T	2591270	RD27SS	2685578	RF-U4	2050710	RN-PP14	2151400	S1.5-M4	2160150
PO7000	2595904	RD28.5SS	2685580	RF-U4/1	2050730	RN-PP16/23	2151410	S1.5-M4/3	2160160
PR-1	2591045	RD30.5SS	2685582	RF-U4/2	2050750	RN-U10	2150990	S1.5-M5	2160190
PRCH	2596113	RD28.5SS-19	2685584	RF-U5	2050790	RN-U12	2151030	S1.5-M6	2160230
PS130-150/E	2616371	RD30.5SS-19	2685586	RF-U5/1	2050791	RN-U3	2150670	S1.5-M6/1	2160270
PS130-240/E	2616381	RD31.8SS	2685588	RF-U6	2050830	RN-U3.5	2150710	S1.5-M7	2160310
PS130-35/E	2616351	RD32.5SS	2685590	RF-U6/1	2050870	RN-U3.5/2	2150720	S1.5-M8	2160350
PS130-95/E	2616361	RD34.6SS	2685592	RF-U8	2050910	RN-U4	2150750	S1.5-P10	2161190
PS230-400 5E	2680186	RD36X46	2685658	RH50	2670050	RN-U4/1	2150760	S1.5-P12	2161230
PS230-630 6E	2680189	RD37.2SS	2685594	RHC131	2619010	RN-U4/2	2150790	S1.5-P8	2161150
PV-1	2591044	RD37X104	2685674	RHC131LN	2619021	RN-U5	2150830	S1.5-PP12	2161310
Q10-4	2167005	RD37X115	2685661	RH-FC48N	2592596	RN-U5/1	2150840	S1.5-PP12/1	2161330
Q10-5	2167010	RD37X54	2685671	RH-FL75	2592597	RN-U6	2150870	S1.5-PP12/19	2161350
Q10-6	2167015	RD37X67	2685672	RHM132	2619410	RN-U6/1	2150910	S1.5-PP14	2161360
Q10-8	2167020	RD37X88	2685673	RHM50	2670035	RN-U8	2150950	S1.5-U10	2160950
Q10-10	2167025	RD38.1SS	2685596	RHT160	2592422	RP-M10	2046045	S1.5-U12	2160990
Q10-12	2167030	RD40.5SS	2685598	RHT160-60N	2592584	RP-M12	2046050	S1.5-U3	2160630
Q16-5	2167080	RD40.5SS-FC	2685627	RHTD1724	2682482	RP-M2	2046005	S1.5-U3.5	2160670
Q16-6	2167085	RD41.3SS	2685600	RHTD3241	2682502	RP-M3	2046010	S1.5-U3.5/2	2160682
Q16-8	2167090	RD41.3SS-FC	2685628	RHTD3241T	2682517	RP-M3.5	2046015	S1.5-U4	2160710
Q16-10	2167095	RD42.5SS	2685602	RHU131-C	2619210	RP-M3.5/1	2046016	S1.5-U4/1	2160730
Q16-12	2167100	RD42.5SS-FC	2685629	RHU230-630	2680075	RP-M4	2046020	S1.5-U4/2	2160750
Q25-5	2167150	RD43.2SS	2685604	RHU450	2640011	RP-M4/3	2046023	S1.5-U5	2160790
Q25-6	2167155	RD43.2SS-FC	2685630	RHU520	2640151	RP-M5	2046025	S1.5-U5/1	2160800
Q25-8	2167160	RD44.5SS	2685606	RHU600	2640250	RP-M6	2046030	S1.5-U6	2160830
Q25-10	2167165	RD44.5SS-FC	2685632	RHU1000	2640810	RP-M6/1	2046031	S1.5-U6/1	2160870
Q25-12	2167170	RD46X107	2685652	RHU81	2600045	RP-M7	2046035	S1.5-U8	2160910
Q25-16	2167175	RD46X46	2685660	RKF-BF4	2051632	RP-M8	2046040	S2.5-M10	2162170
Q35-6	2167230	RD46X54	2685662	RKF-BM4	2051662	RP-P10	2046115	S2.5-M12	2162210
Q35-8	2167235	RD46X72	2685664	RKF-F305	2051562	RP-P12	2046120	S2.5-M2	2161800
Q35-10	2167240	RD47.2SS	2685608	RKF-F308	2051582	RP-P8	2046110	S2.5-M3	2161810
Q35-12	2167245	RD47.2SS-FC	2685634	RKF-F405	2051602	RP-PP12	2046140	S2.5-M3.5	2161850
Q35-16	2167250	RD50.5SS	2685610	RKF-F405P	2051607	RP-PP12/1	2046145	S2.5-M3.5/1	2161890
Q50-6	2167310	RD54.2SS	2685612	RKF-F408	2051592	RP-PP12/19	2046150	S2.5-M4	2161930
Q50-8	2167315	RD60SS	2685614	RKF-F408P	2051597	RP-PP12/23	2046155	S2.5-M5	2161970
Q50-10	2167320	RD64SS	2685616	RKF-F608	2051612	RP-PP14	2046160	S2.5-M6	2162010
Q50-12	2167325	RD65SS	2685618	RKF-F608P	2051622	RP-PP16/23	2046165	S2.5-M6/1	2162050
Q50-16	2167330	RD68X68	2685666	RKF-FM608	2051692	RP-PPL30	2046180	S2.5-M7	2162090
Q70-6	2167390	RD76SS	2685620	RKF-M608	2051652	RP-PPL46	2046185	S2.5-M8	2162130
Q70-8	2167395	RD80.5SS	2685622	RKY-M3	2145684	RP-U10	2046265	S2.5-P10	2163050
Q70-10	2167400	RD89SS	2685621	RKY-M3.5	2145685	RP-U12	2046270	S2.5-P12	2163090
Q70-12	2167405	RD92X92	2685668	RKY-M3.5/1	2145687	RP-U3	2046210	S2.5-P8	2163010
Q70-16	2167410	RF-BF4	2051630	RKY-M4	2145690	RP-U3.5	2046215	S2.5-PP12	2163170
Q95-8	2167470	RF-BM4	2051660	RKY-M5	2145699	RP-U3.5/2	2046217	S2.5-PP12/25	2163210
Q95-10	2167475	RF-F305	2051560	RKY-M6/1	2145705	RP-U4	2046230	S2.5-PP16/25	2163250
Q95-12	2167480	RF-F305P	2051565	RKY-M8	2145711	RP-U4/1	2046231	S2.5-U10	2162730
Q95-16	2167485	RF-F308	2051580	RKY-M10	2145715	RP-U4/2	2046240	S2.5-U12	2162770

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Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code
S2.5-U3	2162410	TC04	2591396	TCS48X100Y/G	2811517	TSS24GN	2811831	VALSTAR ND2/PK0	2590567
S2.5-U3.5	2162450	TC050	2597050	TCS64X100Y/G	2811519	TSS32GN	2811833	VALSTAR ND2/PKE	2590566
S2.5-U3.5/1	2162460	TC050Y	2597056	TCS95X100Y/G	2811521	TSS48GN	2811835	VALSTAR R3/IDT	2590593
S2.5-U4	2162490	TC055	2591860	TCS127X100Y/G	2811523	TSS64GN	2811837	VALSTAR V3-F	2590577
S2.5-U4/1	2162510	TC085	2597150	TCS190X100Y/G	2811525	TSS95GN	2811839	VALTC055	2593325
S2.5-U4/2	2162530	TC096	2597360	TCS254X50Y/G	2811527	TSS127GN	2811841	VALTC085	2593323
S2.5-U5	2162570	TC120	2597250	TCS381X50Y/G	2811511	TSS190GN	2811843	VALTC120	2593322
S2.5-U6	2162610	TCP10	3019220	TCS508X25Y/G	2811513	TSS254GN	2811845	VP-M2	2048010
S2.5-U6/1	2162650	TCP12	3019225	TD-M16C	2685010	TSS380GN	2811847	VP-M3	2048030
S2.5-U8	2162690	TCP15	3019230	TF300-Q38F	2592862	TSS510GN	2811849	VP-M3.5	2048070
S6-M10	2163830	TCP18	3019235	TF300-Q38FM	2592863	TSS24GY	2811861	VP-M4	2048150
S6-M10/1	2163850	TCP20	3019240	TF600-Q38FM	2592981	TSS32GY	2811863	VP-M5	2048190
S6-M12	2163890	TCP25	3019250	TGM38	3016155	TSS48GY	2811865	VP-M6	2048210
S6-M14	2163930	TCP30	3019260	TGM48	3016157	TSS64GY	2811867	VP-P10	2049210
S6-M16	2163970	TCP35	3019270	TGM513	3016165	TSS95GY	2811869	VP-PP12/19	2049370
S6-M3	2163510	TCP40	3019280	TGM58	3016159	TSS127GY	2811871	VP-U3	2048630
S6-M3.5	2163550	TCP45	3019290	TGM613	3016167	TSS190GY	2811873	VP-U3.5	2048670
S6-M4	2163590	TCP5	3019210	TGM713	3016169	TSS254GY	2811875	VP-U4	2048710
S6-M5	2163630	TCP50	3019300	TGM817	3016171	TSS380GY	2811877	WF6	8420030
S6-M6	2163670	TCP55	3019305	TN120S	2590270	TSS510GY	2811879	WF16	8420015
S6-M6/1	2163710	TCP60	3019310	TN70	2590230	TSS24BR	2811890	WF35	8420031
S6-M7	2163750	TCP65	3019315	TND6-70	2590120	TSS32BR	2811892	WLO3-M	2469780
S6-M8	2163790	TCP70	3019320	TND10-120	2590145	TSS48BR	2811894	WLO6-M	2469785
S6-M8/1	2163800	TCS12X200BK	2811312	TNN120	2590290	TSS64BR	2811896	WL1-M	2469790
S6-P10	2164710	TCS16X200BK	2811314	TNN70	2590240	TSS95BR	2811898	WT2-3D	2636970
S6-P12	2164750	TCS24X200BK	2811316	TNN71	2590241	TSS127BR	2811900	Z10-1	2845030
S6-P14	2164790	TCS32X200BK	2811318	TRS-B70	2593280	TSS190BR	2811902	Z16-1	2845040
S6-PP12	2164830	TCS48X100BK	2811320	TSS24BK	2811650	TSS254BR	2811904	Z16-12	2844156
S6-PP17	2164870	TCS64X100BK	2811322	TSS32BK	2811652	TSS380BR	2811906	Z16-12D	2844157
S6-U10	2164370	TCS95X100BK	2811324	TSS48BK	2811654	TSS510BR	2811908	Z16-3	2844115
S6-U10/1	2164390	TCS127X100BK	2811326	TSS64BK	2811656	TSS32Y/G	2811920	Z16-3D	2844116
S6-U12	2164430	TCS160X100BK	2811328	TSS95BK	2811658	TSS48Y/G	2811922	Z16-4	2844130
S6-U14	2164470	TCS190X100BK	2811330	TSS127BK	2811660	TSS64Y/G	2811924	Z16-4D	2844131
S6-U16	2164510	TCS254X50BK	2811332	TSS190BK	2811662	TSS95Y/G	2811926	Z16-5N	2844122
S6-U3.5	2164170	TCS320X50BK	2811334	TSS254BK	2811664	TSS127Y/G	2811928	Z16-5ND	2844123
S6-U4	2164210	TCS381X50BK	2811336	TSS380BK	2811666	TSS190Y/G	2811930	Z16-8	2844140
S6-U5	2164250	TCS508X25BK	2811338	TSS510BK	2811668	TSS254Y/G	2811932	Z16-8D	2844141
S6-U6	2164290	TCS762X25BK	2811340	TSS24RE	2811680	TSS380Y/G	2811934	Z25-1	2845050
S6-U8	2164330	TCS1016X25BK	2811342	TSS32RE	2811682	UP130-120	2616520	Z25-DP7-100	2845180
SC1	2591261	TCS1260X25BK	2811344	TSS48RE	2811684	UP130-150	2616530	Z2.5-1	2845010
SC3X	2591264	TCS1500X25BK	2811346	TSS64RE	2811686	UP130-185	2616550	Z35-1	2845060
SC4X	2591265	TCS16X200YE	2811352	TSS95RE	2811688	UP130-240	2616560	Z35-26D	2844216
SH-B70	2596080	TCS24X200YE	2811354	TSS127RE	2811690	UP130-250	2616470	Z35-3	2844205
SS4.8-3.7	3041670	TCS32X200YE	2811356	TSS190RE	2811692	UP130-70	2616490	Z35-3D	2844206
SS4.8-4.5	3041672	TCS48X100YE	2811358	TSS254RE	2811694	UP130-95	2616500	Z35-4	2844201
SS9-4.5	3041675	TCS64X100YE	2811360	TSS380RE	2811696	VAL04	2593310	Z35-4D	2844202
SS9-5	3041677	TCS95X100YE	2811362	TSS510RE	2811698	VAL096	2593669	Z35-6	2844210
SS9-6.4	3041679	TCS127X100YE	2811364	TSS24WH	2811710	VAL1000	2593426	Z35-6D	2844211
SUB-D050	8420033	TCS190X100YE	2811366	TSS32WH	2811712	VAL130	2610450	Z35-DP14-125	2845210
SUB-D075	8420032	TCS254X50YE	2811368	TSS48WH	2811714	VAL130-U	2610451	Z35-DP14B-125	2845212
TBS16X20RE	2811035	TCS16X200GN	2811390	TSS64WH	2811716	VAL160	2593405	Z35T-11	2844220
TBS24X20RE	2811037	TCS24X200GN	2811392	TSS95WH	2811718	VAL231	2593384	Z35T-11D	2844221
TBS32X10RE	2811039	TCS32X200GN	2811394	TSS127WH	2811720	VAL230-630	2680085	Z50-10D	2844230
TBS48X10RE	2811041	TCS48X100GN	2811396	TSS190WH	2811722	VAL450	2593424	Z50-DP12-160	2845220
TBS64X10RE	2811043	TCS64X100GN	2811398	TSS254WH	2811724	VAL520	2593410	Z6-1	2845020
TBS95X10RE	2811045	TCS95X100GN	2811400	TSS380WH	2811726	VAL600	2593425	Z6-10	2844106
TBS127X10RE	2811047	TCS127X100GN	2811402	TSS510WH	2811728	VAL75	2600110	Z6-10D	2844107
TBS190X5RE	2811049	TCS190X100GN	2811404	TSS24BU	2811740	VALB-TC950	2593704	Z6-3	2844080
TBS254X5RE	2811051	TCS254X50GN	2811406	TSS32BU	2811742	VALCPO96	2593671	Z6-3D	2844081
TBS16X20BK	2811110	TCS16X200BU	2811420	TSS48BU	2811744	VALCPO96-W	2593674	Z6-5	2844100
TBS24X20BK	2811112	TCS24X200BU	2811422	TSS64BU	2811746	VALECW-H3D	2593421	Z6-5D	2844101
TBS32X10BK	2811114	TCS32X200BU	2811424	TSS95BU	2811748	VALFCL	2593709	Z6-6	2844108
TBS48X10BK	2811116	TCS48X100BU	2811426	TSS127BU	2811750	VALMAT230-630	2680086	Z6-6D	2844109
TBS64X10BK	2811118	TCS64X100BU	2811428	TSS190BU	2811752	VALMAT520	2593411	ZKE2	2590710
TBS95X10BK	2811120	TCS95X100BU	2811430	TSS254BU	2811754	VALMATW	2670076	ZKE610	2590718
TBS127X10BK	2811122	TCS127X100BU	2811432	TSS380BU	2811756	VALP1	2590595	ZKE6-F	2590716
TBS190X5BK	2811124	TCS190X100BU	2811434	TSS510BU	2811758	VALP3	2590610	ZP2	2590760
TBS254X5BK	2811126	TCS254X50BU	2811436	TSS24TR	2811770	VALP4	2590612	ZS-B16	2842185
TBS16X20Y/G	2811160	TCS16X200RE	2811450	TSS32TR	2811772	VALP5	2590614	ZS-B4	2842115
TBS24X20Y/G	2811162	TCS24X200RE	2811452	TSS48TR	2811774	VALP7	2590616	ZS-B6	2842155
TBS32X10Y/G	2811164	TCS32X200RE	2811454	TSS64TR	2811776	VALP10	2590620	ZS-T16	2842190
TBS48X10Y/G	2811166	TCS48X100RE	2811456	TSS95TR	2811778	VALP18	2590628	ZS-T4	2842120
TBS64X10Y/G	2811168	TCS64X100RE	2811458	TSS127TR	2811780	VALP19	2590629	ZS-T6	2842160
TBS95X10Y/G	2811170	TCS95X100RE	2811460	TSS190TR	2811782	VALP21	2874156	ZS-U16	2842180
TBS127X10Y/G	2811172	TCS127X100RE	2811462	TSS254TR	2811784	VALP22	2874157	ZS-U4	2842110
TBS190X5Y/G	2811174	TCS190X100RE	2811464	TSS380TR	2811786	VALP25	2590633	ZS-U6	2842150
TBS254X5Y/G	2811176	TCS254X50RE	2811466	TSS510TR	2811788	VALP26	2590635		
TBS16X20BU	2811185	TCS16X200WH	2811480	TSS24YE	2811800	VALP27	2590638		
TBS24X20BU	2811187	TCS24X200WH	2811482	TSS32YE	2811802	VALP28	2590639		
TBS32X10BU	2811189	TCS32X200WH	2811484	TSS48YE	2811804	VALP29	2590641		
TBS48X10BU	2811191	TCS48X100WH	2811486	TSS64YE	2811806	VALP30	2590642		
TBS64X10BU	2811193	TCS64X100WH	2811488	TSS95YE	2811808	VALP35	2590647		
TBS95X10BU	2811195	TCS95X100WH	2811490	TSS127YE	2811810	VALP36	2590648		
TBS127X10BU	2811197	TCS127X100WH	2811492	TSS190YE	2811812	VALP37	2590646		
TBS190X5BU	2811199	TCS190X100WH	2811494	TSS254YE	2811814	VALP41	2590645		
TBS254X5BU	2811201	TCS254X50WH	2811496	TSS380YE	2811816	VALP45	2590653		
TC025	2591895	TCS32X200Y/G	2811515	TSS510YE	2811818	VALSTAR ND2/PKC	2590565		

COMPARISON OF AWG, MCM AND METRIC CONDUCTOR CROSS SECTIONS

AWG comparison to Metric

AWG	Actual conductor csa mm ²	Comparable metric csa mm ²
27	0,10	
26	0,13	0,14
25	0,16	-
24	0,21	0,2
23	0,26	0,25
22	0,33	0,34
21	0,41	-
20	0,52	0,5
19	0,65	-
18	0,82	0,75
17	1,04	1
16	1,31	-
15	1,65	1,5
14	2,08	-
13	2,63	2,5
12	3,31	-
11	4,15	4
10	5,27	6
9	6,62	-
8	8,35	-
7	10,6	10
6	13,3	-
5	16,8	16
4	21,2	-
3	26,7	25
2	33,6	35
1	42,4	-
1/0	53,4	50
2/0	67,5	70
3/0	85,0	95
4/0	107,2	120

MCM comparison to Metric

MCM	Actual conductor csa mm ²	Comparable metric csa mm ²
250	127	120
300	152	150
350	177	185
400	203	-
500	253	240
600	304	300
700	355	-
800	405	400
900	456	-
1000	507	500
1250	633	625
1500	760	800
1750	887	-
2000	1010	1000

MAXIMUM DIAMETERS OF CIRCULAR COPPER CONDUCTORS: SOLID, NON COMPACTED STRANDED AND FLEXIBLE

Cross sectional area [mm ²]	Conductors in cables for fixed installations		Flexible conductors (Classes 5 and 6) Maximum diameter [mm]
	Solid (Class 1) Maximum diameter [mm]	Stranded (Class 2) Maximum diameter [mm]	
0,5	0,9	1,1	1,1
0,75	1,0	1,2	1,3
1	1,2	1,4	1,5
1,5	1,5	1,7	1,8
2,5	1,9	2,2	2,4
4	2,4	2,7	3,0
6	2,9	3,3	3,9
10	3,7	4,2	5,1
16	4,6	5,3	6,3
25 ^a	5,7	6,6	7,8
35 ^a	6,7	7,9	9,2
50 ^a	7,8	9,1	11,0
70 ^a	9,4	11,0	13,1
95 ^a	11,0	12,9	15,1
120 ^a	12,4	14,5	17,0
150 ^a	13,8	16,2	19,0
185	15,4	18,0	21,0
240	17,6	20,6	24,0
300	19,8	23,1	27,0
400	22,2	26,1	31,0
500	-	29,2	35,0
630	-	33,2	39,0
800	-	37,6	-
1000	-	42,2	-

NOTE: The values given for flexible conductors represent both class 5 and class 6 conductors.

^a Solid copper conductor having cross-sectional areas of 25 mm² and above are for particular types of cable, e.g. mineral insulated, and not for general purposes.

MINIMUM AND MAXIMUM DIAMETERS OF STRANDED COMPACTED CIRCULAR COPPER, ALUMINIUM AND ALUMINIUM ALLOY CONDUCTORS

Cross-sectional area [mm ²]	Stranded compacted circular conductors (Class 2)	
	Minimum diameter [mm]	Maximum diameter [mm]
10	3,6	4,0
16	4,6	5,2
25	5,6	6,5
35	6,6	7,5
50	7,7	8,6
70	9,3	10,2
95	11,0	12,0
120	12,3	13,5
150	13,7	15,0
185	15,3	16,8
240	17,6	19,2
300	19,7	21,6
400	22,3	24,6
500	25,3	27,6
630	28,7	32,5

NOTES: - The dimensional limits of Aluminium conductors with cross-sectional areas above 630 mm² are not given as the compaction technology is not generally established.

- The values are given for compacted copper conductors in the size range 1,5 mm² to 6 mm².

MINIMUM AND MAXIMUM DIAMETERS OF CIRCULAR ALUMINIUM CONDUCTORS

Cross-sectional area [mm ²]	Solid conductors (Class 1)	
	Minimum diameter [mm]	Maximum diameter [mm]
10	3,4	3,7
16	4,1	4,6
25	5,2	5,7
35	6,1	6,7
50	7,2	7,8
70	8,7	9,4
95	10,3	11,0
120	11,6	12,4
150	12,9	13,8
185	14,5	15,4
240	16,7	17,6
300	18,8	19,8
400	21,2	22,2
500	24,0	25,1
630	27,3	28,4
800	30,9	32,1
1000	34,8	36,0
1200	37,8	39,0

CLASS 1:

SOLID CONDUCTORS FOR SINGLE-CORE AND MULTI-CORE CABLES

Nominal cross-sectional area [mm ²]	Maximum resistance of conductor at 20 °C		
	Circular, annealed Copper conductors		Aluminium and Aluminium alloy conductors, circular or shaped ^c [ohm/km]
	Plain [ohm/km]	Metal [ohm/km]	
0,5	36	36,7	-
0,75	24,5	24,8	-
1	18,1	18,2	-
1,5	12,1	12,2	-
2,5	7,41	7,56	-
4	4,61	4,70	-
6	3,08	3,11	-
10	1,83	1,84	3,08 ^a
16	1,15	1,16	1,91 ^a
25	0,727 ^b	-	1,20 ^a
35	0,524 ^b	-	0,868 ^a
50	0,387 ^b	-	0,641
70	0,268 ^b	-	0,443
95	0,193 ^b	-	0,320 ^d
120	0,153 ^b	-	0,253 ^d
150	0,124 ^b	-	0,206 ^d
185	0,101 ^b	-	0,164 ^d
240	0,0775 ^b	-	0,125 ^d
300	0,0620 ^b	-	0,100 ^d
400	0,0465 ^b	-	0,0778
500	-	-	0,0605
630	-	-	0,0469
800	-	-	0,0367
1000	-	-	0,0291
1200	-	-	0,0247

^a Aluminium conductors 10 mm² to 35 mm² circular only

^b Solid Copper conductors having nominal cross-sectional area of 25 mm² and above are for particular types of cable, e.g. mineral insulated, and not for general purposes.

^c For solid Aluminium alloy conductors, having the same nominal cross-sectional area as an Aluminium conductor, the resistance value given in the table should be multiplied by a factor of 1,162 unless otherwise agreed between the manufacturer and the purchaser.

^d For single core cables, four sectoral shaped conductors may be assembled into a single circular conductor. The maximum resistance of the assembled conductor shall be 25% of that of the individual component conductors.

CLASS 2:

STRANDED CONDUCTORS FOR SINGLE-CORE AND MULTI-CORE CABLES

Nominal cross-sectional area [mm ²]	Minimum number of wires in the conductor						Maximum resistance of conductor at 20 °C		
	Circular		Circular compacted		Shaped		Annealed copper conductor		Aluminium or aluminium alloy conductor ^c [ohm/km]
	Cu	Al	Cu	Al	Cu	Al	Plain wires [ohm/km]	Metal-coated wires [ohm/km]	
0,5	7	-	-	-	-	-	36,0	36,7	-
0,75	7	-	-	-	-	-	24,5	24,8	-
1,0	7	-	-	-	-	-	18,1	18,2	-
1,5	7	-	6	-	-	-	12,1	12,2	-
2,5	7	-	6	-	-	-	7,41	7,56	-
4	7	-	6	-	-	-	4,61	4,70	-
6	7	-	6	-	-	-	3,08	3,11	-
10	7	7	6	6	-	-	1,83	1,84	3,08
16	7	7	6	6	-	-	1,15	1,16	1,91
25	7	7	6	6	6	6	0,727	0,734	1,20
35	7	7	6	6	6	6	0,524	0,529	0,868
50	19	19	6	6	6	6	0,387	0,391	0,641
70	19	19	12	12	12	12	0,268	0,270	0,443
95	19	19	15	15	15	15	0,193	0,195	0,320
120	37	37	18	15	18	15	0,153	0,154	0,253
150	37	37	18	15	18	15	0,124	0,126	0,206
185	37	37	30	30	30	30	0,0991	0,100	0,164
240	61	61	34	30	34	30	0,0754	0,0762	0,125
300	61	61	34	30	34	30	0,0601	0,0607	0,100
400	61	61	53	53	53	53	0,0470	0,0475	0,0778
500	61	61	53	53	53	53	0,0366	0,0369	0,0605
630	91	91	53	53	53	53	0,0283	0,0286	0,0469
800	91	91	53	53	-	-	0,0221	0,0224	0,0367
1000	91	91	53	53	-	-	0,0176	0,0177	0,0291
1200			<i>b</i>				0,0151	0,0151	0,0247
1400 ^a			<i>b</i>				0,0129	0,0129	0,0212
1600			<i>b</i>				0,0113	0,0113	0,0186
1800 ^a			<i>b</i>				0,0101	0,0101	0,0165
2000			<i>b</i>				0,0090	0,0090	0,0149
2500			<i>b</i>				0,0072	0,0072	0,0127

^a Non-preferred sizes. Other non-preferred sizes are recognized for some specialized applications but are not within the scope of this standard.

^b The minimum number of wires for these sizes is not specified. These sizes may be constructed from 4, 5 or 6 equal segments (Milliken).

^c For stranded Aluminium alloy conductors having the same nominal cross-sectional area as an Aluminium conductor the resistance value should be agreed between the manufacturer and the purchaser.

CLASS 5:

FLEXIBLE COPPER CONDUCTORS FOR SINGLE-CORE AND MULTI-CORE CABLES

Nominal cross-sectional [mm ²]	Maximum diameter of wires in conductor [mm]	Maximum resistance of conductor at 20 °C	
		Plain wires [ohm/km]	Metal-coated wires [ohm/km]
0,5	0,21	39,0	40,1
0,75	0,21	26,0	26,7
1,0	0,21	19,5	20,0
1,5	0,26	13,3	13,7
2,5	0,26	7,98	8,21
4	0,31	4,95	5,09
6	0,31	3,30	3,39
10	0,41	1,91	1,95
16	0,41	1,21	1,24
25	0,41	0,780	0,795
35	0,41	0,554	0,565
50	0,41	0,386	0,393
70	0,51	0,272	0,277
95	0,51	0,206	0,210
120	0,51	0,161	0,164
150	0,51	0,129	0,132
185	0,51	0,106	0,108
240	0,51	0,0801	0,0817
300	0,51	0,0641	0,0654
400	0,51	0,0486	0,0495
500	0,61	0,0384	0,0391
630	0,61	0,0287	0,0292

CLASS 6:

FLEXIBLE COPPER CONDUCTORS FOR SINGLE-CORE AND MULTI-CORE CABLES

Nominal cross-sectional [mm ²]	Maximum diameter of wires in conductor [mm]	Maximum resistance of conductor at 20 °C	
		Plain wires [ohm/km]	Metal-coated wires [ohm/km]
0,5	0,16	39,0	40,1
0,75	0,16	26,0	26,7
1,0	0,16	19,5	20,0
1,5	0,16	13,3	13,7
2,5	0,16	7,98	8,21
4	0,16	4,95	5,09
6	0,21	3,30	3,39
10	0,21	1,91	1,95
16	0,21	1,21	1,24
25	0,21	0,780	0,795
35	0,21	0,554	0,565
50	0,31	0,386	0,393
70	0,31	0,272	0,277
95	0,31	0,206	0,210
120	0,31	0,161	0,164
150	0,31	0,129	0,132
185	0,41	0,106	0,108
240	0,41	0,0801	0,0817
300	0,41	0,0641	0,0654

- H Cable conforming to harmonised standards
- A Recognised national type of cable
- N Other type of national cable

- 00 Less than 100 / 100 V
- 01 Above 100 / 100 V and less than 300 / 300 V
- 03 300 / 300 V
- 05 300 / 500 V
- 07 450 / 750 V
- 1 0,6 / 1 kV

- B Ethylenpropylene rubber for working temperature of 60° C
- N Polychloroprene
- N2 Polychloroprene for welding cables
- Q Polyurethane
- R Rubber
- V Common-quality PVC
- V2 PVC for working temperatures of 90° C
- V3 PVC for low temperature cables
- V4 Reticulate PVC
- V5 Oil-resistant PVC
- Z Polyolefin mixture

- C Concentric Copper core
- C4 Copper braid screen on multiple cores
- C5 Copper braid screen on single cores
- C7 Screen made of Copper straps or ribbons

- Z2 Round Steel strand armour
- Z3 Steel strap armour
- Z4 Steel ribbon armour
- Z5 Steel strand braid

- H Flat divisible cable with or without sheath
- H2 Flat indivisible cable
- H3 Flat cable with cores separated by a slot
- H6 Flat cable with three or more cores
- H7 Cable with double-layered insulation
- H8 Extendable cord

- D Flexible core for weldings cables
- E Very flexible core for welding cables
- F Flexible core for moving connections
- H Very flexible core for moving connections
- K Flexible core for fixed laying
- R Rigid round cord
- U Round rigid single strand

REFERENCE TO THE STANDARDS

RATED VOLTAGE

INSULATION AND SHEATH MATERIAL

SCREENS

ARMOURS

CONSTRUCTIVE FORM OF THE CABLE

CONDUCTOR FLEXIBILITY DEGREE

UL AND VDE MARKING OF CABLE GLANDS

MAXIblock® - spiralblock®

Ref. Light Grey	Thread	COMPRESSION RANGE Ø min-max				IMPACT CATEGORY (*)	MARKING
		Nominal [mm]	UL 514B		EN 50262 [mm]		
			[mm]	[inches]			
1900.M12	M12x1.5	3.5-7	3.5	0.14	3.5-7	1	USR-CNR / VDE
1900.M16	M16x1.5	5-10	7	0.28	7-10	1	USR-CNR / VDE
1900.M20	M20x1.5	7-13	13	0.51	7-13	3	USL-CNL / VDE
1900.M25	M25x1.5	10-17	17	0.67	10-17	3	USL-CNL / VDE
1900.M32	M32x1.5	13-21	15-21	0.60-0.83	13-21	3	USL-CNL / VDE
1900.M40	M40x1.5	19-28	21-28	0.83-1.10	19-28	3	USL-CNL / VDE
1900.M50	M50x1.5	27-35	27-34	1.06-1.34	27-35	3	USL-CNL / VDE
1900.M63	M63x1.5	34-45	35-45	1.38-1.77	34-45	3	USL-CNL / VDE
1910.M12	M12x1.5	2-5	2-5	0.08-0.20	2-5	1	USR-CNR / VDE
1910.M16	M16x1.5	3-7	4-7	0.16-0.28	4-7	1	USR-CNR / VDE
1910.M20	M20x1.5	5-10	5-10	0.20-0.40	5-10	3	USR-CNR / VDE
1910.M25	M25x1.5	7-13	7-13	0.28-0.51	7-13	3	USR-CNR / VDE
1910.M32	M32x1.5	8-14	8-14	0.31-0.55	8-14	3	USR-CNR / VDE
1910.M40	M40x1.5	15-23	15-23	0.59-0.91	15-23	3	USL-CNL / VDE
1910.M50	M50x1.5	21-29	21-29	0.83-1.14	21-29	3	USL-CNL / VDE
1910.M63	M63x1.5	27-39	28-39	1.1-1.54	27-39	3	USL-CNL / VDE
1901.M12	M12x1.5	3.5-7	3.5	0.14	3.5-7	1	USR-CNR / VDE
1901.M16	M16x1.5	5-10	7	0.28	7-10	1	USR-CNR / VDE
1901.M20	M20x1.5	7-13	13	0.51	7-13	3	USL-CNL / VDE
1901.M25	M25x1.5	10-17	17	0.67	10-17	3	USL-CNL / VDE
1901.M32	M32x1.5	13-21	15-21	0.60-0.83	13-21	3	USL-CNL / VDE
1901.M40	M40x1.5	19-28	21-28	0.83-1.10	19-28	3	USL-CNL / VDE
1901.M50	M50x1.5	27-35	27-34	1.06-1.34	27-35	3	USL-CNL / VDE
1901.M63	M63x1.5	34-45	35-45	1.38-1.77	34-45	3	USL-CNL / VDE
1500.M12	M12x1.5	3.5-7	3.5	0.14	3.5-7	1	USR-CNR / VDE
1500.M16	M16x1.5	5-10	7	0.28	7-10	1	USR-CNR / VDE
1500.M20	M20x1.5	7-13	13	0.51	7-13	3	USL-CNL / VDE
1500.M25	M25x1.5	10-17	17	0.67	10-17	3	USL-CNL / VDE
1500.M32	M32x1.5	13-21	15-21	0.60-0.83	13-21	3	USL-CNL / VDE

Add to Ref. **N** for Black, **G** for Dark Grey

MAXIblock® - spiralblock®

Ref. Light Grey	Thread	COMPRESSION RANGE Ø min-max				MARKING	
		Nominal [mm]	UL 514B		EN 50262 [mm]		
			[mm]	[inches]			
1900.07	Pg 7	3.5-7	4.5-6.5	0.18-0.25	3-7	5	USR-CNR
1900.09	Pg 9	5-8	5.5-8	0.22-0.31	4-8	6	USR-CNR
1900.11	Pg 11	5-10	6.5-9.5	0.26-0.37	5-10	6	USR-CNR
1900.13	Pg 13.5	7-12	8-11.5	0.31-0.45	7-12	6	USL-CNL
1900.16	Pg 16	10-14	10.5-14	0.41-0.55	10-14	6	USL-CNL
1900.21	Pg 21	13-18	13-18	0.51-0.71	13-18	6	USL-CNL
1900.29	Pg 29	18-25	18.5-25	0.73-0.98	18-25	6	USL-CNL
1900.36	Pg 36	20-32	21.5-32	0.85-1.26	20-32	6	USL-CNL
1900.42	Pg 42	28-38	28-38	1.10-1.49	28-38	6	USL-CNL
1900.48	Pg 48	37-45	40-44	1.57-1.73	37-45	6	USL-CNL
1910.07	Pg 7	2-5	2-5	0.08-0.20	2-5	5	USR-CNR / VDE
1910.11	Pg 11	4-7	4-7	0.16-0.28	4-7	5	USR-CNR / VDE
1910.13	Pg 13	5-10	10	0.39	5-10	5	USR-CNR
1910.21	Pg 21	9-15	10-14	0.39-0.55	9-15	6	USR-CNR
1910.36	Pg 36	18-26	18-26	0.71-1.02	18-26	6	USR-CNR
1910.42	Pg 42	25-31	25-31	0.98-1.22	25-31	6	USL-CNL
1901.07	Pg 7	3.5-7	6.5	0.26	3.5-7	5	USR-CNR
1901.09	Pg 9	5-8	5.5-8	0.22-0.31	4-8	6	USR-CNR
1901.11	Pg 11	5-10	6.5-9.5	0.26-0.37	5-10	6	USR-CNR
1901.13	Pg 13.5	7-12	8-11.5	0.31-0.45	7-12	6	USL-CNL
1901.16	Pg 16	10-14	10.5-14	0.41-0.55	10-14	6	USL-CNL
1901.21	Pg 21	13-18	13-18	0.51-0.71	13-18	6	USL-CNL
1901.29	Pg 29	18-25	18.5-25	0.73-0.98	18-25	6	USL-CNL
1901.36	Pg 36	20-32	21.5-32	0.85-1.26	20-32	6	USL-CNL
1901.42	Pg 42	28-38	28	1.10	28-38	6	USL-CNL
1901.48	Pg 48	37-45	40-44	1.57-1.73	37-45	6	USL-CNL
1500.07	Pg 7	3.5-7	4.5-6.5	0.18-0.25	3-7	5	USR-CNR
1500.09	Pg 9	5-8	5.5-8	0.22-0.31	4-8	6	USR-CNR
1500.11	Pg 11	5-10	6.5-9.5	0.26-0.37	5-10	6	USR-CNR
1500.13	Pg 13.5	7-12	8-11.5	0.31-0.45	7-12	6	USL-CNL
1500.16	Pg 16	10-14	10.5-14	0.41-0.55	10-14	6	USL-CNL
1500.21	Pg 21	13-18	13-18	0.51-0.71	13-18	6	USL-CNL

1900.14	G1/4"	3-6.5	4.5-6.5	0.18-0.25	3-7	5	USR-CNR
1900.38	G3/8"	4-8	5.5-8	0.22-0.31	4-8	6	USR-CNR
1900.12	G1/2"	7-12	8-11.5	0.31-0.45	7-12	6	USL-CNL
1900.34	G3/4"	13-18	13-18	0.51-0.71	13-18	6	USL-CNL
1901.12	G1/2"	7-12	8-11.5	0.31-0.45	7-12	6	USL-CNL
1500.14	G1/4"	3-6.5	4.5-6.5	0.18-0.25	3-7	5	USR-CNR
1500.38	G3/8"	4-8	5.5-8	0.22-0.31	4-8	6	USR-CNR
1500.12	G1/2"	7-12	8-11.5	0.31-0.45	7-12	6	USL-CNL
1500.34	G3/4"	13-18	13-18	0.51-0.71	13-18	6	USL-CNL

Add to Ref. **N** for Black, **G** for Dark Grey

MAXIbrass®

Tipo	Thread	COMPRESSION RANGE Ø min-max			MARKING
		Nominal [mm]	UL 514B		
			[mm]	[inches]	
2900.07N	Pg 7	3-7	3-7	0.12-0.28	USR-CNR
2900.09N	Pg 9	4-8	4-8	0.16-0.31	USR-CNR
2900.11N	Pg 11	4.5-10	4.5-10	0.18-0.39	USR-CNR
2900.13N	Pg 13.5	5-12	9-12	0.35-0.47	USL-CNL
2900.16N	Pg 16	7-13	10-13	0.39-0.51	USL-CNL
2900.21N	Pg 21	10-17	12-17	0.47-0.67	USL-CNL
2900.29N	Pg 29	17-25	18-25	0.71-0.98	USL-CNL
2900.36N	Pg 36	20-32	22-32	0.86-1.26	USL-CNL
2900.42N	Pg 42	28-38	28-35	1.10-1.38	USL-CNL
2900.48N	Pg 48	34-45	34-45	1.33-1.77	USL-CNL
2910.07N	Pg 7	1-5	1-5	0.04-0.20	USR-CNR
2910.09N	Pg 9	2-6	3-6	0.12-0.24	USR-CNR
2910.11N	Pg 11	2.5-7	3.5-7	0.14-0.28	USR-CNR
2910.13N	Pg13.5	4-10	5.5-10	0.22-0.39	USR-CNR
2910.16N	Pg 16	5-10	6-10	0.24-0.39	USR-CNR
2910.21N	Pg 21	6-13	7-13	0.28-0.51	USR-CNR
2910.29N	Pg 29	11-20	12-20	0.47-0.79	USR-CNR
2910.36N	Pg 36	18-26	19-26	0.75-1.02	USL-CNL
2910.42N	Pg 42	24-31	24-31	0.94-1.22	USL-CNL
2910.48N	Pg 48	27-39	31-39	1.22-1.54	USL-CNL
2901.07N	Pg 7	3-7	3-7	0.12-0.28	USR-CNR
2901.09N	Pg 9	4-8	4-8	0.16-0.31	USR-CNR
2901.11N	Pg 11	4.5-10	4.5-10	0.18-0.39	USR-CNR
2901.13N	Pg13.5	5-12	9-12	0.35-0.47	USL-CNL
2901.16N	Pg 16	7-13	10-13	0.39-0.51	USL-CNL
2901.21N	Pg 21	10-17	12-17	0.47-0.67	USL-CNL
2901.29N	Pg 29	17-25	18-25	0.71-0.98	USL-CNL
2901.36N	Pg 36	20-32	22-32	0.86-1.26	USL-CNL
2901.42N	Pg 42	28-38	28-35	1.10-1.38	USL-CNL
2911.07N	Pg 7	1-5	1-5	0.04-0.20	USR-CNR
2911.09N	Pg 9	2-6	3-8	0.12-0.31	USR-CNR
2911.11N	Pg 11	2.5-7	3.5-7	0.14-0.28	USR-CNR
2911.13N	Pg13.5	4-10	5.5-10	0.22-0.39	USR-CNR
2911.16N	Pg 16	5-10	6-10	0.24-0.39	USR-CNR
2911.21N	Pg 21	6-13	7-13	0.28-0.51	USR-CNR
2911.29N	Pg29	11-20	12-20	0.47-0.79	USR-CNR
2911.36N	Pg36	18-26	19-26	0.75-1.02	USL-CNL
2911.42N	Pg42	24-31	24-31	0.94-1.22	USL-CNL

VDE: Licence nos 40008472, 40008474, 40008475 and 40008476

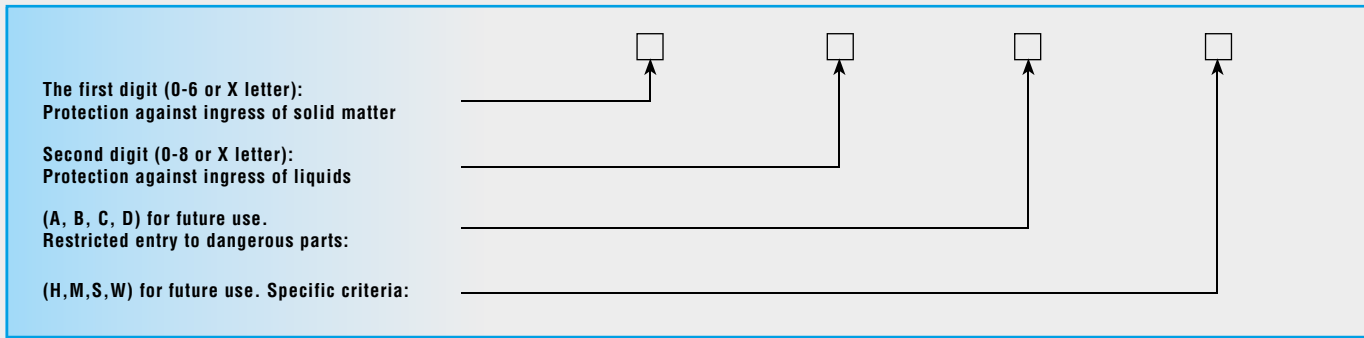
USL-CNL: UL LISTING file no E220310; control no 48SB valid in USA & Canada

USR-CNR: UL RECOGNITION file no E220310 valid in USA & Canada (with reduced tightening force)

(*) EN 50262 § 9.4

MAXIbrass®

Tipo	Thread	COMPRESSION RANGE Ø min-max				IMPACT CATEGORY (*)	MARKING
		Nominal [mm]	UL 514B		EN 50262 [mm]		
			[mm]	[inches]			
2900.M12N	M12x1.5	3-7	3-7	0.12-0.28	3-7	5	USR-CNR / VDE
2900.M16N	M16x1.5	4.5-10	4.5-10	0.18-0.39	4.5-10	6	USL-CNL / VDE
2900.M20N	M20x1.5	7-13	8-13	0.31-0.51	7-13	6	USL-CNL / VDE
2900.M25N	M25x1.5	10-17	10-17	0.39-0.67	10-17	6	USL-CNL / VDE
2900.M32N	M32x1.5	11-21	11-21	0.43-0.83	11-21	6	USL-CNL / VDE
2900.M40N	M40x1.5	19-28	19-28	0.75-1.10	19-28	6	USL-CNL / VDE
2900.M50N	M50x1.5	26-35	27-35	1.06-1.38	26-35	6	USL-CNL / VDE
2900.M63N	M63x1.5	34-45	34-45	1.33-1.77	34-45	6	USL-CNL / VDE
2910.M12N	M12x1.5	1-5	2-5	0.08-0.20	1-5	5	USR-CNR / VDE
2910.M16N	M16x1.5	2.5-7	3.5-7	0.14-0.28	2.5-7	6	USR-CNR / VDE
2910.M20N	M20x1.5	5-10	5-10	0.20-0.39	5-10	6	USR-CNR / VDE
2910.M25N	M25x1.5	6-13	6-13	0.24-0.51	6-13	6	USR-CNR / VDE
2910.M32N	M32x1.5	7-14	7-14	0.28-0.55	7-14	6	USR-CNR / VDE
2910.M40N	M40x1.5	13-23	15-23	0.59-0.90	17-23	6	USL-CNL / VDE
2910.M50N	M50x1.5	20-29	20-29	0.79-1.14	22-29	6	USL-CNL / VDE
2910.M63N	M63x1.5	27-39	28-39	1.10-1.54	31-39	6	USL-CNL / VDE
2901.M12N	M12x1.5	3-7	3-7	0.12-0.28	3-7	5	USR-CNR / VDE
2901.M16N	M16x1.5	4.5-10	4.5-10	0.18-0.39	4.5-10	6	USL-CNL / VDE
2901.M20N	M20x1.5	7-13	8-13	0.31-0.51	7-13	6	USL-CNL / VDE
2901.M25N	M25x1.5	10-17	10-17	0.39-0.67	10-17	6	USL-CNL / VDE
2901.M32N	M32x1.5	11-21	11-21	0.43-0.83	11-21	6	USL-CNL / VDE
2901.M40N	M40x1.5	19-28	19-28	0.75-1.10	19-28	6	USL-CNL / VDE
2901.M50N	M50x1.5	26-35	27-35	1.06-1.38	26-35	6	USL-CNL / VDE
2911.M12N	M12x1.5	1-5	2-5	0.08-0.20	1-5	5	USR-CNR / VDE
2911.M16N	M16x1.5	2.5-7	3.5-7	0.14-0.28	2.5-7	6	USR-CNR / VDE
2911.M20N	M20x1.5	5-10	5-10	0.20-0.39	5-10	6	USR-CNR / VDE
2911.M25N	M25x1.5	6-13	6-13	0.24-0.51	6-13	6	USR-CNR / VDE
2911.M32N	M32x1.5	7-14	7-14	0.28-0.55	7-14	6	USR-CNR / VDE
2911.M40N	M40x1.5	13-					



**1st CHARACTERISTIC NUMBER:
PROTECTION AGAINST INGRESS OF SOLID MATTER**

PROTECTION	0	1	2	3	4	5	6
Protection against ingress of solid matter caused by		solid bodies measuring over 50 mm	solid bodies measuring over 12,5 mm	solid bodies measuring over 2,5 mm	solid bodies measuring over 1 mm	powder in harmful quantities	Powder (completely protected)
Test method		Accessibility gauge \varnothing 50 mm	Accessibility gauge \varnothing 12,5 mm	Accessibility gauge \varnothing 2,5 mm	Accessibility gauge \varnothing 1 mm	talcum powder	talcum powder

**2nd CHARACTERISTIC NUMBER:
PROTECTION AGAINST INGRESS OF LIQUIDS**




PROTECTION	0	1	2	3	4	5	6	7	8
Protection against ingress of liquids caused by		Drops of water falling vertically	Vertical drops of water with inclination of casing up to 15°	Rain	Sprays of water	Jets of water	Powerful jets of water	Temporary Immersion	Permanent Immersion
Test method		Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7	Agreement between manufacturer and user but more severe than 7

**1st ADDITIONAL LETTER
RESTRICTED ENTRY TO DANGEROUS PARTS**

RESTRICTED ENTRY	A	B	C	D
Restricted entry to dangerous parts caused by	back of hand	finger	tool	wire
Test method	accessibility gauge \varnothing 50 mm	articulated test finger	accessibility gauge \varnothing 2,5 mm	accessibility gauge \varnothing 1 mm

**2nd ADDITIONAL LETTER
MEANING OF THE SECOND ADDITIONAL LETTER**

SPECIFIC CRITERIA	H	M	S	W
Specific criteria	High voltage equipment	Tested against negative effects of water penetration, when the moveable parts of the equipment (e.g. wheels of a revolving machine) are moving	Tested against the negative effects of water penetration, when the moveable parts of the equipment (e.g. wheels of a revolving machine) are stationary	Suitable for use in environmental conditions as specified and equipped with additional measures of protection

TYPE OF TEST	TEST EQUIPMENT	COMPLIANCE WITH STANDARDS	OBJECTIVE OF TEST	TEST RESULTS	TEST CONDITIONS		
					heat source	length of test	characteristic features
CHARACTERISTIC FEATURES		IEC 695-2-1 CEI 50-11 DIN VDE 0471-2-1	Check that abnormal heating produced by overcurrent and bad contacts does not compromise the safety of the insulating material. Lighting test. The wire is pressed against the sample using force and penetrates up to 7 mm.	Any sign of flame starting must stop within 30 sec. of removing the glowing wire TEST TEMPERATURE <ul style="list-style-type: none"> • 650° for materials which do not support parts under tension • 750° for materials which support parts under tension of moving sockets and plugs • 850° for materials which support parts under tension of fixed sockets and switches 	Glow-wire 4 mm in diameter	Wire applied for 30 seconds	Flame extinction time
NEEDLE FLAME		IEC 695-2-1 CEI 50-11	Simulates the effect small flames have which may occur due to internal faults of products in order to judge the fire risk.	<ul style="list-style-type: none"> • the sample does not catch fire • the flame and incandescent particles do not spread the fire • combustion lasts less than 30 seconds 	Bunsen burner flame	Flame applied for (Ta) 5, 10, 20, 30, 60, 120 sec. According to particular standards	The degree of severity: flame application time (Ta)
UL (UNDERWRITER LABORATORIES)		UL 94	Measuring of time the sample continues to burn after the direct flame has been removed	<ul style="list-style-type: none"> • V0 if the sample burns for less than 5 sec. before going out. • V1 if it burns for less than 25 sec. • V2 if it burns for less than 25 sec. With incandescent drops • HB if it burns for more than 25 sec. (horizontal sample and burning speed less than 38 mm per minute) Comparable to ASTM D-635 	Bunsen burner flame	Flame applied for 10 seconds twice following	Length of combustion

MAXIblock[®], spiralblock[®], MAXIbrass[®], MAXIinox

to obtain IP68 ingress protection in accordance with EN 50262

Torque ratio values apply to mounting in a threaded entry and to use with a locknut

THREAD CABLE GLAND	CABLE GLAND torque ratio Nm	
	metallic	non-metallic
M12 x 1,5	6	2,7
M16 x 1,5	6	5,0
M20 x 1,5	8	7,0
M25 x 1,5	8	7,5
M32 x 1,5	12	8,0
M40 x 1,5	18	8,0
M50 x 1,5	18	10,0
M63 x 1,5	18	10,0

MAXIblock[®], spiralblock[®], MAXIbrass[®], MAXIinox

to obtain IP68 ingress protection in accordance with DIN VDE for Pg threads

Torque ratio values apply to mounting in a threaded entry and to use with a locknut

THREAD CABLE GLAND	CABLE GLAND torque ratio Nm		
	metallic	non-metallic series	
		1900	1910
Pg 7	6.25	2.5	2.5
Pg 9	6.25	3.75	3.75
Pg 11	6.25	3.75	3.75
Pg 13,5	6.25	3.75	3.75
Pg 16	7.5	5.0	5.0
Pg 21	10.0	7.5	7.5
Pg 29	10.0	7.5	7.5
Pg 36	18.0	7.5	7.5
Pg 42	18.0	7.5	10.0
Pg 48	18.0	7.5	10.0

MAXIblock[®], spiralblock[®]

to obtain IP68 with reduced tightening force for GAS threads

Torque ratio values apply to mounting in a threaded entry and to use with a locknut

THREAD CABLE GLAND	CABLE GLAND non-metallic torque ratio Nm
	G1/4"
G3/8"	5
G1/2"	6
G3/4"	10

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