

USER MANUAL



Automatic Pump



CE



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Edition

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2013

ENGLISH

Dear Customer

Thanking you for the preference granted us, we remind you that the present manual contains all the information necessary for a correct use and for the necessary maintenance of the plant.

We suggest you, therefore, to read it carefully before proceeding with the installation and to keep it at disposal of the persons in charge for the use of the same machine.

We remind you, anyway, that for any problem of any kind, we remain at your disposal for any further clarification so as to optimize the use of the machine itself.

Best regards
B.P. ELETTRONICA SNC

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The descriptions and images are not binding, as a consequence **B.P. ELETTRONICA SNC** reserve the right to make in every moment all the modifications they consider appropriated.

The present manual is:

- integrating part of the supply and must be read carefully for a correct use, in conformity with the essential safety requirements;
- elaborated according to the dispositions of the Machine Directive 2006/42 CE, it contains the information necessary to carry out properly all the procedures in safety conditions;
- it must be conserved with accuracy (protected in a transparent airtight cover to avoid its deterioration) and it must accompany the machine during all its life, included any changes in ownership.

In case of loss or deterioration it's possible to receive a copy making a request to **B.P. ELETTRONICA SNC** signalling the data indicated on the identification label.

B.P. ELETTRONICA SNC refuses all responsibility for damages arising from operations not explained in this manual.

List of symbols used in the manual

Symbols indicating dangerous situations or very much important information.



Caution!

It indicates dangerous situations.



Warning!

It indicates dangerous situations for the machine and/or for the product in process



N.B.!

It indicates useful information for manual consultation and for the good operation of the machine.

Symbols indicating information related to skilled operators.



Maintenance operator

It indicates the procedures of ordinary and programmed maintenance competing to the mechanic or electric maintenance operator.



Skilled technician

It indicates the procedures for installation, start-up and /or extraordinary maintenance (of electric/mechanic type) competing to the assistance technician servant or authorised by **B.P. ELETTRONICA SNC**.

GENERAL INFORMATION



The present manual is referred to:

AIRLESS SYSTEM FOR THE APPLICATION OF GLAZE, ENGOBES AND CRISTALLINE
mod. AUTOMATIC PUMP

This manual contains information related to the use, the maintenance, the disassembly and the surveillance of the machine, thus it must be considered integrating part of the machine itself, therefore it must be conserved carefully until the final dismantlement of AUTOMATIC PUMP.

In case of damage that does not allow the use anymore, this manual can be requested to the seller.

The present manual reflects the real conditions of the machine and cannot be considered inadequate only because subsequently updated according to new experiences. The seller reserves the right to update the production of the above mentioned manual without the obligation to inform the users of the machinery previously supplied. The signalling from our side of possible modifications must be considered as a form of courtesy. Our customer service remains in any case at disposal of the users.

The seller disclaims any liability concerning:

- Improper use of the machine;
- Use contrary to the specific laws;
- Incorrect installation;
- Feeding faults;
- Serious lacks in the maintenance;
- Modifications and interventions non-authorised or not supervised by our technician;
- Use of non original spare parts or not authorised by the supplier of the machine;
- Total or partial non-observance of the instructions;
- Exceptional events.

GENERAL INFORMATION ABOUT THE SAFE USE OF THE MACHINE



- Read the manual carefully and don't start the machine if it is on breakdown.
- Don't allow the non-authorised personnel intervening on the same;
- Before the start-up, ensure the possible existence of any dangerous condition for the same or for the staff;
- Be sure that all guards are in place and that all the safety devices are working and efficient;
- Pay attention to possible extraneous objects placed in the machine working area;
- Any maintenance operation must be performed with the machine turned-off;
- If there is the possibility to be hit by projections or by the falling of solid or similar parts, use glasses with lateral blinkers, helmets, gloves or other means for the individual protection;
- Although the machine is not noisy, it can be required the use of protections against the noise because of the sound pressure level of the environment where the machine is installed.
- Any interventions on the machine electric equipment must be carried out by highly skilled personnel, respecting the safety rules in force.

INFORMATION AND FEATURES



The pump has been realized for different types of ceramic mixtures in suspension.

The used products must not be aggressive for the materials constituting the pump, they must not produce toxic or harmful vapours for human health and they must not produce particular hazards such as fires.

In case you use substances don't respecting these requirements, it will be necessary to provide for the adoption of suitable solutions, possibly in agreement with the manufacturer.

The machine running must be entrusted to personnel pre-instructed about the features of the same and informed about the content of the present manual.

GUARANTEE AND EXCLUSIONS OF THE RESPONSIBILITIES



The complete clauses of the guarantee are indicated in the sale contract.

The guarantee is subordinated to the following conditions:

- The machine must be used within the limits declared in the contract and indicated in the present manual.
- the machine must be used following the manual instructions;
- the maintenance must be performed within the times and in the ways foreseen by the manual, using original spare parts and entrusting the intervention to skilled personnel.


B.P. ELETTRONICA SNC disclaims any liability arising from:

- improper use;
- use by non-authorized or not trained personnel;
- partial or total inobservance of the instructions;
- faults in the working environment (paving not in conformity with the foreseen specifications, excessive lighting, excessive temperature and humidity);
- lacks in maintenance;
- pollution from outside of machine;
- non-authorized modifications or repairs;
- Use of non-original spare parts;
- Exceptional events such as earthquakes, flooding or fires.

IDENTIFICATION LABEL

On the machine it is fixed a label showing the identification features of the machine, whenever there is the need of any intervention or information request, it's necessary to communicate the data present on this label to individuate the model with precision.

The present label is the official reference to which all the guarantee conditions applicable to the machine in object are bound.

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AUTOMATIC PUMP	
Modello / Type	
Matricola / Serial Number	
Anno / Year	
KW	
Volt	
Non rimuovere / Do not remove	<i>Made in Italy</i>

It's forbidden to remove, damage or modify the data on the label



INSTALLATION



ELECTRIC CONNECTIONS AND HABILITATIONS

Electric Board feeding

Feeding connection 440 V a.c. 50 / 60 Hz three-phase: to be connected as indicated in the electric diagram.

Line block connection

To be connected as indicated in the electric diagram.

Predisposition of the place

The only advice about that is that it's necessary to make the access to the machine command organs safe and comfortable.

CAUTIONS FOR A CORRECT MACHINE START-UP

Despite the machine is subjected to a trial before the delivery, it's necessary to effect the verification and the seal of all the installation elements before starting it. Further, the pressure is adjusted to a max of 20 Bar which we suggest to adapt to the final specific use.

1. Immerse the dip pipe into the container of the liquid we wish to suck up.
2. Open the taps only after connecting them to the high pressure pipes with spraygun and nozzle.
3. Start the machine acting on the proper switch.
5. Choose the wished working mode (Automatic / Semi-automatic) and follow the working procedures as shown in the following pages.

The glaze to use, must have been previously sieved with a net of at least 2000 mesh.



Machine stop-phase and cleaning:

To stop the machine it's enough to intervene on the proper switch placed on the command electric board, bringing it back into the original position 0.

To effect the pump cleaning, you can go into the terminal cleaning page (PUMP CLEANING) or continue working in automatic and: immerse the dip pipe into clean water, let the same circulate inside of it for some minutes until it is clear at the output.

Stop the pump leaving inside an adequate quantity of clean water.

The working pressure can be adjusted according to the nozzle diameter, in addition for a longer lasting of the diaphragms, you may avoid the idle working of the pump, this both during the normal use and the cleaning.

INSTALLATION / CONNECTIONS

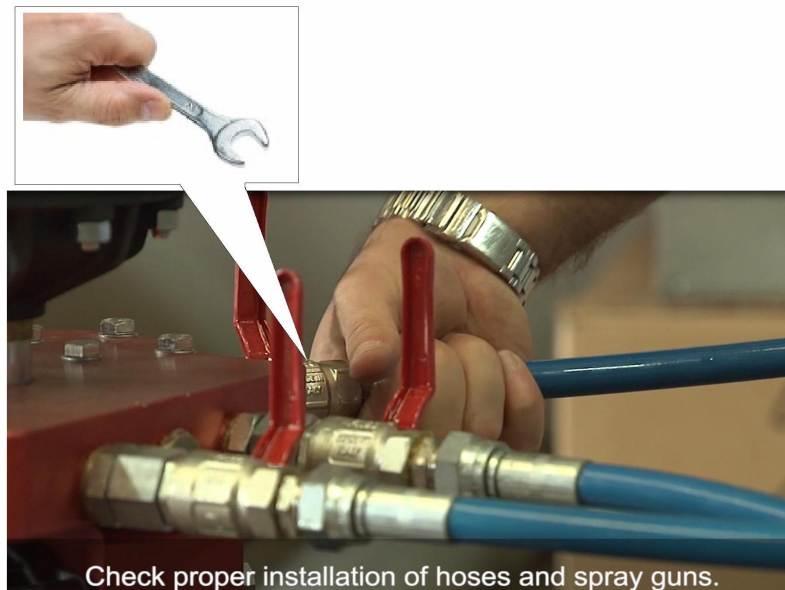


Feeding circuit connection and glaze recirculation

Connect all pipes to the supply connections (from a minimum of 1 output to a maximum of 6 outputs) placed on the base of Pump, making sure to tighten all the fittings properly.

Pipe specification:

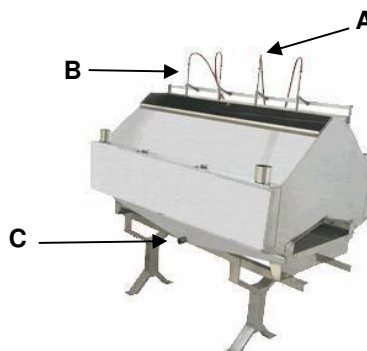
Each pipe is 3/8" and 5 mt in length, complete with 1/2" fittings pre-assembled by pressing, suitable for high pressure up to 100 bar and with non-stick and anti-contamination and sedimentation inside.



Install spray guns in cabin upper part on the suitable support.

Connect all supply pipes (A) to spray guns connections (B), making sure to tighten all the fittings properly

Connect to the exhaust (C), placed in cabin lower part, a pipe to allow the glaze in excess to flow down inside the tank.



Spray guns and nozzle installation

Be sure that:

- The nozzles of the gun/s are perfectly aligned and perpendicular to the center line of the grazing line.
- The spray gun/s are locked with the suitable brackets so as to avoid any shifting or falling.

Spray guns' nozzles have to be placed at 55 – 65 cm from tile surface.

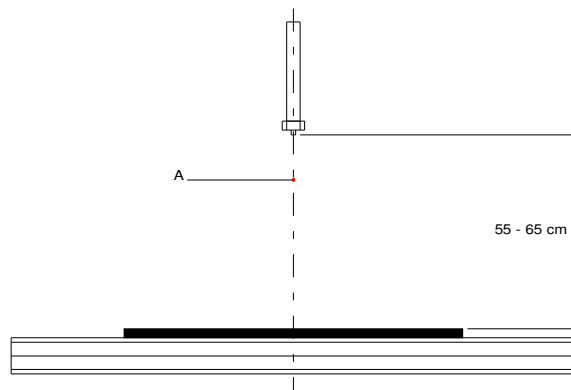
Install on the spray guns the nozzles with the characteristics best suited to the type of material to apply (see nozzles table).

Caution!!!



The above operation must be carried out with the utmost attention and care since a perfect application of material depends on the correct positioning of the nozzles.

Check that all feeding and delivery pipes do not have too sharp curves or crushing. These conditions affect the passage of the product, causing the non-constancy of flow rate to the spray guns and, as a consequence, the lack of homogeneity of the product.



Suction pipes connection

Connect all pipes above the cabin with the central suction system through connection flexible pipes and shutters.

N.B. fix pipes with clamps or other fastening means that does not allow the dispersion of fluid vapours in the working environment.

Standard nozzles table

Nozzles specifications			Capacity at 10 bar (l/min) liquid: water
Nozzle code	Angle	Diameter (inches)	
6501	65°	0,026	0,86
65015		0,031	1,1
6502		0,036	1,82
6503		0,043	2,62
6504		0,052	3,2
8001	80°	0,026	0,86
80015		0,031	1,37
8002		0,036	1,75
8003		0,043	2,24
8004		0,052	2,96
9501	95°	0,026	0,9
95015		0,031	1,3
9502		0,036	1,82
9503		0,043	2,64
9504		0,052	3,64
1100025	110°	0,013	0,21
1100033		0,015	0,26
1100039		0,016	0,31
1100050		0,018	0,42
1100067		0,021	0,57
1100080		0,023	0,69
11001		0,026	0,86
110015		0,031	1,3
11002		0,036	1,77
11003		0,043	2,6
11004		0,052	3,99

Usable ceramic glazes

The glazes that will be applied must be suitable and compatible with the materials composing the machine parts they come in contact with. Furthermore they must not :

- Be aggressive;
- Generate vapours toxic or harmful for human health;
- Originate additional hazards, such as fires.

In case substances are used that do not meet these requirements, you must adopt appropriate measures to prevent the specific risks not foreseen by the manufacturer.

Characteristics if the glazes to be used:

Density	Viscosity
From 1400 1600 g/dm ³	0 – 25 sec. cup ford 4

Glaze weight



Weight to apply on the tile is determined by different factors:

- Working pressure;
- Glaze density;
- Nozzle model (Diameter and angles);
- Glazing line speed;
- Spray guns height;
- Tile size;

By acting on these factors we can increase or decrease quantity of product to apply on the tile.

Identify the correct working pressure:

Higher is the working pressure and higher will be the flow rate output.
Higher is the pressure and higher will be the product nebulization.

Glaze density:

Higher is the density and higher will be the applied weight.

Selection of the nozzle most suitable for our size:

Higher is the gradation and larger is the tile that it is possible to glaze.

Larger is the opening and bigger will be the quantity of product output.

Larger is the opening and higher will be the working pressure to input in terminal to get a good nebulization and laying.

Line speed:

Higher is line speed and lower will be the quantity of applied product.

Spray guns height:

Higher are the nozzles of the guns from tile surface and lower will be the quantity of applied product.

PULSE DAMPER ADJUSTMENT



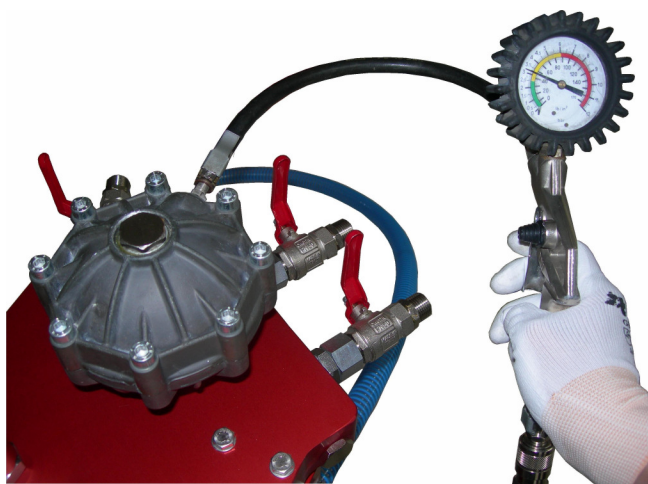
Carry out accumulator adjustment when machine is stopped or off.



A correct adjustment of the accumulator favours a perfect stability of spray gun angle.

SUGGESTED PRESSURES:

WORKING PRESSURE	ACCUMULATOR PRESSURE
From 2,0 Bar to 3,0 Bar	1,8 Bar
From 3,1 Bar to 5,0 Bar	2,5 Bar
From 5,1 Bar to 7,0 Bar	4,5 Bar
From 7,1 Bar to 20,0 Bar	6 Bar

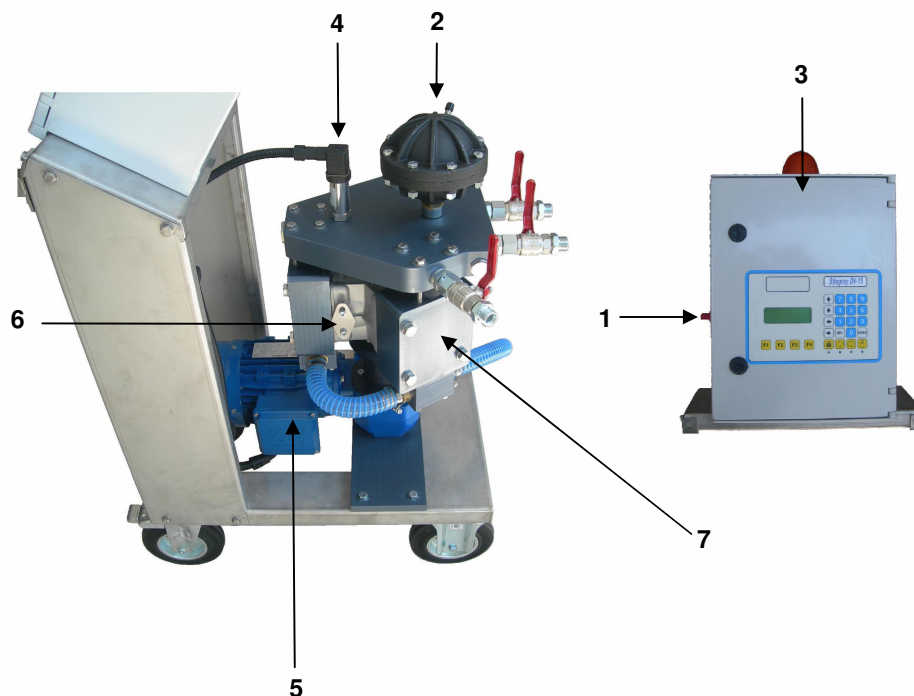


Perform periodically the control of the accumulator pressure.

DESCRIPTION OF THE MACHINE

GROUPS COMPOSING THE MACHINE

Hereinafter it is illustrated an explicative scheme of the whole machine with the list of the main components forming it, useful for a fast individuation of the same.



- 1 - Main switch
- 2 - Impulses damper (keep it at a pressure lower than the working one)
- 3 - Electric board
- 4 - Pressure sensor
- 5 - Electric motor
- 6 - Oil stopper
- 7 - Pump group

GENERAL DESCRIPTION OF THE MACHINE

The machine in object is destined to the pumping of abrasive products and not, such as for example ceramic glazes, crystalline, engobes, slips, water and so on.

The great power and strength of the pumping group, together with the automatic electronic control of the pressure, make it a very reliable and easy to use product.

The heart of the system is an electronic pump with 3 pistons out of phase 120° to one which start three diaphragms allowing in this way a perfect flux linearity, condition granting thus an absolute constancy in the grams of applied glaze.

The high achievable pressure allows the best nebulisation of the glaze, even at very high density, allowing then a perfect glazing, which identifies in specular covering surfaces.

TECHNICAL FEATURES

Technical Features:
Min Pressure 2 Bar With 1 Single Nozzle
Max Pressure 20 Bar
Predisposition to use 4 or 6 Nozzles of series
Capacity 2 - 15 lt./min
Flux Control manual or automatic mode
Power 0,75 Kw
Voltage and frequency: upon request
Structure in stainless steel AISI 304
Wheels dim. 150 mm
Tubular INOX with Filter
Self-priming Pump
Dim. 400 x 800 x 1250 mm

TECHNICAL SPECIFICATIONS

The machine must absolutely be driven by skilled personnel and acknowledged about the complete content of this manual.

The machine, in fact, in any case must not be addicted to other uses which are not those for which it has been projected.

The personnel addicted to drive the machine must wear the proper individual protection devices; further all the normal safety cautions in course in the country must be adopted.

It's forbidden to use the machine for glazing:

- Before the plant it be will incorporated into is declared conform to the national directives and the dispositions of actuation.
- In explosive atmosphere or in place where there is the risk of fire.
- If it hasn't been correctly installed.
- With the safety devices in damage or lacking.



Any other use of the machine is considered improper, not foreseen, then dangerous.

The use of the machine for different uses or to obtain production values higher than the foreseen one, is considered **improper use**.

It's forbidden to use the machine for glazing:

- Materials of nature different from the ceramic pastes.
- Injurious, toxic or radioactive substances.
- Substances which, if glazed, can cause fire or explosion.
- Substances whose nature causes the risk of biologic or microbiologic contamination.



The use of the machine with other materials is considered improper use, not foreseen, then dangerous.

Do not run the pump empty for extended periods.

OPTIONAL:

SAVER PUMP KIT

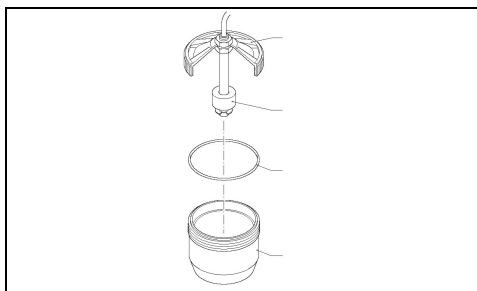
Sensor for oil level control;

The sensor is activated, stopping the machine immediately, when it presents the condition of oil lack.

The oil is used only to lubricate the internal pistons of pumping unit, it is recommended the total change of the oil every two years.

The Saver Pump kit warns with a message on the display and immediately stops the pump in case of:

Oil lack;
Membrane breaking;
Pumping unit breaking.



A L A R M

OIL

Oil for pistons lubrication is finished or one membrane is broken.

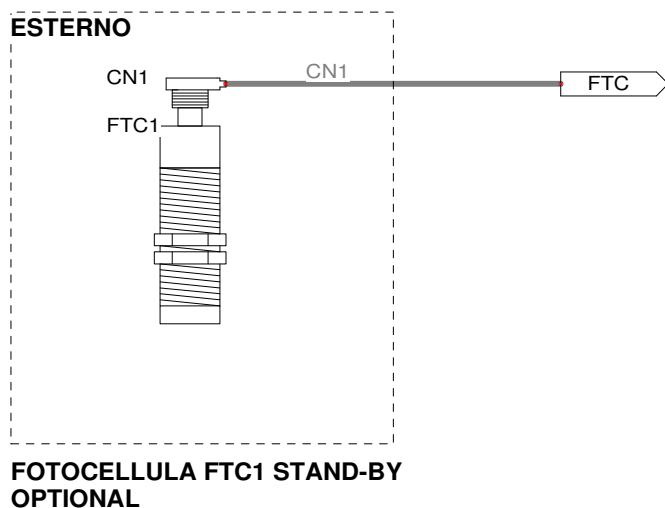
- If the oil is finished, fill the tank up to the maximum level.
- If one membrane is broken, open the pump and replace it with a new one.

N.B. message active only with Saver Pump Kit

OPTIONAL:

STAND – BY PHOTOCELL

When there is no more material arriving for the set time, pump works at low speed: (Energy saving; nozzle wear saving; Glaze saving), returning immediately to the pressure set upon material return.



STAND-BY
T.Ftc off=060 Sec
F.Standby=15 Hz

Off photocell time [030 - 600 Sec]

It sets the time which may pass from when the photocell doesn't read the material anymore to when the machine puts itself in stand-by. (STAND-BY Mode).

Standby Frequency [05 – 50 Hz]

Insert the working frequency for the STAND-BY mode

INDIVIDUAL PROTECTION DEVICES AND SAFETY RULES

For the plant driving it's necessary to wear the proper individual protection devices (D.P.I.), such as gloves, proper shoes and so on, following the rules of the country or the single regulations of the plants.

On the present manual they are signalled with proper symbols the suggested individual protection devices for the various interventions on the machine.



To prevent eventual accidents, it's obligatory to use always the individual protection devices, without underestimating any situations, potentially any intervention on the plant, if imprecise or awkward, can be cause of serious accidents.



SUMMARY or OPERATOR PANEL INDEX

0.1. FUNCTION OF PUSHBUTTONS ON KEYBOEAD

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0.2. MANUAL MODE PAGE DESCRIPTION

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0.3. AUTOMATIC MODE PAGE DESCRIPTION

.....

0.4. SEMI-AUTOMATIC MODE PAGE DESCRIPTION

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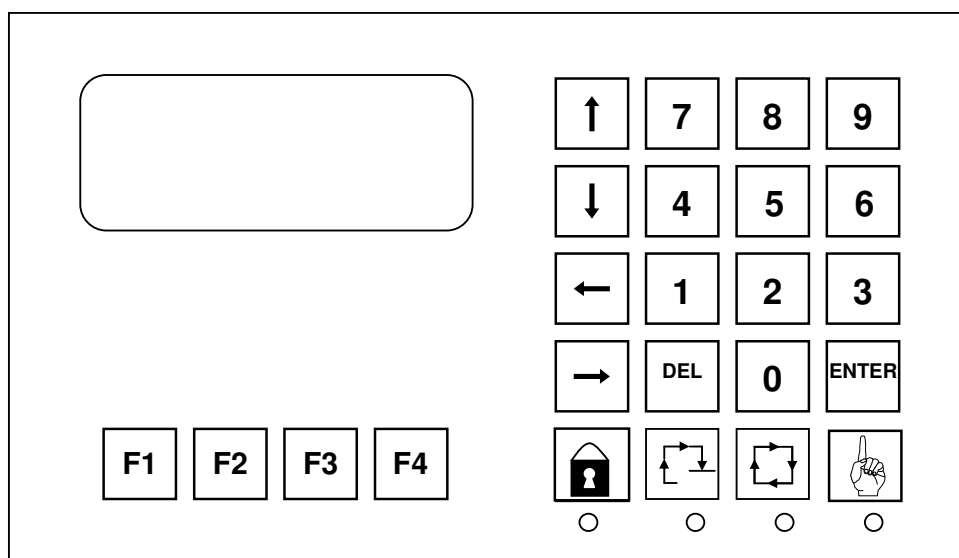
0.5. SUB MENU

.....

0.6. ALARMS AND MESSAGES

.....

0.1. FUNCTION OF PUSHBUTTONS ON KEYBOARD



		Scroll through the pages for working data setting.
		Scroll through data on one page Increases/Decreases
		Reset data.
		Stores data set.
		Key function 1.
		Key function 2.
		Key function 3.
		Key function 4.
		Recalls Password page for the Sub Menu.
		Semi-automatic working mode.
		Automatic mode.
		Manual mode.

0.2. MANUAL MODE PAGE DESCRIPTION



Set pressure
=08.0 bar

Set pressure [2 - 20 bar]

Insert in this page the wished working pressure confirming the data with the ENTER key. Pushing the automatic key the machine will start working stabilising after the Pump loading time.

PUMP WASHING
Washing time=040 Sec.
Washing speed =40.0Hz
<F4>Washing

Washing Time [05 – 999 Sec] Washing speed [05.0 – 60.0 HZ] Pump washing

Insert in this page the pump cleaning time and speed, confirming the data with the ENTER key. Once prepared the machine for the cleaning, push the **F4 key** to start the cleaning cycle. At the end of the set time, the machine will stop automatically.

Boost speed
=50.0 Hz(15-80.0)
Boost time
=010 sec

Boost Speed [05.0 - 80.0 Hz]

It sets the pump starting speed at machine start-up in automatic

Boost time [7.0 – 99.0 sec.]

It sets the time the machine must keep the Loading Speed.

STAND-BY
T.Ftc off=060 Sec
F.Standby=15 Hz

Off photocell time [030 - 600 Sec]

It sets the time which may pass from when the photocell doesn't read the material anymore to when the machine puts itself in stand-by. (STAND-BY Mode).

Standby Frequency [05 – 50 Hz]

Insert the working frequency for the STAND-BY mode.

Select. Lang.=0
0: Ita
1: Eng
2: Spa

Select. Language

To select the wished language.

0.3. AUTOMATIC MODE PAGE DESCRIPTION



In automatic mode we display the pressure detected by the pressure transducer.
With the key ← we decrease the pressure while with the key → we increase the pressure.
We display also the working frequency at the set pressure.

Once reached the set pressure, it is kept in precise way.

The control of the alarms will automatically activate 60 second after the attainment of the set up pressure.

0.4. SEMI –AUTOMATIC MODE PAGE DESCRIPTION



Man. Potentiometer
=40.0 Hz <-+>
ENTER-> Memo
F1-> Start/Stop

Manual Potentiometer

In case of pressure sensor breaking it's possible to continue working in semi-automatic mode, setting manually the frequency.

N.B. At pump switch on, set an optimum frequency for the loading. Once finished the loading it's possible to work in automatic mode.

0.5. SUB MENU

For the sub-menù Enter Password



For the submenu
Enter Password
=00000

For the sub-menù Enter Password

Not active page

To exit press



and then



ATTENTION!!! ONLY AUTHORIZED PERSONNEL !!!



0.6. Alarms and Messages

BOOST

wait.....

In automatic mode, the machine is loading before reaching the set pressure.

EMERGENCY

GLAZE LACK

The pump couldn't load the glaze

- Check that in the tank there's glaze and that it can be loaded correctly.
- Check that the filters are not clogged and that there are no obstructions.
- Check the inverter.
- Check the various PLC connections.

EMERGENCY

SET POINT

The machine has not been able to reach the set pressure.

- Check the presence of glaze.
- Check that the filters are not clogged or that there are no obstructions.
- Check the pressure transducer.
- Check the various PLC connections.

EMERGENCY

PRESSURE OUT OF
RANGE

The pressure has overcome the tolerance range.

- Check that the nozzles are not obstructed nor partially.

E M E R G E N C Y

FREQ OVER
MAXIMUM

The frequency has gone above the maximum allowed one beyond the tolerance time.

- Check the inverter.
- Check the presence of glaze.
- Check that the filters are not clogged or that there are no obstructions.
- Check the various PLC connections.

E M E R G E N C Y

FREQ UNDER
MINIMUM

The frequency has gone below the minimum allowed one beyond the tolerance time.

- Check the inverter.
- Check that the nozzles are not obstructed, nor partially.
- Check the various PLC connections.

E M E R G E N C Y

OIL

The lubricating oil of the pistons is finished or a diaphragm has broken.

- If the oil is finished, fill in the tank up to the maximum level tick.
- If a diaphragm has broken, open the pump and replace it with a new one.

N.B. active message only with the Saver Pump Kit

E M E R G E N C Y

INVERTER

The inverter has gone into protection mode, check:

- Pump group.
- Electric motor.
- Inverter.

Restart the pump to open the electrical panel, reset the inverter, close the electrical panel and restart the pump.

MAINTENANCE



To optimize the product quality and machine lasting in time it's opportune to follow the maintenance rules here below indicated.

Daily maintenance

Washing after work.

At the end of each working cycle, it is essential, in order to avoid possible obstructions, to proceed with machine washing according to following directions:

- Be sure that all valves are open.
- Remove the nozzles from the bit-holder unscrewing the holding screws and the related fittings, then clean everything and put them in a container with clean water,
- Place the suction tube into a bucket with clean water.
- Start the machine in the washing mode or in semi-automatic until the output water is clear.

It is advisable to leave the machine full with water; so doing, any product residual remained after washing, do not harden and will be expelled upon resumption of work.

Check the suction filter; should it become dirty or damaged, proceed with cleaning or replacement.

Daily/weekly maintenance

**** CHECK PERIODICALLY THE OIL LEVEL**

**** EVERY TWO YEARS CARRY OUT THE TOTAL CHANGE OF OIL:
TYPE OIL SAE 10 W 40**

**** CHECK THE PERFECT STATUS OF THE PIPING SUBJECTED TO HIGH PRESSURES**

**** CHECK THE GENERAL STATUS OF THE PUMP AND KEEP CLEAN THE PARTS
SUBJECTED TO MAJOR USE**

**** CONTROL THE PRESSURE OF THE PULSES DAMPER
N.B. EXECUTE THIS OPERATION WHEN MACHINE IS STOPPED OR OFF.**

**** CONTROL THAT ALL CLAMPS ARE TIGHT**

**** CONTROL THAT ALL SCREWS AND BOLTS ARE TIGHTENED**

**** DISASSEMBLE AND OPEN THE PULSES DAMPER FOR A CAREFUL CLEANING**

For machine cleaning we suggest to proceed with low pressure air jets or small and controlled water jets, well far from the electric parts and with the power switched off.

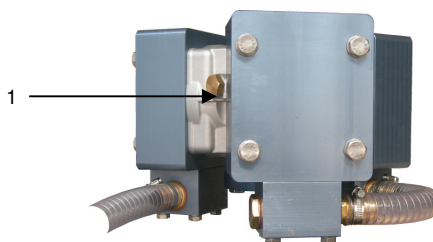
OIL CHANGE



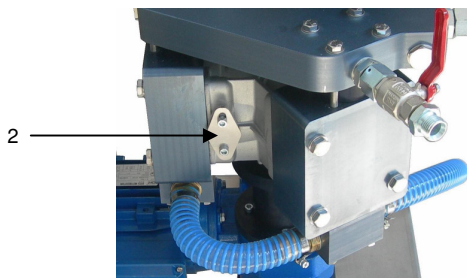
**** EVERY TWO YEARS CARRY OUT THE TOTAL CHANGE OF OIL:
TYPE OIL SAE 10 W 40**

Follow this procedures:

1: Unscrew the stopper after positioning a small basin for the exhausted oils.



2: Unscrew the stopper and fill with oil until the exhausted oil has been replaced completely.



3: Tighten the stopper (1) and fill with 800 ml of oil from the plug 2.

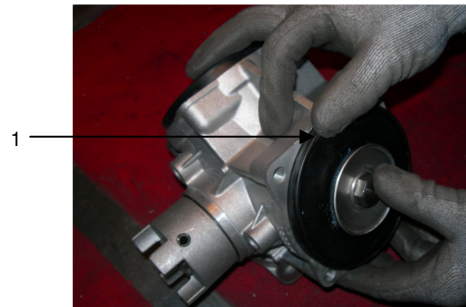
4: Close the filler cap and start the pump in semi-automatic mode at low frequency for a few minutes.

PUMPING UNIT REPLACEMENT



Proceed as shown here below:

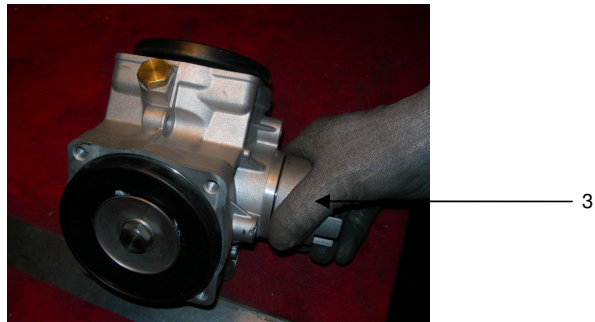
1: Insert membrane inside housing making pressure on the edge of the same.



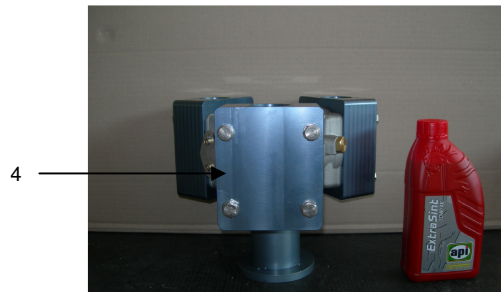
2: Insert the first valve body (Attention to the versus. The hole with height 20 mm upwards).



3: Rotate the shaft to spin the membranes. Repeat the operation starting from point 1 for the other two membranes.



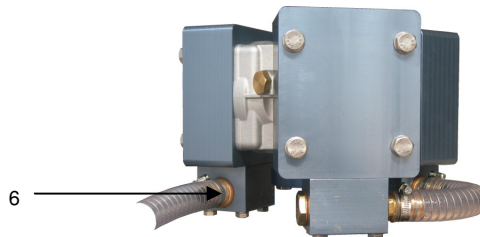
4: Pumping unit is completed.



5: Fill with 800 ml oil.



6: Re-assemble pump with suction blocks and valves.



SPARE PART LIST

POSITION	CODE	DESCRIPTION	QUANTITY
1	R101	PUMP GROUP	1
2	R102	BODY VALVE	3
3	R103	S.S. SCREW	12
4	R104	S.S. SCREW	12
5	R105	GASKET	3
6	R106	VALVE HEAD	3
7	R107	VALVE	6
8	R108	GASKET	1
9	R109	OIL COVER	1
10	R110	GASKET	1
11	R111	PUMP BASE	1
12	R112	CAP	1
13	R113	GASKET	1
14	R114	TANK	1
15	R115	WASHER	2
16	R116	SCREW	2
17	R117	S.S. SCREW	12
18	R118	GASKET	6
19	R119	VALVE FOOT	3
20	R120	MEMBRANE PIN	3
21	R121	PLATE	3
22	R122	MEMBRANE	3
23	R123	MEMBRANE HOLDER	3
24	R124	SEGMENT	3
25	R125	PISTON	3
26	R126	O-RING	3
27	R127	PERN	6
28	R128	CONNECTING ROD	3
29	R129	PIPE	1
30	R130	RUBBER HOLDER	1
31	R131	CAP	1
32	R132	RUBBER HOLDER	4
33	R133	CLAMP	6
34	R134	CONNECTION PIPE	2
35	R135	PULSES DUMPER	1
36	R136	PRESSION SENSOR	1
37	R137	PRESSURE SWITCH	1
38	R138	GRIP HANDLE	1
39	R139	OIL SENSOR (OPTIONAL)	1
40	R140	TAP	4
41	R141	MOTOR	1
42	R142	REDUCTION GEAR	1
43	R143	CAP	3
44	R144	CONNECTION	4
45	R145	BLINKING LAMP	1
46	R146	POWER SOURCE	1
47	R147	INVERTER	1
48	R148	PLC	1
49	R149	MAIN SWITCH	1
50	R150	KEYBOARD	1
51	R151	FUSE HOLDER	1
52	R152	CLAMP KEYBOARDS	1
53	R153	RELAY / TERMINALS	1
54	R154	CASE	1

SPARE PART LIST

POSITION	CODE	DESCRIPTION	QUANTITY
55	R155	SYNOPTIC	1
56	R156	S.S.TROLLEY	1
57	R157	S.S. PIPE	1
58	R158	HUB	1
59	R159	PLATE	1
60	R160	FILTER	1
61	R161	SHAFT	1
62	R162	JOINT	1
63	R163	OIL STOPPER	1

SPARE PART LIST ADVISE

POSITION	CODE	DESCRIPTION	QUANTITY
7	R107	VALVE	6
18	R118	GASKET	6
22	R122	MEMBRANE	3
35	R135	PULSES DUMPER	1
36	R136	PRESSION SENSOR	1
38	R138	GRIP HANDLE	1
40	R140	TAP	4
60	R160	FILTER	1

PURCHASING OF SPARE PARTS:

The request for the spare parts shall be addressed directly to **B.P. ELETTRONICA SNC** which will provide to ship of the requested spare parts.

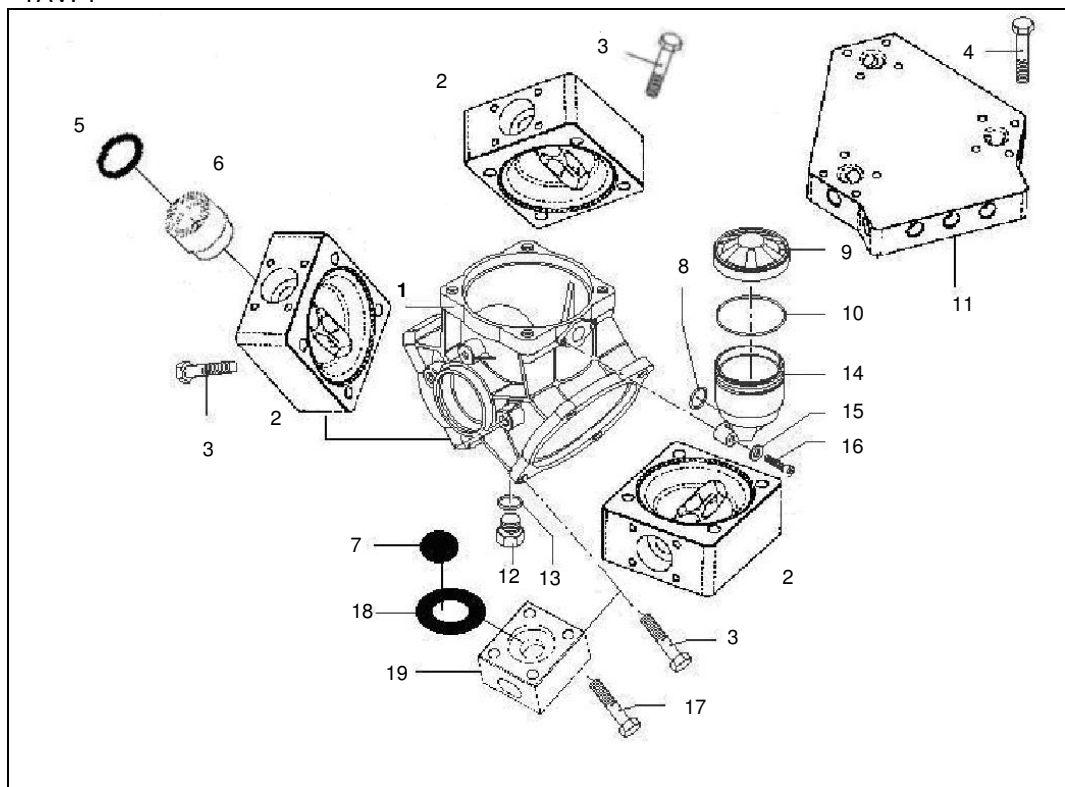


In the inquiry, together with the reference code and piece description, you always shall indicate the serial number, the model and the construction year to identify the plant with precision.

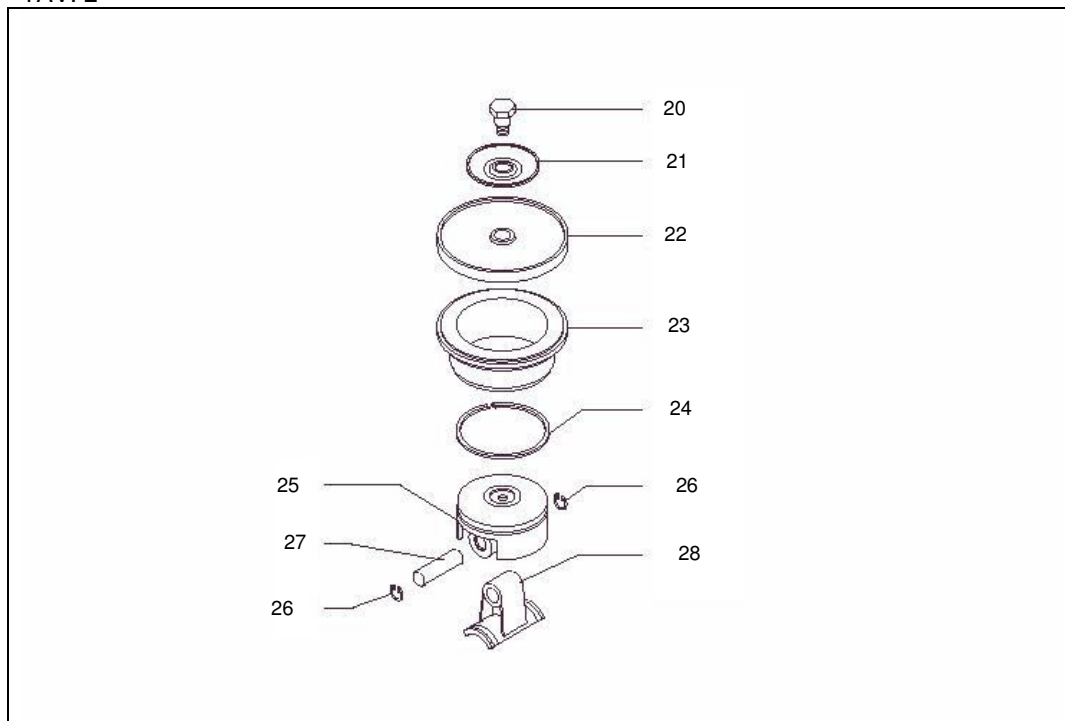
The assembly and the consequent failure of some parts not of the manufacturer property, will cause the forfeiture of the warranty contract and of free assistance during the duration of the same.

EXPLODED

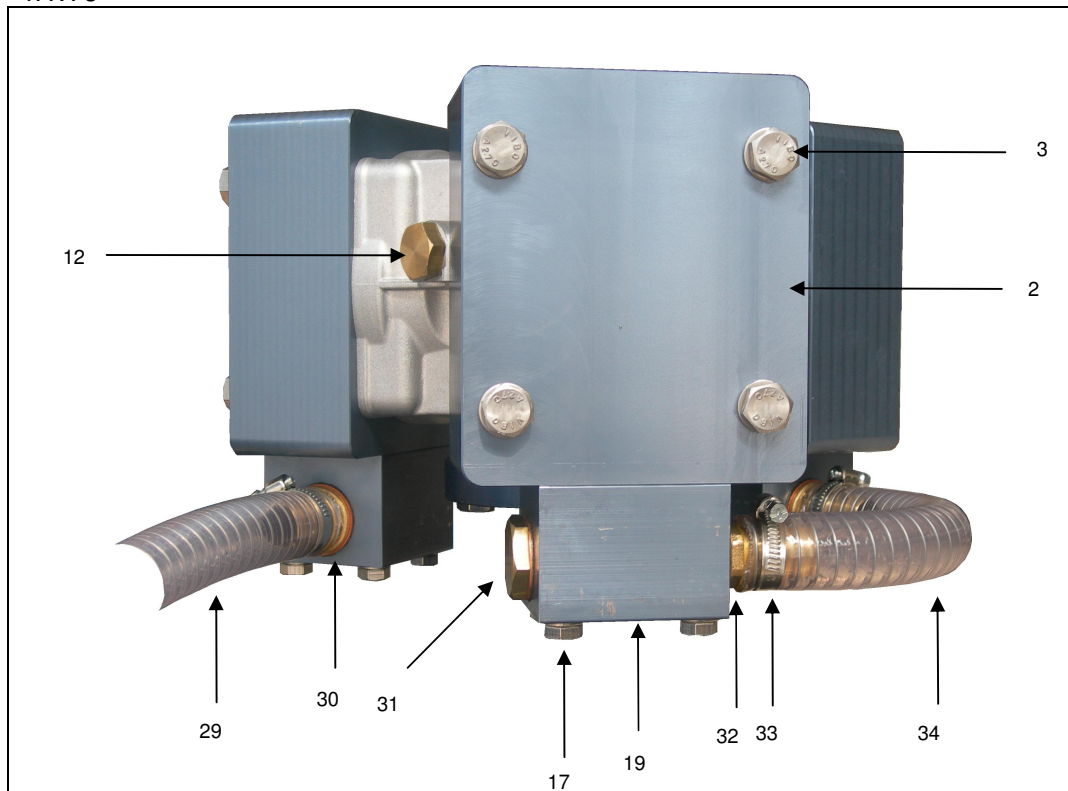
TAV. 1



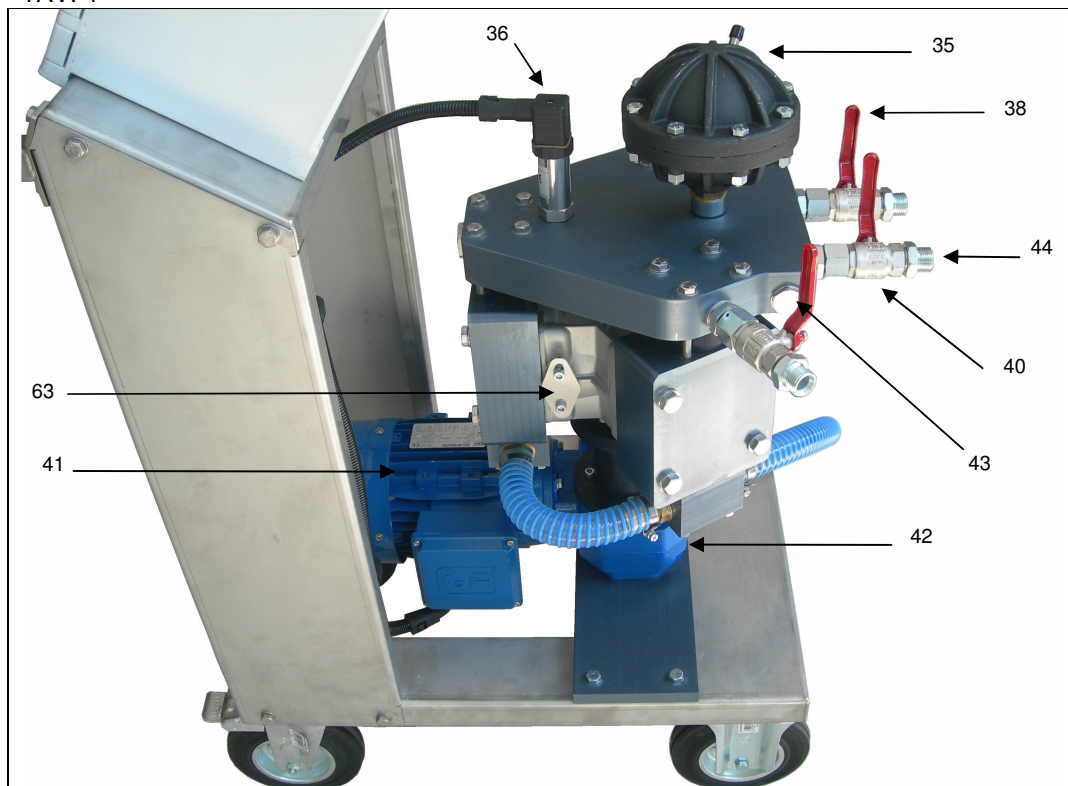
TAV. 2



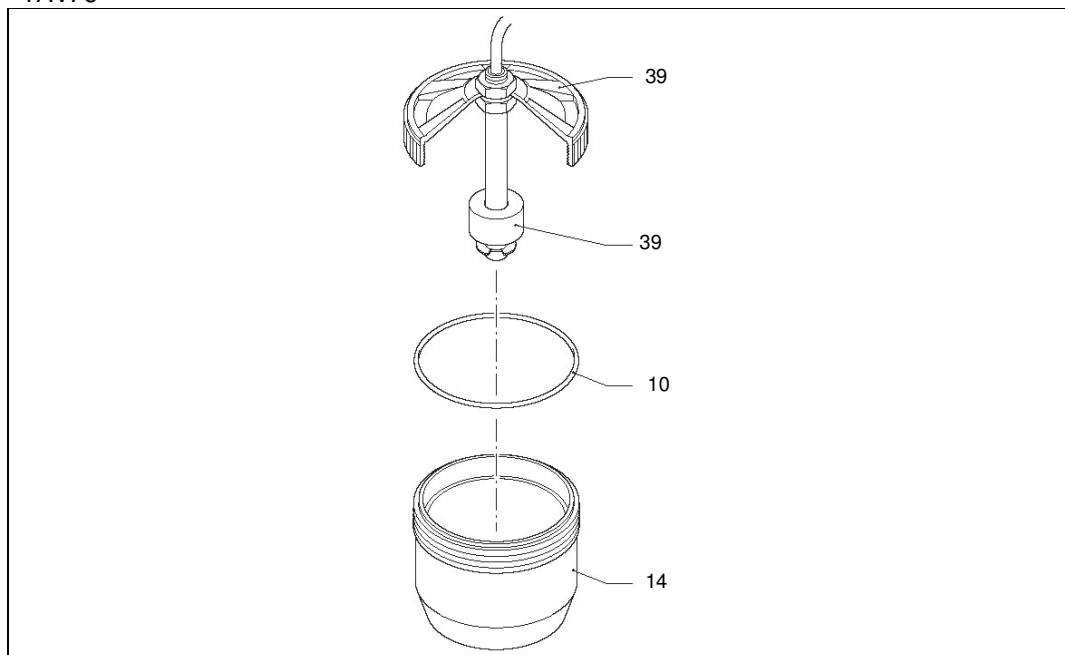
TAV. 3



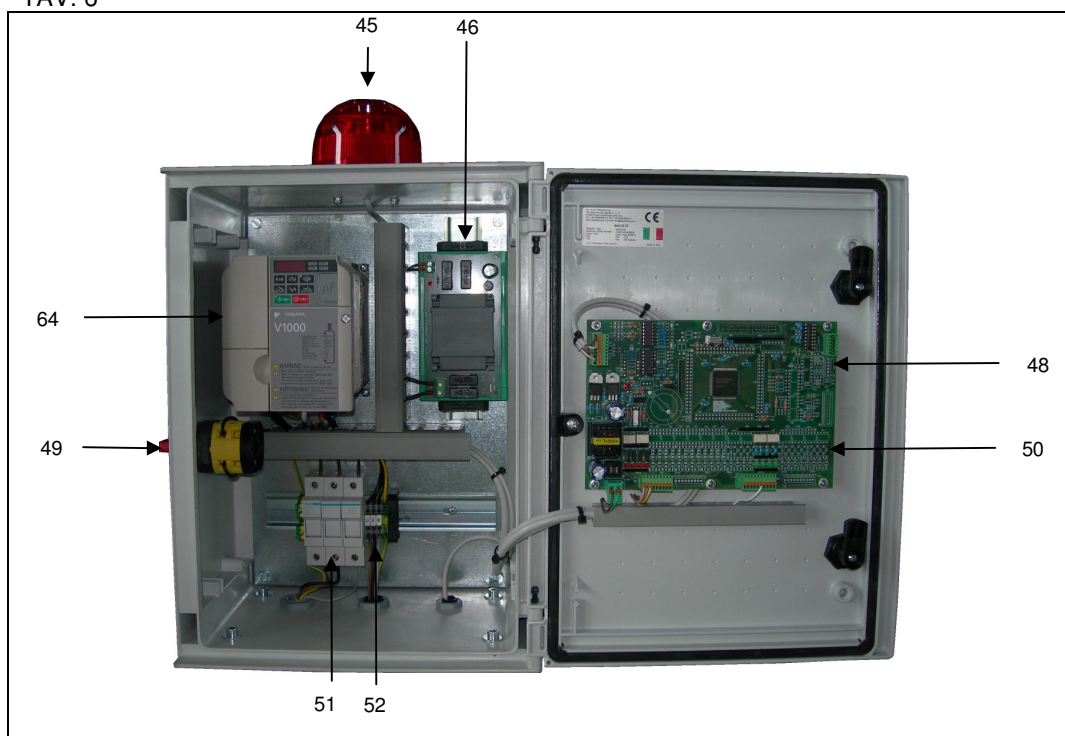
TAV. 4



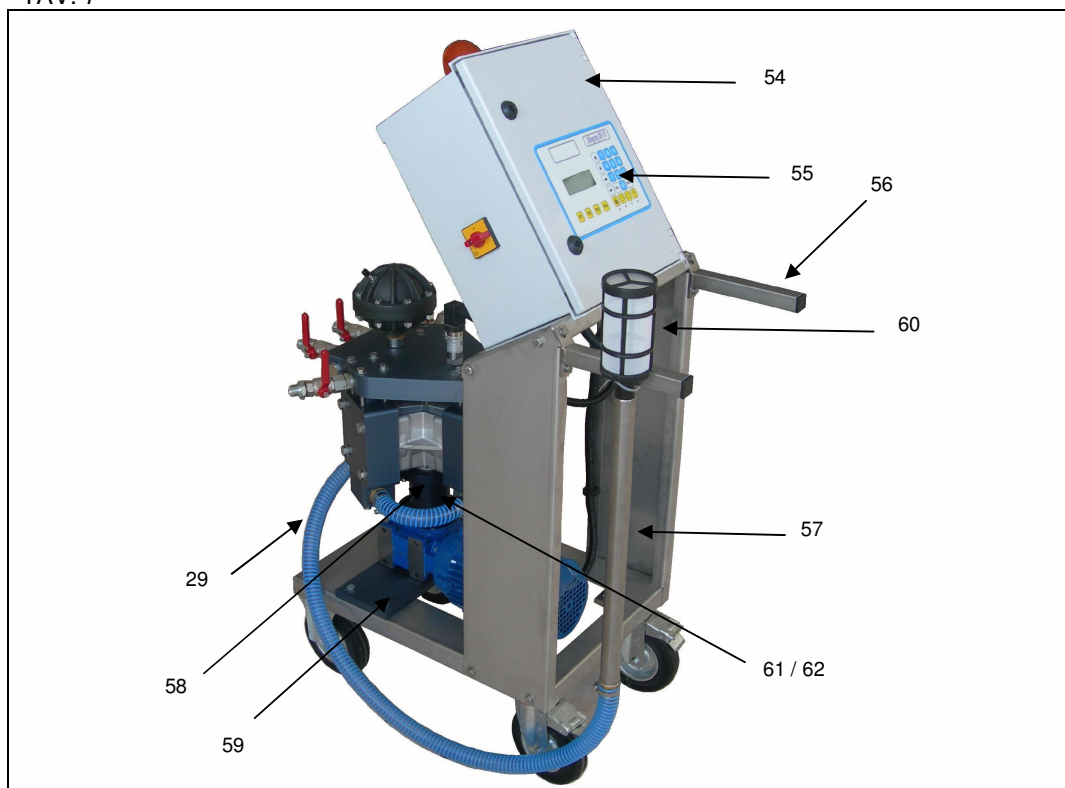
TAV. 5



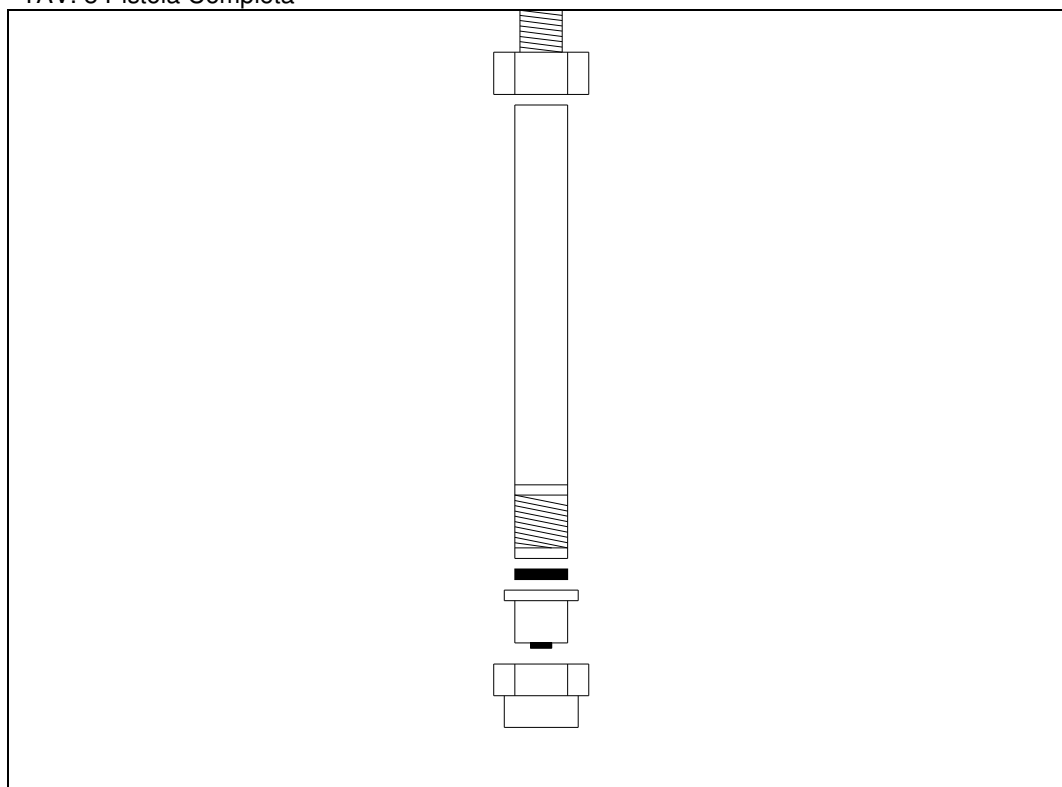
TAV. 6



TAV. 7



TAV. 8 Pistola Completa



Technical assistance requirements:

The assistance service is at disposal for clarifications, for interventions by the customer by sending skilled personnel or for spare parts sending.

Always specify:

- identification data of the machine, such as: type; serial number; year of construction.

In case of need, address to:



B.P. ELETTRONICA SNC
Via Madonna del Sagrato, 2 – 4 – 6
41040 Spezzano di Fiorano Modenese (MO) - Italy
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Assistenza tecnica E-mail: tecnico@bpelettronica.it

www.bpelettronica.it

SERTAM
Via Romagna, 17
41053 Maranello (MO) - Italy
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www.sertam.it

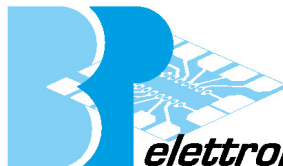


We remind you that the Customer is obliged to buy always original spare parts to ensure a correct operation of the machine and the total validity of warranty (or equivalent spare parts approved in writing by **B.P. ELETTRONICA SNC**)



SERTAM

The original



elettronica

The official