

S/N :

Thank you for purchasing a MINUTEMAN Mixer from an IMER U.S.A. dealer. Your decision is an intelligent one. No other mixer in the world today offers the features and value of the MINUTEMAN Mixer.

- * After the initial set-up the MINUTEMAN Mixer can be knocked down or reassembled in 1 minute.
- * Direct drive drum rotation, efficient and safe.
- * Portable, the large 12" wheels make moving the MINUTEMAN a breeze around the home or job site.
- * Compact, the clever design allows the MINUTEMAN to fit into the trunk or hatchback area of almost all cars.
- * Finish, the high quality of paint and construction components ensure a piece of equipment that you will be proud to own for years.

*At IMER U.S.A. we continually search for ways to better serve our customers. Should you have an idea or thought to share with us regarding this Product we would appreciate hearing from you.
Our motto is **"Tools and Services for the 21st Century"**.
We look forward to delivering the goods.*

Thank you again for your purchase,



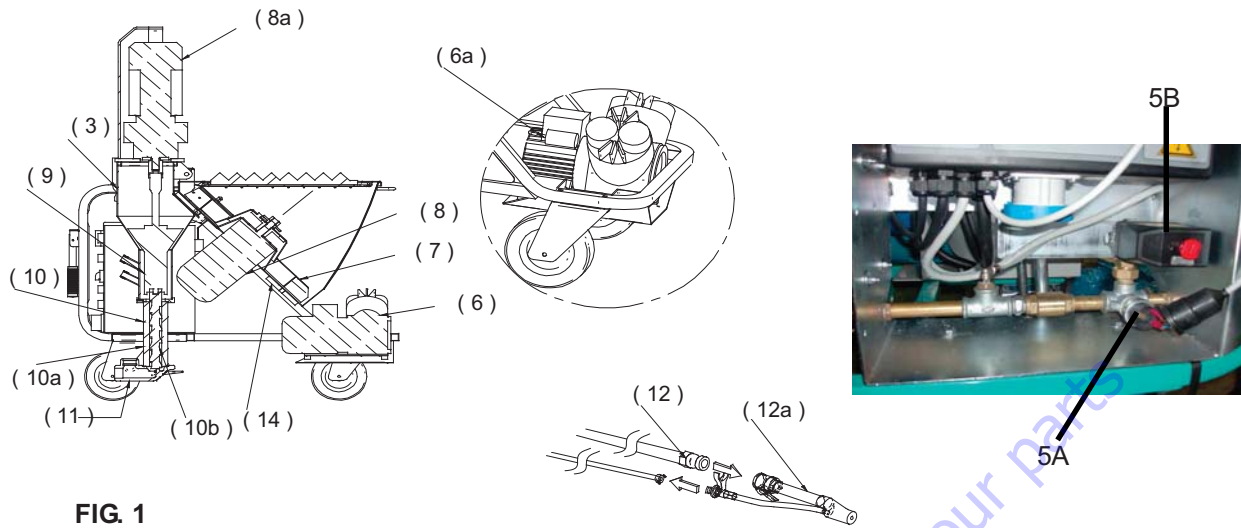
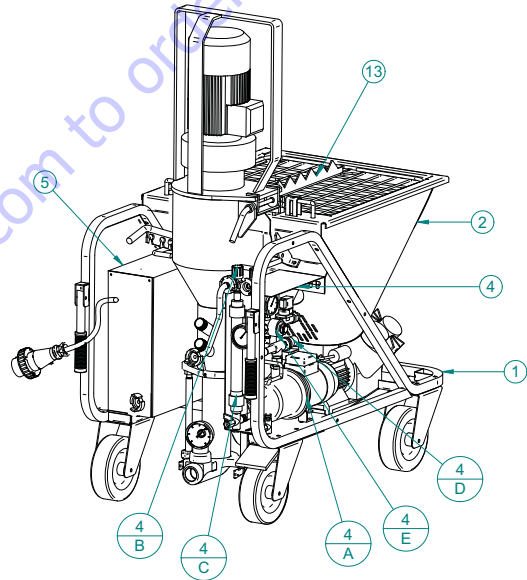


FIG. 1

- (1) WHEELED FRAME
- (2) HOPPER
- (3) MIXING CHAMBER
- (4) WATER CIRCUIT
- (4a) WATER PUMP
- (4b) MICROMETRIC VALVE
- (4c) FLOW METER
- (4d) WATER PRESSURE SWITCH
- (4e) PRESSURE REDUCER
- (5) ELECTRICAL PANEL
- (5a) COMPRESSOR PRESSURE SWITCH
- (5b) MACHINE PRESSURE SWITCH
- (6) DIAPHRAGM COMPRESSOR
- (6a) RELIEF VALVE COMPRESSOR
- (7) CELL WHEEL
- (8) CELL WHEEL GERMOTOR
- (8a) MORTAR PUMP GERMOTOR
- (9) MIXER
- (10) MORTAR PUMP
- (10a) STATOR
- (10b) CAM SCREW
- (11) MANIFOLD
- (12) MATERIAL DELIVERY HOSE
- (12a) SPRAY JET
- (13) GRILLE WITH SACK SPLITTER
- (14) HOPPER WATER OUTLET PLUG



Special attention must be given to warnings with this symbol:



TECHNICAL DATA	KOINE 35	
Machine code	1106048	
MAIN POWER SUPPLY	V Hz	220 60
CONTROLS POWER SUPPLY	V	24
ELECTRICAL CONNECTION CONNECTOR (Monophase) FUSES CABLE (UP TO 40M)	V A mmq	220 32 3x2.5
GENERATOR SET (MINIMUM)	kVA	12
WATER CONNECTION		3/4"
GEARMOTOR MIXER	kW A r.p.m.	2.2 9.9 320
CELL WHEEL GEARMOTOR	kW A r.p.m.	0.37 2 MAX16
WATER PUMP	kW A	0.45 3.3
COMPRESSOR IM 250	kW A NI/min	0.75 5.6 250
MAXIMUM POWER	kW	3.77
WATER PRESSURE SWITCH SETTING (MIN/MAX)	bar	1.9/2.1
PRESSURE STABILISER SETTING	bar	1.9
MIXER GEARMOTOR PRESSURE SWITCH SETTING(MIN/MAX)	bar	0.9/1.2
COMPRESSOR PRESSURE SWITCH SETTING (MIN/MAX)	bar	1.8-2.8
COMPRESSOR SAFETY VALVE SETTING	bar	4
MATERIAL FLOW RATE WITH PUMP ECOSTAR (APPROX.)	l/min	8-11-15
MAXIMUM PRESSURE	bar	20
MAXIMUM PUMPING DISTANCE (*) HOSE DIAM. 25 MM HOSE DIAM.35 MM	m m	15 30
DIMENSIONS X Y Z	mm mm mm	1560 730 1190
LOADING HEIGHT	mm	900
HOPPER CAPACITY	l	110
WEIGHT PUMP GEARMOTOR MIXING CHAMBER MACHINE BODY COMPRESSOR TOTAL	kg	41 28.5 162.5 23 255
NOISE EMISSION LEVEL LPA A 1m - LWA - EN ISO 3744 (2000/14/EC)	dB(A)	<76 90
DESIGN STANDARDS	EN 12100 EN 60204-1 EN 12001	



Dear Customer,
 compliments on your purchase of this IMER plaster mixer, the result of long-standing experience in the field and features maximum reliability and innovative technical solutions.

⚠ - WORKING IN SAFETY.

To ensure complete safety, read all the instructions in this manual carefully.

This OPERATION AND MAINTENANCE manual must be kept by the Site Manager and be always available for consultation.

The manual is considered part of the machine and must be stored for future reference (EN ISO 12100) through to scrapping of the machine itself. If the manual is lost or damaged, a replacement copy can be ordered from the manufacturer .

The manual contains the EC declaration of conformity (2006/42/EC) important information on construction site procedures, installation, operation, maintenance and requests for spare parts. Nevertheless, the user must both have adequate experience and knowledge of the machine prior to use: the user should be trained by a person totally familiar with the operation and use of this machine.

In order to ensure operator safety safe operation and long service life, all instructions in this manual must be observed, together with the requirements of current legislation governing work safety (use of safety footwear and adequate clothing, use of helmets, gloves, goggles etc.).

⚠ - Make sure that all signs are legible.

⚠ - Never make any modifications to the metal structure or plastering machine systems

IMER INTERNATIONAL accepts no responsibility in the event of failure to comply with laws governing the use of this type of equipment, with particular reference to: improper use, incorrect power supply, lack of maintenance, unauthorised modification, and failure to comply, either wholly or partially, with the instructions set out in this manual.

IMER INTERNATIONAL reserves the right to modify the characteristics of the plastering machine and/or contents of this manual, without the obligation to update the previous machine and/or manuals.

1. TECHNICAL DATA

Table 1 provides the technical specifications of the plastering machine, with reference to figure 1.

2. DESIGN STANDARDS

The plastering machines have been designed and constructed according to the standards specified in table 1.

3. NOISE EMISSION LEVEL

Table 1 shows the sound pressure levels of the plastering machine measured at the ear of the operator (L_{pA} at 1 m) and noise emission levels in the environment (power L_{WA}) measured according to EN ISO 3744 (2000/14/CE).

4. DESCRIPTION OF PLASTERING MACHINE OPERATION

⚠ - The plastering machine is designed for use in building sites, for mixing and pumping all mixed mortars declared as compatible with this type of machine by the material manufacturers: gypsum based plasters, anhydrite based plasters, lime/cement based plasters, reverse insulation plasters, grouting mortar etc.

4.1 PLASTERING MACHINE DESCRIPTION (Fig. 1)

The plastering machine comprises a wheeled frame (ref.1), which supports a hopper (ref.2), a mixing chamber (ref.3), a water circuit (ref.4) complete with self-priming pump (ref.4a), an electrical panel (ref.5), and a diaphragm compressor (ref.6). The pre-mixed dry material is poured in to the hopper, in which a cell-wheel-dispenser (ref.7), activated by a gearmotor (ref.8), moves the material inside the mixing chamber . The mixing chamber contains

a mixer (ref.9), activated by a gearmotor (ref.8a), which mixes the material with water delivered to the chamber by the water pump.

The water flow rate is regulated by means of a micrometric valve (ref.4b) and displayed via a flow meter (ref.4c). The mixer drives a helical rotor pump (ref.10) which conveys the material

via a rubber hose (ref.12) to the spray jet (ref.12a). The air pumped by the compressor is also delivered to the jet to enable spray application onto the walls.

5. OPERATION SAFETY

⚠ - Before using the plastering machine, ensure that it is fitted with all safety devices.

⚠ - Never insert parts of the body and/or tools in the hopper or mixing chamber during operation.

All current standards governing accident prevention and safety devices must be observed in the workplace.

Take care when handling sacks of material to avoid dispersion of dust with inhalation of the latter; if this is not possible masks must be worn to protect the mouth and nose.

⚠ - Never use the machine in areas subject to the risk of explosion/fires or in underground installations.

The plastering machine is not equipped with a lighting system and therefore the workplace must be fitted with adequate lighting.

The power lines must be laid to prevent any possible damage.

Never place the plastering machine on electric power cables. Ensure that the electrical connection is protected against the risk of water penetration in connectors. Use exclusively connectors and couplings equipped with water spray protection.

- Never use inadequate or provisional electric lines; if in doubt consult specialist personnel for assistance.

- Repairs to the electrical circuit must be performed exclusively by specialised personnel. Disconnect the machine from the power supply before performing maintenance or repairs.

- Avoid contact of electric wires with movable and/or moving parts of the machine to avoid injury from contact with live metal parts.

6. ELECTRICAL SAFETY

The KOINE 35 plastering machine is constructed according to standard EN 60204-1, with protection against water sprays and protection against overload and power failure.

The plastering machine must be connected to the earthing circuit.



7. MECHANICAL SAFETY

The hazardous points on the IMER plastering machine are protected by means of suitable safety devices, which must remain fitted at all times and kept in perfect condition, such as the electric motor cooling fan guard and the grille on the hopper to prevent contact with the cell wheel.

Also opening of the mixing chamber, either via the motor support flange or the complete mixing chamber, shuts down the rot any parts of the machine thanks to a specific safety microswitch.

8. TRANSPORT

! - Caution! Before moving the plastering machine, always detach the power plug.

Before moving the plastering machine the water delivery hose and material delivery line must be removed.

Only a minimal amount of the material should be in the hopper when handling.

Release the wheel by means of the brake and move the mixer by means of the handles (fig. 2)

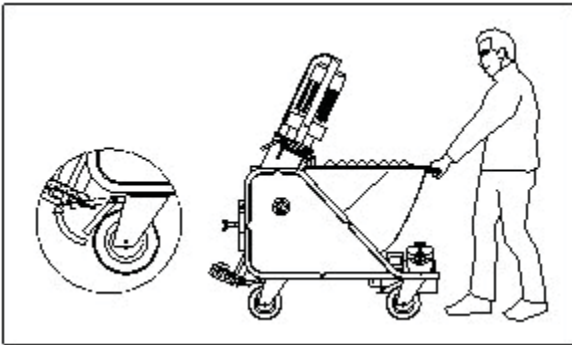


FIG.2

! - Caution! Before lifting the plastering machine, always disassemble the compressor for separate transport.

! - Caution! Before lifting the machine, always check that all machine components are correctly secured and fitted in place.

To lift the machine, use the specific attachment rings (fig.3).

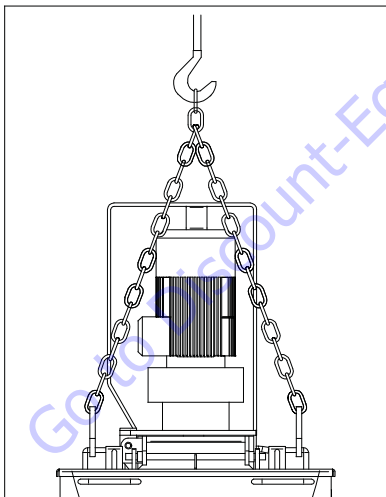


FIG.3

! - Caution! Lift with care to avoid hazardous oscillations

! - Caution! Never use points other than as specified in figure 3 to lift the machine and in particular do not hook up lifting equipment to the gearmotor guard.

Use lifting equipment suited to the overall weight of the machine indicated in table 1.

To facilitate transport, the machine can be disassembled as shown in fig.4

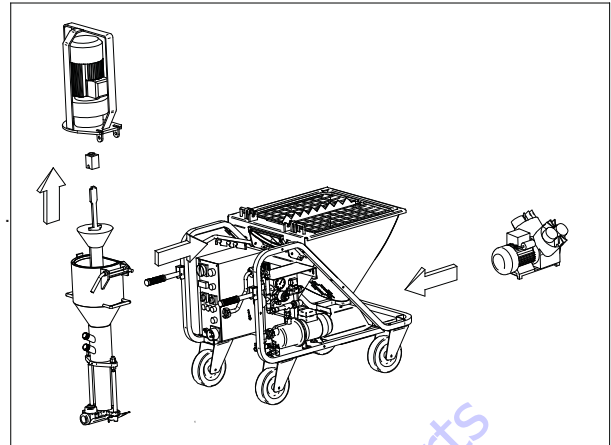


FIG.4

The weight of the sub-units shown in fig.4 are specified in table 1.

9. INSTALLATION

Position the plastering machine on a flat surface in an area where it does not constitute an obstruction either during use or cleaning at the end of the work shift and where a minimum quantity of pipelines is required.

Secure the machine in place by means of the wheel brake (ref.5 fig.11).

10. CONNECTIONS

10.1 ELECTRICAL CONNECTION

! - Ensure that the power supply voltage, mains frequency and electrical connection (socket, fuses, cable) correspond to specifications in table 1.

The electrical power line must be fitted with protection against current overload (e.g. by means of fuses or a thermal magnetic cut-out) and with current dispersion to earth (e.g. with a differential circuit breaker). The electric cable wire size must take into account the operating currents and length of the line to avoid excessive voltage drops.

Avoid use of extension leads wound on drums. The power cable must be suitable for frequent movements and with an abrasion resistant sheath (e.g. type H07RN-F).

Before connecting the plastering machine to the electrical mains, ensure that all safety devices are fitted and are in perfect condition, and check in particular that the hopper grille is secured in place, that the extension is in good condition and that the plugs and sockets are not wet.

Connect the plastering machine socket on the electrical panel to the mains (fig.5).

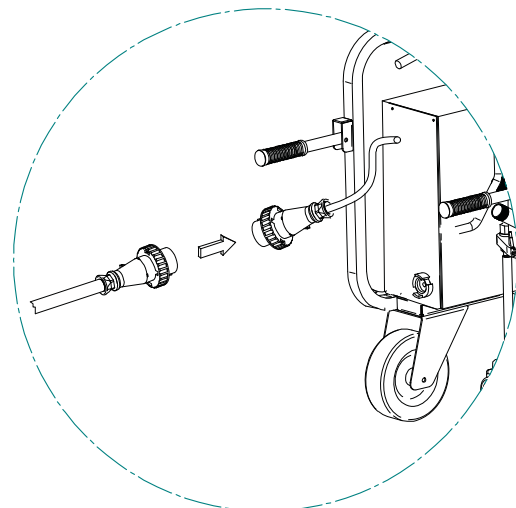


FIG.5



10.2 WATER CONNECTION

Connect the water hose (table 1) to the water mains (fig.6). The water mains must guarantee a minimum flow rate of 20l/min.

Otherwise a tank of suitable capacity (200 l) must be fitted with clean water, to be kept full at all times, and from which water can be taken by means of the self-priming pump supplied with the machine. In this case the hose must have a minimum diameter of 3/4", a maximum length of 3m, preferably a foot filter and must not be subject to deformation during use.

! - Caution! The first time the water pump is connected to the tank, it must be activated by manually filling the intake line. The same operation must be repeated each time the circuit is drained, or after a prolonged period of disuse.

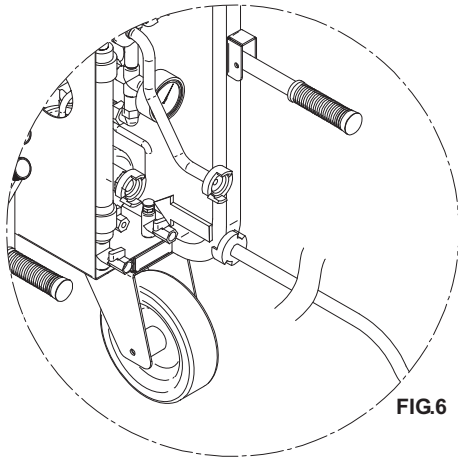


FIG.6

10.3 AIR CONNECTION

Connect the air hose to the machine panel and spray jet (fig.7) Open the spray jet air valve.

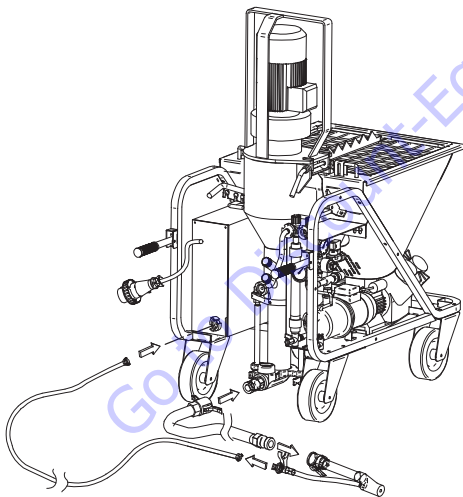


FIG.7

10.4 CORRECT CONNECTIONS FOR MATERIAL LINES

Take the material hoses and check that they are in perfect condition, that the couplings are intact and all relative seals are present. Check that the cam levers (A) of the couplings have been tightened correctly and that the seal (B) is fitted as shown in the figure below .

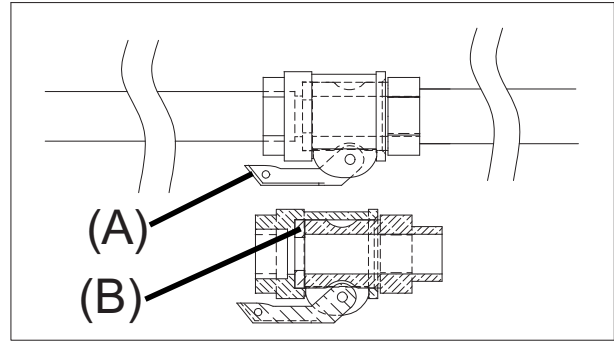


FIG.8

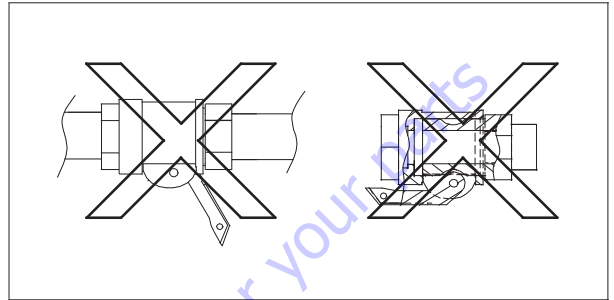


FIG.9

11. START-UP

Before starting up the machine, check that the air valve on the spray jet is open (ref.9a).

Turn the main switch (ref.Q1) on the electrical panel to 1; the compressor is activated. Using the two pushbuttons (ref.Q3), access start command n°2(ref.Q4) on the display .

Remove the cap (ref.1a) and check that there is no material obstructing the hole underneath. Press the supplementary water button (ref.Q 9) and check that water flows out of the hole (ref.1a).

Use the micrometric valve (ref.8) to set the water flow rate, as displayed by the flow meter (ref.2) respectively

- at 300 l/min for cement-based products
- at 500 l/min for gypsum based products

Refit the water level cap in its hole and close securely .

Load the hopper with the relative premixed material in sacks.

Set the cell wheel selector (ref.Q1 1) to the ON position.

Position the start selector (ref.Q5) to ON (rotate to the right), to start up the machine.

Wait for material to be delivered from the jet and at the same time load the material hopper.

At this point the mix delivered by the jet can be adjusted by correcting the quantity of water as required.

Use the micrometric valve, reducing the flow rate by 20l at a time, to obtain the required consistency.

When the jet starts to deliver material at the required consistency normal work can be started.

The machine starts and stops by opening and closing the air supply to the spray jet.

The machine is fitted with protection against power failure or surges (see paragraph *Errors*, page 24): if one of these events occurs, the thermal cut-out trips. In this case reset the switch (ref.Q5) and turn the main switch to 1.

In the event of water pressure failure (see *table Troubleshooting*), the motor shuts down and the green light turns off (ref.Q8). The machine restarts automatically when sufficient pressure is restored.

To stop the machine in the event of an emergency, press the red emergency button (ref.Q10) - all moving parts are shut down - then turn the main switch to 0 and remove the electric power plug from the mains socket.

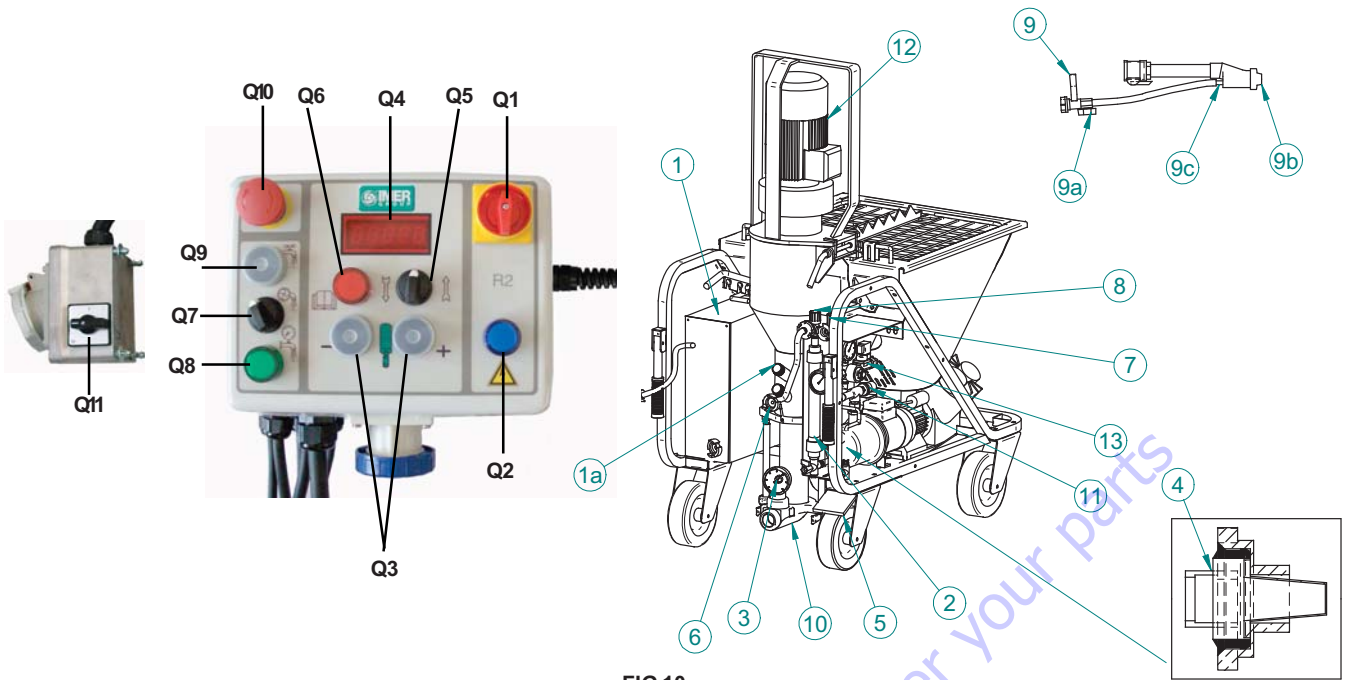


FIG.10

THERMAL CUTOUT PROTECTION

⚠ - The water pump and compressor are protected by a thermal cut-out housed inside the pressure switch connected to the inverter panel. The mixer motor and the cell wheel motor are protected at various levels and if any one of the protection devices trips, this will be signalled on the display.

ERROR MESSAGES (SHOWN ON PANEL DISPLAY):

⚠ - The error messages are shown on the inverter panel display when specific situations arise:

- ERR 00: Fault module inverter
- ERR 01: Motor overtemperature
- ERR 02: Motor thermal cut-out
- ERR 03: Momentary overload of motor
- ERR 04: Thermal image of motor
- ERR 05: Under-voltage
- ERR 06: Over-voltage
- ERR 07: Water pump protection
- ERR 08: Excessive air loss
- ERR 09: Cell wheel motor blocked
- ""BLOC"": Motor pump blocked
- ""H2O"": Water pressure too low
- ""VOLT""

Note: Refer to the table *Troubleshooting* on page 27, for further information.

12. OPERATION

⚠ - The hopper safety grille must be fitted and secured at all times.

Never place materials other than premixed dry materials in the hopper.

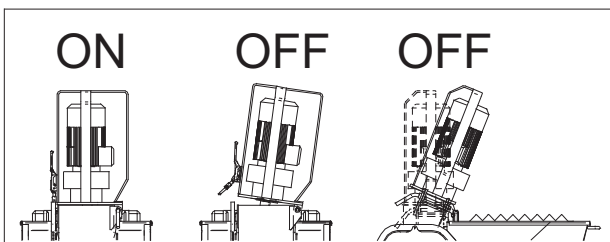


FIG.11

⚠ - Opening of the mixing chamber causes shutdown of the machine moving parts (fig.11). First close the mixing chamber and press the start pushbutton to start the machine.

⚠ - Wear specified protective devices before working on the machine

Regulate the water to obtain the required consistency.

Different diameters of deflector are available (10,12,14,16,18 mm):

the smaller deflectors enable improved nebulisation, and the larger ones are more suited to materials with a larger particle size.

For standard plastering materials the deflector with 14 mm hole (ref.9b) is used.

However, it is important to measure the distance of the nozzle (ref.9c) from the outlet so that it is the same as the diameter of the deflector (fig.12).

If no water is delivered, the machine shuts down.

Before restarting the machine, identify the cause of the problem: valve closed, delivery hose bent, tank empty, clogged filter (ref.4).

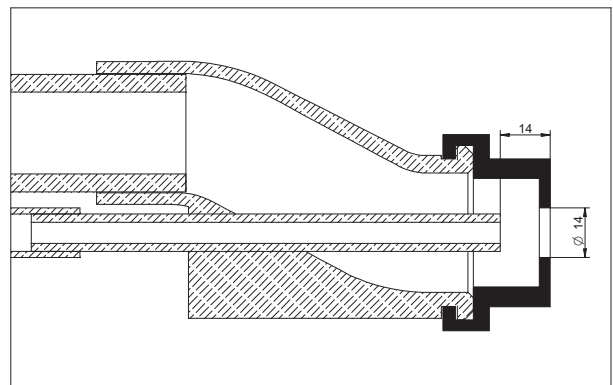


FIG.12



Interruptions exceeding 30min should be avoided. Prolonged shutdown can cause clogging in the material delivery lines: in this case no material is delivered from the jet and the pressure gauge (ref.3) indicates a higher pressure than the normal working value.

Shut down the machine by means of the selector (ref.Q1) to "0", and position the cell wheel switch (ref.Q1 1) to "0" .

Run the pump in the opposite direction for a few seconds by operating the selector switch (ref.Q5): the material pressure gauge indicates 0 bar.

Locate the point of clogging in the hose and remove by tapping the pipeline with a mallet.

! - If necessary, disconnect the jet or open the pipeline couplings, checking previously if any residual pressure is present.

The material pressure gauge must indicate 0 bar and the pipelines, excluding the clogged sections, must be flexible.

The personnel assigned for this task must be specially trained in these procedures.

In the event of any doubt as to the presence of residual pressure, never open the couplings.

Reconnect the pipelines and spray jet, set the main switch to the correct position (the blue lamp illuminates) and restart the machine.

! - Do not move the machine with the hopper full.

If the material delivered is alternately hard and soft this may indicate a worn pump. To replace the pump, proceed as follows: release the handle on the left and open the mixing chamber . Insert the tube wrench on the end of the mixer and unscrew until the screw inside the stator is released. Close the mixing chamber tilt and lock in the lifted position, remove the material delivery manifold and fit a new screw-stator unit (fig.13).

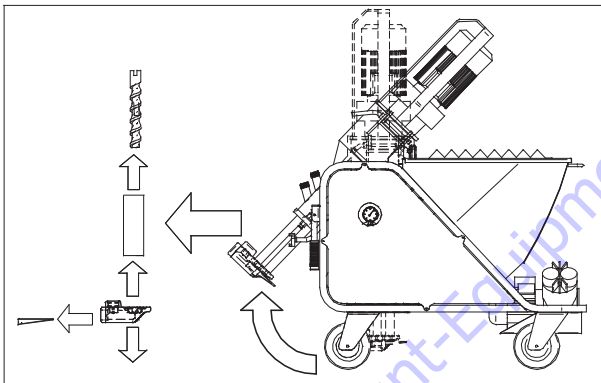


FIG.13

To insert the screw in the stator, use the lubricant spray available from IMER. Never use mineral oil or grease for screw assembly as this may damage the stator. Avoid all types of benzene. In the case of a power failure during operation clean the machine and pipelines immediately (see para.13). Also disassemble the pump, remove the screw from the stator and clean. On completion reassemble all components.

13. MACHINE SHUTDOWN AND CLEANING

At the end of work, stop the cell wheel and continue pumping until the material delivery pipelines are empty.

Stop the machine by means of the pushbutton(ref.Q5) and set the main switch(ref.Q1) to 0.

Open the jet valve, detach the jet and clean thoroughly, cleaning the nozzle with the special tool supplied (fig.14).

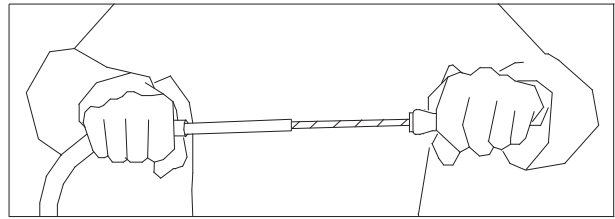


FIG.14

! - Before disconnecting the jet or pipelines, ensure that there is no residual pressure.

Disconnect the material pipelines from the delivery manifold. Detach the quick connector with safety device (ref.14) and open the mixing chamber (fig.15).

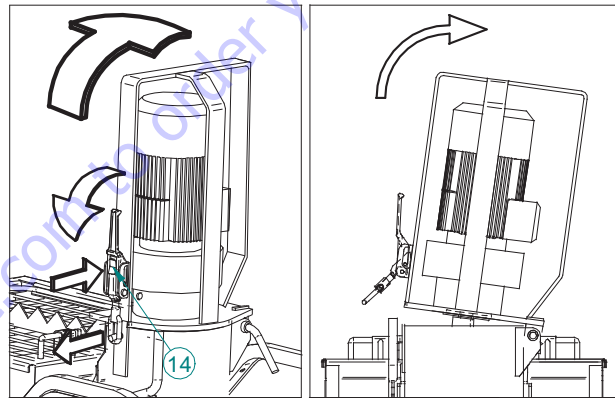


FIG.15

Remove the mixer and clean. Clean the mixing zone with a brush. Insert the scraper (ref.15) as shown in fig.17 , close the mixing chamber, turn the main switch to the work position and then operate the start selector switch .Leave running for 5-10 seconds, until the mixing chamber is completely clean.

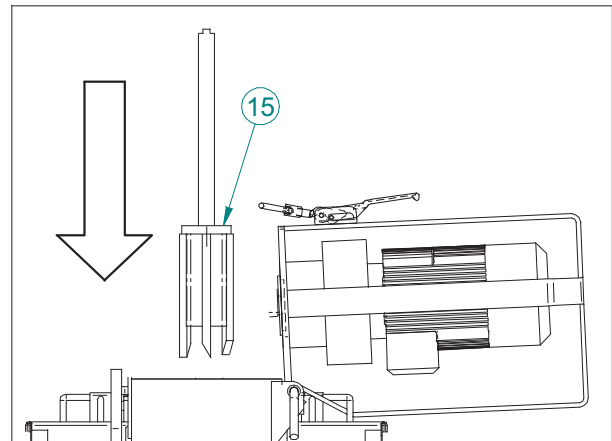


FIG.16



Stop the machine by means turning the selector (Ref.Q5) to "0", and remove the scraper and refit the clean mixer .
 Proceed with pipeline cleaning. Insert a washing sponge (ref.16) at the start of the pipeline, connect the material delivery hose to the mortar hose-water hose coupling (ref.17), and then connect the latter to the auxiliary water valve. Insert the water pump and open the auxiliary water valve until the washing sponge comes out from the other end (fig.17).

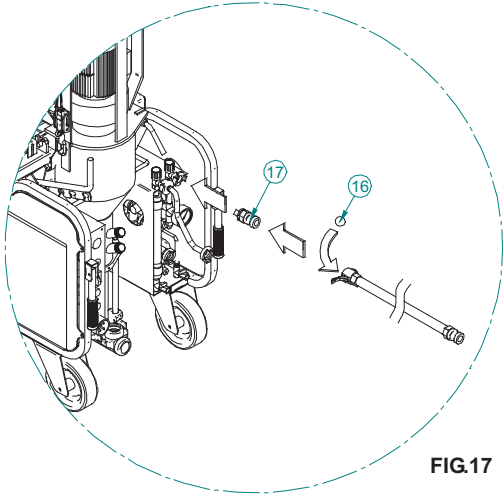


FIG.17

If using pipelines with a different diameter for cleaning, use a suitably sized sponge. Repeat the operation until the pipeline is perfectly clean.
 At this point, on completion of machine cleaning, turn off the main switch, disconnect the power plug, close the water delivery valve, open the auxiliary valve for a few seconds and detach the delivery hose.
 If there is any risk of freezing, open the three valves (ref.18) as shown in fig.18 and drain all water from the circuit.

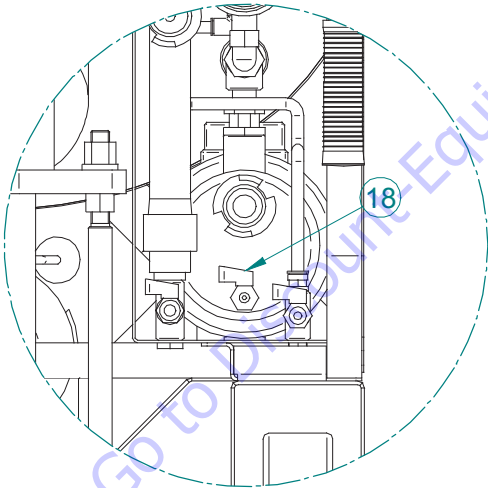


FIG.18

Remember to reclose the valves before restarting the machine.
 If the machine is not to be used for several days, empty the hopper completely, opening also the drain plug (ref.5, see EXPLODED MACHINE DRAWING).
 Also remove the cell wheel.

! - Before opening the drain plug or the grille, ensure that the main switch is turned to 0 and the plug is disconnected from the power supply

14. MAINTENANCE

! - Maintenance must be performed by adequately trained personnel, after switching off the machine, disconnecting it from the power supply and emptying the hopper.

Check daily that the water filter is clean.
 Check weekly that the compressor air filter is clean. If deteriorated, replace.
 Check weekly that the mixer is in good condition and replace if necessary.
 Check weekly that the motor connection is in good condition and replace if necessary .
 Check weekly that the electric motors are free of dust and dirt and if necessary clean using compressed air .
 Check weekly that the plug and socket contacts are clean, dry and rust free.
 Every six months arrange for an inspection of the machine by a technician authorised by IMER or authorised IMER dealer

! - Spent oil is a special waste. Therefore it must be disposed of according to current legislation.

! - Always keep notices and symbols on the machine legible.

15. REPAIRS

! - Never start up the plastering machine during repairs.

Repairs to the electrical installation must be performed exclusively by specialised personnel.

Use exclusively original IMER spare parts, which must not be modified in any way.

! - If any guards are removed for repairs, ensure they are refitted correctly at the end of work.



<i>INCONVENIENTI</i>	<i>CAUSE</i>	<i>RIMEDI</i>
La macchina non parte	Acqua Water pressure too low: the gauge shows pressure below 2 bar (green lamp on?), the display shows the text H ₂ O	- Check that water is delivered from the supply hose - Check that the water filter is clean - Check that the water pump is switched on - If the pump collects from a tank, check that it has been primed and there are no leaks from couplings
Machine does not start	Material - Product too dry in mixing chamber (mortar pump seized? red lamp on?)	- Initial start-up not performed correctly (see para.11) - Water flow rate setting too low (see para.11) - No water delivered to mixing chamber (water inlet obstructed, water solenoid valve malfunction)
Machine does not start	Air - The air pressure, with jet valve completely open, does not fall below the minimum pressure value on the machine pressure switch (table 1)	- Check that the air hose is not bent or obstructed - Check that the jet nozzle is perfectly clean
Machine does not start and compressor does not start and the blue light is OFF	Electrical current - No current delivered to connector of site panel (fuses?) - No power delivered to machine (defective connector connection? loose cable?) - Main switch not ON	- Check points listed alongside
Machine does not start but compressor starts	Electrical current - Start selector switch not in correct position - Mixing chamber open (start/stop pushbutton lamp on?) - Mortar pump motor connector not inserted (start/stop pushbutton lamp on?) - Low water pressure switch trips on start-up (water pump switched on ?see also "machine does not start due to water")	- Check points listed alongside
Cell wheel does not start	Material - Material hardened in hopper - Material too compact in hopper (machine moved with hopper full?)	- Check that water does not continue to enter the mixing chamber when the machine is stationary - Empty hopper (see para.11) and fill with fresh material
Mortar pump and/or cell wheel does not start	Electric current - Starting power voltage insufficient (red lamp illuminates after a few seconds?) - Motor faulty - Faulty cable - Faulty connector	- Ensure that the electric cable section is adequate (see para.10.1) - Check the current line to the site panel and site panel connector - Check motors, electric cables and connectors
Machine does not stop and/or compressor does not stop	Air - Air hose defective (hose cut? Air leaks from couplings?) - Compressor air supply low - Jet air valve faulty (blocked in open position)	- Check the air hose and couplings in particular and replace if necessary - Check air filter (see para. 12) - Check compressor relief valve
Machine stops after starting up	Water - Intake filter clogged - Pressure reducer filter clogged - Water hose too long and/or too narrow - Water supply insufficient	- Check points listed alongside: clean filters, check for adequate flow rate from the water hose (at least 10-12 l/min if working with lime-cement based plaster, at least 15-20 l/min with gypsum based plasters) and replace hose if necessary or collect water from an auxiliary tank
The machine stops during operation The following texts appear on display	- ERR00 : Hopper grille open or incorrectly located. - Screw pump motor thermal cutout (see Err02). - Emergency button pressed. - System malfunction.	- Ensure the grille is properly located - Wait for it cool down, then restart. - Reset the emergency button. - Contact Assistance Service
	- ERR01 : High circuit board temperature (Inverter).	- Wait for it cool down, then restart.
	- ERR02 : High screw pump motor temperature. - The motor has been subjected to overloading for a long time.	- Wait for it cool down, then restart. - Correct the mixture in use.
	- ERR03 : Too much power required from screw pump motor (motor jammed).	- Add water to mixture. - Add binder to mixture. - Use sand with optimized particle size curve. - Remove blockage.
	- ERR04 : Screw pump motor overload warning.	- Use sand with optimized particle size curve. - Add water to mixture. - Add binder to mixture. - Reduce screw pump motor speed. - Ensure that the power voltage is in the range 200V to 230V when the machine is operating, that the power cables are properly rated and that no other equipment (cranes, lifts, saws, concrete mixers, etc.) is connected to the same supply.
	- ERR05 : The compressor turns on and off too frequently although the air tap put on the spray jet is closed. - Air hose punctured. - Leakage from unions.	- Replace the gaskets - Seal the couplings - Replace the air tap of the spray jet
	- ERR06 : Instantaneous power voltage over 265V.	- Check the quality of the current delivered by the power supply (qualified electrician).
	- ERR07 : Current loss to ground or system malfunction.	Contact Assistance Service. Check for water in system.
	- ERR 08 : Power voltage too low: - Lower than 170V	Ensure that the power voltage is in the range 200V to 230V when the machine is operating, that the power cables are properly rated and that no other equipment (cranes, lifts, saws, concrete mixers, etc.) is connected to the same supply
	- ERR09 : Wheel motor overload on loading cell.	- Remove blockage and any encrustation - Remove any foreign matter.
	- ----- : Input voltage in excess of 265V - Check power supply connection	- Check power voltage at source, it must not exceed 240V
	- BLOC : Input voltage in excess of 265V - Check whether the stator and rotor are jammed together - Foreign matter in hopper / mixing chamber	- Remove rotor and stator and unjam/replace them - Remove foreign matter from hopper / mixing chamber
	- STOP : Closed jet air warning. - Jet nozzle / air hose blocked, machine does not stop after halt.	- The warning automatically disappears if the machine starts normally after the halt. - Clean the air nozzle and unblock the air hose.
- H2O : Water pressure below 2.5 bar, insufficient flow/pressure for correct operation. - The machine turned off and on again by itself, "H2O" flashes on the display for a few seconds. - Air in hose/system.	- Switch on the machine's water pump. - Check that the supply pressure does not drop below 2.5 bar while the machine is pumping, if necessary take the water from a 200 litre tank (approximate size). - Check that the water circuit filters are clean. - Drain water from the purge cock to bleed all air from the hose/system.	
Material flow stops (air bubbles)	Mixing - Mixer not suited to product - Material damp in hopper	- Clean the mixer and if necessary replace with one more suited to products used - Clean the mixer and if necessary replace with one more suited to products used
Material flow stops	Clogging - Material hose clogged - Spray jet clogged	- Remove obstruction
Material delivered to jet not constant, too hard or too liquid	Pre-mixed material deteriorated Screw-stator pair worn Screw-stator pair worn Water pressure reducer faulty (ref.) Water solenoid valve faulty Water system settings incorrect Electric cable too long and too narrow	- Check points listed alongside
Water increases in mixing chamber during operation	Screw-stator pair worn Pipeline clogging	- Replace screw-stator - Remove obstruction
Water increases in mixing chamber with machine stationary	Solenoid valve faulty	- Check



INDICATOR LAMP TABLE

INDICATOR LAMP (SEE PAGE 12)	ON	OFF
BLUE (ref.Q2)	Power supply OK, line present	- No electric power supply - no line - Main switch set to 0
RED (ref. Q6)	- Mixing chamber open or not in correct position.	- Mixing chamber in correct position.
GREEN (ref. Q8)	Water pressure OK	- No water pressure

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SPARE PARTS

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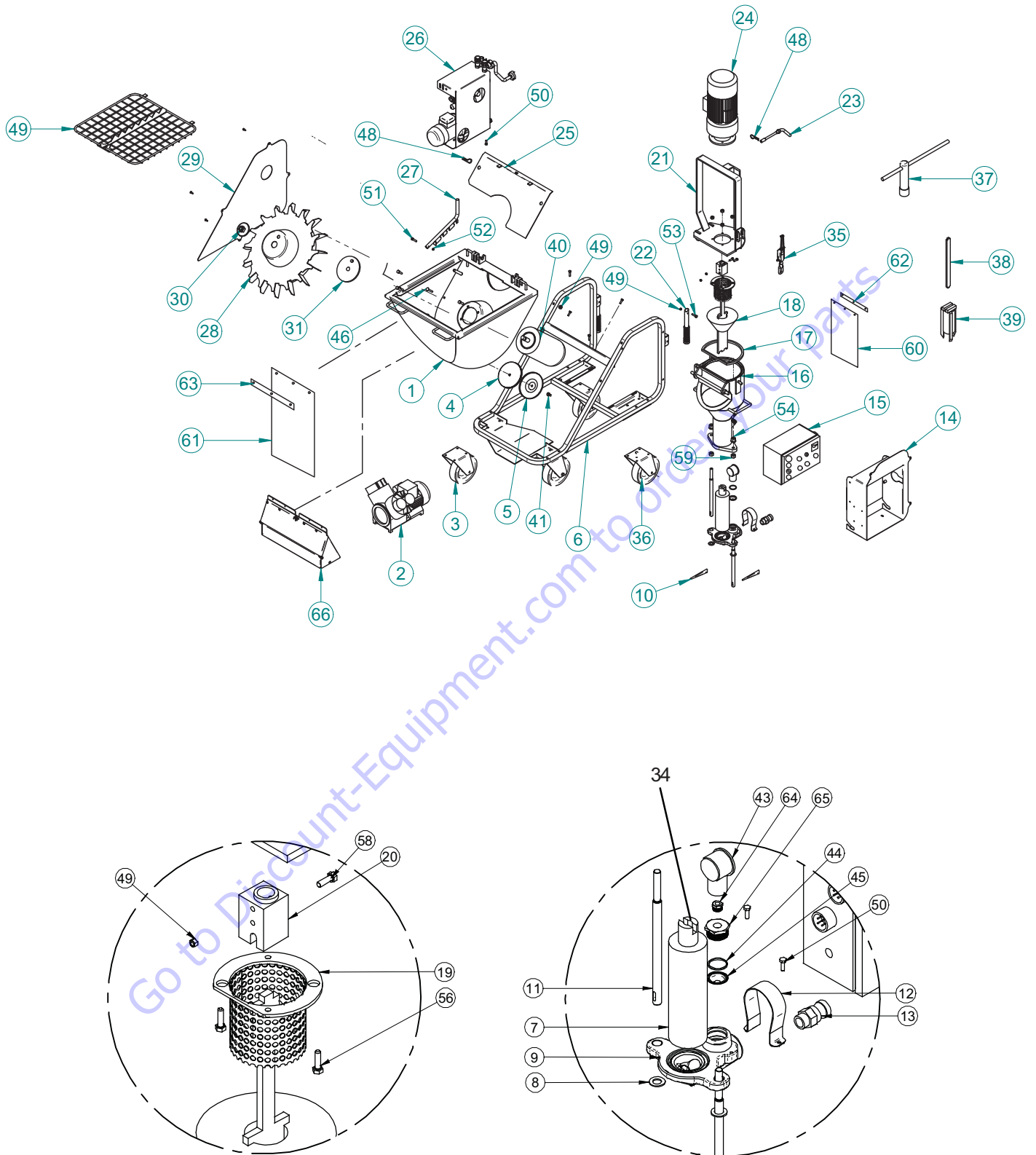


Fig.1 Tav.1



TAV. 1 MACHINE STRUCTURE				
DA MATRICOLA A PARTIR DU NUMERO DE SERIE FROM SERIAL NUMBER VON SERIENNUMMER DEL NUMERO DE SERIE	Rif.	Cod.	DESCRIPTION	Note
9491208	1	3223726	KOINE 4HOPPER	
	2	3229746	COMPRESSOR	
	3	3223422	RUBBER WHEEL	D.200
	4	3223366	DUST OUTLET DOOR SEAL	
	5	3223378	PLUG	
	6	3223412	FRAME	
	7	1107084	STATOR	ECO STAR CB/63 KOINE 35
		1107032		EOB/SM D4-1/2 KOINE 35 AEROBLUE
	8	2224640	WASHER 6592	
	9	3223388	MANIFOLD	
	10	3223719	CLAMPING CONES	
	11	3223720	TIE-ROD	
	12	3223389	GUARD	
	13	3223703	M-M CAM COUPLING	
	14	3227962	GUARD	
	15	3229673	ELECTRICAL PANEL	
	16	3223370	MIXING CHAMBER	
	17	3223995	SEAL	
	18	1107542	MIXER	
3006583	19	3228425	FLANGED HOSE	
	20	3223352	TERMINAL	
3006583	21	3228424	GUARD	
	22	3223716	HANDLE	
	23	3223374	CHAMBER PIN	
3006583	24	3229688	MIXER GEARMOTOR	
3006766	25	3229264	COVER	
	26	3228031	WATER CIRCUIT	
3006766	27	3229325	LOC KING HANDLE	
	28	3223394	CELL WHEEL	
	29	3224139	RH GUARD	
	30	3223376	CENTRAL EYEBOLT	
	31	3223377	WHEEL SUPPORT	
	33			
	34	1107085	CAM SCREW	ECO STAR (KOINE 35)
		1107033		EOB/SM D4-1/2 (KOINE35 AEROBLUE)
	35	3223717	SAFETY HANDLE	
	36	3223421	BRAKE WHEEL	D.200
	37	3223354	PIPE WRENCH	
	38	3223347	VERTICAL SECTION	
	39	3223349	SCRAPER	
	40	3233856	CELL WHEEL GEARMOTOR	
	41	3207209	FEMALE EYEBOLT	M8 Z
	42	3223397	CELL WHEEL TYRE	
	43	3223689	MANIFOLD PRESSURE GAUGE	
	44	3223391	SPACER	M8 F Z
	45	3223392	ANTH-FREEZE MEMBRANE	M8 Z
	46	3223986	SCREW	8X50 TTCQ Z
	47	3223987	SCREW	8X20 TTCQ Z
	48	2226700	SPLIT PIN	D.3.5 Z
9491208	49	3223724	GRILL	
	50	2222060	SCREW	TE 8.8 5739 8X20 Z
	51	2222156	SCREW	TE 8.8 5737 10X50 Z
	52	2223920	SELF LOCKING NUT	M10 Z
	53	3224142	SCREW	TE 8.8 5739 8X45 Z
	54	3223702	FLANGED NUT	M16 UNI 6923 Z
	55	2222034	SCREW	TE 8.8 5739 12X20 Z
	56	2222088	SCREW	TE 8.8 5737 8X40 Z
	57	1222050	SCREW	TE 8.8 5739 8X50 Z
	58	1222047	SCREW	TE 8.8 5739 8X70
	59	2223570	NUT	M16 Z
	60	3224148	REAR APRON	
	61	3224149	FRONT APRON	
	62	3224150	REAR APRON SHEET	
	63	3224151	FRONT APRON SHEET	
	64	3223609	REDUCTION	M.1/2" F. 1/4"
	65	3224173	REDUCTION	M.1" 1/2 F. 1/2"
	66	3234104	TOOLBOX KIT	

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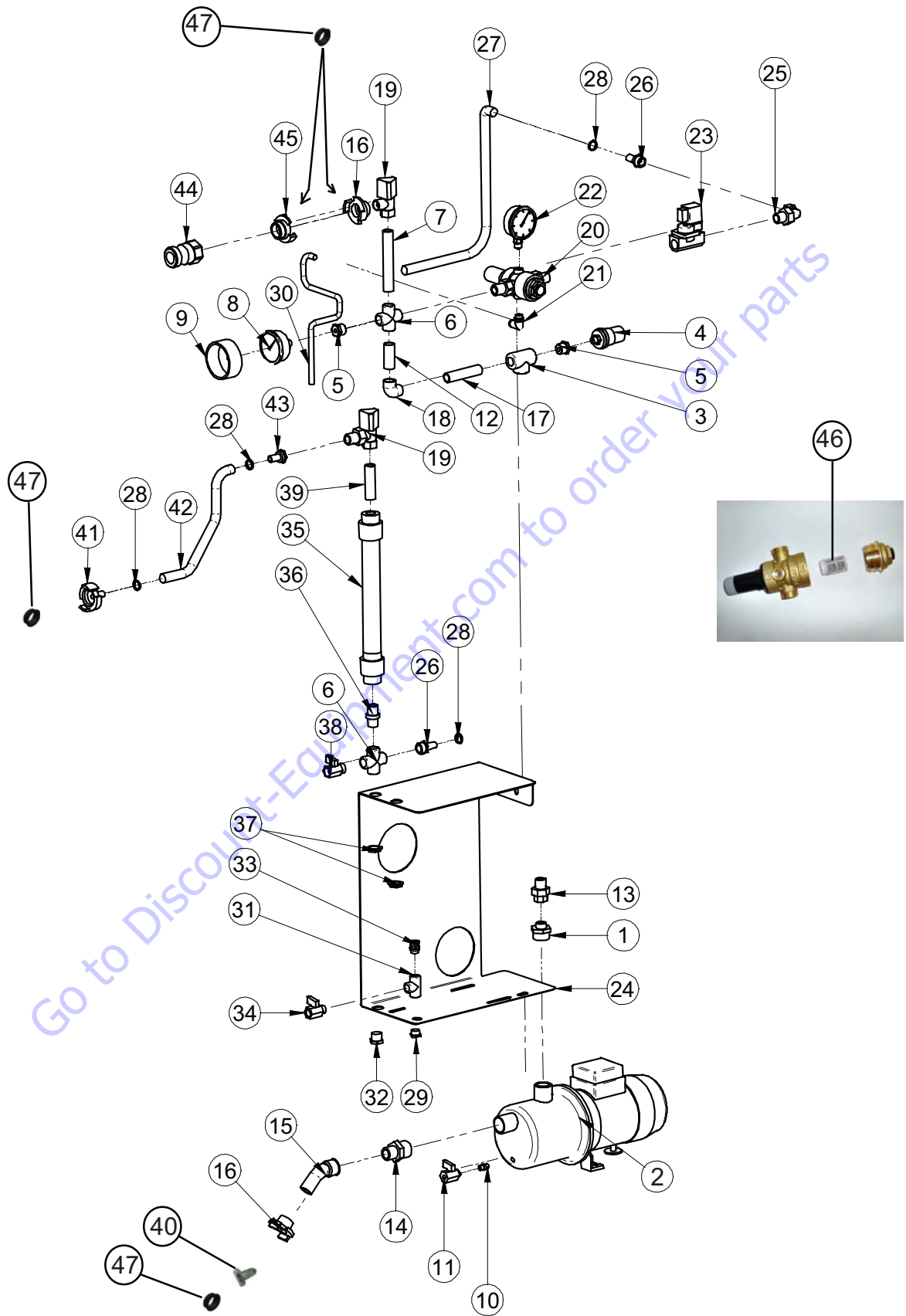


Fig.2 Tav.2

TAV. 2 - 3234428 WATER SYSTEM			
Rif.	Cod.	DESCRIPTION	Note
1	3223619	GREASE NIPPLE	M.M. 1" 1/2 OTTONE
2	3229344	WATER PUMP	NGX M2 220V/60Hz
3	3223617	CONNECTOR	F.F.F. 1/2"1/2"1/2" OTTONE
4	3223630	PRESSURE SWITCH	GP600 1/4 Gc 1-5 BAR
5	3223609	REDUCTION	M.1/2"-F.1/4" OTTONE
6	3223606	CONNECTOR	F.F.F.F. 1/2"1/2"1/2"1/2" OTTONE
7	3223611	BRANCH	M.1/2" L =125 OTTONE
8	3223625	PRESSURE GAUGE	10 BAR 1/4" CONICO D.63 ATT.POSTERIORE
9	3224176	RUBBER COVER	D.63 CON ATTACCO POST.
10	3223959	GREASE NIPPLE	1/8" M.M. CONICO OTTONE
11	3223620	MINI BALL VALVE	F/F CIL.1/8" NICHELATA
12	3223632	BRANCH	M. 1/2" L=50 OTTONE
13	3223618	INLET	M.F. SEDE CONICA 1/2" OTTONE
14	3224170	GREASE NIPPLE	M.M. 1" 3/4 GHISA
15	3224171	45° BEND	3/4" M.F. GHISA
16	3223636	QUICK CONNECTOR	FEMM. 3/4" OTTONE
17	3223957	BRANCH	M. 1/2" L=85 OTTONE
18	3224168	90° ELBOW FITTING	1/2" F.F. OTTONE
19	3223627	ANGLE VALVE	REGMICR.1/2" SYR ART. PFT n°1577
20	3223629	PRESSURE REDUCER	DO6F-1/2" ZPI
21	3223624	AIR CONNECTOR	90° GIREV.1/4"CIL. CON OR
22	3223626	PRESSURE GAUGE	4 BAR 1/4" CONICO D.63 ATT.RADIALE
23	3228388	SOLENOID VALVE	L182-B ZB10A 24V 50/60 Hz
24	3223729	PUMP PROTECTION	
25	3223637	90° ELBOW FITTING	M.F. CON BOCC.SEDE CONICA 1/2" OTTONE
26	3223613	HOSE FITTING	M1/2"x13 OTTONE
27	3223634	WATER HOSE	D.13 15 BAR L=500
28	3223638	RING CLIP	D.20-30
29	3223612	MALE PLUG	M.3/8" OTTONE
30	1272701	HOSE	D8/6 L=400
31	3223616	CONNECTOR	F.F.F. 3/8"3/8"3/8" OTTONE
32	3223610	PLUG	M.1/2" OTTONE
33	3223623	AIR CONNECTOR	M. CONICO 3/8" ZINCATO
34	3223621	BALL VALVE	F/M CIL.3/8" NICHELATA
35	3223633	FLOW METER	1/2"150-1500 L/h TROGLAMIO
36	3223607	GREASE NIPPLE	1/2" OTTONE
37	3223730	FLANGED RINGNUT	NICHELATA 1/2"
38	3223622	BALL VALVE	F/M CIL.1/2" NICHELATA
39	3223958	BRANCH	M.1/2" L=70 OTTONE
40	3223639	FILTER	
41	3223615	QUICK CONNECTOR	CON PORTAG D.13 OTTONE
42	3223635	WATER HOSE	D.13 15 BAR L=400
43	3224169	HOSE FITTING	F. 1/2"x13 OTTONE
44	3223721	CAM COUPLING	DN 25 M. 1" G. F.
45	3223722	CK CONNECTOR	1" M. OTTONE
46	3226729	FILTER	
47	3223697	SEAL QUIK COUPLING	

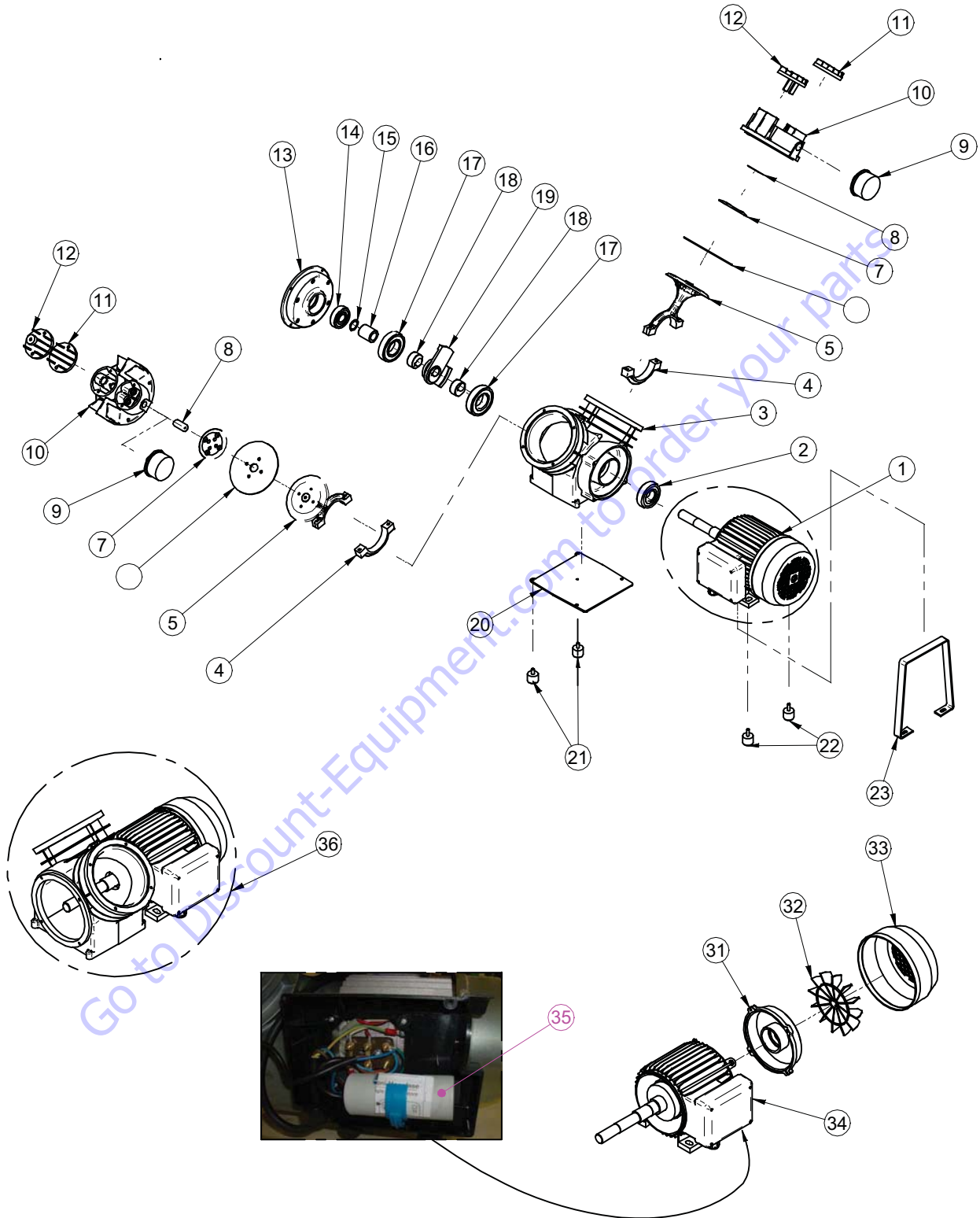


Fig.3 Tav.3

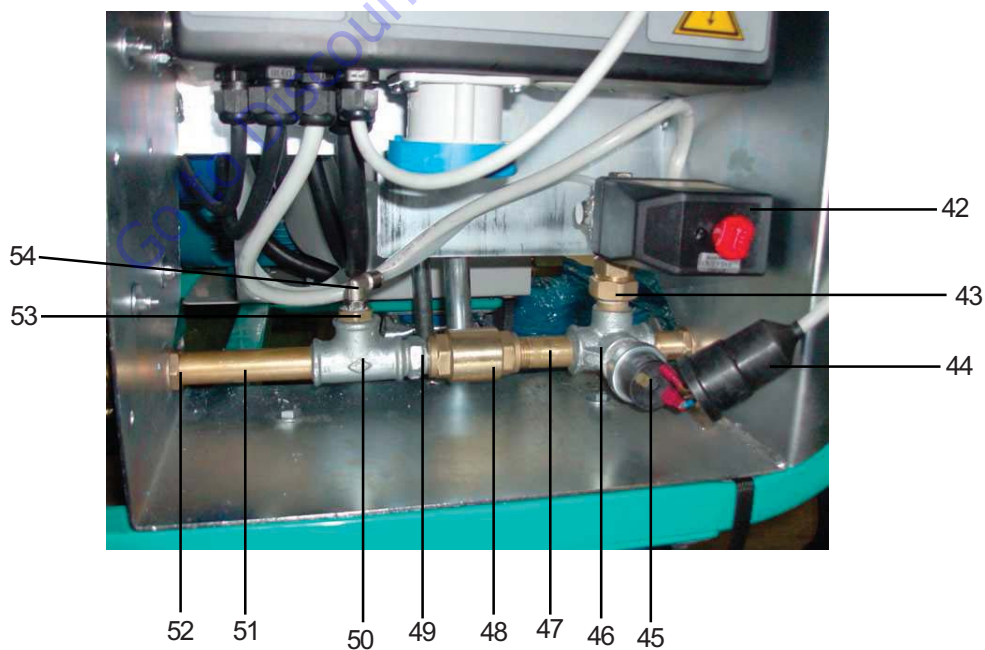
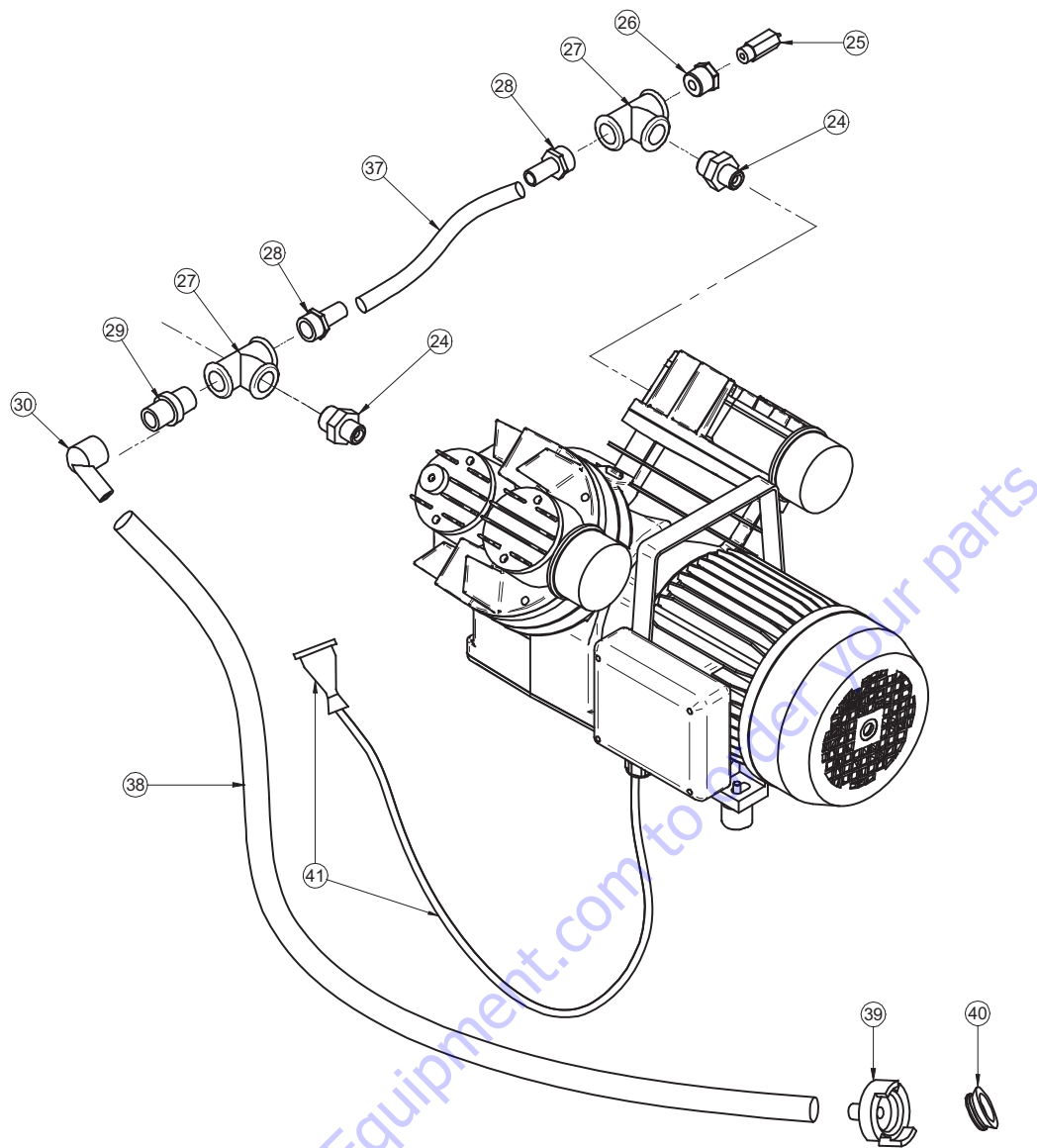


Fig.3.1 Tav.3

TAV. 3 - 3229746 COMPRESSOR IM250 230V - 60HZ 0.75Kw			
Rif.	Cod.	DESCRIPTION	Note
1		STATOR	230V
2	3224763	BEARING	6305 2RS1FAG-SKF
3	3224538	HOUSING	
4	3224530	CONROD HEAD	
5	3224529	CONROD	
6	3224539	COMPRESSOR MEMBRANE	
7	3224531	DIAPHRAGM RETAINER	
8	3224548	COMPRESSOR PLATE	
9	3224844	COMPRESSOR FILTER	
10	3224532	HEAD	
11	3224533	RH CAP	
12	3224534	LH CAP	
13	3224536	COVER	
14	2204531	BEARING	6304 2RS
15	3227154	ADJUSTING RING	LMKAS 28A (27.8X0.5 H=1.7)
16	3224332	SPACER	
17	3224860	BEARING	6207 2RS1
18	3226967	ECCENTRIC BUSH	
19	3226966	CAM FLY PRESS	
20	3224537	COMPRESSOR PLATE	
21	3227825	VIBRATION DAMPER	CI.25/20 M6x13 ARTEFLEX
22	3224868	VIBRATION DAMPER	CI.25/20 M6x18 ARTEFLEX
23	3224876	HANDLE	
24	3224928	REDUCED NIPPLE 1/2"-3/8"	1/2"-3/8"
25	3224593	RELIEF VALVE	1/4"M. TIPO A 5 TAR.4 BAR ISO 228
26	3223609	REDUCER	M. 1/2" F. 1/4"
27	3224350	COUPLING	F.F.F 1/2"
28	3223613	HOSE CLAMP	M.1/2" D.13
29	3224362	NIPPLES TAPER-TAPER	1/2"
30	3224580	HOSE CLAMP 90°	
31	3226531	FLANGE ENGINE	
32	3226532	FAN	
33	3226533	COVER FAN	
34	3226375	ELECTRICAL BOX+COVER	
35	3226183	CAPACITOR	MF 25 450 VAC 50 HZ
36	3228162	COMPRESSOR HOUSING+MOTOR	220V/60HZ
37	3224608	HOSE	L.170 MM
38	3224608	HOSE	L.1000 MM
39	3223615	QUICK CONNECTOR	
40	3223697	EXCENTRIQUE QUICK COUPLING	
41	3225845	ALIMENTATION CABLE	
42	3225843	PRESSURE SWITCH	4 VIE 1/4" 8A
43	3223618	CAP	M.F A SEDE CCONICA 1/2"
44	3226173	CAP	
45	3223630	PRESSURE SWITCH	1/4" CIL.1-5 BAR
46	3227964	DISTRIBUTION "T" 1/2"	
47	3223958	THREADED BRANCH	M 1/2" L.70 MM OTTONE
48	3224360	RELIEF VALVE	1/2" F.F.
49	3224362	REDUCED	1/2"
50	3224350	COUPLING	T 1/2" F.F.F.
51	3223611	THREADED BRANCH	M 1/2" L.130 MM OTTONE
52	3223730	NICKEL-PLATED FLANGED RING NUTA	NICHELATA 1/2"
53	3223609	REDUCER	M. 1/2" F.1/4" OTTONE
54	3223884	COUPLING	GIREV.INN.RAPID. 1/4" CONICO PER TUBO 6/4

INVERTER - 3229673

DA MATRICOLA: 3007655
FROM SERIAL NUMBER: 3007655
À PARTIR DU NUMÉRO DE SÉRIE: 3007655
DEL NÚMERO DE SERIE: 3007655
VON SERIENNUMMER: 3007655

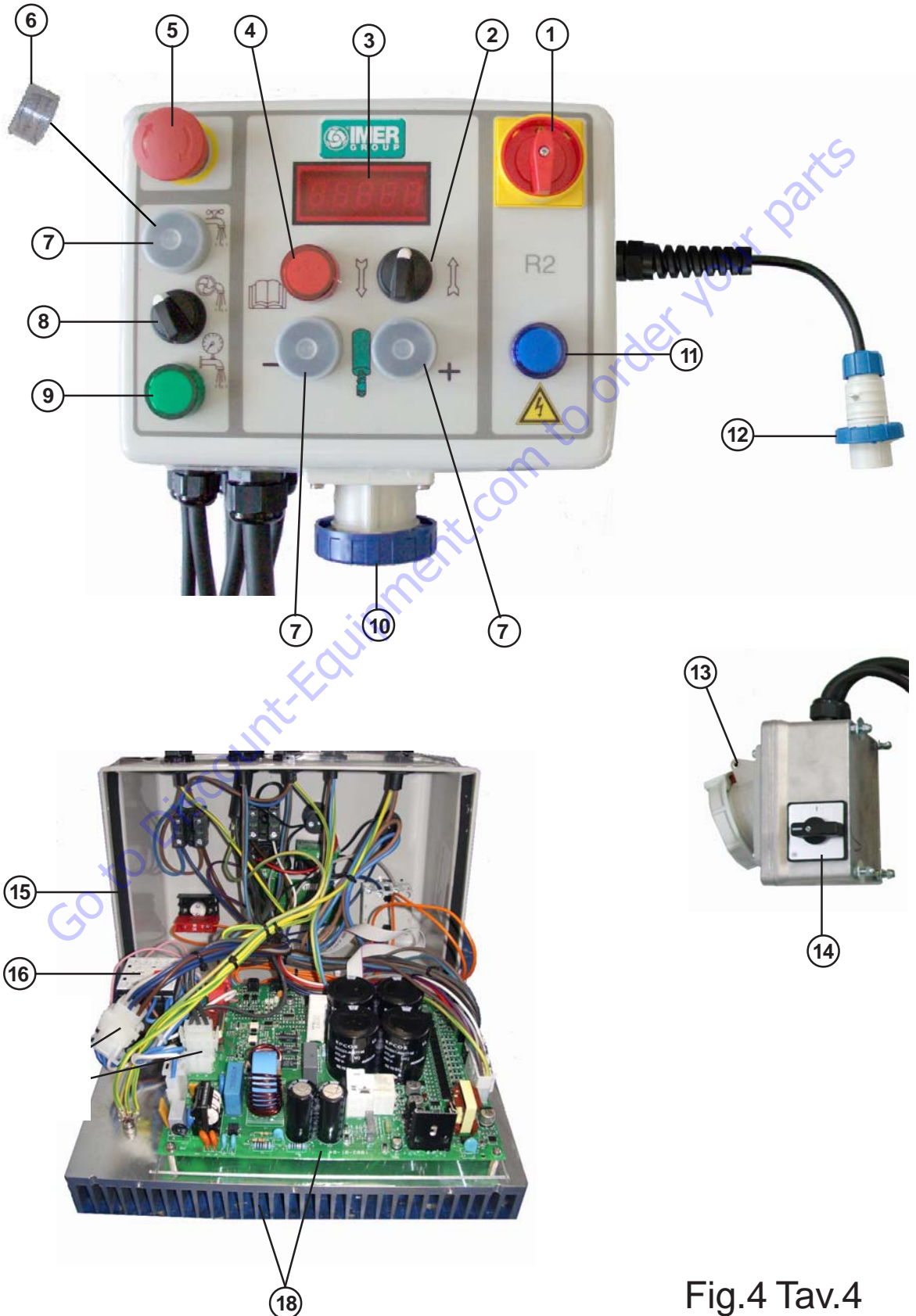
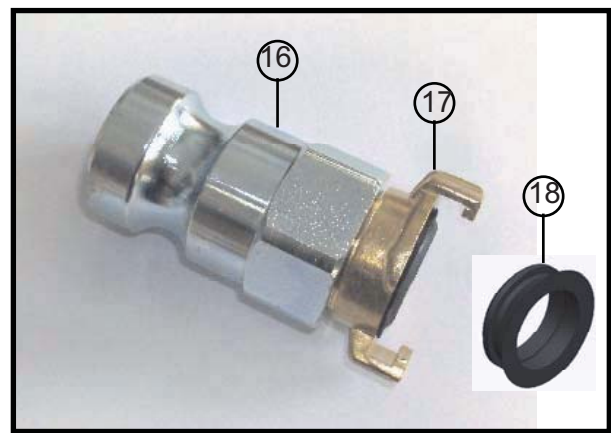
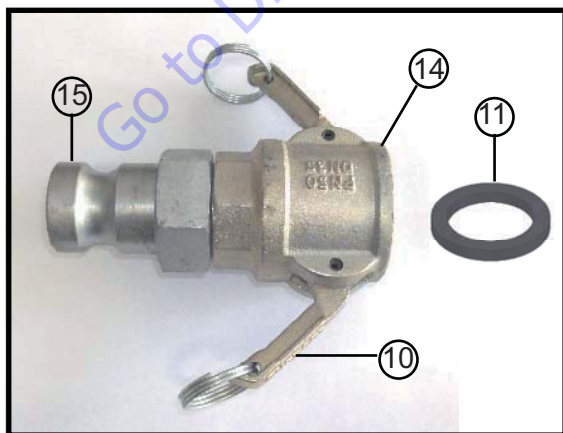
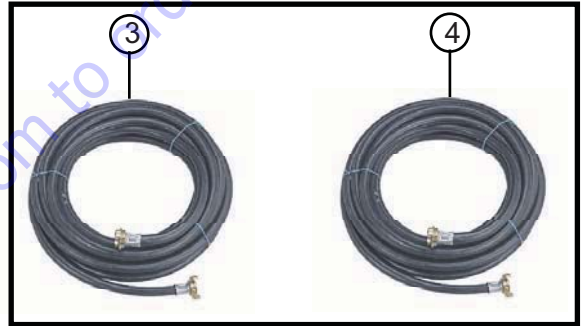
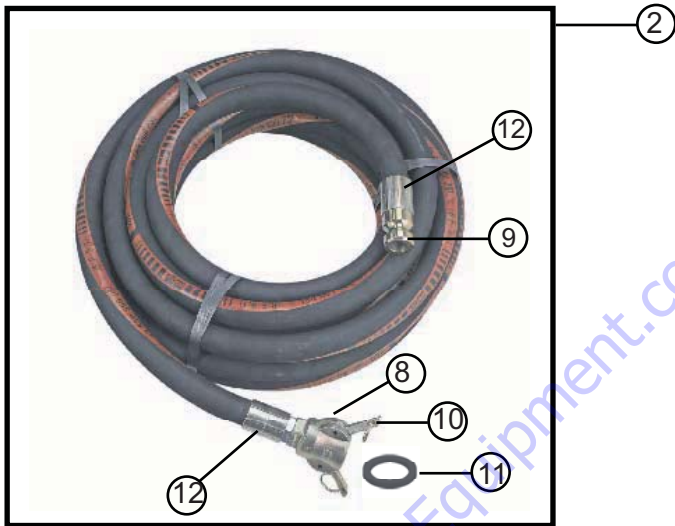
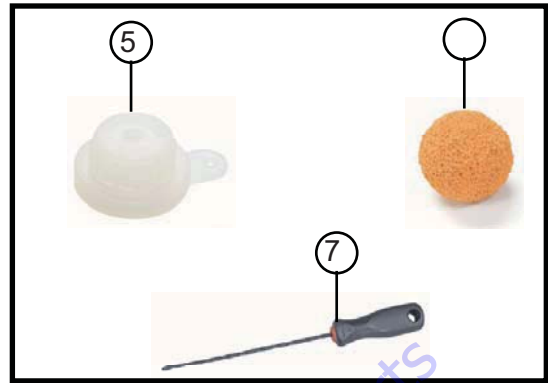


Fig.4 Tav.4



TAV. 1 MACHINE STRUCTURE				
DA MATRICOLA À PARTIR DU NUMÉRO DE SÉRIE FROM SERIAL NUMBER VON SERIENNUMMER DEL NUMERO DE SERIE	R if.	Cod.	DESCRIPTION	Note
	1	3223726	KOINE5 HOPPER	
	2	3225842	COMPRESSOR	
	3	3223422	RUBBER WHEEL	D.200
	4	3223366	DUST OUTLET DOOR SEAL	
	5	3223378	PLUG	
	6	3223412	FRAME	
	7	1107084	STATOR	ECO STAR CB/63 KOINE 35
		1107032		EOB/SM D4-1/2 KOINE 35 AEROBLUE
	8	2224640	WASHER 6592	
	9	3223388	MANIFOLD	
	10	3223719	CLAMPING CONES	
	11	3223720	TIE-ROD	
	12	3223389	GUARD	
	13	3223703	M-M CAM COUPLING	
	14	3227962	GUARD	
	15	3229673	ELECTRICAL PANEL	
	16	3223370	MIXING CHAMBER	
	18	1107542	MIXER	
3006583	19	3228425	FLANGED HOSE	
	20	3223352	TERMINAL	
3006583	21	3228424	GUARD	
	22	3223716	HANDLE	
	23	3223374	CHAMBER PIN	
3006583	24	3229688	MIXER GEARMOTOR	
3006766	25	3229264	COVER	
	26	3228031	WATER CIRCUIT	
3006766	27	3229325	LOC KING HANDLE	
	28	3223394	CELL WHEEL	
	29	3224139	RH GUARD	
	30	3223376	CENTRAL EYEBOLT	
	31	3223377	WHEEL SUPPORT	
3006766	32	3230205	KOINE 5 MESH	
	33			
	34	1107085	CAM SCREW	ECO STAR (KOINE 35)
		1107033		EOB/SM D4-1/2 (KOINE35 AEROBLUE)
	35	3223717	SAFETY HANDLE	
	36	3223421	BRAKE WHEEL	D.200
	37	3223354	PIPE WRENCH	
	38	3223347	VERTICAL SECTION	
	39	3223349	SCRAPER	
	40	3233856	CELL WHEEL GEARMOTOR	
	41	3207209	FEMALE EYEBOLT	M8 Z
	42	3223397	CELL WHEEL TYRE	
	43	3223689	MANIFOLD PRESSURE GAUGE	
	44	3223391	SPACER	M8 F Z
	45	3223392	ANTI-FREEZE MEMBRANE	M8 Z
	46	3223986	SCREW	8X50 TTCQ Z
	47	3223987	SCREW	8X20 TTCQ Z
	48	2226700	SPLIT PIN	D.3.5 Z
	49	3223724	GRILL	
	50	2222060	SCREW	T.E 8.8 5739 8X20 Z
	51	2222156	SCREW	T.E 8.8 5737 10X50 Z
	52	2223920	SELF LOCKING NUT	M10 Z
	53	3224142	SCREW	T.E 8.8 5739 8X45 Z
	54	3223702	FLANGED NUT	M16 UNI 6923 Z
	55	2222034	SCREW	T.E 8.8 5739 12X20 Z
	56	2222088	SCREW	T.E 8.8 5737 8X40 Z
	57	1222050	SCREW	T.E 8.8 5739 8X50 Z
	58	1222047	SCREW	T.E 8.8 5739 8X70
	59	2223570	NUT	M16 Z
	60	3224148	REAR APRON	
	61	3224149	FRONT APRON	
	62	3224150	REAR APRON SHEET	
	63	3224151	FRONT APRON SHEET	
	64	3223609	REDUCTION	M.1/2" F. 1/4"
	65	3224173	REDUCTION	M.1" 1/2 F. 1/2"
	66	3234104	TOOLBOX KIT	

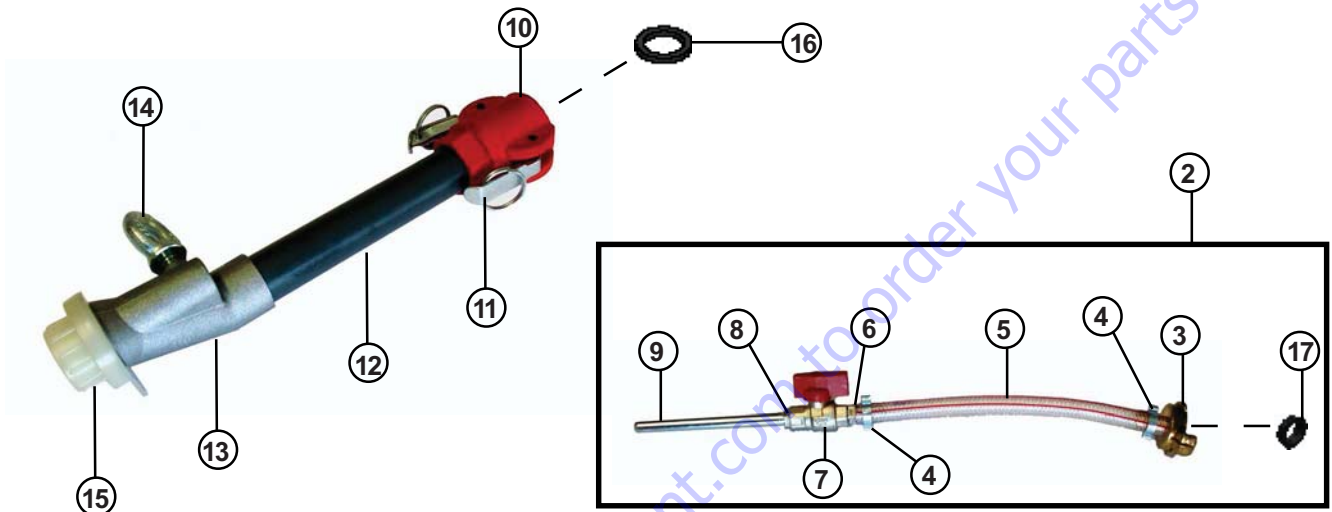


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Fig.5 Tav.5

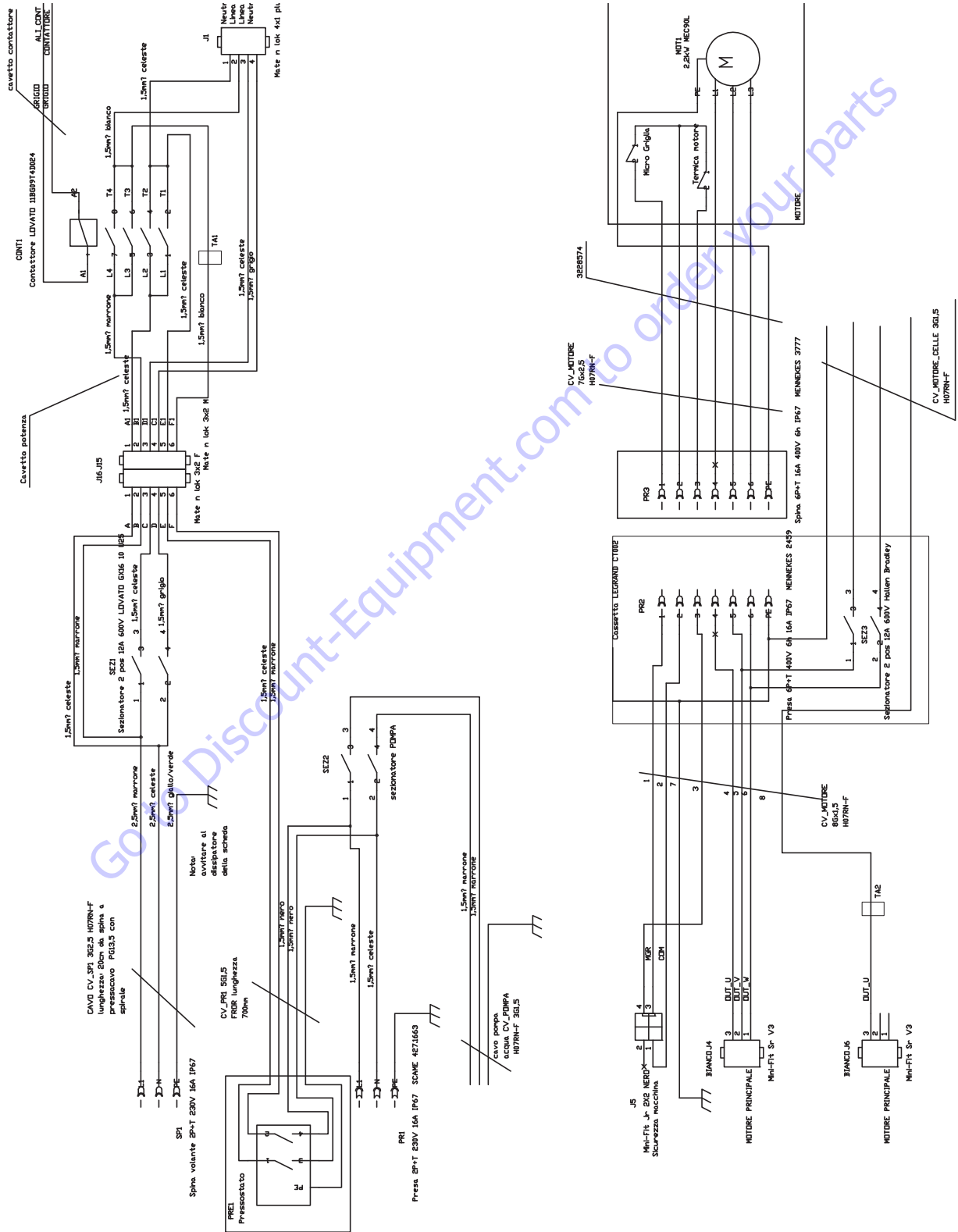
TAV.5 ACCESSORIES			
Rif.	Cod.	GB	Note
1	1107540	SRPAY JET	
2	1107525	15m MATERIAL CARRIER HOSE D25 WITH CAM COUPLINGS	
3	3224546	WATER HOSE	D.19X30
4	1107532	16m AIR HOSE D13 WITH GEKA CONNECTORS	
5	1107552	N°10 DUSE D12	
6	1107519	N°10 WASHING SPONGED30	
7	3223694	NOZZLE CLEANER D4.5	
8	3225934	KAMLOCK COUPLNG FOR CLAMPING DN 27F	
9	3225933	KAMLOCK COUPLNG FOR CLAMPING DN 27M	
10	3224498	LEVER	DN 25-35-50
11	3224830	SEAL CAM COUPLING DN 25	
12	3225943	HOSE CLAMP 28-35	28-35
13	1107565	KIT REDUCER	DN35 F.-DN25 M
14	3223704	CAM-LOCK COUPLING 1 1/4" - DN35 F.	1 1/4" - DN35 F.
15	3223390	CAM-LOCK COUPLING 1 1/4" - DN27 M.	1 1/4" - DN27 M.
16	3223721	CAM-LOCK COUPLING 1" - DN27 F.	1" - DN27 F.
17	3223722	QUICK COUPLING 1" M.	
18	3223697	QUICK COUPLING GASKET	

Fig.6 Tav.6

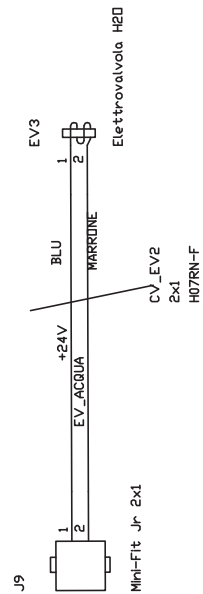
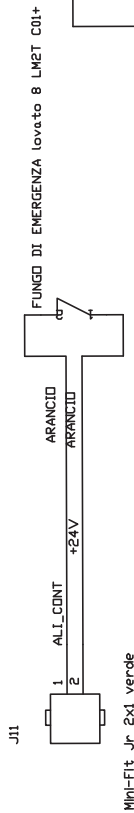
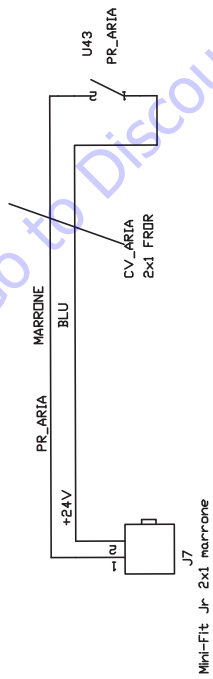
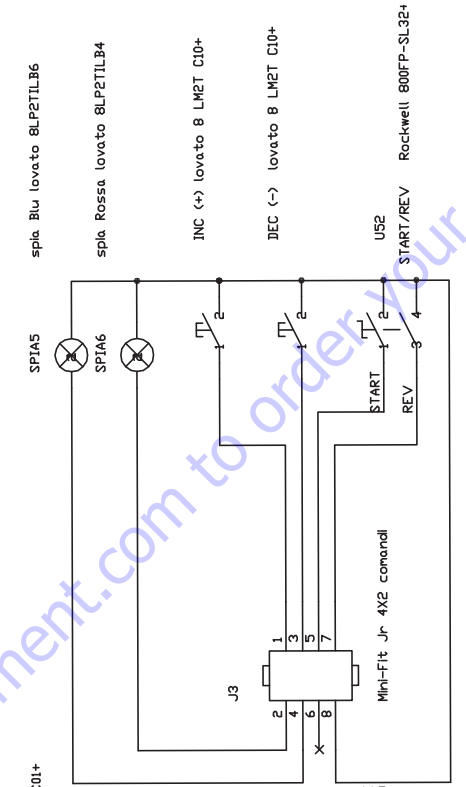
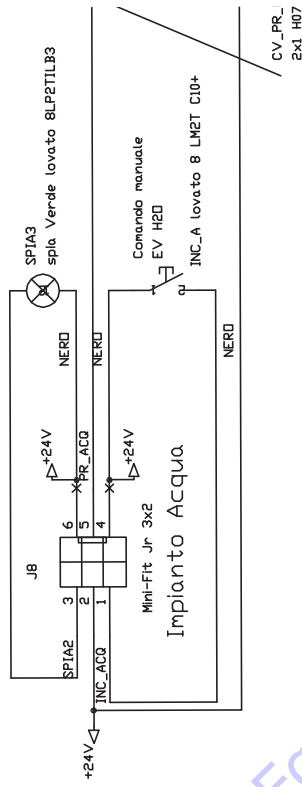


TAV.6 SRPAY JET			
Rif.	Cod.	GB	Note
1	1107540	SRPAY JET	
2	3225598	COMPLETE AIR HOSE FOR SPRAYER	
3	3224818	QUICK COUPLING	D.10
4	3224823	CLAMP	D.15-18
5	2292365	HOSE	D.10X16
6	3227955	HOSE CLAMP	1/4" x D.10
7	3227953	BALL VALVE	1/4" F.F.
8	3227954	REDUCER	1/4"-1/8"
9	3223350	AIR HOSE	L.135
10	3224701	CAM-LOCK COUPLING	DN25 F. -1" G.F.
11	3224498	LEVER	DN 25-35-50
12	3223348	HOSE IN PLASTIC FOR SPRAY JET	
13	3223345	SPRAYER HEAD	
14	3209356	SCREW	M.10
15	1107553	KIT N°10 DUSE D.14	D.14
16	3224830	SEAL CAM COUPLING DN 25	DN.25
17	3223697	QUICK COUPLING GASKET	

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