



CEMBRE

RAILWAY CATALOG



www.cembre.com

CEMBRE AT A GLANCE

INNOVATION IS IN OUR DNA



211

Patents and
filed applications

71

Registered
trademarks



OUR WORKSPACE

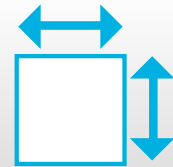


60.000

m² of space ded-
icated to offices,
factories, laboratories

121.000

m² of site



OUR PRODUCT CODES



12.500

different product codes
sold each year

21.000

product codes are
available for immedi-
ate dispatch



AUTOMATED WAREHOUSE



60.000

bins capacity

10.000

order lines
per working day



Trademarks of Cembre S.p.A.



Crimpstar



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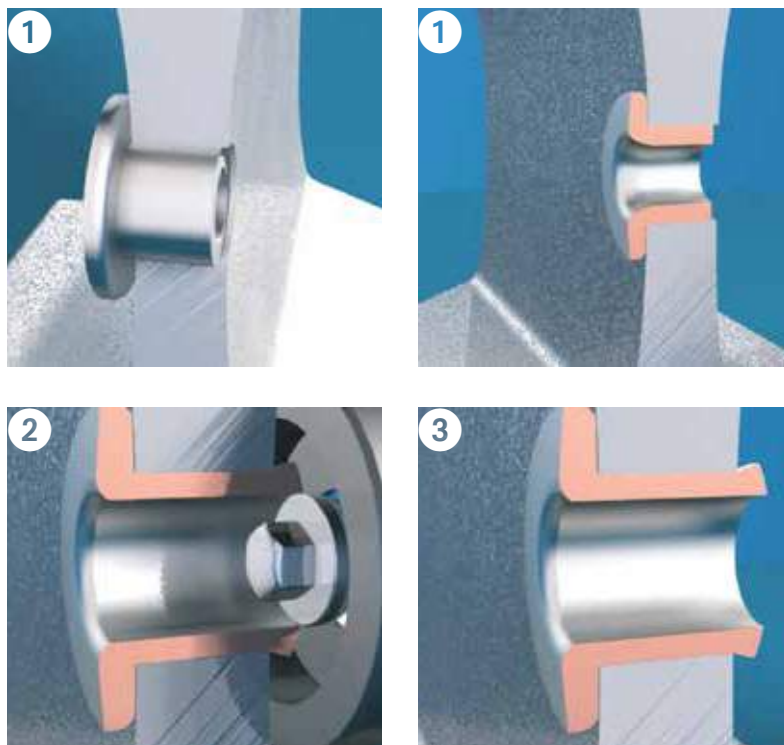
RAIL WEB ELECTRICAL CONNECTION SYSTEMS



SIMPLE AND QUALITY INSTALLATION

The advantages of using the Cembre rail web contacts are that the bush can be installed in all weather and environmental conditions, with a simple, easy to operate portable tool, producing a consistent, quality installation, independent from the skill of the operator. The reduced installation time of this system results in overall cost savings.

During installation the bush is 'extruded' and the copper material flows into the wall of the hole, compensating for variation in hole size and filling any voids and uneven surfaces.



Schematic view of the extrusion process (section)

TESTED TO PROVE HIGH QUALITY

Extensive testing, performed in the test laboratory and in the field, have demonstrated a low and constant resistance, mechanical stability and protection from atmospheric corrosion.

Examples of the electrical tests



Heat Cycling Tests



Short Circuit Testing



On site testing

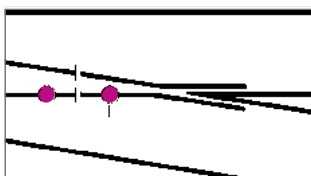
Examples of tests in salt water environments



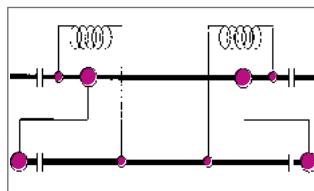
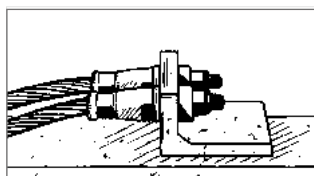
Salt Mist Exposure Testing



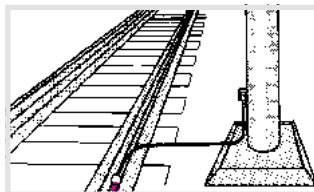
AR60D Installation



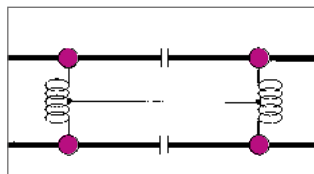
Signalling and traction current connection to manganese steel cast exchange units



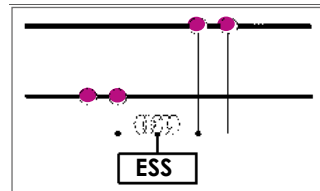
Various connections involved in the train location system



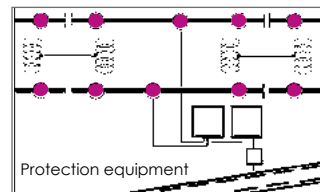
Connections of metallic structures to rails for grounding



Transmission of coded and return current on lines fitted with automatic block



Return current connections to substations



Electrical connection of underground metal structures to rails



Protection equipment

Examples of lines equipped with automatic block



Example of AR60D in electric joint applications



THE AR60D SYSTEM IS USED WORLD WIDE PROVING TO BE FULLY RELIABLE IN ALL THE WORKING CONDITIONS

QUOTED BY THE PRESS

Features and benefits of the AR60D system have appeared in various Railway Industry journals.





1) Example of electrical connections using a low stranded conductor to provide electrical continuity on cast manganese steel crossovers.

1A) AR60D rail web connection, rail side

2) Example of electrical connections using a flexible cable to provide electrical continuity on cast manganese steel crossovers.

2A) AR60D rail web connection, rail side

3) AR260D double contact rail web connection





4

- 4) Example of electrical connection where cable layout is perpendicular to the rail.
- 5-6) **AR60D** rail web connection, rail side.
- 7) **AR67** rail web connection, rail side.
- 8-9) Example of perpendicular electrical connection, on cast Manganese Steel crossovers.



5



6



7



8



9



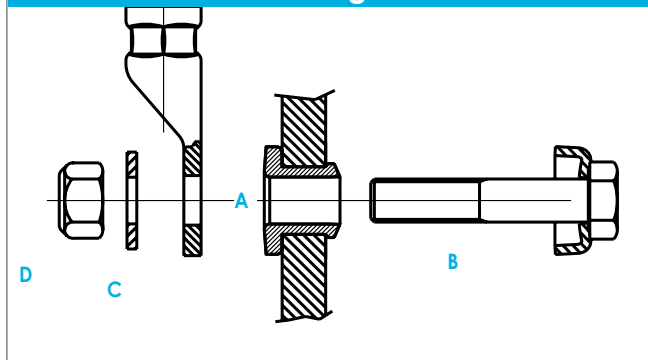
Electrical permanent contact AR60D for hole \varnothing 19-20

This system has been studied, designed and realized by Cembre in 1988 after a deep analysis of existing electrical connection systems and their performances. The aim of the Cembre system is to provide a general and substantial improvement on the most important characteristics of a contact between the rail and the electric cables like:

- extremely low resistance (in terms of micro-ohms);
- easy installation procedures and not depending on operator skillness;
- short installation time (less than one minute for each operation);
- possibility of disconnection / connection of attached cables.
- cold extruded (requires no heating to the rail).

After extensive tests, either in laboratory or in the field, the system has been recognized as totally reliable and perfectly matching the above listed requirements.

AR60D technical drawing



System components

- A - Electrolytically fin-plated copper bush type **AR 60-1**
- B - Steel M12 screw with hollow hex head (1 piece)
- C - Flat steel washer
- D - Self-locking nut

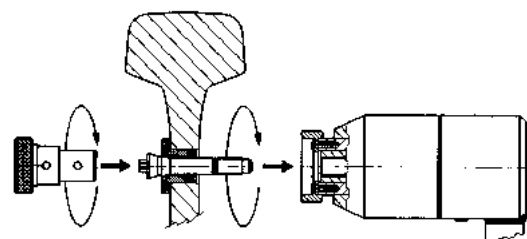
Railweb thickness between 14 to 16,5 mm.


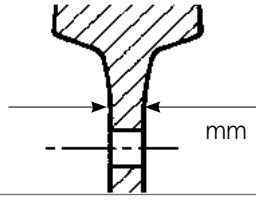
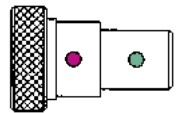
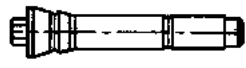
Rail web cable connection applications

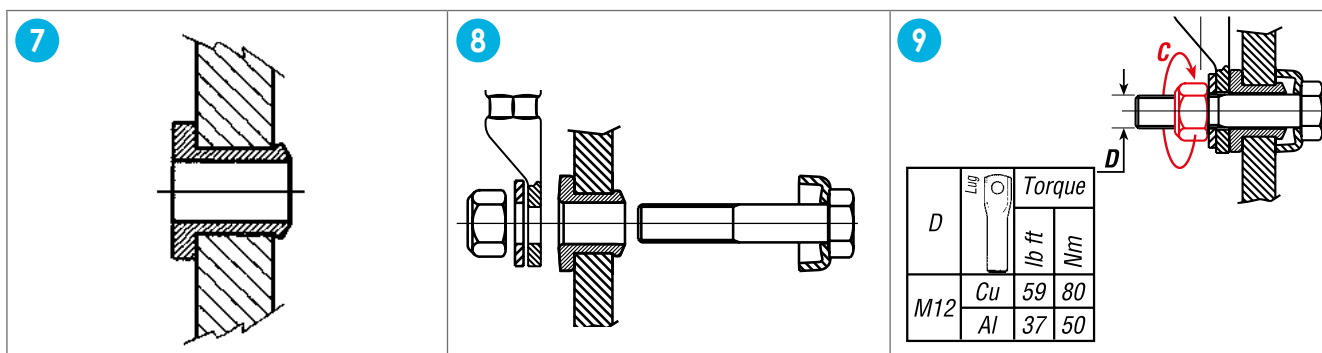
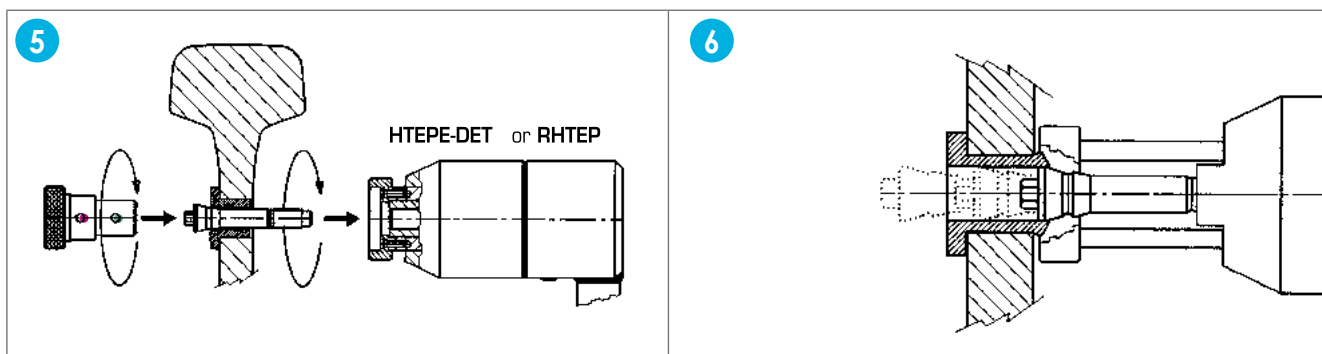
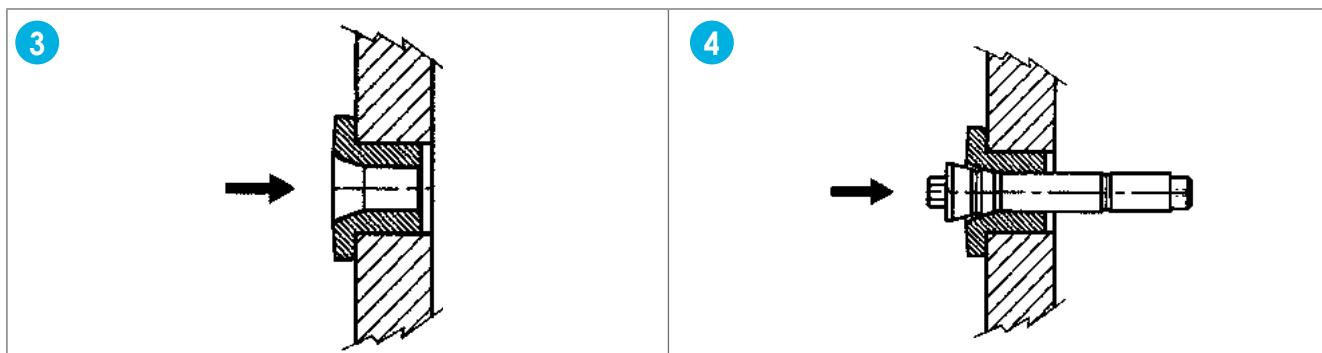
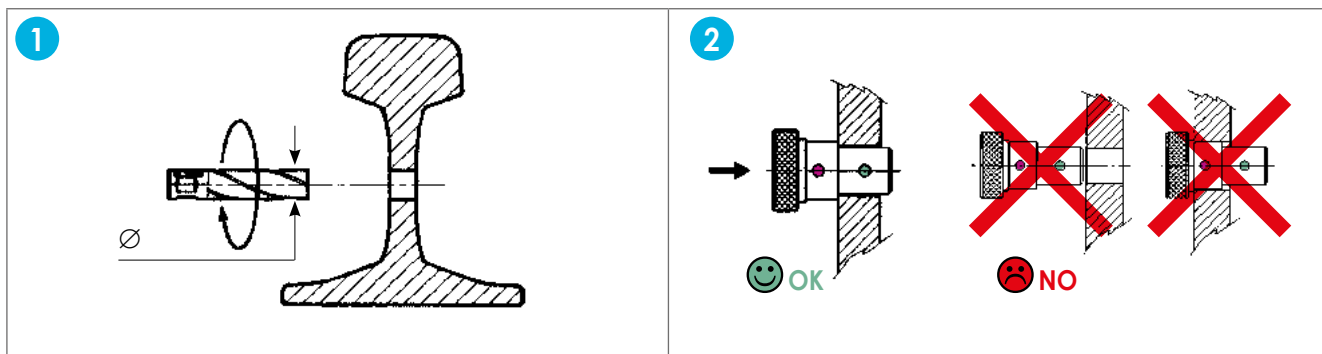
- Traction return bonding
- Continuity bonding
- Ground bonding
- Substation connection
- Electrical Drainage
- Signal track circuit continuity
- Signal track circuit connection

To be installed by

Hydraulic tool type **HTEPE-DETY** or tool type **RHTEP**



		\varnothing mm		
AR60D	14 ÷ 16,5	19	CAL 19.20	OG 13.2





AR260D System components

- A – Electrolytically fin-plated copper bush type AR260-1
- B – Electrolytically fin-plated copper alloy washer type AR260-2
- C – M12x70 flat steel bolt
- D – M12 stainless steel flat washer
- E – M12 self-lock nut

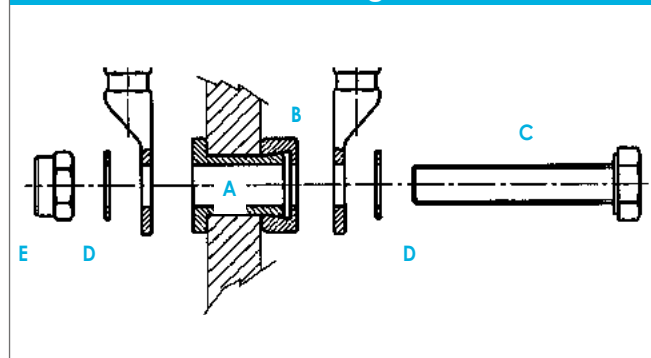
Rail web cable connection applications

- Traction return bonding
- Continuity bonding
- Signal track circuit connection
- Ground bonding

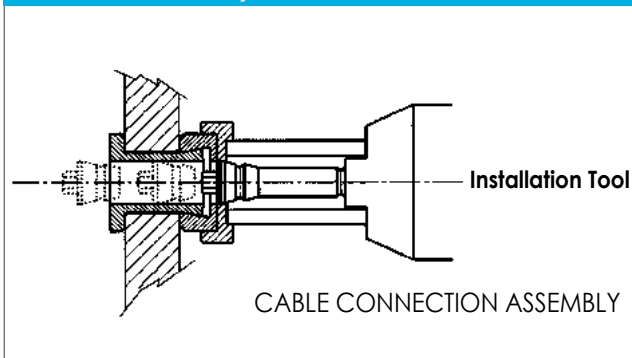
To be installed by tools


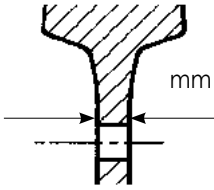
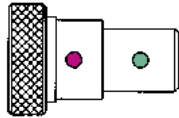
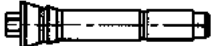
- **HTEP** hydraulic tool or tool type
- **RHTEP** head for connection to a hydraulic pump
- **B1300TEP** hydraulic battery tool with the head directly

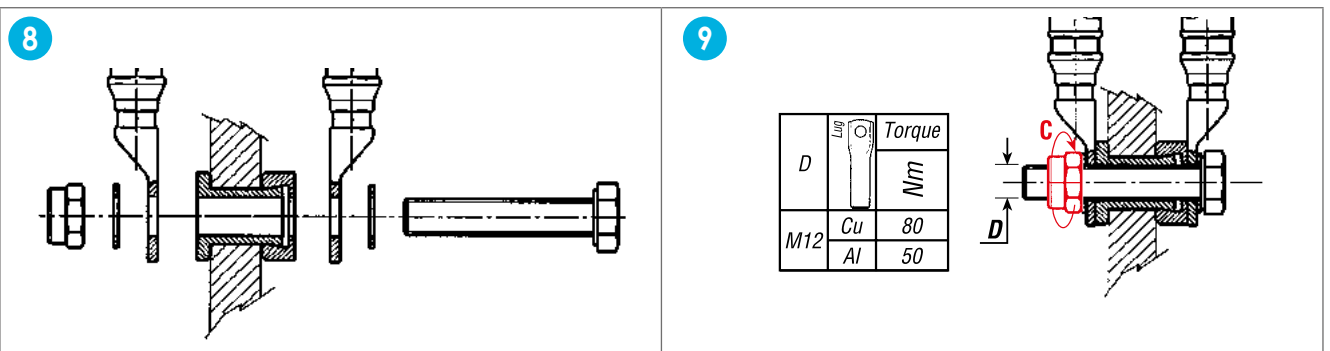
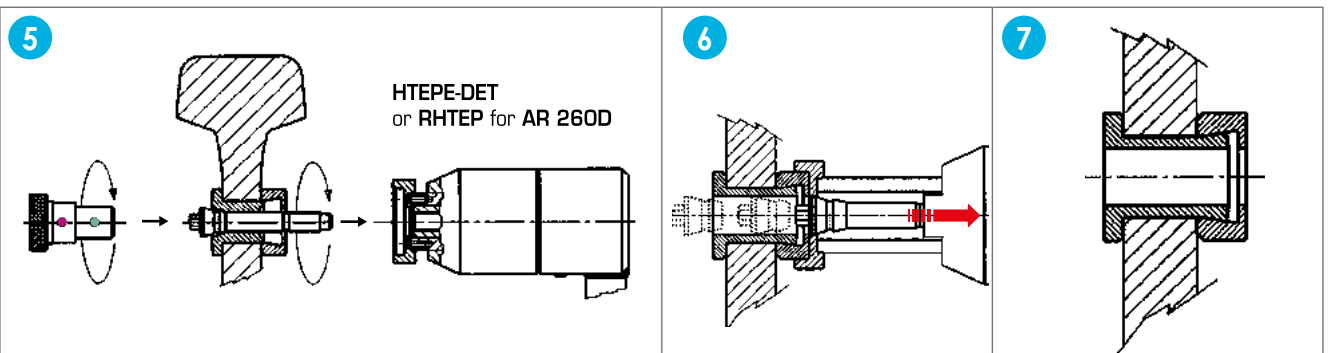
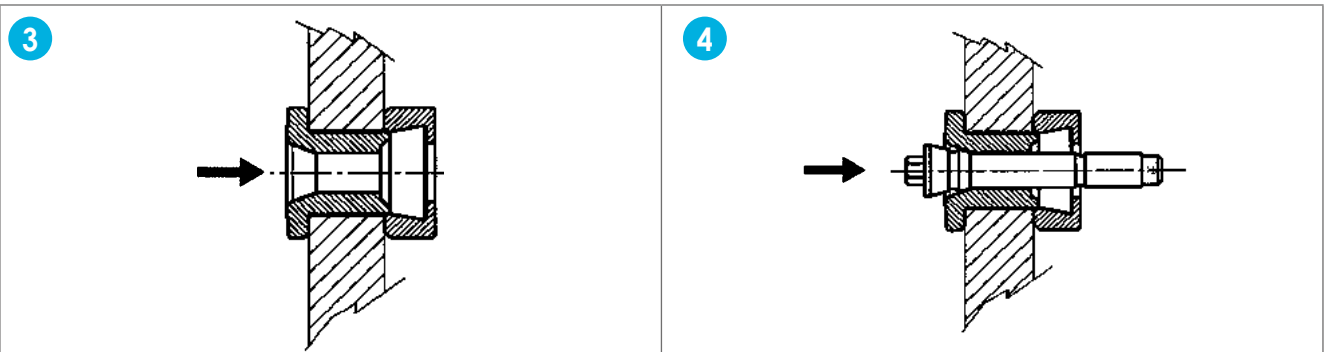
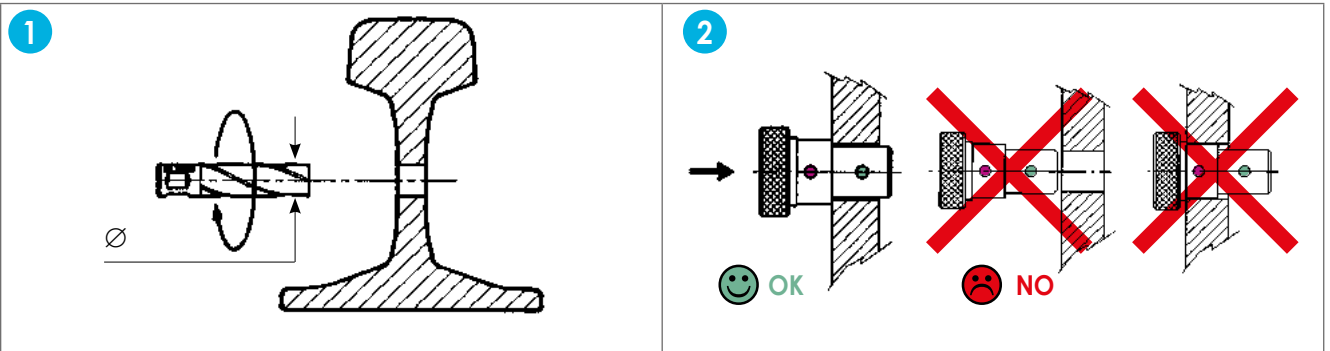
AR260D technical drawing



To be installed by



		\varnothing mm		
AR260D	14 ÷ 16,5	19 ÷ 20	CAL 19.20	OG 13.2





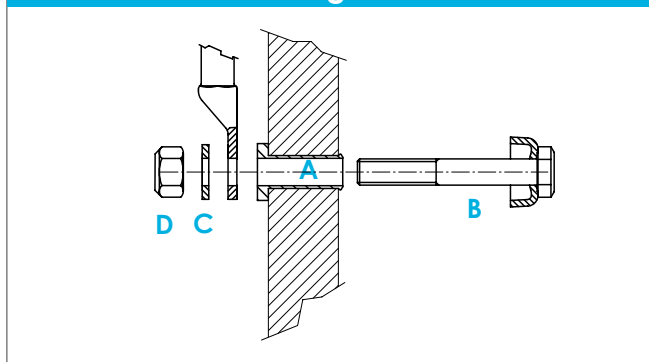
AR67 for hole \varnothing 8 - 8,5 mm

Railweb thickness between 14 to 16,5 mm

System components

- A – Copper bush type **AR67-1** protected on surface by suitable metal plating
- B – Steel M6 screw with hollow hex head
- C – Flat steel washer
- D – M6 self-locking nut

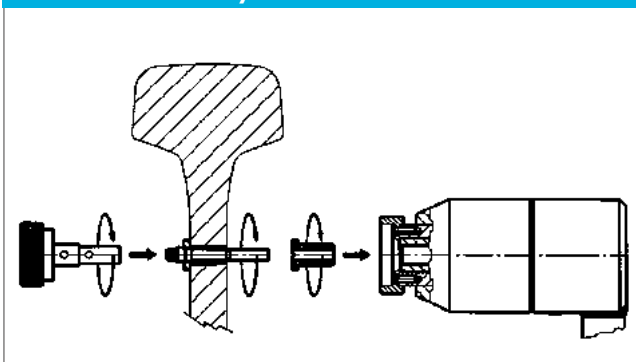
AR79 technical drawing


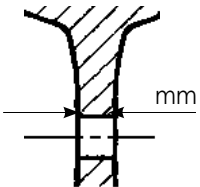
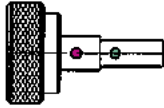
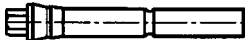


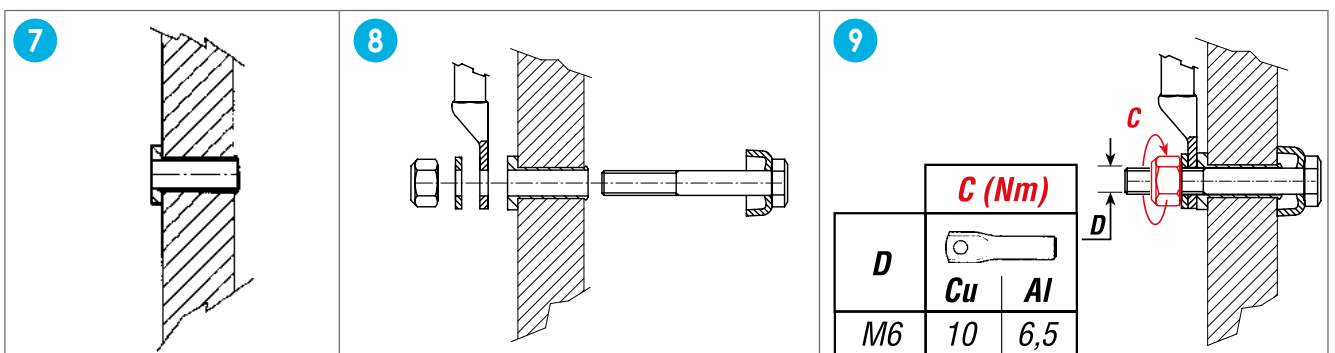
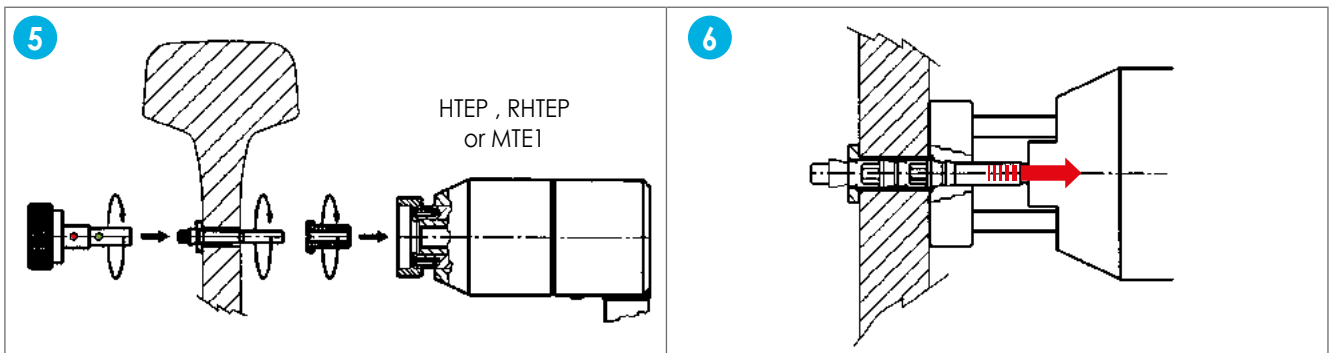
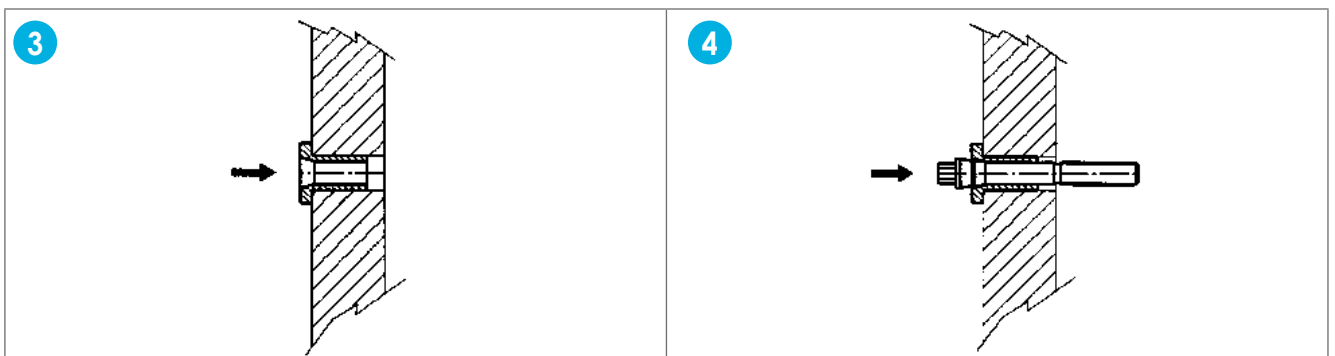
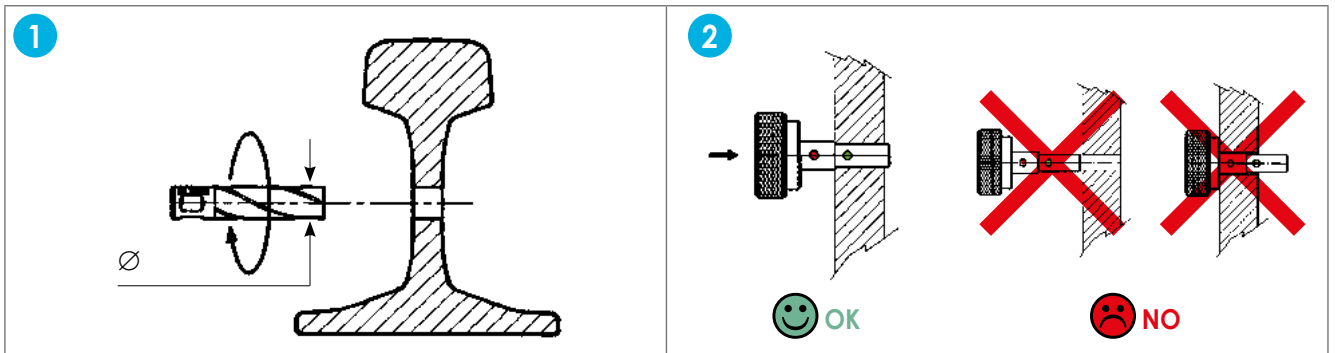
To be installed by

- **HTEP** hydraulic tool + **KIT AR67 INST** installation Kit
- **RHTEP** head for connection to a hydraulic pump +
- **KIT-AR67-INST** installation Kit
- **B1300TEP** hydraulic battery tool with the head directly
- **MTE1** hand held ratchet tool

To be installed by



		\varnothing mm		
AR67	14 ÷ 16,5	8 ÷ 8,5	CAL 8.85	OG 6.5





CCV for hole Ø 8 - 8,5 mm

Rail electrical connection system for perpendicular installation. The system uses the same holes and installation tool of **AR** system and standard cable lugs.

Types available

- **Type 1** Standard crimping only on the conductor (low standard)
- **Type 2** Crimping on the conductor (flexible) and on the insulation

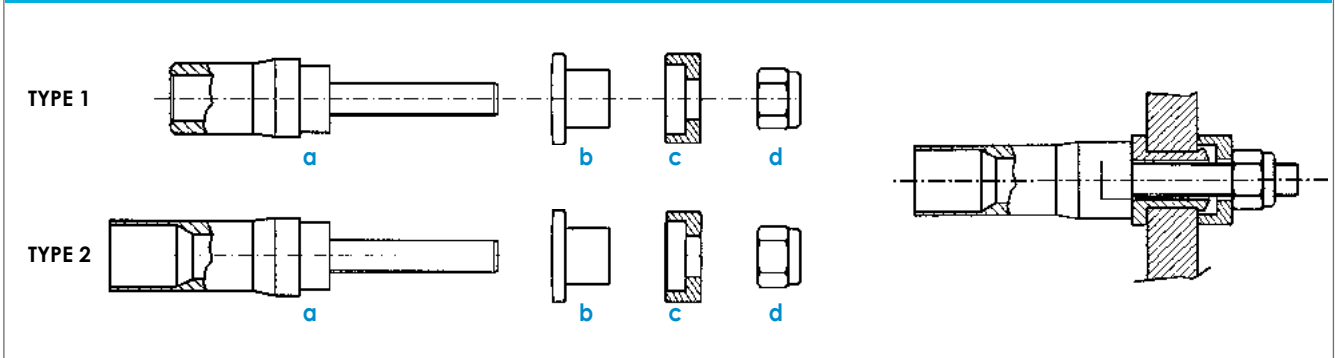
System components

- A** – Linear cable lug type **CCV** (Copper or Aluminium)
- B** – Electrolytically tin-plated Copper bush
- C** – Electrolytically tin-plated steel washer
- D** – Stainless Steel self-lock nut

CCV Types

For identification of correct type and dimension please contact Cembre.

CCV technical drawing



CSF

Cable support kit



CSF1

Cable support kit for rail type **60E1(UIC 60)**, base width 150 mm.

CSF2

Cable support kit for rail type **49E1(S49)** and **54E3(S54)**, base width 125 mm.

At the transition between ground and rail foot, a cable must be correctly supported to avoid damaged, for example, during surface work. The **CSF** support is designed for simple fixing to the rail foot and requires no drilling.

CSF1 and **CSF2** consist of the following components:

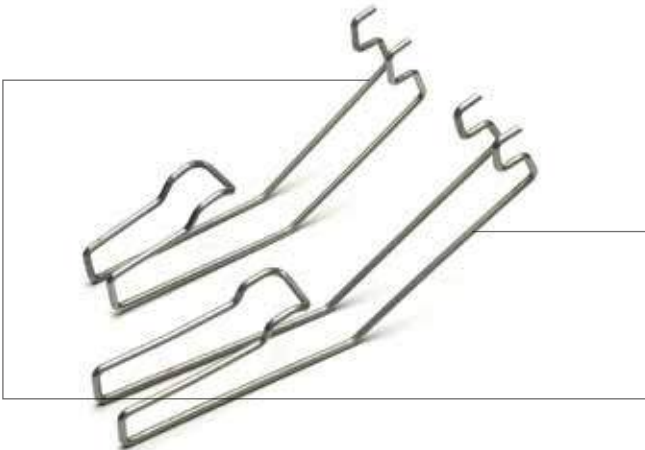
- Cable support in 30% Glass fibre reinforced PA6.6
- 1 clips in Stainless Steel AISI302 for fixing on rail foot
- 2 cable ties in PA12 180x9mm; black; Type 1618.90
- 2 Stainless Steel cable ties ***GX200x4,5**

* Fixing requires cable tie tool type 5527030079 (see page 78).



SFK

Rail foot cable clips



Designed for the secure and durable fixing of cable max. Ø22mm to the rail foot without the need for tools.



CLIP TYPE	RAIL FOOT WIDTH (mm)	SUITS RAIL TYPE
SFK125	125	49E1 (S49); 54E3(S54)
SFK150	150	60E1 (UIC60); R65

B1300TEP

Hydraulic portable battery tool

NEW

FEATURES

System composed by:

- Hydraulic portable battery tool with the head directly connected to the body through a 900 mm flexible hose.
- N° 2 calibrated plungers type **OG13.2** made of special Steel.
- **CAL19.20** gauge to use both for checking rail drills and screwing the calibrated plunger to the head.
- Spare battery.
- Battery charger.
- shoulder strap.
- On request available with case **VAL-P51** or **TRL01**



SPECIFICATIONS

Dimensions mm

Pump body	length	353
	width	83
	height	239

Total weight kg	5,8
-----------------	-----

STORAGE

STORAGE		STORAGE	
Type	VAL-P51	Type	TRL01
Dimensions mm L x W x H	690 x 446 x 179	Dimensions mm L x W x H	500 x 345 x 425
Weight kg	5,5	Weight kg	5,1
Supplied with the tool	-	Supplied with the tool	-
Purchase separately	✓	Purchase separately	✓



B1300TEP while extruding AR contact

HTEP

Manual hydraulic tool

System composed by:

- Hydraulic tool type **HTEP-S**, manually operated.
- Head connected to the pumping body through a flexible pipe 900 mm long.
- 2 units of plungers **OG13.2** type in special Steel.
- Type **CAL19.20** gauge for both check of the rail hole and for screwing of the plunger into the **HTEP-S** tool.
- Metal case type **VAL-HTEP**.



SPECIFICATIONS

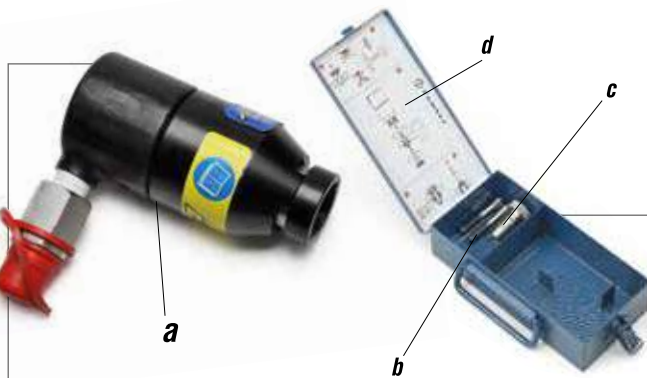
Dimensions mm		
Pump body	length	845
	width	130
Head Ø		48
Total weight kg		3

STORAGE

Type	VAL-HTEP
Dimensions mm L x W x H	495 x 193 x 61
Weight kg	2,5
Supplied with the tool	-
Purchase separately	✓

RHTEP

Hydraulic head



FEATURES

- a -Hydraulic head type **RHTEP-S** to be connected to a pump developing a nominal pressure of 10,000 psi, for example **B70M-P36** battery operated hydraulic pump (see page 96)
- b -2 plungers type **OG13.2** in special steel (for extruding **AR60** bonds)
- c -**CAL19.20** gauge for both check of the rail hole and for screwing of the plunger itself into the head (for **AR60** bonds)
- d -Metal case type **VAL-RHTEP**



RHTEP while extruding AR contact

SPECIFICATIONS

Dimensions mm		
	length	106
	width	90
Head Ø		48
Total weight kg		3

STORAGE

Type	VAL-RHTEP
Dimensions mm L x W x H	500 x 345 x 425
Weight kg	5,1
Supplied with the tool	-
Purchase separately	✓

MTE1-S

Ratchet tool



FEATURES

The **MTE1-S** hand setting tool provides an easy and quick mechanical installation for **AR67** rail contacts.

TOOL INCLUDES:

- 2 plungers **OG6.5** type in special Steel (for extruding **AR69D** bonds)
- **CAL8.5** gauge for both check of the rail hole and for screwing of the plunger itself into the head
- Canvas bag **CVB-016**

SPECIFICATIONS

Dimensions mm	
length	315
width	58
height	98
Weight kg	1,3

STORAGE

Type	CVB-016
Dimensions mm L x W	350x130
Weight kg	0,14
Supplied with the tool	✓
Purchase separately	-

OG13.2T

Plungers



FEATURES

Plungers **OG13.2T** composed of 2 separate items: insert and stem. To rapidly execute subsequent extrusion operations, it is sufficient to unscrew the insert, leaving the stem firmly screwed onto the head.

KIT-AR67-INST



FEATURES

For the installation of the electrical contact **AR67** type

Kit composed by:

- Hydraulic tool type **HTEP-S**, manually operated.
- Head connected to the pumping body through a flexible pipe 900 mm long.

ECR19 + ECR1

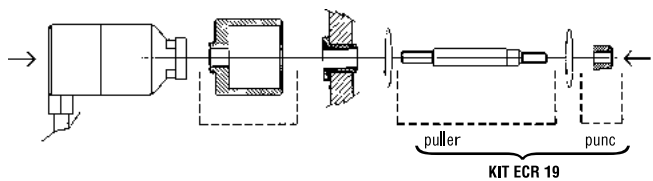
Extractor to remove AR60-I



FEATURES

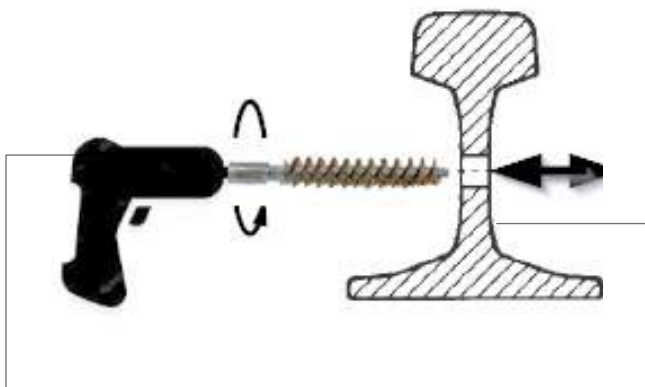
In order to remove **AR60D** bushes from the rail, available as an optional accessory the **ECR19** kit (punch + puller) with positioner **ECR-1**.

For use please refer to the picture.



WB10-80

Wire brush



FEATURES

Metal wire brush for a quick and efficient cleaning operation of pre-existing holes from eventual oxide. The tool can be used in any key/key less chuck battery drill.

TWC SERIES

Torque wrench range



FEATURES

Cembre professional reversible torque wrench range **TWC** will provide optimum torque setting when the threaded fastenings are paired with the same size sockets.

SPECIFICATIONS		TWC10.50-14	TWC20.100-38	TWC40.200-12
Adjustment range Nm:		10-50	20-100	40-200
Drive size in.		1/4	3/8	1/2
Dimensions mm				
Body	length	328	435	510
	width	35	45	45
Head		28	35	40
Weight g		660	1300	1506

SC5X

Wire stripper



FEATURES

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.

SPECIFICATIONS

Dimensions mm		
length		162
width		77
height		18
Weight g		121
Material		
blade		Tempered steel
moulded		Polyamide

KT2

Wire stripper



CUTTING CAPACITY - SECTION CONDUCTOR - AWG

Rigid	Cu	6
	Al	1/0
Multi conductor	Cu	2/0
	Al	2/0
Flexible	Cu	3/0

TEMPORAIL

Temporary rail connection



The Temporal system of connections and tooling provides a quick and reliable means to guarantee continuity of conductivity in rails during maintenance, repair and new installations.

Essential for maintaining return current connections, the Temporal system is also ideal for temporary signaling applications and earthing between the line and adjacent trackside structures.

Cembre Temporal system applies to most of rail types with 125, 140 and 150 mm foot (For suitability verification please contact Cembre)

- Easy installation /removal using Cembre patented tool HT-TRC
- Safer working without the risks associated with alternative systems
- Connection without any drilling or welding
- No grinding or cleaning from previous operations
- High vibration resistance
- Accurate location on rail foot
- Reusability due to controlled use of force

Temporal kit type code	COMPRISING
RTC1CU10-2000	Two Steel contact clamps interconnected by 2 m 95 sqmm insulated Copper flexible conductor cl. 5 terminated both ends with Copper lugs and fixed with M10 Steel bolts and plain washers.
RTC1AI10-2000	Two Steel contact clamps interconnected by 2 m 120 sqmm insulated Aluminium flexible conductor cl.5 terminated both ends with Aluminium lugs and fixed with M10 Steel bolts and plain washers.

HT-TRC

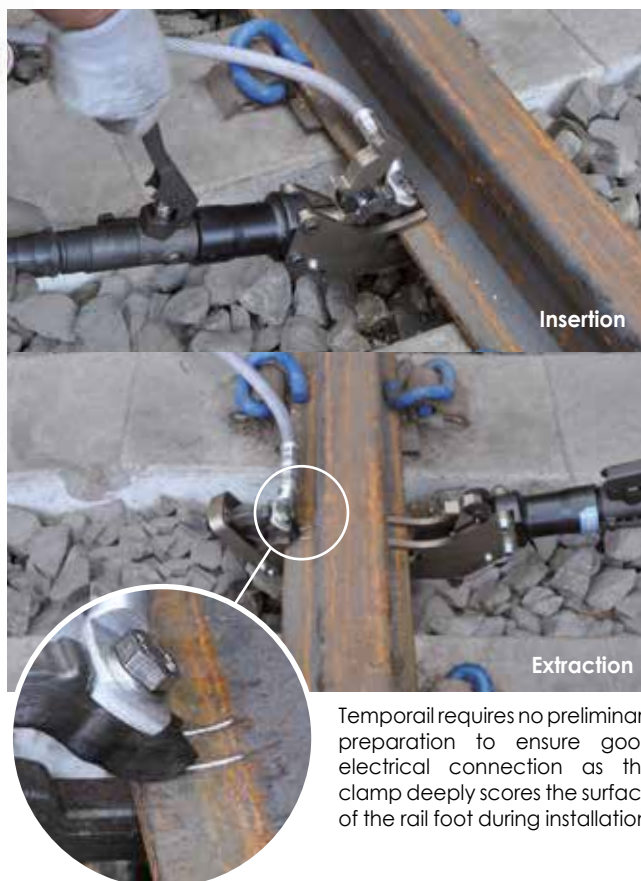
Hydraulic tool for installing TEMPORAIL



- Specifically designed to insert and extract Cembre Temporal clamp
- Works on all rail types with foot up to 150 mm
- Patented tool with safety feature protects against ejection of metal pieces during extraction

SPECIFICATIONS

Crimping force kN	50
Nominal pressure bar	700
Dimensions mm	
length	715
width	177
height	70
Weight kg	7,5



Temporal requires no preliminary preparation to ensure good electrical connection as the clamp deeply scores the surface of the rail foot during installation.



TRACK MAINTENANCE MACHINES



COMMON FEATURES



ERGONOMIC DESIGN

Weighing less than 20kg with the over rail clamp attached, Cembre LD.. rail drills are easily transported via the balanced carrying handle and are compact in design allowing operation in narrow spaces.



QUICK FIT CLAMP

Quick fastening and unfastening system integrated in the over rail clamp device.



COOLING SYSTEM

The drills are provided with a coolant system consisting of a reservoir and pump for use with suitable cooling lubricants.



turn to lock
push to insert



lock

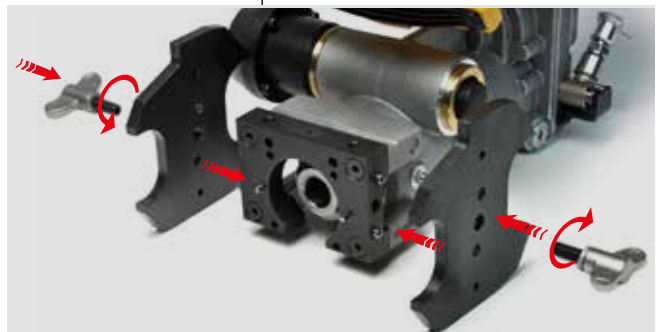
FAST-FIT CHUCK

Faster drilling with FAST-FIT when using CY broach cutters with FAST-FIT shanks; quicker cutter replacement and no tools required.



ADVANCE LEVER

The starting point of the advance lever can be easily adjusted for either left hand or right hand drilling operations.



DOUBLE-SIDED TEMPLATE KITS

KPAF template kits are equipped with a double profile that enables quick positioning of the drill on two different rail types by simply loosening the wing nuts and inverting the inserts.

INNOVATION FIRST AND FOREMOST, IS IN OUR DNA

The new Cembre **LD-16B** 36V battery rail drilling machine attaches the renowned mechanical transmission of our existing machines to a casing newly designed to optimize air circulation around the latest developments in electric motor and battery technology.

ECODRILL features an innovative "drilling assistance" indicator of coloured LEDs which helps the operator to optimize the force applied, leading to savings in power consumption and increased life of consumable cutters.

Time, effort and handtools required to set up the **LD-16B** are dramatically reduced by its compatibility with new Cembre CY Broach cutters having 'Quick' push/turn shanks and a new 'double-sided' template kit that allows machine location on two different rail profiles by a simple inversion of side plates. Powerful LED work area illumination and a Rainproof cowl help avoid operational interruptions.



- 1 **Needs no combustible fuel or mains power:** promotes safe remote working
- 2 **Zero Emissions:** ideal for tunnel and underground works
- 3 **Very low acoustic impact:** allows night work in urban areas
- 4 **Low HAV levels:** helps safeguard operator's physical health

MAIN FEATURES

- 1 **Needs no combustible fuel or mains power:** the powerful 36V 6.2Ah battery promotes safe remote working
- 2 **Zero Emissions:** no fumes to pollute underground and tunnel working
- 3 **Very low acoustic impact:** allows night work in urban areas
- 4 **Low HAV levels:** helps safeguard operator's physical health
- 5 **Optimized effort:** LED indication of spindle advance lever force conserves power
- 6 **Powerful LEDs light work area:** for precise positioning and safety in the dark
- 7 **Integrated battery:** minimizes size and weight
- 8 **Interlocked switch:** to avoid accidental activation
- 9 **Fast fit broach cutter:** compatible with Weldon shank and 'Quick' push/turn couplings
- 10 **Rapid charging:** 55min for full battery charge



Additional features

- Safety alarms by means of flashing LED indicate: max current absorption, battery undervoltage or wrong insertion, diagnostic issue, battery/motor overtemperature, max continuous operating time reached
- A special design of the plastic casing optimizes motor cooling
- Multi-function operating button: ON-OFF with interlocking and step function for indexing the shaft.

SUPPLIED ACCESSORIES FOR BATTERY DRILLS

Both Ecodrills are supplied with the Standard Accessories on page 28 plus:

- Threaded pin for securing Quick push/turn cutters
- Wingnuts for securing KPAF templates (page 30)
- Qty 2 Battery CB 3662L, 36 V - 6,2 Ah Li-Ion with LED residual charge indicator
- Battery charger ASC ULTRA EU 27265000, (Input 220-240 V / 50-60 Hz; Output 14,4-36 V DC / 6,5 A max.)
- Canvas bag with compartments for two batteries and the battery charger



LD-16B

Battery Ecodrill



NEW

CONFORMING TO
EN13977



FEATURES

- Drilling range: $\varnothing 7\div 33$ mm
- $\varnothing 7 \div 13$ mm (with Cembre PE range spiral bits)
- $\varnothing 13 \div 33$ mm (with Cembre CY range broach cutters)
- Max. railweb thickness: 50 mm
- Speed of the shaft without load: 260 rpm
- Battery: 36V-6.2 Ah Li-Ion with LED residual charge indicator

SPECIFICATIONS

Dimensions mm

length	489
width	261
height	485

Weight kg

with battery and DBG-F2	13,7
	18,5

LD-16B-RP

Rainproof Ecodrill



NEW

CONFORMING TO
EN13977



FEATURES

- Drilling range: $\varnothing 7\div 33$ mm
- $\varnothing 7 \div 13$ mm (with Cembre PE range spiral bits)
- $\varnothing 13 \div 33$ mm (with Cembre CY range broach cutters)
- Max. railweb thickness: 50 mm
- Speed of the shaft without load: 260 rpm
- Degree of Protection (Engine & Battery): **IP44M** (EN 60529)
- Battery: 36V-6.2 Ah Li-Ion with LED residual charge indicator

SPECIFICATIONS

Dimensions mm

length	489
width	271
height	485

Weight kg

with battery and DBG-F2	14,1
	18,9



LD-1P-ECO

Two cycle gas



FEATURES

- Engine: Two cycles
- Displacement: 45.4 cc
- Fuel: 2% (1:50) oil/gasoline mixture
- Start: by pull chord
- Clutch: Centrifugal with automatic intervention
- Power: 1.9 HP; 1.4 kW / 7500 rpm
- Drilling range: \varnothing 7÷40 mm
- with broach cutters: \varnothing 13-40 mm, on rails up to 50 mm thick
- with special spiral bits: \varnothing 7-27,5 mm, on rails up to 45 mm thick

SPECIFICATIONS

Dimensions mm

length	489
width	261
height	485

Weight kg

with DBG-F2	18,9
-------------	------



LD-41P

Four cycle gas



FEATURES

- Engine: four cycle
- Displacement: 35.8 cc
- Fuel: unleaded regular grade gasoline
- Start: by pull chord
- Clutch: centrifugal with automatic intervention
- Power: 1.3 HP ; 1 kW
- Drilling range: \varnothing 7÷40 mm
- with broach cutters: \varnothing 13-40 mm, on rails up to 50 mm thick
- with special spiral bits: \varnothing 7-27,5 mm, on rails up to 45 mm thick

SPECIFICATIONS

Dimensions mm

length	489
width	261
height	485

Weight kg

with DBG-F2	19,5
-------------	------

LD-2E

Electric



FEATURES

- Electric single phase motor:
 - supply voltage 220/230V - 50 Hz
 - power rating 1.8 W
- Drilling range: \varnothing 7-33 mm
 - with broach cutters: \varnothing 13-33 mm, on rails up to 50 mm thick
 - with special spiral bits: \varnothing 7-22 mm, on rails up to 45 mm thick

SPECIFICATIONS

Dimensions mm

length	489
width	261
height	485
Weight kg	14
with DBG-F2	17

LD-8H

Hydraulic



FEATURES

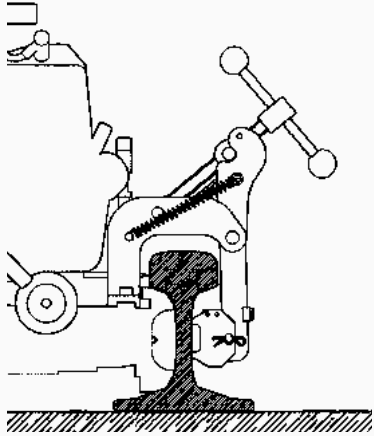
- Engine: hydraulic
- Oil input flow: 5 gpm
- Oil input pressure: 2,000 psi
- Power: 2 kW
- Drilling range: \varnothing 7-40 mm
 - with broach cutters: \varnothing 13-40 mm, on rails up to 50 mm thick
 - with special spiral bits: \varnothing 7-27,5 mm, on rails up to 45 mm thick

SPECIFICATIONS

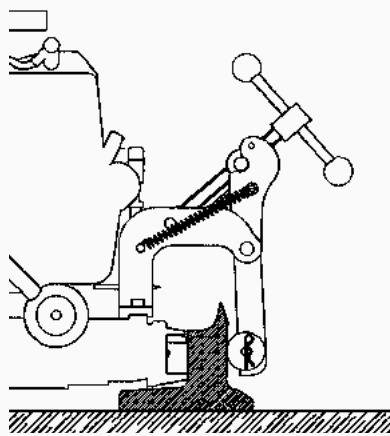
Dimensions mm

length	489
width	261
height	485
Weight kg	16,3
with DBG-F2	20

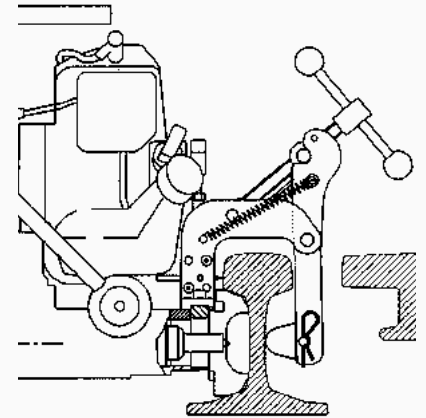
On the rail web



DBG-F2 over rail clamp equipped with TDB-6 termination



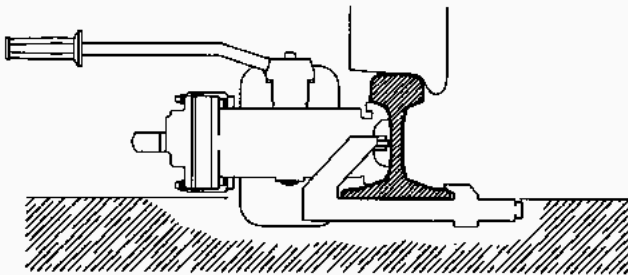
DBG-F2 over rail clamp equipped with TDB-1 termination



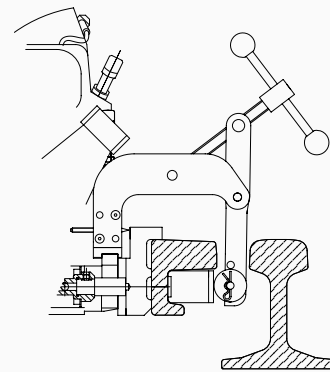
DBG-F2 over rail clamp equipped with TDB-3 termination

To the rail flange

(except model LD-41P)

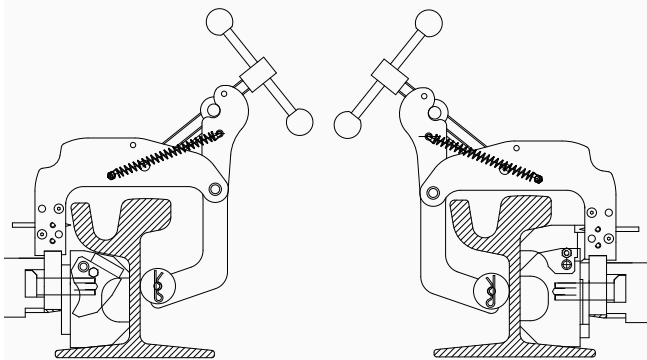


On check rail



- **DBG-UIC33** over rail clamp
- Specific positioning template **MPAF-UIC33 SPACER UIC33** spacer block
- Use of long broach cutters **A...L** range

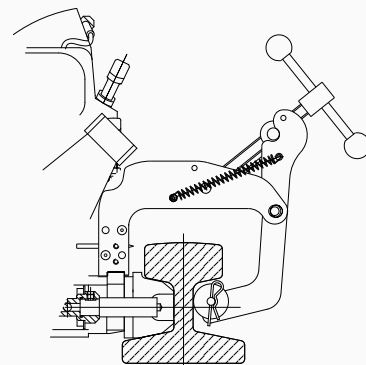
On girder rail (e.g. RI 60 Np4)



- **DBG-LF2** over rail clamp
- Specific positioning template **MPAF**
- Use of long broach cutters **A...L** range

The design of the template (combination) allows positioning on both sides of the rails

On conductor rail



- **DBG-LF2** over rail clamp equipped with **TDB-1** termination for 150LB conductor rail drilling
- Specific positioning template **MPAF-106LB** or **MPAF-150LB**

LD SERIES DRILLS

STANDARD ACCESSORIES SUPPLIED WITH THE DRILLING MACHINE

DBG-F2

Over rail clamp

For clamping drilling machine to rail web and track fittings

Complete with three terminations

- **TDB1** for switch blades and confined spaces
- **TDB6** for standard applications (bull head, flat bottom, check rails etc.)
- **TDB3** for redrilling existing holes in rails for subsequent application of electrical connections and for additional special applications



SR5000

Coolant unit

Coolant unit consisting of pressure vessel and hose, fitted with a manual pump and maximum pressure valve. Connection to the drilling machine is by quick coupler.



Measure for mixture preparation

(6261300)

For accurate preparation of the 2% (1:50) oil/gasoline mixture for **LD-1P-ECO** drilling machine.



Oil for the gear box

LD-3PY 100 ml (6001361)

LD-2EY 140 ml (6001362)



Range of tools

- 1 x spark plug key*
- 1 x 5 mm Allen key (6134020)
- 1 x 6 mm Allen key (6134030)
- 1 x 4 mm Allen key, with handle (6134010)
- 1 x swarf brush (6261310)

* Accessory supplied only for **LD-1P-ECO** (6134040) and **LD-41P** (6134042) rail drills



Socket head cap screws

• 4 pcs for clamping cutter or adaptor into spindle shaft (6340160)

• 4 pcs for securing drilling template to the front plate (6900316)

• 4 pcs for securing heavy duty drilling template to the front plate (6900330)



ARE

Adaptor

For the external application of the coolant. Fits directly to the SR5000 coolant unit coupler



DPE Spacer for drill bits

For use with **APE** adaptor to activate the coolant when using spiral drill bits.



PP...

Guide bits for use with broach cutters

Allow the automatic control (opening and closing) of the flow of the cooling mixture during the drilling operation. They must be inserted in the rear of the cutter, before the cutter is located into the spindle.

- **PP1** (length 80 mm - Ø 7 mm) For use with short broach cutters CY Ø18 mm
- **PP2** (length 80 mm - Ø 8 mm) For use with short broach cutters CY Ø19 - 40 mm
- **PPL1** (length 100 mm - Ø 7 mm) For use with long broach cutters CY.L Ø17 mm
- **PPL2** (length 100 mm - Ø 8 mm) For use with long broach cutters CY.L Ø18 - 40 mm



VAL-P24

Plastic case

Plastic carrying case for rail drills. Accommodates the complete drill together with the clamping device and accessories.

SPECIFICATIONS

Dimensions mm	
length	754
width	458,5
height	484,5
weight kg	9,2



SR5000/CS-P24

Support

VAL-P24 support for SR5000



VAL-P24-CS

Wheeled plastic case

VAL-P24 with wheels and folding handle.

SPECIFICATIONS

Dimensions mm	
length	754
width	458,5
height	484,5
weight kg	9,2



VAL-LD

Metal case

Steel carrying case for rail drills. Accommodates the complete drill together with the **DBG-Y** clamp and the **VAL-MPA** tool case.

SPECIFICATIONS

Dimensions mm	
length	595
width	345
height	467



VAL-LD-L

Metal case

Steel carrying case for rail drills and **DBG-LF2**

SPECIFICATIONS

Dimensions mm	
length	595
width	345
height	467



VAL-MPA

Suitable for storage of drilling templates, cutters and accessories

SPECIFICATIONS

Dimensions mm	
length	390
width	355
height	52



DBG-LF2

Device for clamping the drill to the girder and conductor rails.



SK9038

Countersink

Conical flaring for unalloyed steels, with ergonomic handle in two component material.

- 90° head angle
- 6-edged head

SPECIFICATIONS

Dimensions mm	
length	148
∅ head	38
head length	36
weight g	128

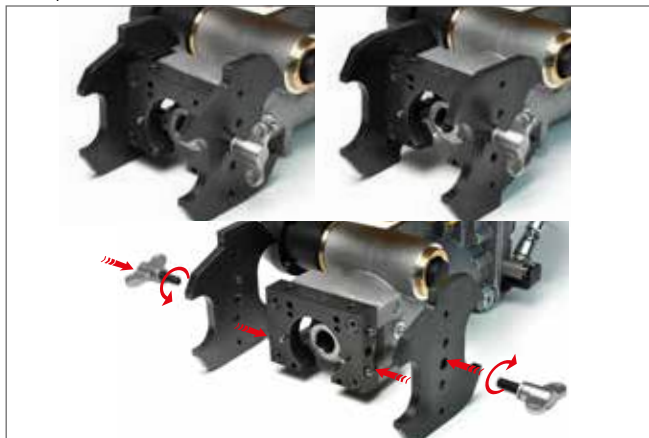


KPAF... "Double sided" templates



- KIT KPAF-Y1 (115RE/100ARA-B)
- KIT KPAF-Y2 (136RE/141AB)

Unlike standard templates for positioning rail drills, **KPAF** kits have a double profile that enables positioning of the drill on two different types of rail by simply rotating the inserts fixed on the sides of the front plate.



MPAF... Templates for positioning rail drills

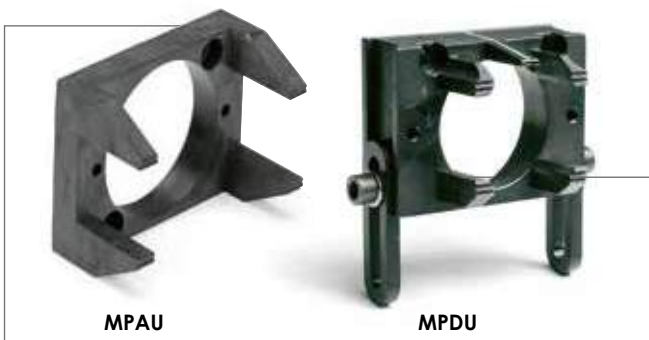


Enables the automatic positioning of the machine on the drilling axis of each specific rail type.

TEMPLATE TYPE	RAIL TYPE		
MPAF UIC60 (60E1)	60E1	UIC60	
MPAF UIC54 (54E1)	54E1	UIC54	
MPAF S54 (54E3)	54E3	S54	
MPAF U50 (50E6)	50E1	50E6	U50
MPAF 50E2T1	50E2T1	63T	
MPAF SJ50 (50E3)	50E3	SJ50	
MPAF 50UNI (49E1)	50E5	49E1	50UNI
MPAF 46UNI	46E1	46E4	46UNI
MPAF U33 (46E2)	46E2	U33	
MPAF 5D (45E2)	45E2	5D	
MPAF S41	40E1	41E1	S41
MPAF R65	R65		
MPAF 48SA	48SA		
MPAF 57SA	57SA		
MPAF RI60N	59R1/R2	60R1/R2	RI60N
MPAF NP4AM	62RI1	NP4AM	
MPAF 35G	55G1/G2	RI54	35G
MPAF EB50	EB50		
MPAF STR40	STR40		
MPAF VST36	VST36		

NOTE: This is a list for reference only.
Please contact Cembre for other types of rail.

MPAU - MPDU Universal templates



MPAU for other kinds of rails or for special applications (positioning not automatic).

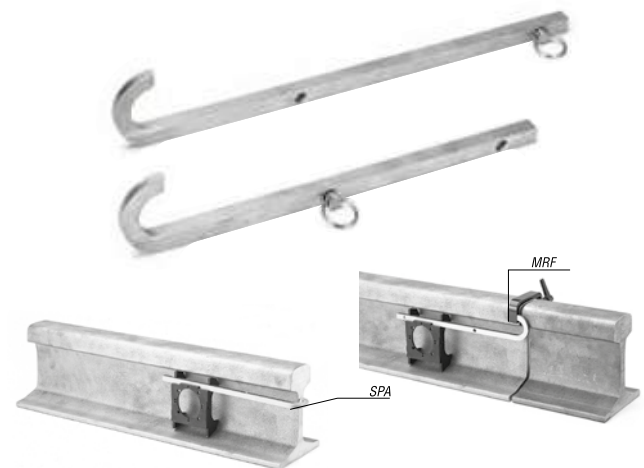
MPDU for other kinds of rails (adjustable positioning).

SPA/2-HSB

Suitable to adjust the drilling height to be used in combination with **MPAU** template.



Positioning connecting plates



To be located in conjunction with the **MPAF** positioning templates for a centre-to-centre distance, established in the Railway board standards.

MRF clamp

Applied as a reference to the head of rails, in conjunction with the positioning connecting plates.

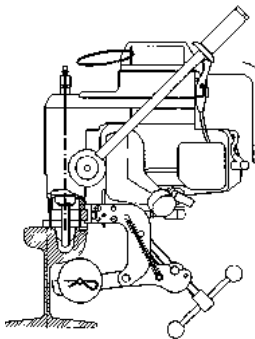


MPAS Vertical positioning template

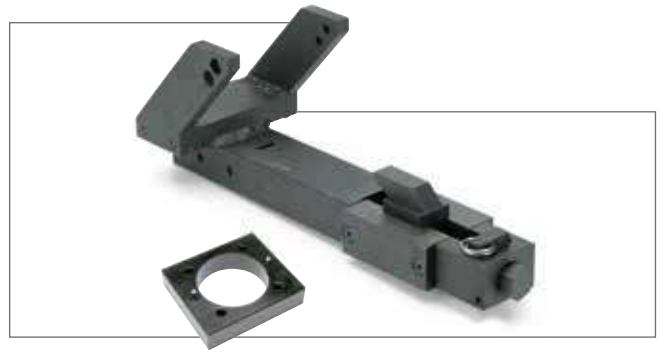


This template allows the correct vertical positioning to drill girder rails for water discharge

- MPAS-Ri60N** for rail Ri60N
- MPAS-35G-GP** for rail 35G and 35GP



DBSN* Under rail clamp



(FOR USE WITH NON RAIL POSSESSION)
For clamping of drilling machine to flange
Can remain in position while trains pass over
* Not for **LD-41P**



DBC Guard rail clamp



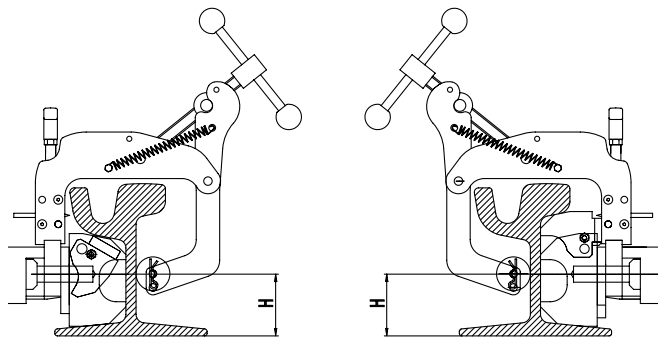
DBC GUARD RAIL CLAMP
For clamping of drilling machine to guard rail type U69 (UIC33)
To be used in combination with **MD1** template



DBG-LF2 for clamping the drill to girder rails



Use the **DBG-LF2** device in place of the **DBG-F2** supplied with the drilling machine, for positioning the machine on girder rails.



MRF-SR-SFA

Positioning jig



The **MRF-SR-SFA** positioning jig facilitates accurate drilling in rail of holes with predefined centres using Cembre drilling machines:

- 2 holes with centres of 145 mm (fig. 1, Pos. 1 and 2)
- 2 holes with centres of 270 mm (fig. 1, Pos. 1 and 3)
- 3 holes with centres of 148 mm (fig. 1, Pos. 4, 5 and 6)

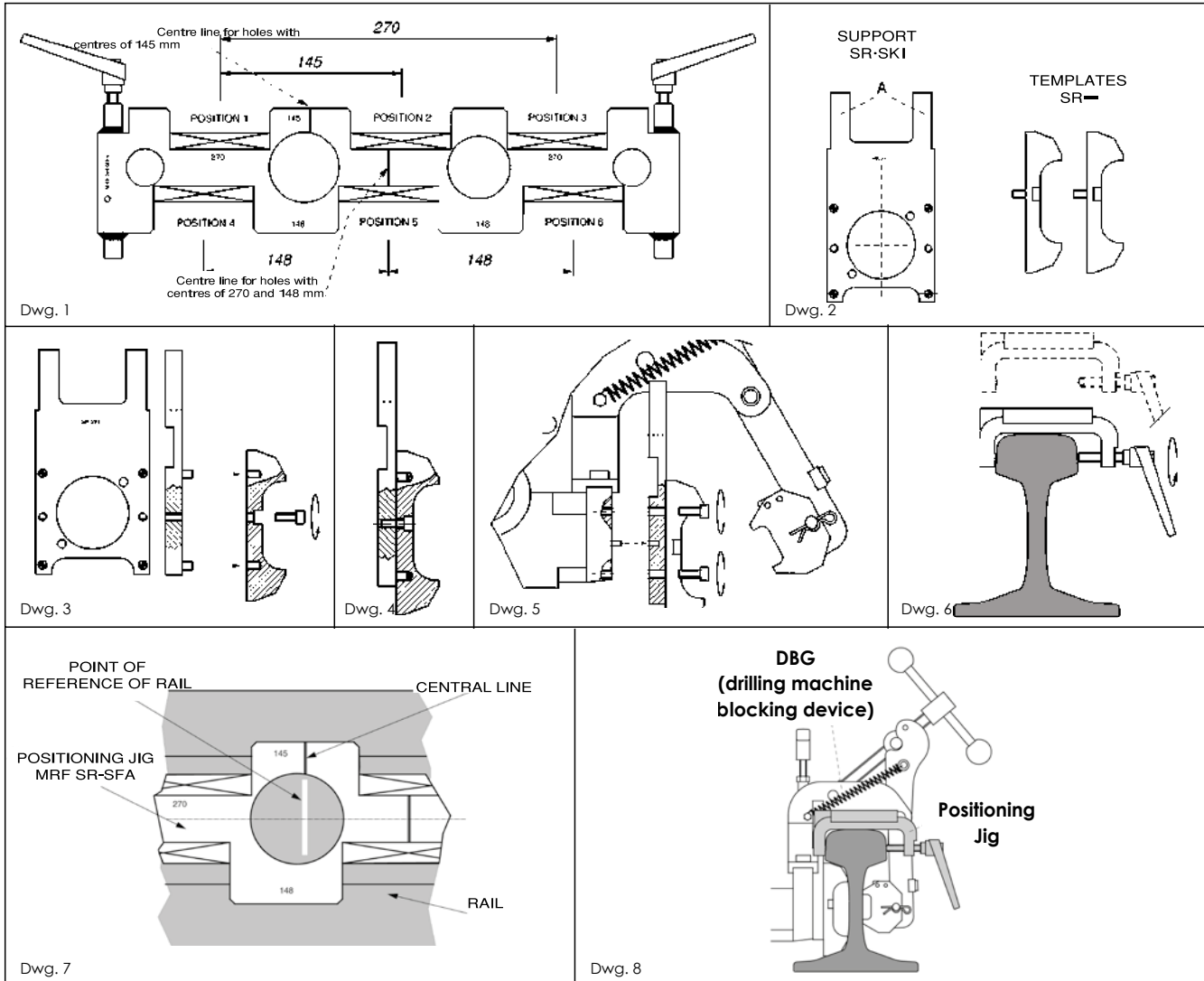
MRF-SR-SF

Positioning jig



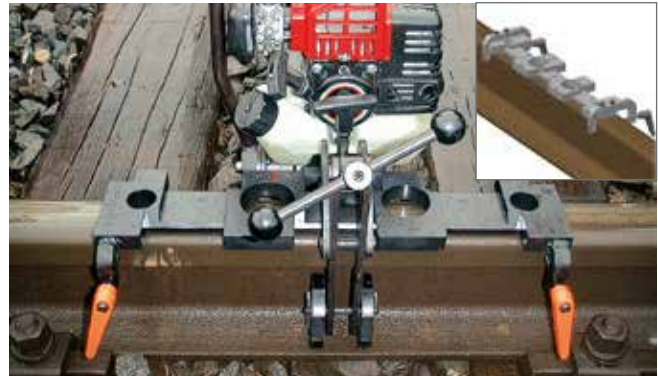
The **MRF-SR-SF** positioning jig is suitable for drilling the following hole centres in axle counter applications:

- 2 holes with centres of 5.7 mm;
- 2 holes with centres of 10.6 mm

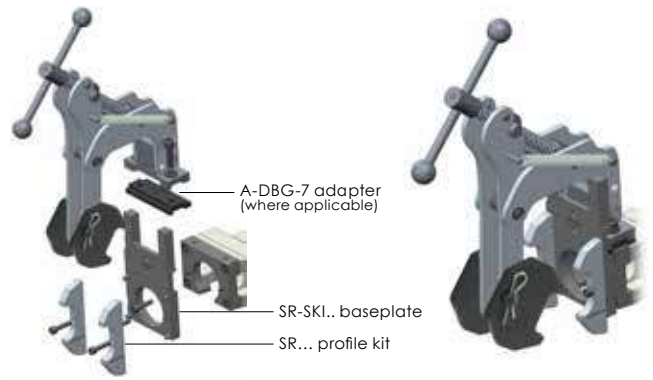


Mounting process

- Template **KIT SR-...** have to be suitable for the rail that have to be drilled (see table)
- Mount the two part of the template **KIT-SR...** on the support **SR-SKI** with the supplied screws M6 x 16 (Dwg 3 and 4). The correct position is obtained centering the area of coupling on the support.
- Mount the support on the drilling machine as a standard template. Take care to fit the centering pin on the support and block it with the screw M6 x 25 supplied with the drilling machine. (Dwg 5).
- The positioning jig **MRF-SR-SFA** have to be positioned on the top of the head of the rail and have to be blocked with the clamp (Dwg 6).
- If necessary, is possible to set the positioning on the line previously drawn on the head of the rail (Dwg 7).



Rail Type		Templates Kit Type	Drilling Height (mm)	Support Type
New	Old			
60E1	UIC60	SR-UIC60-68	68	SR-SKI
60E1	UIC60	SR-UIC60-74	74	SR-SKI
60E1	UIC60	SR-UIC60-81	81	SR-SKI
60E1	UIC60	SR-UIC60-85	85	SR-SKI
60E1	UIC60	SR-UIC60-85,5	85,5	SR-SKI
54E1	UIC54	SR-UIC54-71,5	71,5	SR-SKI
54E1	UIC54	SR-UIC54-72,5	72,5	SR-SKI
54E1	UIC54	SR-UIC54-74,5	74,5	SR-SKI
-	BS95RBH	SR-BS95RBH-58,5	58,5	SR-SKI-C
-	BS95RBH	SR-BS95RBH-65	65	SR-SKI-C
56E1	BS113A	SR-BS113A-65	65	SR-SKI
56E1	BS113A	SR-BS113A-72,25	72,25	SR-SKI



SR... templates Kit have to be used with the support plates SR-SKI or SR-SKI-C which must be ordered separately.

MRFT-SR-A

Positioning jig



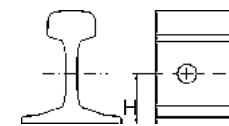
Positioning jig for axle counter gauge fixing holes, with hole centre distances of 148-148 mm. Rail foot clamping allows the jig to remain in place during train passage.

MPSR

Templates with different drilling heights



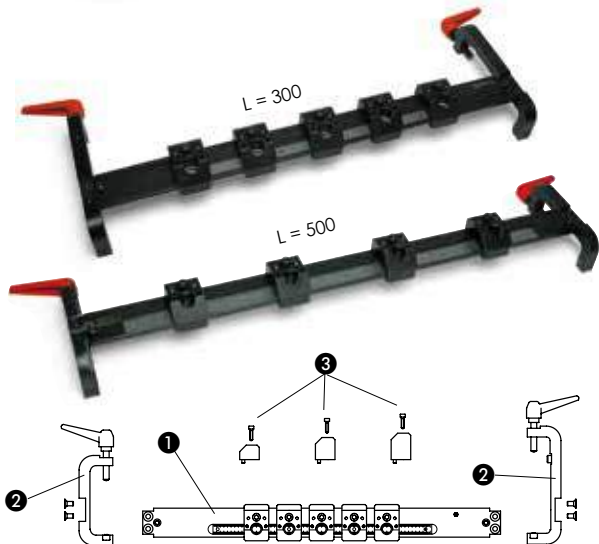
Rail Type	Template Type	Drilling Height (mm)
UIC60	MPSR UIC60-74	74
UIC60	MPSR UIC60-68	68
UIC60	MPSR UIC60-85	85
UIC54	MPSR UIC54-68	68
UIC54	MPSR UIC54-72	72
S54	MPSR S54-63	63
S54	MPSR S54-68	68
46UNI	MPSR 46UNI-64	64
50T	MPSR 50T-64	64
S49	MPSR S49-64	64
37JP	MPSR 37JP-53	53
50JP	MPSR 50JP-63	63
100LB	MPSR 100LB-RE-64	64
R65	MPSR R65-94	94



MPSR templates can be used with positioning jig MRFTSR-A or MRFU300 or MRFU500

MSPAF

Positioning jigs



Rail positioning gauges for different distances. The assembly of the various components of the system allows solving a large number of needs for drilling at different interaxe distances.

MSPAF

Templates for axle counter gauge location holes



TYPE	Description
MRF U300-S	① Positioner with graduated scale 300 mm
MRF U500-S	① Positioner with graduated scale 500 mm
CAV MRFU	② Couple of rail traditional clamps
CAVY MRFU	② Couple of clamps for girder or "Y" rails
BH 200-MRFU	③ Extension block h = 20 mm
BH 305-MRFU	③ Extension block h = 30,5 mm
BH 365-MRFU	③ Extension block h = 36,5 mm


TYPE	Description
MSPAF-ACG-UIC60	for rail UIC60 type (H=68mm) Ø 13mm @ 148mm centres, use over rail clamp DBG-F2
MSPAF-ACG-BS113A	for rail BS113A type (H=65mm) Ø 13mm @ 148mm centres, use over rail clamp DBG-F2
MSPAF-ACG-BS95R-BH	for rail BS95RBH type (H=65mm) Ø 13mm @ 148mm centres, use over rail clamp DBG-F2
MSPAF-ACG-BS80A	for rail BS80A type (H=56mm) Ø13mm @ 148mm centres, use over rail clamp DBG-F2
MSPAF-ACG-109LB	for 109lb FG rail (H=56mm) Ø13mm @ 148mm centres
MSPAF-ACG-98LB	for 98lb FG rail (H=60mm) Ø13mm @ 148mm centres

CY

Broach cutters

The new **CY** broach cutter family is made by Cembre and has been specifically designed for optimum use with Cembre rail drilling machines. **CY** type cutters are suitable for drilling Steel rail quality grades 700-900-1100 (UIC 860.0). Fitted with a Quick push/turn shank, the **CY** family has an original cutting geometry and an additional coating of Titanium Nitride (TiN) with high hardness and low friction to improve both the cut surface finish and corrosion resistance, while staying sharper for longer. With these characteristics, the performance of Cembre **CY** broach cutters easily surpasses that of the previous A and A..L types, by providing:

- More holes per single broach cutter
- Drilling time definitively lower
- Better cut surface finish

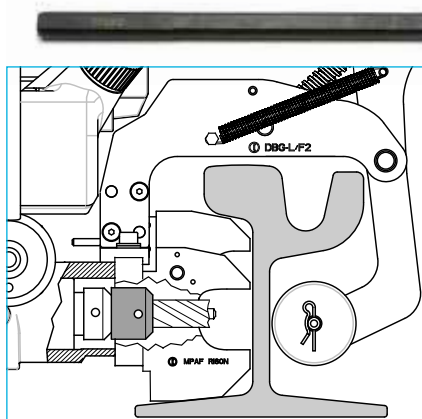
	SHORT RANGE		GUIDE BITS	LONG RANGE		GUIDE BITS
	Ø mm	Type	Type	Ø mm	Type	Type
	13	CY130	PP1	14	CY140L	PPL1
	13,5	CY135				
	16	CY160				
	17	CY170				
	18	CY180				
	19	CY190				
	20	CY200				
	21	CY210				
	22	CY220				
	23	CY230				
	24	CY240	PP2	24	CY240L	PPL2
	25	CY250				
	26	CY260				
	27	CY270				
	28	CY280				
	29	CY290				
	30	CY300				
	32	CY320				
	33	CY330				

Max drilling thickness 25 mm Max drilling thickness 50 mm

EXTENSION PFA

Long range broach cutters type **CY...L** are required when **MPAFRI 60N**, **MPAFI UNI** & **MPAFNP4AM** templates are used.

Alternatively, it is possible to use short range type **CY...** broach cutters and type **PE...** spiral bits with the following extensions:



EXTENSION PFA1 + PILOT BIT PPDF2

For type **CY...** short range broach cutters



EXTENSION PFA2

For type **PE...** spiral bits



PE



Spiral bits

Using these bits guarantees optimum performance during the drilling operation. The semi-automatic lubrocooling system, reduces friction and eliminates heat build up during the drilling operation. As a guide, under standard conditions, a spiral bit can drill 70-100 holes, depending on the hardness of the rail, before re-sharpening. Between 5 and 10 re-sharpening operations are possible.

Ø mm	Type	Adapter	Spacer	Model
7	PE70	APED70	without DPE	
8	PE80	APED80		
9	PE90	APED90		
9,5	PE95	APED95		
10	PE100	APED100		
12	PE120	APED120		
13	PE130	APEDW130		
13,5	PE135	APEDW 135/165		
14	PE140			
16	PE160			
17	PE170	without adapter	DPE	
18	PE180			
19	PE190			
21	PE210			
22	PE220			

HIGH QUALITY SPIRAL BITS

Spiral bits from PE...AR series are characterized by Avyac sharpening and TiAlN coating that together assure a quicker drilling due lower friction during cutting and longer working life of the bit thanks to the higher hardness of the surface.

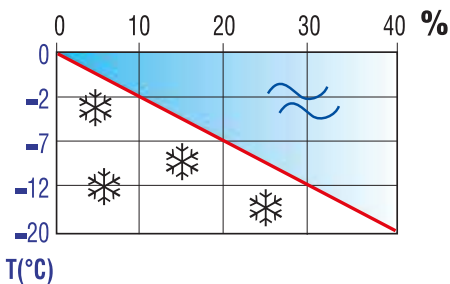
Ø mm	Type	Adapter	Spacer	Model
13	PE130AR	APEDW130	without DPE	
13,5	PE135AR	APEDW135/165		
17	PE170AR	without adapter	DPE	
19	PE190AR			
21	PE210AR			
24	PE240AR			
27,5	PE275AR			

ADDITIVE-V11

Additive (former LR3)

ANTIFREEZE concentrate 3 litres.

Added to the lubro cooling mixture with the right percentage will maintain the lubrocooling mixture fluid (see table) in negative temperature conditions.



VASCO-5000-SP

Lubrocooler (former LR2)

LUBROCOOLER concentrate 3 litres.

This biodegradable product of vegetable origin, to be watered down in the percentage 95% water, 5% oil, will provide a white colour mixture very effective for drilling operations with no heating of the rail or the drilling machine.



MSC

Swarf collector

For collecting metallic swarf following drilling operations.



A new concept in Rail Disc Saws by combining a powerful and robust Saw with the worlds first Automatic Support Arm which, during the cutting phase, allows the operator to be in control but away from the machine and therefore subject to:

- ZERO VIBRATION**
- ZERO PHYSICAL EFFORT**
- ZERO HARMFUL DUST**
- ZERO SPARKS**
- ZERO EXHAUST FUMES**
- MINIMUM ACOUSTIC NOISE**

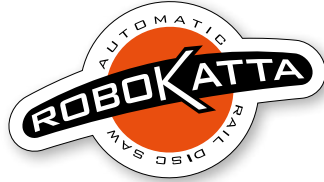
Designed for precise cutting, **Robokatta®** Automatic Rail Disc Saw has the perfectly perpendicular action essential for making the consistently accurate right-angle cuts in both axes that are fundamental to the reliability of isolated joints in automatic signalling systems.

For traditional Manual operation, the alternative two-joint Support Arm combines simplicity with precision and minimizes the working weight of the Saw for the operator.

Design features

In both manual and automatic modes, **Robokatta®** offers tremendous advantages over other rail saws including:

- "Expert operator" cutting times and accuracy obtained due to:
 - Rigorously engineered support arms
 - Patented self-adjusting belt tension system
- Speed control to optimize disc performance, minimizing consumption and consequently delivering the greatest number of cuts
- Elastic system for vibration damping
- One-piece disc support arm and hub coupled to the fixing arm provides maximum rigidity and cutting precision
- Metallic disc protection casing with angular regulation device is not affected by vibration, so assures operator security and optimum visibility
- Transportation handle designed to assist motor protection
- Automatic switch off at end of cut
- Automatic alarm for air filter cleaning
- Switch off the machine or reset the air filter cleaning alarm via the Auxiliary Switching Device supplied.



"Expert operator" cutting times and accuracy in automatic and manual modes

ROBOKATTA® RDS-14P

Rail Saw



Husqvarna 2-stroke engine with electronic start and 5 stage air filter; 7.9 HP (5.8 kW) at 9750 rpm
Pulley transmission with centrifugal clutch and trapezoidal tooth belt

SPECIFICATIONS

Tank capacity:	1,25 l
Cutting disc diameter:	350/400 mm (14"/16")
Disc support shaft diameter:	25,4 mm
Dimensions mm	
length	798 mm
width	285 mm
height	440 mm
Weight	
without support arm	19 kg
weight of manual support arm	8,5 kg
weight of automatic support arm	19,8 kg



Auxiliary switching device

RDS-14P-AA

For vignole rails



It is suitable to cut the following rails:

Vignole Rail types	Vignole Rail types
40E1 (S41-R14)	50E4 (UIC50)
41E1 (S41-R10)	50E6 (U50)
45E2 (DSB45, DSBV)	R50
46E2 (U33)	54E3 (S54)
46E3 (NP46)	54E1 (UIC54, SBBIII)
49E3 (S49B)	60E1 (UIC60, SBBVI)
50E2 (EB50T)	R65
50E3 (BV50)	VST36

In case of other Vignole rails not included in the list, contact Cembre.

RDS-14P-AA Y1

For girder rails



It is suitable to cut the following rails:

Girder Rail types	Girder Rail types
52R1 (Ri lr)	60R2 (Ri 60-R13; Ri 60N)
53R1 (Ri 53-R13; Ri 53)	61C1 (Ri li)
56R1 (Ri lc)	62R1 (NP4aM)
57R1 (Ph 37)	62R2 (NP4aS)
59R2 (Ri 59-R13; Ri 59N)	67R1 (Ph 37a)
60R1 (Ri 60-R10; Ri 60)	105C1 (D180/105)

In case of other girder rails not included in the list, contact Cembre.

If already in possession of Robokatta® for Vignole rails and need to work also on girder rails is possible to purchase: AAY1-RDS and KIT KY1-RDS below.

AA-RDS

Automatic support arm

- Powered by the rail saw engine to simulate the movement of a skilled operator during the cutting phase
- Original clamp configuration for better and safer coupling to the rail being cut
- Exact cutting position indicator integrated into the clamp
- Ability to invert the rail saw easily and quickly to continue cutting on the other side of the rail, without relocating the clamp and support arm
- Arm joint supported by shielded bearings & assembled with no end float to ensure precision when cutting from both sides of the rail
- May be blocked in "Hold" position to simplify rail saw location and start-up operations
- Can be switched to manual mode.



AAY1-RDS Automatic support arm for girder rails



KIT KY1-RDS

Clamp for girder rails



RDS-20P-SA

Rail saw + Manual support arm

RDS-20P-SA consists of a rail disc saw RDS-20P and support arm SA-RDS.

Technical characteristics:

- Husqvarna 2-stroke engine with electronic start and 5 stage air filter; 7.9 HP (5.8 kW) at 9300 ±150 rpm
- Pulley transmission with centrifugal clutch and trapezoidal tooth belt

SA-RDS manual support arm

Support arm for using ROBOKATTA® in manual mode only.

SPECIFICATIONS

Tank capacity:	1,25 l
Cutting disc diameter:	350-400mm(14"/16")
Disc support shaft diameter:	25,4mm

The machine can work with disc support shaft diameter of 1 inch applying the Disc Centering Adapter already included in the kit of standard accessories provided.

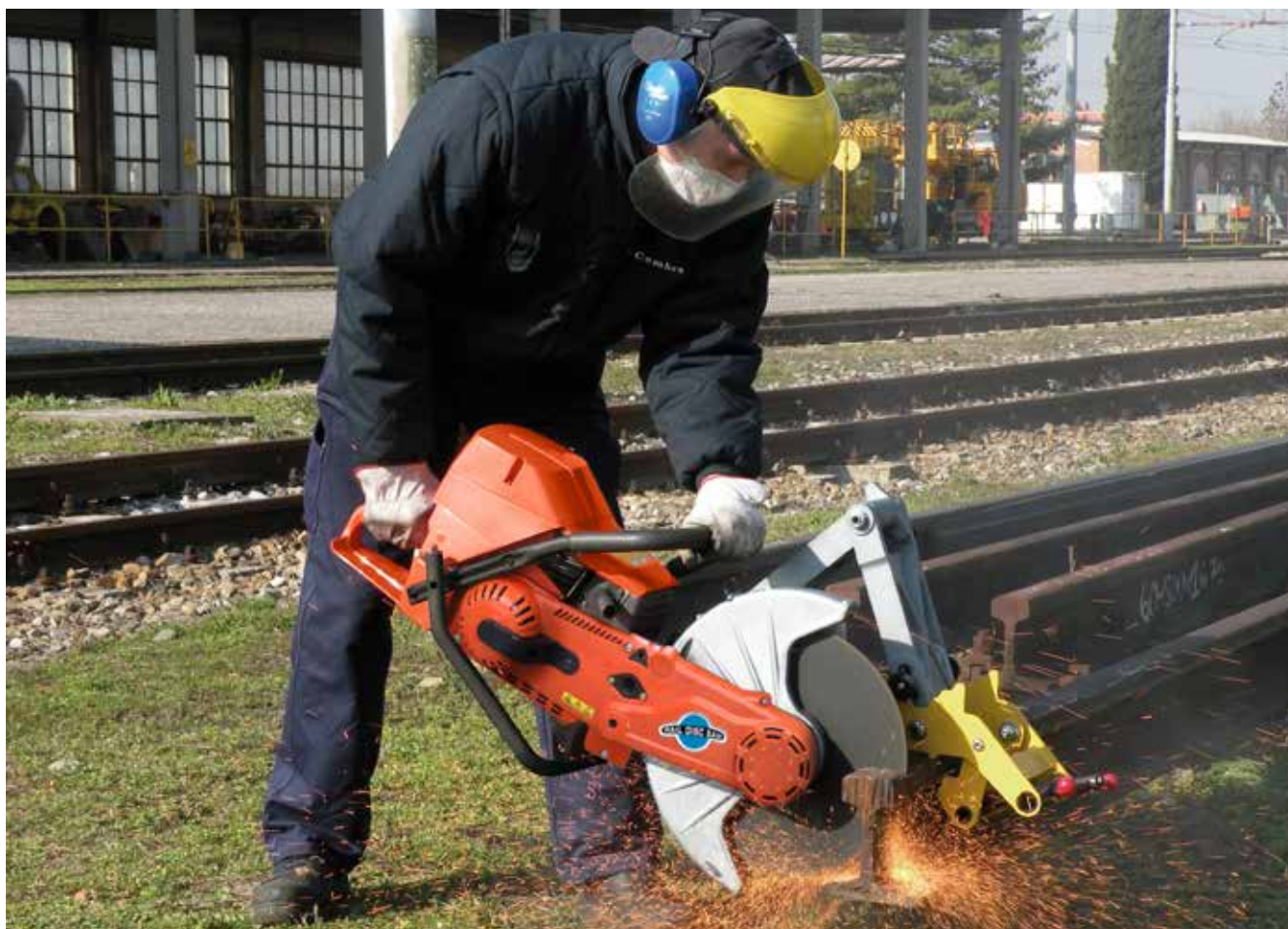
Dimensions mm

length	783
width	280
height	448

Weight

without support arm	19 kg
weight of manual support arm	8,5 kg

CONFORMING TO
EN13977



VAL-RDS

Case for storage

**FEATURES**

case for storage of the **RDS-14P** rail saw.

To facilitate transport and protect the Rail Saw, support arms and accessories from accidental knocks and dirt, Cembre recommends the use of appropriate containers, robust wooden crate with convenient spaces.

SPECIFICATIONS

Dimensions mm	
length	1000
width	390
height	550
weight	
	12 kg

VAL-AA-RDS

Case for storage

**FEATURES**

case for storage of the **AA-RDS** automatic support arm.

To facilitate transport and protect the Rail Saw, support arms and accessories from accidental knocks and dirt, Cembre recommends the use of appropriate containers, robust wooden crate with convenient spaces.

SPECIFICATIONS

Dimensions mm	
length	910
width	434
height	428
weight	
	7,2 kg

C-REX

Cutting discs

**FEATURES**

For **ROBOKATTA®** best performance use Cembre **C-REX** cutting discs. Fiberglass reinforced abrasive disc specifically designed for cutting all types of rail in railway applications.

Consult us for **ROBOKATTA®** version equipped with 22.2 mm (7/8") diameter disc support shaft

ROBOKATTA	Ø Disc	Type
25,4 mm (1")	335 mm (14")	CRDL4381
	406 mm (16")	CRDL6401
22,2 mm (7/8")	335 mm (14")	CRDL4387
	406 mm (16")	CRDL6407

SSR1

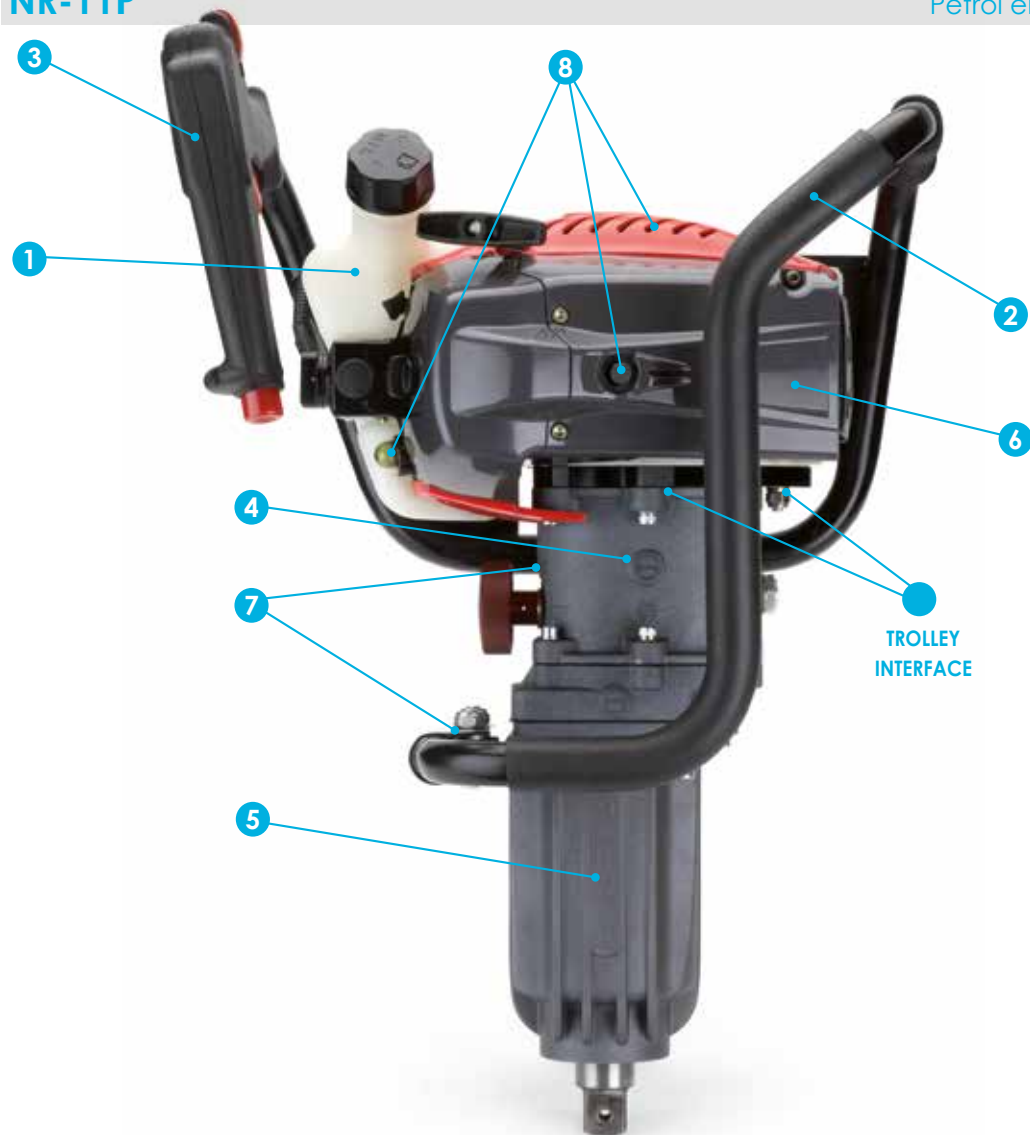
Stabilizer support

**FEATURES**

Stabilizer support for short rail lengths.

NR-11P

Petrol engine impact wrench



Forward/Reverse selector
Smooth change



Protective shield
To protect tank and engine from accidental shocks



Torque selector
With 5 positions

TROLLEY INTERFACE

1 Fuel Tank

This large tank has a 1,2 l capacity for longer working time between refills. The gripping surfaces on the cap make it easy to remove/replace and the facility to add fuel in both vertical and horizontal positions avoids accidental spillage.

2 Handlebar

Careful ergonomic design of the machine spreads the weight equally between left and right handles. The structure formed by the combination of the shaped handle bar and the protective shield minimize the risk of accidental mechanical shock to the fuel tank and engine.

3 Control handle

Control buttons are specifically located to reduce the effects of working in awkward positions, eg wrist and shoulder discomfort, thereby optimizing performance in both vertical and horizontal modes, while a Dead man device prevents accidental acceleration, for operator safety. The control handle assembly is clamped to the handlebar via a steel rod for enhanced robustness.

4 Gearbox

Brightened steel gears are immersed in a synthetic oil bath to prolong life and extend the range of permitted working temperatures. The gear change lever is adjacent to the accelerator control in order to avoid damage caused by changing gear while the engine is running. Smooth acceleration is provided by the centrifugal clutch.

5 Impact mechanism

The innovative patented impact unit develops a high torque and has a larger impact surface than any other nut runner, so to extend the life of this essential component. Specialist, high spec grease minimizes wear in this area and the special seal on the drive prevents the leakage of grease commonly seen on other impact wrenches.

6 Engine

With a greater impact surface, the **NR-11P** does not need higher rpm to develop 2500 Nm thus the engine is not continuously straining at maximum rpm, allowing maintenance intervals to be extended.

7 Vibration

The handlebar is mounted on 4 vibration absorbing dampers so to reduce hand-arm vibration felt by operators.

8 Easy-start

With its decompression button, primer and digital ignition coil, minimum time and effort are required to start **NR-11P**.

TROLLEY

Optional interface kits (page 42) enable the machine to be used in vertical and horizontal modes with the rail mounted **CS-EU** support trolley. Fitted with a braking device in accordance with EN19277, the trolley eliminates much of the effect of the weight of the machine and allows rapid movement between work areas.

NR-11P

Petrol engined impact wrench



HIGH TORQUE
2500 Nm

PATENTED

CONFORMING TO
EN13977



NR-11P is used for the assembly of steel structures such as bridges, building frames, rail tracks, ship building, heavy equipment maintenance, pipelines and industrial applications.

The protective handlebar structure facilitates a comfortable dorso-lumbar operating position without wrist injury.

A reduced mandrel axis to machine base dimension facilitates a more convenient horizontal position for working with track bolts, even when operating across sleepers.

Anti-vibration couplings reduce transmission of vibration to the operator.



Vertical use

SPECIFICATIONS

Engine	type	Two stroke, forced-air cooled, single cylinder
	displacement	55 cc
	fuel tank capacity	1,2 l
	fuel mixture ratio	Synthetic oil 1:50
	revolution (idle)	2800 rpm ± 200
	revolution (loaded, impact)	7000 rpm
	revolution (non loaded, max)	11500 rpm
Ignition	type	Digital
	spark plug type	RAX80 or equivalent
Carburettor	type	Diaphragm
Impact unit	square driver size	1"
	fastening torque range	Full Throttle: 1844 ft. lbs
Mandrel speed	No load:	1300 rpm
Dimensions mm	length	640
	width	431
	height	274
	Weight	Dry



Horizontal use

NR-13E

Electric impact wrench

The **NR-13E** is suitable for use with the **CS-EU** support trolley

Fitted with **PRCD device** (Portable Residual Current Device)

SPECIFICATIONS

Motor	type	single phase electric motor
	supply voltage	220 ÷ 230 V / 50 Hz
	power rating	3 kW
Impact unit	square driver size	25,4 mm (1")
	fastening torque range	Full Throttle: 1844 ft. lbs
Bolt diameter		up to 33 mm (1 1/4")
Dimensions mm	length	640
	width	431
	height	274
Weight		21 Kg

HIGH TORQUE
2500 Nm

PATENTED

CONFORMING TO
EN13977



ACCESSORIES FOR USE WITH CS-EU



[CS-EU page 50](#)

KCS-NR

Vertical use of NR...

Interface kit for vertical use with support trolley **CS-EU**.



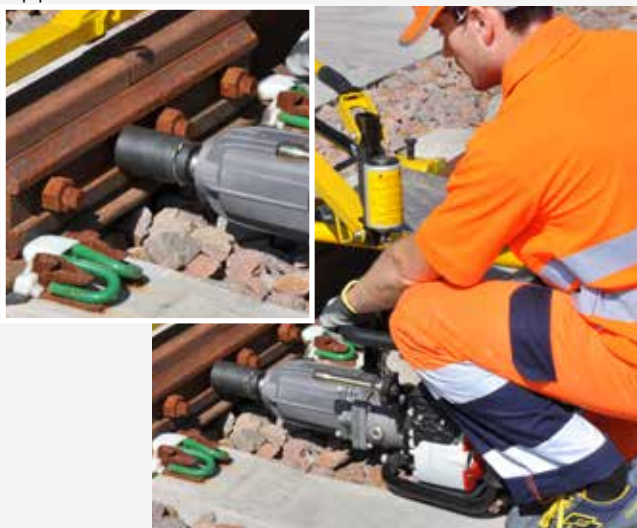
KOHR-NR

Horizontal use of NR...

Interface kit for horizontal use with support trolley **CS-EU**.



Application of **KOHR-NR** kit.



KEB-NR

For road crossings



Extension kit to be installed on the existing **KCS-NR** kit, suitable to raise the standard working level of the **NR-...**
Designed for road crossings applications.

SOCKETS

Standard and long impact sockets, extensions, swivelling shaft, adapters.

SQUARE SOCKETS

WL21X21	1" x 21 x 21 square socket
WL24X24	1" x 24 x 24 square socket
WL26X26	1" x 26 x 26 square socket

RECTANGULAR SOCKETS

W21X28	1" x 21 x 28 rectangular socket
---------------	---------------------------------

HEXAGONAL SOCKETS

W32	1" x 32 hexagonal socket
W36	1" x 36 hexagonal socket
WL38	1" x 38 long hexagonal socket
WL39	1" x 39 long hexagonal socket
WL 41	1" x 41 long hexagonal socket
WL 44	1" x 44 long hexagonal socket

EXTENSIONS

XT100	1" x 100 mm extension
--------------	-----------------------

JOINTS

SJ1"	1" swivel joint
-------------	-----------------

CLIP-NR Retaining circlip

Retaining circlip for fastening sockets to the mandrel having an external diameter range: 47 ÷ 57 mm
3 pieces supplied as standard.



CLIP-NR57 Retaining circlip

Retaining circlip for fastening sockets to the mandrel having an external diameter range: 57 ÷ 67 mm
1 piece supplied as standard.



TARPCOVER 027-NR

Cover

Protection cover manufactured in Polyethylene HDPE and UV resistant. Temperature range: -40°C to +70°C.



VAL-P20

Case for storage

Plastic box for storage of sockets and accessories.

SPECIFICATIONS

Dimensions mm	
length	447
width	228
height	104



VAL-NR

Case for storage

SPECIFICATIONS

Dimensions mm	
length	747
width	454
height	310
Weight kg	13,3





- 1 Needs no combustible fuel or mains power: promotes safe remote working
- 2 Zero Emissions: ideal for tunnel and underground works
- 3 Very low acoustic impact: allows night work in urban areas
- 4 Low HAV levels: helps safeguard operator's physical health



LED lighting



Rotation sense/error signaling lights



Rainproof cover with opening to change the battery

MAIN FEATURES

- 1 LED lighting
- 2 Display for diagnostic and maintenance
- 3 Operating handle
Handle will rotate through 90° for operator comfort.
- 4 Emergency lever
Emergency lever for the immediate release of the drill bit.
- 5 Shock absorbers
Shock absorbers fitted between the drive shaft and spindle, reduce the transmission of machine vibrations to the operator.
- 6 Carrying handle (see page 49)
Carrying handle; also used for locating the drilling machine into the CS-EU trolley.
- 7 Depth gauge
Depth Gauge; easy to operate using the graduated scale, for adjusting the depth of drilled hole.
- 8 MND spindle
MND spindle, for automatically securing drill bits, with a 14 mm diameter shank.
- 9 MND1 interchangeable spindle
MND1 interchangeable spindle: Available as an optional accessory. For automatically securing drill bits, with a 16 mm diameter shank.
- 10 Safety guard
Safety guard: providing effective, total protection of the drill bit (325 mm). Spring loaded to guarantee the retraction of the drill bit from the sleeper on completion of the drilling operation, thereby minimising operator effort.
- 11 Guard nozzle
Interchangeable, Guard Nozzle TPM200-26, for locating into chairs and base plates, as commonly used on existing tracks.
- 12 Rainproof
Rainproof version available

SUPPLIED ACCESSORIES FOR BATTERY DRILLS

Battery drills are supplied with these Standard Accessories:

- Qty 2 Battery CB 3662L, 36 V - 6,2 Ah Li-Ion with LED residual charge indicator
- Battery charger ASC ULTRA EU 27265000, (Input 220-240 V / 50-60 Hz; Output 14,4-36 V DC / 6,5 A max.)
- Canvas bag with compartments for two batteries and the battery charger



SD-19BR

Battery drilling machine



NEW

CONFORMING TO
EN13977

FEATURES

- Drilling range: up to 20 mm diameter, with the Guard nozzle supplied as standard. Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle **TPM-....N** available as an optional accessory.
- Max. drilling thickness: 200 mm
- Speed of the shaft without load: 700 rpm
- Battery: 36V-6.2 Ah Li-Ion with LED residual charge indicator

SPECIFICATIONS

Dimensions mm

length	412
width	320
height	935

weight

16.8 Kg



SD-19BR-RP

Battery rainproof drilling machine



IP44
EN60529

NEW

CONFORMING TO
EN13977

FEATURES

- Drilling range: up to 20 mm diameter, with the Guard nozzle supplied as standard. Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle **TPM-....N** available as an optional accessory.
- Max. drilling thickness: 200 mm
- Degree of Protection (Engine & Battery): **IP44 (EN 60529)**
- Speed of the shaft without load: 700 rpm
- Battery: 36V-6.2 Ah Li-Ion with LED residual charge indicator

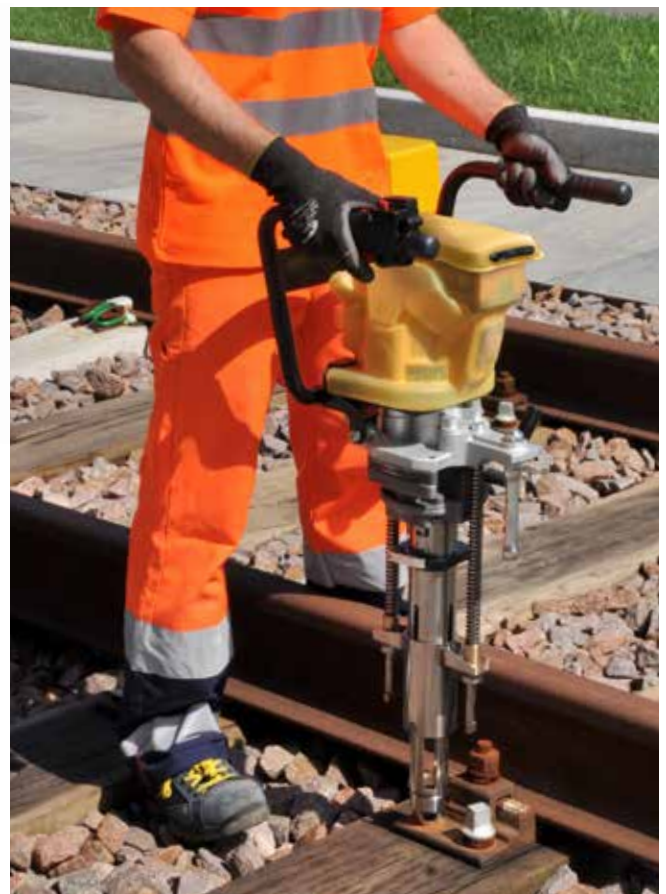
SPECIFICATIONS

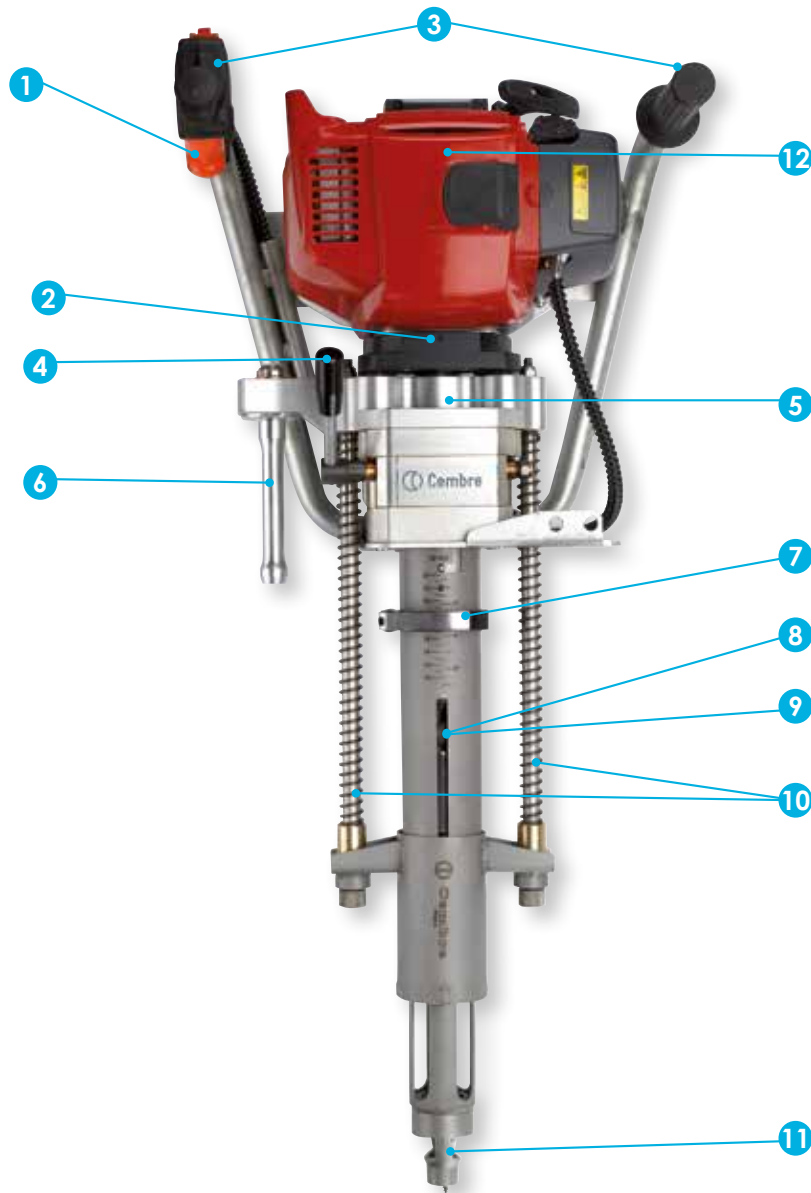
Dimensions mm

length	412
width	320
height	935

weight

17.4 Kg





MAIN FEATURES

1 Accelerator

Accelerator lever fitted with safety switch to prevent accidental operation.

2 Centrifugal clutch

Fitted with a centrifugal clutch; with the engine running at 'tick over' speed the drill bit is stationary. The accelerator controls the rotation of the drill bit.

3 Operating handle

Handle will rotate through 90° for operator comfort.

4 Emergency lever

Emergency lever for the immediate release of the drill bit.

5 Shock absorbers

Shock absorbers fitted between the drive shaft and spindle, reduce the transmission of machine vibrations to the operator.

6 Carrying handle (see page 49)

Carrying handle; also used for locating the drilling machine into the CS-EU trolley.

7 Depth gauge

Depth Gauge; easy to operate using the graduated scale, for adjusting the depth of drilled hole.

8 MND spindle

MND spindle, for automatically securing drill bits, with a 14 mm diameter shank.

9 MND1 interchangeable spindle

MND1 interchangeable spindle: Available as an optional accessory. For automatically securing drill bits, with a 16 mm diameter shank.

10 Safety guard

Safety guard: providing effective, total protection of the drill bit (325 mm). Spring loaded to guarantee the retraction of the drill bit from the sleeper on completion of the drilling operation, thereby minimising operator effort.

11 Guard nozzle

Interchangeable, Guard Nozzle **TPM200-26**, for locating into chairs and base plates, as commonly used on existing tracks.

12 Engine

New engine conforming to "phase 2" of 97/68/CE, 2001/63/CE and 2002/88/CE directives.

SD-9P-ECO

Two cycles



ECO ENGINE
CONFORMING TO EN13977

PATENTED

FEATURES

- Drilling range: 20 mm diameter with the standard Guard nozzle. Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle TPM.... available as an optional accessory.
- Max. drilling thickness: 200 mm

SPECIFICATIONS

Displacement	45.4 cc
Power	1.4 kW
Fuel	2% mixture (1:50)
Starting	Pull chord with automatic rewind
Dimensions mm	
length	413,5
width	316
height	892
weight	19,1 kg



SD-15PR-ECO

Two cycles



ECO ENGINE
CONFORMING TO EN13977

PATENTED

FEATURES

- Drilling range: 20 mm diameter with the standard Guard nozzle.
- Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle TPM.... available as an optional accessory.
- Max. drilling thickness: 200 mm

SPECIFICATIONS

Displacement	53.2 cc
Power	2.7 HP/ 2.0 kW
Fuel	2% mixture (1:50)
Starting	Rope pull with automatic rewind
Forward/Reverse selector	Reverse action enables easy withdrawal of auger
Dimensions mm	
length	413,5
width	316
height	900
weight	21,2 kg

SD-10E

Single phase electric motor



CONFORMING TO EN13977

PATENTED

FEATURES

- Drilling range: 20 mm diameter with the standard Guard nozzle. Drilling up to 25 mm diameter holes can be achieved by using the interchangeable Guard Nozzle TPM.... available as an optional accessory.
- Max. drilling thickness: 200 mm

SPECIFICATIONS

Supply voltage	220 / 230 V - 50 Hz
Power rating	2.7 HP/ 2.0 kW
Dimensions mm	
length	413,5
width	316
height	892
weight	18 kg

SD DRILLING MACHINES

ACCESSORIES FOR PORTABLE DRILLING MACHINES FOR WOODEN SLEEPERS

PV

Augers for Cembre sleeper drills



Ø (mm)	PV	TPM							
10	PV 100	TPM 100-18	TPM 170-24	TPM 190-26	TPM 190-24	TPM 200-26	TPM 220-26	TPM 250-31	TPM 280-34
13									
14	PV140								
16	PV160								
17	PV170								
18	PV180								
19 (3/4")	PV190								
20	PV200								
21	PV210								
22	PV220								
25	PV250								
28	PV280								

TPM... Guard nozzle

Guard Nozzle for the moveable guard, interchangeable with the standard nozzle.



TPM...N Guard nozzle

Guard Nozzle for battery drills. Interchangeable with the standard nozzle.



SPECIFICATIONS	Max. auger Ø (mm)	Hole plate Ø (mm)
TPM100-18	10	18
TPM170-24	17	24
TPM190-24	19	24
TPM190-26	19	26
TPM200-26	20	26
TPM200-26L*	20	26
TPM220-26	22	26
TPM250-31	25	31
TPM280-34	28	34

For TPM...N add "N" at the end of the type code

*Long type

VAL-P6

Plastic case for drill bits

Plastic case for storing the drill bits and standard accessories supplied with the machine. This case can be stored inside the drilling machine case.



SPECIFICATIONS

Dimensions mm

length	214
width	382

MND1

Spindle

Interchangeable spindle: Available as an optional accessory.

For automatically securing drill bits, with a 16 mm diameter shank.



TARPCOVER 026-SD

Protection cover



Protection cover manufactured in Polyethylene HDPE and UV resistant.

Temperature range: -40°C to +70°C.

VAL-SD

Steel case



Robust steel case for storing the drilling machine and VAL P6 accessory case.



Operator transporting **SD19-BR-RP** from the carrying handle



Operator using **SD19-BR** and **SD19-BR-RP** with **CS-EU** trolley (page 50)

CS-EU

Support trolley for NR and SD series

PATENTED **CONFORMING TO EN13977** **NEW**



Cembre presents **CS-EU**, the new support trolley designed for railway applications. The trolley is a development of the Cembre CS-SD now having enhanced features for greater flexibility for the user.

FEATURES

Suitable for **NR** impact wrenches (page 40) and **SD** Drilling Machines (page 44).

A counterbalanced support ... with 360° operating range. The force on the support arm can be adjusted for operator control and balance.

It can also be locked for convenience during transportation.

The support can be extended vertically increasing the height of the mounted machine enabling working with longer screw fastenings typically used in level crossing and bridges.

Having braked wheels and a balancing carriage, the trolley has been designed to incorporate (when required) a support base to carry material (see page 51). This is not supplied as standard with the **CS-EU**.



FLANGED WHEEL

Flanged wheel allowing the trolley to operate on level crossings.



BALANCING CARRIAGE

The **CS-EU** consists of: trolley body, cross arm and balancing carriage.

On the counterweight trolley there are two dedicated housings:

- Counterweights housing for **KLE** extensions
- Housing **NR** bushings / **PV** drill bits.

SPECIFICATIONS

Dimensions

length	1561 mm
minimum height	568 mm
maximum height	900 mm

weight

without counterweight carriage	18 Kg
of counterweight carriage	8,5 Kg
bar	3,5 Kg

KLE...-CS

Extensions for bridges



Extensions **KLE6-CS**, **KLE32-CS** and **KLE43-CS** allow the impact wrench or sleeper drilling machine to be used in areas further away from the rail-mounted trolley. Extensions must be used with **KPC-CS1** counterweight on balancing carriage to maintain stability and operator safety.

SPECIFICATIONS	KLE6-CS	KLE32-CS	KLE43-CS
extension	15 cm	32 cm	58,5 cm

These accessories can be ordered separately

**PSCS-EU**

Support base

**FEATURES**

Can be applied to the base of the support trolley with a quick coupling system and allows the transport of impact wrenches and sleeper drills up to a max. of 25 kg.

Support base only as accessory, not supplied with the **CS-EU** trolley



PSCS-EU transporting impact wrench **NR-11P**

KPC-CS1

Weights KIT



They are positioned on the counterweight carriage to balance the weight of drills or impact wrench mounted on the support trolley (we recommend the use of these when the extensions are mounted).

SUITABLE FOR NR11-P and SD...

The new trolley allows the transportation and use of all Cembre impact wrenches or sleeper drilling machines.



CS-EU with impact wrench **NR-11P**



CS-EU with **SD-9P-ECO**

POWERED by
HONDA™
CONFORMING TO
EN13977



PCM-2P for Pandrol E clips

Particularly suited to rail adjustment work, for instance on in-progress rail sections or track renewal, the PCM-2P machine is also generally applicable in maintenance operations.

Insertion

At the end of each insertion operation, an easily adjustable limit switch ensures clips are not over stressed.



Extraction

Removed clips are kept close by the machine, not dangerously ejected, ensuring a high level of operator safety.



GENERAL FEATURES

- The PCM-2P machine from Cembre is suitable for the insertion and extraction Pandrol E clips used with 75mm bases on standard European gauge sleepers (1435 mm).
- The unit is immediately ready to use requiring no assembly or disassembly of accessories.
- Particularly suited to rail adjustment work, for instance on in-progress rail sections or track renewal, the PCM-2P machine is also generally applicable in maintenance operations.
- Ballast on sleepers does not unduly affect the machine, as the clamps do not rest on them.
- The pump unit is the same as that used on Pandrol Fast clip machine, incorporating a sturdy and powerful 4-stroke engine, Honda or equivalent, with noise levels according to CARB-EPA standards.
- Does not interfere with rail circuits due to the three insulated wheels and is also equipped with an appropriate mechanical joint to allow running without interference on the rail to reach the working area.
- The self-braking system is quick & easy to connect and intervenes automatically when the operator releases the handle of the machine.



POWERED by
HONDA™

CONFORMING TO
EN13977

The Pandrol Fast clips machine from Cembre is suitable for the insertion and extraction of Pandrol Fast clips used with all 1435 mm gauge standard rails mounted on monoblock or biblock concrete sleepers.

Braking system

Pandrol Fast clips machine meets the requirements of EN13977.

This Pandrol Fast clips version is also equipped with a rapid and easy to use fine adjustment system allowing the Fast clip to be positioned in either the pre-assembled parked position, the fully inserted/removed position or the insulator change position.

Insertion



Extraction



GENERAL FEATURES

- The pump unit is the same as that used on the Pandrol E clip machine PCM-2P consequently owners need purchase only the CU-PCM2PFC/E braked clamp unit.
- Easy disassembly allowing operators to work safely on uneven ground.
- The unit is immediately ready to use requiring no assembly or disassembly of accessories.
- Rapid performance with a high degree of simplicity of use requiring only one operator.
- Simultaneous insertion or extraction of two clips by two independent clamps.
- Fast clips located on one side of the rail may be inserted or extracted when there are no clip on the opposite side.
- The pump unit is the same as that used on the E clip machine, incorporating a sturdy and powerful 4-stroke engine, Honda or equivalent, with noise levels according to CARB-EPA standards.
- Does not interfere with rail circuits due to the three insulated wheels and is also equipped with an appropriate mechanical joint to allow running without interference on the rail to reach the working area.
- Equipped with spot lights oriented to the working areas.
- The self-braking system is quick & easy to connect and intervenes automatically when the operator releases the handle of the machine.

GENERAL CHARACTERISTICS

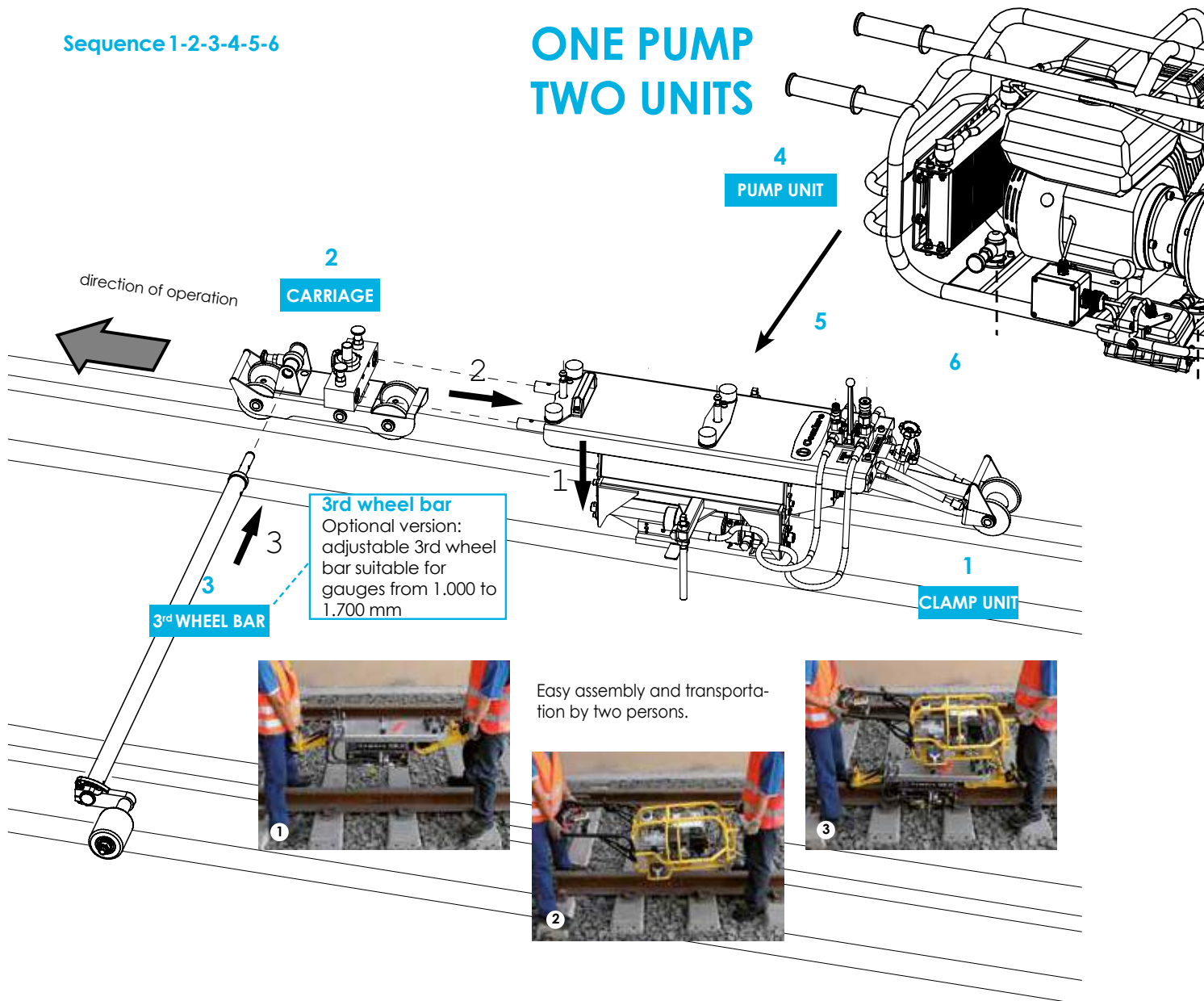
Application range	suitable for the insertion or extraction of PANDROL E clips on standard gauge sleepers (1435mm)	
Developed force (single clamp)	N	29.000
Dimensions (L x W x H)	mm	1400 x 850 x 1900
Resistance between rail and wheel	MΩ	≥ 1
Weight		
Complete machine	kg	113
Pump unit	kg	51
Clamp unit	kg	48
Carriage	kg	9
3 rd wheel bar	kg	5

Combustion engine		
Type	4-stroke, overhead valve, single cylinder	
Model	Honda GX200UT2-SMCR-OH	
Displacement	cm ³	196 cm ³
Power	kW	4,3 kW
Revs.	rpm	3600
Fuel	unleaded regular grade petrol	
Tank capacity	lt	3,1
Start	by pull chord with automatic rewind	
Hydraulic pump		
Max. pressure	MPa	42
Oil supply	5,6 liters/minute	
Speed	rpm	3600

ASSEMBLY SEQUENCE PCM-2P

Sequence 1-2-3-4-5-6

ONE PUMP TWO UNITS

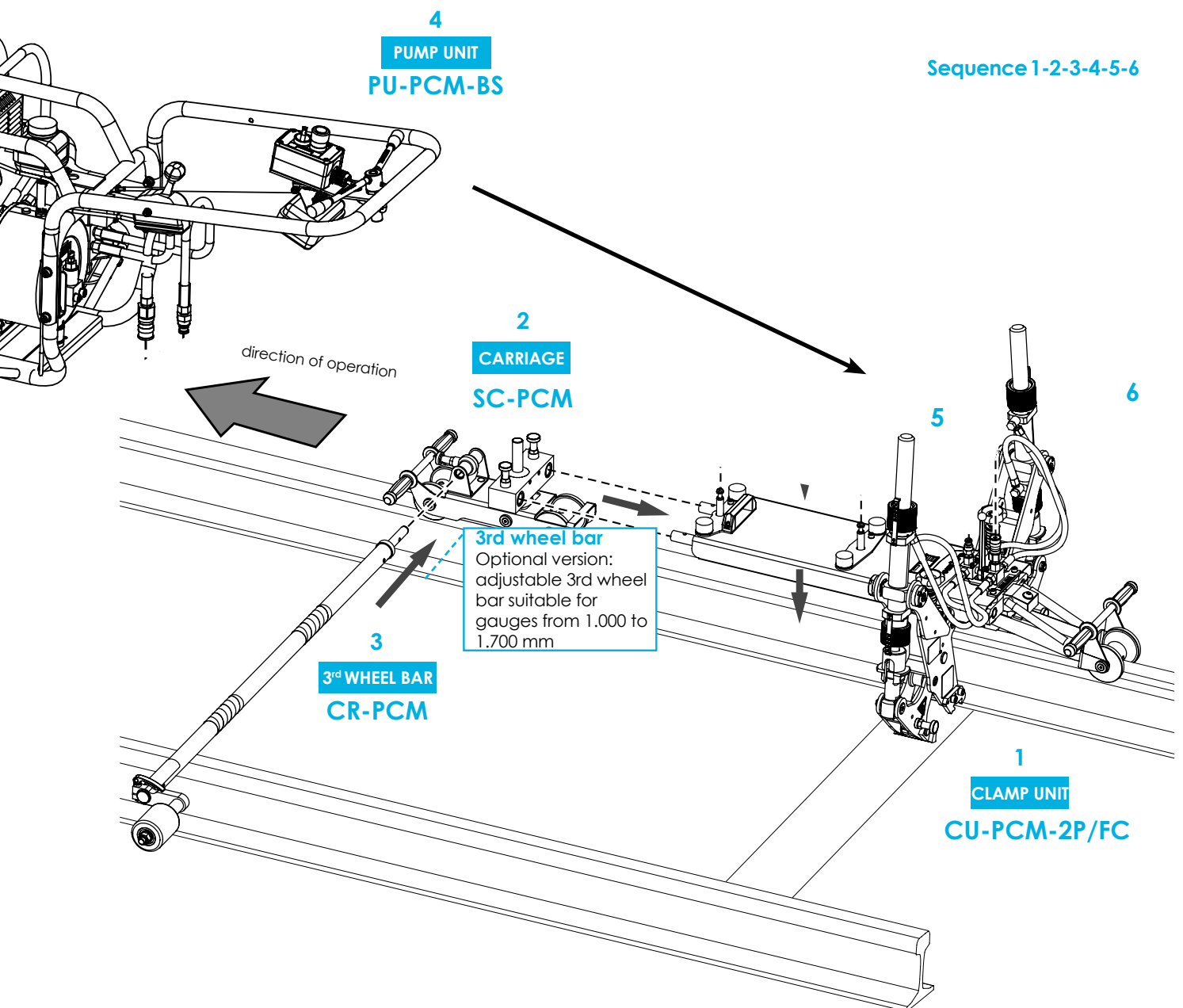


GENERAL CHARACTERISTICS

Application range	suitable for the insertion or extraction of PANDROL FAST CLIPS on standard gauge sleepers (1435mm)	
Developed force (single clamp)	N	29.000
Dimensions (L x W x H)	mm	1470 x 875 x 2000
Resistance between rail and wheel	MΩ	≥ 1
Weight		
Complete machine	kg	130
Pump unit	kg	51
Clamp unit	kg	65
Carriage	kg	9
3 rd wheel bar	kg	5

Combustion engine	
Type	4-stroke, overhead valve, single cylinder
Model	Honda GX200UT2-SMCR-OH
Displacement	cm ³ 196 cm ³
Power	kW 4,3 kW
Revs.	rpm 3600
Fuel	unleaded regular grade petrol
Tank capacity	lit 3,1
Start	by pull chord with automatic rewind
Hydraulic pump	
Max. pressure	MPa 42
Oil supply	5,6 liters/minute
Speed	rpm 3600

ASSEMBLY SEQUENCE PCM-2P/FC



Tarpcover 019-PCM

Cover

**FEATURES**

Robust UV resistant cover for Cembre machines for pandrol fastening.
Temperature range: -40°C to +70°C.

MPC6

Manometer

**FEATURES**

Manometer for checking the operation of the maximum pressure value in the hydraulic circuit.



OVERHEAD CATENARY SYSTEMS



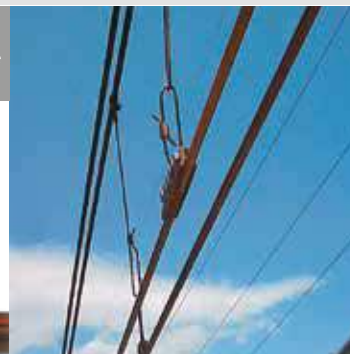
FTGW

The joint allows connection between new or new and worn contact wires without any tapering operation, assuring a uniform and continuous sliding area of the pantograph; the use of these joints also reduces intervention times to a minimum. In addition to the laboratory tests, on line tests have shown that the joint operates satisfactorily on 180 km/h lines and on lower speed lines but with strong current absorption (gradients).



Hydraulic presshead

PATENT PENDING



Connecting joint type	Torque ratio Nm	Grooved contact wire		Reference standard
		Section (sqmm)	Ø (mm)	
FTGW100	65	100	12,0	EN 50149 (Type AC-120 or Cu and CuAg 0,1)
FTGW120		120	12,9	
FTGW150		150	14,5	

The jointing process can be improved and made quicker by the perpendicular cutting of the contact wire ends to be joined using the appropriate tool:

Contact wire cut with a traditional cutter



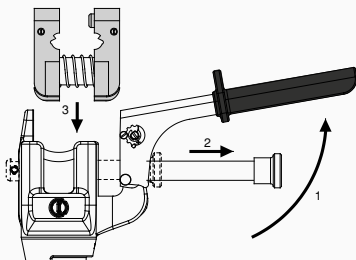
Contact wire cut with the Cembre RH-TFC hydraulic head



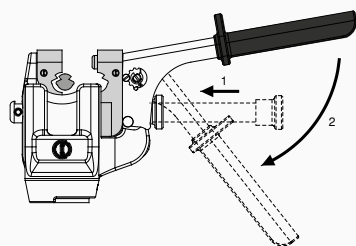
TFC TOOLS

Instructions for use

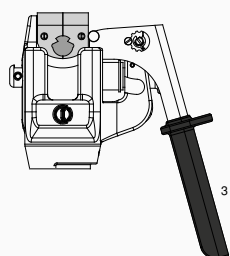
Insert the die set into the head.



Position the conductor inside the die set so that the blade lines up with the desired cutting point; close the die set by moving the locking handle towards the tool body, until automatically "locked" in position and securely clamping the wire/conductor.



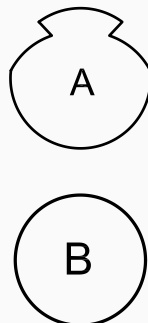
Operate the pump to advance the blade to the conductor; the blade progressively advances until the conductor is completely cut in a clean and precise manner without deforming the conductor itself.



MFC-...

Cutting dies for TFC tools

A wide range of dies is available to cut most profiled contact wires or stranded conductors.



MFC cutting die sets available		
Contact Wire Type	Fig	Cutting Dies
AC80-EN50149	A	MFC-AC80
AC100-EN50149	A	MFC-AC100
AC107-EN50149	A	MFC-AC107
AC120-EN50149	A	MFC-AC120
BC107-EN50149	A	MFC-BC107
BC120-EN50149	A	MFC-BC120
BC150-EN50149	A	MFC-BC150
BF100-EN50149	A	MFC-BF100
BF107-EN50149	A	MFC-BF107
BF120-EN50149	A	MFC-BF120
BF150-EN50149	A	MFC-BF150
137-BS23	A	MFC-137BS
161-BS23	A	MFC-161BS
193-BS23	A	MFC-193BS
FD100-OB	A	MFC-FD100
FD120-OB	A	MFC-FD120
100 sqmm GOST R 55647	A	MFC-100RUS
Cu/Steel conductor	B	MFC-D7.5-S
Cu or Al Round rod Ø 10.8	B	MFC-D10.8
Cu or Al Round rod Ø 14.5	B	MFC-D14.5
Cu or Al Round rod Ø 16.1	B	MFC-D16.1

RH-TFC

Hydraulic cutting head

Hydraulic cutting head for cutting profiled contact wires and Copper and Aluminium wires. Interchangeables dies cut perpendicularly and without deformation to optimise joint installation. The use of this head simplifies the cutting operation and reduces the time needed to prepare the joint.
Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a max working pressure of 700 bar. Suitable for cutting profiled contact wires on electrified traction systems.



SPECIFICATIONS		STORAGE	
Max operating pressure bar	600-700	Type	VALP15
Dimensions mm		Dimensions mm L x W	315 x 300
length	196	Weight kg	0,93
width (locking handle closed)	159	Supplied with the tool	✓
width (locking handle open)	257	Purchase separately	-
Weight kg	3,1		

* Suitable for storage 4 sets of dies

HT-TFC

Hydraulic cutting tool

This two speed lightweight and compact, hydraulic tool is ideal for cutting profiled contact wires on electrified traction systems. Having the benefit of spring loaded handles, the dies can be advanced using only one hand. For ease of operation and comfort of the operator, the tool head can be rotated through 180 degrees. The built-in safety valve will by-pass the oil supply when the maximum pressure is reached, while the pressure release system can easily be operated at any stage of the compression.



SPECIFICATIONS		STORAGE	
Dimensions mm		Type	VALP17
length	373	Dimensions mm L x W	470 x 384 x 110
width (locking handle closed)	159	Weight kg	2
width (locking handle open)	257	Supplied with the tool	✓
Weight kg	3,6	Purchase separately	-

* Suitable for storage 4 sets of dies

B500-TFC

18.0V Battery hydraulic cutting tool

The **B500-TFC** is a cordless tool that can be operated with one hand.

Suitable for cutting profiled contact wires, on electrified traction systems.

- Balanced tool for greater control
- Head rotates 180° for ease of operation in confined spaces.
- Fitted with a maximum pressure valve.
- Automatic return of dies after completion of the cut.
- Automatic return can be stopped at any time to ease positioning.
- Extremely quiet, minimal vibration.
- Durable moulded body offering high resistance to wear and damage in all operating conditions.
- New Li-Ion 18V 5.2 Ah 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 AC charger (220-240V) included.
- Operating temperature: -15 to +50°C



SPECIFICATIONS

SPECIFICATIONS	
Dimensions mm	
length	298
height	382
width	93
Weight kg	5

STORAGE

STORAGE	
Type	VAL-TFC
Dimensions mm L x W	558 x 460 x 132
Weight kg	3,5
Supplied with the tool	✓
Purchase separately	-

* Suitable for storage 4 sets of dies

AD-GW

Profiled contact wire alignment device

This device is designed to facilitate accurate, repeatable and secure operations when aligning two profiled contact wires during the installation of connecting joints.

Included with **AD-GW** is the **HC-GW** device designed to simplify radial and lateral adjustment of the contact wire to ensure rapid processing.

AD-GW is equipped with hooks for easy attachment to self-gripping clamps and a Tirfor type mechanical ratchet block commonly used for tensioning contact wire in jointing operations.



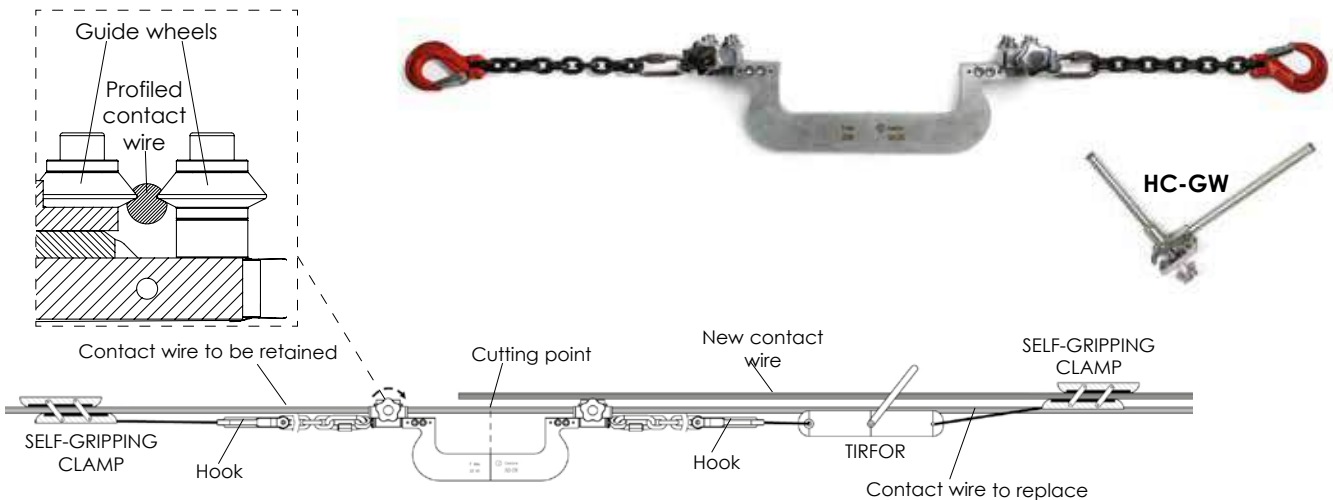
Installation procedure



AD-GWL

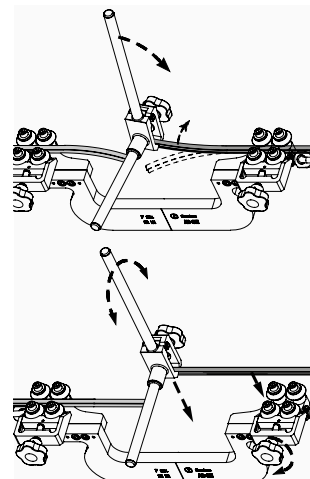
Profiled contact wire alignment device

Suitable to install long type contact wire joints having a maximum length of 375 mm. The maximum tension weight admitted is 22 kN.



HC-GW

Adjusting device



Using the **HC-GW** adjusting device, align the grooves of the new contact wire into the profile of the guide wheels then tighten the **AD-GW** knob (on the Tirfor side).

If necessary, use the adjusting device to correct the bend of the ends of both contact wires.

MSGW

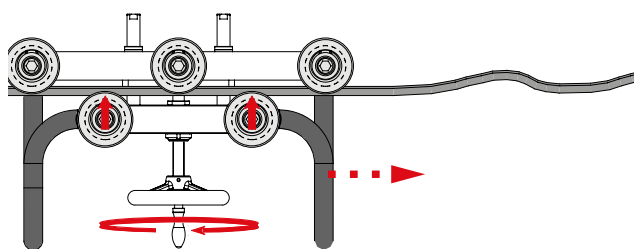
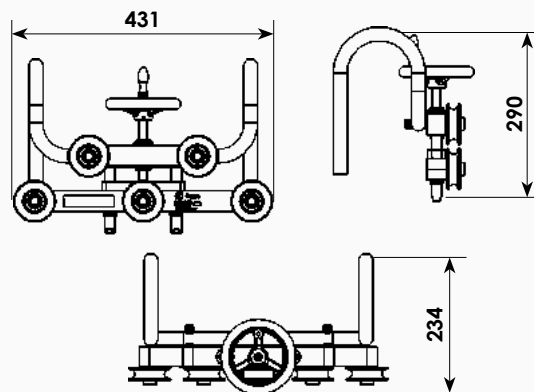
Mechanical straightening device



The mechanical straightening device for profiled contact wires allows the easy and continuous straightening of the most common sizes of wires for example: 100 - 120 - 150 sq^{mm}.
Weight: 6,8 kg

Available **MSGW-E1** For trolley wire 185 sq^{mm} and larger.

DIMENSIONS (mm)



MSGW...-3D

Straightening die sets for profiled contact wires



Straightening die sets to be used with ECW-H3D hydraulic head
By a combination of the calibrated profile of these dies and the high compression force of the press head, good results in correcting localised mis-shaping of the wire may be obtained, with only one operation.

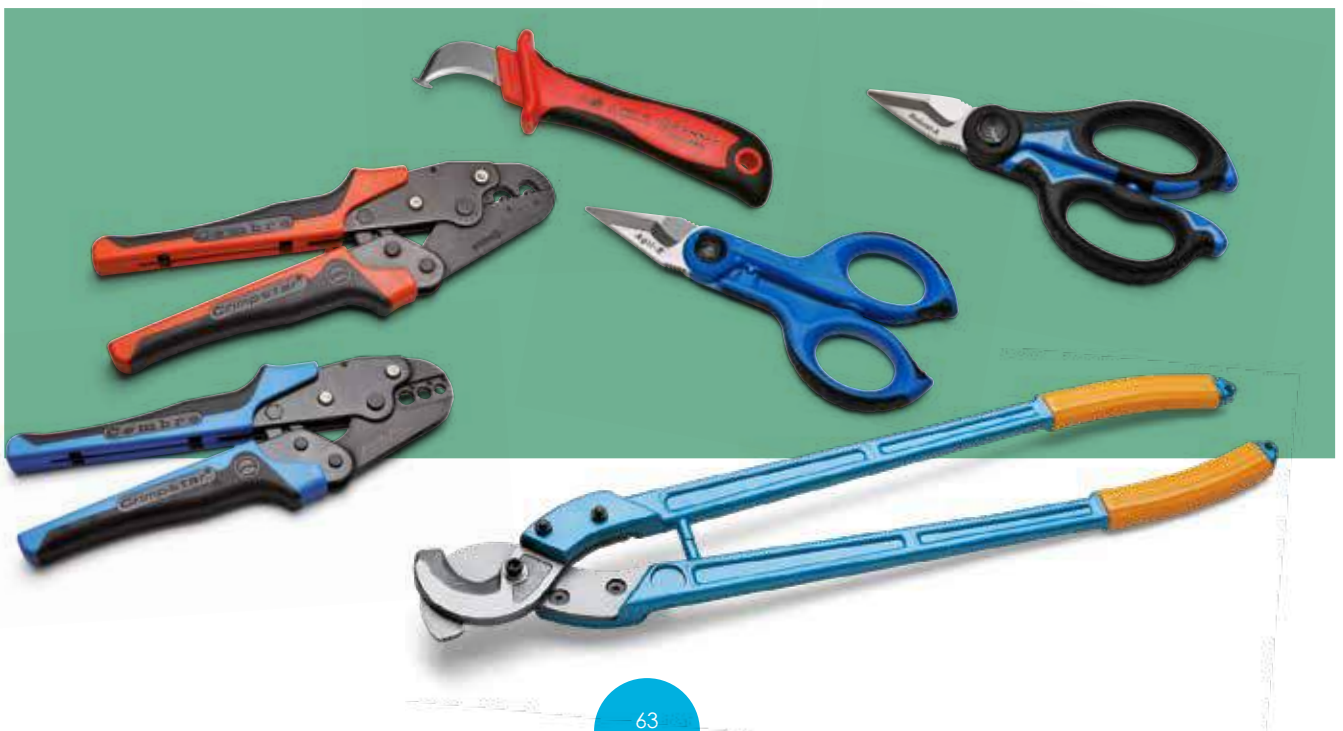
The head can be connected to a hydraulic pump with a working pressure of 700 bar max (see page 94).



MSGW STRAIGHTENING DIE SETS AVAILABLE		
Conductor size	Contact Wire Type	STRAIGHTENING DIES
100 sqmm	AC100-EN50149	MSGW100-3D
120 sqmm	AC120-EN50149	MSGW120-3D
150 sqmm	BC150-EN50149	MSGWBC150-3D
150 sqmm	BF150-EN50149	MSGWBF150-3D
110 - 4/0 AWG	110CN - 4/0	MSGW110CN-4/0-3D
120 sqmm	120CN	MSGW120CN-3D
2/0 AWG	2/0 AWG ASTM B47-95A	MSGW2/0AWG-3D
335 MCM	335MCM ASTM B9-90	MSGW335MCM-3D
350 MCM	350MCM ASTM B9-90	MSGW350MCM-3D



MECHANICAL CRIMPING AND CUTTING TOOLS



The ratchet controlled tools in the **Crimpstar®** range, are compact, lightweight and easy to use.

Features include:

- High precision treated steel crimp jaws
- Factory-set ratchet to ensure precise crimping
- Emergency release lever allowing jaws to open
- Toggle action leverage to reduce operator effort
- Automatic handles opening upon completion of crimping operation

- Ergonomically designed non-slip moulded plastic grips.
- Several combinations of kits available including tool and applicable connectors are available

HP1 for insulated terminals and connectors



Crimping Range PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 0,2 to 2,5 sqmm

HP3 for insulated terminals and connectors



Crimping Range PVC, PC and PA6.6 insulated terminals and connectors for conductor sizes 0,25 to 6 sqmm

HNN3 for insulated terminals and connectors



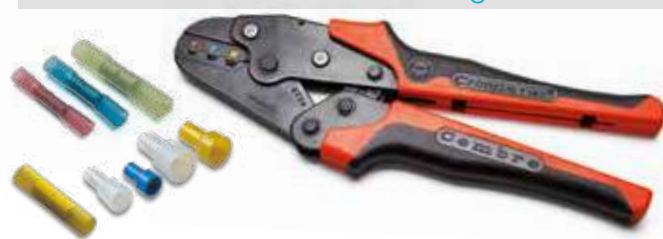
Crimping Range PA6.6 insulated terminals and connectors for conductor sizes 1,5 to 10 sqmm

HNN4 for insulated terminals and connectors



Crimping Range PA6.6 insulated terminals and connectors for conductor sizes 10 and 16 sqmm

HPH1 for through connectors



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 sqmm

HNKE4 for end sleeves



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

HNKE16 for end sleeves



Crimping Range End sleeves for conductor sizes 4 to 16 sqmm

HNKE50 for end sleeves



Crimping Range End sleeves for conductor sizes 25 - 35 - 50 sqmm

HN1 for insulated terminals and connectors



Crimping Range

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

HN5 for insulated terminals and connectors



Crimping Range

Uninsulated terminals and connectors for conductor sizes 10 and 16 sqmm

HN-A25 for insulated terminals and connectors



Crimping Range

Uninsulated terminals and connectors A-M, L-M and L-P series for conductor sizes 10 to 25 sqmm

HN-D25 for Cu tube lugs DR and through connectors DSV



Crimping Range

Cu tube lugs DR (DIN 46235) and through connectors DSV (DIN 46267) for conductor sizes 10 to 25 sqmm

HF1 for open barrel brass terminals



Crimping Range

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

HF2 for open barrel brass terminals



Crimping Range

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

HN for coaxial connectors



Crimping Range

Coaxial connectors type RG58, RG59, RG62 and RG 71

SC1

Scissors



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.

SC3X

Scissors



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 sqmm**

SC5X

Professional scissors



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 sqmm**

SC6X

Professional scissors



Only 86 g weight, the tapered blades and streamlined handles encourage agility and speed of operation for perfect work every time. Handles have an integrated crimping system for end sleeves. **Shaped groove for cutting conductor up to 50 sqmm**

HB2

Wire stripper



Cable stripping tool for circular cables Ø 4,5 to 28,5 sqmm

HB5

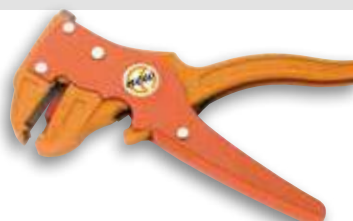
Wire stripper



HB 5 Wire stripper, for PVC insulated wires 0,25 to 6 sqmm

HB8

for coaxial connectors



HB 8 Wire stripper, for PVC insulated cables 0,2 to 6 sqmm

HB6

Wire stripper



Supply configuration including stripping die for PVC insulated cables from 0,02 to 10 sqmm



Grey, flat blade
Stripping features:
PVC from 0,02 to 10 sqmm



Red, rounded blades
Stripping features:
PVC from 4 to 16 sqmm



Blue, 'V' blades
Stripping features:
PTFE from 0,1 to 4 sqmm

HB9

for uninsulated terminals and connectors



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.

HB10

for coaxial connectors



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

KT1

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	Rigid	Multi-Cond.	Flex
Section Cond. sqmm	Cu 16 Al 35	Cu 50 Al 50	Cu 70
Dimensions mm			
Length	170		
Width	45		
Weight g	210		



KT2

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	Rigid	Multi-Cond.	Flex
Section Cond. sqmm	Cu 16 Al 50	Cu 50 Al 70	Cu 95
Dimensions mm			
Length	210		
Width	47		
Weight g	294		



KT5

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	for cutting cables Cu and Al up to max section 25 sqmm		
Dimensions mm			
Length	170		
Width	52		
Weight g	108		



KT3N

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	For cutting cables Cu and Al Ø max 34 mm		
Dimensions mm			
Length	260		
Weight g	600		



KT4N

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	For cutting cables Cu and Al Ø max 62 mm		
Dimensions mm			
Length	297		
Weight g	800		



5116660250

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	For cutting cables Cu and Al Ø max 18 mm		
Dimensions mm			
Length	600		
Width	140		
Weight kg	1,5		

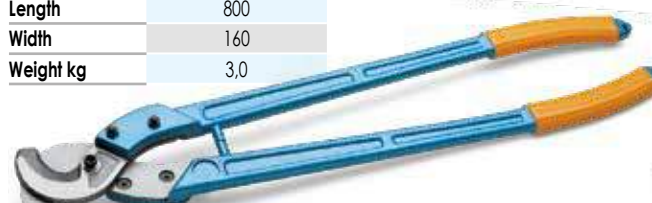


5116660500

Cable cutter

TECHNICAL FEATURES

Cutting Capacity	For cutting cables Cu and Al Ø max 25,4 mm		
Dimensions mm			
Length	800		
Width	160		
Weight kg	3,0		



NEW GPT HAND TOOL RANGE

For every professional, using quality tools specific for each job is essential; Cembre, always attentive to the needs of the electrical sector, has developed a new range of hand tools made specifically to meet the needs of the commercial and industrial installer.

THE NEW RANGE OF HAND TOOLS INCLUDES

- SCISSORS
- SCREWDRIVERS
- SOCKET & TORQUE WRENCHES
- PLIERS, NIPPERS & GRIPS
- TOOL HOLDERS & KITS
- SPANNERS & HAMMERS
- CUTTERS, SAWS & FILES
- DIGITAL INSTRUMENTS
- TAPES, LEVELS & LINES
- HOLE MAKING ACCESSORIES

Ask for the specific catalogue!



As for all Cembre insulated tools, each individual screwdriver and pair of pliers is tested in accordance with EN 60900

Cembre offers a range of tool holders designed to provide professional users with practical and neat ways to optimise their time and working conditions.





HYDRAULIC CRIMPING AND CUTTING TOOLS





Crimping force kN



Switch protected against accidental operation



18.0 V Li-Ion high power batteries



Can be operated with one hand



Double speed action: a rapid approach speed and a slower more powerful speed for crimping or cutting



Equipped with safety valve as a additional safety element for the operator



Openable compression head, ideal for derivations from running conductors



Provided with a maximum pressure sensor that allows to check the correct execution of the compressions or the limit switch control of the blades



Openable cutting head, ideal for cutting running cables



Pressure release button



Tool with a large 42 mm jaw opening, for easier introduction/removal of large size compression terminations and joints



Extremely quiet in operation



blades manufactured from high strength special Steel, heat treated to ensure a long service life



Very little vibration



Max cutting diameter



Ergonomically designed with a sculptured body for operator comfort



Max hole punching diameter



Lightweight and balanced tool for greater control



The head can rotate to enable the operator to work in the most comfortable position



LED lighting of the working area



OLED display with multi-function capacitive touch button: Crimping force being generated, Battery power availability, Tool identification, LED state, Reset, No. of operational and service crimping cycles, Tool service required



Dual-compound plastic body
Greater safety and comfort in handling, thanks to the rubber inserts



Battery condition displayed to show the residual battery power



Ensures optimal use of energy available



Durable moulded body offering high resistance to wear and damage in all operating conditions



Fitted with an integral socket, for connection to a 12 V dc external power supply



Crimping cycle data (up to 200,000 events) is automatically stored on a memory card for transfer to PC by USB interface



Contains isolated oil



Operating temperature range between -15 and +50°C



Hydraulic units provide protection against short circuit when accidentally cutting live L.V. / M.V. cables with nominal voltage up to 60 kV



Hexagonal crimp



CE marking



Radial crimp



"Bilinear" Structure

Cembre bilinear tools have their mechanical centre of gravity nearest to the operator's wrist to optimise the overall ergonomics of the tool and provide a wider support for the hand



Indent crimp



Smart Release Technology

Automatic retraction of the ram only occurs when the operator releases the start button, this allows visual verification of the die to ensure that they have fully met prior to releasing



"W" crimp



Electronic Pressure Sensor

The EPS guarantees the precision of the crimping operation, checking the actual value of pressure and informing the operator of possible errors



Oval crimp



Data recording and intelligent control allow complete verification of operational parameters. SMARTOOL technology enables the user to store data from up to 200,000 cycles on the integrated memory card for transfer to a computer via a USB cable



Trapezium crimp



Circular crimp



Max operating pressure



Manual pressure release button

RHTD

Single blade hydraulic nut splitting heads

- Requires connection to a pump developing 700 bar pressure.
- Lightweight and compact, designed for ease of operation, for a variety of applications.
- The blade can easily be replaced.



TECHNICAL FEATURES	RHTD270	RHTD3241
suitable for splitting nuts from	16 mm (M 10)	27 mm (M 18)
to	27 mm (M 18) hexagon	41 mm (M 27) hexagon
Working pressure bar	700	700
Weight kg	1,76	4,9

STORAGE	
Type	VAL-P4
Dimensions mm L x W x H	448 x 293 x 98
Weight kg	1,4
Supplied with the tool	✓
Purchase separately	-



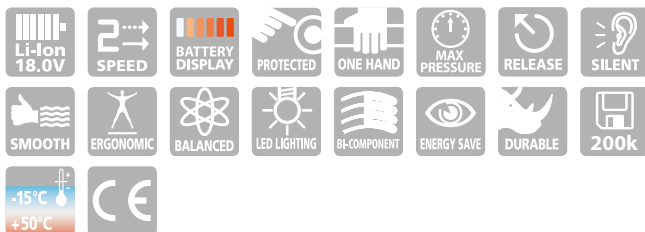
B-TD270

Single blade 18.0 V battery hydraulic nut splitting tool

18.0 V battery operated hydraulic tool suitable for splitting fastening bushes, hexagonal and square nuts as per **RHTD270**.

System composed by:

- Hydraulic portable battery tool with the head directly connected to the body through a 900 mm flexible hose.
- Spare battery.
- Battery charger.
- shoulder strap.
- Bag 030.



TECHNICAL FEATURES		STORAGE	
suitable for splitting nuts from	16 mm (M 10)	Type	Bag 030
to	27 mm (M 18) hexagon	Dimensions mm L x W x H	497 x 266 x 455
Working pressure bar	700	Weight kg	1,4
Weight kg (with battery)	5,5	Supplied with the tool	✓
		Purchase separately	-

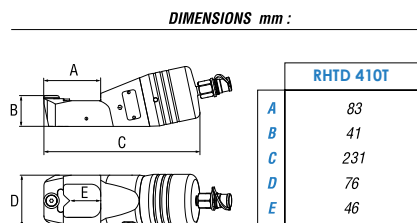
RHTD410T

Double blade hydraulic nut splitting head



- Requires connection to a pump developing 700 bar pressure.
- Lightweight and handy; its shape and dimensions have been designed for the best comfort of operation in a variety of applications.
- The blades can be easily replaced in case of damage.

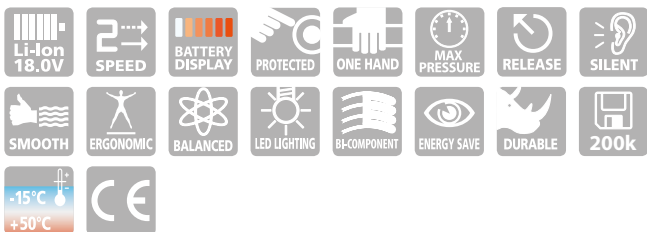
APPLICATION RANGE TOOLS TYPE RHTD AND B-TD				
TOOL TYPE	HEXAGONAL NUTS		SQUARE NUTS	
RHTD 1724 B-TD270	16	M 10	17	M 10
	17	M 10	19	M 12
	18	M 12	22	M 14
	19	M 12	24	M 16
	21	M 14	27	M 18
	22	M 14		
	24	M 16		
RHTD 3241 RHTD 410T B-TD410T	27	M 18	27	M 18
	27	M 18	27	M 18
	30	M 20	30	M 20
	32	M 22	32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



SPECIFICATIONS		STORAGE	
suitable for splitting nuts from	27 mm (M 18)	Type	VAL-P4
	41 mm (M 27) hexagon	Dimensions mm L x W x H	448 x 293 x 98
to		Weight kg	1,4
Working pressure bar	700	Supplied with the tool	✓
Weight kg (with battery)	4,9	Purchase separately	-

B-TD410T

Double blade 18.0 V battery hydraulic nut splitting tool



18.0 V battery operated hydraulic tool suitable for splitting fastening bushes, hexagonal and square nuts as per RHTD410T.

System composed by:

- Hydraulic portable battery tool with the head directly connected to the body through a 900 mm flexible hose.
- Spare battery.
- Battery charger.
- shoulder strap.
- Bag 030.



TECHNICAL FEATURES		STORAGE	
suitable for splitting nuts from	27 mm (M 18)	Type	Bag 030
	41 mm (M 27) hexagon	Dimensions mm L x W x H	497 x 266 x 455
to		Weight kg	1,4
Working pressure bar	700	Supplied with the tool	✓
Weight kg (with battery)	8,8	Purchase separately	-

RH50

Hydraulic head

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a max operating pressure of 700 bar.

RH50 will accept die sets common to Cembre 50 kN tools.

RH50 is suitable for installing the same range of connectors as **B500**.



STORAGE

Type	VAL-P1*
Dimensions mm L x W x H	445 x 290 x 95
Weight kg	1,2
Supplied with the tool	✓
Purchase separately	-

* Suitable for storage of the head and 20 sets of dies

TECHNICAL FEATURES

Crimping force kN	50
Max operating pressure bar	700
Dimensions mm	
Length	195
Width	75
Weight kg	1,6

STORAGE

Type	CVB-007
Dimensions mm L x W	350 x 105
Weight kg	0,13
Supplied with the tool	-
Purchase separately	✓



HT51

Hydraulic manual tool

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.



HT51-KV version also available for Power Supply Companies



TECHNICAL FEATURES

Crimping force kN	50
Dimensions mm	
Length	380
Width	130
Weight kg	2,7

STORAGE

Type	VAL-P1*
Dimensions mm L x W x H	445 x 290 x 95
Weight kg	1,2
Supplied with the tool	✓
Purchase separately	-

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

B500ND

18.0 V Battery hydraulic crimping tool



TECHNICAL FEATURES

Crimping force kN	60
Dimensions mm	
Length	396
Height	135
Width	81
Battery	18.0V 2.0Ah
Weight kg (with Battery)	3,15

STORAGE

Type	VAL-P22
Dimensions mm L x W x H	465 x 315 x 116
Weight kg	1,5
Supplied with the tool	✓
Purchase separately	-

The tool is supplied as:

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



CRIMPING AND CUTTING TOOLS

B500ND is the first of a new generation of hand-held cordless tools, characterised by a "Bilinear" mechanical design. Equipped with a Smart Release system which automatically retracts the ram at the end of the operating cycle.

B500ND is suitable for crimping electrical connectors onto conductor cross sections up to 300 mm² and uses the die sets common to all Cembre 50kN tools and heads.

Equipped with Li-Ion 18 V-2Ah rechargeable high capacity batteries. Fitted with a maximum pressure sensor for enhanced precision and repeatability of the maximum pressure cycle, and a pressure relief valve providing additional safety for the operator. The Electronic Pressure Sensor (EPS) guarantees the precision of the crimping operation, checking the actual value of pressure and informing the operator about possible errors.

The OLED display provides essential real time operating data, including:

- generated crimping force thus verifying accordance with best practice
- battery charge status
- general operating information
- the number of work cycles completed and remaining before recommended maintenance.

Weight and balance have been reconfigured to yield improvements in handling and convenience.

The more rigid structure of the bi-component plastic body provides greater mechanical protection while its rubber inserts boost operator safety and comfort.

Quieter operation, illumination of the working area via LED lights and a minimum of vibration enhance the tool's practicality.

The integrated memory card enables the user to store data from up to 200,000 compression cycles for transfer to a computer via a USB cable.

(SMARTOOL technology).



4 LED lighting of the working area



Manual pressure release button



OLED multifunctional display with touch button



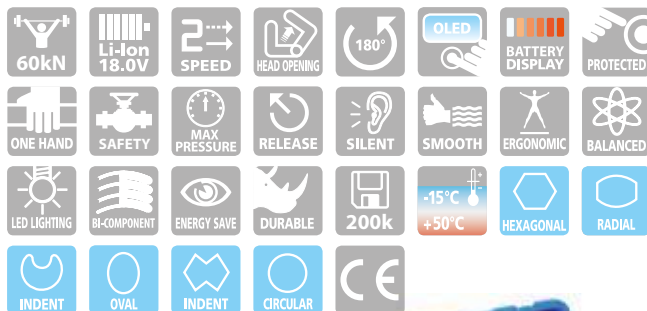
Battery connection system with release button

B500

18.0 V Battery hydraulic crimping tool

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.



B500-KV version also available for Power Supply Companies

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



TECHNICAL FEATURES

Crimping force kN	63
Dimensions mm	
Length	300
Height	343
Width	83
Battery	18.0V 5.2Ah
Weight kg (with Battery)	4,2

STORAGE

Type	VAL-P38
Dimensions mm L x W x H	520 x 432 x 126
Weight kg	2,6
Supplied with the tool	✓
Purchase separately	-

RH61

Hydraulic head

A hydraulic presshead complete with a quick automatic coupler for connection to a hydraulic pump with a max operating pressure of 700 bar.

The **RH61** head develops a crimping force of 60 kN and is suitable for installing crimp type electrical connectors on Copper cables up to 240 sqmm.

The **RH61** head uses the same dies as **HT61** and **B600**.

For the full range of dies available please contact Cembre. It is also possible to use dies from other manufacturers type Gr.1.



TECHNICAL FEATURES

Crimping force kN	60
Dimensions mm	
Length	380
Width	130
Weight kg	2,7

STORAGE

Type	VAL-RH60
Dimensions mm L x W x H	445 x 290 x 95
Weight kg	1,2
Supplied with the tool	✓
Purchase separately	-

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

HT61

Hydraulic manual tool



The **HT61** is a two speed hydraulic hand compression tool developing a crimping force of 60 kN, suitable for installing crimp type electrical connectors on Copper cables up to 240 sqmm. The built in safety valve will by-pass the oil supply when the maximum pressure of 600 bar is reached and a pressure releasing system can be easily operated at any stage of the compression. For ease of operation and comfort of the operator the tool head can be fully rotated through 180° degrees. Three different dies are available depending upon the desired style of crimping; it is also possible to use dies from other manufacturers type Gr.1. For the full range of dies available please refer to Cembre.



TECHNICAL FEATURES

Crimping force kN	60
Dimensions mm	
Length	489
Width	141
Weight kg	4,0

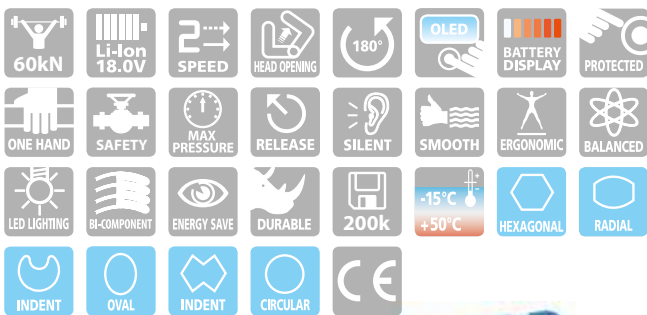
STORAGE

Type	VAL-P7
Dimensions mm L x W x H	727 x 202 x 115
Weight kg	0,13
Supplied with the tool	✓
Purchase separately	-

* Suitable for storage 3 plastic boxes with dies

B600

18.0 V Battery hydraulic crimping tool



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.

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

Dies not included, sold separately



TECHNICAL FEATURES

Crimping force kN	68
Dimensions mm	
Length	347
Height	344
Width	83
Battery	18.0V 5.2Ah
Weight kg (with Battery)	5,1

STORAGE

Type	VAL-P40
Dimensions mm L x W x H	520 x 432 x 126
Weight kg	2,6
Supplied with the tool	✓
Purchase separately	-

RHC131

Hydraulic presshead

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a max operating pressure of 700 bar.

This new design with improved mechanical features, is suitable for installing the same range of connectors as **HT131-C**, **B1350-C** and **B1300-C**.

This model accept all semicircular slotted dies, common to Cembre 130 kN tools.



TECHNICAL FEATURES

Crimping force kN	130
Max operating pressure bar	700
Dimensions mm	
Length	232
Width	124
Weight kg	3,8

STORAGE

Type	VAL-P26
Dimensions mm L x W x H	345 x 205 x 90
Weight kg	4,2
Supplied with the tool	-
Purchase separately	✓

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



RHC131 used with B1300PL (page 95)

HT120

Hydraulic crimping tool

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.



HT120-KV
version also available for Power Supply Companies



Die release system, protected from accidental operation



TECHNICAL FEATURES		STORAGE	
Crimping force kN	120	Type	VAL-P3*
Dimensions mm		Dimensions mm L x W x H	620 x 380 x 135
Length	488	Weight kg	2,5
Width	138	Supplied with the tool	✓
Weight kg	5,7	Purchase separately	-

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

HT131-C

Hydraulic crimping tool

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.



TECHNICAL FEATURES		STORAGE	
Crimping force kN	130	Type	VAL-P3*
Dimensions mm		Dimensions mm L x W x H	620 x 380 x 135
Length	473	Weight kg	2,5
Width	144	Supplied with the tool	✓
Jaw opening	25	Purchase separately	-
Weight kg	5,5		

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

B1350-C

18.0 V Battery hydraulic crimping tool



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



TECHNICAL FEATURES

Crimping force kN	132
Dimensions mm	
Length	338
Width	83
Weight kg	6,5

STORAGE

Type	VAL-P39
Dimensions mm L x W x H	520 x 433 x 127
Weight kg	2,6
Supplied with the tool	✓
Purchase separately	-

* Suitable for storing 7 sets of semi-circular slotted dies

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 5.2 Ah batteries offer a higher capacity than 14.4 V 3 Ah. 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.



B1350-C-KV

version also available for Power Supply Companies

B1300-C

18.0 V Battery hydraulic crimping tool



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



TECHNICAL FEATURES

Crimping force kN	132
Dimensions mm	
Length	406
Height	239
Width	102,5
Jaw Opening mm	25
Battery	18.0V 5.2Ah
Weight kg (with Battery)	6,5

STORAGE

Type	VAL-P44
Dimensions mm L x W x H	680 x 473 x 151
Weight kg	3,7
Supplied with the tool	✓
Purchase separately	-

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 5.2 Ah batteries offer a higher capacity than 14.4 V 3 Ah.

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.



B1300-C-KV

version also available for Power Supply Companies



ECW-H3D

Hydraulic presshead



ECW-H3D ACCESSORIES FOR CUTTING CONDUCTORS

Die Type	Cutting Capacity	Conductor Type
	Ø 20 mm	Cu, Alu, Aldrey and Alu-Steel
	Ø 20 mm	Extra flexible Steel with ≥ 200 strands

WT2-3D
 This die is suitable to cut Steel conductors (R ≤ 160 daN/sqmm) 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



TECHNICAL FEATURES

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

STORAGE

Type	VAL-ECW-H3D*
Dimensions mm L x W x H	345 x 205 x 90
Weight kg	4,2
Supplied with the tool	-
Purchase separately	✓

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

Hydraulic presshead complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max.

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



RHU240-3D-850

Hydraulic presshead



- Hydraulic Presshead complete with quick coupler for connection to hydraulic pump with a max operating pressure of 850 bar.
- Application range from 10 up to 630 sqmm
- The adapter **AU240-130D** is available as an optional extra enabling the head to utilise the semi-circular slotted dies common to most 130 kN tools.
- Also available is a series of dies for the compression of DIN electrical connectors.
- It's possible to use dies from the Grösse III.

To be used on 850 bar pump only (PO8500 or B85M-P24)



TECHNICAL FEATURES

Crimping force kN	240
Max operating pressure bar	850
Dimensions mm	
Length	283
Width	129
Weight kg	5,5

STORAGE

Type	VAL240-3D
Dimensions mm L x W x H	345 x 205 x 90
Weight kg	4,2
Supplied with the tool	-
Purchase separately	✓

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

Dies not included, sold separately



TC025

Hydraulic cutting head - overhead line application

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max.

TC025 has the same cutting capability as **HT-TC026**.



TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	25	Type	CVB-007
Max operating pressure bar	700	Dimensions mm L x W	350 x 105
Dimensions mm		Weight kg	0,13
Length	213	Supplied with the tool	✓
Width	82	Purchase separately	-
Weight kg	2,0		

CUTTING CAPACITY

MATERIAL	TENSILE STRENGTH (daN/sqmm)	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 2,3 : 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	

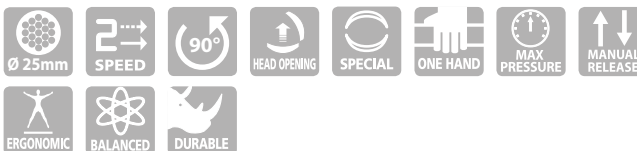
HT-TC026

Hydraulic cutting tool - overhead line application

Hand operated hydraulic tool specifically designed to cut Copper, Alu, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 25 mm. The tool features a double speed action: a fast advancing speed for rapid approach of the blades to the cable and a slower more powerful speed for cutting. The blades are manufactured from high strength special Steel, heat treated to ensure a long service life.

The head can rotate through 180 degrees, to enable the operator to work in the most comfortable position, and can easily be opened to allow the cutting of running cables.

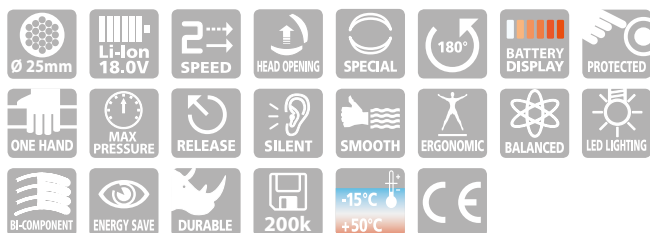
HT-TC026 features an automatic safety valve to bypass oil when reaching maximum pressure; a pressure release device can also be operated at any stage of operation.



TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	25	Type	CVB-001
Dimensions mm		Dimensions mm L x W	430 x 155
Length	382	Weight kg	0,15
Width	129	Supplied with the tool	✓
Weight kg	3,2	Purchase separately	-

B-TC250

18.0 V Battery hydraulic cutting tool



Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Alredy, 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.

TECHNICAL FEATURES

Crimping force kN	230
Max operating pressure bar	700
Dimensions mm	345 x 205 x 90
Length	290
Width	120
Weight kg	5,5

STORAGE

Type	VAL-ECW-H3D*
Dimensions mm L x W x H	345 x 205 x 90
Weight kg	4,2
Supplied with the tool	-
Purchase separately	✓

The tool is supplied as:

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



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



B-TC250ND

18.0 V Battery hydraulic cutting tool



B-TC250ND is a new generation of hand-held cordless tools, characterised by a "Bilinear" mechanical design.

B-TC250ND is specifically designed to cut Copper, Alredy, 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 18.0V - 2.0Ah batteries offer a higher capacity, while greater cutting speed and cutting 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.

STORAGE

Type	VAL-P22
Dimensions mm L x W x H	465 x 315 x 116
Weight kg	1,5
Supplied with the tool	✓
Purchase separately	-



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.

Weight and balance have been reconfigured to yield improvements in handling and convenience.

The more rigid structure of the bi-component plastic body provides greater mechanical protection while its rubber inserts boost operator safety and comfort. Quieter operation, illumination of the working area via LED lights and a minimum of vibration enhance the tool's practicality.

Two batteries and charger included. Same charger of all our tools.

Operating temperature: -15 to +50 °C



B-TC320ND

B-TC320ND is a new generation of hand-held cordless tools, characterised by a "Bilinear" mechanical design. B-TC320ND is specifically designed to cut Copper, Alredy, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 32 mm.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18.0V - 2.0Ah batteries offer a higher capacity, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed action.

The battery is equipped with led indicators that indicate the

The tool is supplied as:

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



Hydraulic cutting head - overhead line application



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.

Weight and balance have been reconfigured to yield improvements in handling and convenience.

The more rigid structure of the bi-component plastic body provides greater mechanical protection while its rubber inserts boost operator safety and comfort. Quieter operation, illumination of the working area via LED lights and a minimum of vibration enhance the tool's practicality.

Two batteries and charger included. Same charger of all our tools. Operating temperature: -15 to +50 °C

TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	32	Type	VAL-P48
Dimensions mm		Dimensions mm L x W x H	620 x 360 x 138
Length	444	Weight kg	2,4
Height	136	Supplied with the tool	✓
Width	81	Purchase separately	-
Battery	18.0V 2.0Ah		
Weight kg (with Battery)	3,95		

B-TC320NDF

B-TC320NDF is a new generation of hand-held cordless tools, characterised by a "Bilinear" mechanical design.

B-TC320NDF is specifically designed to cut Copper, Aluminium and telecommunication cable having a max overall diameter of 32 mm.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18.0V - 2.0Ah batteries offer a higher capacity, while greater cutting speed and cutting force result from a revitalised hydraulic system with double speed action.

The tool is supplied as:

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



Hydraulic cutting tool - overhead line application



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.

Weight and balance have been reconfigured to yield improvements in handling and convenience.

The more rigid structure of the bi-component plastic body provides greater mechanical protection while its rubber inserts boost operator safety and comfort. Quieter operation, illumination of the working area via LED lights and a minimum of vibration enhance the tool's practicality.

Two batteries and charger included. Same charger of all our tools. Operating temperature: -15 to +50 °C

TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	32	Type	VAL-P48
Dimensions mm		Dimensions mm L x W x H	620 x 360 x 138
Length	444	Weight kg	2,4
Height	136	Supplied with the tool	✓
Width	81	Purchase separately	-
Battery	18.0V 2.0Ah		
Weight kg (with Battery)	4,0		

B-TC500ND-SC

18.0 V Battery hydraulic cutting tool



B-TC500ND-SC is a new generation of hand-held cordless tools, characterised by a "Bilinear" mechanical design.

B-TC500ND-SC is specifically designed to cut Copper, Aluminium and telecommunication cable having a max overall diameter of 52,5 mm.

The blades are manufactured from high strength special Steel, heat treated to ensure a long service life. New Li-Ion 18.0V - 2.0Ah batteries offer a higher capacity, while greater cutting speed and cutting 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.

Weight and balance have been reconfigured to yield improvements in handling and convenience. The more rigid structure of the bi-component plastic body provides greater mechanical protection while its rubber inserts boost operator safety and comfort.

Quieter operation, illumination of the working area via LED lights and a minimum of vibration enhance the tool's practicality.

Two batteries and charger included. Same charger of all our tools.

**The tool is supplied as:**

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

TECHNICAL FEATURES

Max cutting Ø mm	52,5
Dimensions mm	
Length	526
Height	152
Width	81
Battery	18.0V 2.0Ah
Weight kg (with Battery)	3,91

STORAGE

Type	VAL-P59
Dimensions mm L x W x H	620 x 360 x 138
Weight kg	2,4
Supplied with the tool	✓
Purchase separately	-



TC04N

Hydraulic cutting head - overhead line application

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, **TC04N** has the same cutting capability as **HT-TC041N**.



TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	45	Type	VAL-04
Max operating pressure bar	700	Dimensions mm L x W x H	350 x 125 x 68
Dimensions mm		Weight kg	2,0
Length	311	Supplied with the tool	✓
Width	100	Purchase separately	-
Weight kg	4,0		

CUTTING CAPACITY

MATERIAL	TENSILE STRENGTH (daN/sqmm)	MAX CUTTING DIAMETER (mm)	
		HT-TC041N	TC04N B-TC450
ROPE & 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 Qty ≥ 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

HT-TC041N

Hydraulic cutting tool - overhead line application

Hand operated hydraulic tool specifically designed to cut Copper, Alu, Aluminium, Aluminium-Steel cables and Steel ropes, Aluminium and Steel rods having a max overall diameter of 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. **HT-TC041N** has the same cutting capability as **TC04N**.



TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	45	Type	VAL-P7
Dimensions mm		Dimensions mm L x W x H	727 x 202 x 115
Length	550	Weight kg	1,3
Width	144	Supplied with the tool	✓
Weight kg	5,8	Purchase separately	-

B-TC450

18.0 V Battery hydraulic cutting tool - overhead line application



Next generation of 18.0 V cordless hydraulic cutting tool specifically designed to cut Copper, Alredy, 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 18V 4Ah 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

**TECHNICAL FEATURES**

Max cutting Ø mm	45
Dimensions mm	
Length	407
Height	401
Width	88
Battery	18.0V 5.2Ah
Weight kg (with Battery)	6,7

STORAGE

Type	VAL-P40
Dimensions mm L x W x H	520 x 432 x 126
Weight kg	2,6
Supplied with the tool	✓
Purchase separately	-

**The tool is supplied as:**

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

TC050

Hydraulic cutting head - industrial application

Hydraulic cutting head complete with quick automatic coupler for connection to a hydraulic pump with a working pressure of 700 bar max, (see pages 94-99)

TC050 features the same cutting capability as **HT-TC051**.



TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	50	Type	CVB-011
Max operating pressure bar	700	Dimensions mm L x W	360 x 137
Dimensions mm		Weight kg	0,13
Length	325	Supplied with the tool	✓
Width	112	Purchase separately	-
Weight kg	3,2		

HT-TC051

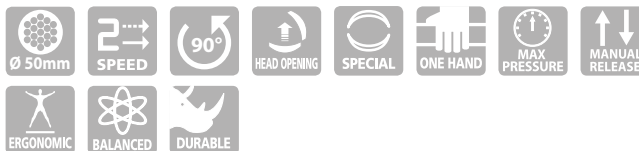
Hydraulic cutting tool - industrial application

Hand operated hydraulic tool specifically designed to cut copper, aluminium and telecommunications cables 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 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.



TECHNICAL FEATURES		STORAGE	
Max cutting Ø mm	50	Type	CVB-010
Dimensions mm		Dimensions mm L x W	545 x 160
Length	497	Weight kg	0,15
Width	129	Supplied with the tool	✓
Weight kg	4,38	Purchase separately	-

B-TC500

18.0 V Battery hydraulic cutting tool - industrial application



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 5.2 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

**TECHNICAL FEATURES**

Max cutting Ø mm	50
Dimensions mm	
Length	405
Height	398
Width	83
Battery	18.0V 5.2Ah
Weight kg (with Battery)	5,8

STORAGE

Type	VAL-P40
Dimensions mm L x W x H	520 x 432 x 126
Weight kg	2,6
Supplied with the tool	✓
Purchase separately	-

**The tool is supplied as:**

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

PO7000 - PO85000

Foot operated hydraulic pump

Foot operated double speed pumps, developing a maximum pressure of 700 or 850 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.



The **PO8500** can be mounted on a ladder and depending of the work the position of the pumping pedal can be rotated very easily.



TECHNICAL FEATURES	PO7000	PO8500	STORAGE	PO7000	PO8500
Operating pressure bar	700	850	Type	VAL-P21	VAL22
Dimensions mm			Dimensions mm	820 x 430	705 x 285
Length	680	689	L x W x H	x 290	x 180
width	200	200	Weight kg	6,74	7
Height	163	210	Supplied with the pump	✓	✓
Weight kg	9,8	9,9	Purchase separately	-	-

CPE-1

Hydraulic pump - Powered by single phase electric motor

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.



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.

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**

The pump is supplied with:

- High pressure flexible hose with male and female automatic quick coupler
- Remote hand controller
- External supply connection cable



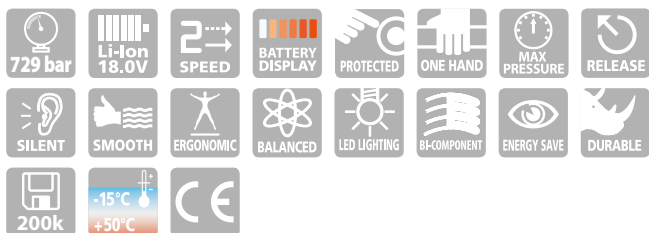
TECHNICAL FEATURES

Operating pressure bar	700
Dimensions mm	
Length	372
width	223
Height	482
Weight kg	21



B1300PL

18.0 V Portable electro-hydraulic pump



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 5.2 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.

TECHNICAL FEATURES

STORAGE

Operating pressure bar	729	Type	VAL-P51
Dimensions mm		Dimensions mm L x W x H	690 x 446 x 179
Length	354	Weight kg	5,5
width	103	Supplied with the pump	✓
Height	240	Purchase separately	-
Battery	18.0V 5.2Ah		
Weight kg (with Battery)	4,0		

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 - 5.2 Ah Li-Ion high power battery
- Battery charger
- Shoulder strap
- Plastic carrying case suitable for storing the tool and accessories, type VALP51



B1300PL

Application range

 <p>CRIMPING RH50 RH61 RHC131</p>	 <p>RAIL BONDING RHTEP-S</p>
 <p>CUTTING TC025 TC04N TC050</p>	 <p>TFC WIRE CUTTING RH-TFC</p>
 <p>NUT SPLITTING RHTD270 RHTD3241 RHTD410T</p>	

B70M-P36

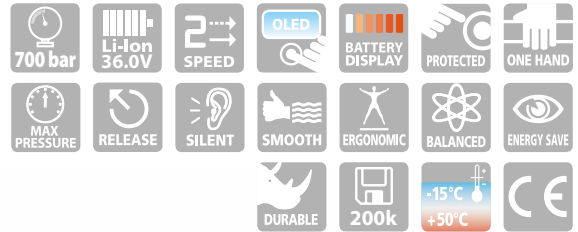
18.0 V Portable electro-hydraulic pump



Easily accessible oil top-up inlet



Toggle button for direct operation via the pump



Automatic battery connection system



Display OLED multifunctional display



Smart Logo



New generation pumps **B70M-P36** and **B85M-P36** are powered by an all new 36.0V 6.2Ah Li-Ion high capacity rechargeable battery providing independence and portability. Fitted with a maximum pressure sensor (EPS) for enhanced precision and repeatability of the maximum pressure cycle, and a pressure relief valve providing additional safety for the operator. These units feature the Smart Release system which automatically retracts the ram at the end of the operating cycle. The manual toggle button can be used to operate and release the pressure directly from the pump. (Inhibited when the remote control is used for safety reasons). Oil top-up inlet for easy access to the oil reservoir.

Extremely compact and suitable for a wide range of applications.

The Cembre logo acts as an indicator by changing colour to provide the operator with instantaneous visual confirmation of the pumps status, such as; pump ready, pump in use, end of cycle, cycle error, anomaly, maintenance required. The new design and ergonomic weight distribution allows the pump to be easily handled during use. The rigid structure of the plastic body ensures adequate mechanical protection and guarantees **IP44M** protection due to the presence of gaskets at the interface of the body shells.

The ergonomically designed handle helps to increase operator comfort when moving the pump.

Remote electrical hand or foot controller connection



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



Pressure release button



Quieter operation, and the absence of vibrations ensure maximum operator comfort. Equipped with a 3 m long high pressure hose complete with a male quick coupling on the pump and a self-locking female quick coupling. The pressure can be released at any time using the pressure release button. The unit features an OLED display to provide essential real time tool operating information including:

- Operating mode selection (cutting, crimping or piercing)
- Release mode selection (Smart release, manual release)
- Minimum set pressure and snapshot pressure reached in bar/psi to allow verification of correct operation
- Battery charge level
- No. of cycles performed
- No. of cycles before scheduled recommended maintenance
- Motor temperature
- Operational command (hand controller or manual on the pump)



Can be used in vertical or horizontal position

B70M-P36

36.0 V Portable electro-hydraulic pump

- 1 Portable electro-hydraulic pump, 36V Li-Ion battery for independent use
- 2 Battery CB 3662L, 36V - 6,2 Ah Li-Ion with LED residual charge indicator
- 3 Battery charger ASC-ULTRA-EU
- 4 USB Cable
- 5 Shoulder strap
- 6 CVB-037 Canvas rucksack
- 7 TF300-Q38FM 3m flexible hose
- 8 ERCH Remote control

**TECHNICAL FEATURES**

Operating pressure bar	700
Dimensions mm	
Length	405
Width	161
Height	327
Battery	36V 6.2Ah
Weight kg (with battery)	10.0*

*without accessories

B70M-P36-CH

36.0 V Portable electro-hydraulic pump

- 1 Portable electro-hydraulic pump, 36V Li-Ion battery for independent use
- 2 Battery CB 3662L, 36V - 6,2 Ah Li-Ion with LED residual charge indicator
- 3 Battery charger ASC-ULTRA-EU
- 4 USB Cable
- 5 Shoulder strap
- 6 CVB-037 Canvas rucksack
- 9 ERCH-WH Remote hand controller integrated with 3 m length flexible hose complete with male + female 3/8" NPT self-lock quick couplers

**TECHNICAL FEATURES**

Operating pressure bar	700
Dimensions mm	
Length	405
Width	161
Height	327
Battery	36V 6.2Ah
Weight kg (with battery)	10.0*

*without accessories

Supplied with:



B85M-P36

36.0 V Portable electro-hydraulic pump

- 1 Portable electro-hydraulic pump, 36V Li-Ion battery for independent use
- 2 Battery CB 3662L, 36V - 6,2 Ah Li-Ion with LED residual charge indicator
- 3 Battery charger ASC-ULTRA-EU
- 4 USB Cable
- 5 Shoulder strap
- 6 CVB-037 Canvas rucksack
- 7 TF300-Q38FM 3m flexible hose
- 8 ERCH Remote control

TECHNICAL FEATURES

Operating pressure bar	850
Dimensions mm	
Length	405
Width	161
Height	327
Battery	36V 6.2Ah
Weight kg (with battery)	10.0*

*without accessories



Supplied with:



B70M-P36

Application range



TRS-B70

Rucksack

For carrying the pump



ERCH-WH

Control handle for flex hoses



RCP-B70

Portable remote foot control



SH-B70

Hook

Hook for hanging the pump from a ladder.



VAL-P18

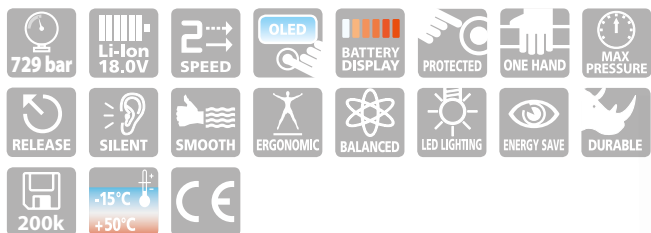
Case

Durable case for pump and accessories.



B68M-P18

18.0 V Portable electro-hydraulic pump



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 5.2 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 button to be maintained until the operating pressure is released, thus allowing the operator to make a visual check of, say, the crimped connection.

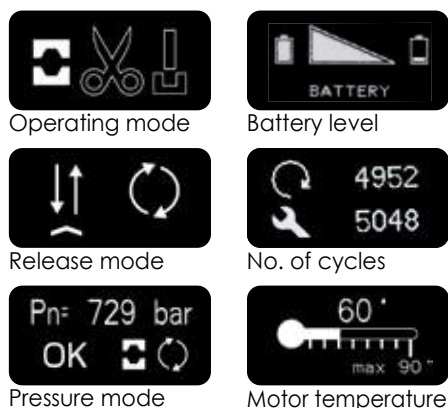
Releasing the button then automatically releases the pressure.

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.

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 - 5.2 Ah Li-Ion high power battery (2 pcs.)
- Canvas bag suitable for storing the tool and accessories
- Battery charger
- Shoulder strap

Example of operating information on OLED display:



TECHNICAL FEATURES		STORAGE	
Operating pressure bar	729	Type	CVB-031
Dimensions mm		Dimensions mm L x W x H	580 x 300 x 320
Length	364	Weight kg	2,23
width	186	Supplied with the pump	✓
Height	236	Purchase separately	-
Battery	18.0V 5.2Ah		
Weight kg (with Battery)	5,6		



B68M-P18		Range of heads	
	CRIMPING HIGH RANGE ECW-H3D		CRIMPING RH50 RH61 RHC131
	CUTTING TC025 TC04N TC050		TFC WIRE CUTTING RH-TFC
	NUT SPLITTING RHTD270 RHTD3241 RHTD410T		RAIL BONDING RHTEP-S



IDENTIFICATION & LABELLING



Consult the catalog Identification & Labelling system



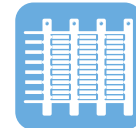
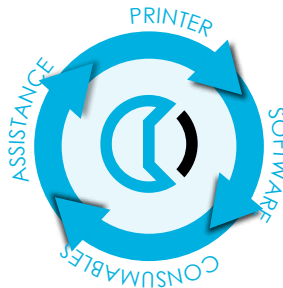
MG3

Thermal transfer printer for sheet media



MG3 is suitable to print terminal block markers, cable tags, component legends and labels.

- **TIME/COST EFFECTIVE PRODUCTION:** no warm up, easy loading/unloading of media. Printing cost is not dependent on print density. Each monochrome ribbon can print more than 300,000 MG-TPMF 4x10 mm cable tags
- **FAST:** 10 second print cycle, quality checked by the operator
- **CLEAN AND QUIET:** produces no fumes or residue and may be conveniently located in an office
- **PORTABLE AND RUGGED:** unaffected by environmental changes or relocation, suited for on-site application
- **READY TO USE:** dry resin ribbon is clean to touch so printed media are immediately ready to use



ROLLY3000

Thermal transfer printer for roll media



ROLLY3000 is ideal to print cable tags, wraparound cable markers, heat shrinkable tubes, legends and labels in intensive use

- **ROBUST AND QUIET**
- **RELIABLE:** intensive operation in an office or factory environment
- **EASY TO SET-UP:** has the facility to optimise printer set-up according to the media selected

Cutting modules ROLLY3000-CUT and ROLLY3000TR-CUT available as an accessory for ROLLY3000



ROLLY2000TR2 is designed to optimise printing simultaneously on both sides of TERMO-ROLL heat shrinkable tubes





CABLE TAGS

CABLE TAGS PRECUT 4 mm
PUSH IN



MG-TPMF

TPM-ROLL

CABLE TAGS PRECUT
TIE ON



MG-ETF

ETF-ROLL

WRAPAROUND CABLE MARKERS 



MG-KMP

KM-ROLL

HEAT SHRINK TUBE
SINGLE & BOTH SIDES PRINTING



TERMO-ROLL

LEGENDS



15 mm
PRECUT



MG-TAP

TAP-ROLL

PREDRILLED
WITH ONE HOLE



MG-DOG

9 mm
PRECUT



MG-TAPW

TAR-ROLL

TERMINAL BLOCK MARKERS
CLIP-ON



MG-CPM

For all available labels codes consult the catalog Identification & Labelling system



MG-KMP

Wraparound cable markers



self adhesive, precut

MG-KMP wraparound cable markers are suitable for identifying large diameter cables, tubes and conduit.

MARKINGENIUS® printing is exceptionally clear and legible and is protected from chemical and atmospheric agents.

Material: Polyolefin PO99006TR, Silicon free, Halogen free, PO99006TR white and yellow are UL approved

Operating temperature range: -70°C to +140°C

Application temperature range: +10°C to +40°C

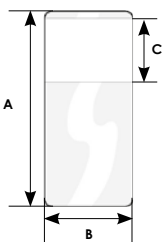


Family	Overall length A mm	Wrapping diameter mm	Print area CxB mm	Type			Markers per sheet	Quantity	SW code
				white PO99006TR	yellow PO99006TR	green			
MG-KMP019	19	2 ÷ 3	9 x 13	49962-013	49462-013		30	1.500	392
MG-KMP025	25	2,6 ÷ 4,1	9 x 15	49956-015	49456-015		24	1.200	393
			9 x 23	49956-023	49456-023		16	800	394
MG-KMP038	38	4,3 ÷ 7	10 x 15	49950-015	49450-015		18	900	381
			10 x 23	49950-023	49450-023		12	600	382
			15 x 12	49951-012		14	700	383	
MG-KMP050	50	6 ÷ 10	15 x 15	49951-015	49451-015		12	600	384
			15 x 23	49951-023	49451-023		8	400	385
			18 x 12	49958-012	49458-012		14	700	395
MG-KMP062	62	6,5 ÷ 12	18 x 12	49958-012	49458-012		14	700	395
MG-KMP068	68	7 ÷ 13	22 x 40	49959-040	49459-040		4	200	396
MG-KMP075	75	8 ÷ 14	25 x 15	49952-015	49452-015		6	300	386
			25 x 23	49952-023	49452-023		4	200	387
MG-KMP080	80	10 ÷ 17	25 x 47	49964-047	49464-047		2	100	397
MG-KMP082	82	10,5 ÷ 18	25 x 50	49954-050			2	100	388
MG-KMP092	92	11 ÷ 19	20 x 80	49965-080	49465-080		1	50	398
MG-KMP100	100	12 ÷ 20	25 x 15	49953-015	49453-015		6	300	389
			25 x 23	49953-023	49453-023		4	200	390
MG-KMP135	135	20 ÷ 25	50 x 50	49955-050	49455-050	49555-050	2	100	391



Wraparound, self adhesive cable markers provide a fast, economical and efficient way of identifying large diameter conductors

MARKINGENIUS® and MG-KMP produce indelible printed marking, protected from water, alcohol, grease, solvents, etc.



MG-ETF

Cable & conduit tags tie-on



precut, one piece markers

MG-ETF tags are used with cable ties for marking large diameter cables, hoses, tubes and conduit.

Consult us for availability of other colours.

Note: UV resistance may vary between colours.

Cable tie max width 4,8 mm.

MG-ETF-SBS

Material: SBS Styrene-Butadiene-Styrene, Halogen free, self extinguishing class HB according to UL94

Operating temperature range: -30°C to +70°C

Size mm	max Ø cable mm	Type										Print area mm	Tags per sheet	Quantity	SW code
		white	yellow	metallic grey	red	blue	green	orange	dark brown	violet	black				
13 x 57	4	64192-SBS	64142-SBS	64182-SBS	64122-SBS	64162-SBS	64152-SBS	64132-SBS	64172-SBS	64112-SBS	64102-SBS	11 x 35	14	700	581
15 x 95	5	64293-SBS	64243-SBS	64283-SBS	64223-SBS	64263-SBS	64253-SBS				64203-SBS	13 x 73	5	250	584
20 x 26	10	64291-SBS	64241-SBS	64281-SBS	64221-SBS	64261-SBS	64251-SBS				64201-SBS	8 x 22	15	750	583
20 x 27	19	64191-SBS	64141-SBS	64181-SBS	64121-SBS	64161-SBS	64151-SBS				64101-SBS	15 x 18	15	750	582
28 x 57	8	64197-SBS	64147-SBS	64187-SBS	64127-SBS	64167-SBS	64157-SBS				64107-SBS	26 x 35	6	300	590

MG-ETF-HF

Cable & conduit tags tie-on

Material: Polycarbonate, Halogen Free, self extinguishing class V0 according to UL94; the colours white PC10050WH and yellow PC10050YE are EN 45545-2 approved.

Operating temperature range: -40°C to +130°C



Size mm	max Ø cable mm	Type										Print area mm	Tags per sheet	Quantity	SW code
		white PC10050WH	yellow PC10050YE	metallic grey	red	blue	green	orange	light brown	dark brown	black				
13 x 57	4	54192-HF	54142-HF	54182-HF	54122-HF	54162-HF	54152-HF	54132-HF	54172-HF	54172-1-HF	54102-HF	11 x 35	14	700	581
15 x 95	5	54293-HF	54243-HF									13 x 73	5	250	584
20 x 26	10	54291-HF	54241-HF									8 x 22	15	750	583
20 x 27	19	54191N-HF	54141N-HF									15 x 18	15	750	582
28 x 57	8	54197-HF	54147-HF		54127-HF	54167-HF		54137-HF				26 x 35	6	300	590

MG-TAPW

Legends 9 mm



precut

MG-TAPW legends are used, with legend holders or legend rails, to identify a wide range of cables and components.

Consult us for availability of other colours.

Note: UV resistance may vary between colours.

Material: Rigid PVC, self extinguishing class V0 according to UL94; the colours white PVC10050WH and yellow PVC10050YE are UL approved.

Operating temperature range: -30°C to +60°C



Family	Component	Size mm	Type				Tags per sheet	Quantity	SW code
			white PVC10050WH	yellow PVC10050YE	blue	green			
MG-TAPW	Entrelec PEAD, Wago 249-119	9 x 12	49092N	49042N			88	2.200	360
		9 x 15	49093N	49043N		49053N	77	1.925	361
		9 x 20	49090N	49040N			55	2.750	362
		9 x 29	49096	49046	49066		30	1.500	363
		9 x 35	49091N	49041N			33	1.650	364
		9 x 50	49094	49044			20	1.000	376
		9 x 70	49095N	49045N		49055N	11	550	378



Material: Polycarbonate, Halogen Free, self extinguishing class V0 according to UL94; the colour white PC10050WH is EN 45545-2 approved.

Operating temperature range: -40°C to +130°C



Family	Size mm	Type white PC10050WH	Tags per sheet	Quantity	SW code
MG-TAPW-HF	9 x 35	49091N-HF	33	1.650	364
	9 x 50	49094-HF	20	1.000	376
	17 x 35	45194-HF	18	900	711

KM-ROLL

Wraparound cable markers

self adhesive, precut

KM-ROLL-PO wraparound cable markers are suitable for identify Large diameter cables, tubes and conduit.

The increased thickness of the label improve the handling and flexibility of the material, facilitating its application on the cable.

Material: Polyolefin PO99006TR, Silicon free, Halogen free, PO99006TR white and yellow are UL approved

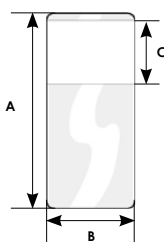
Operating temperature range: -70°C to +140°C

Application temperature range: +10°C to +40°C



PO
HF
SF
-70°C
+140°C

Family	Overall length A mm	Wrapping diameter mm	Print area CxB mm	Type		Columns	Rows	Quantity	SW code
				white PO99006TR	yellow PO99006TR				
KM-ROLL019	19	2 ÷ 3	9 x 13	61962-013N	61462-013N	5	1.400	7.000	4612
KM-ROLL025	25	2,6 ÷ 4,1	9 x 15	61955-015N	61455-015N	5	1.700	8.500	4600
			9 x 23	61955-023N	61455-023N	4	1.700	6.800	4601
KM-ROLL038	38	4,3 ÷ 7	10 x 15	61950-015N	61450-015N	5	1.200	6.000	4602
			10 x 23	61950-023N	61450-023N	4	1.200	4.800	4603
KM-ROLL050	50	6 ÷ 10	15 x 15	61951-015N	61451-015N	5	900	4.500	4604
			15 x 23	61951-023N	61451-023N	4	900	3.600	4605
KM-ROLL062	62	6,5 ÷ 12	18 x 12	61958-012N		6	834	5.000	4652
		12 ÷ 13	32 x 38	61958-038N		2	750	1.500	4614
KM-ROLL067	67	6,5 ÷ 14,5	20 x 72	61966-072N	61466-072N	1	700	700	4613
KM-ROLL068	68	7 ÷ 13	22 x 40	61959-040N		2	750	1.500	4654
KM-ROLL075	75	8 ÷ 14	25 x 15	61952-015N	61452-015N	5	600	3.000	4606
			25 x 23	61952-023N	61452-023N	4	600	2.400	4607
KM-ROLL080	80	10 ÷ 17	25 x 47	61964-047N	61464-047N	2	625	1.250	4660
KM-ROLL092	92	11 ÷ 19	20 x 80	61965-080N	61465-080N	1	500	500	4661
KM-ROLL100	100	12 ÷ 20	25 x 15	61953-015N	61453-015N	5	480	2.400	4608
			25 x 23	61953-023N	61453-023N	4	480	1.920	4609
			25 x 50	61953-050N	61453-050N	2	500	1.000	4616
			32 x 38	61953-038N	61453-038N	2	500	1.000	4615
KM-ROLL135	135	20 ÷ 25	25 x 15	61954-015N	61454-015N	5	350	1.750	4610
			25 x 23	61954-023N	61454-023N	4	350	1.400	4611



ETF-ROLL-SBS

Cable & conduit tags tie-on

precut, one piece markers

ETF-ROLL tags are used with cable ties for marking large diameter cables, hoses, tubes and conduit.

Self extinguishing class HB according to UL94



Material: SBS Styrene-Butadiene-Styrene, Halogen free

Operating temperature range: -30°C to +70°C

SBS **HF** **SF** **-30°C** **+70°C**



Size mm	Ø max vable	Type								Print area mm	Quantity	SW code
		white	yellow	grey	red	orange	green	blue	black			
13 x 57	4	44192-SBS	44142-SBS	44182-SBS	44122-SBS	44132-SBS	44152-SBS	44162-SBS	44112-SBS	11 x 35	1.775	4400
20 x 65	6	44495-SBS			44425-SBS	44435-SBS	44455-SBS			18 x 38	1.000	4402
20 x 125	6	44494-SBS								18 x 98	500	4403
25 x 100	10	44193-SBS	44143-SBS	44183-SBS	44123-SBS		44153-SBS	44163-SBS	44113-SBS	23 x 75	400	4401

ETF-ROLL-HF

Cable & conduit tags tie-on

Material: Polycarbonate PC, Halogen Free, self extinguishing class V0 according to UL94; the colours white PC10040WH and yellow PC10040YE are EN 45545-2 approved

Operating temperature range: -40°C to +130°C

PC **HF** **SF** **-40°C** **+130°C**



Size mm	Ø max vable	Type						Print area mm	Quantity	SW code
		white PC10040WH	yellow PC10040YE	red	blue	green	orange			
13 x 57	4	44192-HF	44142-HF	44122-HF	44162-HF	44152-HF	44132-HF	11 x 35	1.775	4400

ETF-ROLL-TPU

Cable & conduit tags tie-on

Material: Thermoplastic-Polyether-Polyurethane TPU, Halogen Free, Flame Retardent, self extinguishing class V0 according to UL94

Operating temperature range: -25°C to +80°C



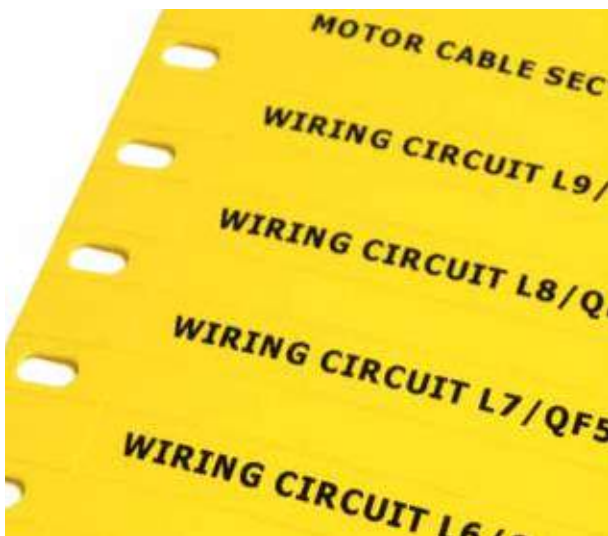
TPU **HF** **-25°C** **+80°C**



Size mm	Ø max vable	Type							Print area mm	Quantity	SW code
		white	yellow	red	light blue	green	orange	black			
10 x 60	4	44390	44340	44320	44360L	44350	44330	44310	8 x 40	1.000	4450

TAR-ROLL

Legends



precut

TAR-ROLL tags are used for marking cables, conduit, tubes, conductors and components.

Material: Rigid PVC, self extinguishing class V0 according to UL94

Operating temperature range: -30°C to +60°C

PVC SF -30°C +60°C



Family	Size mm	Type		Quantity	SW code
		white	yellow		
TAR-ROLL	9 x 20	75098		5.800	4301
	9 x 70	75099	75049	1.450	4300

TAR-ROLL-HF

Legends

Material: Polycarbonate PC, Halogen Free, self extinguishing class V0 according to UL94; the colours white PC10040WH and yellow PC10040YE are EN 45545-2 approved

Operating temperature range: -40°C to +130°C

PC HF -40°C +130°C



Family	Size mm	Type					Quantity	SW code
		white PC10040WH	yellow PC10040YE	blue	Siemens green	orange		
TAR-ROLL-HF	15 x 40	75096-HF	75046-HF	75066-HF	75056SGN-HF	75036-HF	2.250	4302



H2

Heat shrinkable tubing 2:1



ladder & continuous, shrinkage ratio 2:1

H2 type heat shrinkable tubing is used to provide highly legible and resistant identification of cables, pipes, conduits, etc within a minimum space.

Halogen Free composition provides flame retardancy and low smoke emission characteristics suitable for safety critical applications including closed environments such as tunnels and subways, rail installations, marine and industrial applications.

Material: Irradiated Polyolefin, shrinkage ratio 2:1

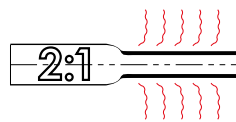
Operating temperature range: -30°C to +105°C

Minimum shrinkage temperature: > +90°C

Technical

Resistance to liquids, after the shrinkage

MIL-STD-202G test method 215 2002 (MIL-81531/SAE-AS81531-1998 clause 3.4.3)



LADDER
ONE SIDE
ONLY

Meets the requirements for fire testing of materials and components for trains in EN 45545-2



Internal Ø before shrinking mm	Cable ext. Ø range mm	Cable c.s.a range mm ²	Type		Length mm	Tubes per step	Quantity	SW Code
			white	yellow				
3,2	1,8 ÷ 2,8	0,5 ÷ 1	H2-32-12.5-WH1	H2-32-12.5-YE1	12,5	4	4.000	4810
			H2-32-25-WH1	H2-32-25-YE1	25	2	2.000	4812
			H2-32-50-WH1	H2-32-50-YE1	50	1	1.000	4814
4,8	2,8 ÷ 4,2	1 ÷ 2,5	H2-48-12.5-WH1	H2-48-12.5-YE1	12,5	4	4.000	4820
			H2-48-25-WH1	H2-48-25-YE1	25	2	2.000	4822
			H2-48-50-WH1	H2-48-50-YE1	50	1	1.000	4824
6,4	4,2 ÷ 5,8	4 ÷ 6	H2-64-12.5-WH1	H2-64-12.5-YE1	12,5	4	4.000	4830
			H2-64-19-WH1	H2-64-19-YE1	19	2	2.000	4831
			H2-64-25-WH1	H2-64-25-YE1	25	2	2.000	4832
			H2-64-38-WH1	H2-64-38-YE1	38	1	1.000	4833
			H2-64-50-WH1	H2-64-50-YE1	50	1	1.000	4834
9,5	5,8 ÷ 8	10 ÷ 16	H2-95-12.5-WH1	H2-95-12.5-YE1	12,5	4	2.000	4840
			H2-95-25-WH1	H2-95-25-YE1	25	2	1.000	4842
			H2-95-50-WH1	H2-95-50-YE1	50	1	500	4844
12,7	8 ÷ 11	25 ÷ 35	H2-127-50-WH1	H2-127-50-YE1	50	1	500	4854
19,1	11 ÷ 17	35 ÷ 50	H2-190-50-WH1	H2-190-50-YE1	50	1	500	4864
25,4	17 ÷ 23	50 ÷ 120	H2-254-50-WH1	H2-254-50-YE1	50	1	300	4874
38,1	23 ÷ 36	120 ÷ 240	H2-381-50-WH1	H2-381-50-YE1	50	1	100	4884
50,8	23 ÷ 48	240 ÷ 400	H2-508-50-WH1		50	1	100	4894



LADDER
ON BOTH
SIDES



Internal Ø before shrinking mm	Cable ext. Ø range mm	Cable c.s.a range mm ²	Type		Length mm	Tubes per step	Quantity	SW Code
			white	yellow				
2,4	1,6 ÷ 2	0,25 ÷ 0,5	H2-24-25-WH2	H2-24-25-YE2	25	2	2.000	4802
			H2-24-50-WH2	H2-24-50-YE2	50	1	1.000	4804
3,2	1,8 ÷ 2,8	0,5 ÷ 1	H2-32-25-WH2	H2-32-25-YE2	25	2	2.000	4812
			H2-32-50-WH2	H2-32-50-YE2	50	1	1.000	4814
			H2-32-50-WH2BULK		50	1	5.000	4814
			H2-48-25-WH2	H2-48-25-YE2	25	2	2.000	4822
4,8	2,8 ÷ 4,2	1 ÷ 2,5	H2-48-50-WH2	H2-48-50-YE2	50	1	1.000	4824
			H2-48-50-WH2BULK		50	1	5.000	4824
			H2-64-25-WH2	H2-64-25-YE2	25	2	2.000	4832
6,4	4,2 ÷ 5,8	4 ÷ 6	H2-64-50-WH2	H2-64-50-YE2	50	1	1.000	4834
			H2-64-50-WH2BULK		50	1	3.000	4834
			H2-95-25-WH2	H2-95-25-YE2	25	2	1.000	4842
9,5	5,8 ÷ 8	10 ÷ 16	H2-95-50-WH2	H2-95-50-YE2	50	1	500	4844
			H2-95-50-WH2BULK		50	1	2.000	4844
			H2-127-25-WH2	H2-127-25-YE2	25	2	1.000	4852
12,7	8 ÷ 11	25 ÷ 35	H2-127-50-WH2	H2-127-50-YE2	50	1	500	4854
			H2-190-25-WH2	H2-190-25-YE2	25	2	1.000	4862
19,1	11 ÷ 17	35 ÷ 50	H2-190-50-WH2	H2-190-50-YE2	50	1	500	4864
			H2-254-25-WH2	H2-254-25-YE2	25	2	600	4872
25,4	17 ÷ 23	50 ÷ 120	H2-254-50-WH2	H2-254-50-YE2	50	1	300	4874
			H2-381-25-WH2	H2-381-25-YE2	25	2	200	4882
38,1	23 ÷ 36	120 ÷ 240	H2-381-50-WH2	H2-381-50-YE2	50	1	100	4884
			H2-508-50-WH2	H2-508-50-YE2	50	1	100	4894



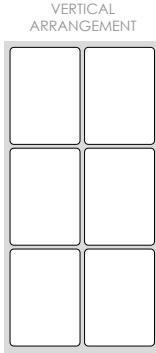
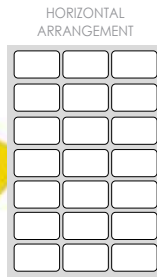
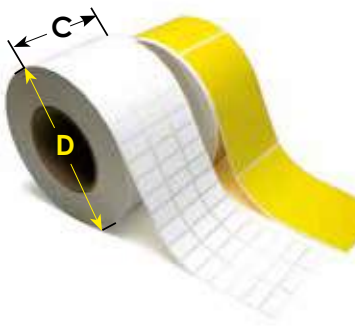
CONTINUOUS
ON BOTH
SIDE



Internal Ø before shrinking mm	Cable ext. Ø range mm	Cable c.s.a range mm ²	Type		Length m	Quantity	VPE
			white	yellow			
2,4	1,6 ÷ 2	0,25 ÷ 0,5	H2-24-WH3	H2-24-YE3	20	1	7000
			H2-24-WH3-50*	H2-24-YE3-50*	50	1	7000
3,2	1,8 ÷ 2,8	0,5 ÷ 1	H2-32-WH3	H2-32-YE3	20	1	7010
			H2-32-WH3-100*	H2-32-YE3-100*	100	1	7010
4,8	2,8 ÷ 4,2	1 ÷ 2,5	H2-48-WH3	H2-48-YE3	20	1	7020
			H2-48-WH3-100*	H2-48-YE3-100*	100	1	7020
6,4	4,2 ÷ 5,8	4 ÷ 6	H2-64-WH3	H2-64-YE3	20	1	7030
			H2-64-WH3-100*	H2-64-YE3-100*	100	1	7030
9,5	5,8 ÷ 8	10 ÷ 16	H2-95-WH3	H2-95-YE3	15	1	7040
			H2-95-WH3-100*	H2-95-YE3-100*	100	1	7040
12,7	8 ÷ 11	25 ÷ 35	H2-127-WH3	H2-127-YE3	15	1	7050
			H2-127-WH3-100*	H2-127-YE3-100*	100	1	7050
19	11 ÷ 17	35 ÷ 50	H2-190-WH3	H2-190-YE3	15	1	7060
			H2-190-WH3-100*	H2-190-YE3-100*	100	1	7060
25,4	17 ÷ 23	50 ÷ 120	H2-254-WH3	H2-254-YE3	15	1	7070
			H2-254-WH3-100*	H2-254-YE3-100*	100	1	7070
38,1	23 ÷ 36	120 ÷ 240	H2-381-WH3	H2-381-YE3	15	1	7080
			H2-381-WH3-60*	H2-381-YE3-60*	60	1	7080
50,8	27 ÷ 48	240 ÷ 400	H2-508-WH3	H2-508-YE3	15	1	7090
			H2-508-WH3-60*	H2-508-YE3-60*	60	1	7090

TTL

TTL FOR ROLL MEDIA



Thermal transfer labels are made from materials which are not temperature sensitive and whose surfaces are treated to accept the pigment from the ribbon heated by the print head.

Labels are normally die cut on a roll and arranged horizontally with respect to the printer output, although some are arranged vertically.

When not in use, labels will maintain their good condition if stored in their original packaging and not subject to excessive heat or significant temperature variation. They should be removed from their packaging only at the time of use and not exposed to moisture for long periods.

white		yellow	metallic grey		Material
WVYG	WPYG	YVYG	SVYG	PPYG	
PVC film outdoor PVC99008WH	Polyester film PET99005WH	PVC film out- door PVC99008YE	PVC film out- door PVC99008GY	Polyester film PET99005GY	
-30°C	-40°C	-30°C	-30°C	-40°C	Min operating temperature
+70°C	+130°C	+70°C	+70°C	+130°C	Max operating temperature
+10°C	+10°C	+10°C	+10°C	+10°C	Min application temperature
+40°C	+40°C	+40°C	+40°C	+40°C	Max application temperature
gloss	gloss	gloss	gloss	gloss	Surface
80µ	50µ	80µ	73µ	50µ	Thickness
....	UV resistance
√	√	√	√	√	Permanent adhesive
					UL approved

SF											
Size AxB mm	Tracks	C mm	D mm	Type	white outdoor	white	yellow outdoor	metallic grey outdoor	metallic grey	Quantity	SW code
6 x 15	5	90	130	8400101...	WVYG	WPYG	YVYG	SVYG	PPYG	30,000	4100
7 x 10	5	66	150	8400093...	WVYG	WPYG	YVYG	SVYG	PPYG	40,000	4113
8 x 12	4	60	150	8400091...	WVYG	WPYG	YVYG	SVYG	PPYG	29,080	4109
9 x 20	3	70	150	8400017...	WVYG	WPYG	YVYG	SVYG	PPYG	19,995	4106
12 x 25	3	85	150	8400023...	WVYG	WPYG	YVYG	SVYG	PPYG	16,005	4112
15 x 27	3	90	150	*8401008...	WVYG	WPYG	YVYG	SVYG	PPYG	13,320	4120
18 x 47	2	100	150	8400034...	WVYG	WPYG	YVYG	SVYG	PPYG	7,610	4159
25 x 80	1	84	130	8400075...	WVYG	WPYG	YVYG	SVYG	PPYG	2,100	4170
34 x 60	1	64	170	8400066...	WVYG	WPYG	YVYG	SVYG	PPYG	3,200	4182
40 x 80	1	84	170	8400051...	WVYG	WPYG	YVYG	SVYG	PPYG	2,800	4188
52 x 105	1	110	170	8400054...	WVYG	WPYG	YVYG	SVYG	PPYG	2,100	4194

SF											
Size AxB mm	Tracks	C mm	D mm	Type	white outdoor	white	yellow outdoor	metallic grey outdoor	metallic grey	Quantity	SW code
120 x 60	1	64	170	8400057...	WVYG	WPYG	YVYG	SVYG	PPYG	950	4252
140 x 98	1	102	170	8400059...	WVYG	WPYG	YVYG	SVYG	PPYG	800	4255
180 x 105	1	110	150	8400061...	WVYG	WPYG	YVYG	SVYG	PPYG	500	4257

SF											
Size AxB mm	Tracks	C mm	D mm	Type	white outdoor	white	yellow outdoor	metallic grey outdoor	metallic grey	Quantity	SW code
20 x 20	4	93	150	8403000...	WVYG	WPYG	YVYG	SVYG	PPYG	13,900	4201
40 x 40	2	87	150	*8402003...	WVYG	WPYG	YVYG	SVYG	PPYG	3,720	4203

*rounded corners

For all available dimensions consult the catalog Identification & Labelling system

TTF

Roll continuous material

Continuous material is made from materials which are not temperature sensitive and whose surfaces are treated to accept the pigment from the ribbon heated by the print head.

When not in use, labels will maintain their good condition if stored in their original packaging and not subject to excessive heat or significant temperature variation. They should be removed from their packaging only at the time of use and not exposed to moisture for long periods.



white				yellow			blue	metallic grey		transparent	Material
WVYG	WPYG/5	WPYG	WVRG	YVYG	YVYG/5	YVRG	BVYG/5	SVYG	PPYG	CPYG	
PVC film outdoor PVC99008WH	PVC film outdoor	Polyester film PET99005WH	Rigid PVC	PVC film outdoor PVC99008YE	PVC film outdoor	Rigid PVC	PVC film outdoor	PVC film outdoor PVC99008GY	Polyester film PET99005GY	PET film	
-30°C	-30°C	-40°C	-40°C	-30°C	-30°C	-40°C	-30°C	-30°C	-40°C	-40°C	Min operating temperature
+70°C	+70°C	+130°C	+60°C	+70°C	+70°C	+60°C	+70°C	+70°C	+130°C	+130°C	Max operating temperature
+10°C	+10°C	+10°C	+10°C	+10°C	+10°C	+10°C	+10°C	+10°C	+10°C	+10°C	Min application temperature
+40°C	+40°C	+40°C	+40°C	+40°C	+40°C	+40°C	+40°C	+40°C	+40°C	+40°C	Max application temperature
gloss	gloss	gloss	gloss	gloss	gloss	gloss	gloss	gloss	gloss	gloss	Surface
80μ	140μ	50μ	400μ	73μ	80μ	400μ	80μ	73μ	50μ	23μ	Thickness
••••	••••	•	•	••••	••••	•	••••	••••	••	•••	UV resistance
√	√		√	√	√		√	√	√	√	Permanent adhesive
											UL approved

Continuous material

Width mm	Length ft	Type	white outdoor	yellow outdoor	Quantity	SW code
100	82	8506002...	WVRG	YVRG	1	4290

Self-adhesive continuous material

Width mm	Length ft	self-adhesive	Type	white outdoor	yellow outdoor	metallic grey outdoor	metallic grey	transparent	white	Quantity	SW code
25.4	410	✓	8506012...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4287
35	410	✓	8506003...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4280
40	410	✓	8506004...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4281
50	410	✓	8506011...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4283
58	410	✓	8506010...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4285
80	410	✓	8506001...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4282
105	410	✓	8506000...	WVYG	YVYG	SVYG	PPYG	CPYG	WPYG	1	4284

Self-adhesive continuous material, reflective finish

Width mm	Length ft	self-adhesive	Type	white outdoor	yellow outdoor	blue outdoor	Quantity	SW code
25	78.74	✓	8506007...	WCYG/5	YCYG/5		1	4280
80	78.74	✓	8506008...	WCYG/5	YCYG/5		1	4282
105	78.74	✓	8506006...	WCYG/5	YCYG/5	BCYG/5	1	4284

Self-adhesive continuous material, ANSI-STANDARD

Width mm	Length ft	self-adhesive	Type	white/orange strip outdoor	Quantity	SW code
80	410	✓	8506001...	WPYG/OR	1	4280
105	410	✓	8506000...	WPYG/OR	1	4282

GMC-AL

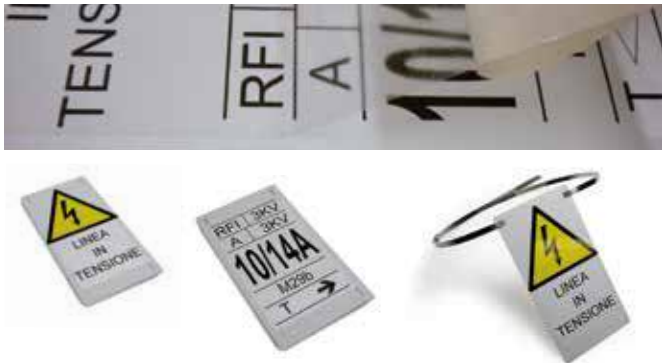
Aluminium mounting plates

round corners, thickness 0,5 mm

Cembre TTL and TTF labels stuck to Aluminium mounting plates are easily fixed to poles, columns, pylons and structures via the slot or holes provided.

Type	Size mm	Label colour	Fixing	Quantity	Use with
GMC2751S	225 x 120	white	slots	10	TTL8400061, G-MC-2700S+T-TL8400097
GMC2907S	430 x 120	white	slots	10	
GMC2678S	115 x 200	white	2 holes+ slots	300/100	TTL8400061
GMC2732S	70 x 140		2 holes	50	TTL8400057
GMC3101S	80 x 200	white	2 holes	10	

When used externally the application of an additional transparent film CPYG, will improve resistance to environmental agents.



GX

Stainless Steel INOX AISI 304 cable ties



Unique ball locking mechanism that allows simple and rapid installation and secure locking.

High tensile strength.

Nonflammability.

Material: AISI 304 Stainless Steel

High resistance to Acetic Acid, Alkalies, Sulphuric Acid, Corrosion, etc. In general very resistant to most hostile environments.

Operating temperature range: -80°C to +500°C

Stainless Steel
AISI 304
-80°C to +500°C



Width mm	Length mm	Type	Ø max. bundle mm	Min. loop tensile strength kg	Quantity
4,5	200	GX200X4.5	50	46	100
	300	GX300X4.5	76		100
	370	GX370X4.5	102		100
	520	GX520X4.5	156		100



Installation tool

for Stainless Steel cable ties

Type 5527030079

Width up to 7,9 mm

With cutting device

Weight: 0,56 kg

Length: 180 mm



PMT-CT

Transparent legend holders tie-on 9 mm



for cable tags 9 mm


Tie on (tie width max 6 mm) for longitudinal mounting on cables, hoses, tubes and conduit.

Material: plasticised PVC, self extinguishing class V0 according to UL 94, free of Cadmium, Lead, Silicon and Teflon. Resistant to Alkali, Alcohol, Acid and many Solvents.

Operating temperature range: -40°C to +80°C

plasticised
PVC -40°C +80°C



	Family	Length mm	Type	For tags mm	Tie: N° x width mm	Quantity
	PMT-CT	40	54015	9	2 x 4,8 mm	500
		55	54013	9	2 x 4,8 mm	500
		90	54014	9	2 x 4,8 mm	250

PMT-ET

Transparent legend holders tie-on 9 & 15 mm



for cable tags 15 mm


Tie on (tie width max 6 mm) for longitudinal mounting on cables, hoses, tubes and conduit.

Material: plasticised PVC, self extinguishing class V0 according to UL 94, free of Cadmium, Lead, Silicon and Teflon. Resistant to Alkali, Alcohol, Acid and many Solvents.

Operating temperature range: -40°C to +80°C

plasticised
PVC -40°C +80°C



	Family	Length mm	Type	For tags mm	Tie: N° x width mm	Quantity
	PMT-ET	17	54000	15 x 17	1 x 6 mm	500
		27	54010	15 x 27	1 x 6 mm	500
		49	54020	15 x 49	2 x 6 mm	250
		67	54030	15 x 67	2 x 6 mm	250

PMF

Transparent tag holders 4 mm



for serieFLAT cable tags 4 mm





PMF holders are specifically designed to accommodate pairs of appropriately sized cables.

Material: plasticised PVC, self extinguishing class V0 according to UL 94, free of Cadmium, Lead, Silicon and Teflon. Resistant to Alkali, Alcohol, Acid and many Solvents.

Operating temperature range: -40°C to +80°C

plasticised
PVC - 40°C + 80°C



	Cable ext.Ø range mm	Cable c.s.a range mm ²	Family	Length mm	Type	Quantity
	1,3 ÷ 2,2	0,25 ÷ 0,5	PMF-00	10	90000	8.000
				12	90010	7.000
				15	90020	6.000
				20	90040	4.000
				30	90070	2.000
				40	90090	2.500
	2 ÷ 3,7	0,5 ÷ 2,5	PMF-01	10	90100	6.000
				12	90110	5.000
				15	90120	4.000
				20	90140	3.000
				30	90170	2.000
				40	90190	1.000
	3,4 ÷ 4,3	2,5 ÷ 4	PMF-02	1.000	90180	25
				10	90200	4.000
				12	90210	4.000
				15	90220	3.000
				20	90240	2.000
				30	90270	1.000
	4 ÷ 6,3	4 ÷ 10	PMF-03	40	90290	1.000
				10	90300	3.000
				12	90310	2.000
				15	90320	2.000
				20	90340	1.000
				30	90370	1.000
				40	90390	1.000




PMF

Transparent tag holders 4 mm



plasticised
PVC - 40°C + 80°C

RoHS
COMPLIANT
2011/65/EU

	Cable ext.Ø range mm	Cable c.s.a range mm ²	Family	Length mm	Type	Quantity
	6 ÷ 10	10 ÷ 25	PMF-04	10	90400	2.000
				12	90410	1.000
				15	90420	1.000
				20	90440	500
				30	90470	500
				40	90490	500
	9 ÷ 15	25 ÷ 70	PMF-05	10	90500	500
				12	90510	500
				15	90520	250
				20	90540	250
				30	90570	150
				40	90590	100
	14 ÷ 26	70 ÷ 240	PMF-06	10	90600	500
				12	90610	250
				15	90620	250
				20	90640	100
				30	90670	100
				40	90690	100

RT-TAPW

Legend rail, 9 mm

Legend rails provide an alternative to direct marking on components.

Material: Rigid dielectric high impact PVC.

Lead free, self extinguishing class V0 according to UL 94, resistant to Acid, Alcohol, Solvents.

Non-deformable up to +90°C

Application temperature range: +10°C to +40°C



PVC **+90°C**

RoHS
COMPLIANT
2011/65/EU

Family	self-adhesive	pre-drilled	Length mm	Type		Quantity
				black	grey	
RTR-TAPW		✓	430	990654	990652	25
		✓	650	990794	990792	25
		✓	1.000	990526	990505	25
RTA-TAPW	✓		430	990655N	990653N	25
	✓		650	990795N	990793N	25
	✓		1.000	990527N	990506N	25

Transparent protective covers, 9 mm

Family	Length mm	Type	Quantity
RT-CCW	430	990656	25
	650	990796	25
	1.000	990507	25



Transparent protective strip, 9 mm

Family	Length mm	Type	Quantity
RT-CCWS	430	990657	25
	650	990797	25
	1.000	990734	25



PTP

Push button legend bases



for Ø 22,5mm manual operators

Ø 22.5mm black push button legend bases to fit a wide range of popular brands.

All types have a hole behind the legend for rivet fixing, while PTP...A types are adhesive backed.

All types suit MG-TAP 15x27 mm legends and can be fitted with a transparent legend cover TAP-CCS 990521 or MG-TAP-HF 990510.

Material: Polycarbonate, self extinguishing class V0 according to UL 94

Operating temperature range:

-40°C to +115°C (continuous)

-40°C to +130°C (short periods)

PC -40°C +115°C



	Family	Self-adhesive	rivet fixing	Size mm	Type black	Ø bottom	Size of printed plate and protection mm	Application	Quantity
	PTPS-22		✓	48 x 30	34002	22,5	15 x 27		100
	PTPSA-22	✓		48 x 30	34602	22,5	15 x 27		100
	PTPS-24		✓	48 x 30	68002	24	15 x 27	Schneider Electric	100
	PTPSA-24	✓		48 x 30	68602	24	15 x 27	Schneider Electric	100
	PTPO-22		✓	48 x 30	34802	22,5	15 x 27		100
	PTPOA-22	✓		48 x 30	34902	22,5	15 x 27		100
	PTPR-22		✓	48 x 30	34102	22,5	15 x 27		100
	PTPRA-22	✓		48 x 30	34702	22,5	15 x 27		100



SELF ADHESIVE



RIVET FIXING

PL

Legend bases

for general purpose applications

PLR legend bases may be fixed to flat surfaces by rivet or in some sizes, by cable tie to tubes, conduits, etc.

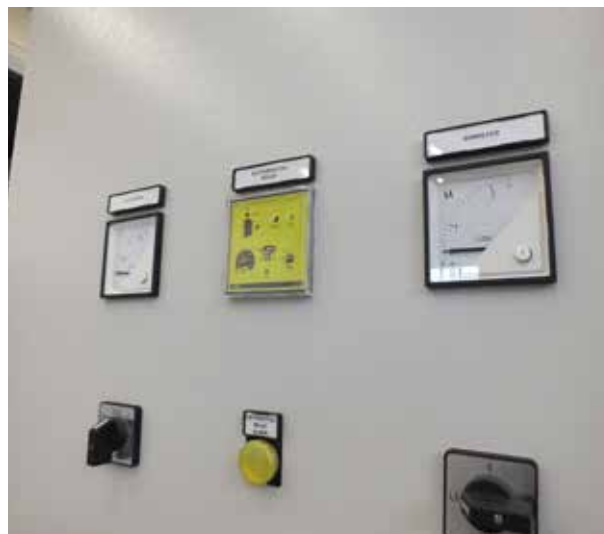
PLA versions are self adhesive. TAP-CCS transparent covers may be fitted to protect the legends.

Material: Polycarbonate, self extinguishing class V0 according to UL 94

Operating temperature range:

-40°C to +115°C (continuous)

-40°C to +130°C (short periods)



PC - +
40°C 115°C



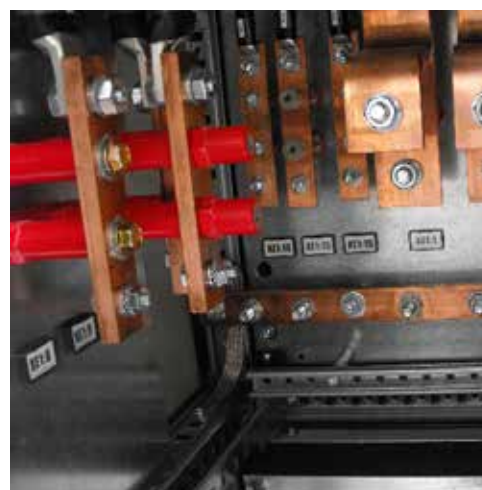
Family	self-adhesive	rivet fixing	Size mm	Type black	Hole spacing mm	For MG-TAP size mm	Quantity
PLR		✓	17 x 20	34202		15 x 17	100
		✓	17 x 30	34302		15 x 27	100
		✓	17 x 52	34402	41	15 x 49	100
		✓	17 x 70	34502	51	15 x 67	100
PLA	✓		17 x 20	35002N		15 x 17	100
	✓		17 x 30	35102N		15 x 27	100
	✓		17 x 52	35202N	41	15 x 49	100
	✓		17 x 70	35302N	51	15 x 67	100



SELF ADHESIVE



RIVET FIXING



WS



Family	Size mm	Type	Labels per sheet	Quantity
WS-AD	Generic hazard			UNI EN ISO 7010 ISO 3864 - UNI 7543
	25	200001	24	240
		200001-BULK	120	1.200
	50	200002	10	50
		200002-BULK	30	900
	100	200003	2	10
		200003-BULK	6	300
WST-LDY	DANGER! Mechanical devices moving			UNI 7543 ISO 3864
	105 x 210	2557AD017-GB	1	3
WS-HT	Electricity			UNI EN ISO 7010 ISO 3864 - UNI 7543
	25	200101	24	240
		200101-BULK	120	1.200
	50	200102	10	50
		200102-BULK	30	900
	100	200103	2	10
		200103-BULK	6	450
WST-LSY	20.000 V			UNI 7543 - ISO 3864
	52 x 105	2454HT021-GB	2	10
WST-LSY	Switch power off before opening the door			UNI 7543 - ISO 3864
	52 x 105	2654HT052-GB	1	10
WS-HTP	Electrical hazard			
	105 x 52	204003	1	10
		204003-BULK	6	300
WSE	Emergency - STOP			
	60	204500-GB	1	10

PS








Family	Size mm	Type	Labels per sheet	Quantity
PS-FL	Do not use open flames			UNI EN ISO 7010 ISO 3864 - UNI 7543
	50	210101	3	30
PS-SW	Do not use water to extinguish fires			UNI EN ISO 7010 ISO 3864 - UNI 7543
	50	210201	3	30
PS-NP	No entry			UNI EN ISO 7010 ISO 3864 - UNI 7543
	50	210501	3	30
PST-PSW	Access prohibited			ISO 3864 UNI 7543
	74 x 52	4301NP003-D	2	10
PS-OD	Do not touch			UNI EN ISO 7010 ISO 3864 - UNI 7543
	50	211201	3	30
PS-TA	Do not touch, live parts			UNI EN ISO 7010 ISO 3864 - UNI 7543
	50	211301	3	30



MS








Family	Size mm	Type	Labels per sheet	Quantity
MS-WG	Protective goggles must be worn			UNI EN ISO 7010 ISO 3864 UNI 7543
	50	220001	3	30
MS-WH	Protective helmets are required			UNI EN ISO 7010 ISO 3864 UNI 7543
	50	220101	3	30
MS-WD	Protective earmuffs are required			UNI EN ISO 7010 ISO 3864 UNI 7543
	50	220201	3	30
MS-MM	Protective mask required			UNI EN ISO 7010 ISO 3864 UNI 7543
	50	220401	3	30
MS-PT	For pedestrians only			UNI EN ISO 7010 ISO 3864 UNI 7543
	50	222401	3	30

VS

Etiketten



Family	Size mm	Type	Labels per sheet	Quantity
VS-I80				
	70 x 120	268000-GB	1	10
VS-I82				
	52 x 105	268200-GB	1	10
VS-I83				
	52 x 105	268300-GB	1	10
VS-I50				
	150 x 180	2615000	1	10
VS-I80				
	70 x 120	2611400	1	10

Polyester film, Halogen free, on sheet

Consist of WS symbols supplemented by information in text form WST, or text only signs which can be used in combination with symbol only signs. Available in different graphic modes and formats, for marking equipment, machinery and installations in a detailed and efficient way.

Material: Polyester film over PETSIGNWHTR ,laminated with transparent film resistant to UV, thickness approximately 0,1 mm. Resistant to Water, Oil, Grease, Alcohol, Detergent, Alkaline Substances and Atmospheric Agents. Low flammability, self extinguishing. Recommended for application to equipment for internal or external use, but not directly exposed to atmospheric agents. If exposed to atmospheric agents, the life of the label may be limited to five years. PETSIGNWHTR is UL approved.

Application temperature range: -40°C to +130°C



Switch shunting box



Inductive connections



Rail circuit box



Poles

Our headquarters

Cembre SpA - Italy



Cembre Ltd - UK



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Cembre España SLU - Spain



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Making the right connections

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