



# SPAGNI

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1,12-11,2 3,10-9,4 5,8-7,6

## CAPPING MACHINE **MASUPTESTA** 4HEAD Maintenance and Instruction Manual

Fig. 01a



Fig. 01b





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Table.1		ID Schedule CE	
CODE art.	DESCRIPTION	ID NR	YEAR
<b>21016b4</b>	<b>MASUPTESTA 4R</b>	<b>V0425</b>	<b>2019</b>

## CONVENTIONAL SYMBOLS


 General Danger: injuries to people


 Caution - Volt tension: injuries to people


 Caution – moving partes: injuries to people


**NOTA** DANGER damages to the machine

IF THIS MACHINE IS USED IMPROPERLY OR THESE OPERATING INSTRUCTIONS ARE NOT FOLLOWED, THE MANUFACTURER DECLINES ANY AND ALL LIABILITY FOR INJURY TO PEOPLE OR DAMAGE TO PROPERTY  
THIS HANDBOOK CAN BE UPDATED OR CHANGED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS


**Table.2 TECHNICAL TABLE**

Art	Description	Bottles/hours	MOTOR KW 0,25 RPM900	Machine dimensions (BOX)			weight
				Lung	Largh	Altezza	Kg
21016b3	Masuptesta 3RM	500-600	220V50/60HZ	50	50	108	43
21016b4	Masuptesta 4RM		220V50/60HZ				
21016b3	Masuptesta 3RT		380V50/60HZ				
21016b4	Masuptesta 4RT		380V50/60HZ				

\*\*Accessories and surcharges (other customization available of requesti)

21035	Centering fork and diam bottle height up to 110mm
21036	Centering fork and diam bottle height from 110mm to 200mm
21038	PREMIBOCCA D28 mm
21038	PREMIBOCCA D31,5mm
21039	PREMIBOCCA D35 mm
21040	Complete Head 3Rolls
21041	Complete Head 4 Rolls

## 2.1 USE AND PRESERVATION OF THE INSTRUCTION


 This instruction manual is directed to the user, owner and maintenance person responsible, that are obliged to read this instruction manual.

The instruction manual serves to describe the use of the machine, its technical features, to give instruction for installation, adjustment and use.

The instruction manual has to be considered as part of the machine and it has to be preserved up to the dismounting of the machine.

The company SPAGNI SAS reserves the right to update the production and the instruction manual without being obliged to update the previous production and instruction manual, except for those cases that SPAGNI SAS considers proper.


If necessary, the User can contact the manufacturer in order to receive information.

In case of machine sale, the User has to enclose the relevant instruction manual.

## 2.2 RESPONSIBILITY OF THE MANUFACTURER



**NOTA** Modifications or removal of the safety doors and of the safety devices foreseen for the system cause a sudden loss of the warranty.

SPAGNI SAS is not responsible for the injuries occurred to person, damages to material or other things caused by:

- 
- incorrect use or misuse of the machine
  - tampering of the safety doors and of the safety devices of the SPAGNI SAS machine
  - introduction of the upper limbs or of the other body parts in the working area during the working phases with the machine turned on.

## 2.3 GENERAL SAFETY REGULATIONS

The machine can be cause of risk if used:

- 
- 
- in incorrect way
  - without respecting the warnings and the instructions for use, described in this instruction manual
  - by not skilled and trained personnel.

If you have to carry our repair or maintenance works by removing the safety devices, always be sure that the power sources have been de-activated.

For this reason on the machine:

- cut off the electric system by turning the main electric switch placed on the electric panel to "0".

Once the works have been accomplished, it's strictly important to fit the safety devices again in their places. Every modification or alteration introduced on the machine by the operator or/and by the maintenance person responsible is forbidden for safety reasons. The company SPAGNI SAS disclaims all responsibility in case of not authorized modifications.

## 2.4 GENERAL SAFETY RECOMMENDATIONS

The machine has to be used by a skilled operator.

He has to be able to:

- operate with the machine in normal conditions, by means of the foreseen operating commands
- carry out set-up and adjustment operations and some ordinary maintenance works.

The working area has to be cleaned with machine stopped and turned on.

The maintenance and repair works have to be carried out by skilled personnel, in particular:

- the mechanical interventions have to be carried out by the mechanical maintenance operators, that absolutely have not to operate on the electric system; the interventions on the electric installation have to be carried out by the electrical maintenance operators and not under tension.

During normal use of the machine is strictly forbidden to remove the safety devices and the safety doors. Once the maintenance and repair works have been accomplished, the removed safety devices or the opened safety doors have to be brought in their original position.

Do not put any tool, container or other material on the movable parts or on the moving parts.

We advise the operator to wear suitable clothes according the working environment and to use protective goggles and gloves in case of accidental breaking of glass containers, due to malformations or to adjustment errors caused by the operator.

## 2.5 NORMAL USE OF THE MACHINE

The machine is a manual capping machine for closing of glass or plastic containers with aluminium caps, after adjustments according to the change of size.



The capping machine cannot work if :

- there are outsiders in the working area
- the safety doors are open
- the safety devices are modified, tampered with, disconnected or removed
- without fixed machine on the floor

The machine has not designed to be used on a production line with other machines.

## 2.6 ENVIRONMENTAL CONDITIONS FOR INSTALLATION

In the place where the machine will be installed there have not to be jets of water or workings foreseeing liquid jets. The recommended ambient temperature is from 10°C to 25°C; besides the machine has to be positioned on a stable workbench or holding structure **fixed on the workbench**, having an height of min. 70 cm from the floor.

## 3.1 INSTRUCTIONS

Position the capping machine MASUPTESTA 4HEAD on a stable and fixed surface, fix the machine with the two rear brackets supplied from the builder, fig.2c p58


The capping machine has to be levelled, using the adjustable feet of the machine (see item 25, assembly drawing).

Connect the machine to the power mains of the workshop, 220V 50/60Hz mono-phase or 380/220V 50/60Hz three-phase (see machine details) with a plug CEE 17. Power on the machine, by turning the main electric switch to "I". Press the push button (item 33) and check if the head rotates properly; if the rotation direction is clockwise the machine is correctly connected, otherwise cut out the electric tension and reverse the phases.

The capping machine is supplied already set-up and adjusted for a certain type of container or cap as requested by customer.

Working sequences: position the container with the cap to be processed on the plate device (item 40), press the electric push button (item 33) and pull the lifting lever item 8 to come nearer the container to the capping head item 37 that carry out the flange threading.

 At the end of the working, **slowly release** the lever to lower the processed container and release the

electric push button.  Remove the already processed container and position the next one, by repeating the above listed working sequences.

The capping machine is supplied with an adjustment system in order to fit the capping head according to the different dimensions of the containers to be processed.

For the adjustment turn the plate device item 40 until the neck of the container without cap get to indicated height from the plaque on the machine.

### 3.2 CONTAINER CHANGE

If the container height changes, adjust it according one of the two following possibilities:

- 1) Position the new container **without cap** on the plate device item 40, loosen the ring nut item 39 and clockwise turn the plate to lift it or otherwise to lower it until the neck of the container get to indicated height from the plaque on the machine . Lock the ring nut item 39 to fix the right position.

Otherwise, if we not get the right height, proceed as follows:

- 2) Loosen the screw item 32 on plate item 40 and take out it from the screw item 38. Assembly one, two or all three spacers item 50-51-52 on the screw item 38 and fix them with the screws on all piece. Assembly the plate device item 40 and fix it with the screw item 32, position the new container **without cap** on the plate device item 40, loosen the ring nut item 39 and clockwise turn the plate to lift it or otherwise to lower it until the neck of the container get to indicated height from the plaque on the machine . Lock the ring nut item 39 to fix the right position

### 3.3 REPLACEMENT OF THE CAPPING HEAD

To replace the capping head act as follows:

- Cut out the power supply
  - Remove the lexan safety door (item 21)
  - Loosen the head (item 37) from the support PTF 1000/A (item 23)
  - Place an head according to the new format, being careful to lock it strongly.
- To adjust the capping head, please consult the relevant instruction manual, herewith enclosed.
- Fit the safety door (item 21) into its seat.
  - Insert power supply

## 4.1 EMERGENCY STOP

The emergency stop red mushroom push button is placed on the electric panel (item 35).

Press this push button in order to:

- Avoid injuries to person
- Reduce damages to the machine or to the production in progress.

Disengaging this mushroom push button, after an emergency stop, does not start the machine.

After an emergency stop, proceed as follows:

- Eliminate the cause of the emergency stop.
- Pull or turn the emergency stop red mushroom push button
- Press the start push button to start the production cycle.

## 4.2 WARRANTY

The warranty of the machine is valid for 12 months from the delivery date.

Within this period all the components that our technicians will judge as faulty will be replaced or repaired.

The warranty of the machine declines if:

- The suggestions or the warnings described in the instruction manual are not respected.
- Wrong operating movement caused damages to the machine.
- Improper use of the machine.
- Incorrect or not sufficient maintenance.
- Modifications or alterations of the machine carried out by the user.
- Tampering of the safety devices.

## 4.3 RISK ANALYSIS

The security and the reliability of the control system is guaranteed by the certification of the used components.

The working cycle foresees carrying out of precise operative sequences, described in the instruction manual.

The shape and the supporting points facilitate the positioning and assure stability, avoiding risks of fall.

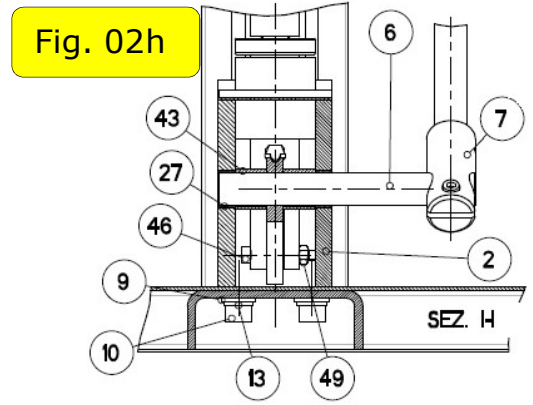
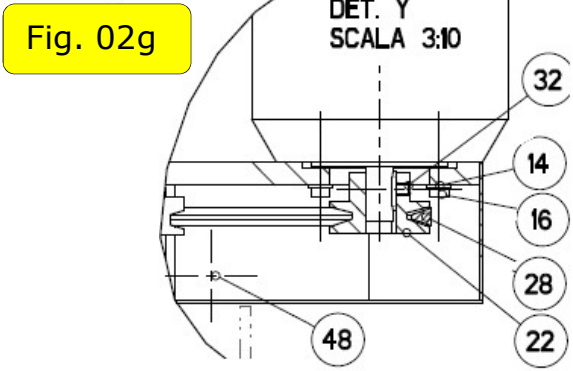
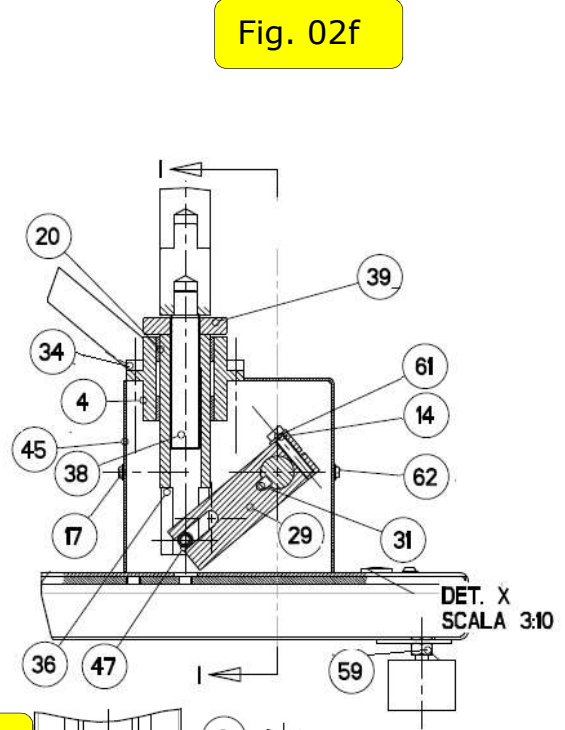
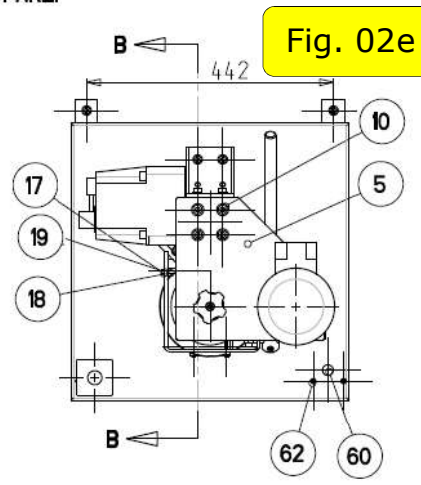
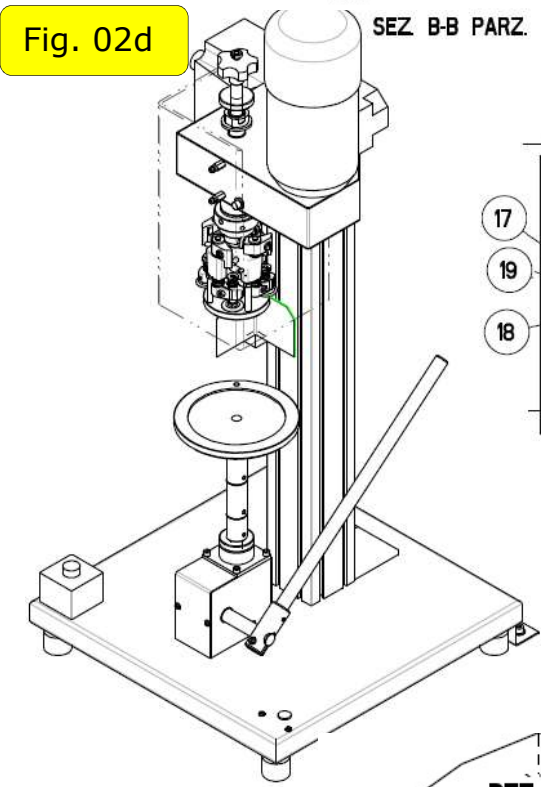
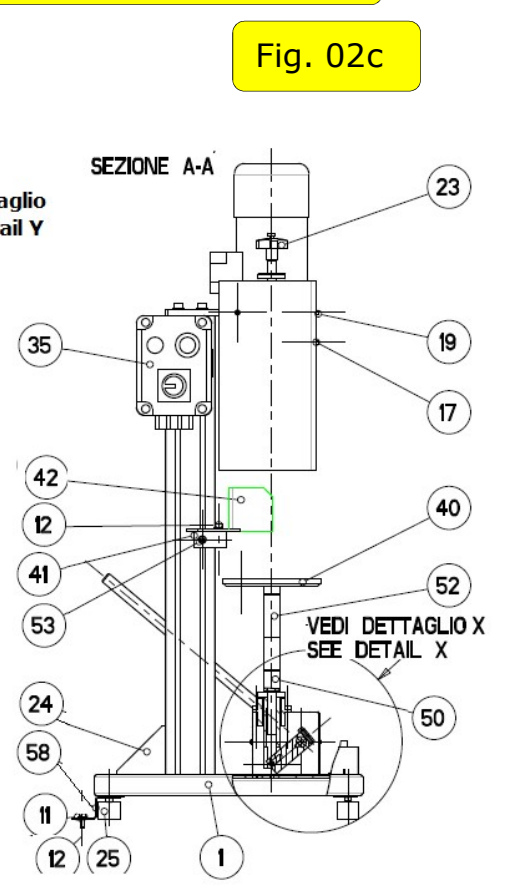
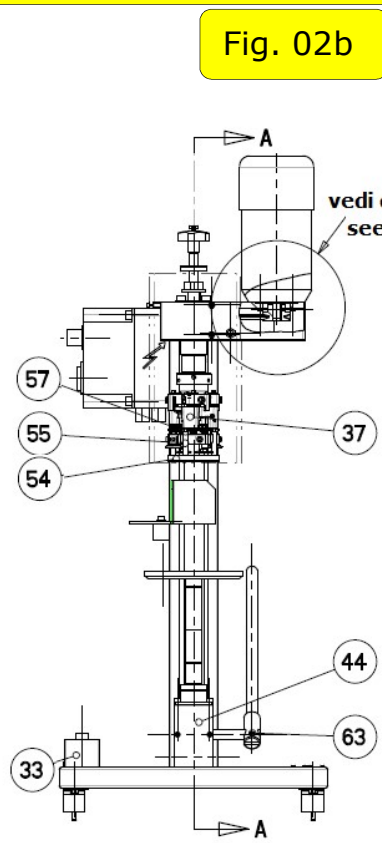
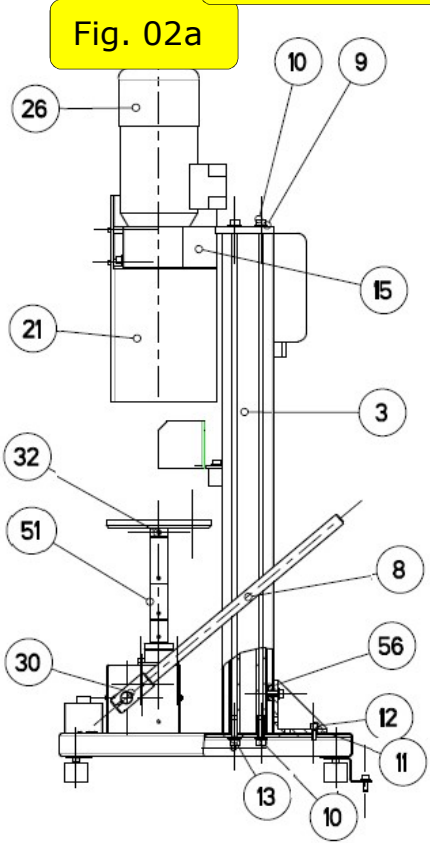
The moving parts of the machine, driven by a motor, are isolated and protected, thanks to sheet-metal and polycarbonate safety guards.

The machine start is possible by means of no. 1 push button placed on left of base plate and on the right lever as to constrain the operator to use both hands, avoiding to introduce them in dangerous zones where there are moving parts. The starting of the machine can be only voluntary.

The machine has not noise pollution and the noise degree survey is not necessary.

The machine parts must have smoothed profile and must not have cutting edges.

Fig. 02 Assembly drawing and main parts list of capping machine



POS.	DESCRIPTION	Q.ty
1	BASE PLATE	1
2	PLATE	2
3	COLUMN H 850	1
4	FLANGE	1
5	PLATE	1
6	LEVER SHAFT	1
7	BLOCK	1
8	LEVER	1
9	WASHER TC 10 UNI 6592	8
10	SCREW M 10X35 UNI 5931	8
11	WASHER TC 8 UNI 6592	11
12	SCREW M 8X20 UNI 5931	9
13	SPRING WASHER M 10 UNI 1751	4
14	WASHER TC6 UNI 6592	5
15	BELT CASE	1
16	SCREW M 6X25 UNI 5739	4
17	WASHER TC 4 UNI 6592	11
18	COLUMN H=15	3
19	SCREW M 4X12 UNI 5931	11
20	BUSHING	2
21	LEXAN SAFETY GUARD	1
22	PULLEY d. = 45	1
23	<b>HEAD SUPPORT ASSEMBLY</b>	<b>1</b>
24	ANGLE	1
25	BUMPER (levelling foot)	4
26	6 poles MOTOR KW 0,25 (0,33 HP) monophas	1
27	BUSHING	2

POS.	DESCRIPTION	Q.ty
28	TRAPEZOIDAL BELT Z 21 1/4	1
29	LIFTING LEVER	1
30	KEY A.4x4x20 UNI 6607	1
31	KEY A.6x6x10 UNI 6607	1
32	SCREW M6x6 UNI 5923	6
33	PUSH BUTTON BOX	1
34	SCREW M 6X14 UNI 5931	4
35	ELECTRIC PANEL	1
36	SHAFT	1
37	<b>ROLLER CAPPING HEAD</b>	<b>1</b>
38	HEIGHT REGULATION SCREW	1
39	RING NUT	1
40	PLATE DEVICE	1
41	SUPPORT	1
42	CONTAINER SUPPORT	1
43	LEVER SPACER	2
44	PROTECTIVE SHEET-METAL	1
45	REAR PROTECTIVE SHEET-METAL	1
46	SCREW M 6X50 UNI 5931	1
47	ROLLER NADELLA D9x12	1
48	MICROSWITCH FOR LEXAN SAFETY GUARD	1
49	LOCKING NUT M 6 UNI 7474	1
50	SPACER H=40	1
51	SPACER H=60	1
52	SPACER H=80	1
53	SCREW M 8X35 UNI 5931	1
54	CENTRER	1
55	ROD	4
56	LOCKING NUT	3
57	SCREW M5x16 UNI 5923	4
58	BRACKET MACHINE FIXING	2
59	LOCKING NUT M 8 UNI 5588	4

Fig. 03 Wiring diagram 220v

Fig. 03a External view

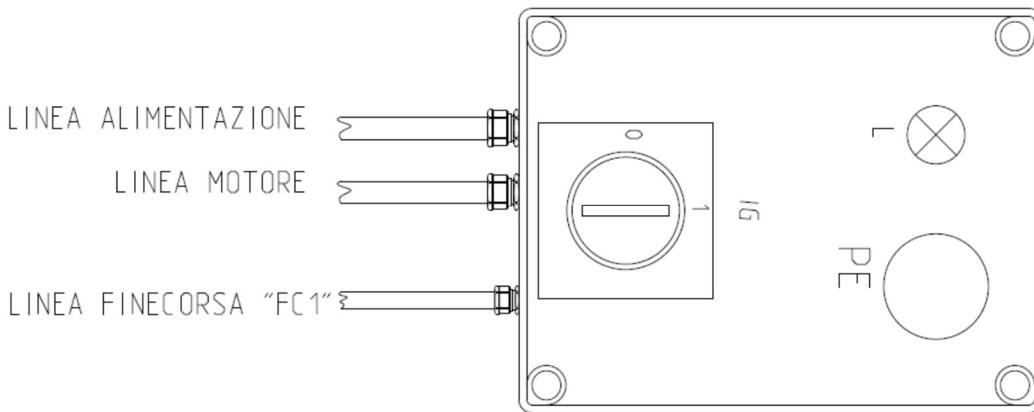


Fig. 03b Internal view

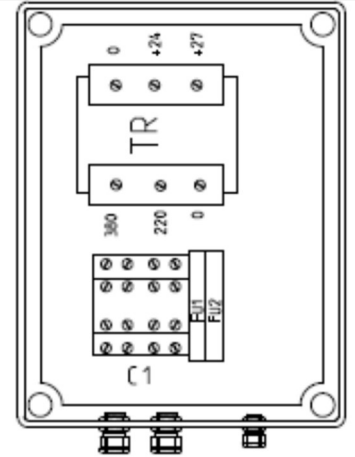


Fig. 03c Wiring diagram

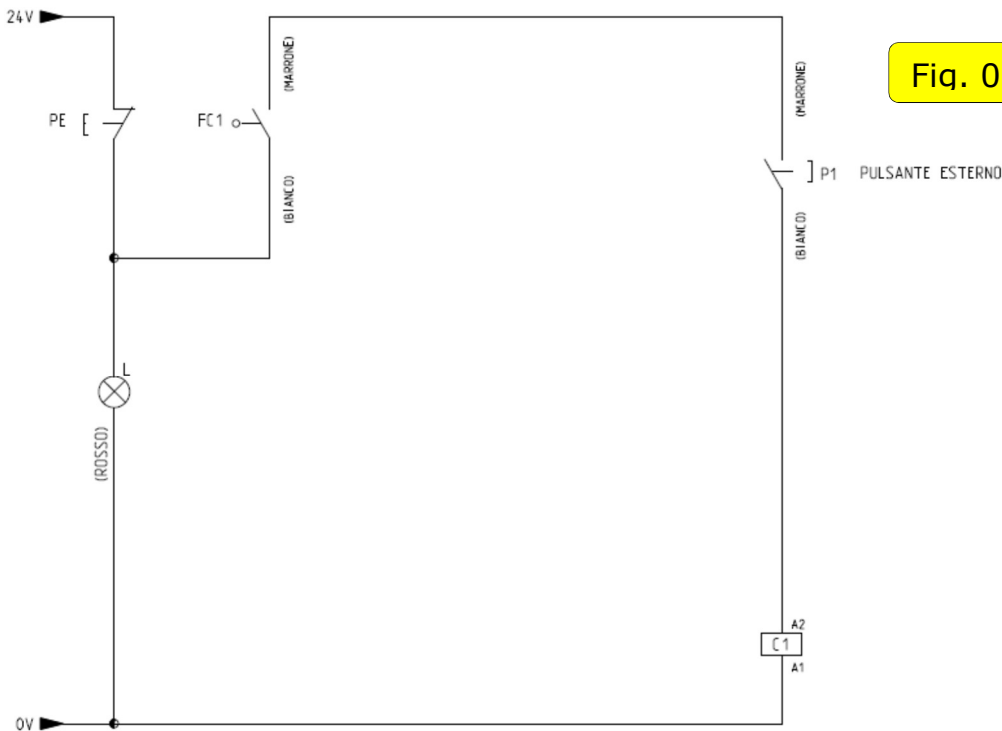
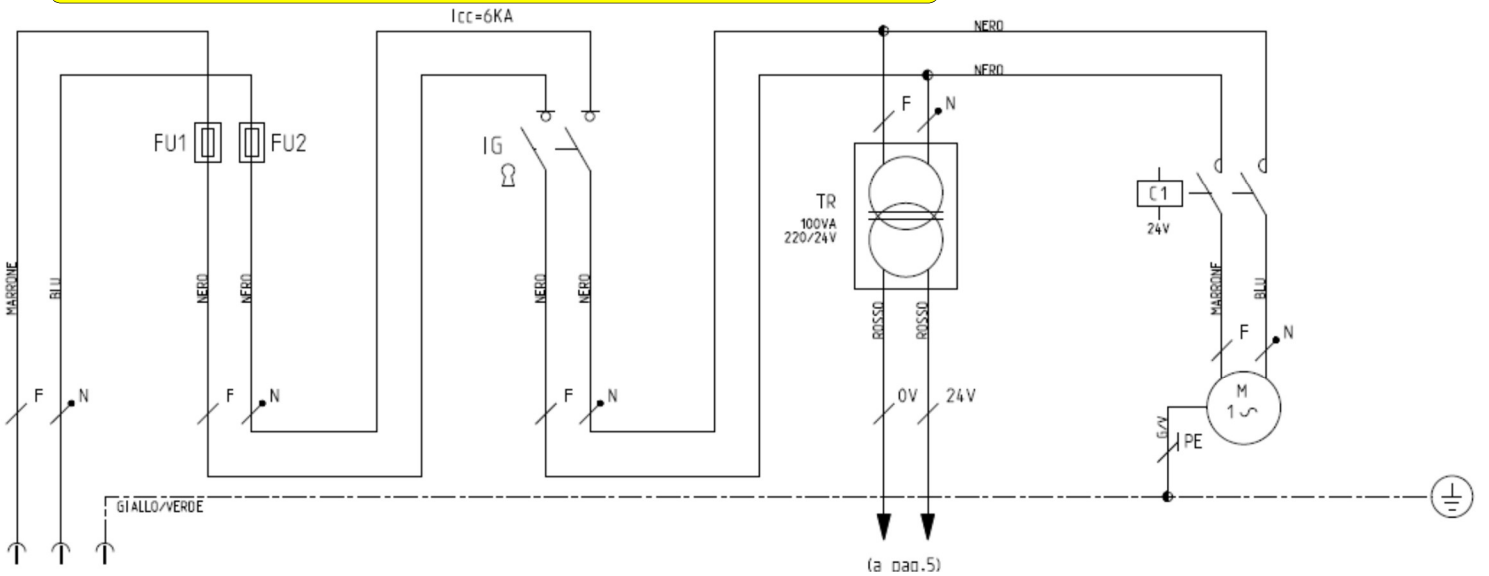


Fig. 03D Wiring diagram



## Fig. 04 Capping head adjustment and maintenance instructions

### CAPPING HEAD 4 head type 1000/4 TF

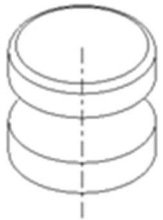


FIG. 1

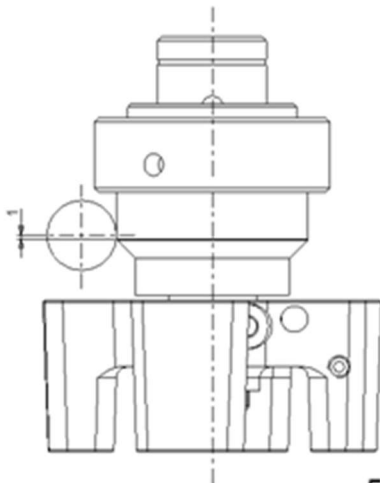


FIG. 2

The head for threading-edging is delivered already regulated for the type of container and capsule requires, and they don't need any other adjustment.

In order to adjust the head on a different size from the original one, follow these instructions:

- Fit the mouth-holder suitable to the new kind of closure, with the allen screws.
- Cut a capsule (see fig.1) and using the only upper part place it on the container.
- Place the container with the cut capsule under the head, and then lower the head completing the cam's run about 1 mm (see fig. 2)

### Adjustment threading rollers

- Loosen the locked screw pos.17 for to set free the support pos.15, and loosen the allen screw pos. 18 for to set free the socket pos.37 of the threading roller.

- Approach the roller to the inner diameter thread and adjust the height at the beginning of the thread, under his axle, screwing or unscrewing the socket (see fig.3).

- Lock the screw pos.17.

- Turn the head of 180° (work direction) and repeat the same adjustment with the other threading roller.( It is important to make this adjustment for the other roller in the same position, and with the head to the same height level for to have the same condition.

Turn the head (1/2 turn) work direction, the rollers go away from the initial position.

Loosen the only screws pos.17 regarding thread rollers support and to bring near to the container about 1,2-1.5 mm for to guarantee a preload on the thread rollers during the work.

Lock the screws pos.17.

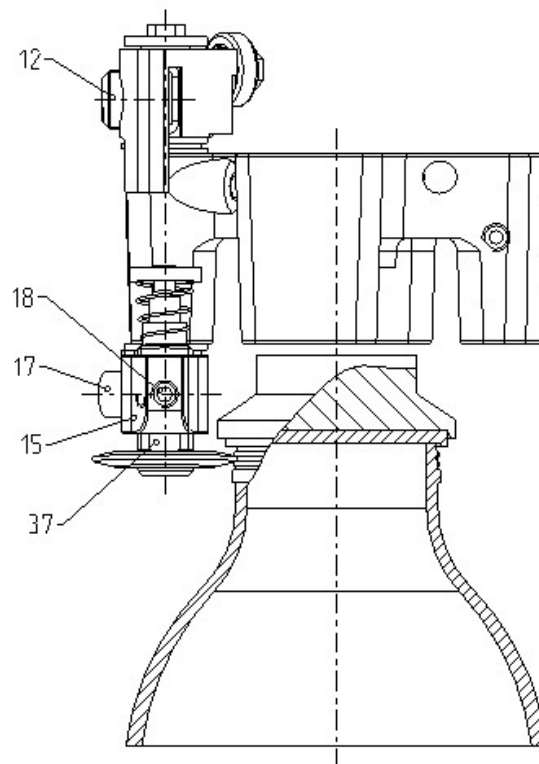
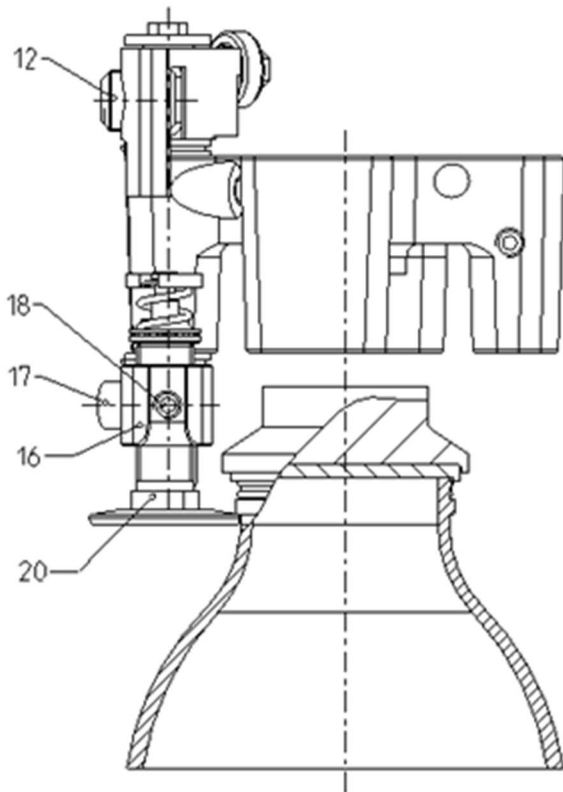


FIG.3

### Adjustment edging roller



**FIG.4**

- Loosen the screw pos.17 for to set free the support pos.16 and loosen the allen screw pos.18 for to set free the socket pos.20 of the edging roller.
- Drive the roller directly in contact with the container neck.
- Lock the screw pos.17.
- By the socket pos.20 screwing or unscrewing, to drive the roller under the edge of the neck (see fig.4).
- Repeat the same operation on the other roller.

N.B. General rules, head turns on the container max 2,5 min 2.

Further control is that the supports pos.15 and 16, during work position, must to have a displacement (springing) toward the exterior 1,5 mm min.

This condition depends from pressure by allen screws pos.12.

Carry out some tests.

Further You must consider for a well-close cap, the big spring pressure, following the instructions of the builder of the capping machine.

The perfect working of the capping head depends on periodical maintenance.

Lubricate periodically and clean the rollers with care.

Fig. 05 CAPPING HEAD TF4 B2

1	Aggregate		
2	Main body	1	
3	Upper support	4	
4	Shaft for roller movement	4	
5	Seeger ring E 12 UNI 7435	12	Inox
6	Washer	4	
7	Screw M 4 x 8 UNI 5739	4	Inox
8	Washer	12	
9	Washer D 5 UNI 6592	4	inox
10	Ball bearing 625-2Z	4	
11	Screw M 5 x 12 UNI 5739	4	inox
12	Screw for spring adjustment	4	
13	Spring	4	
14	Spring	4	
15	Lower support	2	*
16	Lower support for edging	2	*
17	Screw M 6 x 14 UNI 5931	4	Inox
18	Allen screw M 6 x 6 UNI 5923	6	Inox
19	Blocking weldnut	6	
20	Socket for edging roller	2	*
21	Edging roller	2	*
22	Thrust block Nadella AX 715	2	*
23	Disk for spring guide	2	*
24	Disk for spring keeping	4	
25	Spring	2	*
26	External shaft	1	
27	Internal shaft	1	
<b>POS.</b>	<b>DESCRIPTION</b>	<b>Q.</b>	<b>NOTE</b>
28	Thrust block Nadella AX 917	2	
29	Spring washer Nadella CP 917	2	
30	Allen screw M 6 x 16 UNI 5925	1	Inox
31	Cam	1	
32	Key	1	
33	Greaser M 6 9001 type	4	
34	Ring nut	1	
35	Conic spring	2	*
36	Push-rod	4	
37	Socket for threading roller	2	*
38	Threading roller	2	*
39	Roller bearing HK0910	2	
40	Mouth holder	1	
41	Greaser M 6 9000 type	1	
42	Gas ring Nadella ET 1622	1	
43	Allen screw M 5x5 UNI 5927	2	
44	Screw M 3x4 UNI 6107	1	

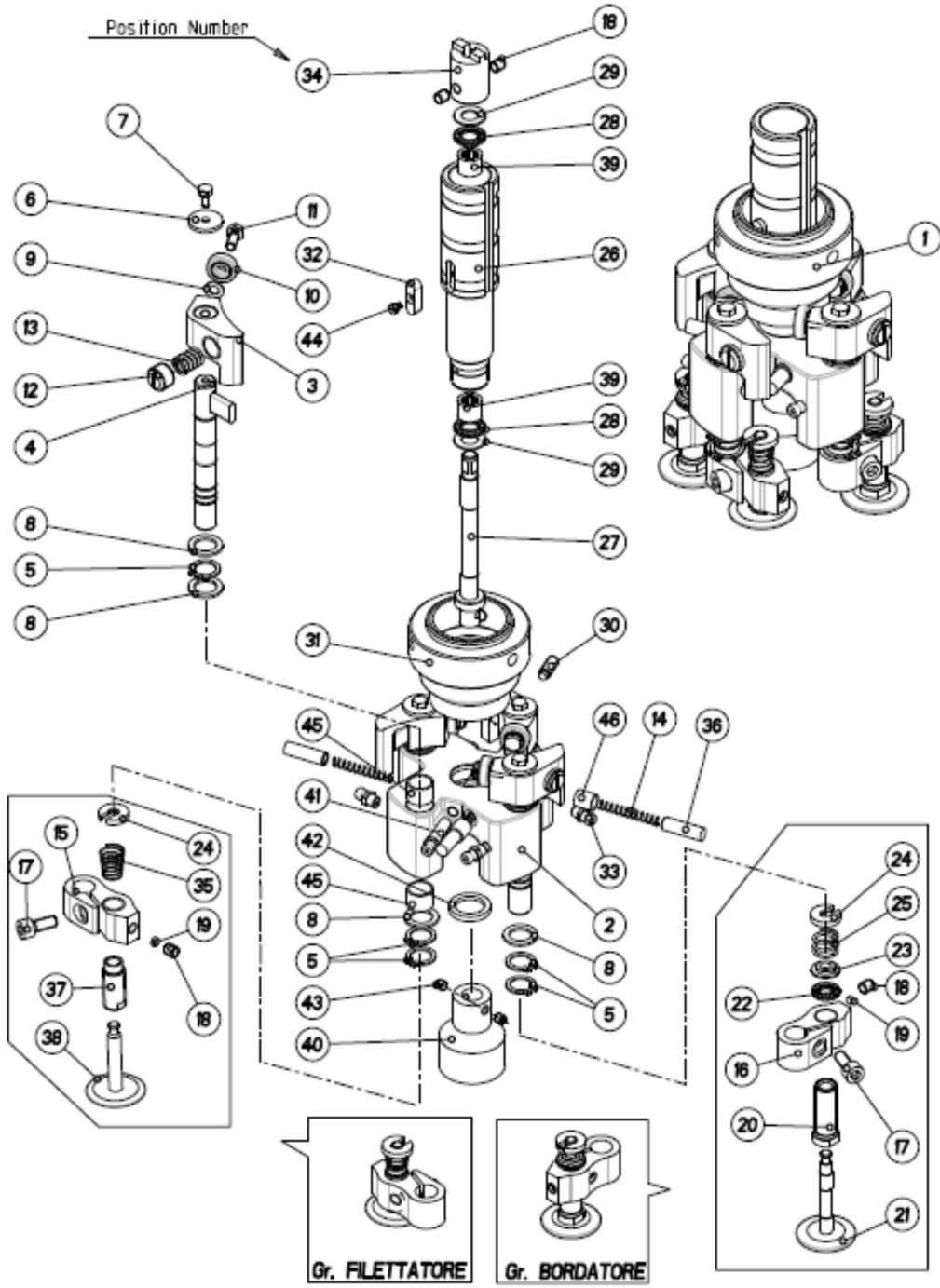


Fig. 06 CAPPING HEAD TF4 B2

POS.	DESCRIPTION	Q.
1	capping head	1
2	centring band	1
3	shaft	4
4	screw M4x12 UNI 5931	4
5	screw M5x16 UNI 5923	4

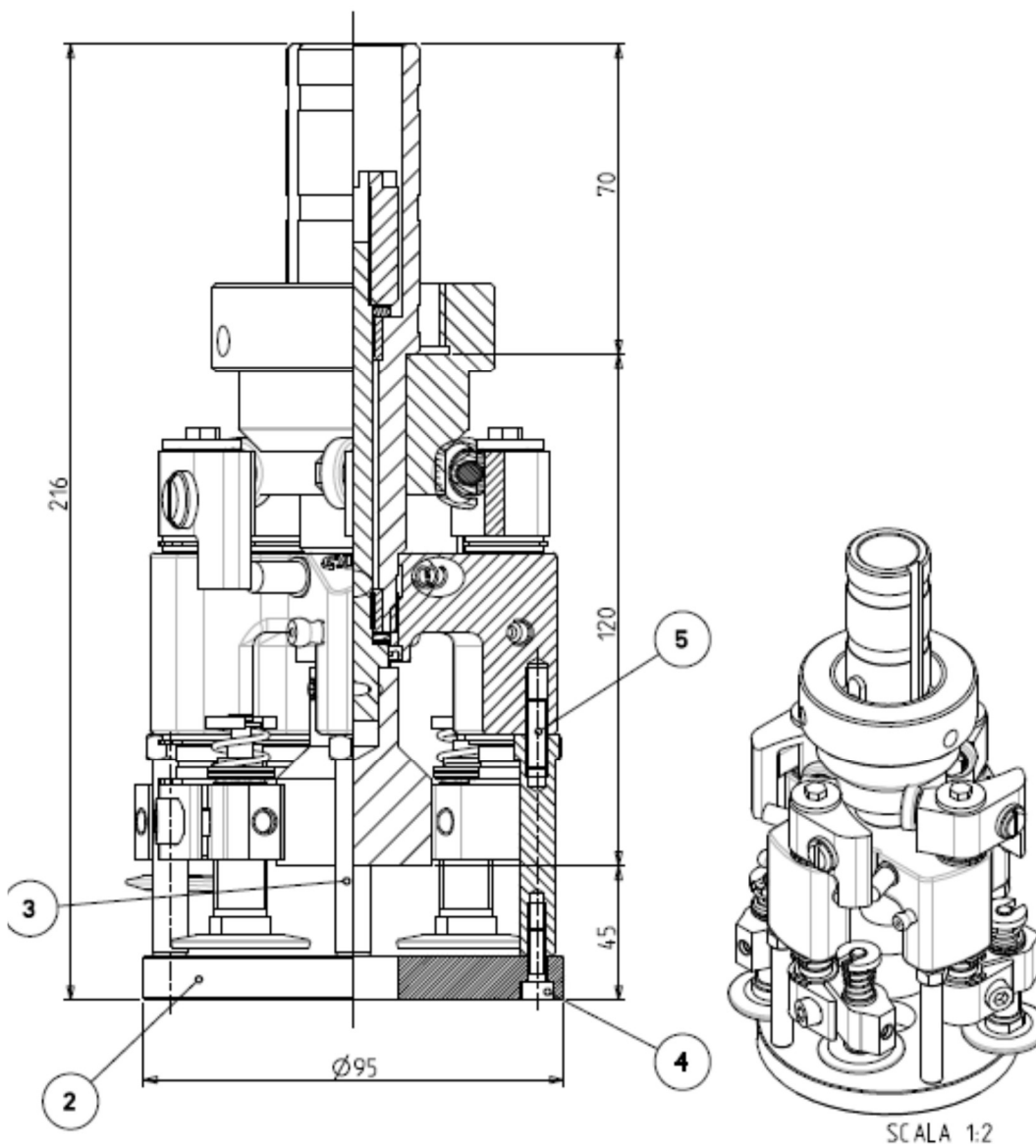


Fig. 07 Capping head support for TF series

POS.	DESCRIPTION	Q.ty	NOTE
	<b>SUPPORT</b>		
1	BODY - PULLEY	1	
2	SHAFT	1	
3	ADJUSTABLE BUSHING	1	
4	SPACER	1	
5	LOCKING DEVICE	1	
6	M 24 UNI 6592 FLAT WASHER	1	inox
7	NKI 22/20 ROLLER BEARING	1	
8	6205 Z BEARING	1	
9	SPRING	1	L = 120
10	BUSHING FOR SPRING	1	
11	WR 22 RING	1	
12	RING NUT	1	
13	ELESA GN 5334 60 M12 E HAND WHEEL	1	
14	LOCKING RING	1	

Fig. 07a

