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ENGLISH

BATTERY OPERATED HYDRAULIC TOOL

BTEPE2.DET12
BTEPE2.DET16

OPERATION AND MAINTENANCE MANUAL

cod. 6261293

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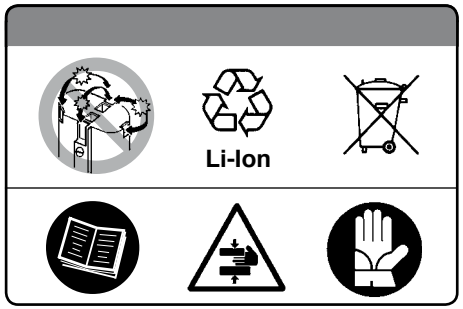
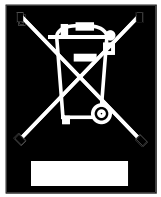
⚠ WARNING



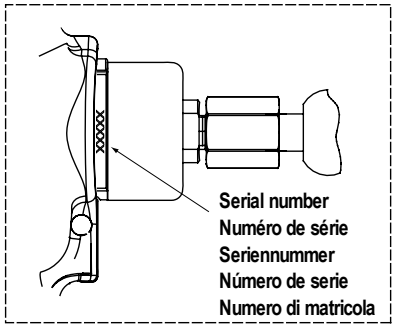


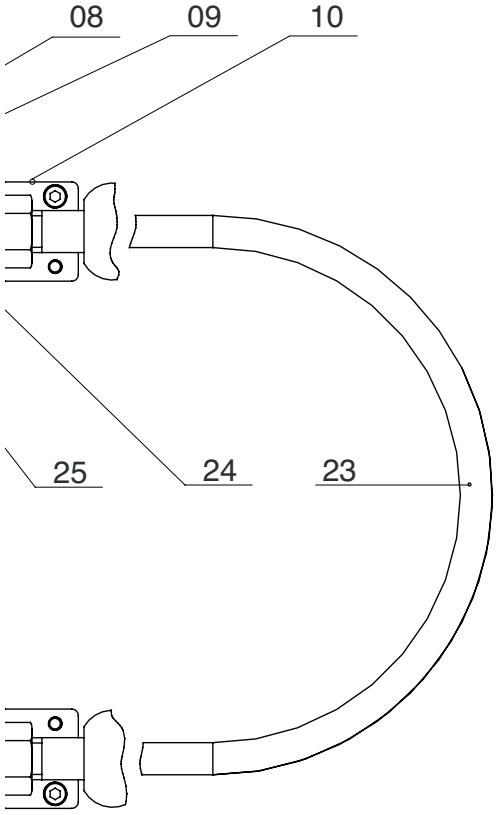
– Before using the tool, carefully read the instructions in this manual.	– When operating the tool, keep hands away from the danger zone.
– Always wear safety gloves when operating.	– Do not short circuit the batteries.
Li-Ion – Always recycle the batteries in accordance with local regulations.	– Do not discard batteries into domestic refuse or waste disposal.

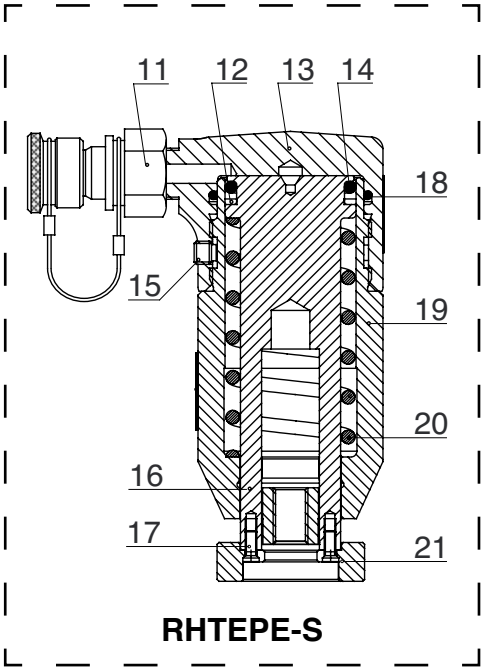
– Following information applies in member states of the European Union:

USER INFORMATION in accordance with "**Directives 2002/95/EC and 2002/96/EC regarding the reduction of hazardous substances in electrical and electronic equipment, including the disposal of waste**".

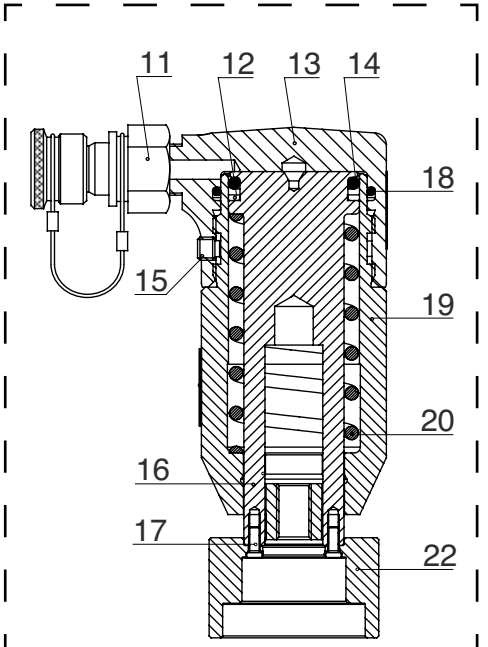
The 'Not in the bin' symbol above when shown on equipment or packaging means that the equipment must, at the end of its life, be disposed of separately from other waste.
The separate waste collection of such equipment is organised and managed by the manufacturer.
Users wishing to dispose of such equipment must contact the manufacturer and follow the prescribed guidelines for its separate collection.
Appropriate waste separation, collection, environmentally compatible treatment and disposal is intended to reduce harmful environmental effects and promote the reuse and recycling of materials contained in the equipment.
Unlawful disposal of such equipment will be subject to the application of administrative sanctions provided by current legislation.







RHTEPE-S



RHTEPE-S16

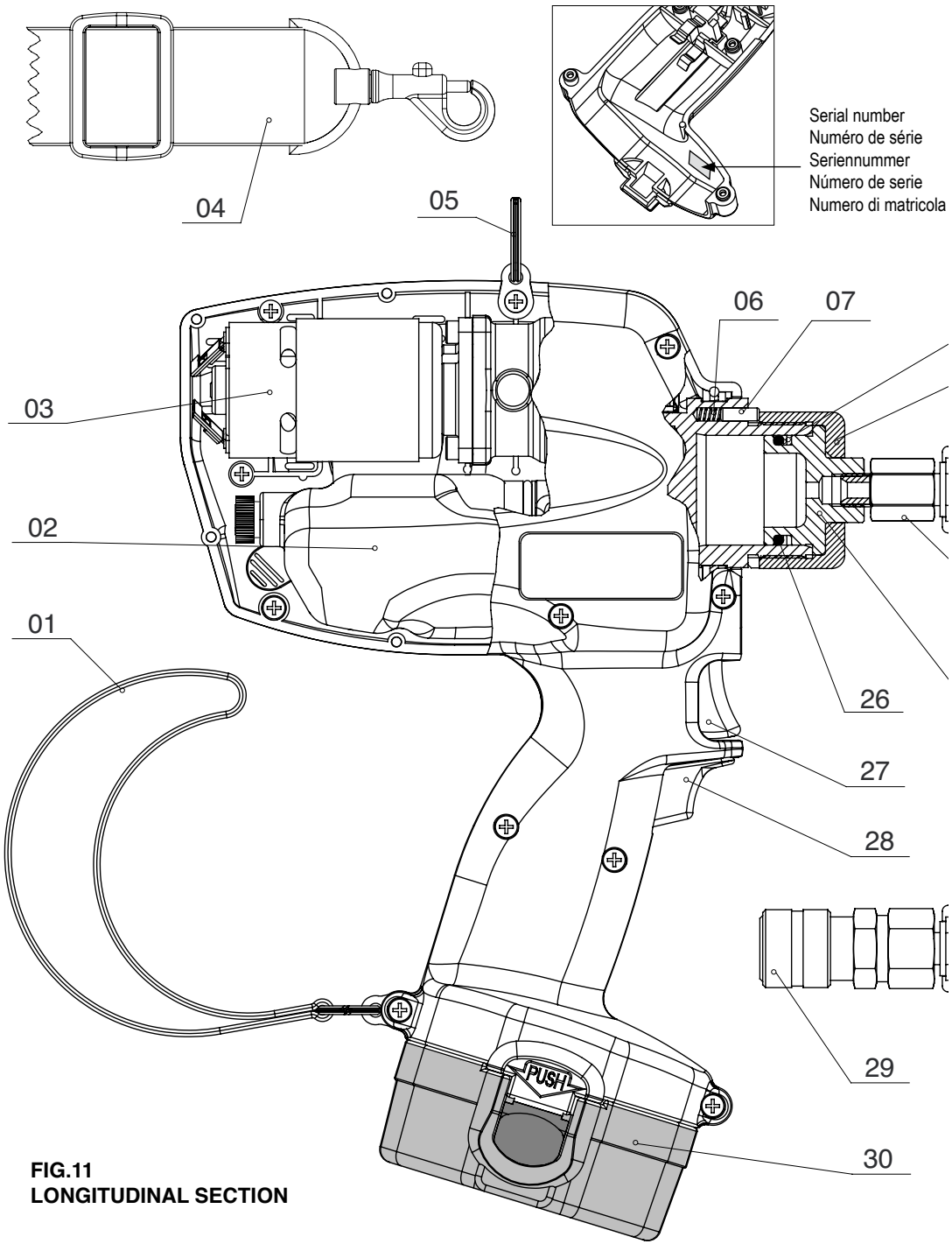


FIG.11
LONGITUDINAL SECTION

BATTERY OPERATED HYDRAULIC TOOL
TYPE BTEPE2.DET12 ; BTEPE2.DET16

The hydraulic tool is powered by **14.4 V Li-Ion** battery.
A balanced tool for optimum control; quiet in operation with very little vibration; lightweight construction enables the operator to hold the tool in one hand.
The residual battery capacity level is automatically displayed after every cycle.

BTEPE2.DET12 system consists of:
- Battey pump unit and insulated hose assembly type BTP2-Z-IS
- GO / NO GO gauge type CAL 22.23
- Battery (qty 2)
- Battery charger
- Shoulder strap
- Canvas bag type “009”
- Hydraulic head type RHTEPE-S
- Plunger type OG 13.2T (qty 2)

BTEPE2.DET16 system consists of:
- Battey pump unit and insulated hose assembly type BTP2-Z-IS
- GO / NO GO gauge type CAL 22.23
- Battery (qty 2)
- Battery charger
- Shoulder strap
- Canvas bag type “009”
- Hydraulic head type RHTEPE-S16
- Plunger type OG 16.2T (qty 2)

1. GENERAL CHARACTERISTICS

- **Application range:**
  BTEPE2.DET12: suitable for installing rail web electrical connection system having M12 bolt (e.g. AR61, AR65, AR261, AR265).
  BTEPE2.DET16: suitable for installing rail web electrical connection system having M16 bolt (e.g. AR6116, AR6516, AR26116, AR26516).
- **Installation force:** ..... 55 kN
- **Rated operating pressure:** ..... 600 bar (8,700 psi)
- **Dimensions pump body:** length ..... 230 mm
  width ..... 94 mm
  height ..... 302 mm
  insulated hose length ..... 900 mm
- **Weight:** (with battery) ..... 4,7 kg
- **Motor:** ..... 14.4 V DC
- **Battery type:** ..... 14.4 V – 3.0 Ah Li-Ion
- **Recommended oil:** ..... **AGIP ITE 360** *or*
  ESSO TRANSFORMER P60 *or equivalent*
- **Safety:** the tool is provided with a maximum pressure valve.

2. INSTRUCTIONS FOR USE

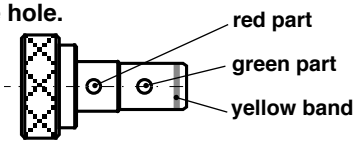
2.1) Setting

Connect the male coupler of the head to the female coupler on the tool hose; ensure that the couplers are securely fitted.

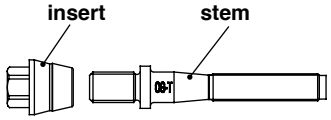
⚠ **Before connecting or disconnecting the head and the hose, ensure that the ram of the head is fully retracted.**

2.2) Installation procedure for AR61, AR65, AR6116, AR6516 rail web electrical connections

– Drill rail web or, **if already drilled, use a suitable reamer to clean the hole** (Fig. 1).
– Check the size of the hole with the **CAL 22.23** "GO/NO GO" gauge (Fig. 2a):
  - The hole size is correct **if only the green part enters the hole.**
  - **If the red part enters, the hole is too large**, in this case it is necessary to drill a new hole.



  Using the same gauge, check the rail thickness (Fig. 2b):
  - If the yellow band protrudes, use the **AR65...** series.
  - If the yellow band does not protrude, use the **AR61....** series.
– Insert the **AR...-1** copper bush into the rail web hole (Fig. 3).
– Ensure that the ram in the head is fully retracted and then firmly screw and tighten the stem of the plunger onto the tool head (Fig. 4).
– Introduce the stem of the plunger into the **AR...-1** copper bush from the unflanged side and screw and tighten the insert of the plunger **OG...** onto the stem (Fig. 5) using the recess in the gauge **CAL22.23.**
  Plungers OG13.2T and OG16.2T are 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.



– Operate the tool (Fig. 6) by pressing the operating button (27) to pull the plunger **OG... completely** through the bush and extrude the bush onto the surface of the hole.
  To halt the advancement release the operating button (27) and the motor will cut out.
  Operate the pressure release lever (28) to retract the ram (16).
– The bush will also extrude itself around the opposite side of the rail web (Fig. 7).

2.3) Conductor assembly

– Crimp the lug onto the conductor.
– Assemble all pieces as shown in Fig. 8.
– Fit the self-locking nut (Fig. 9) and tighten to the torque ratio indicated.

FIG. 1

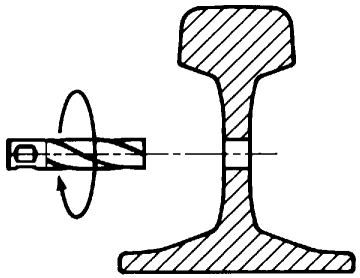


FIG. 2a

NO

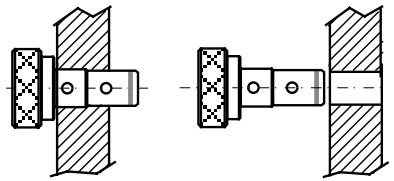
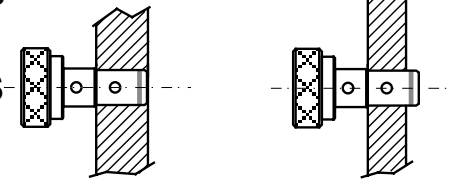


FIG. 2b

YES



5. PARTS LIST (Ref. to Fig. 11)

Code N°	Item	Description	Qty
6000447	01	WRIST STRAP	1
6720073	02	RESERVOIR	1
6000310	03	MOTOR	1
6000354	04	SHOULDER STRAP	1
6040427	05	STRAP ANCHOR RING	1
6520601	06	SPRING	1
6760230	07	Ø 4x12 PIN	1
6040240	08	BACK-UP RING	1
6000368	09	THREADED CAP	1
6260053	10	COLLAR	2
2593864	11	Q14-MS COUPLER	1
6040240	12	BACK-UP RING	1
6840070	13	CUP	1
6360320	14	O-RING	1
6340060	15	M 6x6 GRUB SCREW	1

Code N°	Item	Description	Qty
6620225	16	RAM	1
6900670	17	SCREW	2
6360268	18	O-RING	1
6120171	19	CYLINDER	1
6520430	20	RAM RETURN SPRING	1
6641046	21	RHTEPE-12 WASHER	1
6641038	22	RHTEPE-16 WASHER	1
6890002	23	FLEXIBLE HOSE	1
6060012	24	1/4"F-1/8"M ADAPTER	1
6650081	25	COUPLER	1
6360300	26	O-RING	1
6000326	27	OPERATING PUSH-BUTTON	1
6440108	28	PRESSURE RELEASE BUTTON	1
2593865	29	Q14-F COUPLER	1
2598494	30	BATTERY	1

The guarantee is void if parts used are not Cembre original spares.

When ordering spare parts always specify the following:
- code number of item
- name of item
- type of tool
- tool serial number

Acoustic Noise (Directive 2006/42/EC, annexe 1, point 1.7.4.2 letter u)

– The weighted continuous acoustic pressure level equivalent A at the work place L_{pA} is equal to .....75 dB (A)
– The maximum value of the weighted acoustic displacement pressure C at the work place L_{pCPeak} is .....< 130 dB (C)
– The acoustic power level emitted by the machine L_{WA} is equal to .....85,3 dB (A)

Risks due to vibration (Directive 2006/42/EC, annexe 1, point 2.2.1.1)
Tests carried out in compliance with the indications contained in UNI ENV 25349 and UNI EN 28662 part 1st Standards, and under operating conditions much more severe than those normally found, certify that **the weighted root mean square in frequency of the acceleration the upper limbs are exposed to for each biodynamic reference axis does not exceed 2.5 m/sec².**

6. RETURN TO Cembre FOR OVERHAUL

In the case of a breakdown contact our **Area Agent** who will advise you on the problem and give you the necessary instructions on how to dispatch the tool to our **nearest service Centre**; if possible, attach a copy of the Test Certificate supplied by Cembre together with the tool or, if no other references are available, indicate the approximate purchase date and the tool serial number.

3. WARNING

⚠ THE TOOL IS UNSUITABLE FOR CONTINUOUS USE AND SHOULD BE ALLOWED TO COOL DOWN FOLLOWING UNINTERRUPTED, SUCCESSIVE OPERATIONS; FOR INSTANCE, HAVING EXHAUSTED A FULLY CHARGED BATTERY IN ONE SESSION, DELAY BATTERY REPLACEMENT FOR A FEW MINUTES. OBSERVE RECOMMENDED REST PERIODS ALSO WHEN USING AN EXTERNAL POWER SUPPLY.

⚠ PROTECT THE TOOL FROM RAIN AND MOISTURE. WATER WILL DAMAGE THE TOOL AND BATTERY. ELECTRO-HYDRAULIC TOOLS SHOULD NOT BE OPERATED IN POURING RAIN OR UNDER WATER.

3.1) Using the battery charger
Carefully follow the instructions in the battery charger manual.

3.2) General information on how to use batteries
In order to use the batteries correctly, please follow these rules:
– Use the battery until the automatic residual energy display still has 1-2 LEDs showing: this means the battery is almost completely discharged and no loss in the life of the battery has been caused.
– Be particularly careful when charging a new battery the first 2-3 times in order to be certain of maximising the available energy level.
– Allow the battery to cool down to ambient temperature prior to recharging.
– Rest the battery charger for at least 15 minutes between charges.

4. MAINTENANCE

The tool is robust, completely sealed, and requires very little daily maintenance.
Compliance with the following points should help to maintain the optimum performance of the tool:

4.1) Thorough cleaning
Dust, sand and dirt are a danger for any hydraulic device.
Every day, after use, the tool must be wiped with a clean cloth taking care to remove any residual particles, especially around the moveable parts and the insulated flexible hose.

4.2) Replacement of the automatic coupler
To replace the automatic coupler of the hose or head, proceed as follows:
– Remove the old coupler.
– Carefully clean the thread to remove old sealant.
– Apply Teflon tape to the thread.
– Fit the new automatic coupler and tighten to **30 Nm (22 lbf ft)**.

4.3) Insulated flexible hose
Operate the tool with the hose uncoiled.
Do not bend, twist, kink, knot or squash the hose. Before operation, check the hose for any sign of damage.
When storing the tool in the canvas bag, coil the hose in large loops.

4.4) Storage
When not in use, the tool should be stored and transported in the canvas bag, to prevent damage. Canvas bag: type **"009"**, size 390x390x130 mm, weight 0,6 kg.

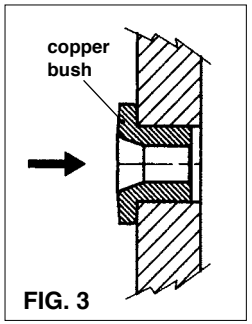


FIG. 3

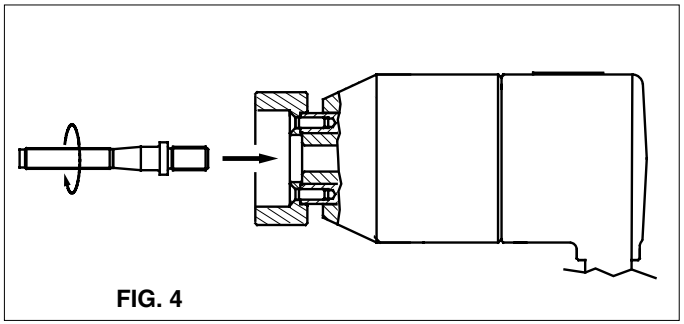


FIG. 4

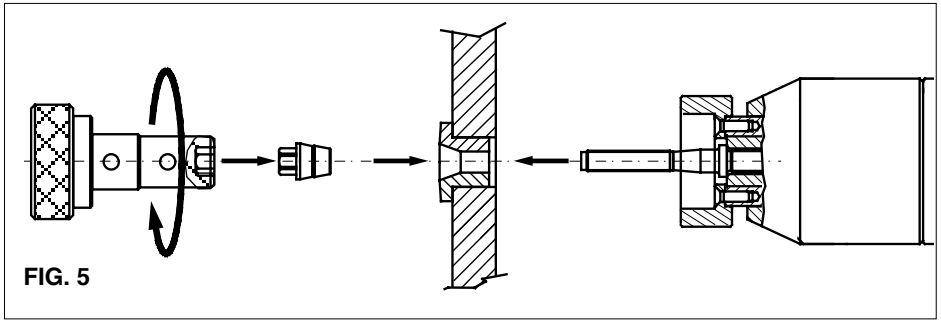


FIG. 5

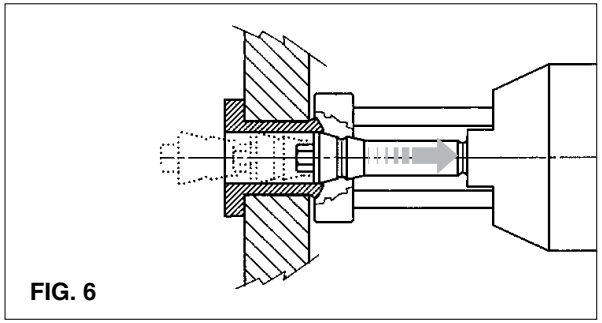


FIG. 6

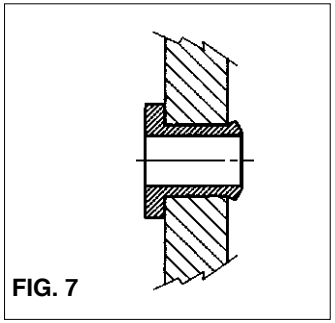


FIG. 7

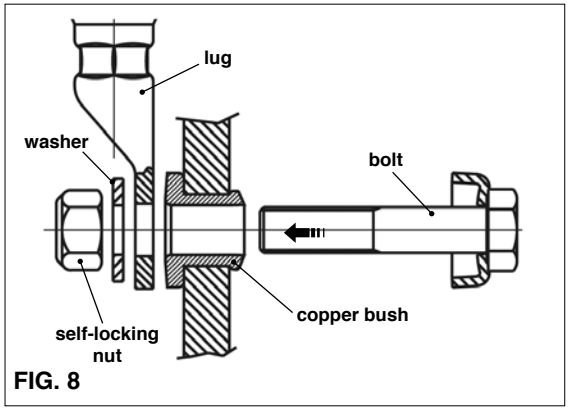


FIG. 8

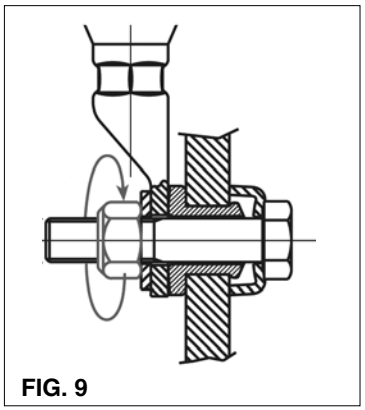
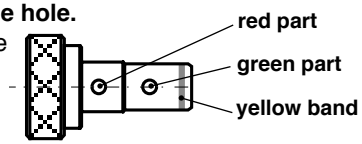


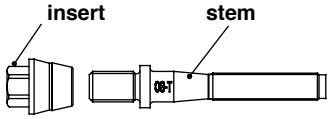
FIG. 9

2.4) Installation procedure for AR261, AR265, AR26116, AR26516 rail web electrical connections

– Drill rail web or, **if already drilled, use a suitable reamer to clean the hole** (Fig. 1).
– Check the size of the hole with the **CAL 22.23** "GO/NO GO" gauge (Fig. 2a):
  - The hole size is correct **only if the green part enters the hole.**
  - **If the red part enters, the hole is too large**, in this case it is necessary to drill a new hole.



  Using the same gauge, check the rail thickness (Fig. 2b):
  - If the yellow band protrudes, use the **AR 265...** series.
  - If the yellow band does not protrude, use the **AR 261...** series.
– Insert the **AR2...-1** copper bush into the rail web hole and position the **AR2...-2** copper washer on the opposite web side (Fig. 3).
– Ensure that the ram in the head is fully retracted and then firmly screw and tighten the stem of the plunger onto the tool head (Fig. 4).
– Introduce the stem of the plunger into the **AR2...-2** copper washer and tighten the insert of the plunger **OG...** onto the stem (Fig. 5) using the recess in the gauge **CAL22.23.**
  Plungers OG13.2T and OG16.2T are 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.



– Operate the tool (Fig. 6) by pressing the operating button (27) to pull the plunger **OG... completely** through the bush and the copper washer (Fig. 6); the bush will extrude onto the side of the hole and into the copper washer that shall be firmly locked (Fig. 7).
  To halt the advancement, release the operating button (27): the motor will cut out.
  Operate the pressure release lever (28) to retract the ram (16).

2.5) Conductor assembly

– Crimp the two lugs onto the conductors.
– Assemble all pieces as shown in Fig. 8.
– Fit the self-locking nut (Fig. 9) and tighten to the torque ratio indicated.

FIG. 1

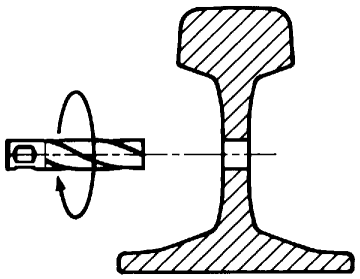


FIG. 2a

NO

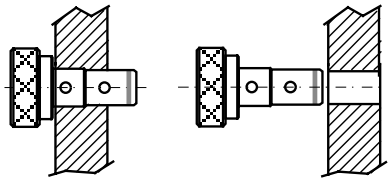
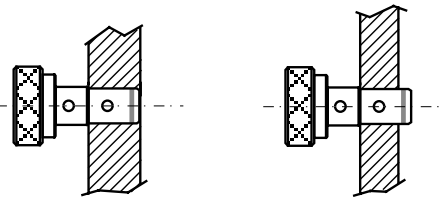


FIG. 2b

YES



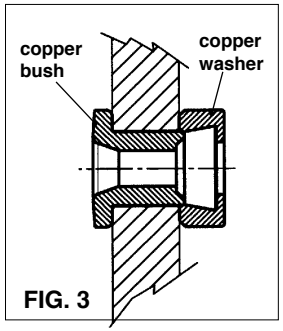


FIG. 3

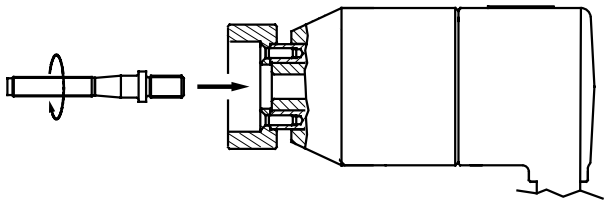


FIG. 4

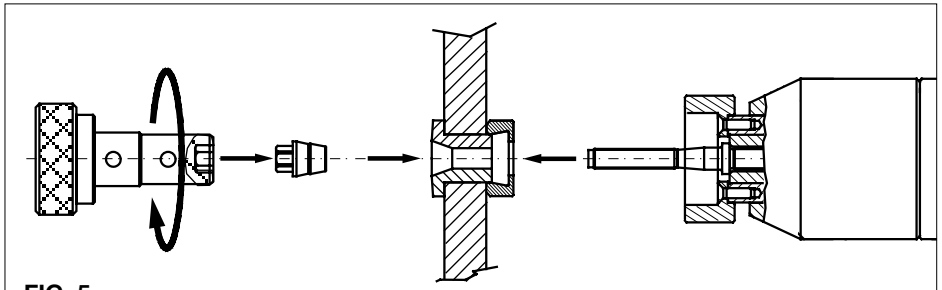


FIG. 5

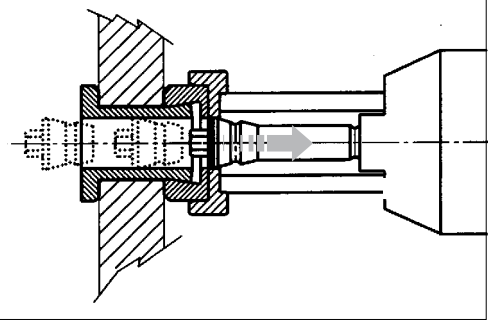


FIG. 6

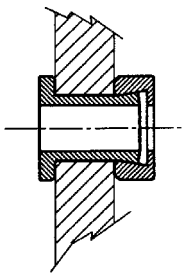


FIG. 7

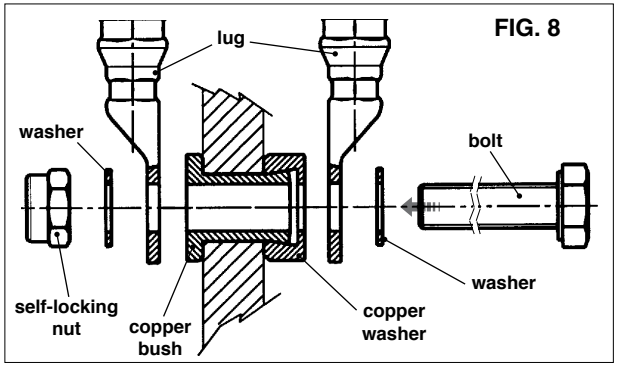


FIG. 8

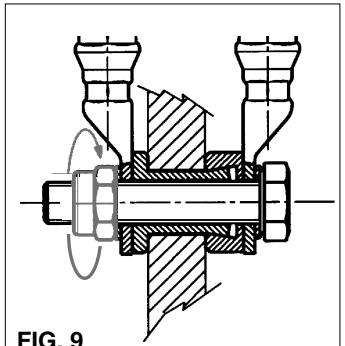


FIG. 9