Cembre

OHSAS 18001
Certified Occupational Health & Safety Management System

ISO 14001
Certified Environmental Management System

ISO 9001
Certified Quality Management System

GENERAL CATALOGUE

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.

RoHS COMPLIANT 2011/65/EU

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 homoge-neous 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)

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ELECTRICAL CONNECTORS

HALOGEN FREE INSULATED TERMINALS

VP RP BP GP

P range funnel entry

Certified according to
EN 45545-2:2013

c UL us
File no. E125401

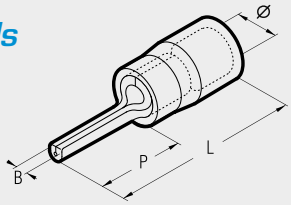
OPERATING TEMPERATURE UP TO 115° C

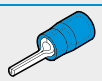
HALOGEN FREE

The "P" range of terminals has been designed, to meet the increasing demands for improved safety and reliability of electrical connectors. The Polycarbonate insulation, is a Halogen free, self extinguishing thermoplastic material class V0 (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.

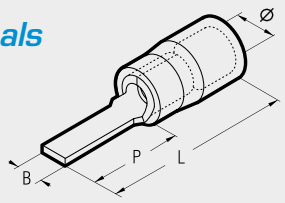
The operating temperature range is – 20 to + 115°C (Surge + 130°C).
Recommended crimping tools are shown on pages 96 to 117, 156, 201.

pin terminals



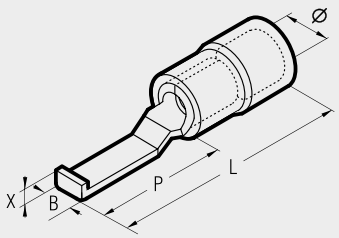
Cond. Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity Box/Bag
0,2÷0,5 (24÷20)	VP-P 10	3,0	1,0	9,8	20,2	4.000/100
0,25÷1,5 (22÷16)	RP-P 8	4,0	1,6	7,8	17,9	3.000/100
	RP-P 10	4,0	1,6	9,8	19,9	3.000/100
	RP-P 12	4,0	1,6	12,0	22,1	3.000/100
 1,5÷2,5 (16÷14)	BP-P 8	4,9	1,7	7,8	17,9	3.000/100
	BP-P 10	4,9	1,8	9,8	19,9	3.000/100
	BP-P 12	4,9	1,8	11,8	21,9	2.500/100
4÷6 (12÷10)	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

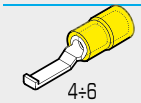
blade terminals



Cond. Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity Box/Bag
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	3.000/100
	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
	RP-PP 16/23	4,0	2,3	17,2	27,3	2.500/100
1,5÷2,5 (16÷14)	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
	BP-PP 16/25	4,9	2,5	17,2	27,3	2.500/100
4÷6 (12÷10)	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 Ø	B	P	L	X	Quantity Box/Bag
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*

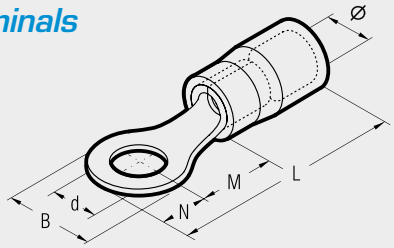
HALOGEN FREE INSULATED TERMINALS

P range funnel entry

VP RP BP GP

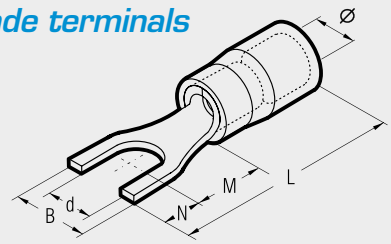
File no. E125401

ring terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity Box/Bag
	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
0,2÷0,5 (24÷20)	6	*VP-M 6	3,0	9,4	8,1	4,7	23,0	6,4	4.000/100
	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
	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
0,25÷1,5 (22÷16)	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
	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	2.000/100
	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
1,5÷2,5 (16÷14)	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
4÷6 (12÷10)	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

fork/spade terminals



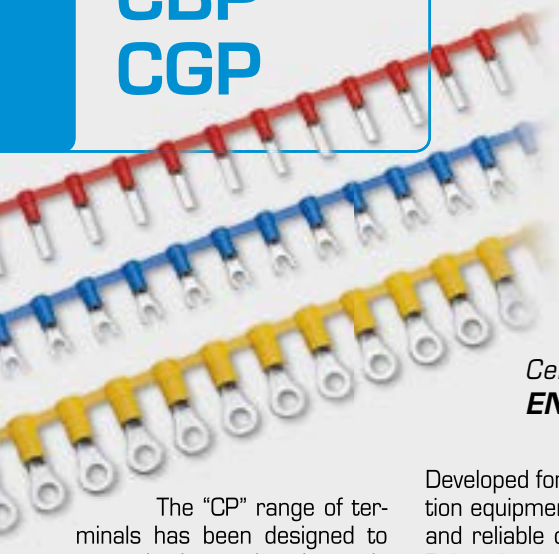
Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity Box/Bag
	3	VP-U 3	3,0	5,5	5,5	4,0	18,7	3,2	4.000/100
	3,5	VP-U 3.5	3,0	6,0	6,5	3,8	19,5	3,7	4.000/100
0,2÷0,5 (24÷20)	4	VP-U 4	3,0	6,5	7,5	3,7	20,4	4,3	4.000/100
	3	RP-U 3	4,0	5,5	5,5	4,0	19,6	3,2	3.000/100
	3,5	RP-U 3.5	4,0	6,0	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
0,25÷1,5 (22÷16)	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
	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
1,5÷2,5 (16÷14)	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
	3,5	GP-U 3.5	6,6	7,5	8,5	3,9	26,5	3,7	1.000/100
	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
	14	GP-U 14	6,6	23,0	16,1	10,5	40,7	15,0	500/100
4÷6 (12÷10)	16	GP-U 16	6,6	26,0	17,1	11,5	42,7	17,0	500/100

*Made to order

INSULATED CHAIN TERMINALS

CRP
CBP
CGP

CP range with easy entry



HALOGEN FREE

OPERATING TEMPERATURE UP TO 115° C

Certified according to
EN 45545-2:2013

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

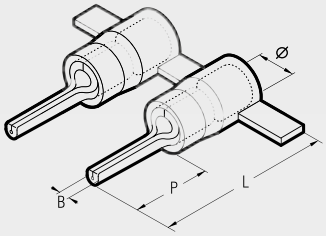
Developed for use with production equipment, to give a quick and reliable crimped joint, the Polycarbonate insulation is a Halogen free, self extinguishing thermoplastic material class VO (UL 94).

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

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

pin terminals

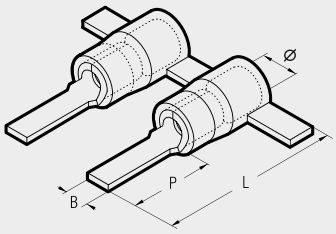
c UL us
File no. E125401



Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity
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

blade terminals

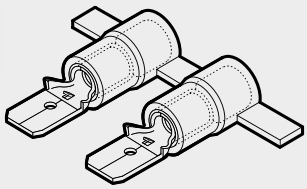
c UL us
File no. E125401



Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity
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

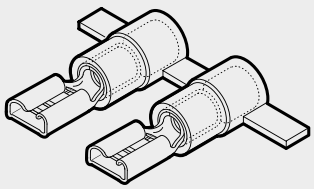
c UL us
File no. E212000



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

female disconnect terminals

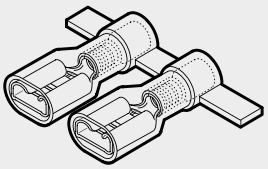
c UL us
File no. E212000



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	1.750
	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

female disconnect terminals fully insulated

c UL us
File no. E212000



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*

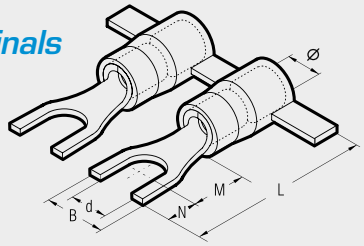
INSULATED CHAIN TERMINALS

CP range with easy entry

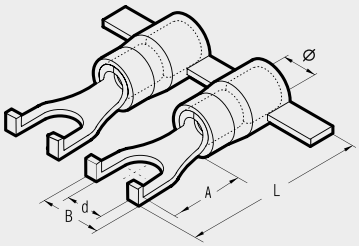
CRP
CBP
CGP

fork/spade terminals

File no. E125401



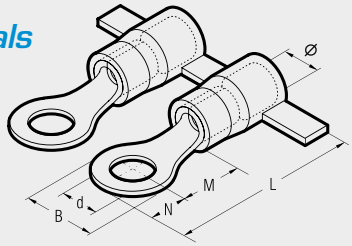
Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity
0,25÷1,5 (22÷16)	3	CRP-U 3	4,0	5,5	5,5	4,0	19,6	3,2	2.000
	3,5	CRP-U 3.5	4,0	6,0	6,5	3,8	20,4	3,7	2.000
	3,5	*CRP-U 3.5/2	4,0	6,4	6,5	3,8	20,4	3,7	2.000
	4	CRP-U 4	4,0	6,5	7,5	3,7	21,3	4,3	2.000
	4	*CRP-U 4/1	4,0	8,5	7,5	3,7	21,3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

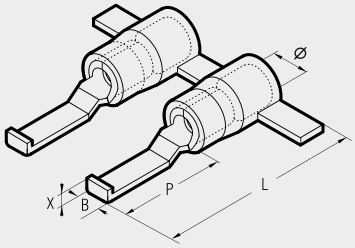
ring terminals

File no. E125401



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity
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
	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
1,5÷2,5 (16÷14)	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
	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
4÷6 (12÷10)	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

hooked blade terminals



Cond. Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	X	Quantity
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*

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

PVC INSULATED CRIMP TERMINALS

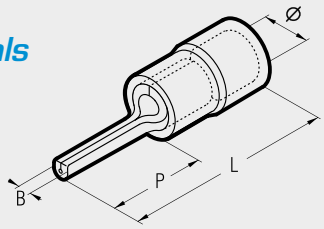
RF BF GF

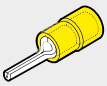
F range funnel entry

File no. E125401

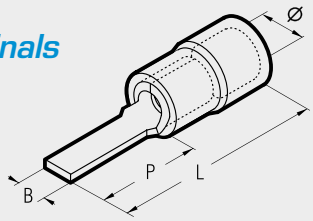
The unique funnel shaped PVC sleeve guarantees total insertion of the conductor strands into the terminal barrel, creating a secure and reliable, electrical and mechanical connection.
The internal surface of the barrel is rifled to improve contact with conductor strands when crimped and to increase tensile 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 96 to 117, 156, 201.

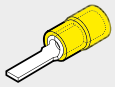
pin terminals



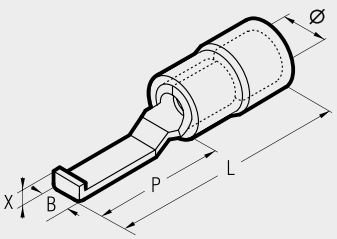
Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity Box/Bag
0,25÷1,5 (22÷16)	RF-P 8	3,9	1,6	8,0	17,9	3.000/100
	RF-P 10	3,9	1,6	10,0	19,9	3.000/100
	RF-P 12	3,9	1,6	12,0	22,1	3.000/100
1,5÷2,5 (16÷14)	BF-P 8	4,9	1,7	8,0	17,9	2.500/100
	BF-P 10	4,9	1,8	10,0	19,9	2.500/100
	BF-P 12	4,9	1,8	12,0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

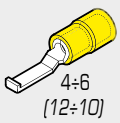
blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity Box/Bag
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 Ø	B	P	L	X	Quantity Box/Bag
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:

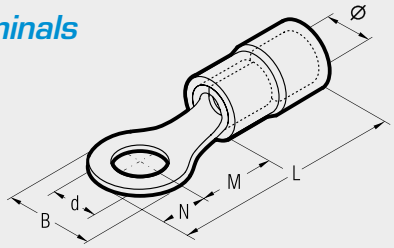
Qty 50 terminals RF-U4
Qty 50 terminals RF-U5
Qty 50 terminals RF-P10

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

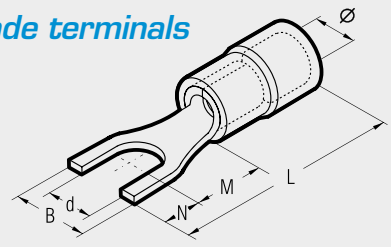
Qty 25 connectors PL06-M
Qty 25 connectors PL1-M

ring terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity Box/Bag
	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
	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
	6	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
	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	800/100
	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
4÷6 (12÷10)	14	GF-M 14	6,7	21,0	16,1	10,5	40,8	15,0	500/100
	16	GF-M 16	6,7	24,0	17,1	12,0	43,3	17,0	500/100

fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity Box/Bag
	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	2.500/100
	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
	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
	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
4÷6 (12÷10)	14	GF-U 14	6,7	23,0	16,1	10,5	40,8	15,0	500/100
	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

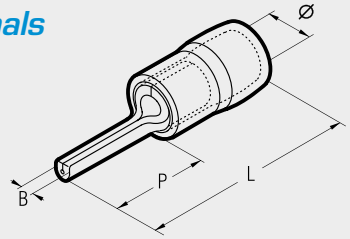
RKY
BKY
GKY

KY range

HALOGEN FREE

'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 96 to 117, 156, 201.

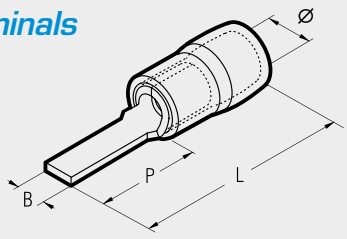
pin terminals

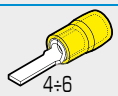


Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity Box/Bag
0,25÷1,5 (22÷16)	RKY-P 8	4,5	1,9	9,0	19,8	3.000/100
	RKY-P 10	4,5	1,9	10,0	20,8	3.500/100
	RKY-P 12	4,5	1,9	12,0	22,8	3.000/100
1,5÷2,5 (16÷14)	BKY-P 8	5,2	1,9	9,0	19,8	3.000/100
	BKY-P 10	5,2	1,9	10,0	20,8	3.000/100
	BKY-P 12	5,2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

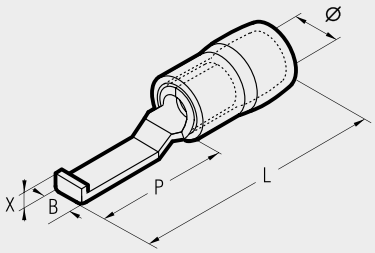
Consult Cembre for a wider range of pin and blade dimensions.

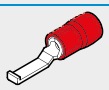
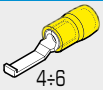
blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	Quantity Box/Bag
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

hooked blade terminals



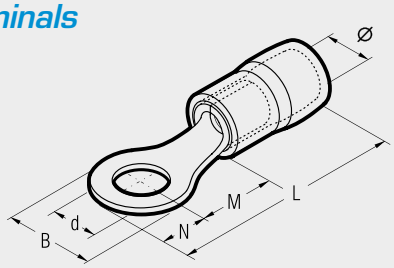
Conductor Size sqmm (AWG)	Ref.	Dimensions mm Ø	B	P	L	X	Quantity Box/Bag
 0,25÷1,5 (22÷16)	RKY-PPL 30	4,5	3,0	16,8	28,2	2,1	3.000/100
	RKY-PPL 46	4,5	4,6	16,8	28,2	2,1	3.000/100
1,5÷2,5 (16÷14)	BKY-PPL 30	5,2	3,0	16,8	28,2	2,1	2.500/100
	BKY-PPL 46	5,2	4,6	16,8	28,2	2,1	2.500/100
 4÷6 (12÷10)	GKY-PPL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

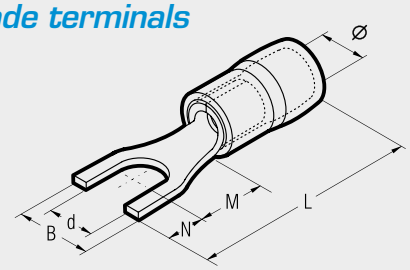
ring terminals



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	*2.500/100*
	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*
	12	**RKY-M 12**	4,5	19,6	16,0	9,4	36,4	13,0	*1.500/100*
1,5÷2,5 (16÷14)	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*
	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*
4÷6 (12÷10)	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*
	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*

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

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-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*

FEMALE DISCONNECT TERMINALS

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 96 to 117, 156, 201.

Certified according to
EN 45545-2:2013

c UL us
File no. E212000

HALOGEN FREE

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
	RF-F 408	4,8 x 0,8	2.500/100
	RF-F 608	6,35 x 0,8	2.000/100
1,5÷2,5 (16÷14)	BF-F 405	4,8 x 0,5	2.500/100
	BF-F 408	4,8 x 0,8	2.500/100
	BF-F 608	6,35 x 0,8	1.500/100
4÷6 (12÷10)	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
	RF-F 408P	4,8 x 0,8	1.500/100
	RF-F 608P	6,35 x 0,8	1.000/100
1,5÷2,5 (16÷14)	BF-F 405P	4,8 x 0,5	1.500/100
	BF-F 408P	4,8 x 0,8	1.500/100
	BF-F 608P	6,35 x 0,8	1.000/100
4÷6 (12÷10)	GF-F 608P	6,35 x 0,8	800/100

◆*Not UL approved*

MALE DISCONNECT TERMINALS

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 96 to 117, 156, 201.

Certified according to
EN 45545-2:2013

c UL us
File no. E212000

HALOGEN FREE

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	2.000/100
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

MALE/FEMALE CONNECTORS

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 96 to 117, 156, 201.

Certified according to
EN 45545-2:2013

c UL us
File no. E212000

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	1.000/100

BULLET AND SOCKET CONNECTORS

HALOGEN FREE

Polycarbonate insulated terminals - partially reinforced with Copper sleeve

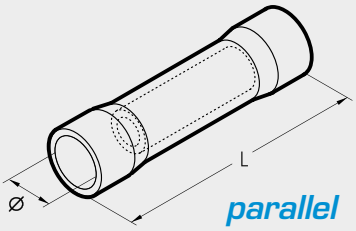
Cond. Size sqmm (AWG)	Ref.	Ø mm	Quantity Box/Bag
0,25÷1,5 (22÷16)	RF-BM 4◆	4	2.500/100
	RF-BF 4◆	4	800/100
1,5÷2,5 (16÷14)	BF-BM 5◆	5	2.000/100
	BF-BF 5◆	5	500/100

◆*Not UL approved*

BUTT AND PARALLEL CONNECTORS

File no. E125401

butt connectors



parallel connectors

PVC insulated

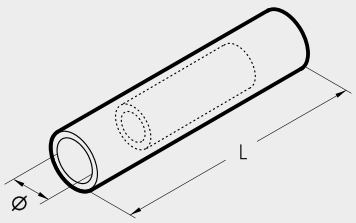
Cond. Size sqmm (AWG)	Ref.	Ø mm	L mm	Quantity Box/Bag
0,2÷0,5 (24÷20)	PL 01-M◆	3,0	25	3.000/100
0,25÷1,5 (22÷16)	PL 03-M	4,0	25	1.000/100
1,5÷2,5 (16÷14)	PL 06-M	5,0	25	1.500/100
4÷6 (12÷10)	PL 1-M	6,5	32	500/100
0,25÷1,5 (22÷16)	PL 03-P◆	4,0	20	3.000/100
1,5÷2,5 (16÷14)	PL 06-P◆	5,0	16	2.000/100

◆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 96 to 117, 156, 201.

BUTT CONNECTORS



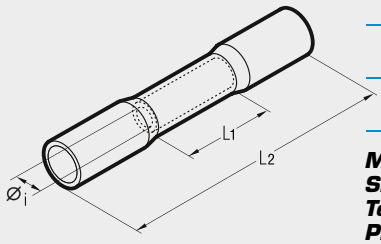
Polyamide PA6.6 insulated

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 96 to 117, 156, 201.

HALOGEN FREE



PE HD insulated, heat shrinkable

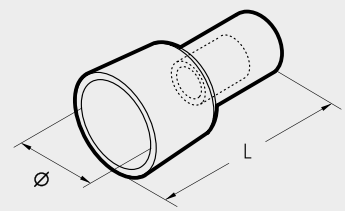
Cond. Size sqmm (AWG)	Ref.	Ø i mm	L1 mm	L2 mm	Quantity Box/Bag
0,5÷1,5 (22÷16)	WL 03-M	1,7	15,0	36,0	1.500/100
1,5÷2,5 (16÷14)	WL 06-M	2,3	15,0	36,0	1.000/100
4÷6 (12÷10)	WL 1-M	3,4	15,0	41,0	500/100

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

WL-M

Manufactured from Copper tube
- Electrolytically Tin plated
- Heat shrink sleeve with sealant
- Recommended crimping tools are shown on pages 98, 109.

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
	NL 06-PB	6,5	13,6	1.500/100
4÷6 (12÷10)	NL 1-P	10,5	21,5	500/100
	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 96 to 117, 156, 201.

REINFORCED DISCONNECT TERMINALS

for Copper cables

HALOGEN FREE

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°C (Surge +110°C)
- Recommended crimping tools are shown on pages 96 to 117, 156, 201.

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	2.500/100
	RKF-F 408	4,8 x 0,8	2.500/100
	RKF-F 608	6,35 x 0,8	2.500/100
1,5÷2,5 (16÷14)	BKF-F 405	4,8 x 0,5	3.000/100
	BKF-F 408	4,8 x 0,8	3.000/100
	BKF-F 608	6,35 x 0,8	2.000/100
4÷6 (12÷10)	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
	RKF-F 608P	6,35 x 0,8	1.000/100
1,5÷2,5 (16÷14)	BKF-F 405P	4,8 x 0,5	2.000/100
	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°C (Surge +110°C)
- Recommended crimping tools are shown on pages 96 to 117, 156, 201.

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

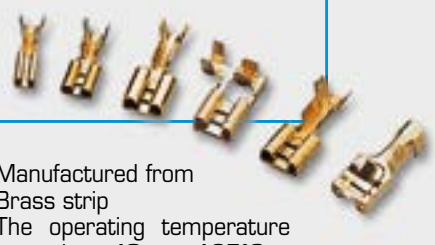
male/female connectors, fully reinforced with Copper sleeve - PA6.6 insulated terminals

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

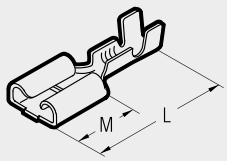
RN-FA
BN-FA



- Manufactured from Brass strip
- The operating temperature range is – 40 to + 125°C.
- Recommended crimping tools are shown on pages 102, 109, 201.

FEMALE CONNECTORS

open barrel

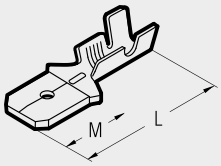


Conductor Size sqmm (AWG)	Ref.	Tab mm	M mm	L mm	Quantity Box/Bag
0,5÷1 (20÷17)	RN-FA 305	2,8 x 0,5	6,3	15,0	6.000/100
	RN-FA 405	4,8 x 0,5	6,3	15,0	5.000/100
	RN-FA 608	6,3 x 0,8	7,7	19,0	3.000/100
1÷2,5 (17÷14)	BN-FA 608	6,3 x 0,8	7,7	19,0	2.000/100
	* BN-FAB 608	6,3 x 0,8	7,7	15,5	1.000/100
	** BN-FAR 608	6,3 x 0,8	7,7	19,0	3.000/100

**flag type **with retainer*

MALE CONNECTORS

open barrel



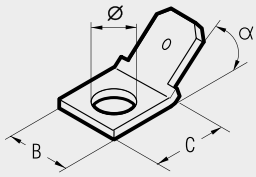
RN-MA
BN-MA

- Manufactured from Brass strip
- The operating temperature range is – 40 to + 125°C.
- Recommended crimping tool is shown on page 102, 109, 201.

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*

MALE TABS

for board mounting



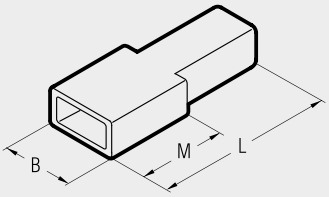
MP
MPD

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

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*

CONNECTOR SLEEVES



CFA
CMA

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	*500/100*
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*

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

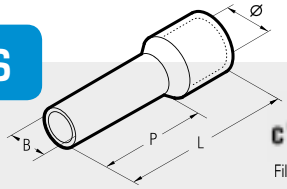
** For twin cables.
Colours available:
Transparent: no suffix
Red: add suffix R
Black: add suffix N
Green: add suffix V
Blue: add suffix B
Yellow: add suffix G

PKD
PKE
PKC
CPKD

HALOGEN FREE

PA6 INSULATED END SLEEVES

for flexible Copper cables



c UL us
File no. E125401

The PK.. 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 96 to 122, 125-126, 156, 158, 160, 201.

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 Ø	B	P	L	Insulation Colour	Quantity Box/Bag
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	5.000/500
1	**PKE 108***	3,0	1,8	8,0	14,0	red	6.000/500
1,5	**PKE 1508***	3,5	2,1	8,0	14,0	black	5.000/500
	PKE 1510*	3,5	2,1	10,0	16,0		5.000/500
	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	800/100
	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

HALOGEN FREE

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 Ø	B	P	L	Insulation Colour	Quantity Reel
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 Ø	B	P	L	Insulation Colour	Quantity Box/Bag
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
	PKD 112	3,0	1,8	12,0	18,0		10.000/500
1,5	**PKD 1508**	3,5	2,1	8,0	14,0	black	5.000/500
	PKD 1510	3,5	2,1	10,0	16,0		5.000/500
	PKD 1512	3,5	2,1	12,0	18,0		5.000/500
	PKD 1518	3,5	2,1	18,0	24,0		5.000/500
2,5	**PKD 2508**	4,2	2,6	8,0	14,0	blue	5.000/500
	PKD 2512	4,2	2,6	12,0	18,0		4.000/500
	PKD 2518	4,2	2,6	18,0	24,0		5.000/500
4	**PKD 410**	4,8	3,3	10,0	18,0	grey	3.000/200
	PKD 412	4,8	3,3	12,0	20,0		3.000/200
	PKD 418	4,8	3,3	18,0	26,0		3.000/200
6	**PKD 612**	6,3	4,0	12,0	20,0	yellow	1.500/100
	PKD 618	6,3	4,0	18,0	26,0		2.000/100
10	**PKD 1012**	7,6	5,0	12,0	22,0	red	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
25	**PKD 25016**	11,2	7,9	16,0	30,0	yellow	500/50
	PKD 25022	11,2	7,9	22,0	36,0		500/50
35	**PKD 35016**	12,7	8,9	16,0	30,0	red	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	blue	200/50
	PKD 50025	15,0	11,0	25,0	41,0		200/50

Conductor Size sqmm	Ref.	Dimensions mm Ø	B	P	L	Insulation Colour	Quantity Box/Bag
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
0,75	**PKC 7508**	2,8	1,6	8,0	14,0	white	10.000/500
	PKC 7512	2,8	1,6	12,0	18,0		10.000/500
1	**PKC 108**	3,0	1,8	8,0	14,0	yellow	10.000/500
	PKC 112	3,0	1,8	12,0	18,0		10.000/500
1,5	**PKC 1508**	3,5	2,1	8,0	14,0	red	5.000/500
	PKC 1510	3,5	2,1	10,0	16,0		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		1.000/100
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		200/50
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

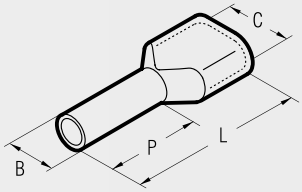
**To DIN standard 46 228/4*

"TWIN" PA6 INSULATED END SLEEVES

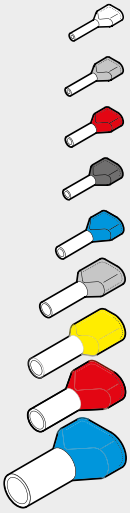
for fine stranded cables

PKT

File no. E125401



HALOGEN FREE



Conductor Size sqmm	Ref.	Dimensions mm C	B	P	L	Insulation Colour	ND#1,ND#2,ND#3, ND#4 and HNKE 50 Compression Aperture	Quantity Box/Bag
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

◆*Not UL approved*

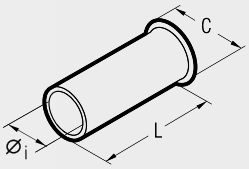
Type PKT range of end sleeves is manufactured from Tin plated electrolytic Copper.
Designed to accomodate two cables terminating in the same sleeve.
The operating temperature range is – 20 to + 115°C (Surge + 130°C).

Recommended crimping tools are shown on pages 96 to 121, 125-126, 156, 158, 160, 201.

UNINSULATED END SLEEVES

for flexible Copper cables

KE



Conductor Size sqmm	Ref.	Dimensions mm Ø	L	C	Quantity Box/Bag
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	40.000/500
	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	10.000/500
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
	*KE 616 ST	3,5	15,0	4,7	5.000/500
10	*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
25	KE 25015 ST	7,3	15,0	9,5	1.500/100
	*KE 25018 ST	7,3	18,0	9,5	1.500/100
35	KE 35012 ST	8,3	12,0	11,0	1.500/100
	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 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 96 to 121, 125-126, 156, 158, 160, 201.

UNINSULATED TERMINALS

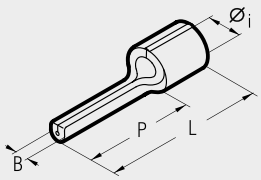
S

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 contact and to improve mechanical strength.

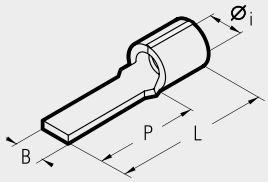
Recommended crimping tools are shown on pages 96 to 117, 156.

pin 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*

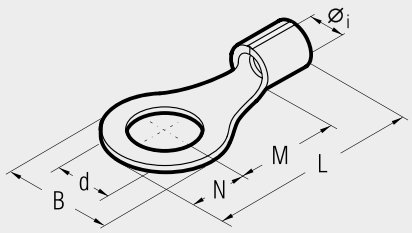
blade terminals



Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Øi	B	P	L	
0,25÷1,25 (22÷16)	**S 1.5-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*

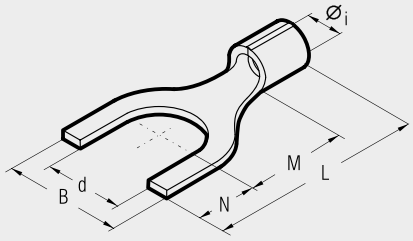
ring terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Quantity Box/Bag
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	3.000/100
	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

*Made to order

fork/spade terminals



Cond. Size sqmm (AWG)	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Quantity Box/Bag
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 3.5/1	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

UNINSULATED TERMINALS

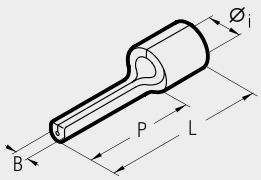
RN BN GN

RN, BN, GN range - unbrazed

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.

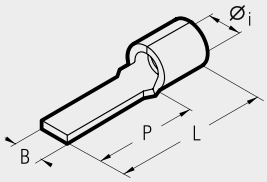
Recommended crimping tools are shown on pages 96 to 117, 156.

pin 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*

blade terminals



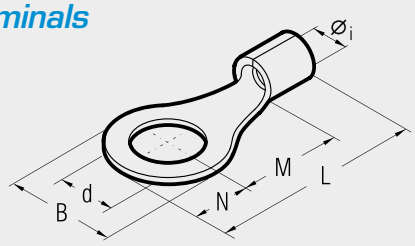
Conductor Size sqmm (AWG)	Ref.	Dimensions mm				Quantity Box/Bag
		Øi	B	P	L	
0,25÷1,5 (22÷16)	**RN-PP 12**	1,8	3,0	12,8	17,0	*8.000/100*
	RN-PP 12/1	1,8	3,0	11,3	15,5	*8.000/100*
	RN-PP 12/19	1,8	1,9	13,2	17,4	*8.000/100*
	RN-PP 14	1,8	3,0	14,8	19,0	*8.000/100*
	RN-PP 16/23	1,8	2,3	17,2	21,4	*8.000/100*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

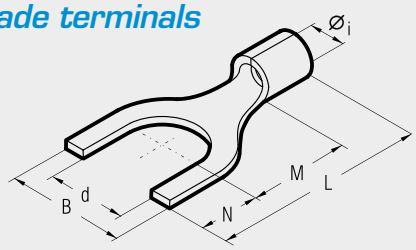
RN, BN, GN range - unbrazed

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

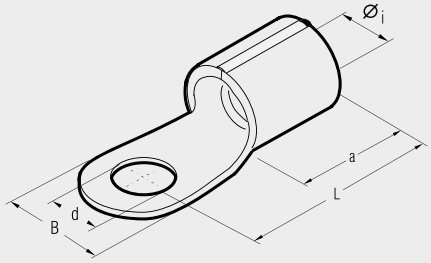
**Made to order*

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	2.000/100
	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

CRIMPING CONNECTORS ACCORDING TO DIN 46234

Q

for Copper cables



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 213.

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	EOW-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*					
	12	**Q 10-12**	4,5	13,0	22,0	22,0	8,0	*500/100*					
10÷16	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*					
	12	**Q 16-12**	5,8	13,0	26,0	22,0	10,0	*500/100*					
16÷25	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*					
	12	**Q 25-12**	7,5	13,0	31,0	22,0	11,0	*300/100*					
	16	**Q 25-16**	7,5	17,0	35,0	28,0	11,0	*200/100*					
25÷35	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*					
	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*					
35÷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*					
	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*					
50÷70	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*					
	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*					
70÷95	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			
95÷120	8	**Q 120-8**	16,5	8,4	44,0	24,0	22,0	*100/25*	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
	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.

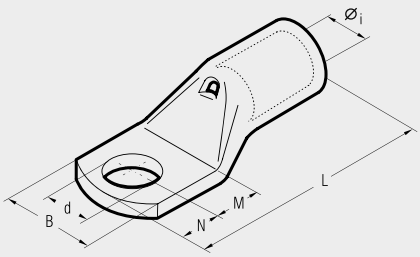
Consult us for special requirements.

COPPER TUBE CRIMPING LUGS

A-M

for Copper conductors

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 tinplated 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 204 to 205.
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 low stranded	Cond. Size sqmm flexible *	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Quantity Box/Bag	Mechanical Tools: HN1	HN5	HN-A25	TN 70 SE	TN 120 SE	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45E	B 550	B 500	RH 50	HT 51	RHU 81	HT 81-U	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
0,25÷1,5		3	A 03-M 3◆	1,8	6,0	4,5	3,5	16,0	3,2	5.000/100																		
		3,5	A 03-M 3.5◆	1,8	6,5	4,5	3,5	16,0	3,7	5.000/100																		
		4	A 03-M 4◆	1,8	6,5	5,0	4,0	17,0	4,3	5.000/100																		
		5	A 03-M 5◆	1,8	7,5	5,5	4,5	18,0	5,3	5.000/100																		
		6	A 03-M 6◆	1,8	9,0	6,0	5,0	19,0	6,4	5.000/100																		
1,5÷2,5		3	A 06-M 3◆	2,4	6,0	4,5	3,5	17,0	3,2	4.000/100																		
		3,5	A 06-M 3.5◆	2,4	6,5	4,5	3,5	17,0	3,7	4.000/100																		
		4	A 06-M 4◆	2,4	7,5	5,0	4,0	18,0	4,3	4.000/100																		
		5	A 06-M 5◆	2,4	8,5	5,5	4,5	19,0	5,3	4.000/100																		
		6	A 06-M 6◆	2,4	9,0	6,0	5,0	20,0	6,4	4.000/100																		
		8	A 06-M 8◆	2,4	12,0	9,0	8,0	26,0	8,4	2.500/100																		
4÷6		3	A 1-M 3	3,6	7,5	4,5	3,5	20,5	3,2	2.000/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
		3,5	A 1-M 3.5	3,6	7,5	4,5	3,5	20,5	3,7	2.000/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
		4	A 1-M 4	3,6	8,0	5,0	4,0	21,5	4,3	2.000/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
		5	A 1-M 5	3,6	9,0	6,5	6,0	25,0	5,3	2.000/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
		6	A 1-M 6	3,6	11,0	7,0	6,0	25,5	6,4	2.000/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 1-M 8	3,6	14,0	9,0	8,0	29,5	8,4	1.500/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 1-M 10	3,6	16,5	11,0	10,0	33,5	10,5	1.000/100	■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
10		4	A 2-M 4	4,6	10,0	5,0	4,0	22,5	4,3	1.500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		5	A 2-M 5	4,6	10,0	6,5	6,0	26,0	5,3	1.500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		6	A 2-M 6	4,6	11,0	7,0	6,0	26,5	6,4	1.500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 2-M 8	4,6	15,0	9,0	8,0	30,5	8,4	1.000/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 2-M 10	4,6	18,0	11,0	10,0	34,5	10,5	1.000/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		12	A 2-M 12	4,6	19,0	14,0	12,0	39,5	13,2	500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
16		4	A 3-M 4	5,8	11,5	5,0	4,0	25,5	4,3	1.000/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		5	A 3-M 5	5,8	11,5	6,5	6,0	29,0	5,3	1.000/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		6	A 3-M 6	5,8	11,5	7,0	6,0	29,5	6,4	1.000/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 3-M 8	5,8	15,0	9,0	8,0	33,5	8,4	500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 3-M 10	5,8	18,0	11,0	10,0	37,5	10,5	500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		12	A 3-M 12	5,8	20,0	14,0	12,0	44,0	13,2	500/100		■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
25		4	A 5-M 4	7,0	14,0	5,0	4,0	28,0	4,3	1.000/100			■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		5	A 5-M 5	7,0	14,0	6,5	6,0	31,5	5,3	500/100			■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		6	A 5-M 6	7,0	14,0	7,0	6,0	32,0	6,4	500/100			■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 5-M 8	7,0	15,0	9,0	8,0	36,0	8,4	500/100			■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 5-M 10	7,0	18,0	11,0	10,0	40,0	10,5	500/100			■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
		12	A 5-M 12	7,0	21,0	14,0	12,0	45,0	13,2	500/100			■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
35	25 35	5	A 7-M 5	8,9	17,0	6,5	6,0	34,0	5,3	500/100				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		6	A 7-M 6	8,9	17,0	7,0	6,0	34,5	6,4	500/100				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 7-M 8	8,9	17,0	9,0	8,0	38,5	8,4	400/100				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 7-M 10	8,9	19,0	11,0	10,0	42,5	10,5	400/100				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		12	A 7-M 12	8,9	21,0	14,0	12,0	47,5	13,2	300/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
50	35 50	6	A 10-M 6	10,0	19,0	8,0	7,0	38,5	6,4	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 10-M 8	10,0	19,0	9,0	8,0	40,5	8,4	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 10-M 10	10,0	20,0	11,5	9,5	44,5	10,5	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		12	A 10-M 12	10,0	21,0	12,0	12,0	47,5	13,2	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		14	A 10-M 14	10,0	25,0	16,0	14,0	55,5	15,0	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		16	A 10-M 16	10,0	26,0	18,0	16,0	59,5	17,0	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
70	50 70	6	A 14-M 6	11,3	21,0	8,0	7,0	44,0	6,4	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		8	A 14-M 8	11,3	21,0	9,0	8,0	46,0	8,4	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		10	A 14-M 10	11,3	21,0	11,0	10,0	50,0	10,5	200/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		12	A 14-M 12	11,3	22,0	14,0	12,0	55,0	13,2	150/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		14	A 14-M 14	11,3	25,0	16,0	14,0	59,0	15,0	100/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■
		16	A 14-M 16	11,3	26,0	18,0	16,0	63,0	17,0	100/50				■		■	■	■	■	■	■	■	■	■	■	■	■	■

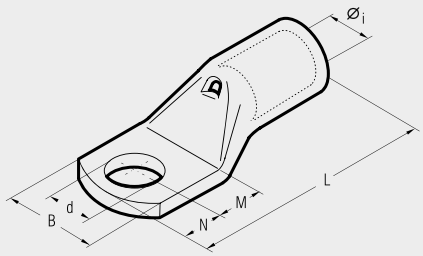
◆*Not UL approved*

Cembre

COPPER TUBE CRIMPING LUGS

for Copper conductors

File no. E125401



Cond. Size sqmm low stranded	Cond. Size sqmm flexible*	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Quantity Box/Bag	Mechanical Tools: TN 120 SE**	Hydraulic Tools: B 35-45MD	B 35-50MD	HT 45-E	HT 51	B 550	RH 50	B 500	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
95	70 95	6	A 19-M 6	13,5	25,0	8,0	7,0	50,5	6,4	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		8	A 19-M 8	13,5	25,0	9,0	8,0	52,5	8,4	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		10	A 19-M 10	13,5	25,0	11,0	10,0	56,5	10,5	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		12	A 19-M 12	13,5	25,0	14,0	12,0	61,5	13,2	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		14	A 19-M 14	13,5	25,0	16,0	14,0	65,5	15,0	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		16	A 19-M 16	13,5	27,0	18,0	16,0	69,5	17,0	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		20	A 19-M 20	13,5	29,5	22,0	20,0	77,5	21,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
120	95 120	8	A 24-M 8	15,2	28,5	9,0	8,0	54,0	8,4	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		10	A 24-M 10	15,2	28,5	11,0	10,0	58,0	10,5	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		12	A 24-M 12	15,2	28,5	14,0	12,0	63,0	13,2	100/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		14	A 24-M 14	15,2	28,5	16,0	14,0	67,0	15,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		16	A 24-M 16	15,2	28,5	18,0	16,0	71,0	17,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		20	A 24-M 20	15,2	30,0	22,0	20,0	79,0	21,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
150	120 150	8	A 30-M 8	16,7	31,5	13,0	11,0	69,0	8,4	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		10	A 30-M 10	16,7	31,5	13,0	11,0	69,0	10,5	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		12	A 30-M 12	16,7	31,5	16,0	14,0	75,0	13,2	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		14	A 30-M 14	16,7	31,5	18,0	16,0	79,0	15,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		16	A 30-M 16	16,7	31,5	19,0	17,0	81,0	17,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
		20	A 30-M 20	16,7	31,5	22,0	20,0	87,0	21,0	50/25	●	●	●	●	●	●	●	●	●	●	●	●	●
185	150 185	8	A 37-M 8	19,2	35,5	13,0	11,0	76,0	8,4	50/25					●	●	●	●	●	●	●	●	●
		10	A 37-M 10	19,2	35,5	13,0	11,0	76,0	10,5	40/20					●	●	●	●	●	●	●	●	●
		12	A 37-M 12	19,2	35,5	16,0	14,0	82,0	13,2	40/20					●	●	●	●	●	●	●	●	●
		14	A 37-M 14	19,2	35,5	18,0	16,0	86,0	15,0	30/15					●	●	●	●	●	●	●	●	●
		16	A 37-M 16	19,2	35,5	19,0	17,0	88,0	17,0	30/15					●	●	●	●	●	●	●	●	●
		20	A 37-M 20	19,2	35,5	22,0	20,0	94,0	21,0	30/15					●	●	●	●	●	●	●	●	●
240	185 240	8	A 48-M 8	21,1	39,0	13,0	11,0	77,5	8,4	30/15					●	●	●	●	●	●	●	●	●
		10	A 48-M 10	21,1	39,0	13,0	11,0	77,5	10,5	30/15					●	●	●	●	●	●	●	●	●
		12	A 48-M 12	21,1	39,0	14,0	12,0	79,5	13,2	30/15					●	●	●	●	●	●	●	●	●
		14	A 48-M 14	21,1	39,0	18,0	16,0	92,0	15,0	30/15					●	●	●	●	●	●	●	●	●
		16	A 48-M 16	21,1	39,0	19,0	17,0	94,0	17,0	30/15					●	●	●	●	●	●	●	●	●
		20	A 48-M 20	21,1	39,0	22,0	20,0	100,0	21,0	30/15					●	●	●	●	●	●	●	●	●
300	240 300	10	A 60-M 10	23,7	44,0	20,0	11,0	96,0	10,5	20/10								●	●	●	●	●	●
		12	A 60-M 12	23,7	44,0	20,0	14,0	99,0	13,2	20/10								●	●	●	●	●	●
		14	A 60-M 14	23,7	44,0	22,0	16,0	103,0	15,0	20/10								●	●	●	●	●	●
		16	A 60-M 16	23,7	44,0	22,0	19,0	106,0	17,0	20/10								●	●	●	●	●	●
		20	A 60-M 20	23,7	44,0	24,0	23,0	112,0	21,0	20/10								●	●	●	●	●	●
400	300 400	12	A 80-M 12	27,0	51,0	22,0	19,0	113,0	13,2	20/5											●	●	●
		14	A 80-M 14	27,0	51,0	22,0	19,0	113,0	15,0	15/5											●	●	●
		16	A 80-M 16	27,0	51,0	22,0	19,0	113,0	17,0	15/5											●	●	●
		20	A 80-M 20	27,0	51,0	24,0	23,0	119,0	21,0	15/5											●	●	●
500	400 500	16	A 100-M 16	30,3	56,5	22,0	19,0	117,0	17,0	15/1												●	●
		20	A 100-M 20	30,3	56,5	24,0	23,0	123,0	21,0	15/1												●	●
630	500 630	16	A 120-M 16◆	33,4	61,6	22,0	19,0	128,0	17,0	12/1												●	●
		20	A 120-M 20◆	33,4	61,6	24,0	23,0	134,0	21,0	10/1												●	●
800	630	16	A 160-M 16◆	38,0	72,0	24,0	19,0	141,0	17,0	6/1													●
		20	A 160-M 20◆	38,0	72,0	24,0	23,0	145,0	21,0	6/3													●
1000	800	16	A 200-M 16◆	44,0	80,0	24,0	19,0	158,0	17,0	6/1													●
		20	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.

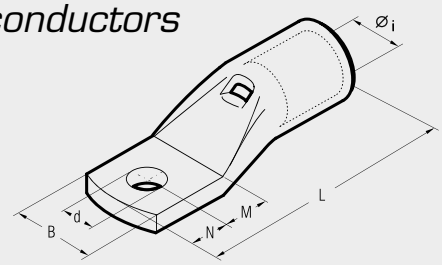
**See page 111

◆Not UL approved

RING TONGUE TERMINALS WITH CONTAINED PALM

A-M

for L.V. circuit breakers
for Copper conductors



c UL us
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 Øi	B	M	N	L	d	Quantity Box/Bag	Mechanical Tools: HN5	HN-A25	TN 70 SE	TN 120 SE	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51	B 550	RH 50	B 500	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
10	5	**A 2-M 5/9**	4,6	9,0	6,5	6,0	26,0	5,3	*1000/100*																
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*																
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*																
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*																
120	8	**A 24 B-M 8/19**	15,2	19,0	14,0	9,0	60,0	8,4	*100/25*																
	10	**A 24 B-M 10/19**	15,2	19,0	14,0	9,0	60,0	10,5	*100/25*																
150	8	**A 30 B-M 8/19**	16,7	19,0	18,0	9,0	70,0	8,4	*50/25*																
	10	**A 30 B-M 10/19**	16,7	19,0	18,0	9,0	70,0	10,5	*50/25*																
185	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*																
	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*																
	12	**A 60 B-M 12/31**	23,7	31,0	16,0	12,0	95,0	13,2	*20/10*																

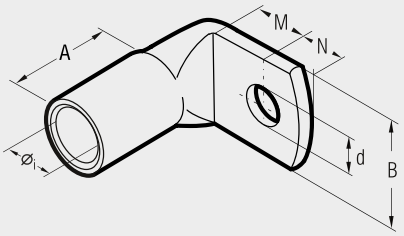
Details of the appropriate crimping tools and dies are shown on pages 204 to 205.

COPPER TUBE CRIMPING LUGS ANGLED 90°

for Copper conductors

A-L

File no. E125401



Cond. Size sqmm low stranded	Cond. Size sqmm flexible *	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	A	d	Quantity Box/Bag	Mechanical Tools HN1	HN5	HN-425	TN 70 SE	TN 120 SE**	Hydraulic Tools B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51	B 550	RH 50	B 500	HT 81-J	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
6		6	**A 1-L 6◆**	3,6	11,0	7,0	6,0	9,5	6,4	*2.000/100*																		
10		5	**A 2-L 5**	4,6	10,0	6,5	6,0	10,5	5,3	*1.500/100*																		
		6	**A 2-L 6**	4,6	11,0	7,0	6,0	10,5	6,4	*1.500/100*																		
		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	11,5	5,3	*1.000/100*																		
		6	**A 3-L 6**	5,8	11,5	7,0	6,0	11,5	6,4	*1.000/100*																		
		8	**A 3-L 8**	5,8	15,0	9,0	8,0	11,5	8,4	*1.000/100*																		
		10	**A 3-L 10**	5,8	18,0	11,0	10,0	11,5	10,5	*500/100*																		
25		6	**A 5-L 6**	7,0	14,0	7,0	6,0	13,0	6,4	*500/100*																		
		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	25	6	**A 7-L 6**	8,9	17,0	7.0	6,0	15,5	6,4	*500/100*																		
	35	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	35	6	**A 10-L 6**	10,0	19,0	8,0	7,0	16,5	6,4	*300/100*																		
	50	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	50	8	**A 14-L 8**	11,3	21,0	9,0	8,0	20,0	8,4	*200/50*																		
	70	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*																		
		16	**A 14-L 16**	11,3	26,0	18,0	16,0	20,0	17,0	*150/50*																		
95	70	8	**A 19-L 8**	13,5	25,0	9,0	8,0	24,5	8,4	*100/25*																		
	95	10	**A 19-L 10**	13,5	25,0	11,0	10,0	24,5	10,5	*100/25*																		
		12	**A 19-L 12**	13,5	25,0	14,0	12,0	24,5	13,2	*100/25*																		
120	95	10	**A 24-L 10**	15,2	28,5	11,0	10,0	25,5	10,5	*50/25*																		
	120	12	**A 24-L 12**	15,2	28,5	14,0	12,0	25,5	13,2	*50/25*																		
150	120	10	**A 30-L 10**	16,7	31,5	13,0	11,0	28,5	10,5	*50/25*																		
	150	12	**A 30-L 12**	16,7	31,5	16,0	14,0	28,5	13,2	*50/25*																		
185	150	10	**A 37-L 10**	19,2	35,5	13,0	11,0	31,5	10,5	*50/25*																		
	185	12	**A 37-L 12**	19,2	35,5	16,0	14,0	31,5	13,2	*50/25*																		
240	185	10	**A 48-L 10**	21,1	39,0	13,0	11,0	33,0	10,5	*30/15*																		
	240	12	**A 48-L 12**	21,1	39,0	16,0	14,0	33,0	13,2	*30/15*																		
300	240 300	12	**A 60-L 12**	23,7	44,0	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.*

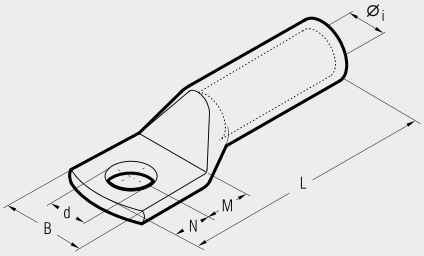
***See page 111*

◆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 tinplated to avoid oxidation.
Details of the appropriate crimping tools and dies are shown on pages 204 to 205.

HEAVY DUTY COPPER TUBE TERMINALS

2A-M



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File no. E125401

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 204 to 205.

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

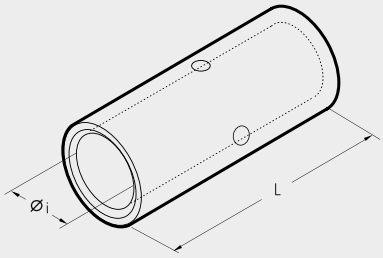
Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Quantity Box/Bag	Mechanical Tools: HN5	HN-A25	TN 70 SE	TN 120 SE*	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51 B 550	RH 50 B 500	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
16	8	**2 A 3-M 8**	5,8	15,0	9,0	8,0	43,5	8,4	*600/100*	●				●									
	10	**2 A 3-M10**	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*		●			●									
	10	**2 A 5-M 10**	7,0	18,0	11,0	10,0	55,0	10,5	*300/50*		●			●									
	12	**2 A 5-M 12**	7,0	21,0	14,0	12,0	60,0	13,2	*300/50*		●			●									
35	8	**2 A 7-M 8**	8,9	17,0	9,0	8,0	53,0	8,4	*250/50*			●											
	10	**2 A 7-M 10**	8,9	19,0	11,0	10,0	57,0	10,5	*250/50*			●											
	12	**2 A 7-M 12**	8,9	21,0	14,0	12,0	62,0	13,2	*200/50*			●											
50	10	**2 A 10-M 10**	10,0	20,0	11,0	10,0	63,0	10,5	*200/50*			●											
	12	**2 A 10-M 12**	10,0	21,0	14,0	12,0	68,0	13,2	*150/50*			●											
	14	**2 A 10-M 14**	10,0	25,0	16,0	14,0	72,0	15,0	*150/50*			●											
	16	**2 A 10-M 16**	10,0	26,0	18,0	16,0	76,0	17,0	*150/50*			●											
63 70	10	**2 A 14-M 10**	11,3	21,0	11,0	10,0	70,0	10,5	*100/50*			●											
	12	**2 A 14-M 12**	11,3	22,0	14,0	12,0	75,0	13,2	*100/50*			●											
	14	**2 A 14-M 14**	11,3	25,0	16,0	14,0	79,0	15,0	*100/50*			●											
	16	**2 A 14-M 16**	11,3	26,0	18,0	16,0	83,0	17,0	*100/50*			●											
95	10	**2 A 19-M 10**	13,5	25,0	11,0	10,0	76,5	10,5	*75/25*				●										
	12	**2 A 19-M 12**	13,5	25,0	14,0	12,0	81,5	13,2	*75/25*				●										
	14	**2 A 19-M 14**	13,5	25,0	16,0	14,0	85,5	15,0	*75/25*				●										
	16	**2 A 19-M 16**	13,5	27,0	18,0	16,0	90,5	17,0	*75/25*				●										
	20	**2 A 19-M 20**	13,5	29,5	22,0	20,0	97,5	21,0	*75/25*				●										
120 125	10	**2 A 24-M 10**	15,2	28,5	11,0	10,0	82,0	10,5	*50/25*				●										
	12	**2 A 24-M 12**	15,2	28,5	14,0	12,0	87,0	13,2	*50/25*				●										
	14	**2 A 24-M 14**	15,2	28,5	16,0	14,0	91,0	15,0	*50/25*				●										
	16	**2 A 24-M 16**	15,2	28,5	18,0	16,0	95,0	17,0	*50/25*				●										
	20	**2 A 24-M 20**	15,2	30,0	22,0	20,0	103,0	21,0	*50/25*				●										
150	10	**2 A 30-M 10**	16,7	31,5	13,0	11,0	92,0	10,5	*50/25*				●										
	12	**2 A 30-M 12**	16,7	31,5	16,0	14,0	98,0	13,2	*30/15*				●										
	14	**2 A 30-M 14**	16,7	31,5	18,0	16,0	102,0	15,0	*30/15*				●										
	16	**2 A 30-M 16**	16,7	31,5	19,0	17,0	104,0	17,0	*30/15*				●										
	20	**2 A 30-M 20**	16,7	31,5	22,0	20,0	110,0	21,0	*30/15*				●										
185	12	**2 A 37-M 12**	19,2	35,5	16,0	14,0	108,0	13,2	*30/15*								●	●					
	14	**2 A 37-M 14**	19,2	35,5	18,0	16,0	112,0	15,0	*30/15*								●	●					
	16	**2 A 37-M 16**	19,2	35,5	19,0	17,0	114,0	17,0	*30/15*								●	●					
	20	**2 A 37-M 20**	19,2	35,5	22,0	20,0	120,0	21,0	*30/15*								●	●					
240	12	**2 A 48-M 12**	21,1	39,0	16,0	14,0	109,0	13,2	*20/5*								●	●					
	14	**2 A 48-M 14**	21,1	39,0	18,0	16,0	113,0	15,0	*20/5*								●	●					
	16	**2 A 48-M 16**	21,1	39,0	19,0	17,0	115,0	17,0	*20/5*								●	●					
	20	**2 A 48-M 20**	21,1	39,0	22,0	20,0	121,0	21,0	*25/5*								●	●					
300	12	**2 A 60-M 12**	23,7	44,0	20,0	14,0	129,5	13,2	*20/5*									●	●	●	●		
	14	**2 A 60-M 14**	23,7	44,0	22,0	16,0	133,5	15,0	*20/5*									●	●	●	●		
	16	**2 A 60-M 16**	23,7	44,0	22,0	19,0	136,5	17,0	*20/5*									●	●	●	●		
	20	**2 A 60-M 20**	23,7	44,0	24,0	23,0	142,5	21,0	*20/5*									●	●	●	●		
400	12	**2 A 80-M 12**	27,0	51,0	22,0	19,0	140,0	13,2	*15/5*												●	●	
	14	**2 A 80-M 14**	27,0	51,0	22,0	19,0	140,0	15,0	*10/5*												●	●	
	16	**2 A 80-M 16**	27,0	51,0	22,0	19,0	140,0	17,0	*10/5*												●	●	
	20	**2 A 80-M 20**	27,0	51,0	24,0	23,0	146,0	21,0	*15/5*												●	●	
500	16	**2 A 100-M 16◆**	30,3	56,5	22,0	19,0	147,0	17,0	*10/1*													●	●
	20	**2 A 100-M 20◆**	30,3	56,5	24,0	23,0	153,0	21,0	*10/1*													●	●
630	16	**2 A 120-M 16◆**	33,4	61,5	22,0	19,0	159,0	17,0	*20/1*													●	●
	20	**2 A 120-M 20◆**	33,4	61,5	24,0	23,0	165,0	21,0	*20/1*													●	●
800	20	**2 A 160-M 20◆**	38,0	72,0	24,0	23,0	187,0	21,0	*12/1*														●
1000	20	**2 A 200-M 20◆**	44,0	82,0	24,0	23,0	202,0	21,0	*6/1*														●

*See page 111

◆*Not UL approved*

THROUGH CONNECTORS

File no. E125401



L-M

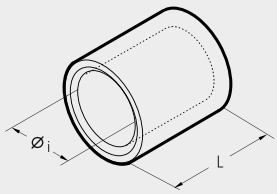
Conductor Size sqmm low stranded	Conductor Size sqmm Flexible	Ref.	Dimensions mm Øi	Dimensions mm L	Quantity Box/Bag	Mechanical Tools: HN 1	HN 5	HN-A25	TN 70 SE	TN 120 SE*	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51	B 550	RH 50	B 500	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
0,25÷1,5	0,25÷1,5	L 03-M◆	1,8	15	6.000/100	●					●												
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	●					●												
10	10	L 2-M	4,6	25	1.000/100		●		●		●												
16	16	L 3-M	5,8	27	1.000/100		●	●	●		●												
25	25	L 5-M	7,0	29	500/100			●	●		●												
35	25÷35	L 7-M	8,9	33	400/100			●	●		●												
50	35÷50	L 10-M	10,0	37	200/50			●	●		●												
70	50÷70	L 14-M	11,3	39	200/50			●	●		●												
95	70÷95	L 19-M	13,5	43	100/25				●	●	●												
120	95÷120	L 24-M	15,2	47	100/25				●	●	●												
150	120÷150	L 30-M	16,7	58	50/25				●	●	●												
185	150÷185	L 37-M	19,2	64	50/25						●	●	●	●	●	●	●	●	●	●	●	●	●
240	185÷240	L 48-M	21,1	75	30/15						●	●	●	●	●	●	●	●	●	●	●	●	●
300	240÷300	L 60-M	23,7	90	20/10						●	●	●	●	●	●	●	●	●	●	●	●	●
400	300÷400	L 80-M	27,0	94	15/5						●	●	●	●	●	●	●	●	●	●	●	●	●
500	400÷500	L 100-M	30,3	98	12/1						●	●	●	●	●	●	●	●	●	●	●	●	●
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 111

◆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 204 to 205.

PARALLEL CONNECTORS



L-P

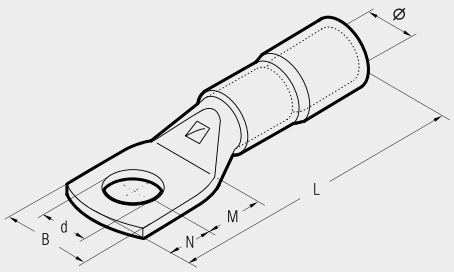
Total Conductor Size sqmm low stranded	Total Conductor Size sqmm Flexible	Ref.	Dimensions mm Øi	Dimensions mm L	Quantity Box/Bag	Mechanical Tools: HN 1	HN 5	HN-A25	TN 70 SE	TN 120 SE*	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51	B 550	RH 50	B 500	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
0,25÷1,5	0,25÷1,5	L 03-P	1,8	6,0	10.000/100	●					●												
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	●					●												
10	10	L 2-P	4,6	10,5	3.000/100		●		●		●												
16	16	L 3-P	5,8	11,5	2.000/100		●	●	●		●												
25	25	L 5-P	7,0	13,0	1.500/100			●	●		●												
35	25÷35	L 7-P	8,9	14,0	500/100			●	●		●												
50	35÷50	L 10-P	10,0	16,0	500/100			●	●		●												
70	50÷70	L 14-P	11,3	18,0	500/100			●	●		●												
95	70÷95	L 19-P	13,5	19,0	300/50				●	●	●												
120	95÷120	L 24-P	15,2	22,0	200/50				●	●	●												
150	120÷150	L 30-P	16,7	26,5	100/50				●	●	●												
185	150÷185	L 37-P	19,2	26,5	100/50						●	●	●	●	●	●	●	●	●	●	●	●	●
240	185÷240	L 48-P	21,1	34,0	60/15						●	●	●	●	●	●	●	●	●	●	●	●	●
300	240÷300	L 60-P	23,7	43,0	50/25						●	●	●	●	●	●	●	●	●	●	●	●	●

*See page 111

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 204 to 205.

POLYAMIDE PA6.6 INSULATED COPPER TUBE LUGS

ANE-M



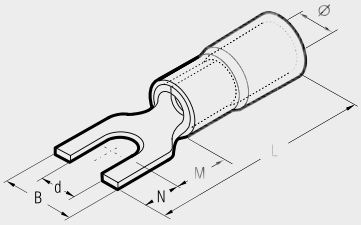
ANE-M series lugs are manufactured from electrolytic Copper tube annealed and Tin plated.
The interior of the PA6.6 insulated sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.
It also eliminates the need to insulate the terminal using either tape or heat 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 206 to 207.

Cond. Size Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity Box/Bag	Mechanical Tools HNN3	HNN4	TNN 70	TNN 120	Hydraulic Tools B 15MD	B 35-50MD	HT 51	RH 50	B 500	B 550	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
10	4	ANE 2-M 4	8,0	10,0	5,0	4,0	34,1	4,3	500/100												
	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												
	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												
	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												
	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												
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												
	10	ANE 10-M 10	13,8	20,0	11,5	9,5	59,0	10,5	150/50												
	12	ANE 10-M 12	13,8	21,0	12,0	12,0	62,0	13,2	150/50												
70	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												
	14	ANE 14-M 14	15,8	25,0	16,0	14,0	76,0	15,0	100/25												
95	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												
	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												
150	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												
	16	ANE 30-M 16	23,0	31,5	19,0	17,0	107,0	17,0	30/15												
	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



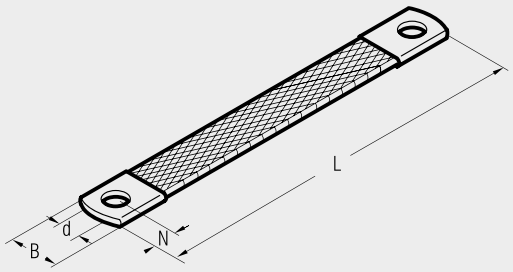
Conductor Size Flexible sqmm	Ø Stud mm	Ref.	Dimensions mm Ø	B	M	N	L	d	Quantity Box/Bag	Mechanical Tools HNN 3	HNN 4	TNN70	TNN 120	Hydraulic Tools B 15MD	B 35-50MD	RH 50 B 500 B 550 HT 51	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
10	4	**ANE 2-U 4**	8,0	9,8	7,5	7,0	35,1	4,3	*500/100*									
	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*									

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.

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 206 to 207.

FLEXIBLE BRAIDS

FL



Size sqmm	Ø Stud mm	Ref.	Dimensions mm B	N	L	d	Quantity
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*
16	8	**FL 16-150**	17	10	150	8,5	*50*
	8	**FL 16-200**	17	10	200	8,5	*50*
	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*

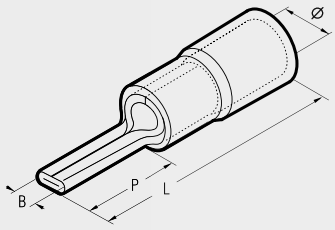
Flexible braids are manufactured from electrolytic Copper wire.
Braids of different conductor sizes or lengths are available on request.
Standard finish - bright Copper.

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)

POLYAMIDE PA6.6 INSULATED PIN TERMINALS

ANE-P

File no. E125401



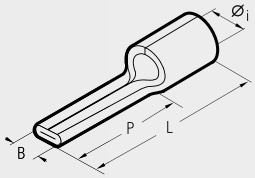
ANE-P series terminals are made from electrolytic Copper, rolled, Tin plated and brazed. The interior of the PA6.6 insulated sleeve is funnel shaped so as to ensure complete and easy introduction of the conductor strands.
The operating temperature range is – 20 to + 115°C (Surge + 130°C).
In order to 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 Ø	B	P	L	Quantity Box/Bag	Mechanical Tools HNN 3	HNN 4	TNN 70	TNN 120	Hydraulic Tools B 15MD	B 35-50MD	HT 51 B 500 RH 50 B 550	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
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 206 to 207.

UNINSULATED PIN CONNECTORS

A-P



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 204 to 205.

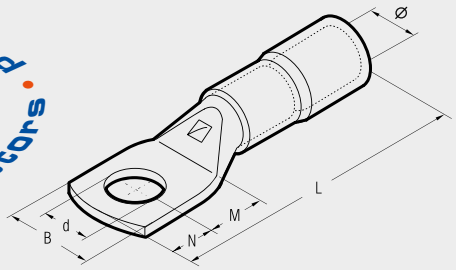
Cond. Size sqmm low stranded	flexible *	Ref.	Dimensions mm Øi	B	P	L	Quantity Box/Bag	Mechanical Tools HN 1	HN 5	HN-A25	TN 70 SE	TN 120 SE	Hydraulic Tools B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51 RH 50 B 500 B 550	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D
10	10	**A 2-P 12**	4,8	4,3	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		TNN 70	TNN 120	B 35-50MD	B 500	RH 50	HT 51	HT 120 and tools and heads with 130 kN crimping force
35	6	**ANE 9-M 6/15**	13,6	15,0	8,0	7,0	54,0	6,4	*200/50*							
	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*							
	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*							
	12	**ANE 12-M 12**	15,7	22,0	14,0	12,0	70,5	13,2	*100/25*							
70	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*							
	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*							
95	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*							
	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*							
120	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*							
	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	*40/20*							
150	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).

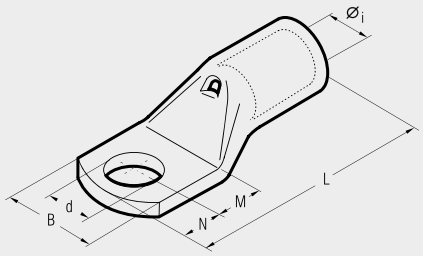
In order to achieve the best electrical and mechanical performance it is suggested that they are crimped using dies and tools specifically developed for this purpose by Cembre.

Details of the appropriate crimping tools and dies are shown on pages 206 to 207.

COPPER TUBE CRIMPING LUGS

for extra flexible Copper conductors

A-M



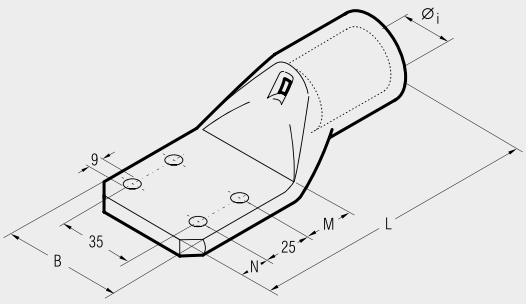
for fine stranded SPECIAL flexible conductors

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 204 to 205.

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	HT 51 RH 50 B 500 B 550
	8	**A 9-M 8**	9,3	17,0	9,0	8,0	40,5	8,4	*400/100*	TN 120 SE	HT 81-U RHU 81
	10	**A 9-M 10**	9,3	18,5	11,0	10,0	44,5	10,5	*400/100*	B 35-45MD	HT 120 and tools and heads with 130 kN crimping force
	12	**A 9-M 12**	9,3	21,0	14,0	12,0	49,5	13,2	*300/50*	B 35-50MD	ECW-H3D
50	6	**A 12-M 6/15**	11,0	15,0	8,0	7,0	40,5	6,4	*200/50*	HT 45E	RHU 520
	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*		
	12	**A 12-M 12**	11,0	22,0	14,0	12,0	51,5	13,2	*200/50*		
70	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*		
	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*		
95	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*		
	16	**A 20-M 16**	15,0	27,0	16,5	13,5	63,0	17,0	*100/25*		
120	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*		
	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*		
150	10	**A 35-M 10**	19,2	34,2	13,0	11,0	65,5	10,5	*50/25*		
	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*		
185	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*		
	20	**A 40-M 20**	21,0	37,5	22,0	20,0	91,0	21,0	*30/15*		

COPPER TUBE LUGS 4-ESI FIXING

A-4ESI



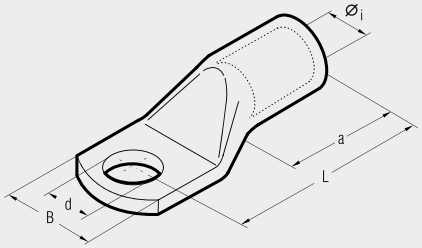
Conductor Size sqmm	Ref.	Dimensions mm					Quantity Box/Bag	Hydraulic Tools					
		Øi	B	M	N	L		HT 51 B 550	RH 50 B500	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
185	**A 37-4ESI**	19,2	61	20	15	124	*20/10*						
240	**A 48-4ESI**	21,1	61	20	15	128	*20/10*						
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 204 to 205.

COPPER TUBE CRIMPING LUGS ACCORDING TO DIN 46235

DR

for Copper conductors



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 (mm^2).
- Stud Ø (mm).
- crimping die code

Details of the appropriate crimping tools and dies are shown on page 213.

Consult us for special requirements

Conductor Size sqmm	Ø Stud mm	Ref.	Code	Dimensions mm Øi	d	L	B	a	Quantity Box/Bag	Mechanical Tools: HN-025	TND 6-70	TND 10-120	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51 RH 50 B 500	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
6	5	DR6-5	5	3,8	5,3	24,0	8,5	10,0	800/100												
	6	DR6-6	5	3,8	6,4	24,0	9,0	10,0	800/100												
	8	DR6-8*	5	3,8	8,4	26,0	13,0	10,0	800/100												
10	5	DR10-5	6	4,5	5,3	27,5	10,0	10,0	800/100												
	6	DR10-6	6	4,5	6,4	27,0	10,0	10,0	800/100												
	8	DR10-8*	6	4,5	8,4	28,0	13,0	10,0	800/100												
	10	DR10-10*	6	4,5	10,5	28,5	15,0	10,0	800/100												
16	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												
	8	DR16-8	8	5,5	8,4	37,0	13,0	20,0	400/100												
	10	DR16-10	8	5,5	10,5	40,0	17,0	20,0	400/100												
	12	DR16-12*	8	5,5	13,0	41,0	19,0	20,0	400/100												
25	6	DR25-6	10	7,0	6,4	39,0	14,6	20,0	400/100												
	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	17,0	20,0	200/100												
	12	DR25-12	10	7,0	13,0	40,5	19,0	20,0	200/100												
35	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												
	10	DR35-10	12	8,2	10,5	43,0	19,0	20,0	200/100												
	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												
50	6	DR50-6*	14	10,0	6,4	52,0	20,0	28,0	100/25												
	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												
	12	DR50-12	14	10,0	13,0	53,0	24,0	28,0	100/25												
	16	DR50-16	14	10,0	17,0	57,0	28,0	28,0	100/25												
70	8	DR70-8	16	11,5	8,4	56,0	24,0	28,0	50/25												
	10	DR70-10	16	11,5	10,5	56,0	24,0	28,0	50/25												
	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												
	20	DR70-20*	16	11,5	21,0	84,5	30,0	28,0	50/25												
95	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												
	12	DR95-12	18	13,5	13,0	66,0	28,0	35,0	50/25												
	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												
120	8	DR120-8*	20	15,5	8,4	70,0	31,0	35,0	50/25												
	10	DR120-10	20	15,5	10,5	70,0	32,0	35,0	50/25												
	12	DR120-12	20	15,5	13,0	70,5	32,0	35,0	50/25												
	16	DR120-16	20	15,5	17,0	70,0	32,0	35,0	50/25												
	20	DR120-20	20	15,5	21,0	72,0	36,0	35,0	50/25												
150	10	DR150-10	22	17,0	10,5	79,0	34,0	35,0	50/25												
	12	DR150-12	22	17,0	13,0	78,5	34,0	35,0	50/25												
	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	40,0	35,0	50/25												
185	10	DR185-10	25	19,0	10,5	83,0	37,0	40,0	25/25												
	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												
	20	DR185-20	25	19,0	21,0	83,0	40,0	40,0	25/25												
240	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												
	16	DR240-16	28	21,5	17,0	92,0	42,5	40,0	20/10												
	20	DR240-20	28	21,5	21,0	92,0	45,0	40,0	20/10												

** Dimensions of the tube according to DIN 46235; Stud hole not included within the standard.*

COPPER TUBE CRIMPING LUGS ACCORDING TO DIN 46235

for Copper conductors

DR

Conductor Size sqmm	Ø Stud mm	Ref.	Code	Dimensions mm Øi	d	L	B	a	Quantity Box/Bag	Hydraulic Tools: RH 50 B 500	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
300	12	**DR300-12***	32	24,5	13,0	104,0	47,0	50,0	*10/5*				
	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*				
800	20	**DR800-20**	52	40,0	21,0	166,0	75,0	100,0	*5/5*				
1.000	20	**DR1000-20**	58	44,0	21,0	166,0	85,0	100,0	*5/5*				

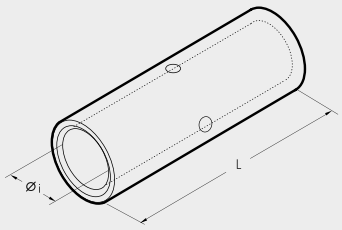
** Dimensions of the tube according to DIN 46235; Stud hole not included within the standard.*

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 Øi	L	Quantity Box/Bag	Mechanical Tools: HN-D25	TND 6-70	TND 10-120	Hydraulic Tools: B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51	RH 50	B 500	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
6	**DSV 6**	5	3,7	30	*1.200/100*															
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*															
800	**DSV 800**	52	40,0	200	*5/5*															
1.000	**DSV 1000**	58	44,0	200	*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 213.

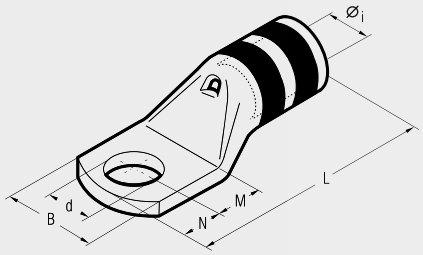
Consult us for special requirements

C

COLOUR CODED COPPER CRIMPING LUGS

for Copper conductors

File no. E125401



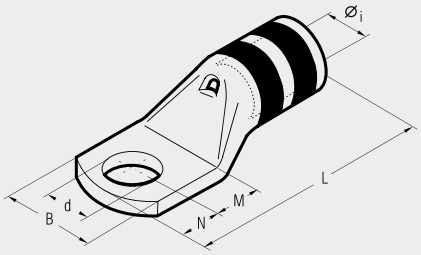
C series lugs are manufactured from electrolytic Copper tube.
The dimensions of the tube are designed to obtain the most efficient electrical conductivity and mechanical strength to resist vibration and pull out.
Cembre lugs are annealed to guarantee optimum ductility, an absolute necessity for connectors 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 tinplated 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 212.
Cembre technicians are available to provide technical advice as required.
Please consult Cembre for products not listed.

Cond. Size sqmm	Conductor AWG Size	Conductor AWG Navy	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Colour Code	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
10	8	23	4	C8-8	4,6	10,0	5,0	4,0	22,5	4,3	RED	600/50	TN 70 SE TN 120 SE	B15MD B35-50MD HT 51 RH 50 B 500 HT 120 and tools and heads with 130 kN crimping force ECW-H3D RHU 520
			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		4	C6-8	5,8	11,5	5,0	4,0	25,5	4,3	BLUE	600/50		
			5	C6-10	5,8	11,5	6,5,0	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		400/50		
25	4	40	4	C4-8	6,2	12,5	5,0	4,0	25,5	4,3	GREY	600/50		
			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		
	3	50	4	C3-8	7,0	14,0	5,0	4,0	28,0	4,3	WHITE	600/50		
			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		
35	2	60	5	C2-10	7,6	17,0	6,5	6,0	33,0	5,3	BROWN	400/50		
			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		
	1	75	6	C1-14	8,9	17,0	7,0	6,0	34,5	6,4	GREEN	400/50		
			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		
50	1/0	100	6	C1/0-14	10,0	19,0	8,0	7,0	40,5	6,4	PINK	200/25		
			8	C1/0-516	10,0	19,0	9,0	8,0	42,5	8,4		200/25		
			10	C1/0-38	10,0	20,0	11,0	10,0	46,5	10,5		200/25		
			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		
70	2/0	125	6	C2/0-14	11,3	21,0	8,0	7,0	44,0	6,4	BLACK	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		200/25		
			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		
95	3/0	150	6	C3/0-14	12,4	23,0	8,0	7,0	45,0	6,4	ORANGE	200/25		
			8	C3/0-516	12,4	23,0	9,0	8,0	47,0	8,4		200/25		
			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



Cond. Size sqmm	Conductor AWG Size	Conductor AWG Navy	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Colour Code	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
			6	C4/0-14	13,5	25,0	8,0	7,0	50,5	6,4		100/25		
			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		
	4/0	200	12	C4/0-12	13,5	25,0	14,0	12,0	61,5	13,2	PURPLE	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		
			6	C250-14	15,2	28,5	8,0	7,0	52,0	6,4		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		
120	250 MCM	250	12	C250-12	15,2	28,5	14,0	12,0	63,0	13,2	YELLOW	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		
			22	C250-78	15,2	32,0	24,0	23,0	84,0	23,0		50/25		
			8	C300-516	16,7	31,5	13,0	11,0	69,0	8,4		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		
150	300 MCM	300	14	C300-916	16,7	31,5	18,0	16,0	79,0	15,0	WHITE	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		
			10	C350-38	17,6	33,0	13,0	11,0	70,5	10,5		40/20		
			12	C350-12	17,6	33,0	16,0	14,0	76,5	13,2		40/20		
185	350 MCM	350	14	C350-916	17,6	33,0	18,0	16,0	80,5	15,0	RED	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		
			10	C400-38	19,2	35,5	13,0	11,0	76,0	10,5		40/20		
			12	C400-12	19,2	35,5	16,0	14,0	82,0	13,2		40/20		
	400 MCM	400	14	C400-916	19,2	35,5	18,0	16,0	86,0	15,0	BLUE	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		
			10	C500-38	21,1	39,0	13,0	11,0	82,0	10,5		30/15		
			12	C500-12	21,1	39,0	16,0	14,0	88,0	13,2		30/15		
240	500 MCM		14	C500-916	21,1	39,0	18,0	16,0	92,0	15,0	BROWN	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		
			12	C600-12	23,7	44,0	20,0	14,0	99,0	13,2		20/10		
			14	C600-916	23,7	44,0	22,0	16,0	103,0	15,0		20/10		
300	600 MCM		16	C600-58	23,7	44,0	22,0	19,0	106,0	17,0	GREEN	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		
			12	C750-12	26,0	48,0	22,0	19,0	113,0	13,2		10/5		
			16	C750-58	26,0	48,0	22,0	19,0	113,0	17,0		10/5		
	750 MCM		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	BLACK	10/5		

TN 120 SE

B35-50MD

HT 51 RH 50 B 500

HT 120 and tools and heads with 130 kN crimping force

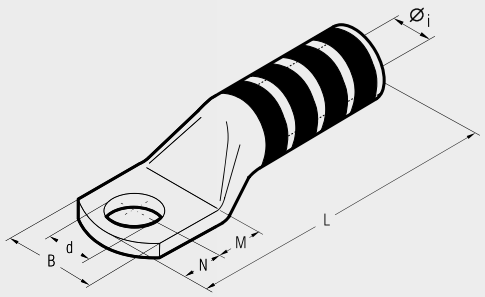
ECW-H3D

RHU 520

COLOUR CODED COPPER CRIMPING LUGS

CL

one hole long barrel for Copper conductors



File no. E125401

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 strenght.
Lugs are electrolytically tinplated 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 212.
Cembre technicians are available to provide technical advice as required.
Please consult Cembre for products not listed.

Cond. Size sqmm	Conductor AWG Size	Conductor AWG Navy	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	L	d	Colour Code	Quantity Box/Bag	Mechanical Tools: TN 70 SE	Mechanical Tools: TN 120 SE	Hydraulic Tools: B15MD	Hydraulic Tools: B35-50MD	Hydraulic Tools: HT 51 RH 50 B 500	Hydraulic Tools: HT 120 and tools and heads with 130 kN crimping force	Hydraulic Tools: ECW-H3D	Hydraulic Tools: RHU 520
10	8	23	5	CL8-10	4,6	10,0	6,5	6,0	37,5	5,3	RED	400/50	●	●	●	●	●	●	●	●
			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		5	CL6-10	5,8	11,5	6,5	6,0	40,0	5,3	BLUE	400/50								
			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								
			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								
	3	50	6	CL3-14	7,0	14,0	7,0	6,0	47,5	6,4	WHITE	200/100								
			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								
35	2	60	5	CL2-10	7,6	17,0	6,5	6,0	46,0	5,3	BROWN	200/50								
			6	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								
	1	75	5	CL1-10	8,9	17,0	6,5	6,0	48,0	5,3	GREEN	200/50								
			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								
50	1/0	100	5	CL1/0-10	10,0	19,0	8,0	7,0	53,5	5,3	PINK	100/50								
			8	CL1/0-516	10,0	19,0	9,0	8,0	55,5	8,4		100/50								
			10	CL1/0-38	10,0	20,0	11,0	10,0	59,5	10,5		100/50								
			12	CL1/0-12	10,0	21,0	14,0	12,0	64,5	13,2		100/50								
70	2/0	125	10	CL2/0-38	11,3	21,0	11,0	10,0	67,5	10,5	BLACK	100/50								
			12	CL2/0-12	11,3	22,0	14,0	12,0	72,5	13,2		100/50								
95	3/0	150	12	CL3/0-12	12,4	24,0	14,0	12,0	71,5	13,2	ORANGE	100/50		●						
	4/0	200	10	CL4/0-38	13,5	25,0	11,0	10,0	73,5	10,5	PURPLE	60/30								
			12	CL4/0-12	13,5	25,0	14,0	12,0	78,5	13,2		60/30								
120	250 MCM	250	12	CL250-12	15,2	28,5	14,0	12,0	84,0	13,2	YELLOW	50/25								
150	300 MCM	300	12	CL300-12	16,7	31,5	16,0	14,0	98,0	13,2	WHITE	30/15								
185	350 MCM	350	12	CL350-12	17,6	33,0	16,0	14,0	98,0	13,2	RED	30/15								
	400 MCM	400	12	CL400-12	19,2	35,5	16,0	14,0	107,0	13,2	BLUE	20/10								
			16	CL400-58	19,2	35,5	19,0	17,0	113,0	17,0		20/10								
240	500 MCM		12	CL500-12	21,1	39,0	16,0	14,0	108,0	13,2	BROWN	20/10								
			16	CL500-58	21,1	39,0	19,0	17,0	114,0	17,0		20/10								
300	600 MCM		12	CL600-12	23,7	44,0	20,0	14,0	128,5	13,2	GREEN	10/5								
			16	CL600-58	23,7	44,0	22,0	19,0	135,5	17,0		10/5								
	750 MCM		12	CL750-12	26,0	48,0	22,0	19,0	140,5	13,2	BLACK	10/5								
			16	CL750-58	26,0	48,0	22,0	19,0	140,5	17,0		10/5								

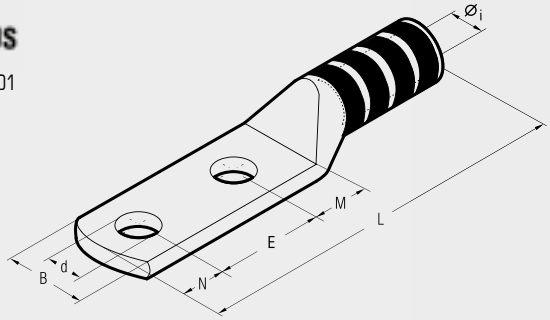
Also available with inspection hole.
In case of order, add suffix IH to the part number.
E.g.: CL250IH-12

COLOUR CODED COPPER CRIMPING LUGS

double hole long barrel for Copper conductors

CL-D

File no. E125401



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

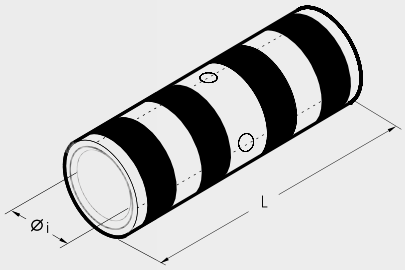
Mechanical Tools	Hydraulic Tools
TN 70 SE	B15MD
TN 120 SE	B35-50MD
	HT 51 RH 50 B 500
	HT 120 and tools and heads with 130 kN crimping force
	ECW-H3D
	RHU 520

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 212.
Cembre technicians are available to provide technical advice as required.
Please consult Cembre for products not listed.

COLOUR CODED SPLICES

BSCL

long barrel



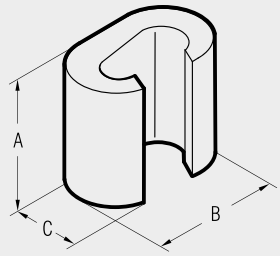
File no. E125401

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 212.

Conductor Size sqmm	Conductor Size AWG	Ref.	Dimensions mm Øi	Dimensions mm L	Colour Code	Quantity Box/Bag	Mechanical Tools: HN1	Mechanical Tools: HN5	Mechanical Tools: TN 70 SE	Mechanical Tools: TN 120 SE	Hydraulic Tools: B15MD	Hydraulic Tools: B35-50MD	Hydraulic Tools: HT 51 RH 50 B 500	Hydraulic Tools: HT 120 and tools and heads with 130 kN crimping force	Hydraulic Tools: ECW-H3D	Hydraulic Tools: RHU 520
10	8	**BSCL8**	4,6	50,5	RED	600/150	HN1	HN5	TN 70 SE	TN 120 SE	B15MD	B35-50MD	HT 51 RH 50 B 500	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
16	6	**BSCL6**	5,8	50,5	BLUE	400/100										
25	4	**BSCL4**	6,2	60,5	GREY	200/100										
	3	**BSCL3**	7,0	60,5	WHITE	200/50										
35	2	**BSCL2**	7,6	60,5	BROWN	200/50										
	1	**BSCL1**	8,9	65,5	GREEN	200/50										
50	1/0	**BSCL1/0**	10,0	73,0	PINK	200/50										
70	2/0	**BSCL2/0**	11,3	79,0	BLACK	100/50										
95	3/0	**BSCL3/0**	12,4	79,0	ORANGE	80/40										
	4/0	**BSCL4/0**	13,5	85,5	PURPLE	50/25										
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										

SLEEVE CONNECTORS

C-C



tin plated version

Conductor Size sqmm Run	Tap	Ref.	Dimensions mm A	B	C	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
6÷2,5	6÷1,5	**C 6-C 6 ST**	9,0	9,8	6,4	1.000/100	HP4-C10	
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		

Hydraulic Tools: B 35-45MD; B 35-50MD; HT 45-E; B 500; B 550; RH 50; HT 51; RHU 81; HT 81-U; HT 120 and tools and heads with 130 kN crimping force; ECW-H3D

bright surface version

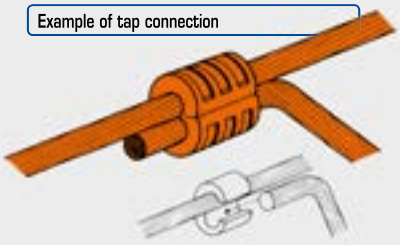
Conductor Size sqmm Run	Tap	Ref.	Dimensions mm A	B	C	Quantity Box/Bag	Mechanical Tools	Hydraulic Tools
6÷2,5	6÷1,5	**C 6-C 6**	9,0	9,8	6,4	1.000/100	HP4-C10	
10	10÷1,5	**C 10-C 10**	12,0	12,6	8,4	500/100		
16	16÷1,5	**C 16-C 16**	17,0	19,4	12,0	500/100		
25÷16	10÷1,5	**C 25-C 10**	17,0	19,8	13,0	400/50		
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		

Hydraulic Tools: B 35-45MD; B 35-50MD; HT 45-E; B 500; B 550; RH 50; HT 51; RHU 81; HT 81-U; HT 120 and tools and heads with 130 kN crimping force; ECW-H3D

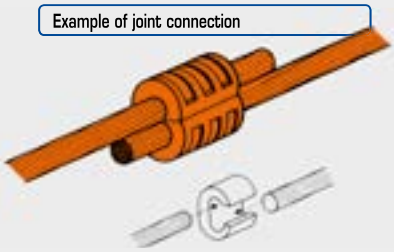
"C" connectors are manufactured from high purity copper profiles and are suitable for a variety of uses either to create an earthing network or tapping off from overhead distribution lines. Each connector is marked as follows:
- Cembre trade mark
- Reference number
- Conductor size-Run
- Conductor size-Tap
- Number of crimps
- Die reference.

Details of the appropriate crimping tools and dies are shown on page 208.

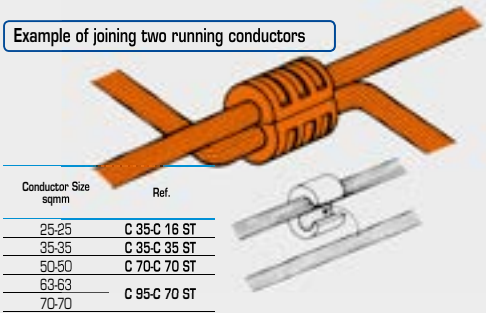
Example of tap connection



Example of joint connection

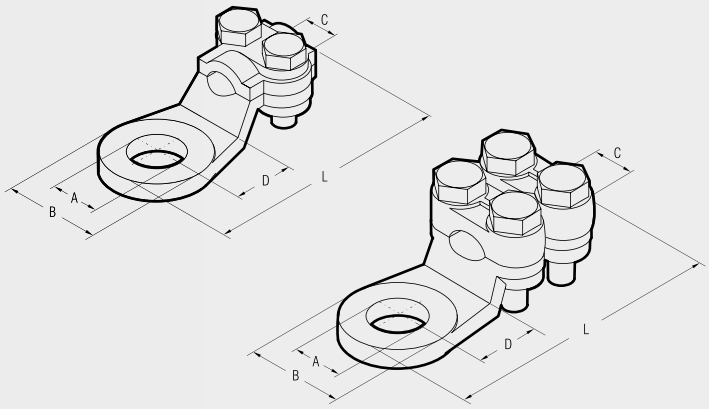


Example of joining two running conductors



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	C 185-C 95 ST
125-125	

MECHANICAL FIXING LUGS



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

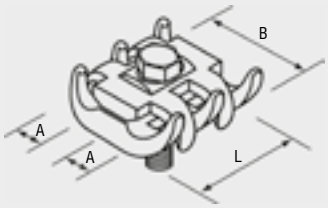
2 bolt fixing lugs

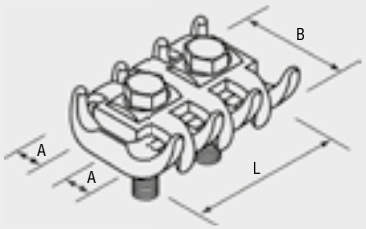
Conductor Size sqmm	Ref.	A bolt	Dimensions mm				Quantity
			B	C	D	L	
16	**2155**	M8	18,0	4,5	12,5	39	*100*
16	**2171**	M10	18,0	4,5	12,5	39	*100*
25	**2156**	M8	19,5	6,0	13,0	43	*100*
25	**2172**	M10	19,5	6,0	13,0	43	*100*
35	**2157**	M12	23,0	7,0	15,0	49	*50*
35	**2173**	M14	23,0	7,0	15,0	49	*50*
50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

2 bolt fixing

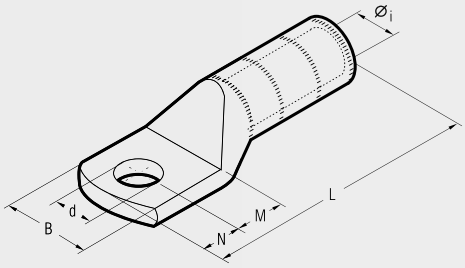
Conductor Size sqmm	Ref.	Ø A for cable mm	Dimensions mm		Quantity
			B	L	
6÷16	**2333**	3÷ 5	24,5	30	*50*
16÷50	**2336**	5÷ 8	32	40	*50*
35÷70	**2339**	7÷12	40	44	*25*
50÷95	**2342**	8÷14	48	48	*10*
70÷150	**2344**	12÷16	51	53	*10*
150÷300	**2346***	16÷22	66	66	*5*

** Stainless Steel bolts*

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

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 208.

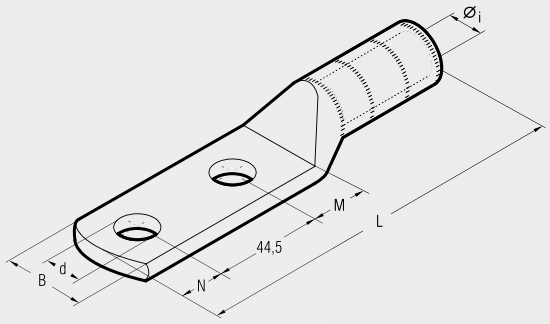
Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm						Quantity Box/Bag	Hydraulic Tools						
			Øi	B	M	N	L	d		B35-50MD	HT 51	RH 50	B 500	B 550	HT 81-U	RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
25 R	8	**CA 25-M 8**	6,8	14,0	9	8	65,0	8,4	*300/50*	●	●	●	●	●	●	●	●	●	●
	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*	●	●	●	●	●	●	●	●	●	●
50 S	12	**CA 50 S-M 12**	9,5	21,0	16	14	79,0	13,2	*150/50*	●	●	●	●	●	●	●	●	●	●
	16	**CA 50 S-M 16**	9,5	26,0	19	17	85,0	17,0	*100/50*	●	●	●	●	●	●	●	●	●	●
63 S ÷ 70 S	12	**CA 70 S-M 12**	11,0	28,0	16	14	81,2	13,2	*50/25*		●	●	●	●	●	●	●	●	●
	16	**CA 70 S-M 16**	11,0	30,0	19	17	87,2	17,0	*50/25*		●	●	●	●	●	●	●	●	●
80 S ÷ 95 RC	12	**CA 95 R-M 12**	12,0	28,0	16	14	91,0	13,2	*50/25*		●	●	●	●	●	●	●	●	●
	14	**CA 95 R-M 14**	12,0	28,0	18	16	95,0	15,0	*50/25*		●	●	●	●	●	●	●	●	●
95 S ÷ 100 S	12	**CA 95 S-M 12**	13,5	28,0	16	14	91,0	13,2	*50/25*		●	●	●	●	●	●	●	●	●
	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*		●	●	●	●	●	●	●	●	●
120 RC/S ÷ 150 RC	12	**CA 150 R-M 12**	15,0	31,0	16	14	97,0	13,2	*30/15*		●	●	●	●	●	●	●	●	●
	14	**CA 150 R-M 14**	15,0	31,0	18	16	101,0	15,0	*30/15*		●	●	●	●	●	●	●	●	●
150 S ÷ 160 RC	12	**CA 150 S-M 12**	16,5	32,0	16	14	97,0	13,2	*30/15*		●	●	●	●	●	●	●	●	●
	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	*30/15*		●	●	●	●	●	●	●	●	●
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	*15/5*								●	●	●
315 S	14	**CA 315 S-M 14**	23,7	44,0	18	16	105,0	15,0	*15/5*								●	●	●
400 R	14	**2 A 80-M 14**	27,0	51,0	22	19	140,0	15,0	*15/5*								●	●	●
	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 Øi	B	M	N	L	d	Quantity Box/Bag	Hydraulic Tools: B35-50MD	B 550	B 500	RHU 81	RH 50	HT 81-U	HT 51	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
25 R	8	CA 25-2 M 8	6,8	14,0	10	11	113,5	8,4	200/50	●	●	●	●	●	●	●	●	●	●
	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	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●
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		●	●	●	●	●	●	●	●	●
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		●	●	●	●	●	●	●	●	●
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		●	●	●	●	●	●	●	●	●
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								●	●	●
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								●	●	●
	16	2 A 80-2 M 16	27,0	51,0	22	19	184,5	17,0	15/5								●	●	●
500 R	14	2 A 100-2 M 14	30,3	56,5	22	16	182,5	15,0	10/5									●	●
	16	2 A 100-2 M 16	30,3	56,5	22	19	185,5	17,0	10/5									●	●
600 R ÷ 630 R	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									●	●

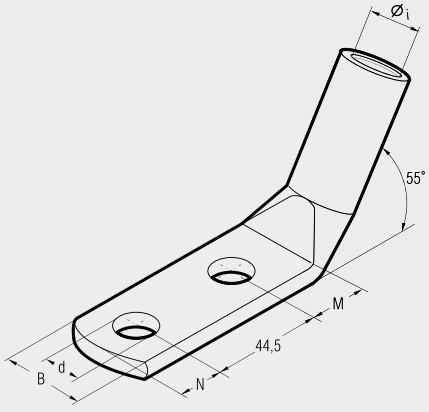
R = Round conductors RC = Round Compact conductors S = Sector shaped conductors

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 208.

HIGH VOLTAGE TERMINALS

two hole fixing

2A-2M/55°

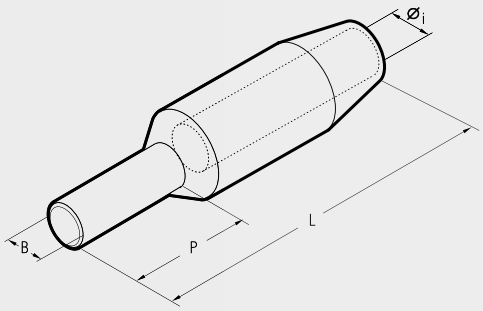


Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm Øi	B	M	N	d	Quantity Box/Bag	Hydraulic Tools: HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
400 R	14	2 A 80 - 2 M 14/55°	27,0	51,0	22	16	15	10/5	●	●	●
600 R ÷ 630 R	14	2 A 120 - 2 M 14/55°	33,4	61,5	22	16	15	15/3		●	●

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 208.

MT-C



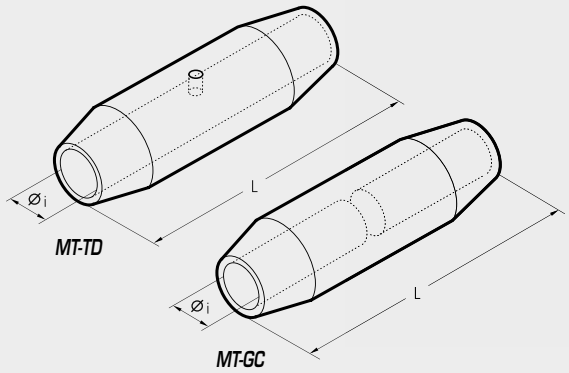
MT-C series connectors are designed for high voltage applications up to 33 kV.
They are manufactured from high purity copper, annealed and tin plated.
The extended barrel enhances both electrical and mechanical performance.
The stalk or pin makes these connectors ideal for terminating conductors into contact blocks.
Details of the appropriate crimping tools and dies are shown on page 208.

Conductor Size sqmm	Ref.	Dimensions mm				Quantity Box/Bag	Hydraulic Tools							
		Øi	B	P	L		B35-50MD	HT 51 RH 50 B 500 B 550	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
25 R	MT 25-C 8	6,8	8	35	80	90/3						
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						
50 S	MT 50 S-C 8	9,5	8	35	80	90/3						
	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	30/3						
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						
95 S ÷ 100 S	MT 95 S-C 10	13,5	10	45	110	60/3						
	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	60/3						
	MT 150 R-C 16	15,0	16	45	110	30/3						
150 S ÷ 160 RC	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						
	MT 150 S-C 16	16,5	16	45	110	60/3						
160 S ÷ 200 RC	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



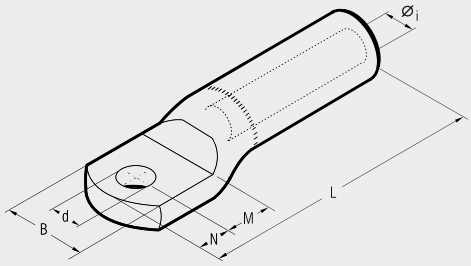
Conductor Size sqmm	Ref.	Ref.	Dimensions mm		Quantity Box/Bag	Hydraulic Tools					
			Øi	L		B35-50MD	B 500 B 550	HT 51 RH 50	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	EGW-H3D	RHU 520
25 R	**MT 25-TD**	**MT 25-GC**	6,8	60	*90/3*							
30 RC/S ÷ 40 S	**MT 40 S-TD**	**MT 40 S-GC**	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*							
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 208.

ALUMINIUM TERMINALS

AA-M

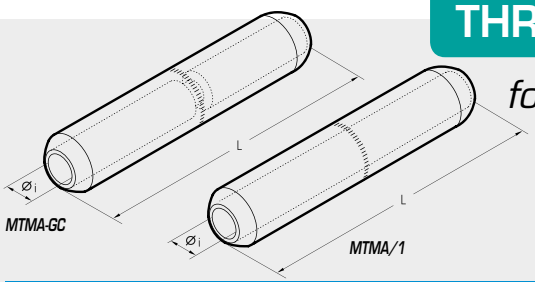


AA-M series terminals are made from Aluminium of a purity equal to or greater than 99,5%.
They are designed to accept a variety of conductor forms especially low stranded compacted conductors.
Non circular conductors may require pre-rounding prior to introduction to the terminal.
Barrels are capped and filled with grease so as to avoid oxidation of the Aluminium.
Details of the appropriate crimping tools and dies are shown on page 209.

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 130D-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*					
	16	**AA 300-M 16**	23,3	54	19	17	172,0	17,0	*12/3*					RHU 230-630
400	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



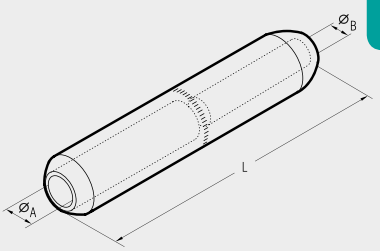
MTMA-GC
MTMA/1

Conductor Size sqmm	Ref.	Ref.	Dimensions mm Øi	Dimensions mm L	Quantity Box/Bag	Hydraulic Tools: B 1300-UC	RHU 131-C	HT 131-UC	HT120 HT131-C RHC 131	ECW-H3D	RHU 230-630
10	MTMA 10-GC		4,3	90,5	60/3						
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						
	MTMA 300-GC		23,3	218,0	15/3						
400		MTMA 400/1	26,0	218,0	15/3						
500	MTMA 500-GC		29,1	218,5	15/3						
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 210-211.

REDUCER THROUGH CONNECTORS

for Aluminium or copper conductors



MTMA-GC

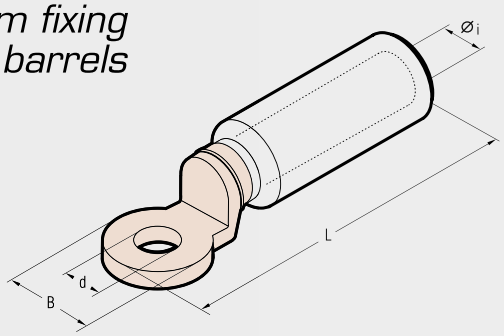
Conductor Size sqmm Side A Al	Side B Al/Cu	Ref.	Dimensions mm ØA	Dimensions mm ØB	Dimensions mm L	Quantity Box/Bag	Hydraulic Tools: B 1300-UC	RHU 131-C	HT 131-UC	HT120 HT131-C RHC 131	ECW-H3D	RHU 230-630
16	10	MTMA 16-10-GC	5,5	4,3	90,5	60/3						
25	10	MTMA 25-10-GC	6,5	4,3	90,5	60/3						
	16	MTMA 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						
	120	MTMA 150-120-GC	15,5	13,7	133,0	30/3						
185	120	MTMA 185-120-GC	17,0	13,7	143,5	15/3						
	150	MTMA 185-150-GC	17,0	15,5	143,5	15/3						
240	150	MTMA 240-150-GC	19,5	15,5	143,5	15/3						
	185	MTMA 240-185-GC	19,5	17,0	143,5	15/3						
300	95	MTMAD 300-95-GC	22,5	12,5	144,5	15/3						
	150	MTMAD 300-150-GC	22,5	15,5	144,5	15/3						
	185	MTMAD 300-185-GC	22,5	17,0	144,5	15/3						
	240	MTMAD 300-240-GC	22,5	19,5	144,5	15/3						
400	240	MTMA 400-240-GC	26,0	19,5	218,0	15/3						
	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 210-211.

BIMETALLIC CONNECTORS

CAA-M

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 209, 211.

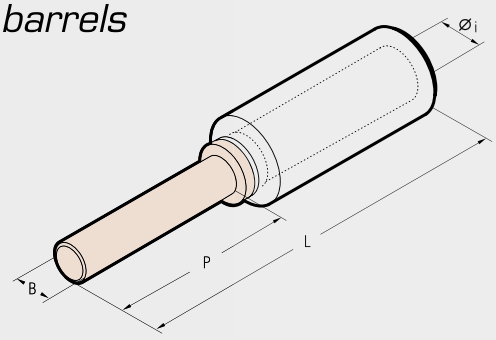
Conductor Size sqmm	Ø Stud mm	Ref.	Dimensions mm Øi	B	L	d	Quantity Box/Bag	Hydraulic Tools
10	12	**CAA 10-M 12**	4,3	24	87,0	13,0	*90/3*	HT 131-UC, RHU 131-C, B 1300-UC
16	12	**CAA 16-M 12**	5,5	24	87,0	13,0	*90/3*	
25	12	**CAA 25-M 12**	6,5	24	87,0	13,0	*90/3*	
35	12	**CAA 35-M 12**	8,0	24	87,0	13,0	*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	*18/3*	
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*	HT120, HT131C, RHC 131, ECW-H3D
	16	**CAA 300-34 M 16**	22,5	35	120,0	17,0	*15/3*	
	16	**CAA 300-M 16**	23,3	35	152,5	16,5	*12/3*	RHU 230-630
400	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

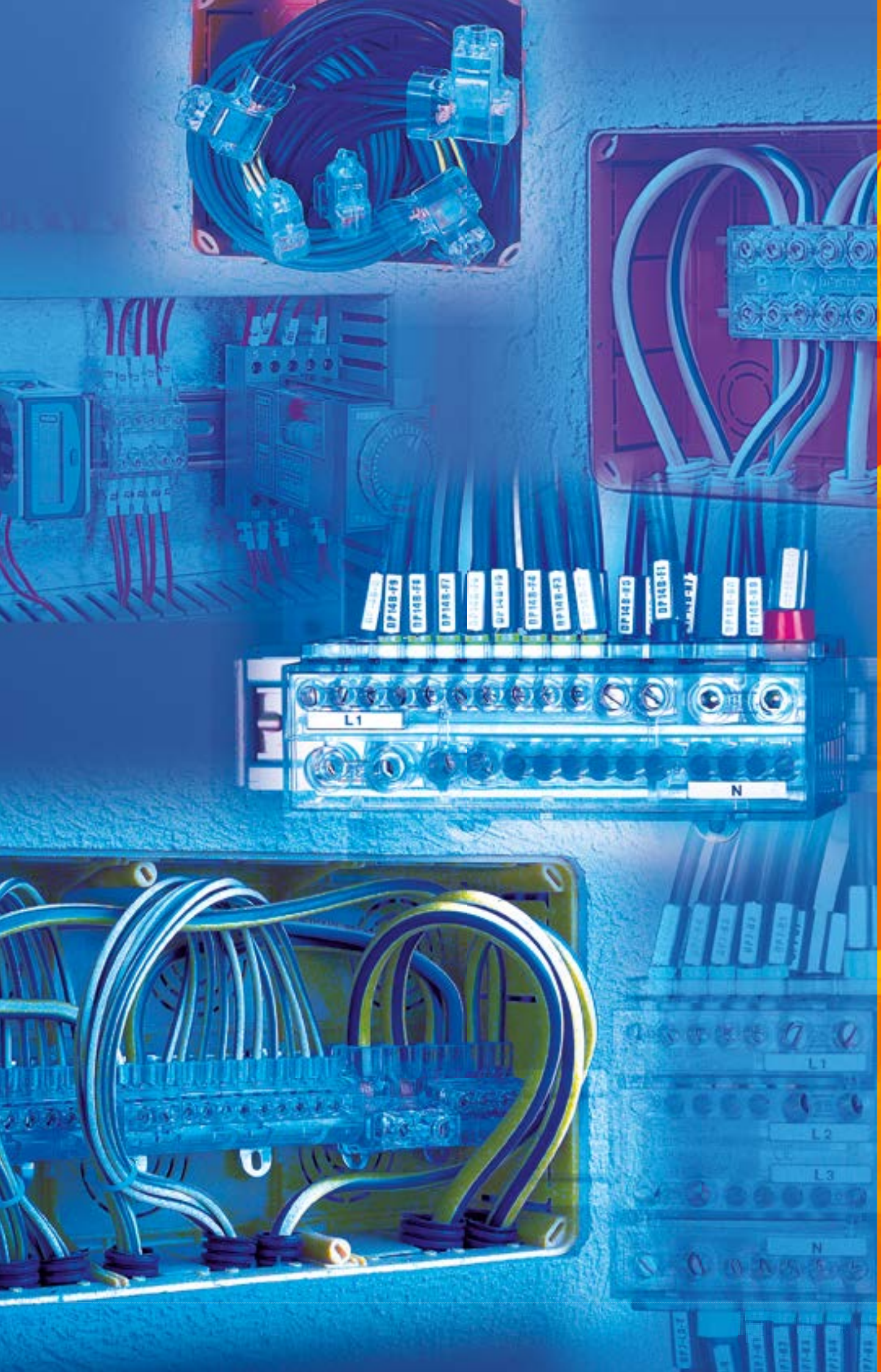
MTA-C

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 209, 211.

Conductor Size sqmm	Ref.	Dimensions mm Øi	B	P	L	Quantity Box/Bag	Hydraulic Tools
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

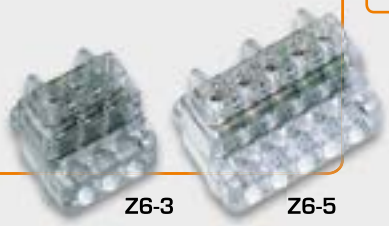
SINGLE POLE TERMINAL BLOCKS

type ZETApiù®

Z6

indirect clamping

nominal section 6 sqmm



Z6-3 Z6-5

Z6-6 Z6-10

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 "ZETApiù" 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***

SINGLE POLE TERMINAL BLOCKS

type ZETApiù®

Z16

indirect clamping

nominal section 16 sqmm

Z16-3 Z16-4

Z16-5N

Z16-8

Z16-12

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÷6)	(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÷10)	(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

type ZETApiù®

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+4)	*(2 way)* 35 + *(4 way)* 16	450	85	IP 20	V-0 (UL 94)	83x41xh43	130	*8*
Z35-6D							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.

type ZETApiù®

SINGLE POLE TERMINAL BLOCKS

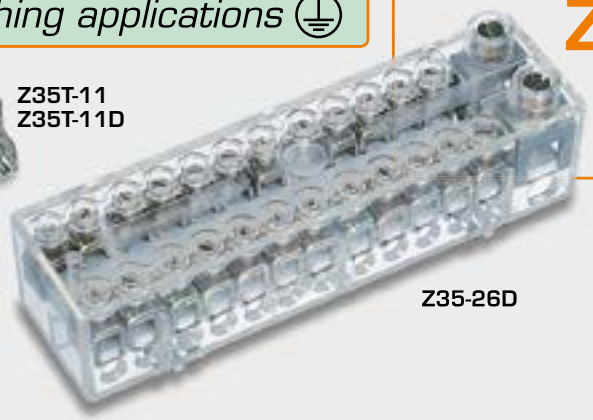
indirect clamping

for earthing applications ⏚

Z35
Z50

Z35T-11
Z35T-11D

Z50-10D



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+10)	*(1 way)* 35 + *(10 way)* 6	85	V-0 (UL 94)	58x43xh42	70	*10*
Z35T-11D					58x53xh47	75	
Z35-26D	26 (2+24)	*(2 way)* 35 + *(24 way)* 10	85	V-0 (UL 94)	151x52xh48	379	*4*
Z50-10D	10 (2+8)	*(2 way)* 50 + *(8 way)* 25	85	V-0 (UL 94)	77,5x55xh49	320	*6*

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 "ZETApiù"

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□	3 x 6□	1 x 6□ R/F 1 x 4□ R/F 1÷2 x 2,5□ R/F 1÷2 x 1,5□ R/F 1÷4 x 1□ R/F	CE, 6 sqmm 450 V T 85°C
Z6-5 Z6-5D	6□	5 x 6□		
Z6-6 Z6-6D	6□	6 x 6□		CE, 6 sqmm 450 V T 85°C
Z6-10 Z6-10D	6□	10 x 6□		
Z16-3 Z16-3D	16□	3 x 16□	1 x 16□ R/F 1 x 10□ R/F 1÷2 x 6□ R/F 1÷3 x 4□ R/F 1÷4 x 2,5□ R/F 1÷8 x 1,5□ R/F	CE, 16 sqmm 450 V T 85°C
Z16-4 Z16-4D	16□	4 x 16□	1 x 16□ F 1 x 10□ F 1÷2 x 6□ F 1÷3 x 4□ F 1÷4 x 2,5□ F 1÷8 x 1,5□ F	CE, 16 sqmm 450 V T 85°C
Z16-5N Z16-5ND	16□	5 x 16□	1 x 16□ R/F 1 x 10□ R/F 1÷2 x 6□ R/F 1÷3 x 4□ R/F 1÷4 x 2,5□ R/F 1÷8 x 1,5□ R/F	CE, 16 sqmm 450 V T 85°C
Z16-8 Z16-8D	16□/6□	2 x 16□	1 x 16□ R/F 1 x 10□ R/F 1÷2 x 6□ R/F 1÷3 x 4□ R/F 1÷4 x 2,5□ R/F 1÷8 x 1,5□ R/F	CE, 16÷6 sqmm 450 V T 85°C
		6 x 6□	1 x 6□ R/F 1 x 4□ R/F 1÷2 x 2,5□ R/F 1÷2 x 1,5□ R/F 1÷4 x 1□ R/F	
Z16-12 Z16-12D	16□/6□	2 x 16□	1 x 16□ F 1 x 10□ F 1÷2 x 6□ F 1÷3 x 4□ F 1÷4 x 2,5□ F	CE, 16÷6 sqmm 450 V T 85°C
		10 x 6□	1 x 6□ F 1 x 4□ F 1÷2 x 2,5□ F 1÷2 x 1,5□ F 1÷4 x 1□ 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 "ZETApiù"

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□	3 x 35□	1 x 35□ R/F 1 x 25□ R/F 1÷2 x 16□ R/F 1÷3 x 10□ R/F 1÷5 x 6□ R/F	CE, 35 sqmm 450 V T 85°C
Z35-4 Z35-4D	35□	4 x 35□	1 x 35□ F 1 x 25□ F 1÷2 x 16□ F 1÷3 x 10□ F 1÷6 x 6□ F	CE, 35 sqmm 450 V T 85°C
Z35-6 Z35-6D	35□/16□	2 x 35□	1 x 35□ R/F 1 x 25□ R/F 1÷2 x 16□ R/F 1÷3 x 10□ R/F 1÷6 x 6□ F	CE, 35÷16 sqmm 450 V T 85°C, LR, RINA
		4 x 16□	1 x 16□ R/F 1 x 10□ R/F 1÷2 x 6□ R/F 1÷3 x 4□ R/F 1÷5 x 2,5□ F	
Z35T-11 Z35T-11D	35□/6□	1 x 35□	1 x 35□ R/F 1 x 25□ R/F 1 x 16□ R/F 1 x 10□ R/F	CE, 35÷6 sqmm T 85°C
		10 x 6□	1 x 6□ R/F 1 x 4□ R/F 1÷2 x 2,5□ R/F 1÷2 x 1,5□ R/F 1÷4 x 1□ R/F	
Z35-26D	35□/10□	2 x 35□	1 x 35□ R/F 1 x 25□ R/F 1÷2 x 16□ R/F 1÷3 x 10□ R/F 1÷6 x 6□ R/F	CE, 35÷10 sqmm T 85°C, LR, RINA
		24 x 10□	1 x 10□ R/F 1 x 6□ R/F 1÷2 x 4□ R/F 1÷4 x 2,5□ R/F	
Z50-10D	50□/25□	2 x 50□	1 x 50□ R/F 1 x 35□ R/F 1÷2 x 25□ R/F 1÷4 x 16□ R/F	CE, ** RINA, 50÷25 sqmm T 85°C
		8 x 25□	1 x 25□ R/F 1÷2 x 16□ R/F 1÷3 x 10□ R/F 1÷6 x 6□ R/F 1÷9 x 4□ 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:

CE

Istituto italiano del Marchio di Qualità type approval

Lloyd's Register of Shipping type approval

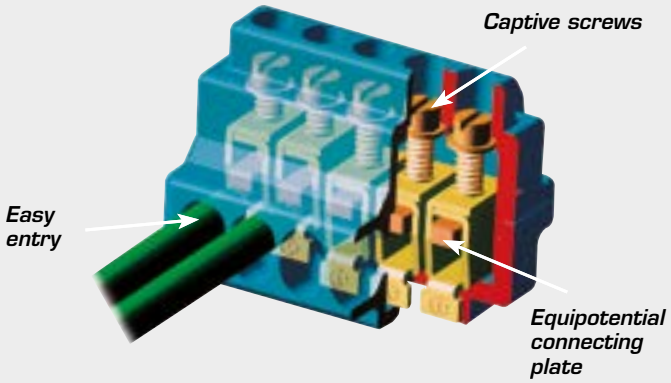
Registro Italiano Navale type approval

** EN 60947-7-1: 2002

CONFORM TO:

Directives 2006/95/CE

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



POWER DISTRIBUTION BLOCK

type ZETAblock®

Z-DP

indirect clamping

FOUR POLE 100 A

Z 25-DP7-100

TWO POLE 125 A

Z 35-DP14B-125

Z 50-DP12-160

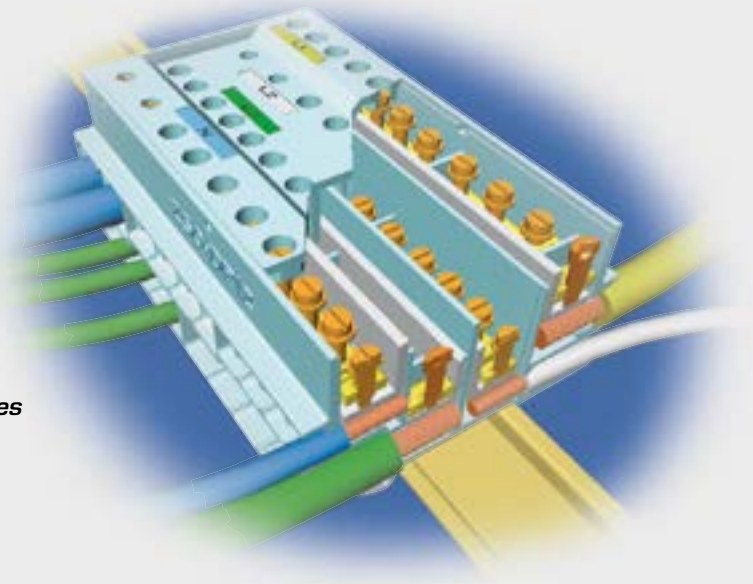
FOUR POLE 125 A

Z 35-DP14-125

FOUR POLE 160 A

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, ZETAblocks 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 Ui	Impulse voltage Uimp	Maximum operating current In	Allowable short duration fault current Icw	Maximum allowed peak fault current Ipk	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 ZETA*block*®

POWER DISTRIBUTION BLOCK

indirect clamping

Z-DP

CONNECTING CAPACITY OF POWER DISTRIBUTION BLOCK

POWER DISTRIBUTION BLOCK TYPE "ZETA*block*"

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

F = Flexible conductor

MARKINGS:

CE

IMQ *Istituto italiano del Marchio di Qualità type approval*

CONFORM TO:

Directives 2006/95/CE

EN 60947-7-1: 2009 Norms

ONE WAY TERMINAL BLOCKS

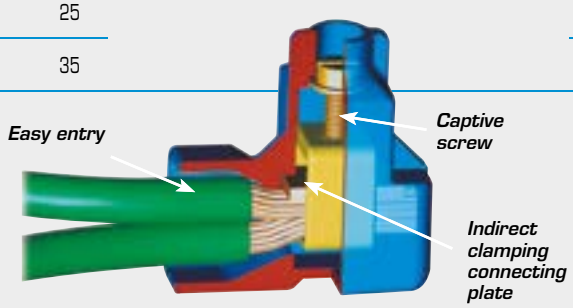
type ZETAmini®

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

TERMINAL BLOCKS TYPE "ZETAmini"

TYPE	NOMINAL SECTION	CONNECTING CAPACITY * No. of Conductors x Section		MARKINGS
Z2.5-1	2,5□	2 x 2,5□ *R/F* 2÷3 x 1,5□ *R/F* 2÷5 x 1,0□ *R/F*	2÷6 x 0,75□ *R/F* 2÷10 x 0,5□ *R/F* 2÷18 x Ø0,4÷0,6 *mm* communication type wire	CE, 2,5 sqmm 450 V T 85°C IP 20
Z6-1	6□	2 x 6□ *R/F* 2÷3 x 4□ *R/F* 2÷4 x 2,5□ *R/F* 2÷6 x 1,5□ *R/F* 2÷6 x 1□ *R/F*	2÷10 x 0,75□ *R/F* 2÷12 x 0,5□ *R/F* (1 x 6□ *F*) + (4 x 1,5□ *F*) (1 x 6□ *F*) + (2 x 2,5□ *F*)	CE, 6 sqmm 450 V T 85°C IP 20
Z10-1	10□	2 x 10□ *R/F* 2÷3 x 6□ *R/F* 2÷5 x 4□ *R/F* 2÷8 x 2,5□ *R/F* (1 x 6□ *F*) + (1 x 4□ *F*) + (2 x 2,5□ *F*) + (3 x 1,5□ *F*)	2÷12 x 1,5□ *R/F* 2÷20 x 1□ *R/F* 2÷25 x 0,75□ *R/F*	CE, 10 sqmm 450 V T 85°C IP 20
Z16-1	16□	2 x 16□ *R/F* 2÷3 x 10□ *R/F* 2÷5 x 6□ *R/F*	2÷8 x 4□ *R/F* 2÷12 x 2,5□ *R/F* 2÷18 x 1,5□ *R/F*	CE, 16 sqmm 450 V T 85°C IP 20
Z25-1	25□	2 x 25□ *R/F* 2÷3 x 16□ *R/F* 2÷4 x 10□ *R/F*	2÷8 x 6□ *R/F* 2÷11 x 4□ *R/F* 4÷16 x 2,5□ *R/F*	CE, 25 sqmm 450 V T 85°C IP 20
Z35-1	35□	2 x 35□ *R/F* 2÷3 x 25□ *R/F* 2÷4 x 16□ *R/F* 2÷7 x 10□ *R/F*	2÷11 x 6□ *R/F* 4÷17 x 4□ *R/F* 5÷28 x 2,5□ *R/F*	CE, 35 sqmm 450 V T 85°C IP 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

CE

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

Cembre

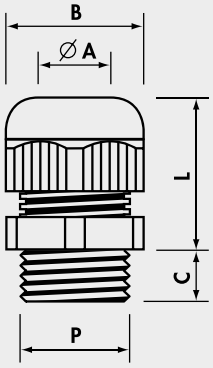
CABLE GLANDS AND ACCESSORIES

MAXIblock® CABLE GLANDS

1900

Polyamide PA6.6

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

Technical data pages 229 to 232

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

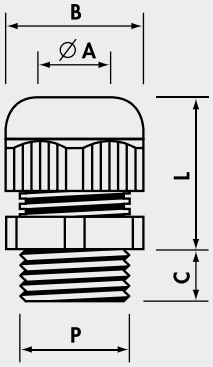
Material: POLYAMIDE PA6.6
self-extinguishing class V2 (UL 94)
Temperature range:
–20°C to +90°C (continuous)
Sealing ring: NEOPRENE® 50 sh A
Protection: IP 68
Colour: RAL 7035 light grey.
RAL 9005 black, RAL 7001 dark grey

MAXIblock® *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

◆*Not UL approved*

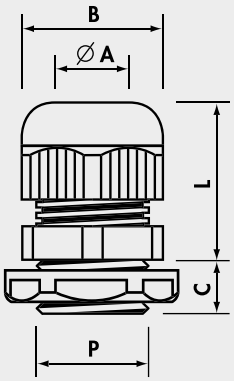
Technical data pages 229 to 232

MAXIblock® CABLE GLANDS

Polyamide PA6.6

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



MAXIblock® *standard, factory fitted with locknuts with collar*

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

File no. E220310

File no. E220310

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

File no. E220310

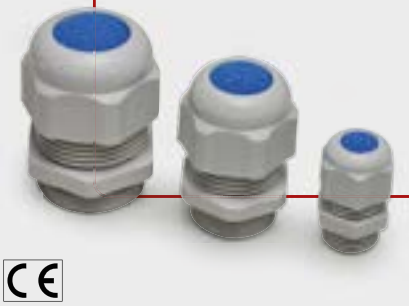
File no. E220310

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

MAXIblock® CABLE GLANDS

Polyamide PA6.6

1900DP



MAXIblock® *standard, factory fitted with Polyethylene foam discs*

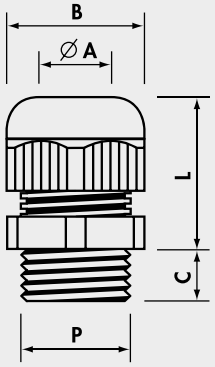
Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

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

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
Discs: 2 mm thick Polyethylene foam

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*
1900DP.07	Pg 7	12,7	3,5- 7	15	8	18-22	100/10
1900DP.09	Pg 9	15,5	5 - 8	19	8	22-26	100/10
1900DP.11	Pg11	18,8	5 -10	22	8	23-28	100/10
1900DP.13	Pg13,5	20,5	7 -12	24	9	24-29	50/10
1900DP.16	Pg16	22,6	10 -14	27	10	26-31	30/10
1900DP.21	Pg21	28,5	13 -18	33	12	30-35	20/10
1900DP.29	Pg29	37,2	18 -25	42	12	33-39	20/10
1900DP.36	Pg36	47,2	20 -32	53	14	42-49	10/5
1900DP.42	Pg42	54,2	28 -38	60	14	42-50	5/5
1900DP.48	Pg48	60,0	37 -45	66	15	45-55	5/5



1900

MAXIblock® *standard*

BSP thread ISO 228/1

File no. E220310

File no. E220310

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

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

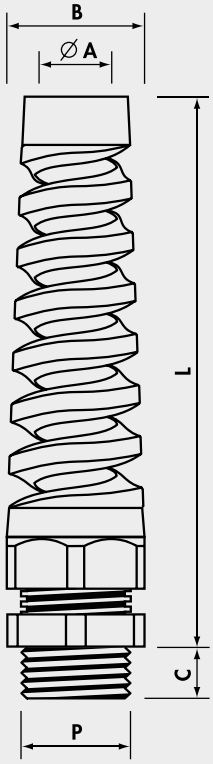
Technical data pages 229 to 232

spiralblock® CABLE GLANDS

1500

Polyamide PA6.6

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



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

MAXIblock® CABLE GLANDS

4900

Polyamide PA6.6

CE 0051 Ex II 2 G D

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

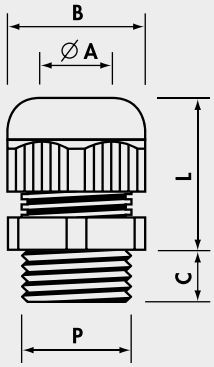
extended thread

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

Material: POLYAMIDE PA6.6
self-extinguishing class V2 (UL 94)
Safety level: Ex e IIC/Ex tb IIIC according to
EN 60079-0 : 2012
EN 60079-7 : 2007
EN 60079-31 : 2014
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

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

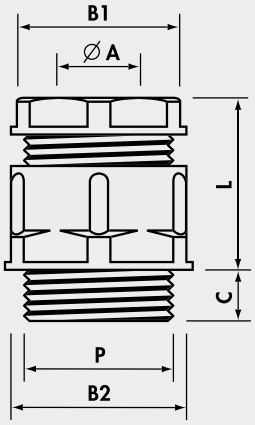
Technical data pages 229 to 232

COMPRESSION CABLE GLANDS

1700
1400

Polyamide PA6

Material: POLYAMIDE PA6
self-extinguishing class V0 (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



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

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

COMPRESSION CABLE GLANDS

Polyamide PA6

1700T

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

Material: POLYAMIDE PA6
self-extinguishing class V0 (UL 94)
Temperature range:
–20°C to +90°C (continuous)
Protection: IP 54
Colour: RAL 7035 light grey,
RAL 9005 black

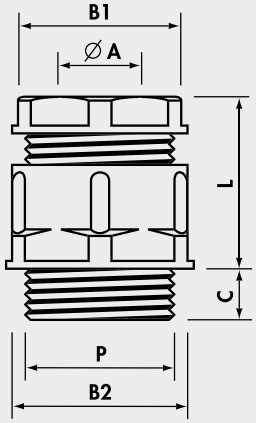
Compression cable gland - reduced cable entry

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

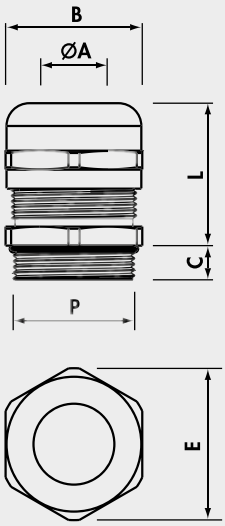
Material: POLYSTYRENE PS
Temperature range:
–20°C to +60°C (continuous)
Colour: RAL 7035 light grey,
RAL 9005 black

MAXIbrass® CABLE GLANDS

2900

Nickel Plated Brass

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

Technical data pages 229 to 232

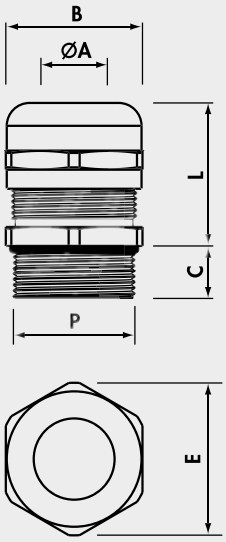
File no. E220310

File no. E220310

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

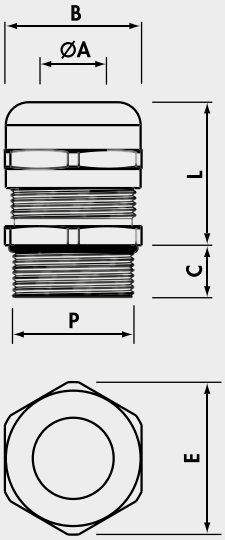
Technical data pages 229 to 232

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® 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® CABLE GLANDS

Nickel Plated Brass

2900

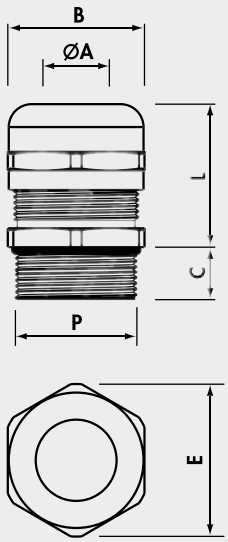
File no. E220310

File no. E220310

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® *standard, factory fitted with Polyethylene foam discs*

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

2900DP

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
2900DP.M12N	M12x1,5	12,2	3 - 7	16	18	6,5	16-20	100
2900DP.M16N	M16x1,5	16,2	4,5-10	20	23	7,0	20-25	100
2900DP.M20N	M20x1,5	20,5	7 -13	24	27	8,0	20-27	50
2900DP.M25N	M25x1,5	25,4	10 -17	29	32	8,0	24-30	50
2900DP.M32N	M32x1,5	32,5	11 -21	36	40	9,0	27-34	25
2900DP.M40N	M40x1,5	40,5	19 -28	45	50	9,0	34-42	10
2900DP.M50N	M50x1,5	50,5	26 -35	54	60	10,0	35-43	8
2900DP.M63N	M63x1,5	64,0	34 -45	67	74	15,0	40-52	5

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
Discs: 2 mm thick Polyethylene foam
Temperature range: -25°C to +100°C (continuous)

MAXIbrass®

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
2900DP.07N	Pg 7	12,7	3 - 7	16	18	5,0	16-20	100
2900DP.09N	Pg 9	15,5	4 - 8	17	19	6,0	17-23	100
2900DP.11N	Pg11	18,8	4,5-10	20	23	6,0	20-25	100
2900DP.13N	Pg13,5	20,5	5 -12	22	25	6,5	20-26	50
2900DP.16N	Pg16	22,6	7 -13	24	27	6,5	20-27	50
2900DP.21N	Pg21	28,5	10 -17	30	33	7,0	24-30	50
2900DP.29N	Pg29	37,2	17 -25	40	45	8,0	30-37	25
2900DP.36N	Pg36	47,2	20 -32	50	55	8,0	38-48	10
2900DP.42N	Pg42	54,2	28 -38	57	63	10,0	39-48	5
2900DP.48N	Pg48	60,0	34 -45	67	74	15,0	40-52	5

Technical data pages 229 to 232

MAXIbrass® ATEX CABLE GLANDS

5900

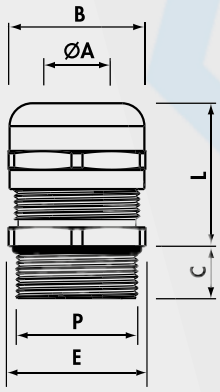
Nickel Plated Brass

CE 0051 Ex II 2 G D

Certificate No IMQ ATEX 028X

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

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 : 2012
EN 60079-7 : 2007
EN 60079-31 : 2014
Areas of utilisation: 1 & 2, 21 & 22



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
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

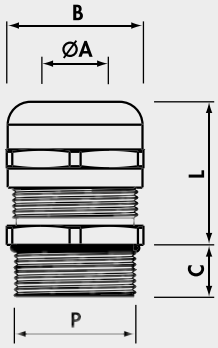
20M3

Nickel Plated Brass

Protection: IP 68, 5 bar
Temperature range:
-30°C to +120°C (continuous)

CE

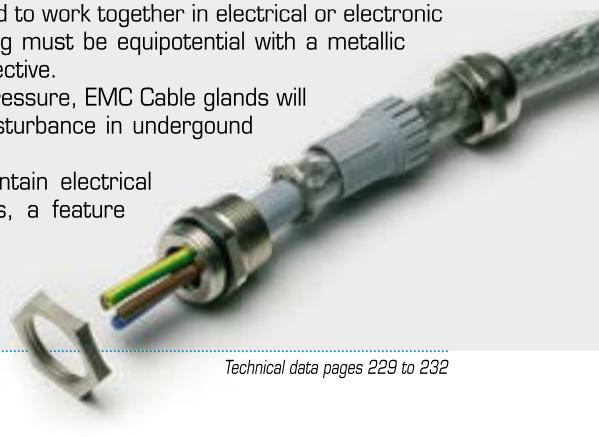
Material: NICKEL PLATED BRASS (CuZn 40 Pb 3)
Sealing-ring: CLOROPRENE (CR)
Cable grip insert: PA6.6
O-Ring: (NBR) (factory fitted)



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 undergound 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 229 to 232

COMPRESSION CABLE GLANDS

Brass

2003
2002
2001

Metric thread M 1.5 pitch CEI EN 60423 CEI EN 50262

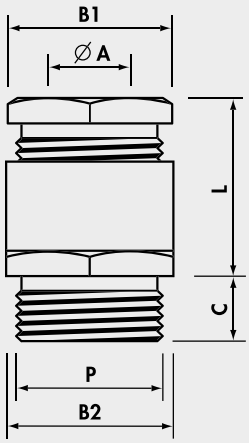
Ref. Nickel Plated Brass	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B1 Spanner Head (mm)	B2 Spanner Body (mm)	C (mm)	L min-max (mm)	Quantity *Box/Bag*
2003M1221N	M12x1,5	12,2	4 - 6	13	14	5	13-16	500/100
2003M1621N	M16x1,5	16,2	8 -10	15	17	5	14-17	200/100
2003M2021N	M20x1,5	20,5	10 -12	20	22	6	16-19	150/50
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

Technical data pages 229 to 232

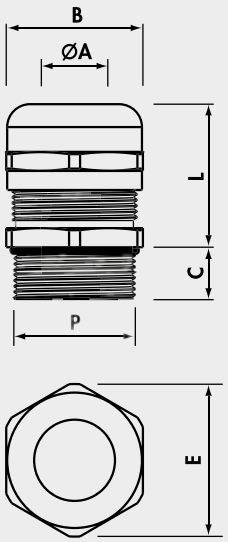
MAXI*inox* CABLE GLANDS

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)



MAXI*inox* 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

MAXI*inox* 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

MAXI*inox* CABLE GLANDS

Stainless Steel 303 (X8 CrNiS 18-9)

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

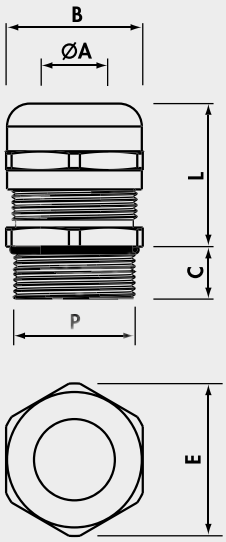
7900
7900A

MAXI*inox* 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)



MAXI*inox* Stainless Steel AISI 316L

Pg thread DIN 40 430

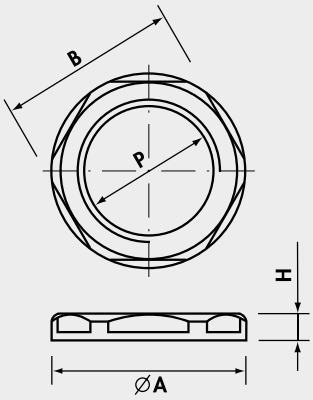
Stainless Steel AISI 316L	P	Fixing Hole Ø (mm)	Ø A min-max (mm)	B Spanner (mm)	E (mm)	C (mm)	L min-max (mm)	Quantity *Box/Bag*
7900A.07	Pg 7	12,7	3 - 7	16	18	5,0	16-20	60/20
7900A.09	Pg 9	15,5	4 - 8	17	19	6,0	17-23	60/20
7900A.11	Pg11	18,8	4,5-10	20	23	6,0	20-25	100/20
7900A.13	Pg13,5	20,5	5 -12	22	25	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

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



Metric thread M 1.5 pitch CEI EN 60423

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

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

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

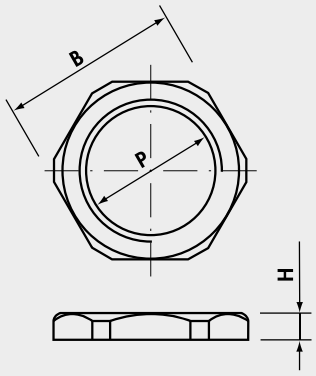
Pg thread DIN 40 430 - Dimensions DIN 46 320

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

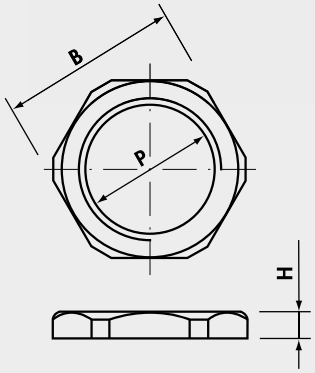
Ref. Light Grey	P	B Spanner (mm)	H (mm)	*Quantity* *Box/Bag*
1410	G1/4"	19	5	800/100
1411	G3/8"	23	6	600/100
1412	G1/2"	27	6	400/100
1413	G5/8"	30	6	100
1414	G3/4"	34	7	200/100
1415	G1"	40	7	50

Add to Ref: N for Black

LOCKNUTS

Brass

2033
2032
2031



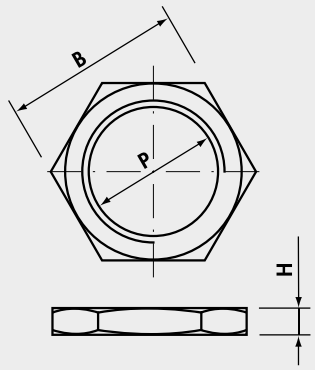
Metric thread M 1.5 pitch CEI EN 60423

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	300/50
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

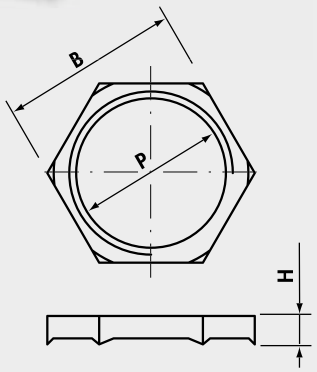
Ref. Plain Brass	P	B Spanner (mm)	H (mm)	Quantity Box/Bag
2031014	G1/4"	16	3	2.400/100
2031038	G3/8"	19	3	1.000/100
2031012	G1/2"	24	3,5	1.000/100
2031058	G5/8"	26	4	500/50
2031034	G3/4"	30	4	500/50
2031100	G1"	37	4	250/25
2031118	G1"1/8	41	4,5	100/25
2031114	G1"1/4	45	4,5	200/20
2031112	G1"1/2	52	5,5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

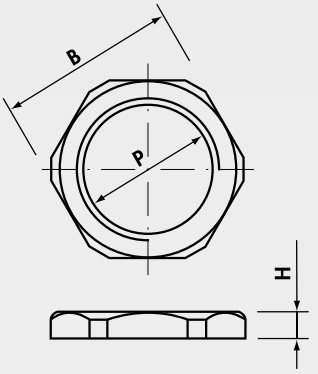
Ref. Nickel Plated Brass	P	B Spanner (mm)	H (mm)	*Quantity Box/Bag*
20N3M12N	M12X1,5	15	3,5	1,000/100
20N3M16N	M16X1,5	19	3,5	1,000/100
20N3M20N	M20X1,5	24	3,5	500/100
20N3M25N	M25X1,5	30	4,0	400/100
20N3M32N	M32X1,5	36	4,0	200/100
20N3M40N	M40X1,5	46	4,7	100/50
20N3M50N	M50X1,5	60	5,7	50/50
20N3M63N	M63X1,5	70	6,7	50/25

MAXI*inox* LOCKNUTS

7032
7033

Stainless Steel 303 (X8 CrNiS 18-9)

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



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

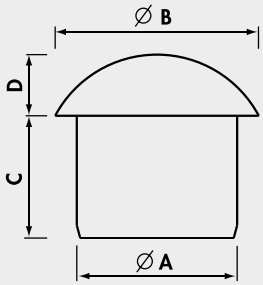
Stainless Steel AISI 303	Stainless Steel AISI 316L	P	B Spanner (mm)	H (mm)	AISI 303 *Quantity Box/Bag*	AISI 316L *Quantity Box/Bag*
7032007	7032A007	Pg 7	16	2,8	450/30	300/20
7032009	7032A009	Pg 9	20	2,8	450/30	300/20
7032011	7032A011	Pg11	22	3	300/30	200/20
7032013	7032A013	Pg13,5	22	3	300/30	200/20
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**®, **MAXI***brass*® and **MAXI***inox* cable glands and maintaining IP 68.



Plugs

Ref.	Suitable for MAXIblock®	Suitable for MAXIbrass® MAXIinox	∅ A (mm)	∅ B (mm)	C (mm)	D (mm)	Quantity Box/Bag
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 M16R + Pg11R	M12 + Pg7 M16R + Pg11R	6,8	12	12	4,5	1.000/100
TCP15	Pg9	Pg9	8	11	11,5	5	1.500/100
TCP18	M16 + Pg11	M16 + Pg11	9,5	12,5	13	5	800/100
TCP20	M20R Pg13,5 + Pg13,5R Pg16R	M20R Pg13 + Pg13,5R Pg16R	10	15	14	6	800/100
TCP25	M20 + Pg16	M20 + Pg16	12,5	17	15	8	400/100
TCP30	M25R + M32R Pg21R	M25R + M32R Pg21R	12,5	22,5	18	9	300/100
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

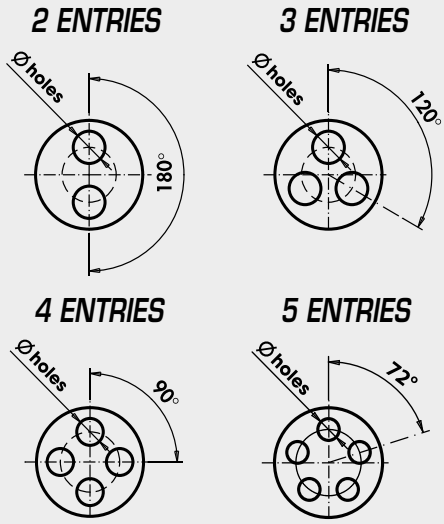
R: reduced cable entry

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 MAXIblock®	Suitable for MAXIbrass® MAXIinox®	n° entries	Ø Dia entry (mm)	Quantity Box/Bag
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	1.000/100
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

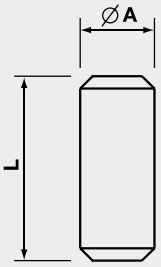


Material: POLYAMIDE PA6.6
Temperature range:
–20°C to +90°C (continuous)
Colour: RAL 7035 light grey

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

Multi-entry seal plugs

Ref.	Suitable for Seal	Ø A (mm)	L (mm)	Quantity Box/Bag
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

2093
2043
20A4

Nickel Plated Brass

Material: NICKEL PLATED BRASS (CuZn 40 Pb 3)

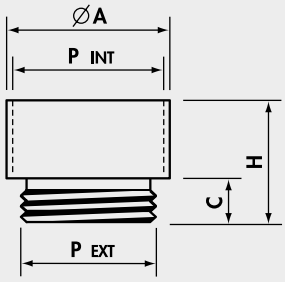


Fig. 1

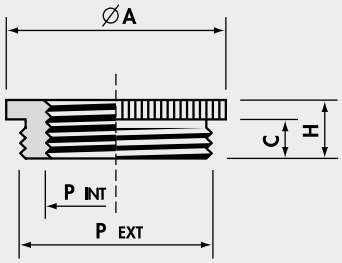


Fig. 2

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

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

ENTRY THREAD ADAPTERS

Nickel Plated Brass

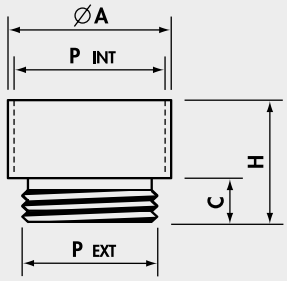
1800 2042

Entry thread enlargers

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

Ref.	P EXT	P INT	∅ 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

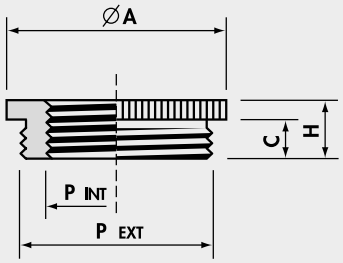
Material: NICKEL PLATED BRASS (CuZn 40 Pb 3)



Entry thread reducers

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

Ref.	P EXT	P INT	∅ 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
20424236N	Pg42	Pg36	57	10	14	50/25
20424836N	Pg48	Pg36	64	10	14	50/25
20424842N	Pg48	Pg42	64	10	14	50/25



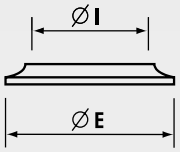
6010

Compression washers

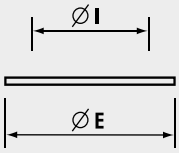
Material: Zinc plated STEEL UNI 5961/84

Ref.	Fits thread	∅ E (mm)	∅ I (mm)	*Quantity Box/Bag*
6010.14	Pg7 + G1/4"	11	8	15.000/1.000
6010.38	Pg9 + G3/8"	14,5	10	5.000/1.000
6010.11	Pg11 + G3/8"	17	12	5.000/1.000
6010.12	Pg13,5 + G1/2"	18	14	4.000/1.000
6010.58	Pg16 + G5/8"	20	15,5	3.000/1.000
6010.34	G3/4"	24	18,5	2.500/500
6010.114	G1"1/4	38	33	1.000/500
6010.21	Pg21 + G3/4"	26,5	20	2.000/500
6010.01	G1"	30	24,5	1.500/500
6010.29	Pg29 + G1"1/8	35	26,5	1.000/500
6010.36	Pg36 + G1"1/2	45	38	750/250
6010.42	Pg42	51	42,5	500/250
6010.48	Pg48 + G2"	57	48	400/100

Subject to availability, the compression washers could be of type A or B



Type A



Type B

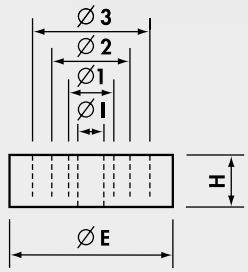
1880
1890

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	5,5	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

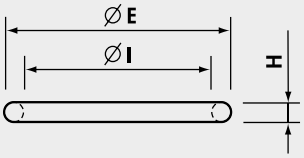
*material: RUBBER NR



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

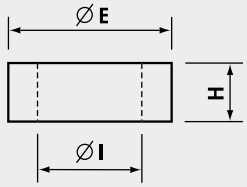


SEALING RINGS

PVC 50 sh A

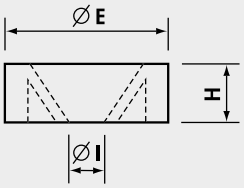
341
342
343
344

Material: PVC 50 sh A



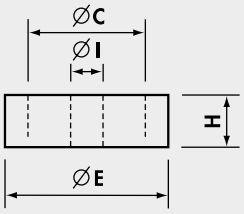
Cylindrical sealing rings

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



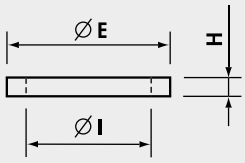
Double sealing rings

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

357 FD

Material: BUTADIENE-NITRILE NBR 70 sh A
Temperature range: -20°C to +70°C
Colour: RAL 7035 light grey

Ref.	Fits thread	∅ E (mm)	∅ 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	∅ E (mm)	∅ 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 + M16	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	46	38	1,2	500/20
FD 36	Pg36 + G1"1/2"	54	45,5	1,2	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

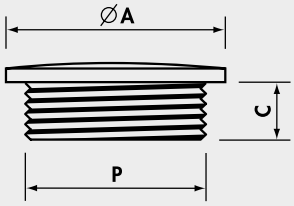
*recommended with set screws

ENTRY PLUGS

Polyamide PA6

1053
1052

Material: POLYAMIDE PA6
reinforced with fibreglass
self-extinguishing class HB (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	∅ 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	∅ 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

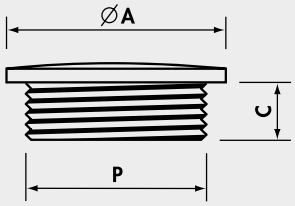
Protection: IP 54

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

Metric thread M 1.5 pitch CEI EN 60423

Ref. Light Grey	P	∅ 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



Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Light Grey	P	∅ 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

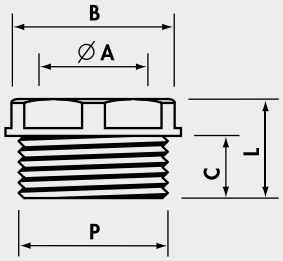
Add to Ref: N for Black

ENTRY BUSHES

1700

Polyamide PA6

Material: POLYAMIDE PA6
self-extinguishing class V0 (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	∅ A (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

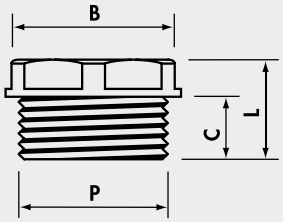
BSP thread ISO 228/1

* **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	∅ A (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

*Add to Ref: N for Black

ENTRY PLUGS AND BUSHES

Brass

2053
2052
2021

Entry plugs

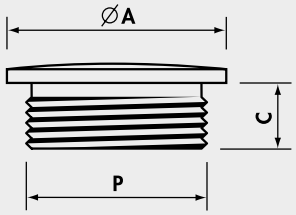
Metric thread M 1.5 pitch CEI EN 60423

Ref. Nickel Plated Brass	P	∅ 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

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

Pg thread DIN 40 430 - Dimensions DIN 46 320

Ref. Nickel Plated Brass	P	∅ 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

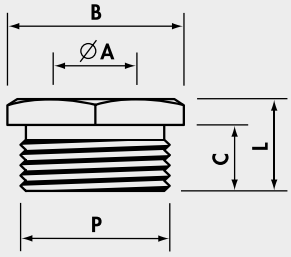


Entry bushes

BSP thread ISO 228/1

Ref. Brass	P	∅ 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

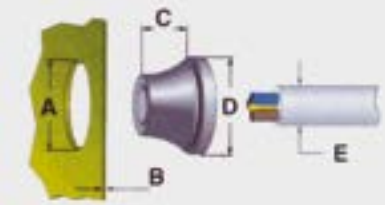
Add to Ref: N for NICKEL PLATED BRASS



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 A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Quantity Box/Bag
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 A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	Quantity Box/Bag
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

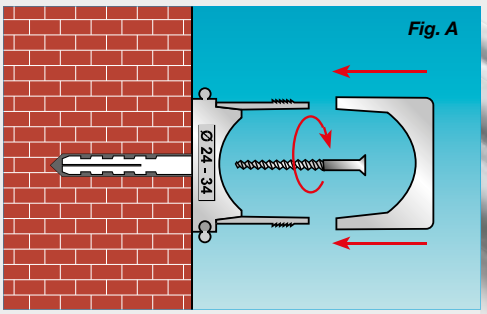
3600

Material: ABS self-extinguishing class V0 (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

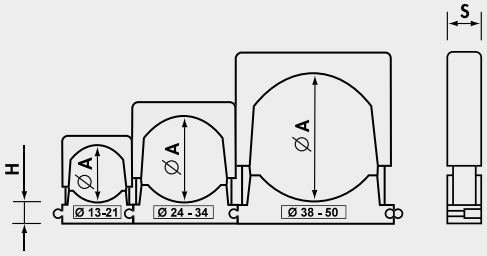
SICURclips

modular retaining clips - ABS

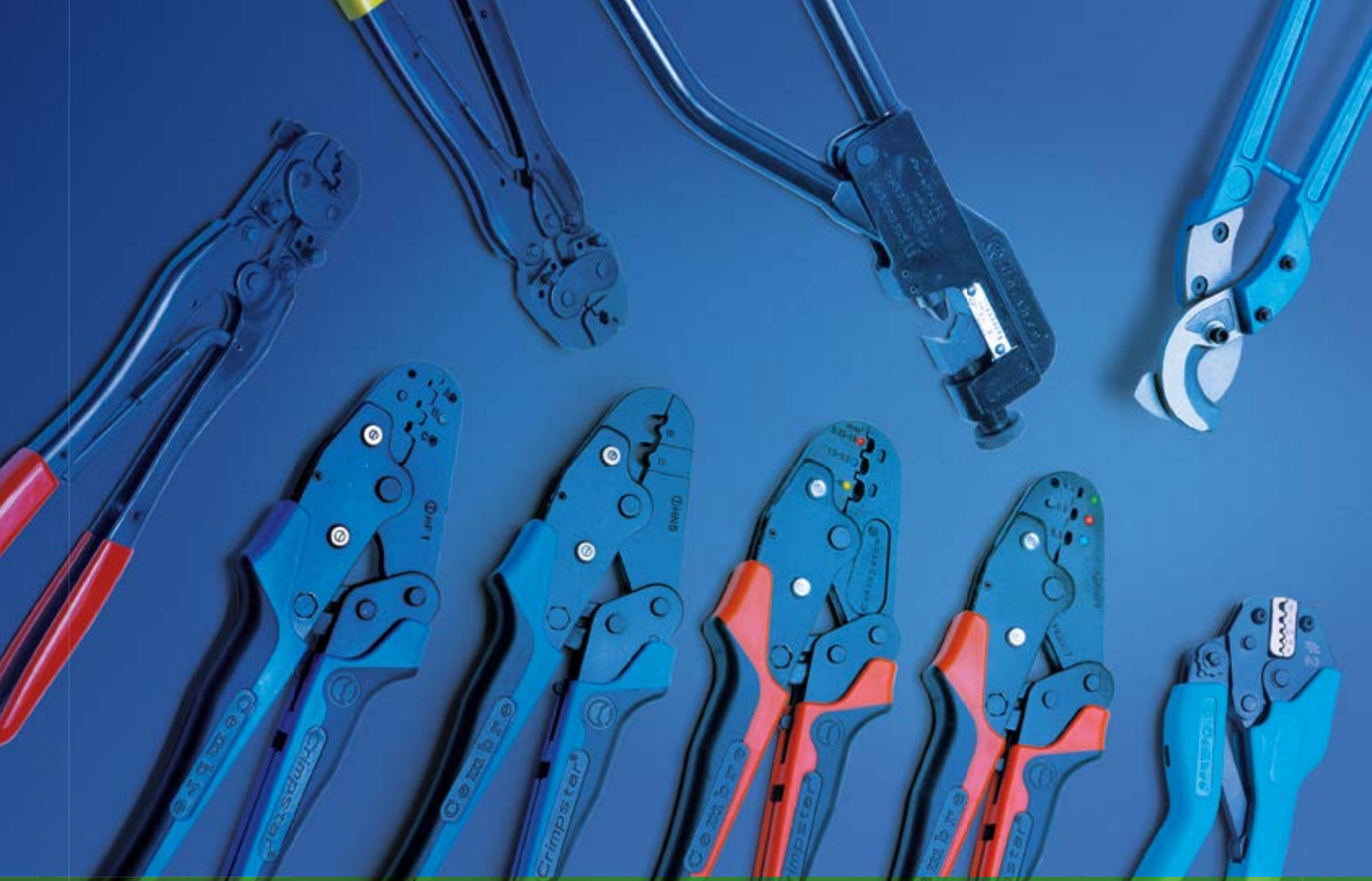
Application: Fix SICURclip base to surface using dia. 5 - 6 mm screw (Ref. Fig. A).
Insert cable, tubing or flexible conduit.
Fit adjustable cover and press to secure.
Modular SICURclips of the same or different size may easily be joined together.



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

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® HNN 3**	Crimp style:
	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

HNN 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® HNN 4**	Crimp style:
	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

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:
Crimping range:		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
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:
Crimping range:		End sleeves for conductor sizes 0,5 to 4 sqmm
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

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 mm²
	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 mm²
	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

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:
	Crimping range:	Uninsulated terminals and connectors for conductor sizes 0,25 to 10 sqmm
	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:
	Crimping range:	Uninsulated 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:	489 g
	Package dimensions:	240 x 81 x 25 mm

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**	Crimp style: ⬡
	Crimping range:	Uninsulated terminals and connectors A-M, L-M and L-P series for conductor sizes 10 to 25 mm²
	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

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**	Crimp style: ⬡
	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

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**	Crimp style:
Crimping range:		Open barrel brass terminals for conductors sizes 0,5 to 4 sqmm (not BN-FAB/FAR type)
Dimensions:		
Length (closed handles)		234,5 mm
Width (closed handles)		73,0 mm
Height		18,3 mm
Weight:		509 g
Package dimensions:		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**	Crimp style:
Crimping range:		Open barrel brass terminals for conductors sizes 0,08 to 1,3 sqmm (28 to 16 AWG)
Dimensions:		
Length (closed handles)		234,5 mm
Width (closed handles)		73,0 mm
Height		18,3 mm
Weight:		497 g
Package dimensions:		240 x 81 x 25 mm

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

HN-CS4

Specific positioner for Cembre CS4 connectors

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-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

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: V

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 mm^2

Construction features:

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

Technical features:	HP4-R	Crimp style:
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

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 mm^2

Construction features:

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

Technical features:	HP4-B	Crimp style:
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

MECHANICAL TOOLS HP4 RANGE

HP4-G

Construction features:

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

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

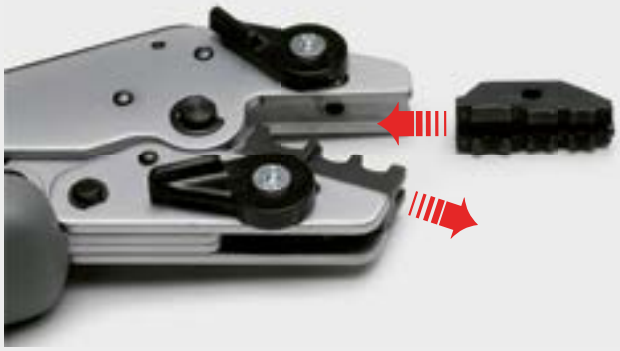
New

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 113 for **HB 11** cable stripper

MECHANICAL TOOL IDT

WITH MODULAR INTERCHANGEABLE DIES

New

DIES FOR PHOTOVOLTAIC CONNECTORS

4300-3540 *MC3 Multi Contact*
4300-3539 *MC4 Multi Contact*
4300-3541 *Tyco Solarlok*

See page 113 for **HB 11** cable stripper

IDT

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.

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 mm² (Red - Blue)	Size 4 ÷ 6 mm² (Yellow) Size 0,1 ÷ 0,4 mm² (Green)

CONNECTORS WITH HEAT SHRINKABLE INSULATION

4300-3258	4300-3262
Size 0,5 ÷ 2,5 mm² (Red - Blue)	Size 4 ÷ 6 mm² (Yellow) Size 0,32 ÷ 0,75 mm² (Green)

UNINSULATED CONNECTORS

4300-3137	4300-3241
Size 0,75 ÷ 2,5 mm²	Size 4 ÷ 10 mm²

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

4300-3147	4300-3148
Size 0,14 ÷ 4 mm²	Size 6 ÷ 10 mm²

INSULATED AND UNINSULATED END SLEEVES

4300-3127	4300-3153	4300-3154
Size 0,25 ÷ 10 mm²	Size 16 ÷ 25 mm²	Size 35 ÷ 50 mm²

OPEN BARREL CONNECTORS

4300-3146
Size 0,5 ÷ 6 mm²

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 Size 2,5 - 4/6 mm²	MC4 Size 2,5/4/6 mm²	Tyco Solarlok Size 2,5/4/6 mm²

VALSTAR R3 IDT
To order separately - sturdy plastic case designed to store an IDT tool and up to 10 modular dies.

Modular die storage housings are easily combined for convenient transportation

IDT tool pack

Modular die pack

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

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

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 5X

Robust-A

New

Professional scissors with Special Steel frame, high hardness blades (58 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 Ø 12,7 to 63,5 mm and primary insulator in XLPE max Ø 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

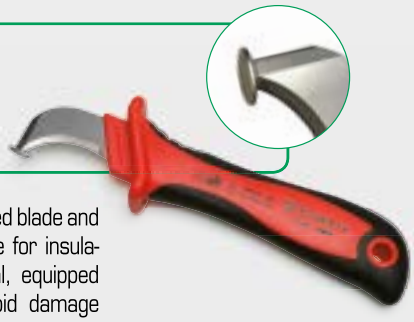
HB 2

Cable stripping tool for circular cables Ø 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 (mm)	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 PRESS TOOLS

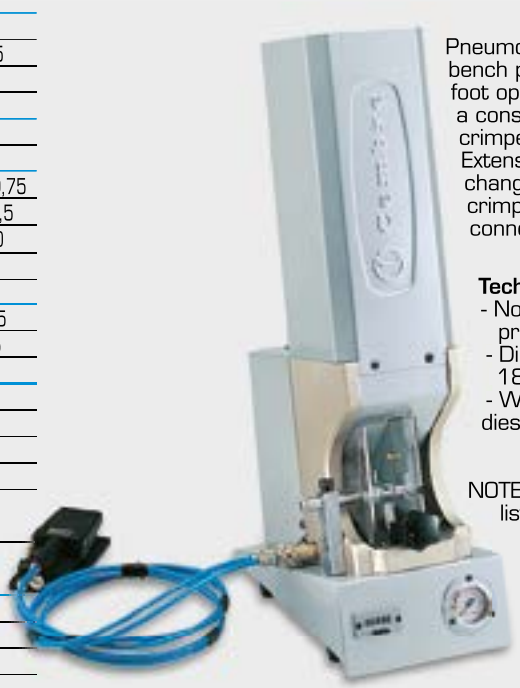
BENCH PRESS TOOLS

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
PH1-1	PH-1**	*Through connectors PE HD insulated*			0,5÷6
		NL-M, NL-P connectors PA6.6 insulated			0,25÷6
KE 0.75-1	PK-1	*End Sleeves*		*KE, PK...*	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-..	RN-..	0,25 - 1,5
		A 06-M..	S 2.5-..	BN-..	1,5 - 2,5
		A 1-M..	S 6-..	GN-..	4 - 6
ME 1-50	PU-1	*Uninsulated Copper lugs*		*A1-M..*	4 - 6
ME 2-50	ME-1			*A2-M..* *S10-M..*	10
ME 3-50				*A3-M..*	16
ME 5-50				*A5-M..*	25
ME 7-50				*A7-M..*	35
ME 9-50				*A9-M..*	
ME 10-50				*A10-M..*	50
ME 12-50				*A12-M..*	
MN 2RF-50	MN RF-1	*Polyamide insulated lugs*		*ANE2-M..*	10
MN 3RF-50				*ANE3-M..*	16
MN 5RF-50				*ANE5-M..*	25
MN 7RF-50				*ANE7-M..*	35
				ANE9-M..	

** Supplied as standard with the machine*
*** Supplied as standard with the die*



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

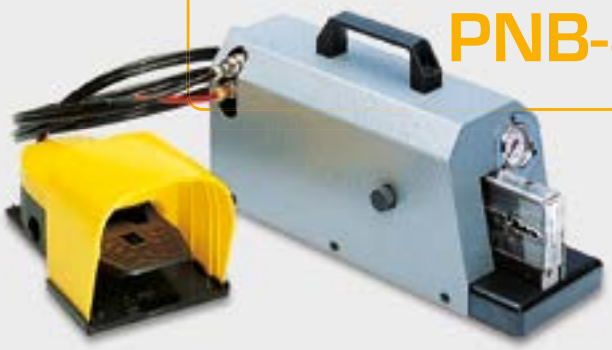
Technical details:
- Nominal operating pressure: 6 bar
- Dimensions LxDxH: 180x320x700 mm
- Weight: 23 kg (without dies)

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.

ELECTRO-PNEUMATIC BENCH PRESS

EPB-1N

automatic stripping / crimping machine for insulated end sleeves

New

Bench press type **EPB-1N**, electro-pneumatically operated, is designed for stripping and crimping insulated end sleeves Cembre type PKC, PKD and PKE.
The basic configuration processes connectors of c.s.a 0,5/0,75/1,0 and 1,5 mm² with a sleeve lengths of 6, 8, 10 and 12 mm.

Adapter kits are available:

KIT 2.5-EPB1N
for insulated end sleeves c.s.a **2,5 mm²**
with a sleeve length of 8, 10 and 12 mm

KIT 4-EPB1N
for insulated end sleeves c.s.a **4,0 mm²**
with a sleeve length of 10 mm

Stripping and crimping operations are carried out in quick succession. Adjustable loading speed of vibrating charger.
Quick and easy change of configuration for different connector sizes. Automatic adjustment of operating perameters to suit each configuration.
Modular structure and wear-free components guarantee excellent reliability.

Adapter Kit for insulated end sleeves c.s.a **2,5 mm²**
(KIT 2.5-EPB1N)

Technical data

Bench Press EPB-1N	
Power Supply:	230 V/50 Hz (110 V/60 Hz)
Current:	0,5 A
Connector c.s.a:	0,5-1,5 mm² (basic configuration)
Length of crimp:	6, 8, 10 and 12 mm
Geometry of crimp:	Trapezoidal
Cycle time:	2 s
Compressed Air supply:	Min. 4 - Max 6 bar
Air consumption:	1,2 l/cycle
Cycle controller:	Electro-pneumatic, with microprocessor
Counter:	Digital
Dimensions (w x l x d):	240 x 390 x 490 mm
Weight:	29 kg

ELECTRICAL CRIMPING TOOL

Portable

ECT-KE2.5N

CE

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

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

Crimp style:

PNB-6KE
PNB-7KE

Hand held - PNB series

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

CE

Technical details:

	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	

	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.

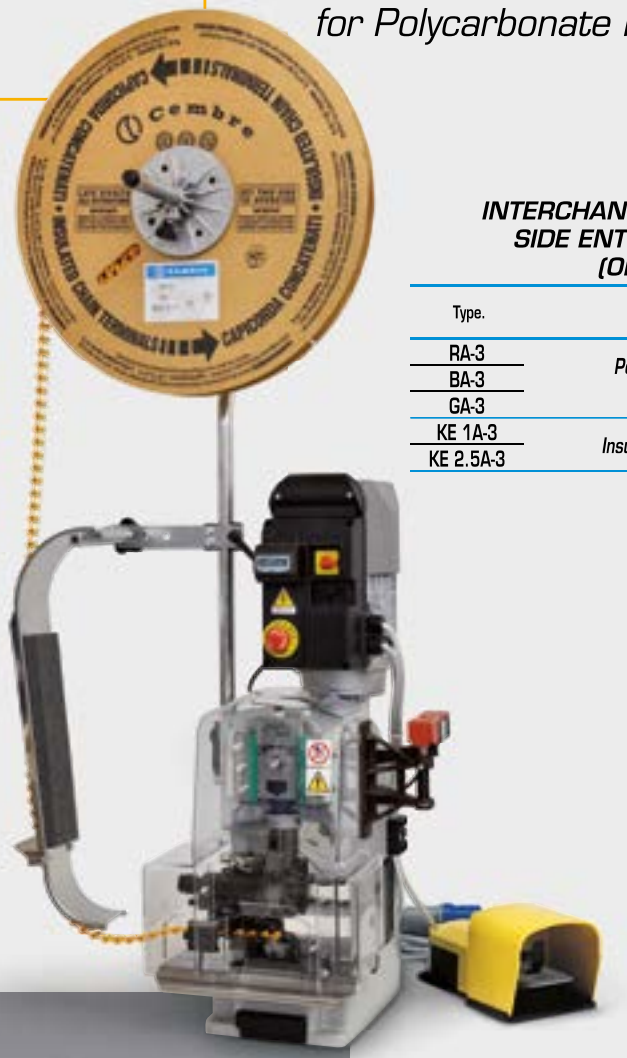
BENCH PRESS

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)

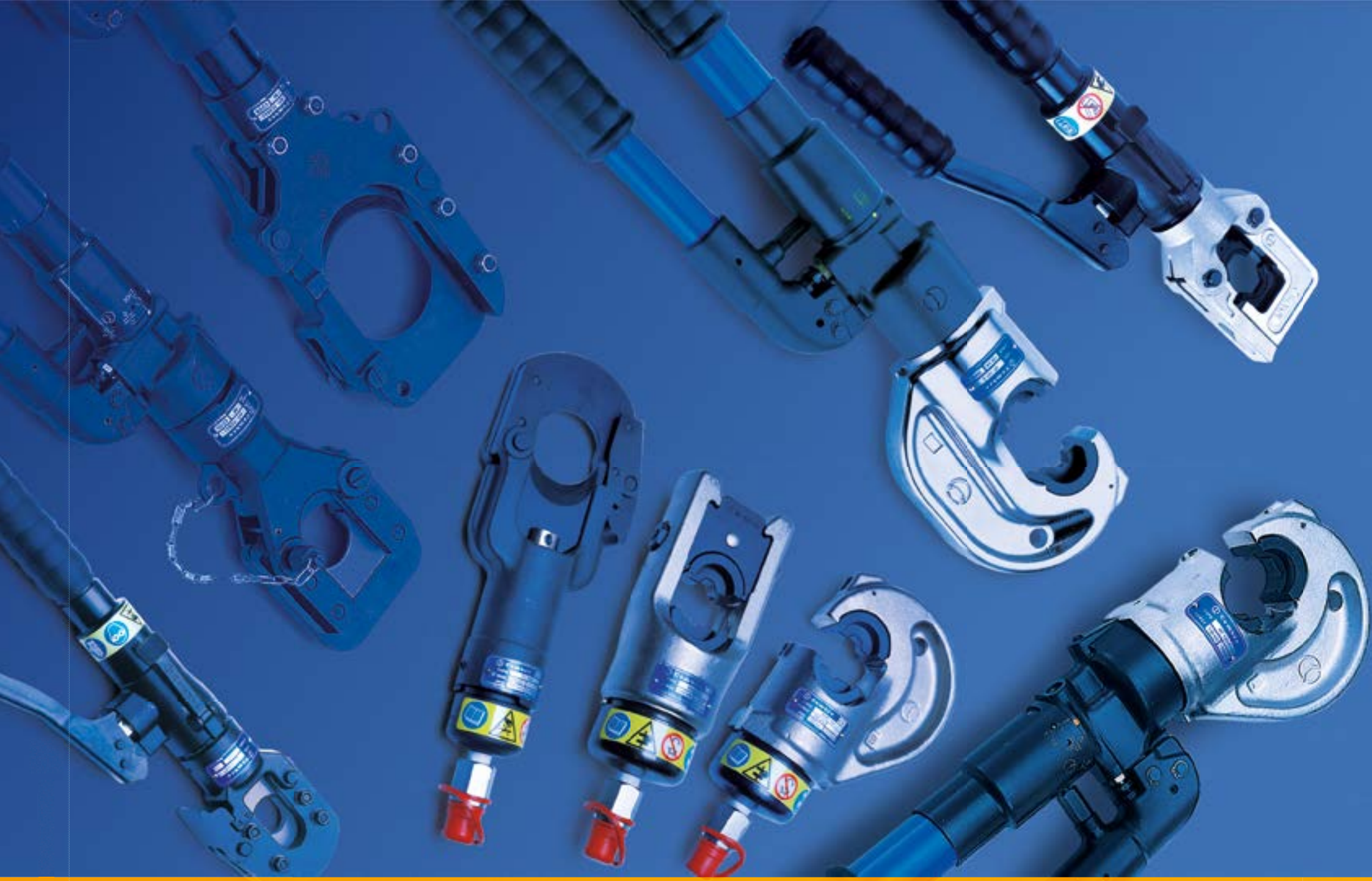
Type.	Connectors		Conductor Size sqmm
RA-3	*Polycarbonate insulated chain terminals*	*red*	0,25÷1,5
BA-3		*blue*	1,5÷2,5
GA-3		*yellow*	4÷6
KE 1A-3	*Insulated chain end sleeves*		0,5÷1
KE 2.5A-3			1÷2,5

c UL us
File no. E125401
File no. E212000

HALOGEN 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		Weigth kg
	length	*width*	
50	346	130	2,0

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.

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.*

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

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC CRIMPING TOOL

HT 51

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*	445x290xh95	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.

New

KIT HT51-1
KIT HT51-2
KIT HT51-MK

KIT HT51-1

Kit includes:

- HT51 Hydraulic tool
- VAL P1 plastic carrying case

8 die sets:

• ME 5-50	*Hexagonal crimp for low voltage terminals and through connectors from 25 to 185 mm² A-M family*
• ME 7-50	
• ME 10-50	
• ME 14-50	
• ME 19-50	
• ME 24-50	
• ME 30-50	
• ME 37-50	

KIT HT51-2

Kit includes:

- HT51 Hydraulic tool
- VAL P1 plastic carrying case

6 die sets:

Nest	*Indentor*	
• MA 5-50	• PA 5-50	*Indent crimp for low voltage general purpose terminals and through connectors from 25 to 120 mm²*
• MA 7-50	• PA 10-50	
• MA 10-50		
• MA 14-50	• PA 19-50	
• MA 19-50		
• MA 24-50	• PA 24-50	

KIT HT51-MK

Kit includes:

- HT51 Hydraulic tool
- VAL P1 plastic carrying case

10 die sets:

• MK 8-50	*Hexagonal crimp for low voltage terminals and through connectors from 16 to 240 mm² DIN 46235 family*
• MK 10-50	
• MK 12-50	
• MK 14-50	
• MK 16-50	
• MK 18-50	
• MK 20-50	
• MK 22-50	
• MK 25-50	
• MK 28-50	

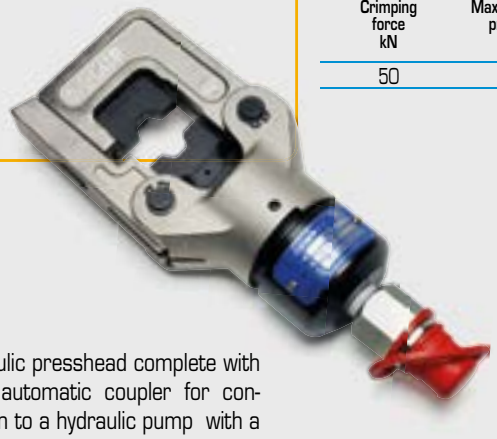
These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC PRESSHEAD

RH 50

general features

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



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
RH 50 is suitable for installing the same range of connectors as HT 51.

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*	445x290xh95	1,2	❊	—
Canvas bag 007	350x105	0,13	—	❊

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

HYDRAULIC PRESSHEAD

RHM 50

general features

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

Hydraulic presshead complete with quick automatic coupler for connection to hydraulic pump with working pressure of 700 bar max, (see page 178-184).
RHM50 is suitable for installing the same range of connectors as RH50.

Particularly suitable for high volume bench crimping.

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*	445x290xh95	1,2	❊	—
Canvas bag 007	350x105	0,13	—	❊

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

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC CRIMPING TOOL

HT 81-U

general features

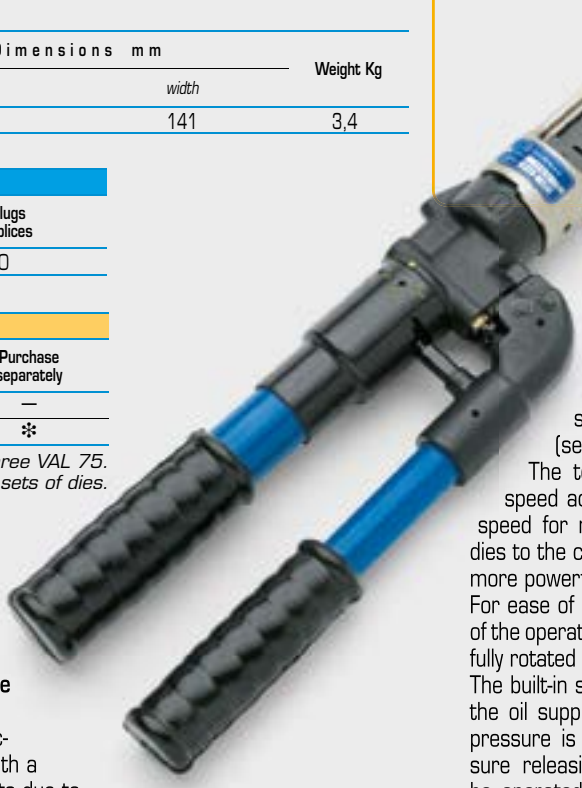
Crimping force kN	Dimensions mm		Weight Kg
	length	*width*	
80	485	141	3,4

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.*

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, aldrey 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.

HYDRAULIC PRESSHEAD

RHU 81

CE

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	—	❊

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
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.

HT 81-U and RHU 81 ACCESSORIES FOR CUTTING CONDUCTORS		
Die Type	Cutting Capacity	Conductor Type
MB2-80U	Ø 16 mm	Cu, Alu, Aldrey and Alu-Steel
	This die is suitable to cut steel conductors (R ≤ 160 daN/mm²) 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 mm² aluminium-steel conductors, without damage to the steel core	

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC CRIMPING TOOL

HT 120

general features

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*	620x380xh135	2,5	❄	—

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

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.
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.

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.

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC CRIMPING TOOL

HT 131-C

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*

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. 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.

New

KIT HT131-C-1
KIT HT131-C-2
KIT HT131-C-MK

KIT HT131-C-1

Kit includes:

- HT131-C Hydraulic tool
- VAL P3 plastic carrying case

7 die sets:

• ME 10-C	*Hexagonal crimp for low voltage terminals and through connectors from 50 to 240 mm² A-M family*
• ME 14-C	
• ME 19-C	
• ME 24-C	
• ME 30-C	
• ME 37-C	
• ME 48-C	

KIT HT131-C-2

Kit includes:

- HT131-C Hydraulic tool
- VAL P3 plastic carrying case

11 die sets:

Nest	Indentor	
• MA 2-C	• PA 10-C	*Indent crimp for low voltage general purpose terminals and through connectors from 10 to 240 mm²*
• MA 3-C		
• MA 5-C		
• MA 7-C		
• MA 10-C		
• MA 14-C	• PA 24-C	
• MA 19-C		
• MA 24-C		
• MA 30-C	• PA 48-C	
• MA 37-C		
• MA 48-C		

KIT HT131-C-MK

Kit includes:

- HT131-C Hydraulic tool
- VAL P3 plastic carrying case

11 die sets:

• MK 6-C	*Hexagonal crimp for low voltage terminals and through connectors from 10 to 240 mm² DIN 46235 family*
• MK 8-C	
• MK 10-C	
• MK 12-C	
• MK 14-C	
• MK 16-C	
• MK 18-C	
• MK 20-C	
• MK 22-C	
• MK 25-C	
• MK 28-C	

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC PRESSHEAD

RHC 131

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

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
This new design with improved mechanical features, is suitable for installing the same range of connectors as HT 131-C.

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*

HYDRAULIC PRESSHEAD

RHM 132

general features

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

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).

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 204 to 213

HYDRAULIC CRIMPING TOOL

HT 131LN-C

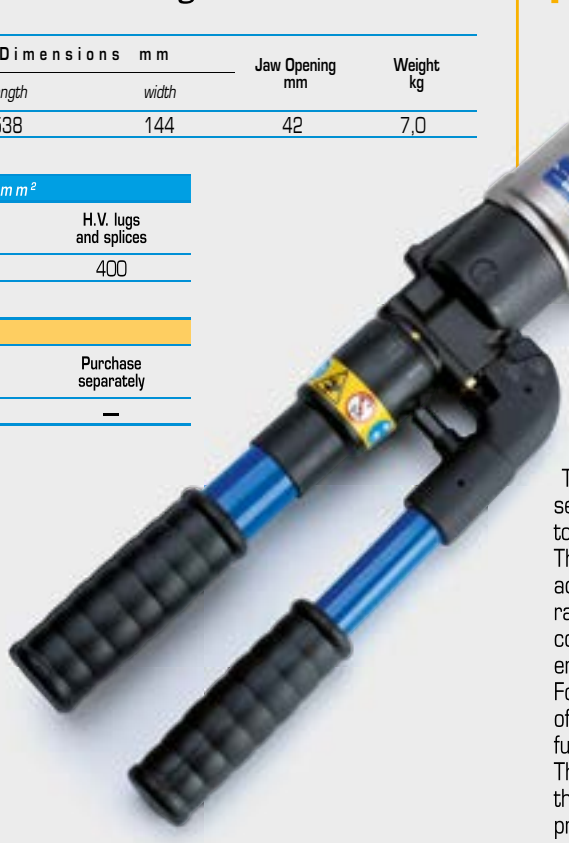
general features

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

RHC 131LN

CE

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*

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 178-184). Is suitable for installing the same range of connectors as HT 131LN-C.

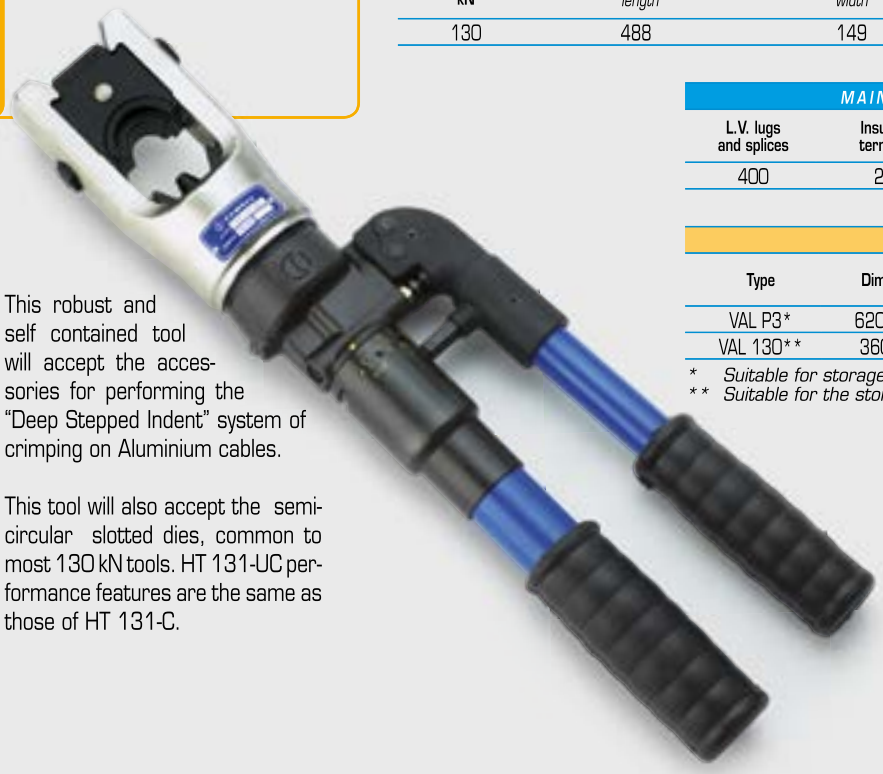
These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC CRIMPING TOOL

HT 131-UC

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 dies*
** *Suitable for the storage of accessories for crimping Aluminium connectors*

HYDRAULIC PRESSHEAD

RHU 131-C

general features

CE

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 178-184).

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 204 to 213

HYDRAULIC PRESSHEAD

ECW-H3D

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/mm²) 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	

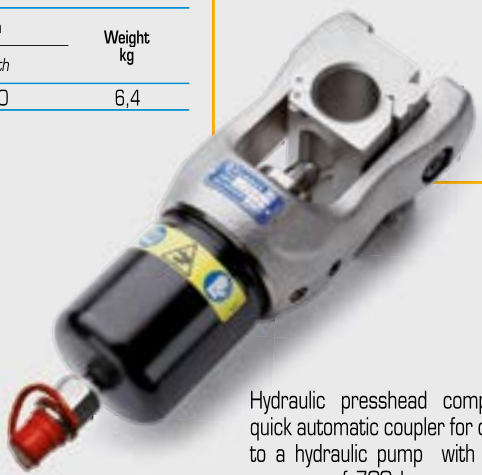
Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
Adaptor type **AU230-130D** is available as an optional extra enabling the head to utilise the semi-circular slotted dies which are common to most 130 kN tools. Also available is a series of dies for the compression of DIN electrical connectors, and a die for cutting Copper, Aluminium, aldrey, Aluminium-Steel and Steel conductors.

HYDRAULIC PRESSHEAD

RHU 231

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*

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
For crimping up to 500 sqmm Aluminium.
Dies are available also for crimping Copper connectors.

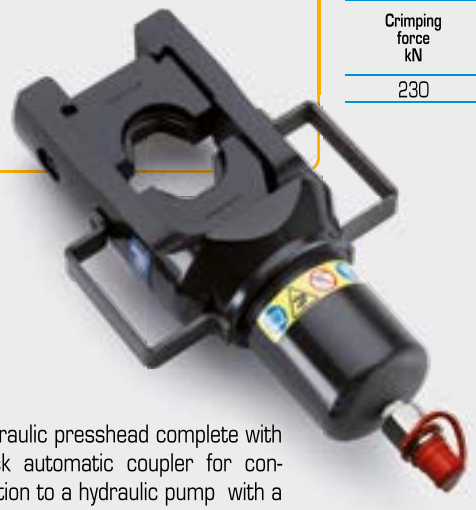
These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC PRESSHEAD

RHU 230-630

general features

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



Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
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.

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

HYDRAULIC PRESSHEAD

RHU 450

general features

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

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).

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.

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*

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC PRESSHEAD

RHU 520

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

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
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.

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

HYDRAULIC PRESSHEAD

RHU 600

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

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).

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

RHU 1000

general features

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 178-184).

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.

HYDRAULIC CUTTING TOOL

INDUSTRIAL APPLICATION

HT-TC051

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	❊	—

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

INDUSTRIAL APPLICATION

TC 050

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	❊	—

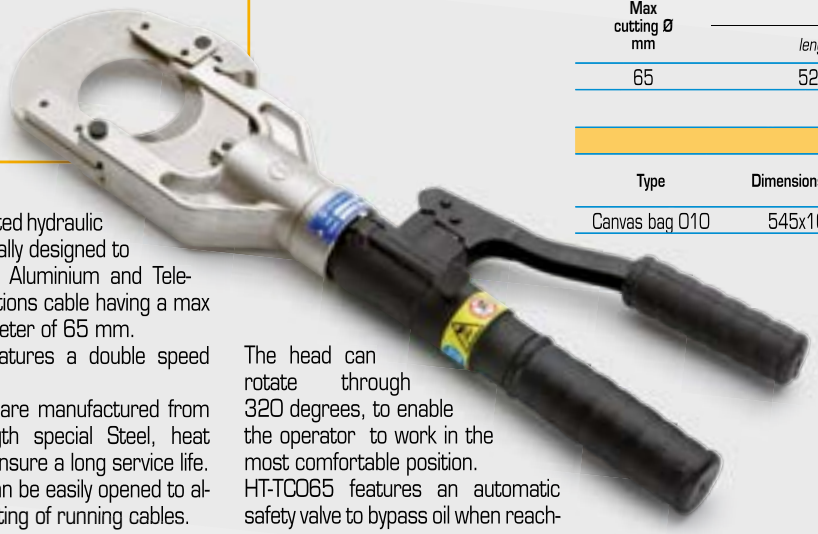
Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184)
TC050 features the same cutting capability as HT-TC051.

HYDRAULIC CUTTING TOOL

INDUSTRIAL APPLICATION

HT-TC065

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	❊	—

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 reaching maximum pressure; a pressure release device can also be operated at any stage of operation.

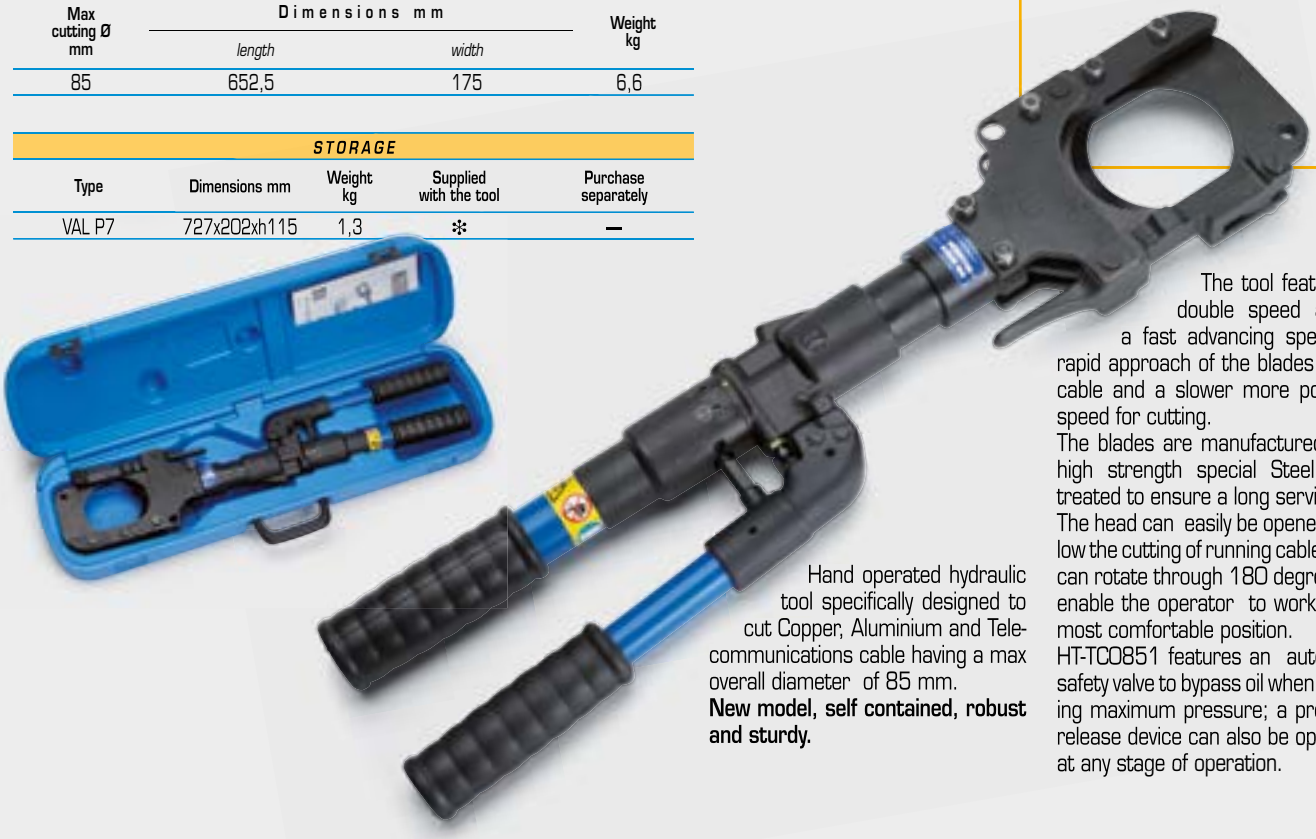
HYDRAULIC CUTTING TOOL

general features

INDUSTRIAL APPLICATION
HT-TC0851

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.

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

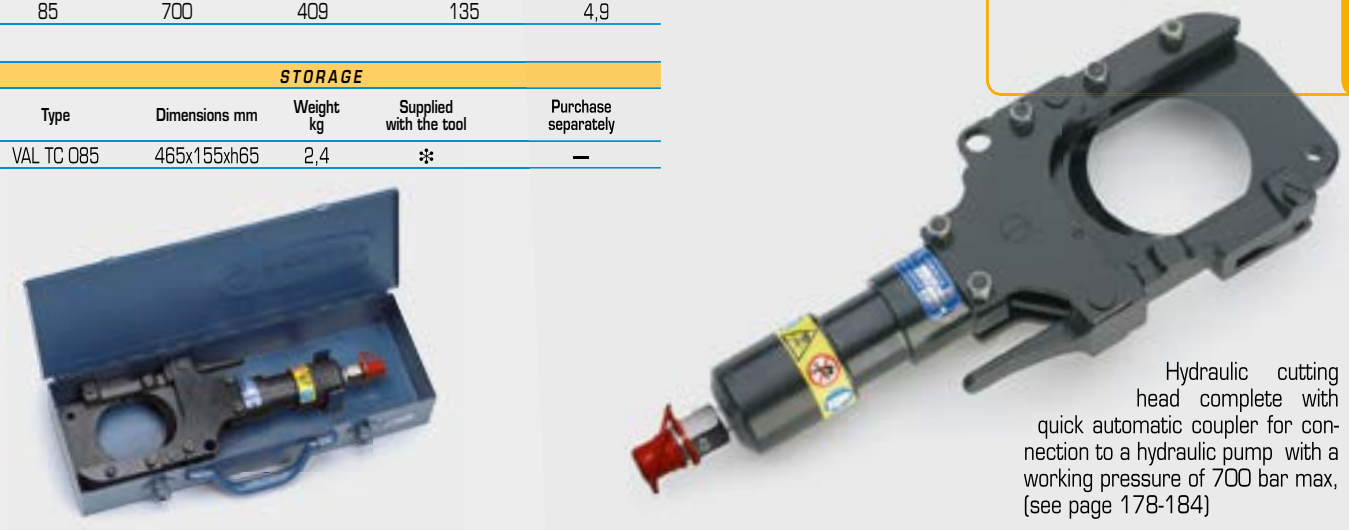
CE

general features

INDUSTRIAL APPLICATION
TC 085

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 178-184)

TC085 features the same cutting capability as HT-TC0851.

HYDRAULIC CUTTING HEAD

INDUSTRIAL APPLICATION
TC 096

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 178-184).

Handle designed for ease of operation

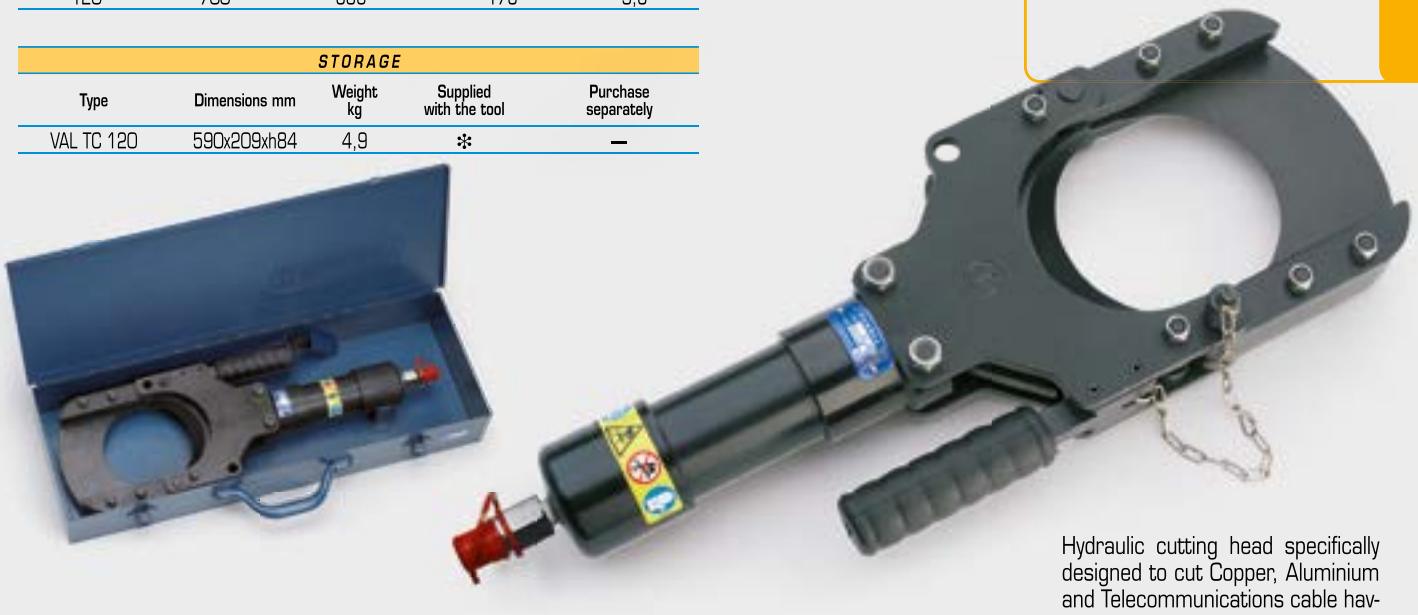
HYDRAULIC CUTTING HEAD

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 178-184).

Cable type	TC 120 cutting capacity - a few examples:
	3x150 mm² Steel armoured Ø80 mm
	1000 mm² Cu - EPR rubber insulated; Ø85 mm
	1000 mm² Cu - EPR rubber insulated + lead sheath; Ø92 mm
	1000 mm² Cu - EPR rubber insulated + lead sheath + PE sheath; Ø100 mm
	240 mm² EPR rubber insulated

Handle designed for ease of operation

Opening head, to allow cutting of running cables

HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION

HT-TC026

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	❊	—

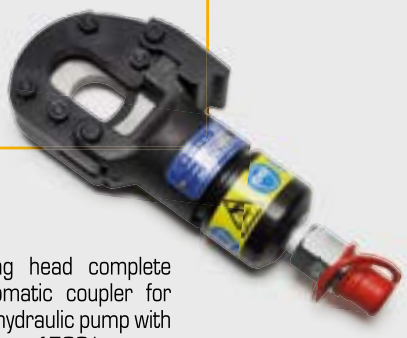
Hand operated hydraulic tool specifically designed to cut Copper, aldrey, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 25 mm.
The tool features a double speed action: a fast advancing speed for rapid approach of the blades to the cable and 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.

CUTTING CAPACITY			
	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm) HT-TC026 TC 025 / HT-TC026Y B-TC250
ROPES & 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
	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
RODS	STEEL	≤ 60	13
		≤ 42	16
	COPPER	≤ 30	20
		≤ 25	23
	ALUMINIUM	≤ 16	25

HYDRAULIC CUTTING HEAD

OVERHEAD LINE APPLICATION

TC 025



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 head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184)

TC025 has the same cutting capability as HT-TC026.

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, aldrey, 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/mm²*
14,2	/	*STEEL EARTHING ROD, COPPER PLATED; Tensile strength = 69 daN/mm²*
15,6	/	*STEEL EARTHING ROD; Tensile strength = 69 daN/mm²*
15,9	5/8"	*STEEL EARTHING ROD, COPPER PLATED (CON ED - ILLINOIS); Tensile strength = 57 daN/mm²*
15,9	5/8"	*STEEL EARTHING ROD, COPPER PLATED (CON ED - STATEN ISLAND); Tensile strength = 78 daN/mm²*
19	3/4"	*STEEL EARTHING ROD, COPPER PLATED; Tensile strength = 74 daN/mm²*
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

OVERHEAD LINE APPLICATION

HT-TC041N

general features

Max cutting Ø mm	Dimensions mm		Weight kg
	length	*width*	
45	550	144	5,8

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, aldrey, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 45 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.

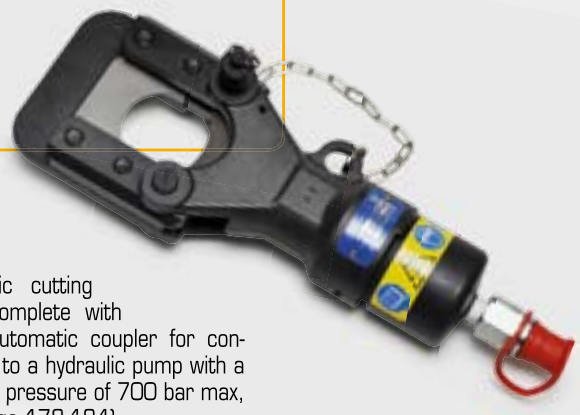
HT-TC041N features an automatic safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.

CUTTING CAPACITY			
	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm) HT-TC 041N TC 04N B-TC450
ROPES & CONDUCTORS	COPPER	≤ 41	45
	ALUMINIUM	≤ 20	45
	ALMELEC	≤ 34	45
	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	18
	ACSR	≤ 180	45 *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
RODS	STEEL	≤ 60	18
		≤ 42	20
	COPPER	≤ 30	30
		≤ 25	32
	ALUMINIUM	≤ 16	45

HYDRAULIC CUTTING HEAD

OVERHEAD LINE APPLICATION

TC 04N



general features

Max cutting Ø mm	Max operating pressure bar	Dimensions mm		Weight kg
		length	*width*	
45	700	311	100	4,0

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL 04	350x125xh68	2,0	❊	—

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184)

TC04N has the same cutting capability as HT-TC041N.

HYDRAULIC CUTTING TOOL

general features

OVERHEAD LINE APPLICATION

HT-TC051Y

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	❊	–

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

CE

general features

OVERHEAD LINE APPLICATION

TC 050Y

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	❊	–

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184).
TC 050Y features the same cutting capability as HT-TC051Y.

Not suitable for cutting stay wire, Steel rope or earthing rod.

HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION

HT-TC055

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	727x202xh115	1,3	❊	—

Hand operated hydraulic tool specifically designed to cut Copper, aldrey, 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.

CUTTING CAPACITY			
	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm) HT-TC055 TC 055 B-TC550
ROPES & CONDUCTORS	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 strenght grade	7 x 4,77 : Ø est. =14,30 mm
RODS	STEEL	≤ 60	20
		≤ 42	22
	COPPER	≤ 30	34
		≤ 25	38,5
	ALUMINIUM	≤ 16	50

HYDRAULIC CUTTING HEAD

OVERHEAD LINE APPLICATION

TC 055

general features

CE

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	❊	—

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see page 178-184)
TC055 has the same cutting capability as HT-TC055.

general features

Frame-type hole punching head RH-FC48N

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*	315x300xh95	0,93

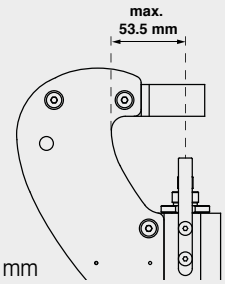
**Supplied with the head*

Hole Dimensions					Maximum thickness of mild Steel (mm)	Code
Nominal		Pg	ISO	Inch		
Ø (mm)	Ø (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**

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.

VAL P30
Supplied in a robust plastic case.

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 178-184).



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

Piercing heads RHT

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*	283x180xh100	2,3

**Supplied with the head*

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 178-184).

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 - indentor	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

Puller-type hole punching tool HT-FL75

general features

New

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	620x360xh138	2,4	❊	—

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 149.

Universal joint allows punching head to pivot 180deg over a full 360deg rotation.

Puller-type hole punching head RH-FL75

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	448x288xh105	1,4	❊	—

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 178-184).

Supplied with Pullers TD-11, TD-19 and spiral bit Ø 11,5 mm.

For the punch-die selection chart see page 149.

KIT HT-FL75-1

KIT HT-FL75-1

Kit includes:

- HT-FL75 Puller-type hole punching hydraulic tool
- VAL P28 plastic carrying case with accessories

4 KIT for round punch:

• KIT RD18.8SS	Pg11
• KIT RD20.5SS	Pg13,5
• KIT RD22.6SS	Pg16
• KIT RD28.5SS	Pg21

The tool is supplied as:

- *Puller-type hole punching tool*
- *Puller TD-11*
- *Puller TD-19*
- *spiral bit Ø 11,5 mm*
- *Plastic carrying case suitable for storing the tool and accessories*

The Kit includes puller-type hole punching hydraulic tool HT-FL75 complete of 4 kit for round punch (Pg11, Pg13,5, Pg16, Pg21) and robust plastic carrying case suitable for storing the tool and accessories.

PUNCHING ACCESSORIES AVAILABLE

ROUND PUNCH

Hole diameter					Material max thickness		Pilot hole Ø	Code			
Nominal		Pg	ISO	GAS	Stainless Steel	Mild Steel		KIT (Punch+die)	Punch	Die	Puller
Ø (mm)	Ø (inch)						(mm)				
15,5	.610	Pg9	-	-	2,5 mm (0.1 in.) Rm= 700 N/mm²	3,5 mm (0.14 in.) Rm= 510 N/mm²	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	
17,0	.669	-	-	G3/8"				**RD 17SS**	P-RD17SS	M-RD17SS	
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	Pg 13,5	ISO-20	-				**RD 20.5SS**	P-RD20.5SS	M-RD20.5SS	
21,5	.846	-	-	G1/2"				**RD 21.5SS**	P-RD21.5SS	M-RD21.5SS	
22,6	.890	Pg16	-	-				**RD 22.6SS**	P-RD22.6SS	M-RD22.6SS	
23,8	.937	-	-	G5/8"				**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	-	-	G3/4"				**RD 27SS**	P-RD27SS	M-RD27SS	
28,5	1.122	Pg21	-	-				**RD 28.5SS**	P-RD28.5SS	M-RD28.5SS	
30,5	1.201	-	-	G7/8"				**RD 30.5SS**	P-RD30.5SS	M-RD30.5SS	
28,5	1.122	Pg 21	-	-			20,0	**RD 28.5SS-19**	P-RD28.5SS-19	M-RD28.5SS-19	TD-19
30,5	1.201	-	-	G7/8"				**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	
34,0	1.338	-	-	G1"				**RD 34SS**	P-RD34SS	M-RD34SS	
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	
38,5	1.515	-	-	G1"1/8"				**RD 38.5SS**	P-RD38.5SS	M-RD38.5SS	
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	-	-	G1"1/4"				**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	
48,5	1.909	-	-	G1"1/2"				**RD 48.5SS**	P-RD48.5SS	M-RD48.5SS	
50,5	1.988	-	ISO-50	-				**RD 50.5SS**	P-RD50.5SS	M-RD50.5SS	
51,4	2.023	-	-	-				**RD 51.4SS**	P-RD51.4SS	M-RD51.4SS	
52,4	2.063	-	-	-				**RD 52.4SS**	P-RD52.4SS	M-RD52.4SS	
54,2	2.134	Pg42	-	G1"3/4"				**RD 54.2SS**	P-RD54.2SS	M-RD54.2SS	
60,0	2.362	Pg48	-	G2"				**RD 60SS**	P-RD60SS	M-RD60SS	
60,5	2.381	-	-	-				**RD 60.5SS**	P-RD60.5SS	M-RD60.5SS	
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	-	-	G2"1/2"		3		**RD 76SS**	P-RD76SS	M-RD76SS	
76,5	3.011	-	-	-		3,5		**RD 76.5SS**	P-RD76.5SS	M-RD76.5SS	
80,5	3.169	-	-	-		3		**RD 80.5SS**	P-RD80.5SS	M-RD80.5SS	
89,0	3.503	-	-	G3"		3,5		**RD 89SS**	P-RD89SS	M-RD89SS	
90,0	3.543	-	-	-	2	3		**RD 90SS**	P-RD90SS	M-RD90SS	
100,0	3.937	-	-	-	2	3	29,0	**RD 100SS**	P-RD100SS	M-RD100SS	TD-28.5*
102,0	4.015	-	-	-	2	3		**RD 102SS**	P-RD102SS	M-RD102SS	
114,0	4.488	-	-	-	2	2,5		**RD 114SS**	P-RD114SS	M-RD114SS	
120,0	4.724	-	-	-	1,5	2		**RD 120SS**	P-RD120SS	M-RD120SS	
140,0	5.512	-	-	-	1,5	2		**RD 140SS**	P-RD140SS	M-RD140SS	

* Puller included in the kit

SQUARE PUNCH

Hole size		Material max thickness (mm)		Pilot hole Ø	Code
Nominal		Stainless Steel	Mild Steel		KIT (Punch+die + Puller)
(mm)	(inch)			(mm)	
21,0 x 21,0	.827 x .827	2,5	3,5	12,0	**RD 21X21**
46,0 x 46,0	1.811 x 1.811	2,0	3,0	22,5	**RD 46X46**
68,0 x 68,0	2.677 x 2.677	1,5	2,0		**RD 68X68**
92,0 x 92,0	3.622 x 3.622				**RD 92X92**
126,0 x 126,0	4.960 x 4.960	1,0	1,5	28,5	**RD 126X126**
138,0 x 138,0	5.433 x 5.433				**RD 138X138**
220,0 x 220,0	8.661 x 8.661				**RD 220X220**

RECTANGULAR PUNCH

Hole size		Material max thickness (mm)		Pilot hole Ø	Code
Nominal		Stainless Steel	Mild Steel		KIT (Punch+die + Puller)
(mm)	(inch)			(mm)	
18,0 x 46,0	.709 x 1.811	2,0	2,0	16,5	**RD 18X46**
22,0 x 30,0	.866 x 1.181				**RD 22X30**
22,0 x 46,0	.866 x 1.811				**RD 22X46**
35,0 x 86,0	1.377 x 3.385				**RD 35X86**
35,0 x 112,0	1.377 x 4.409				**RD 35X112**
36,0 x 46,0	1.417 x 1.811			23,8	**RD 36X46**
37,0 x 54,0	1.456 x 2.125	1,5		16,5	**RD 37X54**
37,0 x 67,0	1.456 x 2.637				**RD 37X67**
37,0 x 88,0	1.456 x 3.464			26,5	**RD 37X88**
37,0 x 104,0	1.456 x 4.094				**RD 37X104**
37,0 x 115,0	1.456 x 4.527				**RD 37X115**
46,0 x 54,0	1.811 x 2.126				**RD 46X54**
46,0 x 72,0	1.811 x 2.835				**RD 46X72**
46,0 x 107,0	1.811 x 4.212				**RD 46X107**
50,0 x 98,0	1.968 x 3.858				**RD 50X98**
67,0 x 126,0	2.637 x 4.960			28,5	**RD 67X126**

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
TD27	COSMEC (Ø105÷Ø140)	Ø 27.5
TD14X14-M14	COSMEC 46x46	Ø 18.8
TD120X20-M20	COSMEC 92x92	Ø 27.5
TD20X20-M20	BM, COSMEC 42x95	Ø 27.5
KIT TGD-13.5X13.5-M13	COSMEC 40x40; 45x45; 46x46	Ø 18.8
KIT TGD-10X10-M9	COSMEC 006505	Ø 13.8

(*) 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.

Nut splitting heads RHTD

general features

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 178-184).

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 410T

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

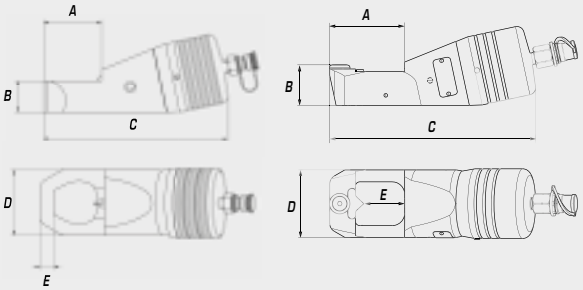
Type	Dimensions mm	Weight kg
VAL P4*	315x300x95	0,93

**Supplied with the head*

VAL P4
Supplied in a robust plastic case.

***DIMENSIONS** mm:*

	RHTD 3241	RHTD 1724	RHTD 410T
A	66	40,5	83
B	36	25	41
C	208	150,5	231
D	75,5	54	76
E	16	7,5	46



APPLICATION RANGE TOOLS TYPE RHTD AND B-TD

TOOL TYPE	HEXAGONAL NUTS mm	HEXAGONAL NUTS Ø	SQUARE NUTS mm	SQUARE NUTS Ø
RHTD 1724 B-TD270	16	M 10	17	M 10
	17	M 10	19	M 12
	18	M 12	22	M 14
	19	M 12	24	M 16
	21	M 14	27	M 18
	22	M 14		
	24	M 16		
	27	M 18	27	M 18
RHTD 3241 RHTD 410T B-TD410T	27	M 18	27	M 18
	30	M 20	30	M 20
	32	M 22	32	M 22
	34	M 22	34	M 24
	36	M 24	36	M 27
	41	M 27		

general features

B-TD270

New

NEW 18V Li-Ion BATTERY

18.0 V battery operated hydraulic tool suitable for splitting fastening bushes, hexagonal and square nuts as per RHTD 1724.

B-TD270

Suitable for splitting nuts mm	Dimensions mm	Weight kg
16 (M10) ÷ 27 (M18)	1.292,5 x 83 x 350	5,5

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 030	497x266xh455	1,4	❊	—

B-TD410T

New

NEW 18V Li-Ion BATTERY

18.0 V battery operated hydraulic tool suitable for splitting fastening bushes, hexagonal and square nuts as per RHTD 410T.

B-TD410T

Suitable for splitting square and hexagonal nuts or fastening bushes mm	Dimensions mm	Weight kg
27 (M18) ÷ 41 (M27)	1.360 x 83 x 350	8,8

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
Canvas bag 030	497x266xh455	1,4	❊	—

Canvas bag 030
This tools are supplied in a robust canvas bag.

PRESSURE TEST DEVICE

for hydraulic pumps and tools

MPC 1

MPC1 device

The MPC1 device, complete with test adapter set, is used to measure the maximum oil pressure on all Cembre tools.

MPC 2

MPC2 device

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

MPC4 device

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

MPC7 device

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 35-45MD, B 35-50MD, 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 - 4.0 Ah 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.
12. SMARTOOL technology for viewing and downloading operational data.

18.0V 4.0Ah Li-Ion

NEW 18V Li-Ion BATTERY

DOUBLE ACTION SPEED

New

SMARTOOL TECHNOLOGY SMARTOOL

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. USB cable.
4. Shoulder strap.

- Plastic or Metal carrying case.

Multifunction OLED display:

General operating information

Tool service required to maintain optimum condition

Battery power availability

Pressure level check

Crimping force check

18.0 V - 2.0 Ah 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.

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 15MD

general features

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	*height*	*width*		
15	337	133	81	18.0 V 2.0 Ah	1,74

18.0V 2.0Ah Li-Ion

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	465x315xh116	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 by 340° 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 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 to +50 ° C

Many different interchangeable crimping dies available

CRIMPING DIES AVAILABLE				
Conductor size mm²	(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)	RBY-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

B 35-45MD

general features

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	18.0 V 2.0 Ah	2,19

MAIN APPLICATIONS - max section mm²

L.V. lugs and splices		"C" sleeve Connectors	H.V. lugs and splices
Low Stranded	*Flexible*		
95	150	35	70

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315xh116	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

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.

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 avaiable for crimping 120 mm² and 150 mm².
Application field as shown in the table above. For further details please refer to tables of page 204-213.
Operating temperature:
-15 to +50 ° C

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 204 to 213

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	18.0 V 2.0 Ah	2,6

18.0V 2.0Ah Li-Ion

MAIN APPLICATIONS - max section mm²				
L.V. lugs and splices		Insulated terminals	End sleeves	"C" sleeve Connectors
Low Stranded	*Flexible*			
95	150	50	95	35

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315xh116	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.
B35-50MD accepts many of the dies common to 50 kN Cembre crimping tools.

B35-50MD specific dies avaiable for crimping 120 mm² and 150 mm².
Application field as shown in the table above. For further details please refer to tables of page 204-213.
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

Cembre

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 54MD-D6

general features

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	18.0 V 2.0 Ah	2,95

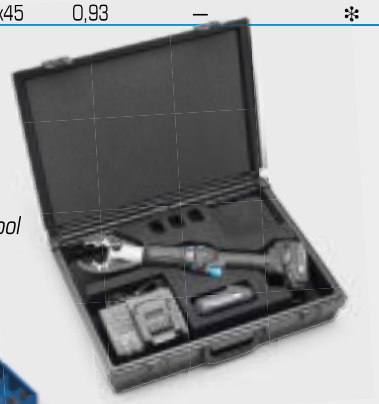
MAIN APPLICATIONS - max section AWG		
Copper lugs and splices	Aluminum lugs and splices	Aluminum H taps
300 MCM	4/0	4/0 - 4/0

The professional tool ideal for OH lines and residential service applications.

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*



VAL MAT-W

Available as optional accessories:
VAL MAT-W *metal case for storing 12 Index die sets, fits into VAL-P45.*

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

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**	W, X Series KD6 Series ND Series
CDD6-8	"D3" TO ACCEPT ALL "W" STYLE CRIMPING DIES + "O" FIXED GROOVE	**Huskie** **Panduit**	HT-58 Series CD-2001 series
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

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

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

New

NEW 18V Li-Ion BATTERY

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
VALP38	520x432x126	2,6	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and 14 die sets*

B 500-KV version also available for Power Supply Companies

New

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

KIT B 500-1
KIT B 500-2
KIT B 500-MK

New

KIT B500-MK

Kit includes:

- B500 Cordless hydraulic tool
- VAL P38 plastic case with accessories

10 die sets:

• MK 8-50	*Hexagonal crimp for low voltage terminals and through connectors from 16 to 240 mm² DIN 46235 family*
• MK 10-50	
• MK 12-50	
• MK 14-50	
• MK 16-50	
• MK 18-50	
• MK 20-50	
• MK 22-50	
• MK 25-50	
• MK 28-50	

KIT B500-1

Kit includes:

- B500 Cordless hydraulic tool
- VAL P38 plastic case with accessories

8 die sets:

• ME 5-50	*Hexagonal crimp for low voltage terminals and through connectors from 25 to 185 mm² A-M family*
• ME 7-50	
• ME 10-50	
• ME 14-50	
• ME 19-50	
• ME 24-50	
• ME 30-50	
• ME 37-50	

KIT B500-2

Kit includes:

- B500 Cordless hydraulic tool
- VAL P38 plastic case with accessories

6 die sets:

Nest	*Indentor*	
• MA 5-50	• PA 5-50	*Indent crimp for low voltage general purpose terminals and through connectors from 25 to 120 mm²*
• MA 7-50	• PA 10-50	
• MA 10-50		
• MA 14-50	• PA 19-50	
• MA 19-50		
• MA 24-50	• PA 24-50	

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 550

general features

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

Crimping force kN	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	*height*	*width*		
57.7	358	358	83	18.0 V 4.0 Ah	5,3

MAIN APPLICATIONS - max section mm²

Copper lugs and splices	Insulated terminals	End sleeves	"C" sleeve Connectors
240	120	120	70

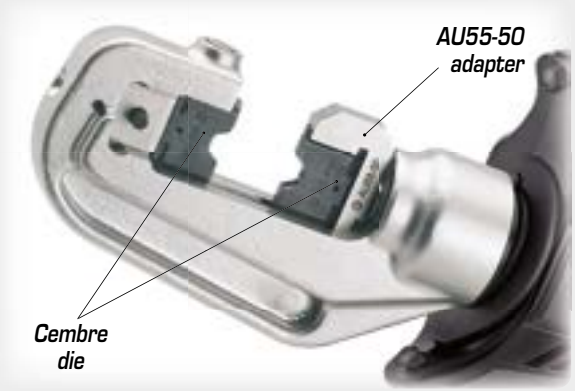
STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP40	520x432x126	2,6	❊	—

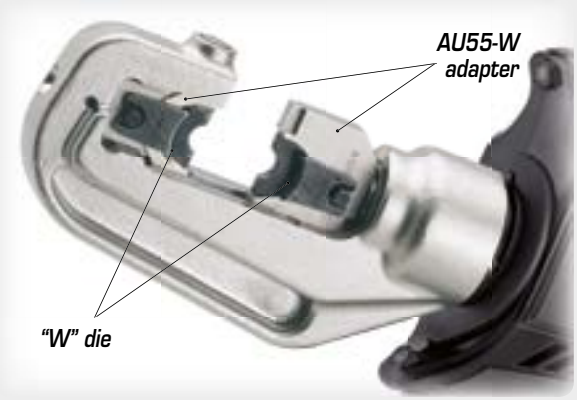
The tool is supplied as:

- *Basic tool with battery, wrist strap and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and accessories*

With adapter AU55-50 for accepting Cembre dies.



With adapter AU55-W for accepting "W" dies.



New

The next generation of Cembre cordless hydraulic tools represents a significantly advantageous evolution from current models.
The B 550, with adapter AU55-50, will accept all Cembre 50 kN dies; with adapter AU55-W it will accept "W" 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, B550 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

Suitable for installing the same range of connectors of B 550, B 550-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.

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

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	6,5

DOUBLE ACTION SPEED

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*

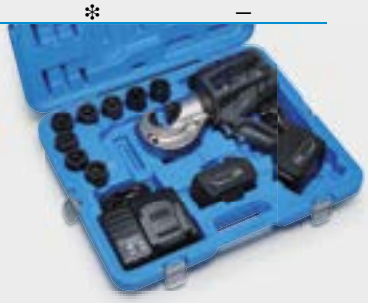
STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP39	520x432x126	2,6	❊	—

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 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-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

The tool is supplied as:
- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and 8 die sets*



B 1350-C-KV version also available for Power Supply Companies

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	8,1

DOUBLE ACTION SPEED

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 and splices
400	240	185	400

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP39	520x432x126	2,6	❊	—

B1350L-C version, featuring a large 42 mm jaw opening, for an easier introduction/removal of large size compression terminations and joints.

The tool is supplied as:
- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and 8 die sets*

B 1350L-C-KV version also available for Power Supply Companies

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 1350-UC

New

general features

DOUBLE ACTION SPEED

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
VALP39	520x432x126	2,6	❊	—
VAL 130*	360x280xh48	3,0	—	❊

**Suitable for the storage of accessories for crimping Aluminium connectors*

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and 8 die sets*

VAL P39

VAL 130

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

LED lighting of the working area

Multifunction OLED display with touch button

Anatomically shaped grip for improved comfort

Slot-in battery with release button

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

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

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

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 P44	680x473x151	3,7	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery* • *Battery charger*
- *USB cable* • *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

B 1300-C-KV version also available for Power Supply Companies

KIT B1300-C-1
KIT B1300-C-2
KIT B1300-C-MK

KIT B1300-C-2

Kit includes:
- B1300-C Cordless hydraulic tool
- VAL P44 plastic case with accessories

11 die sets:

Nest	*Indentor*	
• MA 2-C		*Indent crimp for low voltage general purpose terminals and through connectors from 10 to 240 mm²*
• MA 3-C		
• MA 5-C	• PA 10-C	
• MA 7-C		
• MA 10-C		
• MA 14-C		
• MA 19-C	• PA 24-C	
• MA 24-C		
• MA 30-C		
• MA 37-C	• PA 48-C	
• MA 48-C		

KIT B1300-C-1

Kit includes:
- B1300-C Cordless hydraulic tool
- VAL P44 plastic case with accessories

7 die sets:

• ME 10-C	*Hexagonal crimp for low voltage terminals and through connectors from 50 to 240 mm² A-M family*
• ME 14-C	
• ME 19-C	
• ME 24-C	
• ME 30-C	
• ME 37-C	
• ME 48-C	

KIT B1300-C-MK

Kit includes:
- B1300-C Cordless hydraulic tool
- VAL P44 plastic case with accessories

11 die sets:

• MK 6-C	*Hexagonal crimp for low voltage terminals and through connectors from 10 to 240 mm² DIN 46235 family*
• MK 8-C	
• MK 10-C	
• MK 12-C	
• MK 14-C	
• MK 16-C	
• MK 18-C	
• MK 20-C	
• MK 22-C	
• MK 25-C	
• MK 28-C	

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 1300L-C

general features

DOUBLE ACTION SPEED

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

New

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
VAL P44	680x473x151	3,7	❊	—

New

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery* • *Battery charger*
- *USB cable* • *Plastic carrying case suitable for storing the tool and 12 die sets*

B 1300L-C-KV version also available for Power Supply Companies

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.

18.0 V CORDLESS HYDRAULIC CRIMPING TOOL

B 1300-UC

general features

DOUBLE ACTION SPEED

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

New

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	Alu lugs and splices
400	240	185	400	300

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P44	680x473x151	3,7	❊	—
VAL 130*	360x280xh48	3,0	—	❊

**Suitable for the storage of accessories for crimping Aluminium connectors*

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and 12 die sets*

VAL P44

VAL 130

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

These tools are supplied without dies. For die selection, please refer to chart on pages 204 to 213

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION

B35M-TC025

general features

Max cutting Ø mm	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	*height*	*width*		
25	391	133	81	18.0 V 2.0 Ah	3,1

18.0V 2.0Ah Li-Ion

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P22	465x315xh116	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 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

CUTTING CAPACITY			
	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm) B35M-TC025
ROPES & 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	-
	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
RODS	STEEL	≤ 60	10
		≤ 42	-
	COPPER	≤ 30	-
		≤ 25	16
	ALUMINIUM	≤ 16	25

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION

B-TC250BS

general features

18.0V 2.0Ah Li-ion

Max cutting Ø mm	Dimensions mm			Battery Li-Ion	Weight kg (with battery)
	length	*height*	*width*		
26	436	140	81	18.0 V 2.0 Ah	3,4

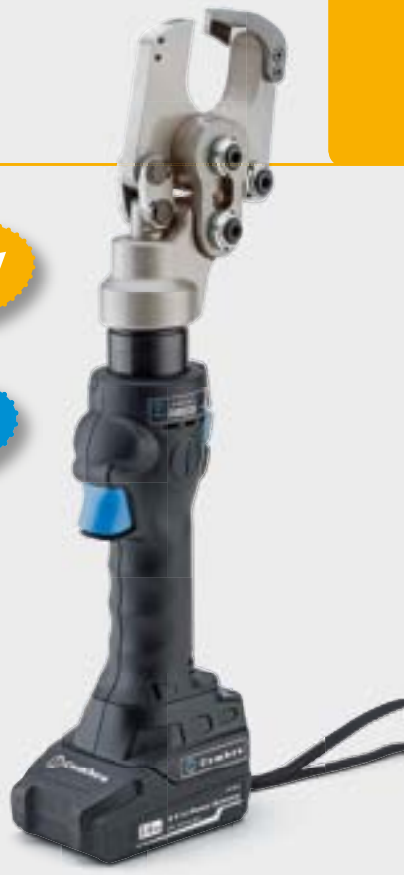
STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VAL P48	620x360x138	2,4	❊	–

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

NEW 18V Li-Ion BATTERY



CUTTING CAPACITY - a few examples			
Section mm²	Ø mm	Stranding	CABLE TYPE
120	13,3 mm	-	*RIM120*
95	-	-	*Steel cable with Bitum (DIEPA)*
95	18,5 mm	-	*Steel cable flex*
38,5	7,0	-	*Round Steel V2A*
78,5	10	-	*10mm grounding wire with insulation*
50	8,9	7x2,95 mm	*Bronze*
70	10,3	19 x 2,06 mm	*Bronze*
95	12,5	19 x 2,50 mm	*Bronze*
70	10,7	19/2,14	*Bronze*
95	12,5	19/2,5	*Bronze*
150	15,75	37/2,25	*Bronze*
323	23,25	19/4,65	*Bronze*
415	26,46	37/3,78	*Bronze*
35/6	8,1	7/2,70	*Aluminium-steel*
50/8	9,6	7/3,20	*Aluminium-steel*
50/30	11,7	12/2,33+7/2,33	*Aluminium-steel*
70/12	11,6	7/1,45+26/1,80	*Aluminium-steel*
95/15	13,4	7/1,65+26/1,10	*Aluminium-steel*
150/25	17,3	7/2,15+20/2,70	*Aluminium-steel*
230/30	21,0	24/3,5+7/2,33	*Aluminium-steel*
226	19,5	37/2,79	*Aluminium-steel*
239	20,1	37/2,87	*Rope Aluminum Alloy*
153	16,0	19/3,2	*Cu*
16	9,0	126/0,4	*Cu flex*
70	19,5	2214/0,2	*Cu extra flex*
120	19,9	608/0,5	*Cu flex*
240	28,6	1221/0,5	*Cu flex*
50	11,0	Class 5	*Aluminium flex*

Can be operated with one hand.
Balanced for greater control.
Head rotates 180° for ease of operation in confined spaces.
The open head and the "scissor" movement of the blades facilitate the cutting of running cables.
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

OVERHEAD LINE APPLICATION

B-TC250

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

general features

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

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *Cable USB*
- *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, aldrey, 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, 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-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.
Operating temperature:
-15 to +50 ° C

CUTTING CAPACITY			
	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm) B-TC250
ROPES & 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
	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
RODS	STEEL	≤ 60	13
		≤ 42	16
	COPPER	≤ 30	20
		≤ 25	23
	ALUMINIUM	≤ 16	25

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION

B-TC450

New

general features

DOUBLE ACTION SPEED

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

STORAGE

Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *Cable USB*
- *Plastic carrying case suitable for storing the tool and accessories*

CUTTING CAPACITY

	MATERIAL	TENSILE STRENGTH (daN/mm²)	MAX CUTTING DIAMETER (mm) B-TC450
ROPES & CONDUCTORS	COPPER	≤ 41	45
	ALUMINIUM	≤ 20	45
	ALMELEC	≤ 34	45
	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	18
	ACSR	≤ 180	45 *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
RODS	STEEL	≤ 60	18
		≤ 42	20
	COPPER	≤ 30	30
		≤ 25	32
	ALUMINIUM	≤ 16	45

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, aldrey, 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.
Operating temperature:
-15 to +50 ° C

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

OVERHEAD LINE APPLICATION

B-TC500Y

New

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

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *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, Aluminum-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.

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-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

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

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Plastic carrying case suitable for storing the tool and accessories*

Next generation of 18.0 V cordless hydraulic cutting tool Specifically designed cut Copper, Aldrey, 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 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 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 146.
Operating temperature:
-15 to +50 ° C

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

INDUSTRIAL APPLICATION
B-TC500

New

NEW 18V Li-Ion BATTERY

general features

DOUBLE ACTION SPEED

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
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:
- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *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

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

INDUSTRIAL APPLICATION
B-TC650

New

NEW 18V Li-Ion BATTERY

general features

DOUBLE ACTION SPEED

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
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:
- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *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

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

INDUSTRIAL APPLICATION

B-TC650-SC

general features

Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	*height*	*width*		
65	503	464	105	18.0 V 4.0 Ah	7,7

DOUBLE ACTION SPEED

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 • USB cable*
- *Metal 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. 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 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-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

18.0 V CORDLESS HYDRAULIC CUTTING TOOL

INDUSTRIAL APPLICATION

B-TC950

general features

Max cutting Ø mm	Dimensions mm			Battery	Weight kg (with battery)
	length	*height*	*width*		
95	518	468	83	18.0 V 4.0 Ah	7,8

DOUBLE ACTION SPEED

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*
- *USB cable*
- *Metal 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 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 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-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

18.0 V CORDLESS HYDRAULIC FRAME-TYPE HOLE PUNCHING TOOL

B-FC470

New

general features

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

Max hole punch Ø in.	Dimensions in.			Battery Ni-MH	Weight lbs. (with battery)
	length	*height*	*width*		
47,2	379	346	83	18.0 V - 4.0 Ah	6,2

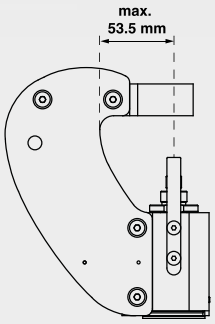
STORAGE				
Type	Dimensions in.	Weight lbs	Supplied with the tool	Purchase separately
VAL FC470	559x459x131	6,7	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Metal carrying case suitable for storing the tool and accessories*

Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to punching holes from 15,5 up to 47,2 mm diameter in the side wall of trunking without the need for pre drilling.
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 that indicate 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-FC470 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
Also available in the hand operated mechanical version MT-FC48N (see page 115).



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

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

Hole Dimensions					Maximum thickness of mild Steel (mm)	Code
Nominal Ø (mm)	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
21,5	.846	-	-	1/2"		RD 21.5 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
34,0	1.338	-	-	1"		RD 34.0 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
38,5	1.516	-	-	1-1/8"		RD 38.5 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

B-FL750

general features

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

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

New

NEW 18V Li-Ion BATTERY

STORAGE				
Type	Dimensions mm	Weight kg	Supplied with the tool	Purchase separately
VALP40	520x432x126	2,6	❊	—

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Puller TD-11* • *Puller TD-19*
- *Spiral bit Ø 11,5 mm*
- *Plastic carrying case suitable for storing the tool and accessories*

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.
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.
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.
For the punch-die selection chart see page 175.

Operating temperature:
-15 to +50 ° C

Universal joint allows punching head to pivot 180deg over a full 360deg rotation.

18.0 V CORDLESS HYDRAULIC PULLER-TYPE HOLE PUNCHING TOOL

CE

general features

KIT B-FL750-1

KIT B-FL750-1

Kit includes:

- B-FL750 cordless hydraulic puller-type hole punching tool
- VALP40 plastic carrying case with accessories

4 KIT for round punch:

• KIT RD18.8SS	Pg11
• KIT RD20.5SS	Pg13,5
• KIT RD22.6SS	Pg16
• KIT RD28.5SS	Pg21

The tool is supplied as:

- *Basic tool with battery and shoulder strap*
- *Spare battery*
- *Battery charger*
- *USB cable*
- *Puller TD-11* • *Puller TD-19*
- *Spiral bit Ø 11,5 mm*
- *Plastic carrying case suitable for storing the tool and accessories*

The Kit includes cordless hydraulic puller-type hole punching tool B-FL750 complete of 4 kit for round punch (Pg11, Pg13,5, Pg16, Pg21) and robust plastic carrying case suitable for storing the tool and accessories.

PUNCHING ACCESSORIES AVAILABLE

ROUND PUNCH

Hole diameter Nominal Ø (mm)	Ø (inch)	Pg	ISO	GAS	Material max thickness Stainless Steel	Mild Steel	Pilot hole Ø (mm)	Code KIT (Punch+die)	Punch	Die	Puller
15,5	.610	Pg9	-	-	2,5 mm (0,1 in.) Rm= 700 N/mm²	3,5 mm (0,14 in.) Rm= 510 N/mm²	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	
17,0	.669	-	-	G3/8"				RD 17SS	P-RD17SS	M-RD17SS	
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	Pg 13,5	ISO-20	-				RD 20.5SS	P-RD20.5SS	M-RD20.5SS	
21,5	.846	-	-	G1/2"				RD 21.5SS	P-RD21.5SS	M-RD21.5SS	
22,6	.890	Pg16	-	-				RD 22.6SS	P-RD22.6SS	M-RD22.6SS	
23,8	.937	-	-	G5/8"				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	-	-	G3/4"				RD 27SS	P-RD27SS	M-RD27SS	
28,5	1.122	Pg21	-	-				RD 28.5SS	P-RD28.5SS	M-RD28.5SS	
30,5	1.201	-	-	G7/8"				RD 30.5SS	P-RD30.5SS	M-RD30.5SS	
28,5	1.122	Pg 21	-	-			20,0	RD 28.5SS-19	P-RD28.5SS-19	M-RD28.5SS-19	TD-19
30,5	1.201	-	-	G7/8"				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	
34,0	1.338	-	-	G1"				RD 34SS	P-RD34SS	M-RD34SS	
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	
38,5	1.515	-	-	G1"1/8"				RD 38.5SS	P-RD38.5SS	M-RD38.5SS	
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	-	-	G1"1/4"				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	
48,5	1.909	-	-	G1"1/2"				RD 48.5SS	P-RD48.5SS	M-RD48.5SS	
50,5	1.988	-	ISO-50	-				RD 50.5SS	P-RD50.5SS	M-RD50.5SS	
51,4	2.023	-	-	-				RD 51.4SS	P-RD51.4SS	M-RD51.4SS	
52,4	2.063	-	-	-				RD 52.4SS	P-RD52.4SS	M-RD52.4SS	
54,2	2.134	Pg42	-	G1"3/4"				RD 54.2SS	P-RD54.2SS	M-RD54.2SS	
60,0	2.362	Pg48	-	G2"				RD 60SS	P-RD60SS	M-RD60SS	
60,5	2.381	-	-	-				RD 60.5SS	P-RD60.5SS	M-RD60.5SS	
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	-	-	G2"1/2"		3		RD 76SS	P-RD76SS	M-RD76SS	
76,5	3.011	-	-	-		3,5		RD 76.5SS	P-RD76.5SS	M-RD76.5SS	
80,5	3.169	-	-	-		3		RD 80.5SS	P-RD80.5SS	M-RD80.5SS	
89,0	3.503	-	-	G3"		3,5		RD 89SS	P-RD89SS	M-RD89SS	
90,0	3.543	-	-	-	2	3		RD 90SS	P-RD90SS	M-RD90SS	
100,0	3.937	-	-	-	2	3	29,0	RD 100SS	P-RD100SS	M-RD100SS	TD-28.5*
102,0	4.015	-	-	-	2	3		RD 102SS	P-RD102SS	M-RD102SS	
114,0	4.488	-	-	-	2	2,5		RD 114SS	P-RD114SS	M-RD114SS	
120,0	4.724	-	-	-	1,5	2		RD 120SS	P-RD120SS	M-RD120SS	
140,0	5.512	-	-	-	1,5	2		RD 140SS	P-RD140SS	M-RD140SS	

* Puller included in the kit

SQUARE PUNCH

Hole size Nominal (mm)	(inch)	Material max thickness (mm) Stainless Steel	Mild Steel	Pilot hole Ø (mm)	Code KIT (Punch+die + Puller)
21,0 x 21,0	.827 x .827	2,5	3,5	12,0	RD 21X21
46,0 x 46,0	1.811 x 1.811	2,0	3,0	22,5	RD 46X46
68,0 x 68,0	2.677 x 2.677	1,5	2,0		RD 68X68
92,0 x 92,0	3.622 x 3.622				RD 92X92
126,0 x 126,0	4.960 x 4.960	1,0	1,5	28,5	RD 126X126
138,0 x 138,0	5.433 x 5.433				RD 138X138
220,0 x 220,0	8.661 x 8.661				RD 220X220

RECTANGULAR PUNCH

Hole size Nominal (mm)	(inch)	Material max thickness (mm) Stainless Steel	Mild Steel	Pilot hole Ø (mm)	Code KIT (Punch+die + Puller)
18,0 x 46,0	.709 x 1.811	2,0	2,0	16,5	RD 18X46
22,0 x 30,0	.866 x 1.181				RD 22X30
22,0 x 46,0	.866 x 1.811				RD 22X46
35,0 x 86,0	1.377 x 3.385				RD 35X86
35,0 x 112,0	1.377 x 4.409				RD 35X112
36,0 x 46,0	1.417 x 1.811			23,8	RD 36X46
37,0 x 54,0	1.456 x 2.125	1,5		16,5	RD 37X54
37,0 x 67,0	1.456 x 2.637				RD 37X67
37,0 x 88,0	1.456 x 3.464			26,5	RD 37X88
37,0 x 104,0	1.456 x 4.094				RD 37X104
37,0 x 115,0	1.456 x 4.527				RD 37X115
46,0 x 54,0	1.811 x 2.126				RD 46X54
46,0 x 72,0	1.811 x 2.835				RD 46X72
46,0 x 107,0	1.811 x 4.212				RD 46X107
50,0 x 98,0	1.968 x 3.858				RD 50X98
67,0 x 126,0	2.637 x 4.960			28,5	RD 67X126

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
TD27	COSMEC (Ø105÷Ø140)	Ø 27.5
TD14X14-M14	COSMEC 46x46	Ø 18.8
TD120X20-M20	COSMEC 92x92	Ø 27.5
TD20X20-M20	BM, COSMEC 42x95	Ø 27.5
KIT TGD-13.5X13.5-M13	COSMEC 40x40; 45x45; 46x46	Ø 18.8
KIT TGD-10X10-M9	COSMEC 006505	Ø 13.8

(*) 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.

Flexible hoses

High pressure flexible hoses for joining hydraulic heads to pumps.
In addition to the standard versions listed below alternative hose lengths are available, upon request:

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.

Quick couplers

STANDARD VERSIONS

Q 14-MS

Q 14-MS
Male automatic coupler for hydraulic heads (1/4" NPT).

Q 38-F

Q 38-F
Female automatic coupler for hydraulic pumps and flexible hoses (3/8" NPT).

Q 38-MS

Q 38-MS
Male automatic coupler for flexible hoses (3/8" NPT).

INSULATED VERSIONS

I 38-F

I 38-F
Female automatic coupler for insulated hydraulic pumps and flexible hoses (3/8" NPT).

I 38-MS

I 38-MS
Male automatic coupler for insulated flexible hoses (3/8" NPT).

HYDRAULIC PUMPS AND UNITS

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*	820x430xh290	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.

CE

Operating pressure bar	Dimensions mm			Weight kg
	length	*width*	*height*	
700	320	150	200	6,8

CPE-1

CPE-1-110

Operating pressure bar	Dimensions mm			Weight kg
	length	*width*	*height*	
700	372	223	482	21

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.

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**

ERCH-WH

RCP-B70

CS-CPE-1

PORTABLE ELECTRO-HYDRAULIC PUMP

B1300PL

battery operated

New portable electro-hydraulic pump B1300PL is battery operated for independent use.
Having the inherent strengths of the Cembre 18V tool range the B1300PL is a compact, lightweight pump suitable for a wide range of applications.
New Li-Ion 18 V 4 Ah batteries offer a high capacity, while improved operating speed results from a revitalised hydraulic system with double speed action.
A security valve assures operator safety.
Designed with improved handling characteristics, B1300PL is easily manageable during the operating 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.
Pressure can be released at any time using the appropriate button.

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

CE

Operating pressure bar	Dimensions mm			Weight kg
	length	*width*	*height*	
729	354	103	240	4,0

Storage type	Dimensions mm	Weight kg
VAL P51*	690x446xh179	5,5

**Supplied with the pump*

The B1300PL pump is supplied with:

- 0,9 m flexible hose complete with male + female 3/8" NPT self-lock quick couplers.
- 18.0 V - 4.0 Ah Li-Ion high power battery
- Battery charger
- Shoulder strap
- Plastic carrying case suitable for storing the tool and accessories, type VALP51

PORTABLE ELECTRO-HYDRAULIC PUMP

battery operated

B68M-P18

DOUBLE ACTION SPEED

18.0V 4.0Ah Li-Ion

CE

Operating pressure bar	Dimensions mm			Weight kg
	length	*width*	*height*	
729	364	186	236	5,6

Storage type	Dimensions mm	Weight kg
Canvas bag 031*	580x300xh320	2,23

**Supplied with the pump*

The B68M-P18 pump is supplied with:

- Remote control provides LED working lights and an OLED display
- 2 m flexible hose complete with rotatable Q14-F quick coupler on the pump and female 3/8" NPT self-lock quick couplers
- 18.0 V - 4.0 Ah Li-Ion high power battery (2 pcs.)
- Canvas bag suitable for storing the tool and accessories
- Battery charger
- Shoulder strap

Example of operating informations on OLED display:

Operating mode

Battery level

Release mode

No. of cycles

Pressure mode

Motor temperature

New portable electro-hydraulic pump B68M-P18 is battery operated for independent use.
Having the inherent strengths of the Cembre 18V tool range, the B68M-P18 is a lightweight high capacity pump equipped with an innovative remote control suitable for a wide range of applications.
New Li-Ion 18V 4 Ah batteries offer a high capacity, while improved operating speed results from a revitalised hydraulic system with double speed action.
A maximum pressure sensor assures greater precision and repeatability of the pressure cycle, while a security valve doubles the provision for operator safety.
The unit has a manual pressure release button in case of emergency.
Easy access to the oil reservoir is by means of an oil top-up inlet.
The innovative remote control provides LED working lights and an OLED display of essential real time tool operating information including:

- Operating mode selection
- Release mode selection: Smart release, manual release
- Minimum set pressure and momentary pressure reached expressed in bar allows verification of correct operation
- Battery charge level
- No. of cycles performed
- No. of cycles before scheduled recommended maintenance
- Motor temperature

Designed with improved handling characteristics, B68M-P18 is easily manageable during the operating process and has a fibreglass-plastic shell with high resistance to wear and damage.
The pump features a rubber pocket to store and protect the remote control.
Low noise levels aid operator comfort while additional convenience and safety are provided by LED lighting on the remote control.
Selecting the SMART release mode on the OLED display allows the operating pressure to be maintained until the operating button is released, thus allowing the operator to make a visual check of, say, the crimped connection.
Releasing the button then automatically releases the pressure.
Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface located under the battery.

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 dc external power supply socket with protective cap

24V 3.1Ah Ni-MH

Powerful 24V Ni-MH rechargeable battery

Battery residual power level display

Manual pressure release button

High pressure hose connects to automatic self-lock quick coupling with protective cap

Variously supplied with different versions:

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

B70M-P24-CH

Operating pressure bar	Dimensions mm			Weight kg
	length	*width*	*height*	
700	390	163	323	9,2*

**without accessories*

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
9. **ERCH-WH** Remote hand controller integrated with 3 m length flexible hose complete with male + female 3/8" NPT self-lock quick couplers

B70M-P24-KV

Operating pressure bar	Dimensions mm			Weight kg
	length	*width*	*height*	
700	390	163	323	9,2*

**without accessories*

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.
8. **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

TRS-B70
CANVAS RUCKSACK
(for carrying the pump)

Operating
push-button

Pressure release button

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

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 **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*

CPU 1131-C

*(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 1230-3D

*(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*

HYDRAULIC CUTTING UNITS

CP 1096

*(pump **PO 7000** + head **TC 096**)*

Max cutting Ø mm	Dimensions pump mm	Dimensions head mm	Weight kg
95	680x200xh163	397x249	17,7

Storage type	Dimensions mm	Weight kg
VAL CP 096*	785x430xh175	14,0

**Supplied with the unit*

CP 1120

*(pump **PO 7000** + head **TC 120**)*

Max cutting Ø mm	Dimensions pump mm	Dimensions head mm	Weight kg
120	680x200xh163	536x175	19,3

Storage type	Dimensions mm	Weight kg
VAL22-TC120*	766x305xh191	8,3

**Supplied with the unit*

Units CP-W-KV

GS approval n. ET 13045

Meets the requirements of EN 50340 VDE 0682 part 661 and GS-ET-22

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 CP096-W*	785x430xh175	12,6

Supplied with the **unit*

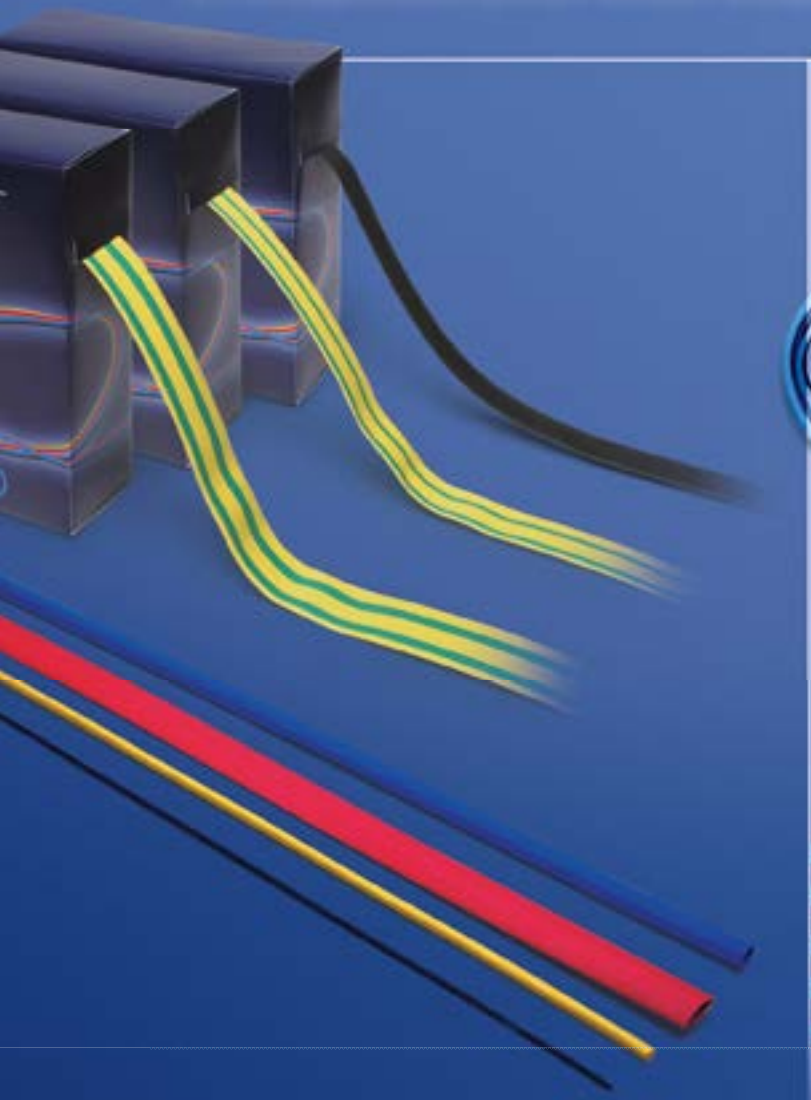
EK 500P

EK 100

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

MARKETLINE PRODUCTS

In this section of the catalogue you can find selected products at competitive price which complement our traditional range

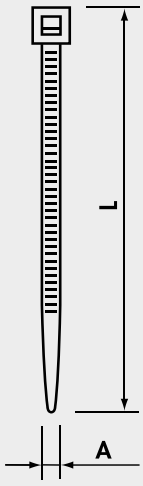


G

G series, PA6.6 Polyamide

HALOGEN FREE

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	Minimum order: 1.000 pcs
G80X2.4N						
G80X2.4/M					1000	
G80X2.4N/M						
G90X2.4	90		16		100	
G90X2.4N						
G100X2.5	100	2,5	22			
G100X2.5N						
G100X2.5/M					1000	
G100X2.5N/M						
G120X2.5	120		30		100	
G120X2.5N						
G140X2.5	140		33			
G140X2.5N						
G140X2.5/M					1000	
G140X2.5N/M					1000	
G160X2.5	160		40		100	
G160X2.5N						
G160X2.5/M					1000	
G160X2.5N/M						
G200X2.5	200		53		100	
G200X2.5N						
G200X2.5/M					1000	
G200X2.5N/M						
G250X2.8	250	2,8	65	14	100	
G250X2.8N						
G300X2.8	300		76			
G300X2.8N						
G120X3.6	120	3,6	30	18		
G120X3.6N						
G140X3.6	140		33			
G140X3.6N						
G140X3.6/M					1000	
G140X3.6N/M						
G150X3.6	150		35		100	
G150X3.6N						
G180X3.6	180		44			
G180X3.6N						
G200X3.6	200		53			
G200X3.6N						
G200X3.6/M					1000	
G200X3.6N/M						
G250X3.6	250		65		100	
G250X3.6N						
G300X3.6	300		76			
G300X3.6N						
G300X3.6/M					1000	
G300X3.6N/M						
G370X3.6	370		102		100	
G370X3.6N						
G120X4.8	120	4,8	24	22		
G120X4.8N						
G160X4.8	160		38			
G160X4.8N						
G190X4.8	190		46			
G190X4.8N						
G190X4.8/M					1000	
G190X4.8N/M						
G200X4.8	200		50		100	
G200X4.8N						
G200X4.8/M					1000	
G200X4.8N/M						
G250X4.8/M	250		60			
G250X4.8N/M						
G250X4.8	250		60		100	Minimum order: 100 pcs
G250X4.8N						
G280X4.8	280		70			
G280X4.8N						
G300X4.8	300		76			
G300X4.8N						
G370X4.8	370		102			
G370X4.8N						
G390X4.8	390		105			
G390X4.8N						
G430X4.8	430		110			
G430X4.8N						

Recommended tools are shown on page 202

HALOGEN FREE

CABLE TIES

G series, PA6.6 Polyamide

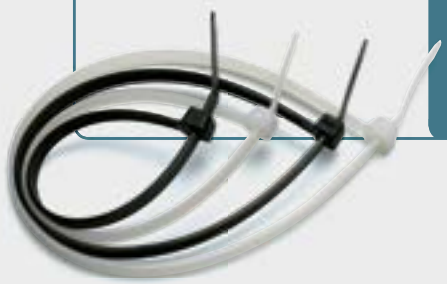
G

Cable Ties in PA6.6

Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
G450X4.8 G450X4.8N	450	4,8	116	22	100
G530X4.8 G530X4.8N	530		140		
G150X7.6 G150X7.6N	150	7,6	33	55	
G200X7.6 G200X7.6N	200		50		
G250X7.6 G250X7.6N	250		65		
G300X7.6 G300X7.6N	300		76		
G370X7.6 G370X7.6N	370		102		
G430X7.6 G430X7.6N	430		125		
G530X7.6 G530X7.6N	530		140		
G430X9.0 G430X9.0N	430	9,0	110	80	
G530X9.0 G530X9.0N	530		140		
G710X9.0 G710X9.0N	710		190		
G780X9.0 G780X9.0N	780		228		
G830X9.0 G830X9.0N	830		239		
G920X9.0 G920X9.0N	920		263		
G1020X9.0 G1020X9.0N	1020		295		
G1220X9.0 G1220X9.0N	1220		365		
G230X12.6 G230X12.6N	230	12,6	50	115	
G380X12.6 G380X12.6N	380		106		
G480X12.6 G480X12.6N	480		120		
G580X12.6 G580X12.6N	580		152		
G730X12.6 G730X12.6N	730		204		
G880X12.6 G880X12.6N	880		248		
G1030X12.6 G1030X12.6N	1030		295		

Minimum order: 100 pcs

Note: In Type, N = Black



Angled tongue to facilitate easy introduction into the buckle

Rounded corners for increased safety

HALOGEN FREE

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	2,5	22		1000	
G140X2.5/M VO	140		33		1000	
G200X2.5/M VO	200		53		1000	
G150X3.6 VO	150	3,6	35	18	100	
G200X4.8/M VO	200	4,8	50	22	1000	
G370X4.8 VO	370		102		100	100
G430X4.8 VO	430		110		100	
G710X9.0 VO	710	9,0	190	80	100	

Same features as G series except:
self-extinguishing VO (UL 94)

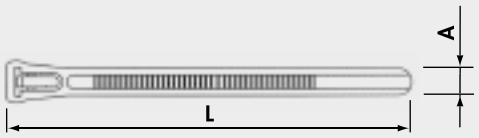
Recommended tools are shown on page 202

CABLE TIES

GR

GR series, PA6.6 Polyamide

HALOGEN FREE



Same features as G series.
Easy installation without tools.
Released by pressure on the tongue.
Suitable for temporary locking.

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

GFH series, PA6.6 Polyamide

HALOGEN FREE

Same features as G series.
Quick and easy identification of bundled conductors.
Write on panel with Felt tip pen.

Markable cable ties in PA6.6

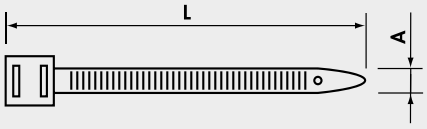
Type	L (mm)	A (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
GFH100X2.5	100	2,5	18	8,1	100
GFHT112X2.5	112				

1600

1600 series, Elastomerized Polymer on Polyamide base

HALOGEN FREE

UV RESISTANT



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

Cable Ties in PA12 Polyamide

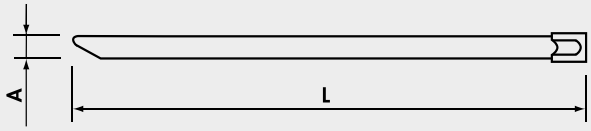
Type	Head Type	L (mm)	A (mm)	Min. Bundle Ø (mm)	Max. Bundle Ø (mm)	Min. Loop Tensile Strength (kg)	Quantity
1618.90	single	180	9	15	40	40	100
1626.90	double	260	9	30	60	55	100
1636.90	double	360	9	30	93	55	100
1651.90	double	510	9	70	140	55	100
1676.90	double	760	9	70	220	55	100

Recommended tools are shown on page 202

CABLE TIES

in Stainless Steel AISI 304

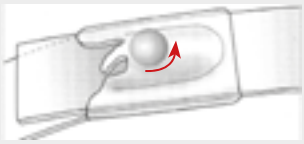
GX



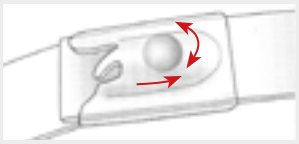
Cable Ties in Stainless Steel

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		

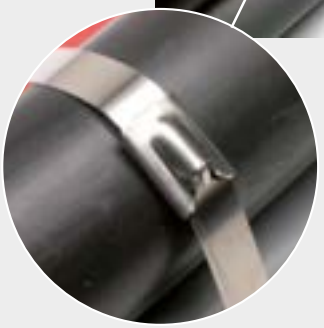
Material: Stainless Steel AISI 304
Unique ball locking mechanism that allows simple and rapid installation and secure locking.
Operating temperature:
From –80°C to +500°C
High tensile strength.
Non-flammability.
High resistance to acetic acid, alkalies, sulphuric acid, corrosion, etc.
In general very 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.



Recommended tools are shown on page 202

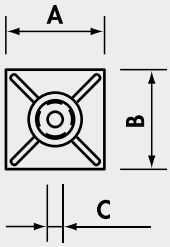
ACCESSORIES

AB CC SS

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)

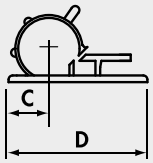
Resistant to:
oils, bases, greases, oil products, chlorinated solvents.
Colour: Natural

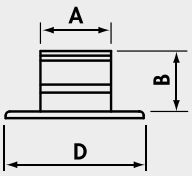


Self adhesive cable tie bases in PA6.6

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

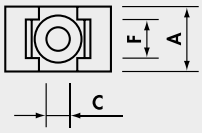
*Add to Ref: N for Black

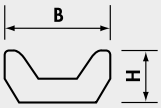




Self adhesive cable clips in PA6.6

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





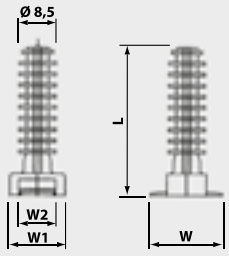
Cable tie saddle clamps in PA6.6

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

ACCESSORIES

GH8

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

File no. E472117

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, White, Blue, Grey, Brown, 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	$\geq 1x10^{14}$
Corrosive action:	UL 224 158°Cx168hr	Not corrosive
Copper compatibility:	UL 224 158°Cx168hr	Not corrosive
Flammability:	UL 224	VW-1

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	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20BK	BLACK	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10BK	BLACK	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10BK	BLACK	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10BK	BLACK	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10BK	BLACK	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10BK	BLACK	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5BK	BLACK	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5BK	BLACK	Ø 25,4 mm	Ø 12,7 mm	5 m
TBS16X20RE	RED	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20RE	RED	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10RE	RED	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10RE	RED	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10RE	RED	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10RE	RED	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10RE	RED	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5RE	RED	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5RE	RED	Ø 25,4 mm	Ø 12,7 mm	5 m
TBS16X20WH	WHITE	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20WH	WHITE	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10WH	WHITE	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10WH	WHITE	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10WH	WHITE	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10WH	WHITE	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10WH	WHITE	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5WH	WHITE	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5WH	WHITE	Ø 25,4 mm	Ø 12,7 mm	5 m
TBS16X20BU	BLUE	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20BU	BLUE	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10BU	BLUE	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10BU	BLUE	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10BU	BLUE	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10BU	BLUE	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10BU	BLUE	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5BU	BLUE	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5BU	BLUE	Ø 25,4 mm	Ø 12,7 mm	5 m

Ref.	Colour	Internal Ø before shrinking	Internal Ø after shrinking	Reel Length
TBS16X20GY	GREY	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20GY	GREY	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10GY	GREY	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10GY	GREY	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10GY	GREY	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10GY	GREY	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10GY	GREY	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5GY	GREY	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5GY	GREY	Ø 25,4 mm	Ø 12,7 mm	5 m
TBS16X20BR	BROWN	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20BR	BROWN	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10BR	BROWN	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10BR	BROWN	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10BR	BROWN	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10BR	BROWN	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10BR	BROWN	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5BR	BROWN	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5BR	BROWN	Ø 25,4 mm	Ø 12,7 mm	5 m
TBS16X20Y/G	YELLOW/GREEN	Ø 1,6 mm	Ø 0,8 mm	20 m
TBS24X20Y/G	YELLOW/GREEN	Ø 2,4 mm	Ø 1,2 mm	20 m
TBS32X10Y/G	YELLOW/GREEN	Ø 3,2 mm	Ø 1,6 mm	10 m
TBS48X10Y/G	YELLOW/GREEN	Ø 4,8 mm	Ø 2,4 mm	10 m
TBS64X10Y/G	YELLOW/GREEN	Ø 6,4 mm	Ø 3,2 mm	10 m
TBS95X10Y/G	YELLOW/GREEN	Ø 9,5 mm	Ø 4,8 mm	10 m
TBS127X10Y/G	YELLOW/GREEN	Ø 12,7 mm	Ø 6,4 mm	10 m
TBS190X5Y/G	YELLOW/GREEN	Ø 19,0 mm	Ø 9,5 mm	5 m
TBS254X5Y/G	YELLOW/GREEN	Ø 25,4 mm	Ø 12,7 mm	5 m

TERMOSTRIP HEAT-SHRINKABLE TUBING

TSS

flame-retardant Polyolefin
shrinkage ratio 2÷1

File no. E472117

HALOGEN FREE

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 193.

- **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
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
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
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
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

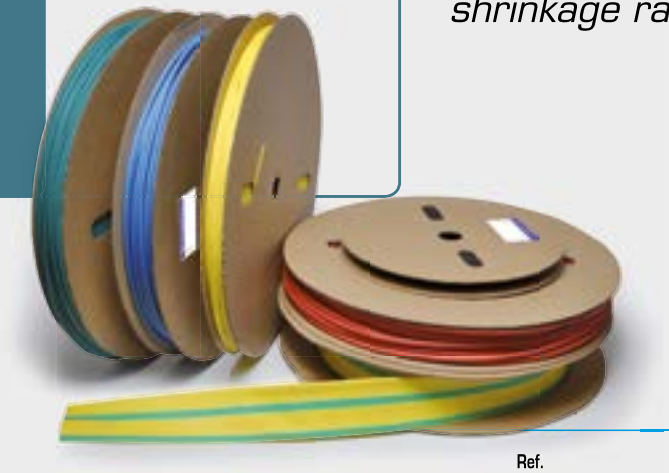
TERMOCOIL HEAT-SHRINKABLE TUBING

TCS

flame-retardant Polyolefin
shrinkage ratio 2÷1

File no. E472117

HALOGEN FREE



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 193.

- **Colours**: Black, Red, White, Blue, Yellow, Green, Grey, Brown, 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

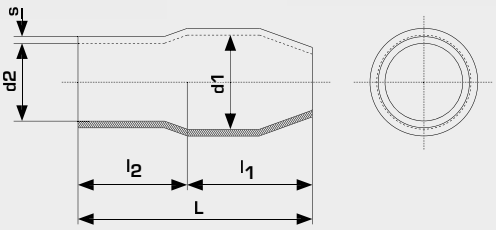
Ref.	Colour	Internal Ø before shrinking	Internal Ø after shrinking	Coil Length
TCS16X200YE	YELLOW	Ø 1,6 mm	Ø 0,8 mm	200 m
TCS24X200YE	YELLOW	Ø 2,4 mm	Ø 1,2 mm	200 m
TCS32X200YE	YELLOW	Ø 3,2 mm	Ø 1,6 mm	200 m
TCS48X100YE	YELLOW	Ø 4,8 mm	Ø 2,4 mm	100 m
TCS64X100YE	YELLOW	Ø 6,4 mm	Ø 3,2 mm	100 m
TCS95X100YE	YELLOW	Ø 9,5 mm	Ø 4,8 mm	100 m
TCS127X100YE	YELLOW	Ø 12,7 mm	Ø 6,4 mm	100 m
TCS190X100YE	YELLOW	Ø 19 mm	Ø 9,5 mm	100 m
TCS254X50YE	YELLOW	Ø 25,4 mm	Ø 12,7 mm	50 m
TCS16X200GN	GREEN	Ø 1,6 mm	Ø 0,8 mm	200 m
TCS24X200GN	GREEN	Ø 2,4 mm	Ø 1,2 mm	200 m
TCS32X200GN	GREEN	Ø 3,2 mm	Ø 1,6 mm	200 m
TCS48X100GN	GREEN	Ø 4,8 mm	Ø 2,4 mm	100 m
TCS64X100GN	GREEN	Ø 6,4 mm	Ø 3,2 mm	100 m
TCS95X100GN	GREEN	Ø 9,5 mm	Ø 4,8 mm	100 m
TCS127X100GN	GREEN	Ø 12,7 mm	Ø 6,4 mm	100 m
TCS190X100GN	GREEN	Ø 19 mm	Ø 9,5 mm	100 m
TCS254X50GN	GREEN	Ø 25,4 mm	Ø 12,7 mm	50 m
TCS16X200GY	GREY	Ø 1,6 mm	Ø 0,8 mm	200 m
TCS24X200GY	GREY	Ø 2,4 mm	Ø 1,2 mm	200 m
TCS32X200GY	GREY	Ø 3,2 mm	Ø 1,6 mm	200 m
TCS48X100GY	GREY	Ø 4,8 mm	Ø 2,4 mm	100 m
TCS64X100GY	GREY	Ø 6,4 mm	Ø 3,2 mm	100 m
TCS95X100GY	GREY	Ø 9,5 mm	Ø 4,8 mm	100 m
TCS127X100GY	GREY	Ø 12,7 mm	Ø 6,4 mm	100 m
TCS190X100GY	GREY	Ø 19,0 mm	Ø 9,5 mm	100 m
TCS254X50GY	GREY	Ø 25,4 mm	Ø 12,7 mm	50 m
TCS381X50GY	GREY	Ø 38,1 mm	Ø 19,0 mm	50 m
TCS16X200BR	BROWN	Ø 1,6 mm	Ø 0,8 mm	200 m
TCS24X200BR	BROWN	Ø 2,4 mm	Ø 1,2 mm	200 m
TCS32X200BR	BROWN	Ø 3,2 mm	Ø 1,6 mm	200 m
TCS48X100BR	BROWN	Ø 4,8 mm	Ø 2,4 mm	100 m
TCS64X100BR	BROWN	Ø 6,4 mm	Ø 3,2 mm	100 m
TCS95X100BR	BROWN	Ø 9,5 mm	Ø 4,8 mm	100 m
TCS127X100BR	BROWN	Ø 12,7 mm	Ø 6,4 mm	100 m
TCS190X100BR	BROWN	Ø 19,0 mm	Ø 9,5 mm	100 m
TCS254X50BR	BROWN	Ø 25,4 mm	Ø 12,7 mm	50 m
TCS381X50BR	BROWN	Ø 38,1 mm	Ø 19,0 mm	50 m
TCS32X200Y/G	YELLOW / GREEN	Ø 3.2 mm	Ø 1.6 mm	200 m
TCS48X100Y/G	YELLOW / GREEN	Ø 4.8 mm	Ø 2.4 mm	100 m
TCS64X100Y/G	YELLOW / GREEN	Ø 6.4 mm	Ø 3.2 mm	100 m
TCS95X100Y/G	YELLOW / GREEN	Ø 9.5 mm	Ø 4.8 mm	100 m
TCS127X100Y/G	YELLOW / GREEN	Ø 12.7 mm	Ø 6.4 mm	100 m
TCS190X100Y/G	YELLOW / GREEN	Ø 19 mm	Ø 9.5 mm	100 m
TCS254X50Y/G	YELLOW / GREEN	Ø 25.4 mm	Ø 12.7 mm	50 m
TCS381X50Y/G	YELLOW / GREEN	Ø 38,1 mm	Ø 19,0 mm	50 m
TCS508X25Y/G	YELLOW / GREEN	Ø 50,8 mm	Ø 25,4 mm	25 m

INSULATED COVERS

ES

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)**: V0
- **Working temperature**: 85 °C
- **Colours**: red, yellow, blue, black, grey, brown.

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	
ES3-..	*A3*	10.0	8.0	15.0	13.0	28.0	1.1	100	1.000
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	
ES14-..	*A12, A14*	17.0	13.9	22.0	20.0	42.0	1.5	100	500
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	
ES48-..	*A48***	36.5	27.2	42.0	33.0	75.0	2.0	50	100
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, **-RE** red, **-YE** yellow,*

** See A-M type copper tube lugs on pages 24-25, 34*

*** Depending on the diameter of the insulated cable*

cast resin, low voltage through joints

SHELLS

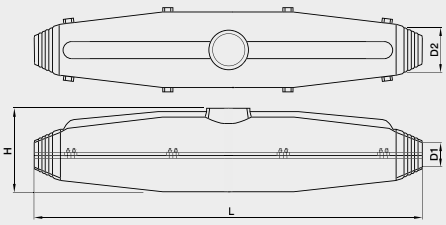
Manufactured from transparent synthetic material which allows a visual check of the connections before and after casting.
The halves of the shell are joined by snap closures which avoid further fixing or sealing.

Shells are left on after casting to provide additional protection against mechanical abrasion, chemical agents and severe weather conditions.

STRAIGHT JOINTS

Type	Dimensions mm L	H	D1[1]	D2[1]	Cable Diameter mm	Indicative Cable Section [2] mm²
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

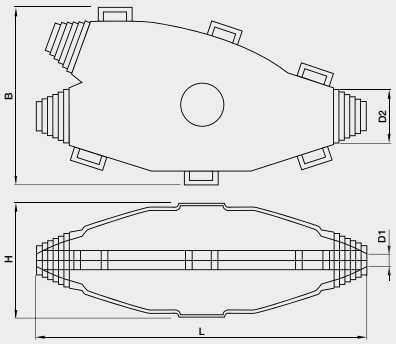
[1] *Internal dimension of the shell*
[2] *Indicative cable sections are approximate and concern only harmonised, PVC or Rubber insulated cables at a working voltage of 0,6/1 kV*



BRANCH JOINTS

Type	Dimensions mm L	H	B	D1[1]	D2[1]	Cable Diameter mm	Indicative Cable Section [2] mm² 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

N

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

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

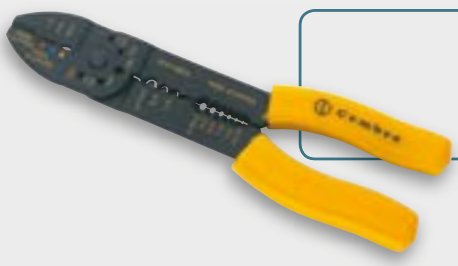
For crimping plugs RJ 11; RJ 12; RJ 14; RJ 22; RJ 45. With cutting and wire-stripping blades

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

DIE SELECTOR CHART

COPPER CONDUCTORS

EXTRA FLEXIBLE COPPER CONDUCTORS

APPLICATION	CONDUCTOR		CONNECTOR			HYDRAULIC TOOLS																										
						B 15MD	B 35-45MD			B 35-50MD			HT 45-E				HT 51 B 500 RH 50 B 550			HT 81-U RHU 81		HT 120 and tools and heads with 130 kN crimping force			ECW-H3D			RHU 520			
	Conductor Size sqmm		TERMINAL		SPLICE	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET		NEST	INDENTOR	DIE SET	DIE SET	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET	NEST	INDENTOR	DIE SET		
	Low str.	*Flex*																														
	0,25 ÷ 2,5		A 03-M.. A 06-M..		L 03-M / L 03-P L 06-M / L 06-P	ME03/2-15 ① MA03/3-15 Ⓨ																												
A..-M..	4 ÷ 6		A 1-M.. A 1-L..		L 1-M L 1-P	ME03/2-15 ① MA03/3-15 Ⓨ	MA 1 Ⓨ	PA 1	ME 1 ①	MA 1-50 Ⓨ	PA 1-50	ME 1-50 ①	MA 1 Ⓨ	PA 1	ME 1 ①		MA 1-50 Ⓨ	PA 1-50	ME 1-50 ①													
	10		A 2-M.. A 2-L.. A 2-P12		L 2-M L 2-P	ME03/2-15 ① ME2/3-15 ① MA03/3-15 Ⓨ	MA 2.3 Ⓨ	PA 5	ME 2 ①	MA 2.3-50 Ⓨ	PA 5-50	ME 2-50 ①	MA 2.3 Ⓨ	PA 5	ME 2 ①		MA 2.3-50 Ⓨ	PA 5-50	ME 2-50 ①	MA 3.5-U Ⓨ	ME 2.19-U ①	MA 2-C Ⓨ	PA 10-C	ME 2-C ①	Adaptor AU 230-130 D with die set MA..-C and indentor PA..-C	Adaptor AU 230-130 D with die set ME..-C		Adaptor AU 520-130 C with die set MA..-C and indentor PA..-C	Adaptor AU 520-130 C with die set ME..-C	
	16		A 3-M.. A 3-L.. A 3-P14	2A 3-M..	L 3-M L 3-P	ME2/3-15 ① MA03/3-15 Ⓨ			ME 3 ①			ME 3-50 ①			ME 3 ①				ME 3-50 ①		ME 3.14-U ①	MA 3-C Ⓨ		ME 3-C ①								
A..-P..	25		A 5-M.. A 5-L.. A 5-P16	2A 5-M..	L 5-M L 5-P		MA 5 Ⓨ		ME 5 ①	MA 5-50 Ⓨ		ME 5-50 ①	MA 5 Ⓨ		ME 5 ①		MA 5-50 Ⓨ		ME 5-50 ①		ME 5.7-U ①	MA 5-C Ⓨ		ME 5-C ①								
	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 ①	MA 7-50 Ⓨ	PA 10-50	ME 7-50 ①	MA 7 Ⓨ	PA 10	ME 7 ①		MA 7-50 Ⓨ	PA 10-50	ME 7-50 ①	MA 7.14-U Ⓨ		MA 7-C Ⓨ		ME 7-C ①								
	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 ②	MA 10-50 Ⓨ		ME 10-50 ②	MA 10 Ⓨ		ME 10 ②		MA 10-50 Ⓨ		ME 10-50 ②	MA 10.19-U Ⓨ	ME 10.24-U ②	MA 10-C Ⓨ		ME 10-C ①								
L..-M..	70	50* 70	A 14-M.. A 14-L..	2A 14-M..	L 14-M L 14-P				ME 14 ②	MA 14-50 Ⓨ	PA 19-50	ME 14-50 ②			ME 14 ②		MA 14-50 Ⓨ	PA 19-50	ME 14-50 ②	MA 7.14-U Ⓨ	ME 3.14-U ②	MA 14-C Ⓨ	PA 24-C	ME 14-C ①								
			A 14-P30						ME 17 ②			ME 17-50 ②			ME 17 ②				ME 17-50 ②					ME 17-C ①								
	95	70* 95	A 19-M.. A 19-L..	2A 19-M..	L 19-M L 19-P				ME 19 ②	MA 19-50 Ⓨ		ME 19-50 ②			ME 19 ②		MA 19-50 Ⓨ		ME 19-50 ②	MA 10.19-U MA 19-U Ⓨ	ME 2.19-U ②	MA 19-C Ⓨ		ME 19-C ①								
	120	95* 120	A 24-M.. A 24-L..	2A 24-M..	L 24-M L 24-P				ME 24L • ②	MA 24-50 Ⓨ	PA 24-50	ME 24L-50 • ②			ME 24 ②		MA 24-50 Ⓨ	PA 24-50	ME 24-50 ②	MA 24-U Ⓨ	ME 10.24-U ②	MA 24-C Ⓨ		ME 24-C ①								
L..-P..	150	120* 150	A 30-M.. A 30-L..	2A 30-M..	L 30-M L 30-P				ME 30L • ③			ME 30L-50 • ③			ME 30 ③				ME 30-50 ③	MA 30.80-U Ⓨ	ME 30-U ②	MA 30-C Ⓨ		ME 30-C ①								
	185	150* 185	A 37-M.. A 37-L.. A 37-4ESI	2A 37-M..	L 37-M L 37-P														ME 37-50 ③	MA 37-U ②	ME 37-U ②	MA 37-C Ⓨ	PA 48-C	ME 37-C ①								
	240	185* 240	A 48-M.. A 48-L.. A 48-4ESI	2A 48-M..	L 48-M L 48-P														ME 48-50 ③	MA 48-U ③	ME 48-U ③	MA 48-C Ⓨ		ME 48-C ②								
2A..-M..	300	240 300	A 60-M.. A 60-L.. A 60-4ESI	2A 60-M..	L 60-M L 60-P														ME 60-50** ④			MA 60-C Ⓨ	PA 60-C	ME 60-C ③								
	400	300 400	A 80-M.. A 80-4ESI	2A 80-M..	L 80-M																			ME 80-C ③	MA 80-3D Ⓨ	PA 100-3D	ME 80-3D ②	MA 80-520 Ⓨ		ME 80-520 ②		
	500	400 500	A 100-M.. A 100-4ESI	2A 100-M..	L 100-M																				MA 100-3D Ⓨ		ME 100-3D ②	MA 100-520 Ⓨ	PA 120-520	ME 100-520 ②		
A..-4ESI	630	500 630	A 120-M.. A 120-4ESI	2A 120-M..	L 120-M																				MA 120-3D Ⓨ	PA 120-3D	ME 120-3D ②	MA 120-520 Ⓨ		ME 120-520 ②		
	800	630	A 160-M.. A 160-4ESI	2A 160-M..	L 160-M																							MA 160-520 Ⓨ	PA 200-520	ME 160-520 ②		
	1000	800	A 200-M..	2A 200-M..	L 200-M																							MA 200-520 Ⓨ		ME 200-520 ②		
		35	A 9-M..				MA 9 Ⓨ	PA 10	ME 9 ①	MA 9-50 Ⓨ	PA 10-50	ME 9-50 ①	MA 9 Ⓨ	PA 10	ME 9 ①		MA 9-50 Ⓨ	PA 10-50	ME 9-50 ①	MA 9.17-U Ⓨ	ME 9.20-U ①	MA 9-C Ⓨ	PA 10-C	ME 9-C ①								
		50	A 12-M..						ME 12 ②	MA 12-50 Ⓨ		ME 12-50 ②			ME 12 ②		MA 12-50 Ⓨ		ME 12-50 ②	MA 12.20-U Ⓨ	ME 12.17-U ②	MA 12-C Ⓨ		ME 12-C ①								
A..-M..		70	A 17-M..						ME 17 ②	MA 17-50 Ⓨ	PA 19-50	ME 17-50 ②			ME 17 ②		MA 17-50 Ⓨ	PA 19-50	ME 17-50 ②	MA 9.17-U Ⓨ	ME 12.17-U ②	MA 17-C Ⓨ	PA 24-C	ME 17-C ①								
		95	A 20-M..						ME 20 ②	MA 20-50 Ⓨ		ME 20-50 ②			ME 20 ②		MA 20-50 Ⓨ		ME 20-50 ②	MA 12.20-U Ⓨ	ME 9.20-U ②	MA 20-C Ⓨ		ME 20-C ①								
		120	A 29-M..						ME 29 ③			ME 29-50 ③			ME 29 ③				ME 29-50 ③	MA 29.80-U Ⓨ	ME 29-U ②	MA 29-C Ⓨ		ME 29-C ①								
		150	A 35-M..																ME 35-50 ③	MA 35-U ②	ME 35-U ②	MA 35-C Ⓨ	PA 48-C	ME 35-C ①								
		185	A 40-M..																ME 40-50 ③	MA 40-U ②	ME 40-U ③	MA 40-C Ⓨ		ME 40-C ①								

⬡ Hexagonal crimp (use one size up with fine stranded conductors, E.G.: 95▫ fine stranded use A19-.. + ME 19 or A 20-.. + ME 20)

Ⓨ Indent crimp

• *Only for flexible conductors*

** Only for B 500 and RH 50.

** Contact Cembre for appropriate die set*

N.B.: *Number inside symbol indicates the number of crimps on A-M barrel*

DIE SELECTOR CHART

COPPER CONDUCTORS

APPLICATION	CONDUCTOR	CONNECTOR							HYDRAULIC TOOLS									
									B 15MD	B 35-45MD	B 35-50MD	HT 45-E	HT 51 RH 50 B 500 B 550	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..	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 RF-C	Adaptor AU 230-130 D with die set MN..-C and indentor PN..-C or with die set MN..-RF-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 RF-C		
	25	ANE 5-M..	ANE 5-P16								MN 5 RF-50		MN 5 RF-50		MN 5-C		MN 5 RF-C		
	35	ANE 7-M..	ANE 7-P20								MN 7 RF-50		MN 7 RF-50		MN 7-C		MN 7 RF-C		
	50	ANE 10-M..									MN 10 RF-50		MN 10 RF-50		MN 10-C	PN 14-C	MN 10 RF-C		
ANE..-P..	70	ANE 14-M..											MN 14 RF-50		MN 14-C		MN 14 RF-C		
	95	ANE 19-M..											MN 19 RF-50		MN 19-C	PN 24-C	MN 19 RF-C		
	120	ANE 24-M..											MN 24 RF-50		MN 24-C		MN 24 RF-C		
	150	ANE 30-M..													MN 30-C	PN 37-C	MN 30 RF-C		
ANE..-U..																			
	35	ANE 9-M..									MN 7 RF-50		MN 7 RF-50		MN 9-C	PN 14-C	MN 7 RF-C	Adaptor AU 230-130 D with die set MN..-C and indentor PN..-C or with die set MN..-RF-C and die set MN..F-C	
	50	ANE 12-M..									MN 12 F-50		MN 12 F-50		MN 12-C		MN 12 F-C		
ANE..-M..	70	ANE 17-M..											MN 17 F-50		MN 17-C	PN 24-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	PN 37-C	MN 29 F-C		
	150	ANE 35-M..													MN 35-C		MN 35 F-C		

COPPER CONDUCTORS

	Conductor Size Flex sqmm	TERMINAL							DIE SET		DIE SET		DIE SET						
	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										
PK ...	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						
KE ...	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						

	Conductor Size Flex sqmm	TERMINAL							DIE SET	COMP. APERTURE		DIE SET		DIE SET					
	2 x 0,5	PKT 508 PKT 510							KE 4-15	1									
	2 x 0,75	PKT 7508 PKT 7512								1,5									
PKT ...	2 x 1	PKT 108 PKT 112								2,5									
	2 x 1,5	PKT 1508 PKT 1512								2,5									
	2 x 2,5	PKT 2510 PKT 2512							KE 4-15 KE 16-15	4									
	2 x 4	PKT 412							KE 16-15	6									
	2 x 6	PKT 614								10									
	2 x 10	PKT 1014							KE 16-15 KE 35-15	16		MTT 16-50		MTT 16-50					
	2 x 16	PKT 1614							KE 35-15	35		MTT 35-50		MTT 35-50					

Indent crimp Radial crimp Trapezium crimp

DIE SELECTOR CHART

TAP-OFF ON COPPER CONDUCTOR

APPLICATION	CONDUCTOR		CONNECTORS		HYDRAULIC TOOLS							
					B 35-45MD	B 35-50MD	HT 45-E	HT 51 RH 50 B 500 B 550	HT 81-U RHU 81	HT 120 and tools and heads with 130 kN crimping force	ECW-H3D	RHU 520
	Conductor Size sqmm		CONNECTOR	CONNECTOR								
	Run	*Tap*			DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET
	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)		
	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)	Adaptor AU 230-130 D with die set MC..-C	
	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)	MC 35-50 (2)	MC 35-U (1)	MC 35-C (1)		
	50	25 ÷ 10										
	70 ÷ 63	25 ÷ 1,5	C 70 - C 25N ST	C 70 - C 25N								Adaptor AU 520-130 C with die set MC..-C
	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								
	150	150 ÷ 63	C 150 - C 150 ST	C 150 - C 150						MC 185-C (3)	MC 185-3D (1)	
	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)	

H.V. COPPER CONDUCTORS

Conductor Size sqmm	TERMINALS		TERMINALS				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 ◯		MMT 25-50 ◯	MMT 25-U ◯	MMT 25-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 ◯		MMT 50-50 ◯	MMT 50-U ◯	MMT 50-C ◯		
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 ◯	MMT 95-U ◯	MMT 95-C ◯	Adaptor AU 230-130 D with die set MMT..-C	Adaptor AU 520-130 C with die set MMT..-C
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 ◯	MMT 200-U ◯	MMT 200-C ◯		
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 ◯		
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 ◯	ME 80-3D ◯	ME 80-520 ◯
500 R	MT 500 - TD		2A 100 - M..	2A 100 - 2M..								ME 100-3D ◯	ME 100-520 ◯
600 R ÷ 630 R	MT 630 - TD		2A 120 - M..	2A 120 - 2M..								ME 120-3D ◯	ME 120-520 ◯

◯ 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

ALUMINIUM CONDUCTORS

APPLICATIONS	CONDUCTOR	CONNECTORS			HYDRAULIC TOOLS			
					HYDRAULIC TOOLS	HT 131-UC	RHU 131-C	B 1350-UC / B 1300-UC
	Conductor Size sqmm	LUGS			DIE HOLDER	DIE		INDENTOR
CAA..-M..	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			MV 95	MUA 95	PS 130-95/E
	70	CAA 70 - M..	MTA 70 - C..					
MTA..-C	95	CAA 95 - M..	MTA 95 - C..					
	120	CAA 120 - M..	MTA 120 - C..			MV 150	MUA 150	PS 130-150/E
	150	CAA 150 - M..	MTA 150 - C..					
	185	CAA 185 - M..	MTA 185 - C..		AU 130-240	MV 240	MUA 240	PS 130-240/E
	240	CAA 240 - M..	MTA 240 - C..					
	300	CAA 300 - 34 - M..				MUA 300-34		
	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..				MUA 95		PS 130-95/E
	70	AA 70 - M..						
AA..-M..	95	AA 95 - M..						
	120	AA 120 - M..				MUA 150		PS 130-150/E
	150	AA 150 - M..						
	185	AA 185 - M..			AU 130-240	MUA 240		PS 130-240/E
	240	AA 240 - M..						
	300	AA 300 - 34 - M..				MUA 300-34		

Indent crimp

ALUMINIUM CONDUCTORS

DIE SELECTOR CHART FOR DEEP STEPPED INDENTING WITH CONTAINING DIES

MTMA..-..GC

Conductor Size sqmm	SPLICES		Conductor Size sqmm Al	Conductor Size sqmm Al/Cu	SPLICES	HYDRAULIC TOOLS HT 131-UC RHU 131-C B 1350-UC B 1300-UC		
						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		MVM 95 / MUA 95	PS 130-95/E
			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		MVM 150 / MUA 150	PS 130-150/E
			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	AU 130-240	MVM 240 / MUA 240	PS 130-240/E
			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		MUA 300-34	
			300	240	MTMAD 300-240 GC			

PRE-ROUNDERS SELECTION

ALUMINIUM CONDUCTOR SIZE sqmm	PRE-ROUNDER	DIE-SUPPORT
25	UP 130-25	AC 130-P
35	UP 130-35	
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	

DIES DESCRIPTION

1) AU 130-.. DIE-HOLDER
Used to house dies and pre-rounders.

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.

3) AC 130-P.. DIE SUPPORT
Houses lower part of pre-rounder **UP 130-..**

4) MUA... DIES
Containing dies.

5) PS 130-../E INDENTORS
Such indentors are specifically engineered for deep indentation of aluminium conductors of any stranding configuration.

DIES SEQUENCE

CONDUCTOR ROUNDING	CRIMPING
1	1
2	4
3	5

Indent crimp

DIE SELECTOR CHART

ALUMINIUM CONDUCTORS

APPLICATIONS	CONDUCTOR	CONNECTORS				HYDRAULIC TOOLS							
						HT 120 and tools and heads with 130 kN crimping force	HT 131-UC RHU 131-C B 1350-UC 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											
	500	CAA 500 - M16 TNBD											
	630	CAA 630 - 4M8								MK46-3D		MV 230-630 MC6E	PS 230-630 6E
	Conductor Size sqmm	LUGS				DIE SET	DIE HOLDER	DIE	INDENTOR	DIE SET	ADAPTOR	DIE	INDENTOR
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											
	500	AA 500 - 40 - M16											
	630	AA 630 - M16								MK46-3D		MUA 230-630-630	PS 230-630 6E
	Conductor Size sqmm	SPLICES	Conductor Size sqmm Al	Al/Cu	SPLICES	DIE SET	DIE HOLDER	DIE	INDENTOR	DIE SET	ADAPTOR	DIE	INDENTOR
	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								
		MTMAD 300-GC		185	MTMAD 300-185-GC								
				240	MTMAD 300-240-GC								
MTMA..	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								
				300	MTMA 400-300-GC								
	500	MTMA 500-40/1											
	500	MTMA 500-GC	500	300	MTMA 500-300-GC					MK46-3D		MVM 230-630 MJ6E	PS 230-630 6E
				400	MTMA 500-400-GC								
	630	MTMA 630/1											

Indent crimp Hexagonal crimp

DIE SELECTOR CHART

COPPER CONDUCTORS

APPLICATIONS	CONDUCTOR			CONECTOR			HYDRAULIC TOOLS									
							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	
	Conductor Size sqmm	Conductor Size AWG	Conductor Size Navy	LUGS		SPLICES	DIE SET		DIE SET		DIE SET		DIE SET	DIE SET	DIE SET	
C..-..	10	8	23	C8-..	CL8-..	BSCL8	ME03/2-15 (1) ME2/3-15 (1) MA03/3-15		MY 2-50 (1)		MY 2-50 (1)		MY 2-C (1)			
	16	6		C6-..	CL6-..	BSCL6	ME2/3-15 (1) MA03/3-15		MY 3-50 (1)		MY 3-50 (1)		MY 3-C (1)			
	25	4	40	C4-..	CL4-..	BSCL4			MY 4-50 (1)		MY 4-50 (1)		MY 4-C (1)			
		3	50	C3-..	CL3-..	BSCL3			MY 5-50 (1)		MY 5-50 (1)		MY 5-C (1)			
	35	2	60	C2-..	CL2-..	BSCL2			MY 6-50 (1)		MY 6-50 (1)		MY 6-C (1)			
CL..-..		1	75	C1-..	CL1-..	BSCL1			MY 7-50 (1)		MY 7-50 (1)		MY 7-C (1)			
	50	1/0	100	C1/0-..	CL1/0-..	BSCL1/0			MY 10-50 (2)		MY 10-50 (2)		MY 10-C (1)	Adaptador	Adaptador	
	70	2/0	125	C2/0-..	CL2/0-..	BSCL2/0			MY 14-50 (2)		MY 14-50 (2)		MY 14-C (1)	AU 230-130 D	AU 520-130 C	
	95	3/0	150	C3/0-..	CL3/0-..	BSCL3/0			MY 16-50 (2)		MY 16-50 (2)		MY 16-C (1)	con matriz	con matriz	
		4/0	200	C4/0-..	CL4/0-..	BSCL4/0			MY 19-50 (2)		MY 19-50 (2)		MY 19-C (1)	MY..-C	MY..-C	
CL..-..	120	250 MCM	250	C250-..	CL250-..	BSCL250			MY 24-50 (2)		MY 24-50 (2)		MY 24-C (1)			
	150	300 MCM	300	C300-..	CL300-..	BSCL300			MY 30L-50 (2)		MY 30-50 (2)		MY 30-C (1)			
	185	350 MCM	350	C350-..	CL350-..	BSCL350					MY 36-50 (2)		MY 36-C (1)			
		400 MCM	400	C400-..	CL400-..	BSCL400					MY 37-50 (2)		MY 37-C (1)			
BSCL..	240	500-MCM		C500-..	CL500-..	BSCL500					MY 48-50 (3)		MY 48-C (2)			
	300	600 MCM		C600-..	CL600-..	BSCL600							MY 60-C (2)			
		750 MCM		C750-..	CL750-..	BSCL750							MY 76-C (2)			

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 B 500	HT 81-U RHU 81 ◊	HT 120 and tools and heads with 130 kN crimping force		ECW-H3D	RHU520
		LUGS	SPLICES	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE SET	DIE	INDENTOR	DIE SET	DIE SET
DIN 46234	6÷10	Q10-..				MQ10-50 (1)		MQ10-50 (1)	MQ10-50 (1)	MQ10-50 (1)	MQS16-C		
	10÷16	Q16-..				MQ16-50 (1)		MQ16-50 (1)	MQ16-50 (1)	MQ16-50 (1)			
	16÷25	Q25-..				MQ25-50 (1)		MQ25-50 (1)	MQ25-50 (1)	MQ25-50 (1)	MQS-35-C		
	25÷35	Q35-..				MQ35-50 (1)		MQ35-50 (1)	MQ35-50 (1)	MQ35-50 (1)			
	35÷50	Q50-..				MQ50-50 (1)		MQ50-50 (1)	MQ50-50 (1)	MQ50-50 (1)	MQS70-C	Adaptor AU 230-130 D with die set MQ...	Adaptor AU 520-130 C with die set MQ...
	50÷70	Q70-..				MQ70-50 (1)		MQ70-50 (1)	MQ70-50 (1)	MQ70-50 (1)			
	70÷95	Q95-..								MQM95-C (1)	MQS150-C		
	95÷120	Q120-..								MQM120-C (1)			
	120÷150	Q150-..								MQM150-C (1)			
	150÷185	Q185-..								MQM185-C (1)	MQS240-C		
	185÷240	Q240-..								MQM240-C (1)			
DIN 46235 - 46267 T.1	6	DR6-..	DSV6	MK5/8-15 (1)	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-C (1)		Adaptor AU 230-130 D with die set MK..-C	
	16	DR16-..	DSV16		MK8 (2)	MK8-50 (2)	MK8 (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-C (1)			
	35	DR35-..	DSV35		MK12 (2)	MK12-50 (2)	MK12 (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-C (2)		MK14-3D (2)	Adaptor AU 520-130 C with die set MK..-C
	70	DR70-..	DSV70		MK16 (3)	MK16-50 (3)	MK16 (3)	MK16-50 (3)	MK16-50 (3)	MK16-C (2)		MK16-3D (2)	
	95	DR95-..	DSV95		MK18 (4)	MK18-50 (4)	MK18 (4)	MK18-50 (4)	MK18-50 (4)	MK18-C (2)		MK18-3D (2)	
	120	DR120-..	DSV120		MK20 ● (4)	MK20-50 ● (4)	MK20 (4)	MK20-50 (4)	MK20-50 (4)	MK20-C (2)		MK20-3D (2)	
	150	DR150-..	DSV150		MK22L ● (4)	MK22L-50 ● (4)	MK22L (4)	MK22-50 (4)	MK22-50 (4)	MK22-C (2)		MK22-3D (2)	
	185	DR185-..	DSV185					MK25-50 (5)	MK25-50 (5)	MK25-C (2)		MK25-3D (2)	
	240	DR240-..	DSV240					MK28-50 (5)	MK28-50 (5)	MK28-C (4)		MK28-3D (2)	
	300	DR300-..	DSV300					MK32-50** (6)		MK32-C (4)		MK32-3D (2)	
	400	DR400-..	DSV400									MK38-3D (3)	MK38-520 (3)
	500	DR500-..	DSV500									MK42-3D (3)	MK42-520 (3)
	625	DR625-..	DSV625									MK44-3D (3)	MK44-520 (3)
	800	DR800-..	DSV800										MK52-520 (3)
	1000	DR1000-..	DSV1000										MK58-520 (3)

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 flexible conductors* ** Only for B 500 and RH 50.

APPENDIX

REFERENCE/CODE CROSS-REFERENCE CHART

Ref.	Code
1052007	3005900
1052007N	3005901
1052009	3005903
1052009N	3005904
1052011	3005906
1052011N	3005907
1052013	3005909
1052013N	3005910
1052016	3005912
1052016N	3005913
1052021	3005915
1052021N	3005916
1052029	3005918
1052029N	3005919
1052036	3005921
1052036N	3005922
1052042	3005924
1052042N	3005925
1052048	3005927
1052048N	3005928
1053M12	3005958
1053M12N	3005959
1053M16	3005961
1053M16N	3005962
1053M20	3005964
1053M20N	3005965
1053M25	3005967
1053M25N	3005968
1053M32	3005970
1053M32N	3005971
1053M40	3005973
1053M40N	3005974
1053M50	3005976
1053M50N	3005977
1053M63	3005979
1053M63N	3005980
1112	3005715
1112N	3005716
1116	3005720
1116N	3005721
1120	3005725
1120N	3005726
1125	3005730
1125N	3005731
1132	3005735
1132N	3005736
1140	3005740
1140N	3005741
1141012	3005120
1141012N	3005121
1141112	3005155
1141112N	3005156
1141200	3005170
1141200N	3005171
1142007	3005010
1142007G	3005012
1142007N	3005011
1142009	3005015
1142009G	3005017
1142009N	3005016
1142011	3005020
1142011G	3005022
1142011N	3005021
1142013	3005025
1142013G	3005027
1142013N	3005026
1142016	3005030
1142016G	3005032
1142016N	3005031
1142021	3005035
1142021G	3005037
1142021N	3005036
1142029	3005040
1142029G	3005042
1142029N	3005041
1142036	3005045
1142036G	3005047
1142036N	3005046
1142042	3005050
1142042G	3005052
1142042N	3005051
1142048	3005055
1142048G	3005057
1142048N	3005056
1143M12	3005215
1143M12G	3005217
1143M12N	3005216
1143M16	3005220
1143M16G	3005222

Ref.	Code
1143M16N	3005221
1143M20	3005225
1143M20G	3005227
1143M20N	3005226
1143M25	3005230
1143M25G	3005232
1143M25N	3005231
1143M32	3005235
1143M32G	3005237
1143M32N	3005236
1143M40	3005240
1143M40G	3005242
1143M40N	3005241
1143M50	3005245
1143M50G	3005247
1143M50N	3005246
1143M63	3005250
1143M63G	3005252
1143M63N	3005251
1150	3005745
1150N	3005746
1163	3005750
1163N	3005751
1253M12	3006750
1253M12N	3006751
1253M16	3006755
1253M16N	3006756
1253M20	3006760
1253M20N	3006761
1253M25	3006765
1253M25N	3006766
1253M32	3006770
1253M32N	3006771
1253M40	3006775
1253M40N	3006776
1253M50	3006780
1253M50N	3006781
1253M63	3006785
1253M63N	3006786
1400	3003110
1401	3003114
1401B	3003116
1401BN	3003117
1401C	3003118
1401CN	3003119
1401N	3003115
1402	3003120
1402N	3003121
1403	3003125
1404	3003130
1405	3003135
1407	3003155
1408	3003170
1410	3005610
1410N	3005611
1411	3005615
1411N	3005616
1412	3005620
1412N	3005621
1413	3005625
1413N	3005626
1414	3005630
1414N	3005631
1415	3005635
1415N	3005636
1500.07	3002010
1500.07N	3002011
1500.09	3002015
1500.09N	3002016
1500.11	3002020
1500.11N	3002021
1500.12	3002120
1500.12N	3002121
1500.13	3002025
1500.13N	3002026
1500.14	3002110
1500.14N	3002111
1500.16	3002030
1500.16N	3002031
1500.21	3002035
1500.21N	3002036
1500.34	3002130
1500.34N	3002131
1500.38	3002115
1500.38N	3002116
1500.M12	3002205
1500.M12N	3002206
1500.M16	3002210

Ref.	Code
1500.M16N	3002211
1500.M20	3002215
1500.M20N	3002216
1500.M25	3002220
1500.M25N	3002221
1500.M32	3002225
1500.M32N	3002226
1618.90	3041350
1626.90	3041360
1636.90	3041370
1651.90	3041380
1676.90	3041390
1700	3003015
1700.2	3004015
1700.2N	3004016
1700N	3003016
1700P	3006015
1700T	3003515
1700TN	3003516
1701	3003020
1701.2	3004020
1701.2N	3004021
1701N	3003021
1701P	3006020
1701PN	3006021
1701T	3003517
1701TN	3003518
1702	3003025
1702.2	3004025
1702.2N	3004026
1702.5	3004425
1702.5N	3004426
1702CONC	3003523
1702CONCN	3003524
1702N	3003026
1702P	3006025
1702PN	3006026
1702T	3003519
1702TN	3003520
1703	3003030
1703.2	3004030
1703.5	3004430
1703P	3006030
1704	3003035
1704.2	3004035
1704P	3006035
1705	3003040
1705.2	3004040
1706	3003045
1707	3003050
1708	3003055
1709	3003010
1710	3005515
1710N	3005516
1711	3005520
1711N	3005521
1712	3005525
1712N	3005526
1713	3005530
1713N	3005531
1714	3005535
1714E34	3005572
1714N	3005536
1715	3005540
1715N	3005541
1719	3005510
1719E17	3005581
1719E17N	3005580
1719N	3005511
1730M20	3003225
1730M20N	3003226
180709	3017610
180911	3017620
180913	3017625
181113	3017630
181116	3017640
181316	3017650
181321	3017655
181621	3017660
182129	3017670
182936	3017680
1830	3004110
1830N	3004111
1831	3004115
1831N	3004116
1832	3004120
1832N	3004121
1835G	3004222

Ref.	Code
1836	3004225
183642	3017690
1836N	3004226
1840	3006610
1840N	3006611
1841	3006615
1841N	3006616
1842	3006620
184248	3017700
1842N	3006621
1843	3006625
1843N	3006626
1844	3006630
1844N	3006631
1845	3006635
1845N	3006636
1846	3006640
1846N	3006641
1847	3006645
1847N	3006646
1848	3006650
1848N	3006651
1849	3006655
1849N	3006656
1861	3004515
1861N	3004516
1862	3004520
1862N	3004521
1866	3004615
1866N	3004616
1880	3016215
1881	3016220
1882	3016225
1883	3016230
1884	3016235
1884A	3016236
1885	3016240
1886	3016245
1887	3016250
1888	3016255
1888/5	3016256
1889	3016405
1890	3016410
1890A	3016420
1891	3016430
1891A	3016431
1892	3016440
1892A	3016450
1892B	3016451
1893	3016460
1893A	3016461
1894	3016480
1895	3016490
1896	3016500
1897	3016510
1898	3016520
1899	3016530
1899A	3016535
1899B	3016540
1900.07	3001010
1900.07G	3001012
1900.07N	3001011
1900.07/X	3001077
1900.09	3001015
1900.09G	3001017
1900.09N	3001016
1900.09/X	3001080
1900.11	3001020
1900.11G	3001022
1900.11N	3001021
1900.11/X	3001083
1900.12	3001120
1900.12N	3001121
1900.13	3001025
1900.13G	3001027
1900.13N	3001026
1900.13/X	3001086
1900.14	3001110
1900.14N	3001111
1900.16	3001030
1900.16G	3001032
1900.16N	3001031
1900.16/X	3001089
1900.21	3001035
1900.21G	3001037
1900.21N	3001036
1900.21/X	3001092
1900.29	3001040

Ref.	Code
1900.29G	3001042
1900.29N	3001041
1900.29/X	3001095
1900.34	3001130
1900.34N	3001131
1900.36	3001045
1900.36G	3001047
1900.36N	3001046
1900.36/X	3001098
1900.38	3001115
1900.38N	3001116
1900.42	3001050
1900.42G	3001052
1900.42N	3001051
1900.42/X	3001101
1900.48	3001055
1900.48G	3001057
1900.48N	3001056
1900.48/X	3001104
1900.M12	3001215
1900.M12G	3001217
1900.M12N	3001216
1900.M12/X	3001310
1900.M16	3001220
1900.M16G	3001222
1900.M16N	3001221
1900.M16/X	3001313
1900.M20	3001225
1900.M20G	3001227
1900.M20N	3001226
1900.M20/X	3001316
1900.M25	3001230
1900.M25G	3001232
1900.M25N	3001231
1900.M25/X	3001319
1900.M32	3001235
1900.M32G	3001237
1900.M32N	3001236
1900.M32/X	3001322
1900.M40	3001240
1900.M40G	3001242
1900.M40N	3001241
1900.M40/X	3001325
1900.M50	3001245
1900.M50G	3001247
1900.M50N	3001246
1900.M50/X	3001328
1900.M63	3001250
1900.M63G	3001252
1900.M63N	3001251
1900.M63/X	3001331
1900DP.07	3001150
1900DP.09	3001153
1900DP.11	3001156
1900DP.13	3001159
1900DP.16	3001162
1900DP.21	3001165
1900DP.29	3001168
1900DP.36	3001171
1900DP.42	3001174
1900DP.48	3001177
1900DP.M12	3013380
1900DP.M16	3013383
1900DP.M20	3013386
1900DP.M25	3013389
1900DP.M32	3013392
1900DP.M40	3013395
1900DP.M50	3013398
1900DP.M63	3013401
1901.07	3001503
1901.07N	3001504
1901.09	3001515
1901.09N	3001516
1901.11	3001520
1901.11N	3001521
1901.13	3001535
1901.13N	3001536
1901.16	3001550
1901.16N	3001551
1901.21	3001568
1901.21N	3001569
1901.29	3001575
1901.29N	3001576
1901.36	3001582
1901.36N	3001583
1901.42	3001590
1901.42N	3001591
1901.48	3001596

REFERENCE/CODE CROSS-REFERENCE CHART

Ref.	Code
1901.48N	3001597
1901.M12	3001650
1901.M12G	3001652
1901.M12N	3001651
1901.M16	3001655
1901.M16G	3001657
1901.M16N	3001656
1901.M20	3001660
1901.M20G	3001662
1901.M20N	3001661
1901.M25	3001665
1901.M25G	3001667
1901.M25N	3001666
1901.M32	3001670
1901.M32G	3001672
1901.M32N	3001671
1901.M40	3001675
1901.M40G	3001677
1901.M40N	3001676
1901.M50	3001680
1901.M50G	3001682
1901.M50N	3001681
1901.M63	3001685
1901.M63G	3001687
1901.M63N	3001686
1902.13N	3001538
1910.07	3001501
1910.07N	3001502
1910.09	3001509
1910.09N	3001510
1910.11	3001526
1910.11N	3001527
1910.13	3001539
1910.13N	3001540
1910.16	3001552
1910.16N	3001553
1910.21	3001565
1910.21N	3001566
1910.29	3001578
1910.29N	3001579
1910.36	3001588
1910.36N	3001589
1910.42	3001592
1910.42N	3001593
1910.48	3001598
1910.48N	3001599
1910.M12	3001705
1910.M12G	3001707
1910.M12N	3001706
1910.M16	3001710
1910.M16G	3001712
1910.M16N	3001711
1910.M20	3001715
1910.M20G	3001717
1910.M20N	3001716
1910.M25	3001720
1910.M25G	3001722
1910.M25N	3001721
1910.M32	3001725
1910.M32G	3001727
1910.M32N	3001726
1910.M40	3001730
1910.M40G	3001732
1910.M40N	3001731
1910.M50	3001735
1910.M50G	3001737
1910.M50N	3001736
1910.M63	3001740
1910.M63G	3001742
1910.M63N	3001741
1925.3	3016470
200101241	3013120
200101241N	3013121
200101441	3013110
200101441N	3013111
200103441	3013130
200103441N	3013131
200103841	3013115
200103841N	3013116
200105841	3013125
200105841N	3013126
200110041	3013135
200110041N	3013136
200111241	3013155
200111241N	3013156
200111441	3013145
200111441N	3013146
200111841	3013140
200111841N	3013141
200120041	3013170
200120041N	3013171
200121221	3013185
200121221N	3013186
200130021	3013195
200130021N	3013196
200200721N	3013011
200200921N	3013016
200201121N	3013021
200201321N	3013026
200201621N	3013031
200202121N	3013036
200202921N	3013041
200203621N	3013046
200204221N	3013051
200204821N	3013056
2003M1221N	3013215
2003M1621N	3013220
2003M2021N	3013225
2003M2521N	3013230
2003M3221N	3013235
2003M4021N	3013240
2003M5021N	3013245
2003M6321N	3013250
2021012	3014120
2021012N	3014121
2021014	3014110
2021014N	3014111
2021034	3014130
2021034N	3014131
2021038	3014115
2021038N	3014116
2021058	3014125
2021058N	3014126
2021100	3014135
2021100N	3014136
2021112	3014155
2021112N	3014156
2021114	3014145
2021114N	3014146
2021118	3014140
2021118N	3014141
2021200	3014170
2021200N	3014171
2031012	3015620
2031012N	3015621
2031014	3015610
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AC130-P	2615531
ANE10-M6	2439350
ANE10-M8	2439360
ANE10-M10	2439370
ANE10-M12	2439380
ANE12-M10	2442220
ANE12-M10/19	2442225
ANE12-M12	2442230

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ANE17-M10/19	2447265
ANE17-M12	2447270
ANE17-M14	2447280
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ANE5-M5	2418510
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ANE7-M6	2422300
ANE7-M8	2422310
ANE7-M10	2422320
ANE7-M12	2422330
ANE7-P20	2422360
ANE9-M10	2430170
ANE9-M12	2430180
ANE9-M6/15	2430150
ANE9-M8	2430160
ASC30-36 EU	2598485
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AU130-240	2615590
AU230-130D	2636960
AU230-630	2680300
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AU55-W	2672511
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B-TD410T	2598945
B15MD	2599837
B1300-C	2599350
B1300-C-KV	2599388
B1300-UC	2599365
B1300L-C	2599358
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B1350L-C-KV	2599345
B1350-UC	2599335
B35-45MD	2599893
B35-50MD	2599906
B35M-TC025	2599515
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B500-KV	2596207
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B68M-P18	2590163
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B70M-P24-KV	2596127
BA-3	2598424
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BF-BM5	2053660
BF-F405	2053560
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BF-F408	2053570
BF-F408P	2053575
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BF-F608P	2053620
BF-FM608	2053690
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BF-M12	2052430
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BF-M3	2052030
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BF-M4	2052150
BF-M5	2052190
BF-M6	2052230
BF-M6/1	2052270
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BF-U12	2052950
BF-U3	2052630
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BF-U4/1	2052720
BF-U4/2	2052730
BF-U5	2052750
BF-U5/2	2052765
BF-U6	2052790
BF-U6/1	2052830
BF-U8	2052870
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BKF-BF4	2053632
BKF-BM4	2053662
BKF-F405	2053562
BKF-F405P	2053567
BKF-F408	2053572
BKF-F408P	2053577
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BKF-FM608	2053692
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BKY-P8	2145930
BKY-P10	2145932
BKY-P12	2145934
BKY-PP12	2145940
BKY-PP12/25	2145942
BKY-PP16/23	2145944
BKY-PPL30	2145950
BKY-PPL46	2145952
BKY-U3	2145900
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BKY-U5	2145909
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BN-U8	2152870
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BP-M4	2046320
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BP-M6/1	2046331
BP-M6/2	2046332
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BP-U12	2046570
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BSCL2	2489530
BSCL2/0	2489545
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BSCL3	2489525
BSCL3/0	2489550
BSCL300	2489565
BSCL350	2489570
BSCL4	2489520
BSCL4/0	2489555
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BSCL600	2489585
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C1/0-916	2396300
C1-12	2396080
C1-14	2396020
C1-38	2396060
C1-516	2396040
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C250-34	2397140
C250-38	2397060
C250-516	2397040
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C250-78	2397160
C250-916	2397100
C2-516	2395860
C3/0-12	2396680
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C3/0-34	2396740
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C3/0-916	2396700
C300-12	2397360
C300-34	2397420
C300-38	2397340
C300-516	2397320
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C3-10	2395640
C3-12	2395720
C3-14	2395660
C3-38	2395700
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C350-38	2397520
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C350-78	2397620
C350-916	2397560
C3-516	2395680
C3-8	2395620
C4/0-12	2396880
C4/0-14	2396820
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C500-78	2398020
C500-916	2397960
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C600-34	2398180
C600-58	2398160
C600-78	2398200
C600-916	2398140
C6-10	2395240
C6-12	2395320
C6-14	2395260
C6-38	2395300
C6-516	2395280
C6-8	2395220
C750-12	2398320
C750-34	2398380
C750-58	2398360
C750-78	2398400
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C8-12	2395120
C8-14	2395060
C8-38	2395100
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C8-8	2395020
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C16-C16	2490110
C185-C185	2490745
C185-C95	2490710
C240-C120	2490760
C25-C10	2490150
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C35-C16	2490230
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C95-C70	2490550
C95-C95	2490590
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C150-C120ST	2492670
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C16-C16ST	2492110
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C185-C95ST	2492710
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C25-C10ST	2492150
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C70-C25NST	2492310
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CA150S-2M14	2533330
CA150S-M12	2533210
CA150S-M14	2533250
CA200R-2M14	2533570
CA200R-M14	2533530
CA240R-2M14	2533850
CA240R-M14	2533770
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CA40S-M12	2530450
CA40S-M16	2530490
CA50R-2M12	2530870
CA50R-M12	2530790
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CA50S-M12	2531110
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CA70-M12	2531870
CA70S-2M12	2531510
CA70S-M12	2531430
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CA95R-2M14	2532230
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CA95S-M16	2532500
CAA10-M12	2760005
CAA120-M12	2760310
CAA150-M12	2760350
CAA16-M12	2760012
CAA185-M12	2760430
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CAA25-M12	2760030
CAA300-M16	2760710
CAA300-34-M12	2760680
CAA300-34-M16	2760715
CAA35-M12	2760070
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CAA400-M16	2760750
CAA50-M12	2760110
CAA500-M16-TNBD	2760852
CAA630-4M8	2760950
CAA70-M12	2760150
CAA95-M12	2760190
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Canvas Bag 007	2593295
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Canvas Bag 011	2593299
Canvas Bag 013	2593294
Canvas Bag 031	2593312
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CB1840L	2598493
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CC9.12	3041632
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CDD6-8	2599941
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CFA300	3031900
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CGP-P10	2076755
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CL1-D141	2396161
CL1-D38	2396170
CL1-DN	2396175
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CL3/0IH-916	2396813
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CL6-D14	2395360
CL6-D141	2395361
CL6-D38	2395370
CL6-DN	2395375
CL6IH-10	2395405
CL6IH-12	2395417
CL6IH-14	2395408
CL6IH-38	2395414
CL6IH-516	2395411
CL750-12	2398485
CL750-58	2398488
CL750-D38	2398470
CL750-DN	2398475
CL750-DN38	2398471
CL750IH-12	2398505
CL750IH-34	2398511
CL750IH-58	2398508
CL8-10	2395183
CL8-14	2395186
CL8-38	2395192
CL8-D14	2395160
CL8-D141	2395161
CL8-D38	2395170
CL8IH-10	2395203
CL8IH-12	2395215
CL8IH-14	2395206
CL8IH-38	2395212
CL8IH-516	2395209
CMA600	3031984
CMB1	2599943
CMB2	2599945
CP1086-W-1000-KV	2597905
CP1096	2597700
CP1096-W-1000-KV	2597695
CP1120	2597962
CP1120-W-1000-KV	2597958
CP1131	2610120
CPE-1	2592751
CPE-1-110	2592752
CPKD108	2808582
CPKD1508	2808587
CPKD2508	2808592
CPKD508	2808573
CPKD7508	2808578
CPP-0	2592671
CPU1131-C	2610150
CPU1230-3D	2630200
CRP-F305	2076225
CRP-F308	2076230
CRP-F405	2076235
CRP-F405P	2076237
CRP-F408	2076240
CRP-F408P	2076242
CRP-F608	2076245
CRP-F608P	2076250
CRP-M3	2076010
CRP-M3.5	2076015
CRP-M3.5/1	2076020
CRP-M4	2076025
CRP-M4/3	2076030
CRP-M5	2076035
CRP-M6	2076040
CRP-M6/1	2076045
CRP-M608	2076260
CRP-M7	2076050
CRP-M8	2076055
CRP-P10	2076155
CRP-P12	2076160
CRP-P8	2076150
CRP-PP12	2076180
CRP-PP12/1	2076185
CRP-PP12/23	2076190
CRP-PP14	2076195
CRP-PPL30	2076205
CRP-U3	2076080
CRP-U3.5	2076085
CRP-U3.5/2	2076090
CRP-U4	2076095
CRP-U4/1	2076100
CRP-U4/2	2076105
CRP-U5	2076110
CRP-U6	2076115
CRP-U6/1	2076120
CRP-U8	2076125
CS-CPE-1	2592748

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DC24	2596100
DR6-5	2387910
DR6-6	2387920
DR6-8	2387930
DR10-5	2388000
DR10-6	2388005
DR10-8	2388010
DR10-10	2388015
DR16-5	2388025
DR16-6	2388030
DR16-8	2388040
DR16-10	2388050
DR16-12	2388060
DR25-6	2388110
DR25-8	2388120
DR25-10	2388130
DR25-12	2388140
DR25-16	2388160
DR35-6	2388210
DR35-8	2388220
DR35-10	2388230
DR35-12	2388240
DR35-16	2388246
DR50-6	2388250
DR50-8	2388255
DR50-10	2388260
DR50-12	2388270
DR50-14	2388280
DR50-16	2388290
DR70-8	2388320
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DR70-12	2388340
DR70-14	2388350
DR70-16	2388360
DR70-20	2388380
DR95-8	2388390
DR95-10	2388395
DR95-12	2388400
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DR95-16	2388420
DR95-20	2388430
DR120-8	2388450
DR120-10	2388460
DR120-12	2388470
DR120-16	2388490
DR120-20	2388500
DR150-10	2388530
DR150-12	2388540
DR150-16	2388560
DR150-20	2388570
DR185-10	2388600
DR185-12	2388610
DR185-16	2388620
DR185-20	2388630
DR240-10	2388710
DR240-12	2388720
DR240-16	2388730
DR240-20	2388740
DR300-10	2388780
DR300-12	2388790
DR300-16	2388810
DR300-20	2388820
DR400-12	2388870
DR400-16	2388890
DR400-20	2388900
DR500-12	2388950
DR500-16	2388970
DR500-20	2388980
DR625-12	2389030
DR625-16	2389050
DR625-20	2389060
DR800-20	2389110
DR1000-20	2389130
DSV6	2489010
DSV10	2489015
DSV16	2489020
DSV25	2489025
DSV35	2489030
DSV50	2489035
DSV70	2489040
DSV95	2489045
DSV120	2489050
DSV150	2489055
DSV185	2489060
DSV240	2489065
DSV300	2489070
DSV400	2489075
DSV500	2489080
DSV625	2489085

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ECW-H3D	2630073
EK100	2597990
EK500P	2597992
ELB-3	2598422
EPB-1N	2598453
EPS115-230.24	2596091
ERCH	2596112
ERCH-WH	2596114
ES03-BU	2470410
ES06-BU	2470411
ES1-BU	2470412
ES2-BU	2470413
ES3-BU	2470414
ES5-BU	2470415
ES10-BU	2470416
ES14-BU	2470417
ES19-BU	2470418
ES24-BU	2470419
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ES48-BU	2470423
ES80-BU	2470424
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ES1-GY	2470432
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ES3-GY	2470434
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ES19-GY	2470438
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ES30-GY	2470440
ES37-GY	2470441
ES40-GY	2470442
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ES80-GY	2470444
ES03-BR	2470450
ES06-BR	2470451
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ES3-BR	2470454
ES5-BR	2470455
ES10-BR	2470456
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ES24-BR	2470459
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ES40-RE	2470522
ES48-RE	2470523
ES80-RE	2470524
ES03-YE	2470550
ES06-YE	2470551
ES1-YE	2470552
ES2-YE	2470553
ES3-YE	2470554
ES5-YE	2470555
ES10-YE	2470556
ES14-YE	2470557
ES19-YE	2470558
ES24-YE	2470559
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ES37-YE	2470561
ES40-YE	2470562
ES48-YE	2470563
ES80-YE	2470564
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ESC600	2599001
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FD11	3017354
FD13.5	3017356
FD16	3017358
FD21	3017360
FD29	3017362
FD36	3017364
FD42	3017366
FD48	3017368
FD7	3017350
FD9	3017352
FDM12	3017375
FDM16	3017374
FDM20	3017377
FDM25	3017379
FDM32	3017381
FDM40	3017383
FDM50	3017385
FDM63	3017387
FL10-150	2510070
FL10-200	2510150
FL10-250	2510190
FL16-150	2510470
FL16-200	2510550
FL16-250	2510590
FL16-320	2510670
FL16-350	2510690
FL16-420	2510710
FL16-570	2510750
FL16-660	2510790
FL25-150	2510950
FL25-200	2511070
FL25-250	2511110
FL25-300	2511190
FL10-150ST	2518510
FL10-200ST	2518550
FL10-250ST	2518590
FL16-150ST	2518870
FL16-200ST	2518910
FL16-250ST	2518950
FL16-320ST	2518990
FL16-350ST	2519030
FL16-420ST	2519070
FL16-570ST	2519150
FL16-660ST	2519170
FL25-150ST	2519530
FL25-200ST	2519570
FL25-250ST	2519610
FL25-300ST	2519690
FLS3	3026810
FLS5	3026815
G80X2.4	3041700
G80X2.4N	3041701
G80X2.4/M	3041702
G80X2.4N/M	3041703
G90X2.4	3041705
G90X2.4N	3041706
G90X2.4 V0	3041709
G100X2.5	3041710
G100X2.5N	3041711
G100X2.5/M	3041712
G100X2.5/M V0	3041714
G100X2.5N/M	3041713
G120X2.5	3041715
G120X2.5N	3041716
G140X2.5	3041720
G140X2.5N	3041721
G140X2.5/M	3041722
G140X2.5/M V0	3041724
G140X2.5N/M	3041723
G160X2.5	3041725
G160X2.5N	3041726
G160X2.5/M	3041727
G160X2.5N/M	3041728
G200X2.5	3041730
G200X2.5N	3041731
G200X2.5/M	3041732
G200X2.5/M V0	3041734
G200X2.5N/M	3041733
G250X2.8	3041735
G250X2.8N	3041736
G300X2.8	3041740
G300X2.8N	3041741
G120X3.6	3041745
G120X3.6N	3041746
G140X3.6	3041750
G140X3.6N	3041751
G140X3.6/M	3041753
G140X3.6N/M	3041752
G150X3.6	3041755
G150X3.6N	3041756
G150X3.6 V0	3041759
G180X3.6	3041760
G180X3.6N	3041761
G200X3.6	3041765
G200X3.6N	3041766
G200X3.6/M	3041767
G200X3.6N/M	3041768
G250X3.6	3041770
G250X3.6N	3041771
G300X3.6	3041775
G300X3.6N	3041776
G300X3.6/M	3041777
G300X3.6N/M	3041778
G370X3.6	3041780
G370X3.6N	3041781
G120X4.8	3041785
G120X4.8N	3041786
G160X4.8	3041790
G160X4.8N	3041791
G190X4.8	3041795
G190X4.8N	3041796
G190X4.8/M	3041797
G190X4.8N/M	3041798
G200X4.8	3041800
G200X4.8N	3041801
G200X4.8/M	3041802
G200X4.8/M V0	3041804
G200X4.8N/M	3041803
G250X4.8	3041805
G250X4.8N	3041806
G250X4.8/M	3041807
G250X4.8N/M	3041808
G280X4.8	3041810
G280X4.8N	3041811
G300X4.8	3041815
G300X4.8N	3041816
G370X4.8	3041820
G370X4.8 V0	3041824
G370X4.8N	3041821
G390X4.8	3041825
G390X4.8N	3041826
G430X4.8	3041830
G430X4.8 V0	3041834
G430X4.8N	3041831
G450X4.8	3041835
G450X4.8N	3041836
G530X4.8	3041840
G530X4.8N	3041841
G150X7.6	3041845
G150X7.6N	3041846
G200X7.6	3041850
G200X7.6N	3041851
G250X7.6	3041855
G250X7.6N	3041856
G300X7.6	3041860
G300X7.6N	3041861
G370X7.6	3041865
G370X7.6N	3041866
G430X7.6	3041870
G430X7.6N	3041871
G530X7.6	3041875
G530X7.6N	3041876
G430X9.0	3041880
G430X9.0N	3041881
G530X9.0	3041885
G530X9.0N	3041886
G710X9.0	3041890
G710X9.0N	3041891
G710X9.0 V0	3041894
G780X9.0	3041895
G780X9.0N	3041896
G830X9.0	3041900
G830X9.0N	3041901
G920X9.0	3041905
G920X9.0N	3041906
G1020X9.0	3041910
G1020X9.0N	3041911
G1220X9.0	3041915
G1220X9.0N	3041916
G230X12.6	3041920
G230X12.6N	3041921
G380X12.6	3041925
G380X12.6N	3041926
G480X12.6	3041930
G480X12.6N	3041931
G580X12.6	3041935
G580X12.6N	3041936
G730X12.6	3041940
G730X12.6N	3041941
G880X12.6	3041945
G880X12.6N	3041946
G1030X12.6	3041950
G1030X12.6N	3041951
GA-3	2598429
GF-F608	2055630
GF-F608P	2055650
GF-M10	2054250
GF-M10/1	2054290
GF-M12	2054330
GF-M14	2054370
GF-M16	2054410
GF-M3	2054010
GF-M3.5	2054030
GF-M4	2054070
GF-M5	2054110
GF-M6	2054150
GF-M6/1	2054160
GF-M608	2055670
GF-M7	2054170
GF-M8	2054210
GF-M8/1	2054220
GF-P10	2055310
GF-P12	2055350
GF-P14	2055370
GF-PP12	2055390
GF-PP17	2055430
GF-PPL46	2055465
GF-U10	2054810
GF-U10/1	2054850
GF-U12	2054890
GF-U14	2054930
GF-U16	2054970
GF-U3.5	2054610
GF-U4	2054650
GF-U5	2054690
GF-U6	2054730
GF-U8	2054770
GFHT112X2.5	3042805
GFH100X2.5	3042810
GH8	3041550
GK-F608	2145500
GK-F608P	2145502
GKF-M608	2055672
GKY-M3.5	2145982
GKY-M4	2145985
GKY-M5	2145988
GKY-M6	2145991
GKY-M8	2145994
GKY-M10	2145997
GKY-M12	2146000
GKY-M14	2146003
GKY-M16	2146006
GKY-P14	2146040
GKY-PP12	2146045
GKY-PP17	2146047
GKY-PPL46	2146055
GKY-U3.5	2146020
GKY-U4	2146023
GKY-U5	2146026
GKY-U6	2146029
GKY-U8	2146032
GN-M10	2154250
GN-M10/1	2154290
GN-M12	2154330
GN-M14	2154370
GN-M16	2154410
GN-M3	2154010
GN-M3.5	2154030
GN-M4	2154070
GN-M5	2154110
GN-M6	2154150
GN-M6/1	2154160
GN-M7	2154170
GN-M8	2154210
GN-M8/1	2154220
GN-P10	2155250
GN-P12	2155290
GN-P14	2155310
GN-PP12	2155330
GN-PP17	2155370
GN-U10	2154850
GN-U10/1	2154890
GN-U12	2154930
GN-U14	2154970
GN-U16	2155010
GN-U3.5	2154650
GN-U4	2154690
GN-U5	2154730
GN-U6	2154770
GN-U8	2154810
GP-M10	2046645
GP-M10/1	2046646
GP-M12	2046650
GP-M14	2046655
GP-M16	2046660
GP-M3	2046610
GP-M3.5	2046615
GP-M4	2046620
GP-M5	2046625
GP-M6	2046630
GP-M6/1	2046631
GP-M7	2046635
GP-M8	2046640
GP-M8/1	2046641
GP-P10	2046715
GP-P12	2046720
GP-P14	2046725
GP-PP12	2046740
GP-PP17	2046750
GP-PPL46	2046755
GP-U10	2046865
GP-U10/1	2046866
GP-U12	2046870
GP-U14	2046875
GP-U16	2046880
GP-U3.5	2046825
GP-U4	2046830
GP-U5	2046845
GP-U6	2046855
GP-U8	2046860
GR100X7.6N	3042620
GR120X7.6N	3042625
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GR200X7.6N	3042635
GR250X7.6N	3042640
GR300X7.6N	3042645
GR370X7.6N	3042650
GX200X4.5	3042245
GX300X4.5	3042250
GX370X4.5	3042255
GX370X7.9	3042260
GX520X4.5	3042257
GX680X7.9	3042265
GX1020X7.9	3042270
HB2	2591308
HB5	2591318
HB6	2591285
HB7	2591310
HB8	2591284
HB9	2591336
HB10	2591337
HB11	2591343
HB12N	2591345
HB13UE	2591347
HF1	2590900
HF2	2590905
HN1	2590300
HN5	2590291
HNA25	2590401
HNCS4	2590024
HND25	2590403
HNKE4	2590299
HNKE16	2590329
HNKE50	2590342
HNN3	2590296
HNN4	2590292
HP1	2590500
HP1-1	2590502
HP3	2590531
HP3-1	2590532
HP4-B	2590032

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HP4-R	2590031
HPH-1	2590029
HT-FL75	2665030
HT-TC026	2591406
HT-TC026Y	2591408
HT-TC041N	2591427
HT-TC051	2591472
HT-TC051Y	2591475
HT-TC055	2591445
HT-TC065	2591477
HT-TC0851	2591496
HT120	2610420
HT120-KV	2610430
HT131-C	2610416
HT131-UC	2610436
HT131LN-C	2610419
HT45-E	2650040
HT51	2670610
HT51-KV	2670611
HT81-U	2600036
HWE-1	8420010
HX1	2590298
I38-F	6060130
I38-MS	6060128
IDT	2590920
IT6	8420016
KE0.75-1	2591050
KE10-1	2591049
KE1016ST	2803150
KE106ST	2802310
KE110ST	2802390
KE1508ST	2802510
KE1510ST	2802550
KE16-15	2599861
KE1616ST	2803190
KE1A-3	2598430
KE2.5-1	2591048
KE2.5A-3	2598432
KE25015ST	2803455
KE25018ST	2803460
KE2508ST	2802670
KE2510ST	2802710
KE35-15	2599862
KE35012ST	2803470
KE35015ST	2803475
KE35018ST	2803480
KE4-15	2599860
KE410ST	2802870
KE412ST	2802910
KE506ST	2802030
KE508ST	2802070
KE610ST	2802990
KE612ST	2803030
KE616ST	2803070
KE7506ST	2802110
KE7508ST	2802150
KIT B1300-C-1	2599318
KIT B1300-C-2	2599319
KIT B1300-C-MK	2599349
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KIT B500-2	2596202
KIT B500-MK	2596203
KIT B-FL750-1	2598860
KIT HT131-C-1	2610380
KIT HT131-C-2	2610381
KIT HT131-C-MK	2610382
KIT HT51-1	2670601
KIT HT51-2	2670600
KIT HT51-MK	2670599
KIT HT-FL75-1	2665031
KIT2.5EPB1N	2598463
KIT4EPB1N	2598464
KITHWE1	8420012
KIT TGD-10X10-M9	2685018
KIT TGD-13.5X13.5-M13	2685017
KITTRD-9.4C	2685015
KITTRD-M11C	2685016
KT1	2591319
KT2	2591320
KT3	2591275
KT4	2591277
KT5	2591279
KTS1632	2590700
L03-M	2480020
L03-P	2485010
L06-M	2480050

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L10-M	2480330
L10-P	2485270
L100-M	2480930
L120-M	2481010
L14-M	2480410
L14-P	2485350
L160-M	2481050
L19-M	2480490
L19-P	2485430
L1-M	2480090
L1-P	2485070
L200-M	2481090
L24-M	2480570
L24-P	2485510
L2-M	2480130
L2-P	2485100
L30-M	2480650
L30-P	2485590
L37-M	2480730
L37-P	2485670
L3-M	2480170
L3-P	2485130
L48-M	2480810
L48-P	2485680
L5-M	2480210
L5-P	2485160
L60-M	2480850
L60-P	2485690
L7-M	2480250
L7-P	2485190
L80-M	2480890
M108-520	2648752
M108-C	2611860
M108.215-U	2603723
M110-520	2648754
M113	2651130
M113-50	2675855
M113-C	2611870
M113.173-U	2603730
M118	2651150
M118-50	2675860
M118-C	2611910
M118.158-U	2603725
M140	2651170
M140-50	2675870
M140-C	2612010
M140.190-U	2603800
M145-520	2648770
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M158-50	2675880
M158-C	2612130
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M173-C	2612230
M173L-C	2612240
M190-50	2675900
M190-520	2648772
M190-C	2612330
M208-C	2612420
M208-U	2603780
M215-50	2675910
M215-520	2648773
M215-C	2612490
M220-520	2648774
M232-C	2612590
M255-520	2648776
M295-520	2648780
M340-520	2648784
M440-520	2648840
M540-520	2648910
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M70-C	2611590
M70.140-U	2603710
M75	2651100
M75-50	2675805
M75-C	2611650
M75.96-U	2603715
M96	2651110
M96-50	2675850
M96-C	2611800
MA03/3-15	2599870
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MA1-50	2675658
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MA10-50	2675666

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MA100-520	2645690
MA12-50	2675668
MA12-C	2610870
MA12.20-U	2600310
MA120-3D	2631810
MA120-520	2645711
MA14-50	2675670
MA14-C	2610880
MA160-520	2645731
MA17-50	2675672
MA17-C	2610890
MA19-50	2675674
MA19-C	2610900
MA19-U	2600320
MA2-C	2610810
MA2.3	2650130
MA2.3-50	2675660
MA20-50	2675675
MA20-C	2610910
MA200-520	2645750
MA24-50	2675676
MA24-C	2610920
MA24-U	2600330
MA29-C	2610930
MA29.80-U	2600360
MA3-C	2610820
MA3.5-U	2600210
MA30-80-U	2600380
MA30-C	2610940
MA35-C	2610950
MA35-U	2600390
MA37-C	2610960
MA37-U	2600410
MA40-C	2610970
MA40-U	2600430
MA48-C	2610980
MA48-U	2600450
MA5	2650150
MA5-50	2675662
MA5-C	2610830
MA60-C	2610990
MA7	2650170
MA7-50	2675664
MA7-C	2610840
MA7.14-U	2600250
MA80-3D	2631770
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MA9	2650180
MA9-50	2675665
MA9-C	2610850
MA9.17-U	2600270
MB2-80U	2604350
MB3-80U	2604400
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MC02-U	2603550
MC10	2650530
MC10-50	2675610
MC10-C	2611100
MC10-U	2600610
MC185-3D	2632030
MC185-C	2611150
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MC240-3D	2632035
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MC25-50	2675620
MC25-C	2611110
MC25-U	2600650
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MC35-50	2675630
MC35-C	2611120
MC35-U	2600690
MC4	8420019
MC6	2650510
MC6-50	2675605
MC6.25-U	2600630
MC70-3D	2632010
MC70-50	2675640
MC70-80U	2600720
MC70-C	2611130
MC95-3D	2632020
MC95-80U	2600730
MC95-C	2611140
MCCC16-C	2617050

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MCCC35-C	2617090
MCCC50-C	2617110
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ME10-50	2676060
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ME100-3D	2634940
ME100-520	2648552
ME12	2652150
ME12-50	2676070
ME12-C	2614213
ME12.17-U	2604850
ME120-3D	2634950
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ME14	2652170
ME14-50	2676080
ME14-C	2614215
ME160-520	2648556
ME17	2652190
ME17-50	2676090
ME17-C	2614217
ME19	2652210
ME19-50	2676100
ME19-C	2614219
ME2	2652030
ME2/3-15	2599876
ME2-50	2676010
ME2-C	2614201
ME2.19-U	2604750
ME20	2652230
ME20-50	2676110
ME200-520	2648558
ME20-C	2614221
ME24	2652250
ME24L	2652251
ME24-50	2676120
ME24L-50	2676121
ME24-C	2614223
ME29	2652260
ME29-50	2676130
ME29-C	2614225
ME29-U	2604870
ME3	2652050
ME3-50	2676020
ME3-C	2614203
ME3.14-U	2604770
ME30	2652270
ME30L	2652271
ME30-50	2676140
ME30L-50	2676141
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ME30-U	2604890
ME35-50	2676150
ME35-C	2614229
ME35-U	2604910
ME37-50	2676160
ME37-C	2614231
ME37-U	2604930
ME40-50	2676165
ME40-C	2614233
ME40-U	2604950
ME48-50	2676170
ME48-C	2614235
ME48-U	2604970
ME5	2652070
ME5-50	2676030
ME5-C	2614205
ME5.7-U	2604790
ME60-50	2676172
ME60-C	2614237
ME7	2652090
ME7-50	2676040
ME7-C	2614207
ME80-3D	2634930
ME80-520	2648550
ME80-C	2614239
ME9	2652110
ME9-50	2676050
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MFB50-63	2598045
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MK20-3D	2634786
MK22-3D	2634787
MK25-3D	2634788
MK28-3D	2634790
MK32-3D	2634800
MK34-3D	2634810
MK38-3D	2634830
MK42-3D	2634850
MK44-3D	2634870
MK46-3D	2634880
MK5/8-15	2599890
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MK10	2651640
MK12	2651670
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MK10-50	2675410
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MK22L-50	2675534
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MK28-60	2671460
MK32-50	2675564
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MK10-C	2614270
MK12-C	2614280
MK14-C	2614290
MK16-C	2614300
MK18-C	2614310
MK20-C	2614320
MK22-C	2614330
MK25-C	2614340
MK28-C	2614350
MK32-C	2614360
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MMT50-50	2676382
MMT50-C	2611170
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MMT95-50	2676384
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MN10-C	2610560
MN10RF-50	2676250
MN10RF-C	2610768
MN12-C	2610570
MN12F-50	2676260
MN12F-C	2610770
MN14-C	2610580
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MN20-C	2610610

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MN24RF-C	2610780
MN29-C	2610625
MN29F-C	2610782
MN2RF-50	2676210
MN2RF-C	2610760
MN3-C	2610520
MN30-C	2610630
MN30RF-C	2610784
MN35-C	2610635
MN35F-C	2610786
MN37-C	2610640
MN37RF-C	2610788
MN3RF-50	2676220
MN3RF-C	2610762
MN48-C	2610650
MN48RF-C	2610790
MN5-C	2610530
MN5RF-50	2676230
MN5RF-C	2610764
MN60-C	2610660
MN7-C	2610540
MN7RF-50	2676240
MN7RF-C	2610766
MN80-3D	2631450
MN9-C	2610551
MP608	3031810
MP608/45	3031815
MP608/90	3031820
MP608D	3031830
MPC1	2595201
MPC2	2595203
MPC4	2595208
MPC7	2595221
MQ10-50	2675010
MQ16-50	2675013
MQ25-50	2675016
MQ35-50	2675019
MQ50-50	2675021
MQ70-50	2675024
MQM10-C	2610661
MQM16-C	2610662
MQM25-C	2610663
MQM35-C	2610664
MQM50-C	2610665
MQM70-C	2610666
MQM95-C	2610667
MQM120-C	2610668
MQM150-C	2610669
MQM185-C	2610670
MQM240-C	2610671
MQS16-C	2610752
MQS35-C	2610753
MQS70-C	2610754
MQS150-C	2610755
MQS240-C	2610756
MS4/10-15	2599880
MS10/16-15	2599881
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MT150R-C16	2545090
MT150R-GC	2541870
MT150R-TD	2540550
MT150S-C12	2545310
MT150S-C14-80	2546270
MT150S-C16	2545350
MT150S-GC	2541910
MT150S-TD	2540630
MT200R-C10	2545540
MT200R-C16	2545550
MT200R-GC	2542030
MT200R-TD	2540670
MT240R-C12	2545710
MT240R-C16	2545750
MT240R-GC	2542110
MT240R-TD	2540710
MT25-C8	2543030
MT25-GC	2541570
MT25-TD	2540150
MT315R-C16	2545950
MT315R-GC	2542150
MT315R-TD	2540750
MT315S-C16	2545990
MT315S-GC	2542290
MT315S-TD	2540790
MT400-TD	2540830

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MT40S-C14-80	2546070
MT40S-C8	2543400
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MT40S-TD	2540190
MT500-TD	2540870
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MT50R-C8	2543610
MT50R-GC	2541690
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MT50S-C10	2543850
MT50S-C14-80	2546110
MT50S-C8	2543810
MT50S-GC	2541650
MT50S-TD	2540230
MT630-TD	2540890
MT70S-C10	2544050
MT70S-GC	2541730
MT70S-TD	2540350
MT95R-C10	2544290
MT95R-C12	2544330
MT95R-GC	2541770
MT95R-TD	2540390
MT95S-C10	2544530
MT95S-C12	2544570
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MT95S-GC	2541850
MT95S-TD	2540470
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MTA25-C	2770020
MTA35-C	2770030
MTA50-C	2770310
MTA70-C	2770550
MTA95-C	2770830
MTA120-C	2771510
MTA150-C	2771710
MTA185-C	2772150
MTA240-C	2773010
MTMA10-GC	2720025
MTMA120-70-GC	2721410
MTMA120-95-GC	2721450
MTMA120-GC	2720272
MTMA150-120-GC	2721630
MTMA150-70-GC	2721550
MTMA150-95-GC	2721590
MTMA150-GC	2720330
MTMA16-10-GC	2720560
MTMA16-GC	2720035
MTMA185-120-GC	2721900
MTMA185-150-GC	2721910
MTMA185-GC	2720360
MTMA240-GC	2720410
MTMA240-150-GC	2722050
MTMA240-185-GC	2722090
MTMA25-10-GC	2720575
MTMA25-16-GC	2720580
MTMA25-GC	2720090
MTMA300-GC	2720430
MTMA35-20-GC	2720135
MTMA35-GC	2720130
MTMA400-240-GC	2722245
MTMA400-300-GC	2722250
MTMA50-25-GC	2720650
MTMA50-35-GC	2720660
MTMA50-GC	2720152
MTMA500-GC	2720515
MTMA500-300-GC	2722260
MTMA500-400-GC	2722270
MTMA70-35-GC	2720940
MTMA70-50-GC	2720980
MTMA70-GC	2720195
MTMA95-50-GC	2721030
MTMA95-70-GC	2721070
MTMA95-GC	2720232
MTMA16/1	2720031
MTMA25/1	2720071
MTMA35/1	2720111
MTMA50/1	2720160
MTMA70/1	2720191
MTMA95/1	2720250
MTMA120/1	2720280
MTMA150/1	2720320
MTMA185/1	2720370
MTMA240/1	2720400
MTMAD300/1	2720460
MTMA400/1	2720475
MTMA500-40/1	2720509
MTMA630/1	2720530
MTMAD300-GC	2720440

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MTMAD300-95-GC	2722121
MTMAD300-150-GC	2722140
MTMAD300-185-GC	2722160
MTMAD300-240-GC	2722220
MTT16-50	2677220
MTT25-50	2677230
MTT35-50	2677240
MTT50-50	2677250
MTT70-50	2677260
MTT95-50	2677270
MTT120-50	2677275
MUA150	2616050
MUA230-630-400	2680129
MUA230-630-630	2680130
MUA240	2616070
MUA300-34	2616090
MUA35	2616010
MUA95	2616030
MV150	2616170
MV230-400 MC5E	2680860
MV230-630 MC6E	2680870
MV240	2616180
MV35	2616150
MV95	2616160
MVM150	2616310
MVM230-400 MJ5E	2680910
MVM230-630 MJ6E	2680920
MVM240	2616320
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MY14-C	2613385
MY16-50	2677350
MY16-C	2613390
MY19-50	2677355
MY19-C	2613395
MY24-50	2677360
MY24L-50	2677362
MY24-C	2613400
MY2-50	2677310
MY2-C	2613350
MY30-50	2677365
MY30L-50	2677366
MY30-C	2613405
MY3-50	2677315
MY36-50	2677370
MY36-C	2613410
MY37-50	2677375
MY37-C	2613415
MY3-C	2613355
MY4-50	2677320
MY48-50	2677380
MY48-C	2613420
MY4-C	2613360
MY5-50	2677325
MY5-C	2613365
MY60-C	2613425
MY6-50	2677330
MY6-C	2613370
MY7-50	2677335
MY76-C	2613430
MY7-C	2613375
N1-1	2591059
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NL03-P	2110870
NL06-M	2469330
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NL06-PB	2111960
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NL1-P	2113970
NL1-PG	2113990
NL2-M	2469390
NL3-M	2469430
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OB2.5P	8420034
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PA1-50	2675680
PA10	2650290
PA10-50	2675686
PA10-C	2611010
PA100-3D	2631930
PA120-3D	2631950
PA120-520	2645600
PA19-50	2675694
PA200-520	2645610
PA24-50	2675696
PA24-C	2611020
PA48-C	2611030
PA5	2650250
PA5-50	2675682
PA60-C	2611040
PB-1	2591046
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PG-1	2591047
PH1-1	2591061
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PKC410	2809452
PKC412	2809455
PKC418	2809460
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PKC7508	2809370
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PKE2512	2809135
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PKE410	2809152
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PKE418	2809160
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PL01-M	2049510
PL03-M	2051850
PL03-P	2051860
PL06-M	2053850
PL06-P	2053860
PL1-M	2055870
PN14-C	2610710
PN24-C	2610720
PN37-C	2610730
PN48-C	2610740
PN60-C	2610750
PN7-C	2610700
PN80-3D	2631460
PNB-1	2591040
PNB-3F/M	2591088
PNB-3N1	2591092
PNB-3N5	2591096
PNB-3NN3	2591094
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PNB-3P	2591090
PNB-3P1	2591084
PNB-3PD	2591091
PNB-4KE	2591251
PNB-6KE	2591260
PNB-6KE-T	2591262
PNB-7KE	2591268
PNB-7KE-T	2591270
PO7000	2595904
PR-1	2591045
PRCH	2596113
PS130-150/E	2616371
PS130-240/E	2616381
PS130-35/E	2616351
PS130-95/E	2616361
PS230-400 5E	2680186
PS230-630 6E	2680189
PV-1	2591044
Q10-4	2167005
Q10-5	2167010
Q10-6	2167015
Q10-8	2167020
Q10-10	2167025
Q10-12	2167030
Q16-5	2167080
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Q16-12	2167100
Q25-5	2167150
Q25-6	2167155
Q25-8	2167160
Q25-10	2167165
Q25-12	2167170
Q25-16	2167175
Q35-6	2167230
Q35-8	2167235

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Q50-16	2167330
Q70-6	2167390
Q70-8	2167395
Q70-10	2167400
Q70-12	2167405
Q70-16	2167410
Q95-8	2167470
Q95-10	2167475
Q95-12	2167480
Q95-16	2167485
Q120-8	2167540
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Q120-12	2167550
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Q185-10	2167680
Q185-12	2167685
Q185-16	2167690
Q240-10	2167750
Q240-12	2167755
Q240-16	2167760
Q14-MS	6060120
Q38-F	6060126
Q38-MS	6060124
RA-3	2598428
RBG-15	2599850
RBY-15	2599852
RCP-B70	2596116
RD100SS	2685623
RD102SS	2685636
RD114SS	2685626
RD120SS	2685624
RD126X126	2685669
RD138X138	2685670
RD140SS	2685637
RD15.5SS	2685560
RD15.5SS-FC	2685550
RD16.2SS	2685562
RD16.2SS-FC	2685552
RD17SS	2685563
RD17.5SS	2685564
RD17.5SS-FC	2685554
RD18.8SS	2685566
RD18.8SS-FC	2685556
RD18X46	2685654
RD19.1SS	2685568
RD20.5SS	2685570
RD21.5SS	2685571
RD21X21	2685650
RD22.6SS	2685572
RD22X30	2685651
RD22X46	2685656
RD220X220	2685676
RD23.8SS	2685574
RD25.4SS	2685576
RD27SS	2685578
RD28.5SS	2685580
RD30.5SS	2685582
RD28.5SS-19	2685584
RD30.5SS-19	2685586
RD31.8SS	2685588
RD32.5SS	2685590
RD34SS	2685591
RD34.6SS	2685592
RD36X46	2685658
RD37.2SS	2685594
RD37X104	2685674
RD37X115	2685661
RD37X54	2685671
RD37X67	2685672
RD37X88	2685673
RD38.1SS	2685596
RD38.5SS	2685597
RD40.5SS	2685598
RD40.5SS-FC	2685627
RD41.3SS	2685600
RD41.3SS-FC	2685628
RD42.5SS	2685602
RD42.5SS-FC	2685629
RD43.2SS	2685604

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RD43.2SS-FC	2685630
RD44.5SS	2685606
RD44.5SS-FC	2685632
RD46X107	2685652
RD46X46	2685660
RD46X54	2685662
RD46X72	2685664
RD47.2SS	2685608
RD47.2SS-FC	2685634
RD48.5SS	2685609
RD50.5SS	2685610
RD50X98	2685663
RD51.4SS	2685611
RD52.4SS	2685613
RD54.2SS	2685612
RD60SS	2685614
RD60.5SS	2685615
RD64SS	2685616
RD65SS	2685618
RD67X126	2685665
RD68X68	2685666
RD76SS	2685620
RD76.5SS	2685619
RD80.5SS	2685622
RD89SS	2685621
RD90SS	2685625
RD92X92	2685668
RF-BF4	2051630
RF-BM4	2051660
RF-F305	2051560
RF-F305P	2051565
RF-F308	2051580
RF-F308P	2051585
RF-F405	2051600
RF-F405P	2051605
RF-F408	2051590
RF-F408P	2051595
RF-F608	2051610
RF-F608P	2051620
RF-FM608	2051690
RF-M10	2050390
RF-M12	2050430
RF-M2	2050010
RF-M3	2050030
RF-M3.5	2050070
RF-M3.5/1	2050110
RF-M4	2050150
RF-M4/3	2050170
RF-M5	2050190
RF-M6	2050230
RF-M6/1	2050270
RF-M608	2051650
RF-M608P	2051655
RF-M7	2050310
RF-M8	2050350
RF-P10	2051250
RF-P12	2051290
RF-P8	2051210
RF-PP12	2051330
RF-PP12/1	2051340
RF-PP12/19	2051370
RF-PP12/23	2051380
RF-PP14	2051410
RF-PP16/23	2051450
RF-PPL30	2051460
RF-PPL46	2051465
RF-U10	2050950
RF-U12	2050990
RF-U3	2050630
RF-U3.5	2050670
RF-U3.5/1	2050680
RF-U3.5/2	2050681
RF-U4	2050710
RF-U4/1	2050730
RF-U4/2	2050750
RF-U5	2050790
RF-U5/1	2050791
RF-U6	2050830
RF-U6/1	2050870
RF-U8	2050910
RH50	2670050
RHC131	2619010
RHC131LN	2619021
RH-FC48N	2592596
RH-FL75	2592597
RHM132	2619410
RHM50	2670035
RHT160	2592422

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RHU450	2640011
RHU520	2640151
RHU600	2640250
RHU1000	2640810
RHU81	2600045
RKF-BF4	2051632
RKF-BM4	2051662
RKF-F305	2051562
RKF-F308	2051582
RKF-F405	2051602
RKF-F405P	2051607
RKF-F408	2051592
RKF-F408P	2051597
RKF-F608	2051612
RKF-F608P	2051622
RKF-FM608	2051692
RKF-M608	2051652
RKY-M3	2145684
RKY-M3.5	2145685
RKY-M3.5/1	2145687
RKY-M4	2145690
RKY-M5	2145699
RKY-M6/1	2145705
RKY-M8	2145711
RKY-M10	2145715
RKY-M12	2145718
RKY-P8	2145782
RKY-P10	2145783
RKY-P12	2145784
RKY-PP12	2145790
RKY-PP12/19	2145792
RKY-PP16/23	2145793
RKY-PPL30	2145795
RKY-PPL46	2145798
RKY-U3	2145730
RKY-U3.5	2145733
RKY-U4	2145736
RKY-U5	2145739
RKY-U6	2145742
RKY-U6/1	2145743
RN-FA305	3031610
RN-FA405	3031615
RN-FA608	3031620
RN-M10	2150430
RN-M12	2150470
RN-M2	2150010
RN-M3	2150030
RN-M3.5	2150070
RN-M3.5/1	2150110
RN-M4	2150150
RN-M4/3	2150170
RN-M5	2150190
RN-M6	2150230
RN-M6/1	2150270
RN-M7	2150350
RN-M8	2150390
RN-MA305	3031710
RN-MA405	3031715
RN-MA608	3031720
RN-P10	2151270
RN-P12	2151310
RN-P8	2151230
RN-PP12	2151350
RN-PP12/1	2151370
RN-PP12/19	2151390
RN-PP14	2151400
RN-PP16/23	2151410
RN-U10	2150990
RN-U12	2151030
RN-U3	2150670
RN-U3.5	2150710
RN-U3.5/2	2150720
RN-U4	2150750
RN-U4/1	2150760
RN-U4/2	2150790
RN-U5	2150830
RN-U5/1	2150840
RN-U6	2150870
RN-U6/1	2150910
RN-U8	2150950
RP-M10	2046045
RP-M12	2046050

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RP-M2	2046005
RP-M3	2046010
RP-M3.5	2046015
RP-M3.5/1	2046016
RP-M4	2046020
RP-M4/3	2046023
RP-M5	2046025
RP-M6	2046030
RP-M6/1	2046031
RP-M7	2046035
RP-M8	2046040
RP-P10	2046115
RP-P12	2046120
RP-P8	2046110
RP-PP12	2046140
RP-PP12/1	2046145
RP-PP12/19	2046150
RP-PP12/23	2046155
RP-PP14	2046160
RP-PP16/23	2046165
RP-PPL30	2046180
RP-PPL46	2046185
RP-U10	2046265
RP-U12	2046270
RP-U3	2046210
RP-U3.5	2046215
RP-U3.5/2	2046217
RP-U4	2046230
RP-U4/1	2046231
RP-U4/2	2046240
RP-U5	2046245
RP-U5/1	2046246
RP-U6	2046255
RP-U6/1	2046256
RP-U8	2046260
RS0305.07	3008006
RS0407.M12	3008050
RS0507.09	3008008
RS0509.M16	3008052
RS0710.11	3008010
RS0813.M20	3008054
RS1014.16	3008012
RS1117.M25	3008056
RS1420.21	3008014
RS1520.M32	3008058
RS1928.M40	3008060
RS2026.29	3008016
RS2635.36	3008018
RS2735.M50	3008062
RT11	2592480
RT10.5	2592470
RT21	2592550
RT13	2592490
RT13,5	2592495
RT14	2592500
RT15	2592510
RT17	2592530
RT6.5	2592430
RT8.5	2592450
RT9	2592460
S10-M4	2165130
S10-M5	2165150
S10-M6	2165190
S10-M7	2165230
S1.5-M10	2160390
S1.5-M12	2160430
S1.5-M2	2160010
S1.5-M3	2160030
S1.5-M3.5	2160070
S1.5-M3.5/1	2160110
S1.5-M4	2160150
S1.5-M4/3	2160160
S1.5-M5	2160190
S1.5-M6	2160230
S1.5-M6/1	2160270
S1.5-M7	2160310
S1.5-M8	2160350
S1.5-P10	2161190
S1.5-P12	2161230
S1.5-P8	2161150
S1.5-PP12	2161310
S1.5-PP12/1	2161330
S1.5-PP12/19	2161350
S1.5-PP14	2161360
S1.5-U10	2160950
S1.5-U12	2160990
S1.5-U3	2160630
S1.5-U3.5	2160670

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S1.5-U3.5/2	2160682
S1.5-U4	2160710
S1.5-U4/1	2160730
S1.5-U4/2	2160750
S1.5-U5	2160790
S1.5-U5/1	2160800
S1.5-U6	2160830
S1.5-U6/1	2160870
S1.5-U8	2160910
S2.5-M10	2162170
S2.5-M12	2162210
S2.5-M2	2161800
S2.5-M3	2161810
S2.5-M3.5	2161850
S2.5-M3.5/1	2161890
S2.5-M4	2161930
S2.5-M5	2161970
S2.5-M6	2162010
S2.5-M6/1	2162050
S2.5-M7	2162090
S2.5-M8	2162130
S2.5-P10	2163050
S2.5-P12	2163090
S2.5-P8	2163010
S2.5-PP12	2163170
S2.5-PP12/25	2163210
S2.5-PP16/25	2163250
S2.5-U10	2162730
S2.5-U12	2162770
S2.5-U3	2162410
S2.5-U3.5	2162450
S2.5-U3.5/1	2162460
S2.5-U4	2162490
S2.5-U4/1	2162510
S2.5-U4/2	2162530
S2.5-U5	2162570
S2.5-U6	2162610
S2.5-U6/1	2162650
S2.5-U8	2162690
S6-M10	2163830
S6-M10/1	2163850
S6-M12	2163890
S6-M14	2163930
S6-M16	2163970
S6-M3	2163510
S6-M3.5	2163550
S6-M4	2163590
S6-M5	2163630
S6-M6	2163670
S6-M6/1	2163710
S6-M7	2163750
S6-M8	2163790
S6-M8/1	2163800
S6-P10	2164710
S6-P12	2164750
S6-P14	2164790
S6-PP12	2164830
S6-PP17	2164870
S6-U10	2164370
S6-U10/1	2164390
S6-U12	2164430
S6-U14	2164470
S6-U16	2164510
S6-U3.5	2164170
S6-U4	2164210
S6-U5	2164250
S6-U6	2164290
S6-U8	2164330
SC1	2591261
SC3X	2591264
SC5X	2591266
SH-B70	2596080
SS4.8-3.7	3041670
SS4.8-4.5	3041672
SS9-4.5	3041675
SS9-5	3041677
SS9-6.4	3041679
SUB-D050	8420033
SUB-D075	8420032
TBS16X20RE	2811035
TBS24X20RE	2811037
TBS32X10RE	2811039
TBS48X10RE	2811041
TBS64X10RE	2811043
TBS95X10RE	2811045
TBS127X10RE	2811047
TBS190X5RE	2811049
TBS254X5RE	2811051

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TBS127X10BK	2811122
TBS190X5BK	2811124
TBS254X5BK	2811126
TBS16X20Y/G	2811160
TBS24X20Y/G	2811162
TBS32X10Y/G	2811164
TBS48X10Y/G	2811166
TBS64X10Y/G	2811168
TBS95X10Y/G	2811170
TBS127X10Y/G	2811172
TBS190X5Y/G	2811174
TBS254X5Y/G	2811176
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TBS24X20BU	2811187
TBS32X10BU	2811189
TBS48X10BU	2811191
TBS64X10BU	2811193
TBS95X10BU	2811195
TBS127X10BU	2811197
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TBS64X10WH	2811269
TBS95X10WH	2811271
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TC055	2591860
TC085	2597150
TC096	2597360
TC120	2597250
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TCP15	3019230
TCP18	3019235
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TCP30	3019260
TCP35	3019270
TCP40	3019280
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TCS24X200BK	2811316
TCS32X200BK	2811318
TCS48X100BK	2811320
TCS64X100BK	2811322
TCS95X100BK	2811324
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TCS190X100BK	2811330
TCS254X50BK	2811332

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TCS508X25BK	2811338
TCS762X25BK	2811340
TCS1016X25BK	2811342
TCS1260X25BK	2811344
TCS1500X25BK	2811346
TCS16X200YE	2811352
TCS24X200YE	2811354
TCS32X200YE	2811356
TCS48X100YE	2811358
TCS64X100YE	2811360
TCS95X100YE	2811362
TCS127X100YE	2811364
TCS190X100YE	2811366
TCS254X50YE	2811368
TCS16X200GN	2811390
TCS24X200GN	2811392
TCS32X200GN	2811394
TCS48X100GN	2811396
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TCS95X100GN	2811400
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TCS127X100BU	2811432
TCS190X100BU	2811434
TCS254X50BU	2811436
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TCS127X100RE	2811462
TCS190X100RE	2811464
TCS254X50RE	2811466
TCS16X200WH	2811480
TCS24X200WH	2811482
TCS32X200WH	2811484
TCS48X100WH	2811486
TCS64X100WH	2811488
TCS95X100WH	2811490
TCS127X100WH	2811492
TCS190X100WH	2811494
TCS254X50WH	2811496
TCS32X200Y/G	2811515
TCS48X100Y/G	2811517
TCS64X100Y/G	2811519
TCS95X100Y/G	2811521
TCS127X100Y/G	2811523
TCS190X100Y/G	2811525
TCS254X50Y/G	2811527
TCS381X50Y/G	2811511
TCS508X25Y/G	2811513
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TCS24X200GY	2811573
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TCS64X100GY	2811579
TCS95X100GY	2811581
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TCS190X100GY	2811585
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TCS32X200BR	2811606
TCS48X100BR	2811608
TCS64X100BR	2811610
TCS95X100BR	2811612
TCS127X100BR	2811614
TCS190X100BR	2811616
TCS254X50BR	2811618
TCS381X50BR	2811620
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TD20X20-M20	2685014
TD27	2685007
TD120X20-M20	2685013
TD-M16C	2685010
TF300-Q38F	2592862
TF300-Q38FM	2592863
TF600-Q38FM	2592981

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TGM713	3016169
TGM817	3016171
TN120S	2590270
TN70	2590230
TND6-70	2590120
TND10-120	2590145
TNN120	2590290
TNN70	2590240
TNN71	2590241
TRS-B70	2593280
TSS24BK	2811650
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TSS48BK	2811654
TSS64BK	2811656
TSS95BK	2811658
TSS127BK	2811660
TSS190BK	2811662
TSS254BK	2811664
TSS380BK	2811666
TSS510BK	2811668
TSS24RE	2811680
TSS32RE	2811682
TSS48RE	2811684
TSS64RE	2811686
TSS95RE	2811688
TSS127RE	2811690
TSS190RE	2811692
TSS254RE	2811694
TSS380RE	2811696
TSS510RE	2811698
TSS24WH	2811710
TSS32WH	2811712
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TSS380BU	2811756
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TSS24TR	2811770
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TSS95TR	2811778
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TSS64GN	2811837
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TSS127GN	2811841
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TSS254GN	2811845
TSS380GN	2811847
TSS510GN	2811849
TSS24GY	2811861
TSS32GY	2811863
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TSS64GY	2811867

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TSS127GY	2811871
TSS190GY	2811873
TSS254GY	2811875
TSS380GY	2811877
TSS510GY	2811879
TSS24BR	2811890
TSS32BR	2811892
TSS48BR	2811894
TSS64BR	2811896
TSS95BR	2811898
TSS127BR	2811900
TSS190BR	2811902
TSS254BR	2811904
TSS380BR	2811906
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TSS48Y/G	2811922
TSS64Y/G	2811924
TSS95Y/G	2811926
TSS127Y/G	2811928
TSS190Y/G	2811930
TSS254Y/G	2811932
TSS380Y/G	2811934
UP130-120	2616520
UP130-150	2616530
UP130-185	2616550
UP130-240	2616560
UP130-50	2616470
UP130-70	2616490
UP130-95	2616500
VAL04	2593310
VAL096	2593669
VAL1000	2593426
VAL130	2610450
VAL130-U	2610451
VAL160	2593405
VAL22-TC120	2593391
VAL231	2593384
VAL230-630	2680085
VAL450	2593424
VAL520	2593410
VAL600	2593425
VAL75	2600110
VALB-TC950	2593704
VALCP096	2593671
VALCP096-W	2593674
VALECW-H3D	2593421
VALFC470	2593710
VALMAT230-630	2680086
VALMAT520	2593411
VALMATW	2670076
VALP1	2590595
VALP3	2590610
VALP4	2590612
VALP5	2590614
VALP7	2590616
VALP10	2590620
VALP18	2590628
VALP19	2590629
VALP21	2874156
VALP22	2874157
VALP25	2590633
VALP26	2590635
VALP27	2590638
VALP28	2590639
VALP29	2590641
VALP30	2590642
VALP38	2590650
VALP39	2590651
VALP40	2590652
VALP44	2590654
VALP48	2590655
VALP51	2590658
VALSTAR V3-F	2590577
VALSTAR ND2/PKC	2590565
VALSTAR ND2/PKD	2590567
VALSTAR ND2/PKE	2590566
VALSTAR R3/IDT	2590593
VALSTAR V3-F	2590577
VALTC055	2593325
VALTC085	2593323
VALTC120	2593322
VP-M2	2048010
VP-M3	2048030
VP-M3.5	2048070
VP-M4	2048150
VP-M5	2048190
VP-M6	2048210

Ref.	Code
VP-P10	2049210
VP-PP12/19	2049370
VP-U3	2048630
VP-U3.5	2048670
VP-U4	2048710
WF6	8420030
WF16	8420015
WF35	8420031
WL03-M	2469780
WL06-M	2469785
WL1-M	2469790
WT2-3D	2636970
Z10-1	2845030
Z16-1	2845040
Z16-12	2844156
Z16-12D	2844157
Z16-3	2844115
Z16-3D	2844116
Z16-4	2844130
Z16-4D	2844131
Z16-5N	2844122
Z16-5ND	2844123
Z16-8	2844140
Z16-8D	2844141
Z25-1	2845050
Z25-DP7-100	2845180
Z2.5-1	2845010
Z35-1	2845060
Z35-26D	2844216
Z35-3	2844205
Z35-3D	2844206
Z35-4	2844201
Z35-4D	2844202
Z35-6	2844210
Z35-6D	2844211
Z35-DP14-125	2845210
Z35-DP14B-125	2845212
Z35T-11	2844220
Z35T-11D	2844221
Z50-10D	2844230
Z50-DP12-160	2845220
Z6-1	2845020
Z6-10	2844106
Z6-10D	2844107
Z6-3	2844080
Z6-3D	2844081
Z6-5	2844100
Z6-5D	2844101
Z6-6	2844108
Z6-6D	2844109
ZKE2	2590710
ZKE610	2590718
ZKE6-F	2590716
ZP2	2590760
ZS-B16	2842185
ZS-B4	2842115
ZS-B6	2842155
ZS-T16	2842190
ZS-T4	2842120
ZS-T6	2842160
ZS-U16	2842180
ZS-U4	2842110
ZS-U6	2842150

COMPARISON OF AWG, MCM AND METRIC CONDUCTOR CROSS SECTIONS

AWG comparison to Metric		
AWG	Actual conductor csa mm²	Comparable metric csa mm²
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 mm²	Comparable metric csa mm²
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 [mm²]	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 shaving 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 [mm²]	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 estabilished.
- 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 [mm²]	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 [mm²]	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 [mm²]	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	[b]						0,0151	0,0151	0,0247
1400 [a]	[b]						0,0129	0,0129	0,0212
1600	[b]						0,0113	0,0113	0,0186
1800 [a]	[b]						0,0101	0,0101	0,0165
2000	[b]						0,0090	0,0090	0,0149
2500	[b]						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 [mm²]	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 [mm²]	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

REFERENCE TO THE STANDARDS

- **H** Cable conforming to harmonised standards
- **A** Recognised national type of cable
- **N** Other type of national cable

RATED VOLTAGE

- **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

INSULATION AND SHEATH MATERIAL

- **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

SCREENS

- **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

ARMOURS

- **Z2** Round Steel strand armour
- **Z3** Steel strap armour
- **Z4** Steel ribbon armour
- **Z5** Steel strand braid

CONSTRUCTIVE FORM OF THE CABLE

- **H** Flat divisible cable with or without sheath
- **H2** Flat indivisible cable
- **H3** Flat cable with cores separated by a slat
- **H6** Flat cable with three or more cores
- **H7** Cable with double-layered insulation
- **H8** Extendable cord

CONDUCTOR FLEXIBILITY DEGREE

- **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

MAXIblock® - spiralblock®

Ref. Light Grey	Thread	COMPRESSION RANGE Ø min-max				IMPACT CATEGORY (*)	MARKING
		Nominal	UL 514B		EN 62444		
		[mm]	[mm]	[inches]	[mm]		
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	8-13	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	15-21	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	5-7	1	USR-CNR / VDE
1910.M20	M20x1,5	5-10	5-10	0.20-0.39	6-10	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	28-39	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	5-10	1	USR-CNR / VDE
1901.M20	M20x1,5	7-13	13	0.51	8-13	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	15-21	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	8-13	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	15-21	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	UL 514B		
		[mm]	[mm]	[inches]	
1900.07	Pg 7	3,5-7	4.5-6.5	0.18-0.25	USR-CNR
1900.09	Pg 9	5-8	5.5-8	0.22-0.31	USR-CNR
1900.11	Pg 11	5-10	6.5-9.5	0.26-0.37	USR-CNR
1900.13	Pg 13,5	7-12	8-11.5	0.31-0.45	USL-CNL
1900.16	Pg 16	10-14	10.5-14	0.41-0.55	USL-CNL
1900.21	Pg 21	13-18	13-18	0.51-0.71	USL-CNL
1900.29	Pg 29	18-25	18.5-25	0.73-0.98	USL-CNL
1900.36	Pg 36	20-32	21.5-32	0.85-1.26	USL-CNL
1900.42	Pg 42	28-38	28-38	1.10-1.49	USL-CNL
1900.48	Pg 48	37-45	40-44	1.57-1.73	USL-CNL
1910.07	Pg 7	2-5	2-5	0.08-0.20	USR-CNR
1910.11	Pg 11	4-7	4-7	0.16-0.28	USR-CNR
1910.13	Pg 13,5	5-10	10	0.39	USR-CNR
1910.21	Pg 21	9-15	10-14	0.39-0.55	USR-CNR
1910.36	Pg 36	18-26	18-26	0.71-1.02	USR-CNR
1910.42	Pg 42	25-31	25-31	0.98-1.22	USL-CNL
1901.07	Pg 7	3.5-7	6.5	0.26	USR-CNR
1901.09	Pg 9	5-8	5.5-8	0.22-0.31	USR-CNR
1901.11	Pg 11	5-10	6.5-9.5	0.26-0.37	USR-CNR
1901.13	Pg 13,5	7-12	8-11.5	0.31-0.45	USL-CNL
1901.16	Pg 16	10-14	10.5-14	0.41-0.55	USL-CNL
1901.21	Pg 21	13-18	13-18	0.51-0.71	USL-CNL
1901.29	Pg 29	18-25	18.5-25	0.73-0.98	USL-CNL
1901.36	Pg 36	20-32	21.5-32	0.85-1.26	USL-CNL
1901.42	Pg 42	28-38	28	1.10	USL-CNL
1901.48	Pg 48	37-45	40-44	1.57-1.73	USL-CNL
1500.07	Pg 7	3,5-7	4.5-6.5	0.18-0.25	USR-CNR
1500.09	Pg 9	5-8	5.5-8	0.22-0.31	USR-CNR
1500.11	Pg 11	5-10	6.5-9.5	0.26-0.37	USR-CNR
1500.13	Pg 13,5	7-12	8-11.5	0.31-0.45	USL-CNL
1500.16	Pg 16	10-14	10.5-14	0.41-0.55	USL-CNL
1500.21	Pg 21	13-18	13-18	0.51-0.71	USL-CNL
1900.14	G1/4"	3-6,5	4.5-6.5	0.18-0.25	USR-CNR
1900.38	G3/8"	4-8	5.5-8	0.22-0.31	USR-CNR
1900.12	G1/2"	7-12	8-11.5	0.31-0.45	USL-CNL
1900.34	G3/4"	13-18	13-18	0.51-0.71	USL-CNL
1901.12	G1/2"	7-12	8-11.5	0.31-0.45	USL-CNL
1500.14	G1/4"	3-6,5	4.5-6.5	0.18-0.25	USR-CNR
1500.38	G3/8"	4-8	5.5-8	0.22-0.31	USR-CNR
1500.12	G1/2"	7-12	8-11.5	0.31-0.45	USL-CNL
1500.34	G3/4"	13-18	13-18	0.51-0.71	USL-CNL

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

MAXIbrass®

Ref.	Thread	COMPRESSION RANGE Ø min-max			MARKING
		Nominal	UL 514B		
		[mm]	[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

MAXIbrass®

Ref.	Thread	COMPRESSION RANGE Ø min-max			IMPACT CATEGORY (*)	MARKING
		Nominal	UL 514B		EN 62444	
		[mm]	[mm]	[inches]	[mm]	
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	11-17	6	USL-CNL / VDE
2900.M32N	M32x1,5	11-21	11-21	0.43-0.83	13-21	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	2-5	5	USR-CNR / VDE
2910.M16N	M16x1,5	2,5-7	3,5-7	0.14-0.28	4-7	6	USR-CNR / VDE
2910.M20N	M20x1,5	5-10	5-10	0.20-0.39	5,5-10	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	9-14	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	25-29	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	11-17	6	USL-CNL / VDE
2901.M32N	M32x1,5	11-21	11-21	0.43-0.83	13-21	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	2-5	5	USR-CNR/VDE
2911.M16N	M16x1,5	2,5-7	3,5-7	0.14-0.28	4-7	6	USR-CNR / VDE
2911.M20N	M20x1,5	5-10	5-10	0.20-0.39	5,5-10	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	9-14	6	USR-CNR/VDE
2911.M40N	M40x1,5	13-23	15-23	0.59-0.90	17-23	6	USL-CNL / VDE
2911.M50N	M50x1,5	20-29	20-29	0.79-1.14	25-29	6	USL-CNL / VDE

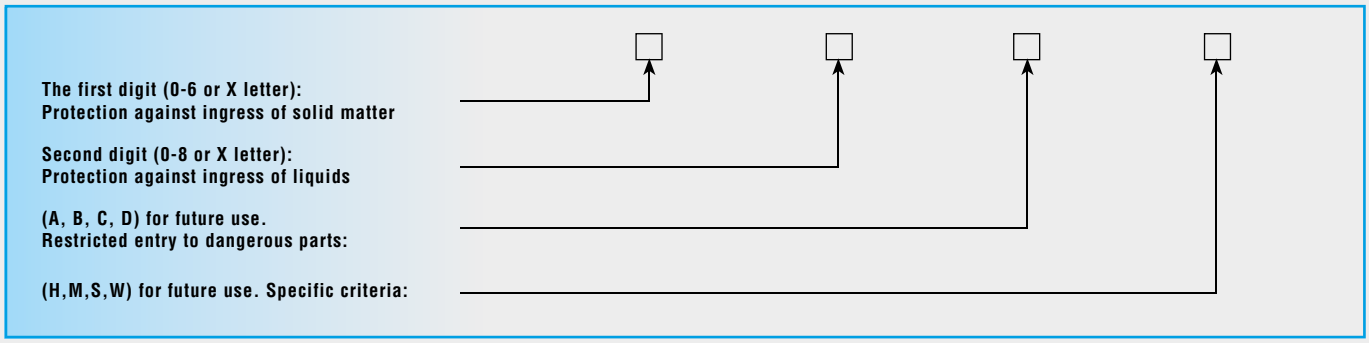
VDE: *Licence nos 40008472, 40008474, 40008475 and 40008476*

USL-CNL: *UL LISTING file no E220310; control no 48SB valid in USA & Canada*

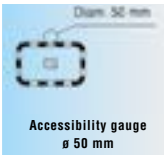
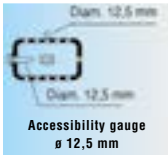
USR-CNR: *UL RECOGNITION file no E220310 valid in USA & Canada (with reduced tightening force)*

(*) *EN 50262 § 9.4*

INGRESS PROTECTION (IP) RATING ACCORDING TO EN 60529 - CEI 70-1



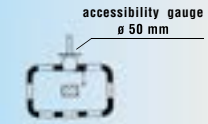
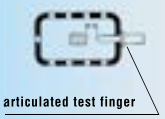
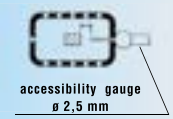
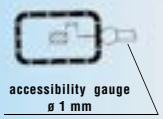
1st CHARACTERISTIC NUMBER:
PROTECTION AGAINST INGRESS OF SOLID MATTER

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 ø 50 mm	 Accessibility gauge ø 12,5 mm	Accessibility gauge ø 2,5 mm	Accessibility gauge ø 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

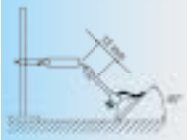
1st ADDITIONAL LETTER
RESTRICTED ENTRY TO DANGEROUS PARTS

RESTRICTED ENTRY	A	B	C	D
Restricted entry to dangerous parts caused by	back of hand	finger	tool	wire
Test method	 accessibility gauge ø 50 mm	 articulated test finger	 accessibility gauge ø 2,5 mm	 accessibility gauge ø 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

FLAMMABILITY TEST FOR PRODUCTS AND MATERIALS

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 • 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.	• 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	• 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	
	metallic	non-metallic
	torque ratio Nm	
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”	4
G3/8”	5
G1/2”	6
G3/4”	10

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