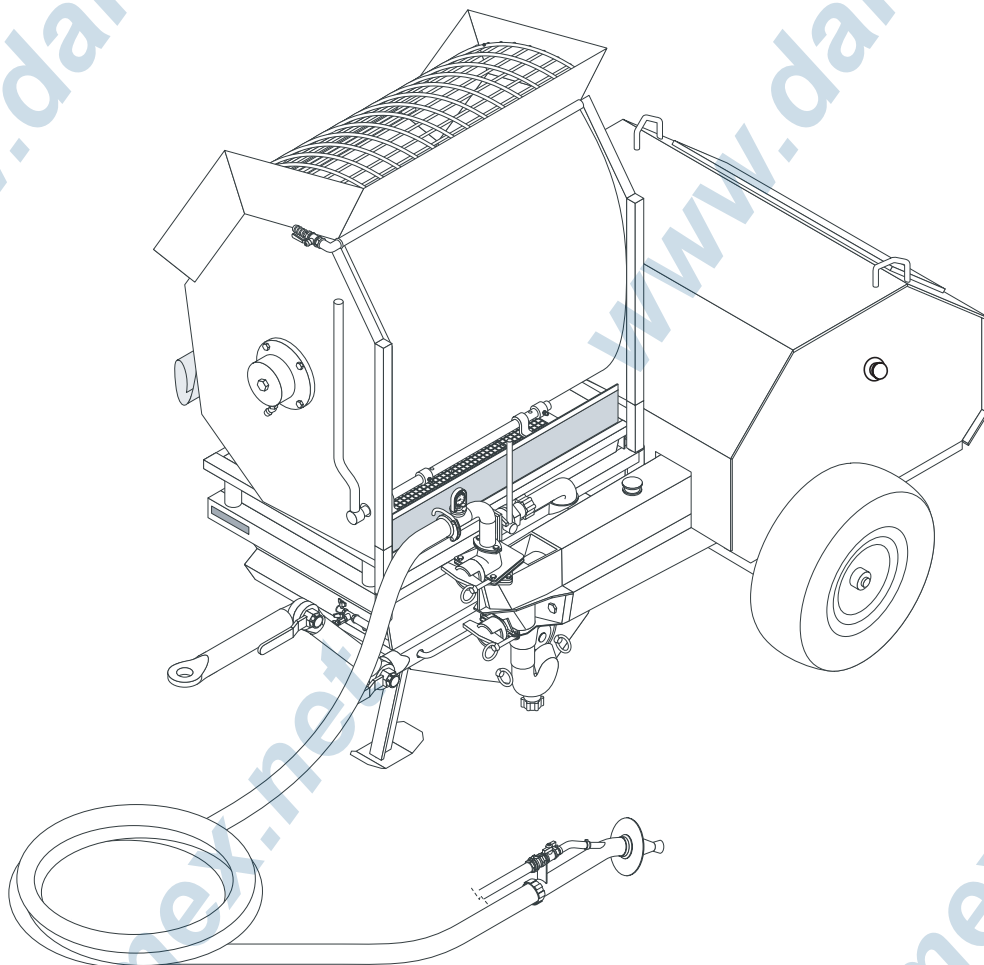


UNI 30 E

17261 - 561.228



Serial number

						/		
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**READ THIS MANUAL CAREFULLY BEFORE USING THE MACHINE.
THIS MANUAL IS AN INTEGRAL PART OF THE MACHINE AND MUST BE KEPT FOR FUTURE REFERENCE
UNTIL THE MACHINE IS DISPOSED OF**

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1.1 CE DECLARATION OF CONFORMITY

**Dichiarazione CE di conformità - EC declaration of Conformity - EG – Konformitätserklärung -
 Déclaration CE de conformité - Declaración de Conformidad CE - Declaração CE de conformidade**

Il fabbricante - *The manufacturer* - Le fabricant - *Der Hersteller* - El fabricante - *O fabricante*

TURBOSOL
PRODUZIONE S.p.A.
 Via A. Volta, 1
 31030 Pero di Breda
 TREVISO – ITALIA

dichiara che la seguente macchina:
declares that the machinery:
déclare que la machine:
erklärt, dass die Maschine:
 declara que la máquina:
declara que a máquina:

Miscelatrice e trasportatrice di massetti per sottofondi
Mixing machine and conveyor of screeds for foundations
 Malaxeur transporteur de chape
Estrich-Mischmaschine mit Förderpumpe
 Mezcladora y transportadora de bloques para explanadas
Misturadora e transportadora de argamassas para estratos

Modello - <i>Model</i> - <i>Modèle</i> - <i>Modell</i> - <i>Modelo</i> - <i>Modelo</i>	MODELLO
Versione - <i>Version</i> - <i>Version</i> - <i>Version</i> - <i>Versión</i> - <i>Versão</i>	VERSIONE
Matricola numero - <i>Serial number</i> - <i>Numéro de matricule</i> - <i>Seriennummer</i> - <i>Número de matrícula</i> - <i>Número de matrícula</i>	XXX.XXX
Anno di fabbricazione - <i>Year of manufacture</i> - <i>Année de fabrication</i> - <i>Herstellungsjahr</i> - <i>Año de fabricación</i> - <i>Ano de fabrico</i>	ANNO

è conforme alle disposizioni della direttiva 98/37/CE e alle disposizioni nazionali di attuazione;
 è anche conforme alle disposizioni delle seguenti direttive europee: 2000/14/CE, 2004/108/CE, 97/23/CE;
 è conforme alle disposizioni delle seguenti norme armonizzate: EN 12100-1/2:2005, EN 294:1993, EN 60204:2006.

fulfils all the relevant provisions of the Directive 98/37/EC;
also fulfils all the relevant provisions of the following European Directives: 2000/14/EC, 2004/108/EC, 97/23/EC;
fulfils the provisions of the following harmonised standards: EN 12100-1/2:2005, EN 294:1993, EN 60204:2006.

est conforme aux dispositions de la directive 98/37/CE;
 est également conforme aux dispositions des directives européennes suivantes: 2000/14/CE, 2004/108/CE, 97/23/CE;
 est conforme aux dispositions des normes harmonisées suivantes: EN 12100-1/2:2005, EN 294:1993, EN 60204:2006.

den Bestimmungen der Richtlinie 98/37/EG;
ebenso den Bestimmungen der folgenden europäischen Richtlinien entspricht: 2000/14/EG, 2004/108/EG, 97/23/EG;
den Bestimmungen der folgenden harmonisierten Normen entspricht: EN 12100-1/2:2005, EN 294:1993, EN 60204:2006.

es conforme a las disposiciones de la directiva 98/37/CE ;
 también es conforme a las disposiciones de las siguientes directivas europeas: 2000/14/CE, 2004/108/CE, 97/23/CE;
 es conforme a las disposiciones de las siguientes normativas armonizadas: EN 12100-1/2:2005, EN 294:1993,
 EN 60204:2006.

é conforme às disposições da directiva 98/37/CE;
também é conforme às disposições das seguintes directivas europeias: 2000/14/CE, 2004/108/CE, 97/23/CE;
é conforme às disposições das seguintes normas harmonizadas: EN 12100-1/2:2005, EN 294:1993, EN 60204:2006.



An original copy of the CE Declaration of Conformity is supplied separately from the manual.

2.1 IMPORTANCE OF THE MANUAL

This "Use and Maintenance Manual" has been drawn up following the guidelines envisioned in the relevant European Directives in order to guarantee simple and full understanding of the subjects by the operators authorised to operate and perform maintenance on the machine in question. The manufacturer has prepared this manual with the greatest care. However, should any operators find any part of the manual difficult to understand, they should contact the manufacturer immediately and request explanations and/or further information in order to avoid misunderstandings that might compromise the user's safety. Before using the machine, authorised operators must read and understand this "Use and Maintenance Manual" in every part and strictly follow the Standards herein, in order to ensure their own safety and that of others, to make the machine work at its full potential and to ensure a long-lasting and efficient service life to all the machine parts. This manual should be safely stored and kept close to the machine at all times for immediate consultation by operators.

Only specifically trained and authorised staff can operate and perform maintenance on the machine.

Operators must follow all the instructions regarding the prevention of accidents and the regulations on workplace safety in force in the country of use.

The Manufacturer shall not be responsible for any damages resulting from changes made to the machine and/or from unauthorized tampering.

It is recommended to make a note of the machine serial number on the cover of this manual. This number must always be presented when requesting after-sales assistance or spare parts.

This manual reflects the latest information available at the time of marketing the machine and should not be considered inadequate only because it may be successively updated on the basis of newly acquired information.

Reprinting or reproducing this manual, in whole or in part, is not allowed unless authorized by ourselves in writing.

THE MANUFACTURER DECLINES ANY RESPONSIBILITY FOR DAMAGES TO PERSONS, ANIMALS OR PROPERTY CAUSED BY FAILURE TO OBSERVE THE STANDARDS AND RECOMMENDATIONS CONTAINED HEREIN.

2.2 ABBREVIATIONS

ca.	About	min	Minutes
chap.	Chapter	N.	Number
IPD	Individual protection devices	page	Page
RIGHT	Right	par.	Paragraph
h	Hours	pos.	Position
EN	European Norm	REF.	Reference
E.g.	Example	s	Seconds
FIG.	Figure/s	LEFT	Left
max.	Maximum	TAB.	Table
min.	Minimum	s.	See

TAB.01

2.3 INFORMATION FOR CONSULTING THE MANUAL

Boldface

Highlights important parts in the text.

The general danger system and the test in upper-case, calls the attention of the operator regarding the warnings given in this manual

2.4 DESCRIPTION OF THE SYMBOLS

Information and recommendations that are particularly important are indicated in this manual by the following symbols:

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ATTENTION: this symbol indicates safety regulations regarding the operator.



PRECAUTION: this symbol indicates the possibility of causing damage to the machine and/or its parts.



DANGER: this symbol indicates the presence of electrical energy.



IMPORTANT NOTE: this symbol supplies useful information.

2.5 MACHINE OFF

Before performing any type of maintenance and/or adjustment on the machine it is mandatory to isolate all power supply sources. Make sure that the machine is effectively off and cannot start-up unexpectedly. Take the by-pass lever to the vertical position (FIG.01-REF.1), make sure that the manometer indicates a pressure of "0" zero bar (FIG.01-REF.2), take the master switch to the "0" position (FIG.02-REF.1) and ensure that the electric power supply cable is disconnected from the mains socket and positioned near to the machine).

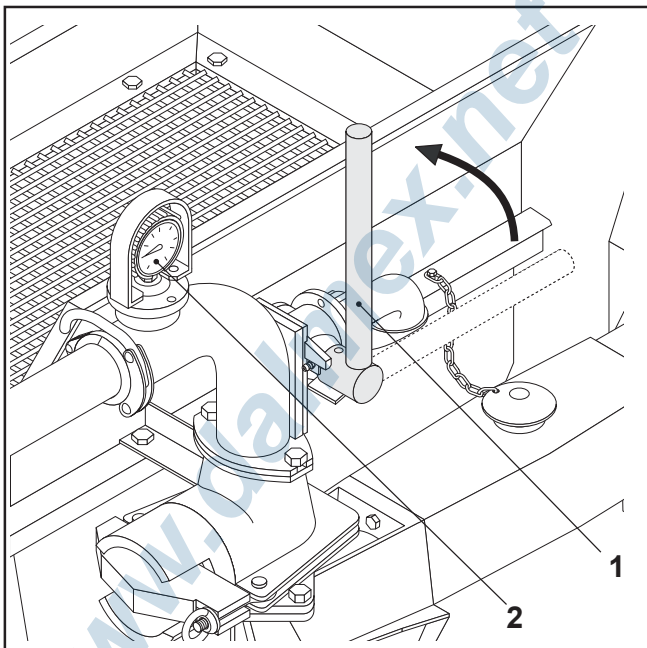


FIG.01

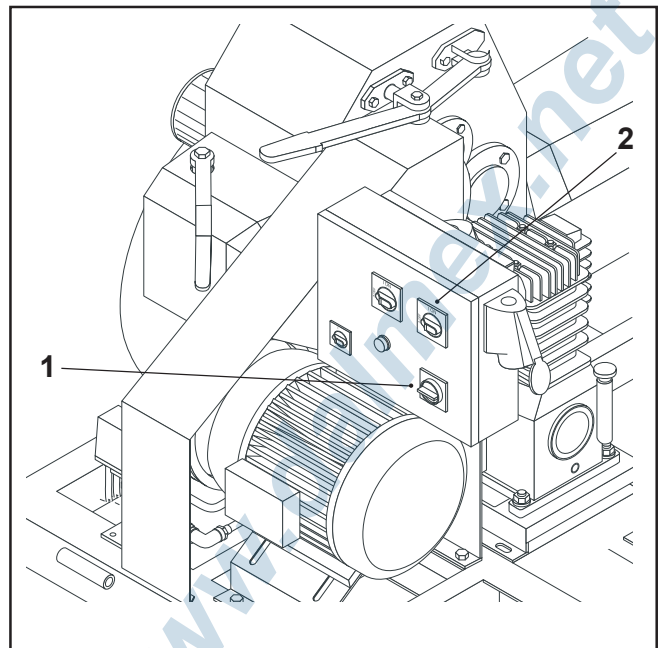


FIG.02

2.6 GENERAL AND CONTACT INFORMATION

The conveyors and UNI 30 E mortar sprayers can be supplied with different set-ups and with different accessories, therefore not all components described in this manual are necessarily mounted on your machine.

The Customer Service department of Turbosol Produzione S.p.A. will be glad to provide any information you may need.



Turbosol Produzione S.p.A.

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website: www.turbosol.it
e-mail: info@turbosol.it

TURBOSOL MACHINES

They are the result of years of experience and constant research. The "know how" acquired in this way, along with great attention to quality, constitutes the fundamental guarantee for the manufacturing of machines with long duration, great reliability and reduced management costs.

MAINTENANCE AND CARE

Proper maintenance and care are essential for the machine to work as designed. It is therefore extremely important that users respect the recommended maintenance intervals and carry out any maintenance required, both to keep the machine in perfect running order and to preserve the validity of the warranty.

SAFETY

All service staff must be informed of the Safety Standards. The general Standards relative to safety and accident prevention envisioned by local legislation must also be complied with.

OPERATOR TRAINING

The operator must receive specific training for the correct use of the machine.
Turbosol periodically carries out training courses, also on specific request of the customer.

TURBOSOL SERVICE

Please contact your TURBOSOL dealer for any request regarding machine malfunctions or requests for spare parts.

Turbosol Produzione S.p.A. reserves the right to make any technical modification for machine improvement, even if not contemplated in this manual. Some drawings and representations may be indicative.

3.1 NAME OF MACHINE

CE mark plate

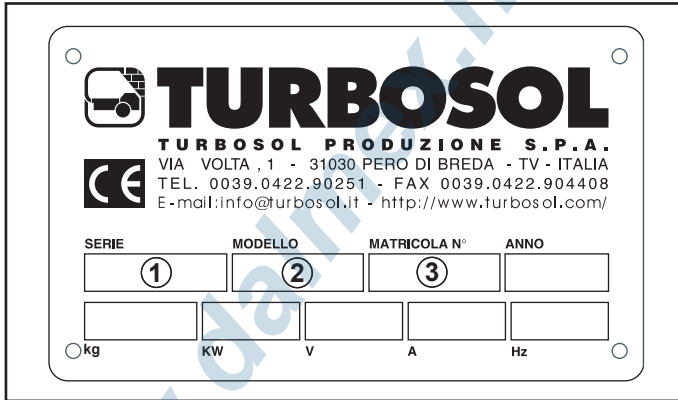


FIG.03

(1) = Machine series:

(2) = Machine model:

(3) = Machine serial number.

Position of the CE mark plate

The CE mark plate (FIG. 04-REF. 1) is affixed to the machine's bodywork.

Position of the machine serial number.

The machine's serial number (FIG.05-REF.1) is punched onto the machine frame and onto the body of the reducer inside the bodywork.

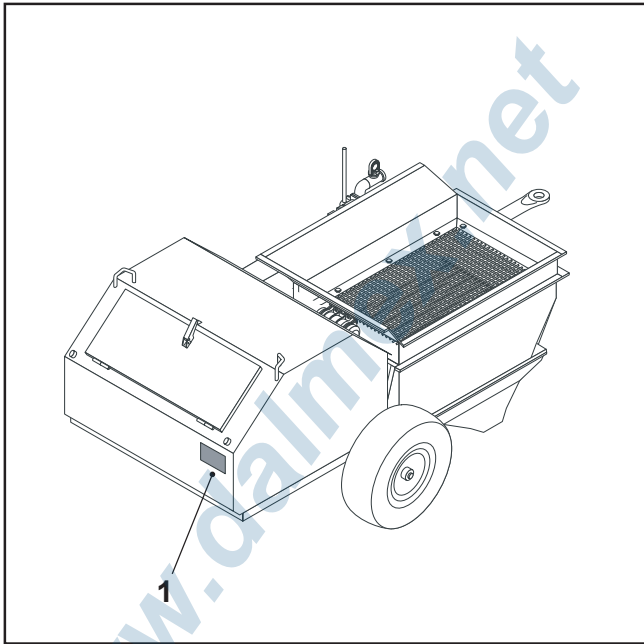


FIG.04

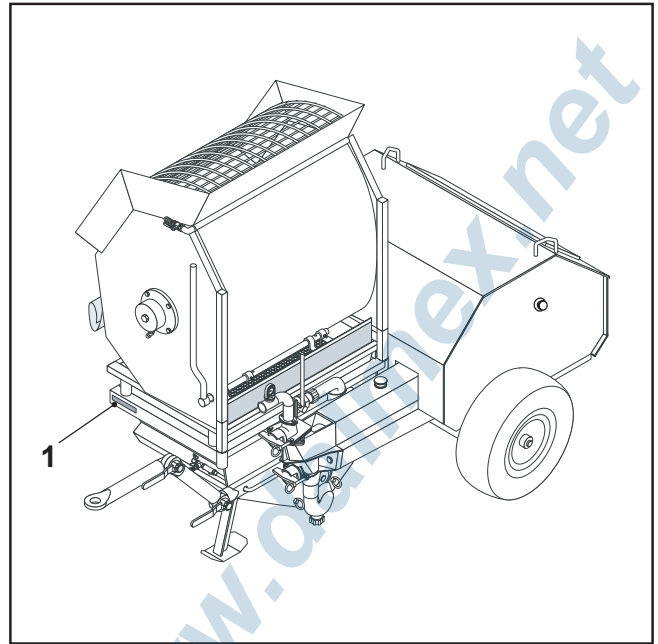


FIG.05

3.2 DIMENSIONS OF MACHINE

The maximum dimensions and gross weight (in working conditions) of the machine in Italy set-up are stated. Depending on the set-up for the various markets, the data given may vary for the optionals and accessories mounted

VERSION	LENGTH	WIDTH	HEIGHT	WEIGHT
ES	2.000 mm	1.500 mm	1.100 mm	660 kg
EMF	2.000 mm	1.500 mm	1.600 mm	830 kg

TAB.03

3.3 TECHNICAL DATA

Mortar pump pressure (indicative)	bar	30
Power supply voltage	V	400
Power supply frequency	Hz	50
Mortar pump electric motor power	kW	5.5
Mixer electric motor power (EMF version)	kW	1.5
Vibrator power	kW	0.11
Absorbed current	A	12
Number of starts/hour	maximum	n 24
Compressor maximum pressure valve	bar	6.5
Pressure switch calibration pressure	minimum maximum	bar 2 4
Hopper capacity	l	200
Mixer capacity	l	180

Useful distance (<i>indicative</i>)	m	200*
Useful height (<i>indicative</i>)	m	60
Material flow rubber pipe ** 1st tract Intermediate tracts Terminal	mm	\varnothing 50 x 69** \varnothing 50 x 66 \varnothing 40 x 53
Particle size that can be transported	mm	0 - 8
Work environment temperature	°C	0 / +35
Maximum height above sea level of the place of installation without sensitive reduction of the power	m	1000
Guaranteed sound power level LwA	dB	110 ***

TAB.02

* maximum distance and height cannot be reached at the same time.

** only use specific pipes for this machine.

*** The operator must use Individual Protection Devices (IPD) for hearing.

3.4 INTENDED USES

The machine has been designed and built for the following use:

FIELD OF USE: construction sector.

DECLARED USE: conveying and spraying plasters.

3.5 PRODUCTS USED FOR WORKING

Cement-based common or ready-mixed mortars, special insulating mortars, refractory mortars.
Cement or anhydride- based self-levelling screeds, grouts and concretes.

3.6 NAME OF THE COMPONENTS

FIG.06 shows and names the components that make up the machine in the most complete version EMF.

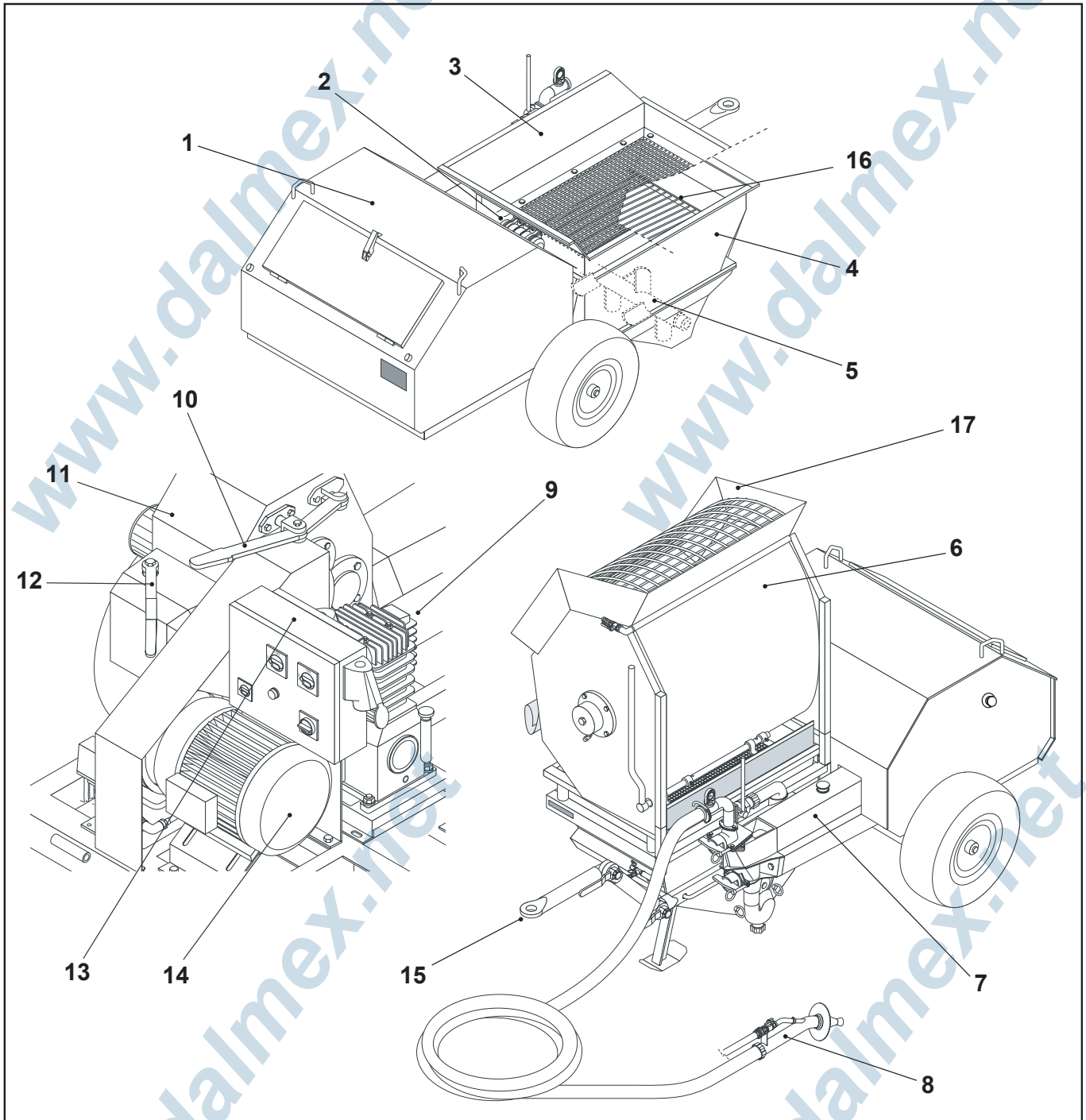


FIG.06

KEY:

- 1) Bodywork
- 2) Electric vibrator
- 3) Vibrating sieve
- 4) Hopper
- 5) Mixer device
- 6) Mixer

- 7) Pumping unit
- 8) Spray gun
- 9) Compressor
- 10) Speed change
- 11) Reducer unit
- 12) Safety lever (pumping block)
- 13) Electric control board
- 14) Electric engine
- 15) Suspension bar
- 16) Hopper safety grill
- 17) Mixer safety grill

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4.1 LIFTING

The machine has three attachment points for lifting using a crane.

- Check that the machine is off and there are no pipes connected.
- Check that the bodywork is closed using the relevant hooks and the safety screw that blocks the bodywork (FIG.07-REF.1) is regularly fixed.
- Lift the suspension bar and position the hole facing upwards.
- Hitch the ropes to the handles and to the suspension bar hole.

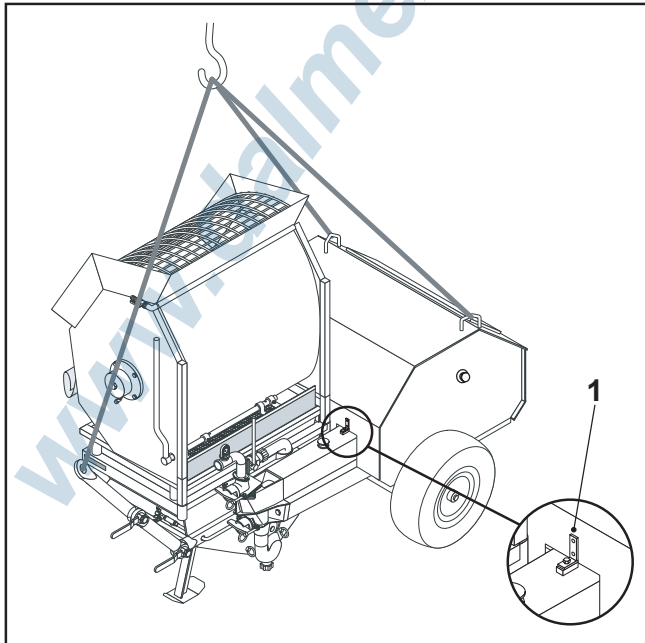


FIG.07

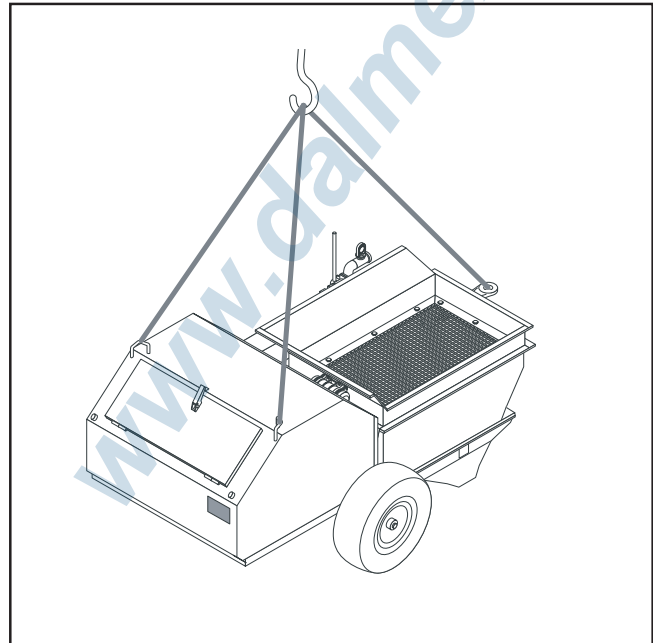


FIG.08



When handling the machine using a crane, the Safety Standards must be complied with that rule lifting operations and the relative equipment.

Use two type-approved ropes for lifting 2,000 kg with length of:

- 1.00 mt. ropes hitched to handles;
- 1.30 mt. rope hitched to suspension bar.

Make sure the area is clear of any bystanders before lifting the machine.

Do not stand under suspended load.

To prevent damage to the machine, do not lift or lower it with abrupt movements.

Do not change the lifting hook's anchoring point.

Do not push the machine.

Lifting should be carried out in strict compliance with all Standards in force regarding lifting, and the equipment used must be in good working order and also comply with regulations.

The lifting apparatus must be operated by specifically trained and authorised staff.

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5.1 POSITIONING THE MACHINE

Place the machine in a horizontal position; the maximum allowed gradient is 5°, both lengthwise and crosswise (FIG. 09).

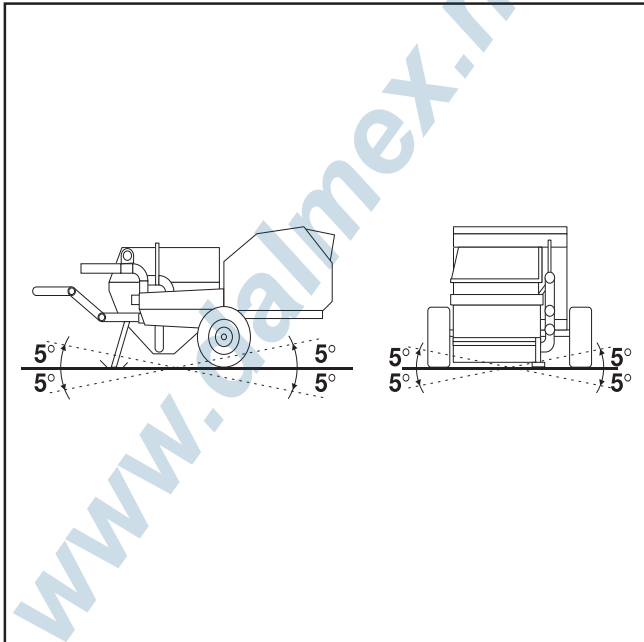


FIG.09

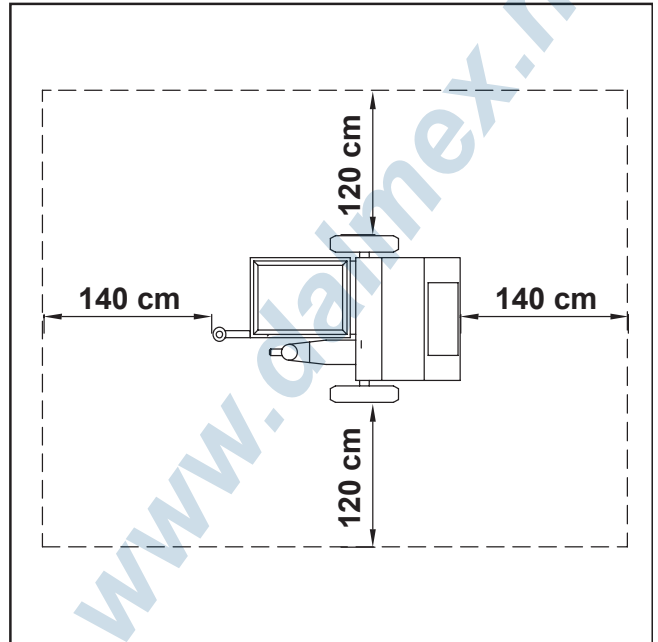


FIG.10

The machine must be positioned in the point of the worksite that allows the pipes and hoses to their full extension.

- Make sure that the machine rests on the bracket positioned under the hopper.



Be sure to leave a passageway all around the machine (FIG.10) clear of any obstacles and with no holes or hazardous projections.

5.2 PIPING

Lay out the piping optimising their length (to reduce transport time and limit wear) and make sure the pipes are in good condition.



Use only original pipes and fittings.

The pipes must be fitted by TURBOSOL PRODUZIONE S.p.A. or by companies expressly authorised by TURBOSOL.

TURBOSOL PRODUZIONE S.p.A. shall not be held responsible for injury/damage to persons or property caused by using non-original piping or fittings.

Piping anchorage

The line must be fixed appropriately: use the supplied pipe clamps to fix the vertical tracts and to arrive at the surface. Make sure that the air piping has no narrowing in the fixing points. This piping must be fixed separately to the mortar pipe. Check that the mortar pipe fittings and the air pipe are perfectly blocked. Make sure that the mortar pipe is well anchored to the goods so that it does not undergo damaging swaying with the pumping action.

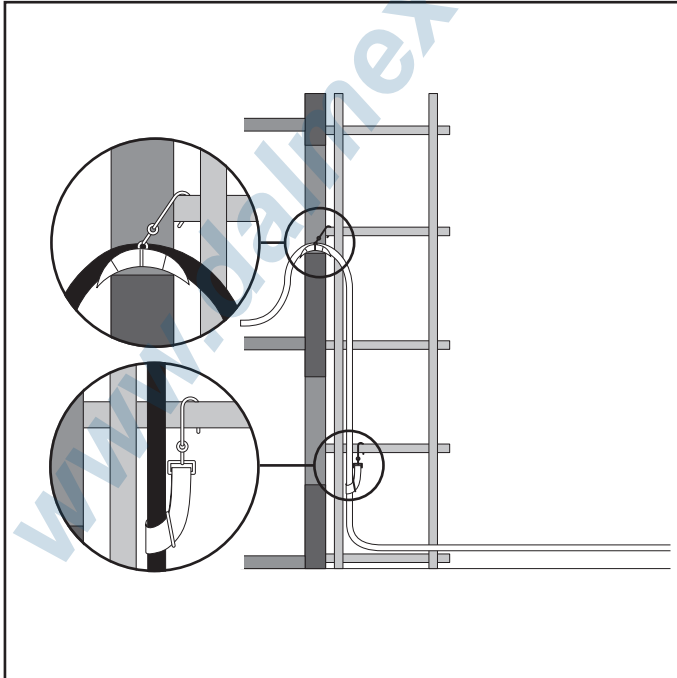


FIG.11

5.3 FITTINGS

Always make sure the fittings are clean and in good working order.

Camlock Fittings

When connecting the pieces of pipe, check that the rubber gasket is present (FIG.12-REF.1), tighten the lever completely (FIG.13-REF.1).

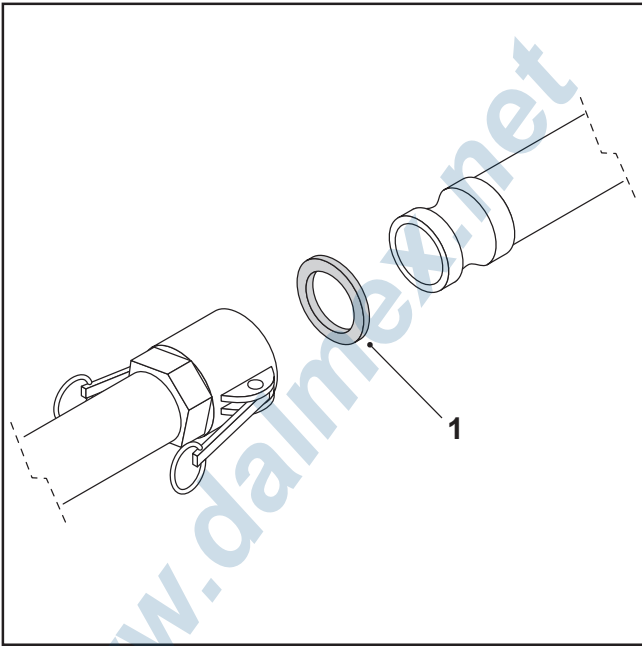


FIG.12

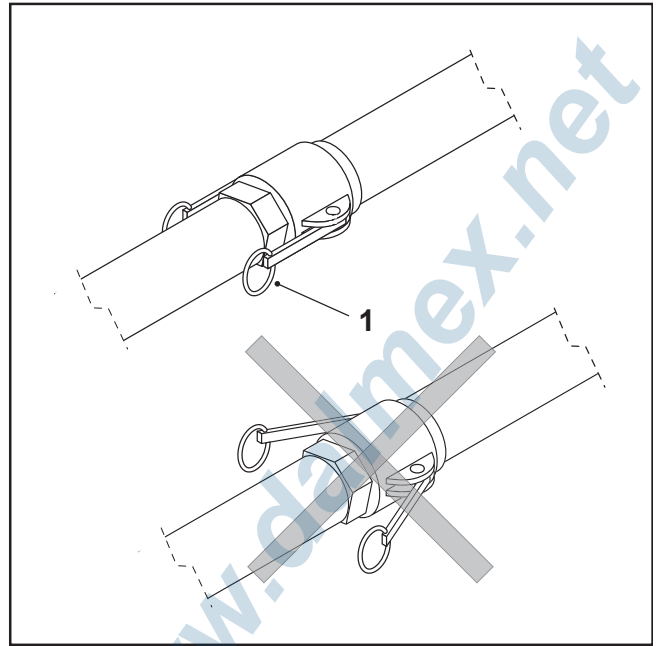


FIG.13



The pipes must be connected to each other with the longest pieces (20 mt) connected to the machine and so on until the shortest pieces are connected to the gun.

5.4 CONNECTIONS



The machine must never operate if the rubber pipe is not connected to the flow connector of the machine and to the gun.

PIPING

Connect the various pieces of material pipe to the pump unit (FIG.14-REF.1) and the air pipe to the quick-release coupling of the air unit (FIG.15-REF.2). Then connect the gun to the end part of the material pipe (FIG.15-REF.3), connect the air pipe (FIG.15-REF.1) tightening the fittings well.

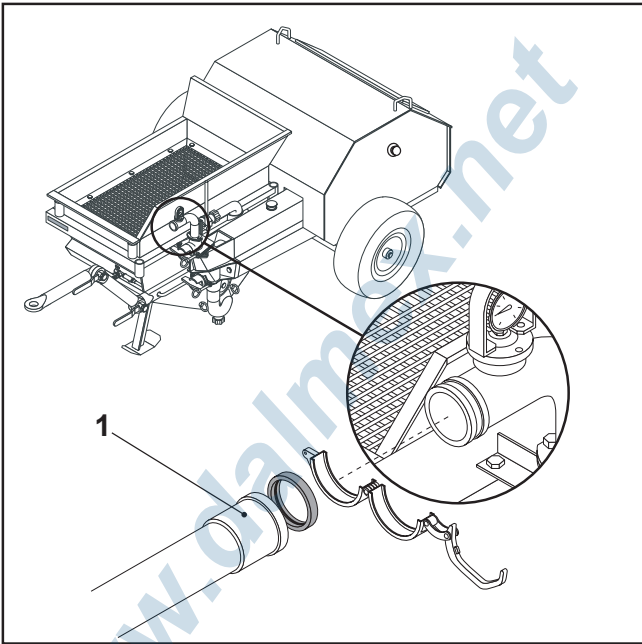


FIG.14

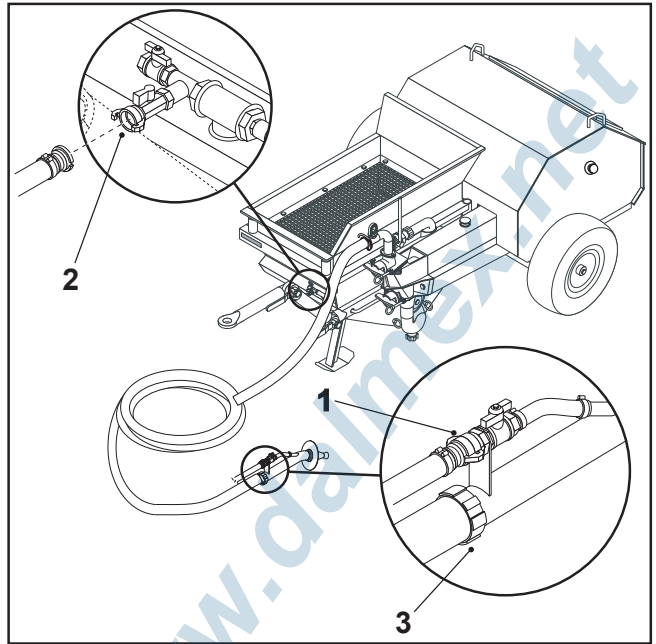


FIG.15

In the EMF version, connect the water pipe to the outlet connection (FIG.17-REF.1).

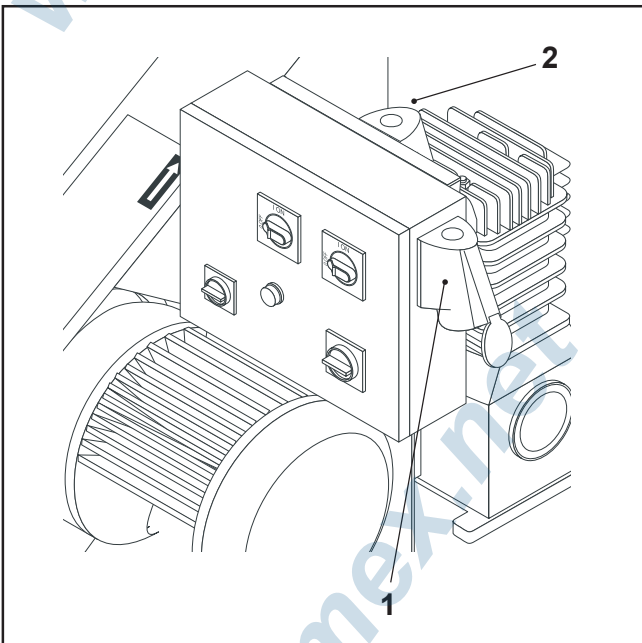


FIG.16

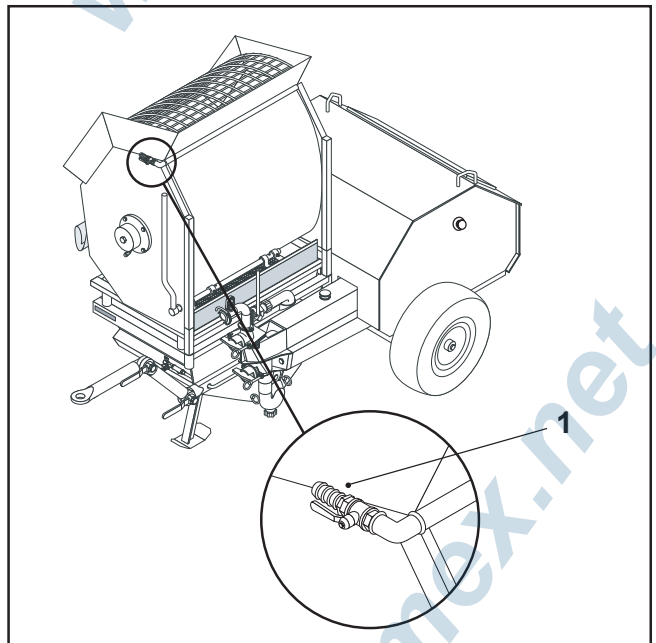


FIG.17

ELECTRIC CONNECTION

Connect the machine to the site electric control board with a neoprene cable (anti-wear rubber) marked H07RN-F, with minimum section:

- 4 x 4 mm. for distance up to 20 m;
- 4 x 6 mm. for distance up to 50 m;
- 4 x 10 mm. for distance up to 100 m;

The use of an electric cable with unsuitable section jeopardises the functioning of the machine.

The site electric control board must have:

- a minimum power of 15 kW,
- suitable earthing,
- 35 A fuses (type aM),
- high-sensitivity differentials (from 30 mA),
- it must always be in compliance with national Standards in force.

Do not use the same power supply cable for the machine and for the concrete mixer.

Insert the vibrating sieve plug into the corresponding socket positioned on the electric control board (FIG.16-REF.1).

Insert the power supply cable plug into the corresponding socket positioned on the electric control board (FIG.16-REF.2).

6.1 SAFETY DEVICES USED

SAFETY VALVE

The air plant is protected from over-pressures by a safety valve positioned on the frame near to the accumulator.

PROTECTION GRILL ON MIXER

On the top of the mixer opening find a hinged grill with square mesh with opening of 58 mm (it has not been possible to satisfy that envisioned by EN 294:19983). It is used to prevent contact with the dangerous area of the inside of the mixer. The grill can only be opened by acting on the lock screws.

MIXER GRILL SAFETY SENSOR

The magnet is inserted on the grill that makes the respective sensor intervene, which is positioned outside the mixer body. During functioning, the machine stops if the grill is removed accidentally.

PROTECTION GRILL ON HOPPER.

A hinged grill is positioned on the hopper composed of round bars with diameter of 10mm and span 36mm. It is used to prevent contact with the mixing device in the dangerous area inside the hopper.

HOPPER GRILL SAFETY SENSOR

The hinged hopper grill also has a lever externally that makes the respective sensor intervene, which is positioned outside of the hopper body. During functioning, the machine stops if the grill is raised accidentally.

MORTAR PUMP OVERPRESSURE SAFETY DEVICE

If an overpressure condition of the mortar pump should occur, the mechanical "spring drivers" device starts-up, which disconnects the pump itself.

MOTOR MOBILE BODYWORK

The mobile bodywork that covers all of the motor compartment is hinged and blocked by a screw and protects from contact with hot parts.

PRESSURE MANOMETER INSIDE THE MORTAR PUMP

The manometer is positioned on the flow collector and is used to inform the operator of the presence of pressure inside the tank body and material conveying pipes.

MUSHROOM-SHAPED EMERGENCY BUTTON

Two mushroom-shaped buttons are mounted on the sides of the bodywork, which allow to stop the machine immediately in emergency situations.



IT IS PROHIBITED TO TAMPER WITH, EXCLUDE AND/OR REMOVE ANY SAFETY DEVICES FROM THE MACHINE.



IT IS PROHIBITED TO REPLACE ANY SAFETY DEVICES OR COMPONENTS OF A SAFETY DEVICE WITH NON-ORIGINAL SPARE PARTS.



IT IS MANDATORY TO CONSTANTLY CHECK THE GOOD WORKING ORDER OF ALL THE SAFETY DEVICES INSTALLED ON THE MACHINE.



IT IS MANDATORY TO REPLACE ANY MALFUNCTIONING OR DAMAGED SAFETY DEVICES IMMEDIATELY.

6.2 SAFETY SIGNS

The safety signs are adhesive labels affixed outside the machine.



The safety signs must be kept clean and clearly visible at all times.



Damaged signs must be replaced immediately with new ones obtained from the manufacturer.



It is prohibited to remove or damage the safety signs affixed on the machine.

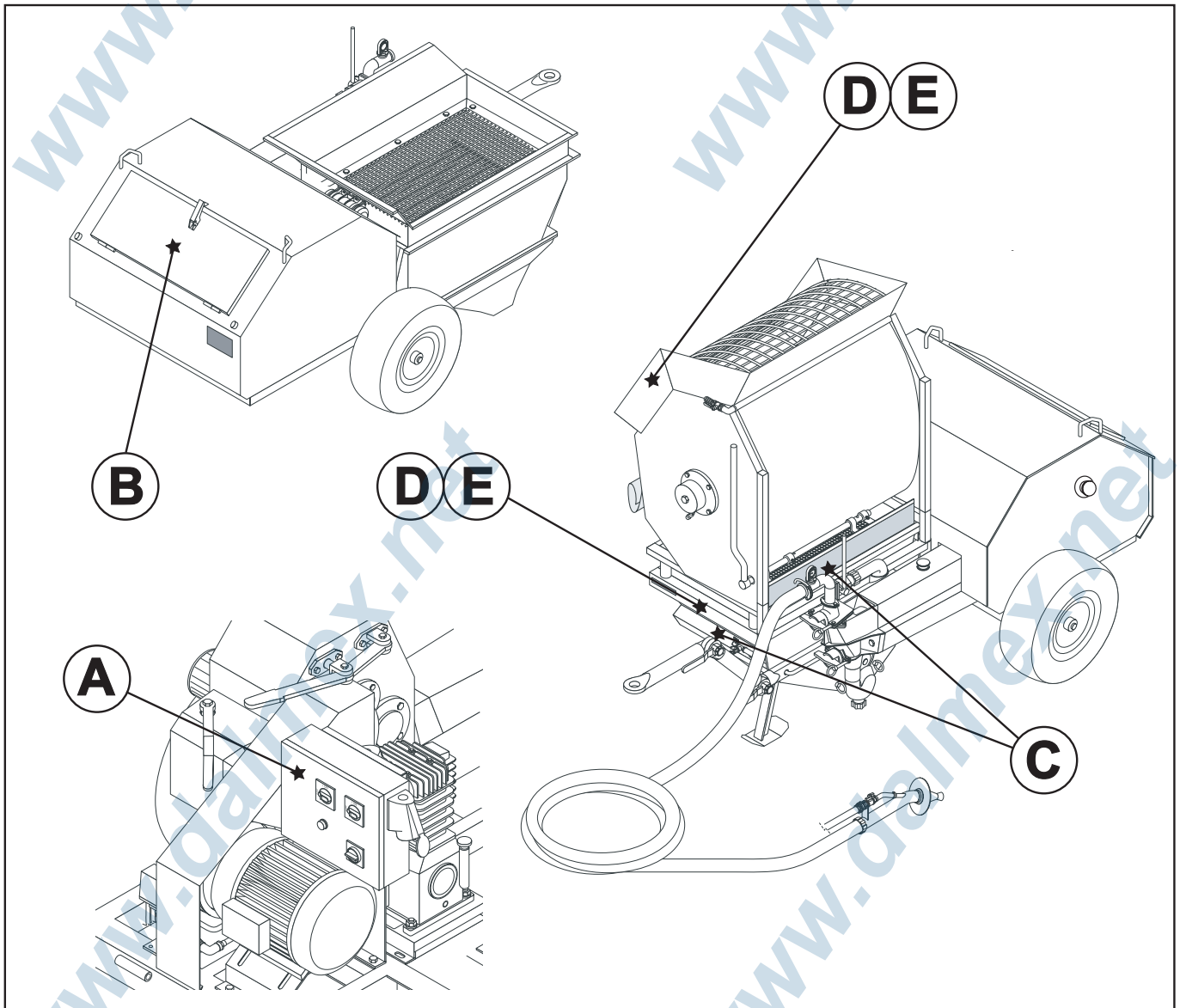







FIG.18

TAB.04





REF.	LABEL	DESCRIPTION
A		Danger electric shocks.
B		It is mandatory to read the instruction manual before starting to operate.
C		It is prohibited to disconnect pressurised pipes.
D		It is prohibited to remove safety devices and protection.
E		Danger moving parts.

6.3 INDIVIDUAL PROTECTION DEVICES

Wearing individual protective devices is mandatory, in compliance with the Standards regarding health and safety in the workplace in force in the country of use.
The employers, staff in charge and operators must be aware of and apply these Standards.



IT IS MANDATORY TO USE THE PROTECTION DEVICES INDICATED BY THE MANUFACTURER (TAB.05).

MANDATORY SIGNS	DESCRIPTION
	IT IS MANDATORY TO PROTECT THE EYES.
	IT IS MANDATORY TO PROTECT HEARING.
	IT IS MANDATORY TO PROTECT THE HANDS.
	IT IS MANDATORY TO PROTECT THE FEET.

TAB.05

6.4 RESIDUAL RISKS

Following the instructions and recommendations contained in this manual will allow you to use the machine correctly and reduce any residual risks.

IN PARTICULAR:

Read the use and maintenance manual before starting the machine.

The operators at the machine and in the material delivery area must be trained to carry out their work following the instructions contained in this manual.

All maintenance must be carried out with the machine switched off.

PRESSURISED PARTS:

Check and guarantee the piping and make sure there are no signs of damage.

Make sure all the quick-release couplings and pipe joints are tight.

Check the correct anchorage of the piping vertical support points.

Do not release the fittings when the pipe is pressurised.

Pay great attention when handling the spray gun.

HOT PARTS:

Do not open the bodywork while the machine is running.

MOVING PARTS:

Do not open the bodywork while the machine is running.

Do not lift the hopper protection grill while the machine is running.

Do not insert foreign bodies through the hopper and mixer grill when the machine is running.

Do not use the machine without the conveyor piping and the spray gun.

6.5 SAFETY RECOMMENDATIONS

- Operate with the bodywork closed.
- The machine must never operate if the piping is not connected to the pump unit and the spray gun.
- Check the state of wear of the pipes and relative joints every day, due to the danger of explosion, projection of the mixture and cutting, in the case of breakage and disconnection from the joints.
- Do not introduce any objects through the protection grill.
- Do not use the machine with inflammable materials, in explosive areas or with unsuitable fluids that cause corrosion and weakening.
- Move with extreme caution in proximity of the conveyor piping, due to the possibility of unexpected movements.
- If the material should block in the conveyor pipe, follow the relative instructions given in the following manual.

7.1 OPERATING PRINCIPLE

The mixture, whether prepared separately with any concrete mixer or mixer, or packed in the mixer incorporated in the plastering machine (EMF version), is made to fall onto the machine vibrating sieve.

The sieved mortar falls into the hopper. From here it is pumped via pump with gravitational valves to the place of use and then sprayed onto the walls using a gun (different depending on the type of material used) into which the material and the air supplied by the compressor, incorporated into the machine, flow.

Machine start and stop are controlled directly by the operator at the gun, by opening and closing the air cock (FIG.19-REF.1) positioned on the mortar gun.

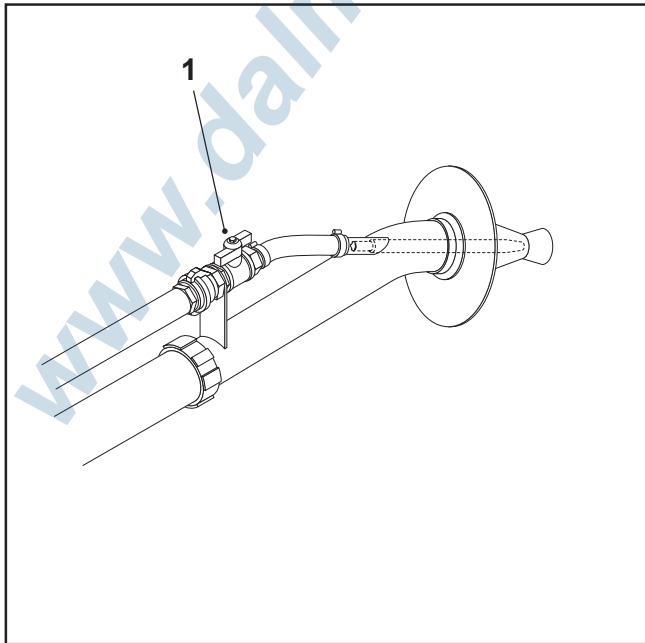


FIG.19

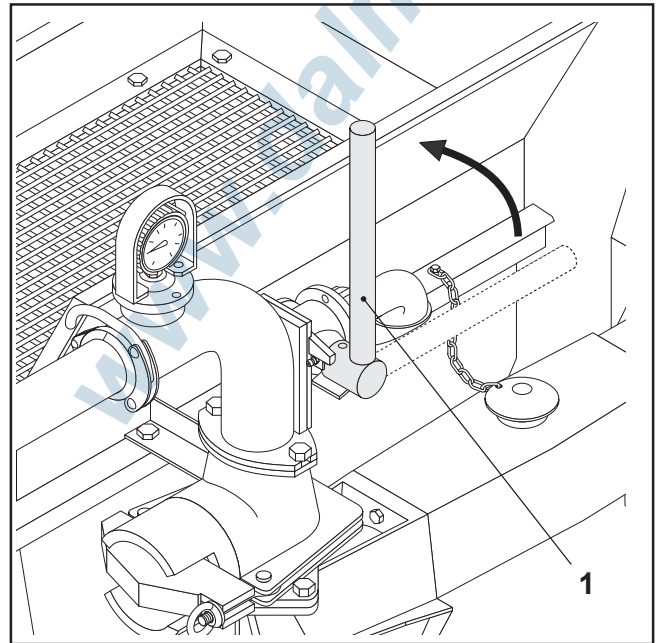


FIG.20

As a general indication, with deflectors that have a smaller diameter, the material is projected with a wider span and vice versa. Using the by-pass lever (FIG.20-REF.1) it is possible to divert the flow of material towards the piping (horizontal position) or in circulation towards the hopper (vertical position).

During the start-up phase, in this way it is possible to start the machine without load and, in case of blocking of the pipes or gun, discharge the pressure present in the piping (vertical position).

The mortar pump overpressure safety device, releases motor transmission from the motor to the pumping unit to prevent dangerous overloads to the pipes and pumping unit.

7.2 PUMPABLE MATERIALS

Below find some fundamental concepts in the realisation of traditional mixtures, which must be conveyed using the UNI 30. The aggregates must be within the particle size curve (FIG.21): mixed sand with particle size 0-6 mm.

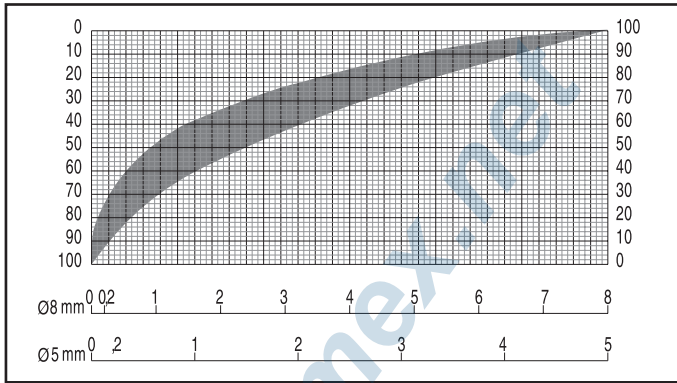


FIG.21

- There must be a correct amount of binder (about 300 - 400 kg per cubed metre) and in the proportions indicated below:

- 2/3 hydraulic lime - 1/3 slack lime;
- 1/3 hydraulic lime - 2/3 slack lime;
- 1/3 cement - 2/3 slack lime;
- 2/3 cement - 1/3 slack lime;

- Do not use plasticizer lime and however as a percentage not higher than a third of the binder: otherwise the machine performance decreases notably.
- The mixture must have a plastic consistency (not too dry and not too wet).

7.3 CHECKS BEFORE START-UP



Oil levels must only be checked when the machine is off.

Perform the following checks:

- Compressor oil level:
the level of lubricant must be on the MAX notch on the stick (FIG.22-REF 1).
If necessary, top-up with SHELL RIMULA EXTRA D 15W40 or equivalent.

The level must never exceed the maximum notch.

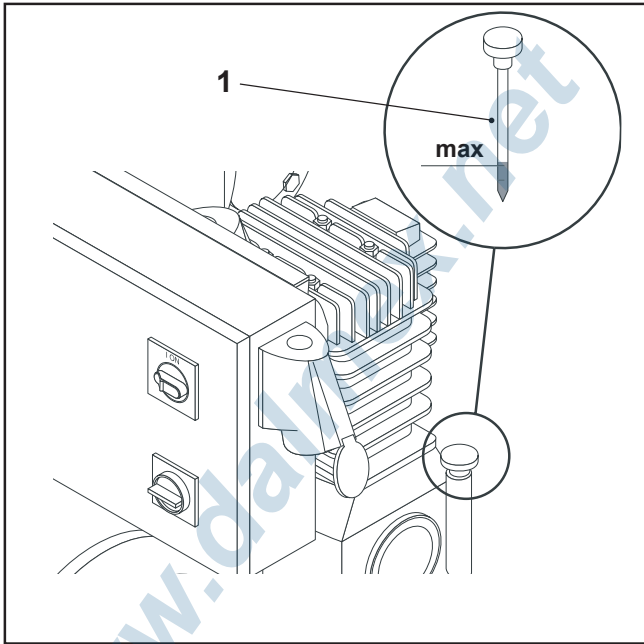


FIG.22

• Reducer oil level:
check the visible level control device (FIG.23-REF.1) and top-up if necessary (FIG.23-REF.2) with ELF POLYTELIS 100 or equivalent.

• Check that the emergency buttons are not inserted.

• Lubrication water:
check that the lubrication water tray of the piston is full.
Restore the level by adding clean water through the mouth (FIG.24-REF.1) situated above the cylinder itself.
In winter add anti-freeze to prevent the formation of ice or discharge the water at the end of the shift.

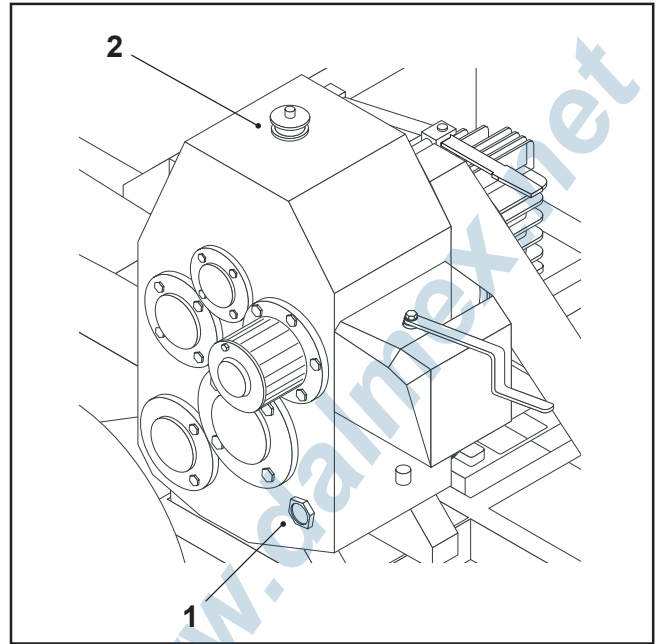


FIG.23



The water must be replaced every 5 working days.

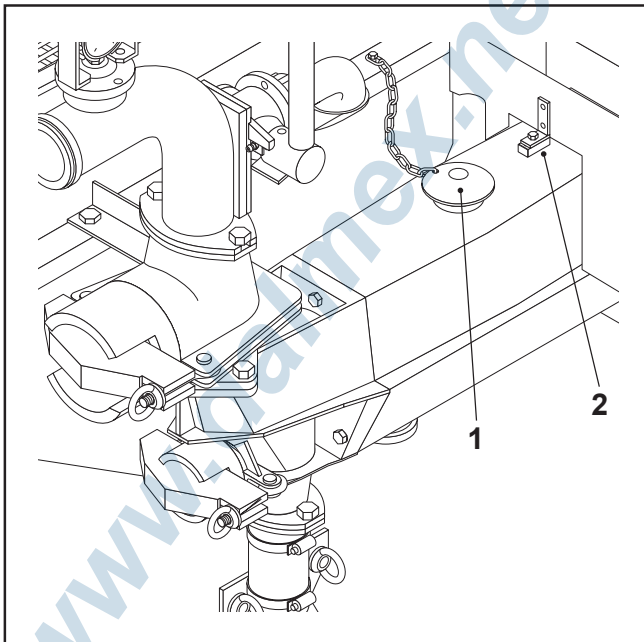


FIG.24

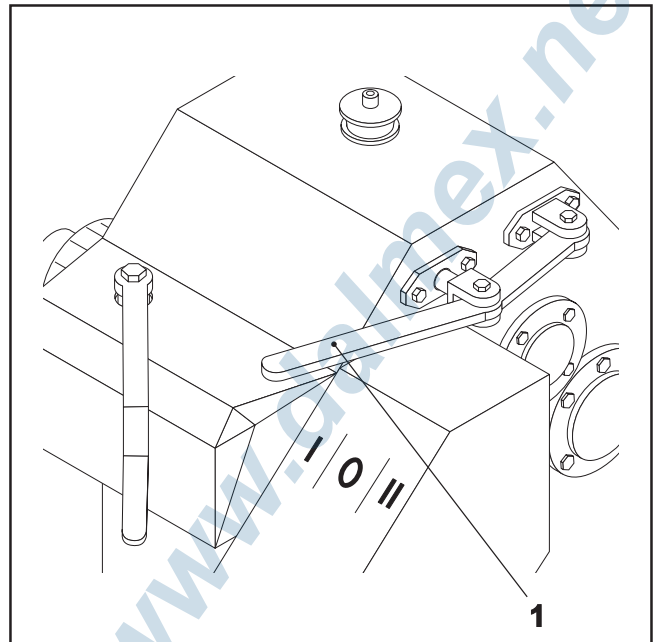


FIG.25

- Start lever:
check that the gear lever (FIG.25-REF.1) is in the idle position (the machine has a two speed gear).

- Safety screw:
check that the safety screw (FIG.24-REF.2) that blocks the bodywork is regularly fixed.

- Inspection caps:
make sure that the machine inspection caps (FIG.26-REF.1) are perfectly blocked.
Perform this operation using the relevant spanner (FIG.26-REF.2) supplied with the plastering machine to tighten the stands by acting on the ring nuts.

- Hopper safety grill:
red indicator on (FIG.27-REF.5) means that the grill on the hopper is not positioned regularly. During lifting of the grill, the machine stops automatically through contact with the micro switch. At every stop induced by the safety sensors, take the master switch (FIG.27-REF.2) to 0 (zero).

Version with mixer (EMF version)

- Mixer safety grill:
red indicator on (FIG.27-REF.5) means that the grill on the mixer is not positioned regularly. During lifting of the grill, the machine stops automatically through contact with the micro switch. At every stop induced by the safety sensors, take the master switch (FIG.27-REF.2) to 0 (zero).

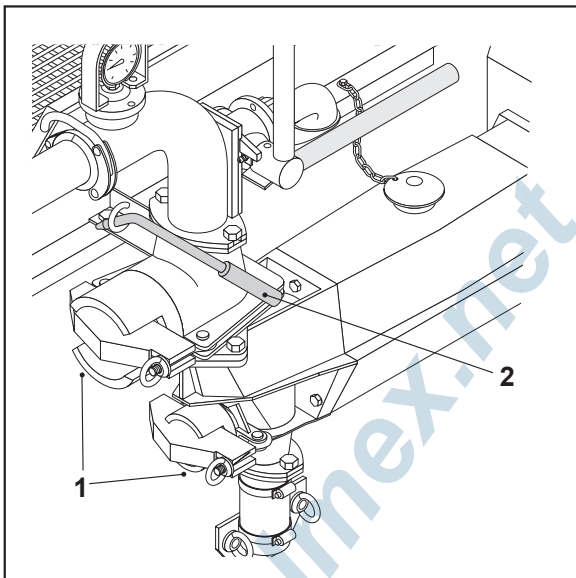


FIG.26



After any repairs or maintenance make sure that all protection devices have been re-mounted and that no tool has been forgotten inside the engine compartment or material hopper.



Tools or cloths forgotten inside the engine compartment can cause breakage of the cooling fan among other things.

7.4 CONTROLS

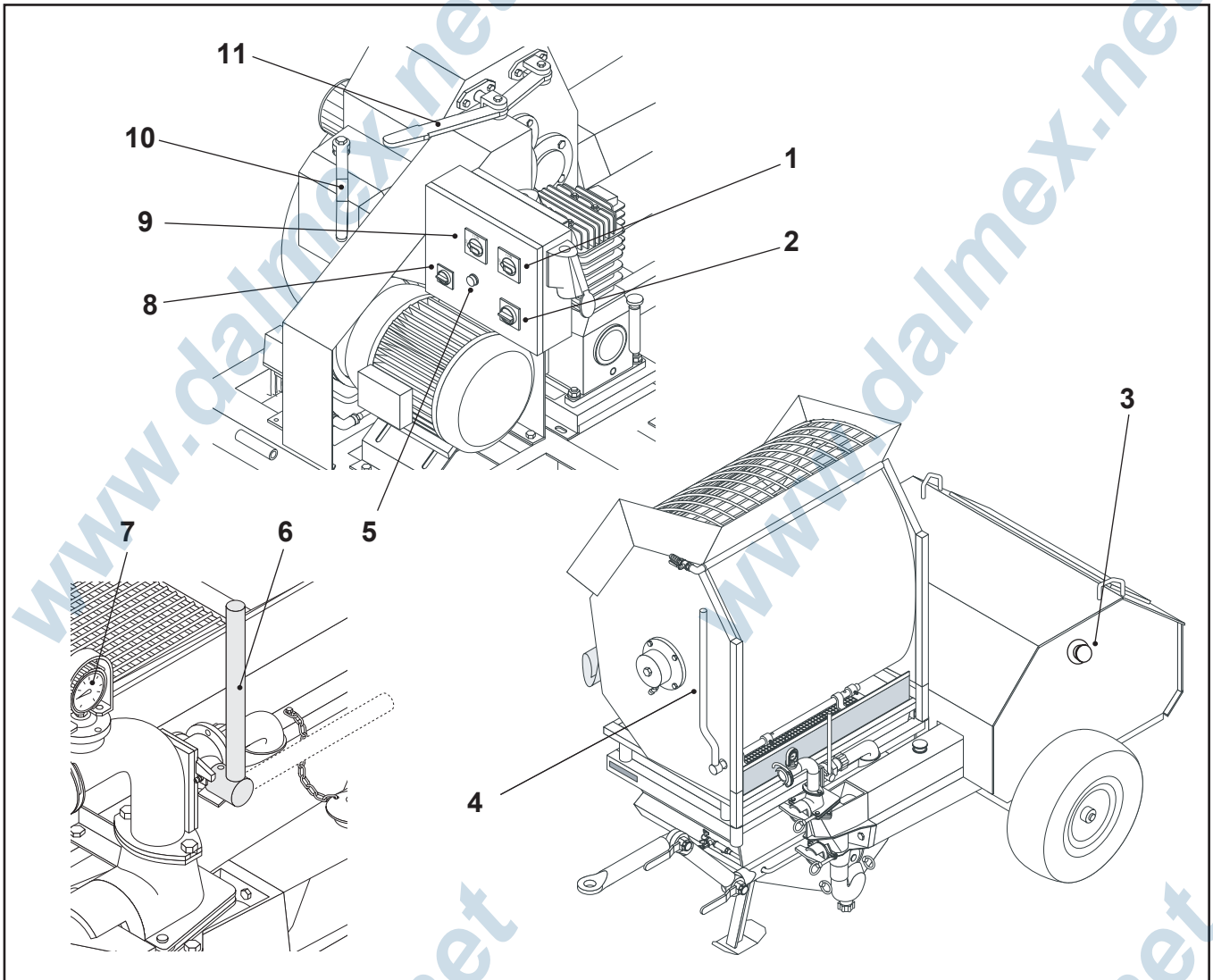


FIG.27

KEY:

- 1) Mortar pump motor switch.
- 2) Master switch.
- 3) Emergency button.
- 4) Material discharge lever (in hopper).
- 5) Emergency indicator (signals the incorrect position of the mixer safety grill or hopper safety grill).
- 6) By-pass lever (material recycle in hopper).
- 7) Mortar piping pressure manometer.
- 8) Sieve vibrator switch.
- 9) Mixer motor switch.
- 10) Safety lever.
- 11) Gear lever (2 speed reducer).

7.5 EMERGENCY STOP



The mushroom-shaped emergency button allows immediate switch-off of the electric engine.

To put the machine in complete safety conditions, proceed with the operations described in paragraph 2.5 "machine off".

7.6 STARTING THE MACHINE

Before starting the machine, prepare the desired mixture in the site concrete mixer and separately prepare 15 ÷ 20 litres of slurry (50% water + 50% cement or lime) and pour it into the hopper.

Check that the air flow cock (FIG.28-REF.1) is open, that the bleed cock is closed (FIG.28-REF.2) and that the air cock to the gun (FIG.28-REF.3) is open.

Also check that the by-pass lever (FIG.29-REF.1) is in a vertical position (material recycle in hopper).



Attention: The machine must always function with material or water in the hopper. If this is not the case the piston will deteriorate.

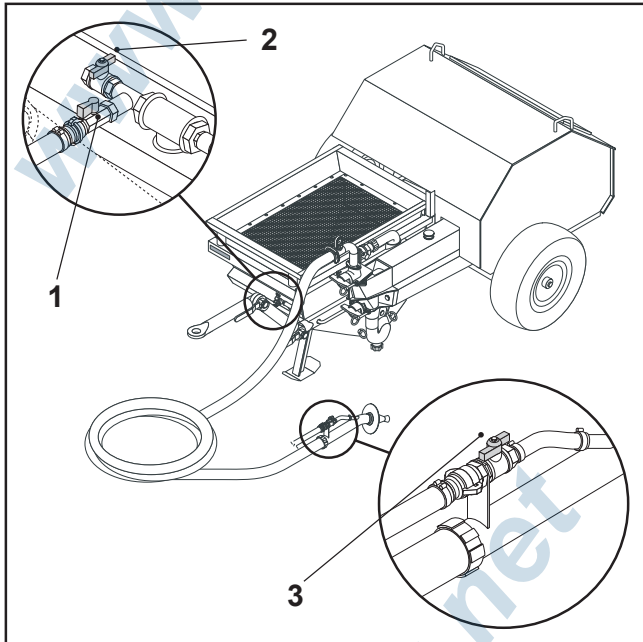


FIG.28

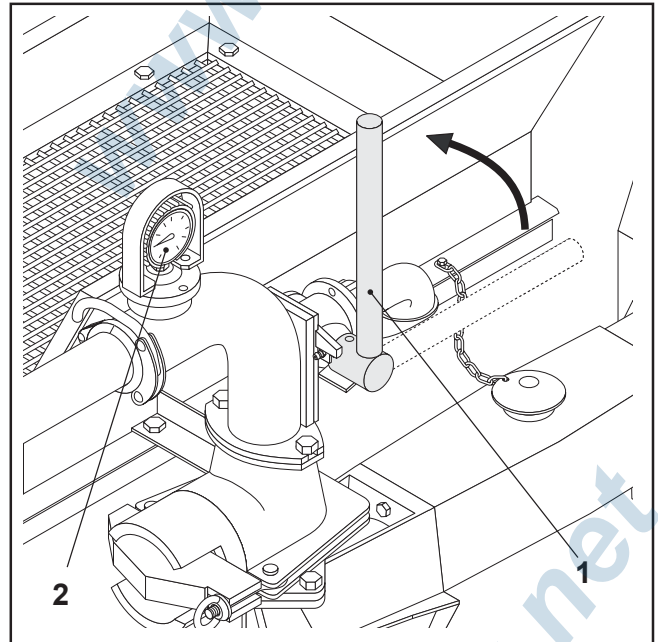


FIG.29

Check the direction of rotation of the motor:

- turn the master switch (red on yellow background) (FIG.30-REF.1) into position I and check that the motor turns in the correct direction indicated by the arrow (FIG.30-REF.2) positioned on the belt cover sump.

As soon as the motor starts, close the air flow cock (FIG.28-REF.1): the machine stops.

Switch the machine off by turning the master switch (FIG.30-REF.1) to position 0:

Take the start lever (FIG.31-REF.1) to position 1 or 2.

Re-start the motor.

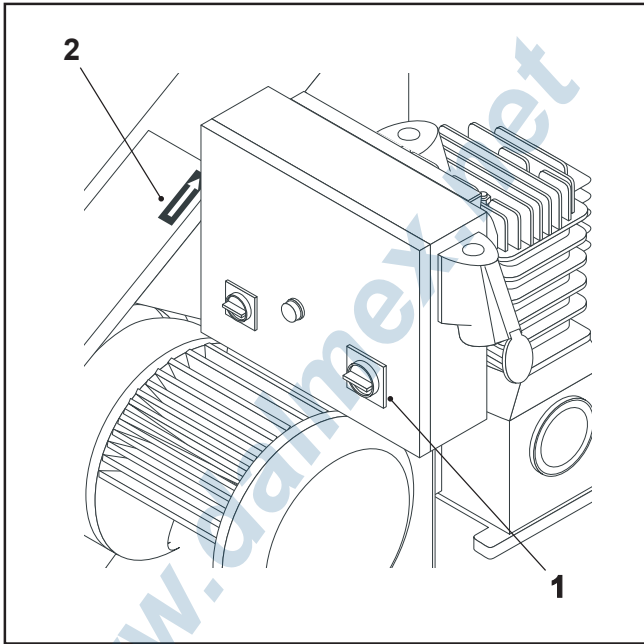


FIG.30

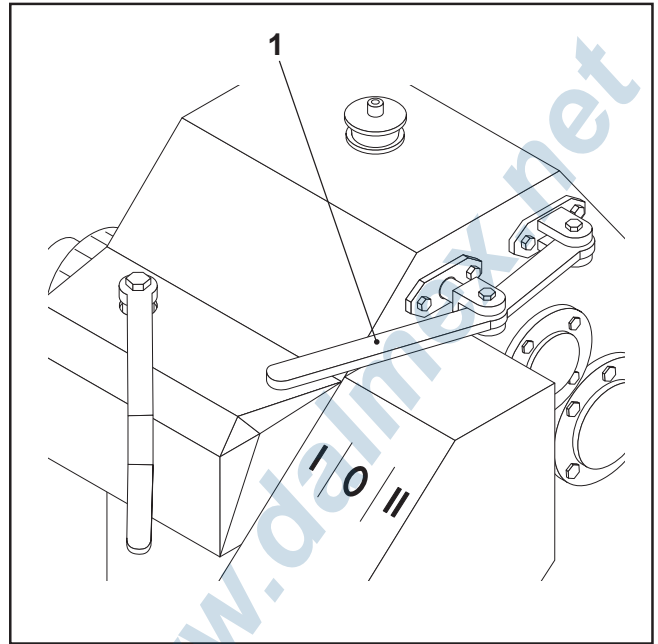


FIG.31

• Check that the machine functions regularly:
 Open and close the air flow cock two or three times (FIG.28-REF.3), to ensure that the pneumatic long distance control functions regularly. The motor stops.

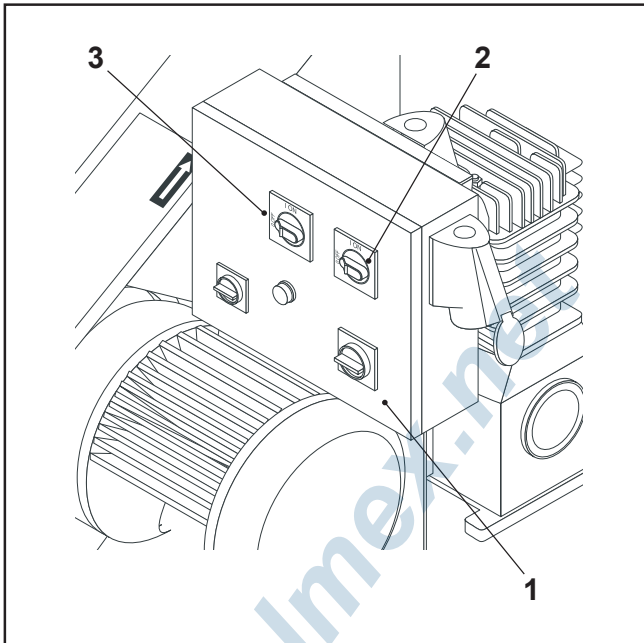


FIG.32

If necessary, switch the motor off and invert the direction of rotation by acting on the power supply lug equipped with reverse start (FIG.34).

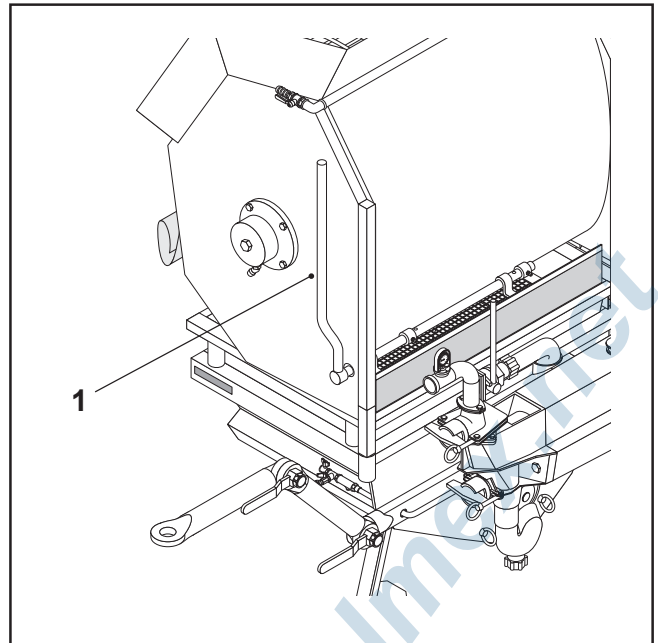


FIG.33

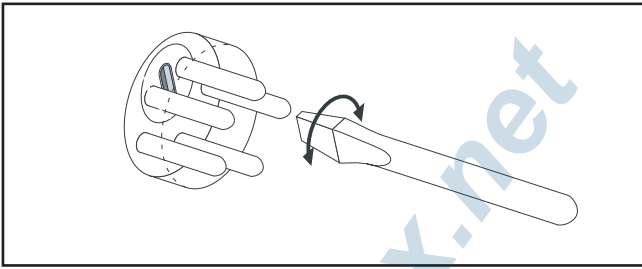


FIG.34

7.7 LOADING THE MATERIAL

LOADING THE MATERIAL



Use nitril fibre gloves for protection against cuts and abrasions.

The mixture must have a plastic consistency (not too dry and not too wet).

Start the machine opening the air flow cock (FIG.35-REF.1-3): the pump starts to pump the slurry that was previously poured into the hopper.

With the by-pass lever (FIG.37-REF.2) in the vertical position (hopper recirculation) check that the pump engages.

If this does not occur, switch the machine off, open the flow stand, remove the inspection cap of the flow valve (FIG.36-REF.1) remove the rubber ball (FIG.36-REF.2) and pour the slurry into the valve body (FIG.36-REF.3).

Then re-position the ball and the inspection cap and finally close the stand and re-start.

Take the by-pass lever (FIG.27-REF.2) to the horizontal position: the machine starts to pump slurry into the piping.

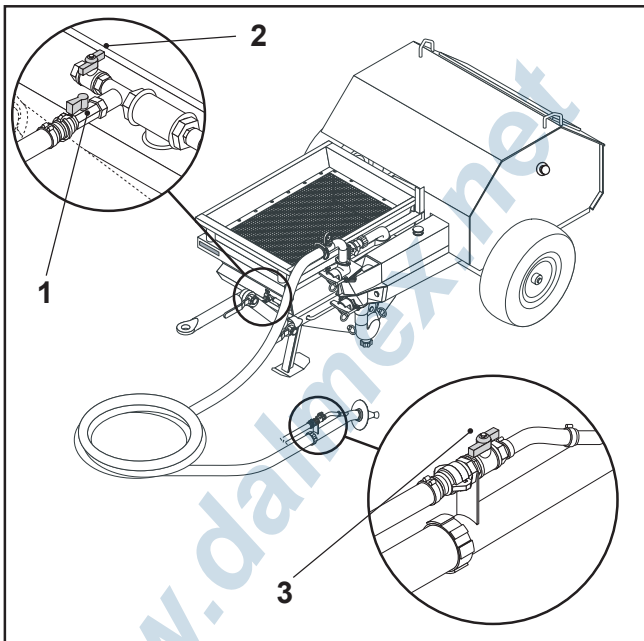


FIG.35

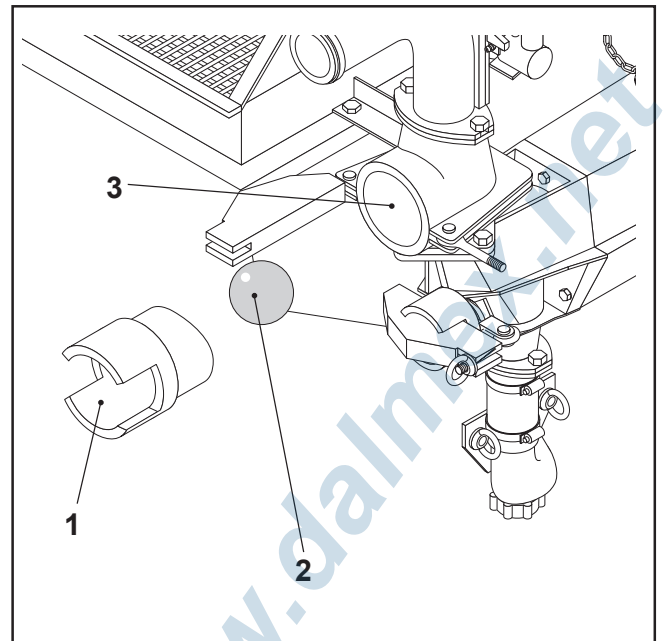


FIG.36

Version with mixer (EMF version)

Activate the mixer by acting on the mixer switch (FIG.32-REF.3) and prepare the mixture.

Load the aggregates, the binder and water into the mixer.

Before the slurry ends, pour the mixture onto the vibrating sieve by opening the discharge hatch using the relevant lever (FIG.38-REF.1).

Activate the motor taking the master switch (FIG.32-REF.2) into position "I", the machine starts to pump.

The slurry starts to escape from the gun and when it has finished, the mixture to add on the work site.

Now the machine is operational and can be stopped by acting on the air cock positioned on the gun (FIG.35-REF.3).

Normally, when the machine stops the operator must take the by-pass lever to the recirculation position (vertical). At the next start-up take the lever back to the pumping position (horizontal).

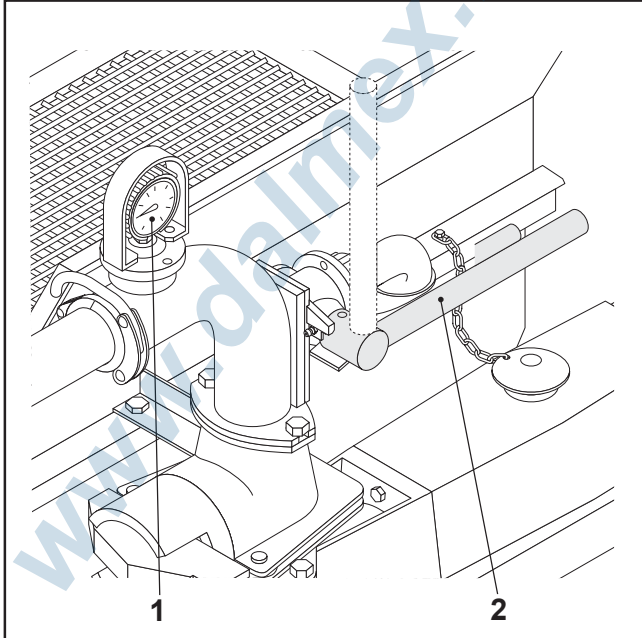


FIG.37

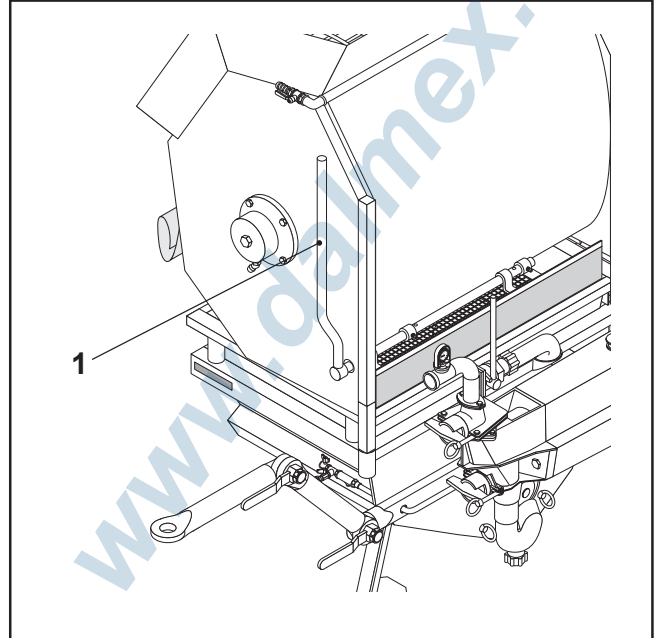


FIG.38

In the case of extended shutdowns, open the bleed cock (FIG.35-REF.2) and position the by-pass lever vertically in a way that the material is recirculated in the hopper.

Check that the level of mortar in the hopper is always such to cover the mixing device. On the contrary, the pumping piston (rubber) deteriorates rapidly due to the lack of lubrication.



The gun operator must never aim the jet towards other persons.

During the pumping phase, the operator at the machine must check that the PRESSURE manometer (FIG.37-REF.1) (positioned on the top of the pup unit) never exceeds $20 \div 25$ bar.

A higher pressure indicates a blockage in the material piping or in the gun. If this occurs, stop the machine and discharge the pressure in the pipes taking the by-pass lever (FIG.37-REF.2) to the vertical position and then remove the blockage (see chap. 10.1).



If the gun should block, for no reason must you look into the hole of the gun deflector. The unexpected escape of the blocked part or pressurised mortar could cause dangerous accidents to the eyes.

During all operations, the air cocks must be completely open or completely closed. Partial opening causes machine shutdown.

In the case of overloads due to pumping pressures that are too high, the safety device intervenes that is positioned inside the reducer.

Intervene by taking the by-pass lever (FIG.37-REF.2) to the recirculation position (vertical) and check that the manometer (FIG.37-REF.1) indicates a pressure of 0 (zero) bar.

Switch the machine off (take the mortar pump motor switch and master switch (FIG.32-REF.1) into position 0). Remove the cause of the overload (mixture unsuitable or blocking of pipes or the gun) and then re-insert the safety device by acting on the lever (FIG.39-REF.1).

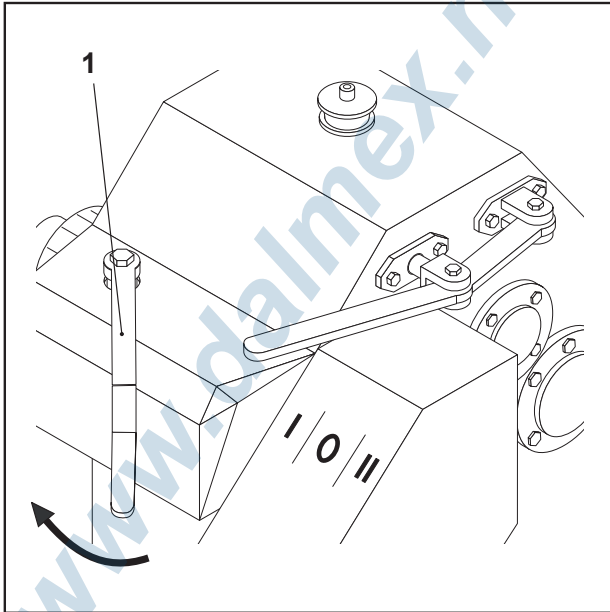


FIG.39

If too much current is absorbed the motor protector intervenes inside the electric control board, which stops the machine. The switches on the electric control board turn positioning themselves between 0 (zero) and I.

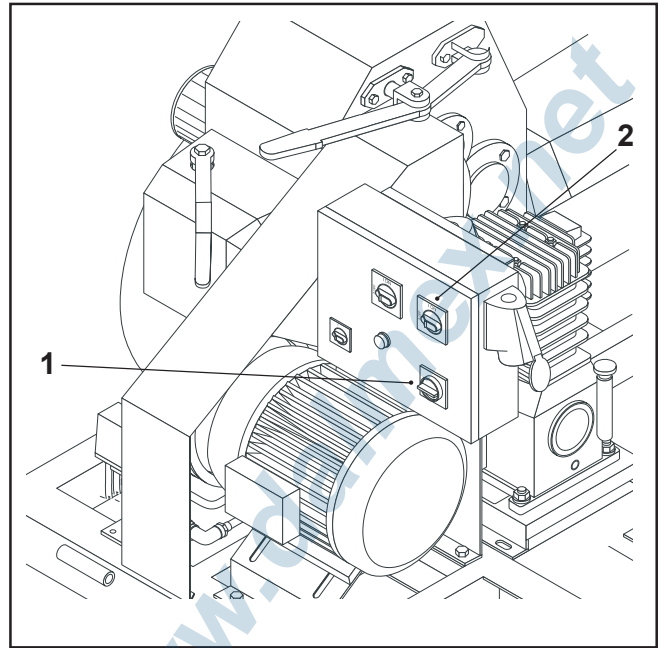
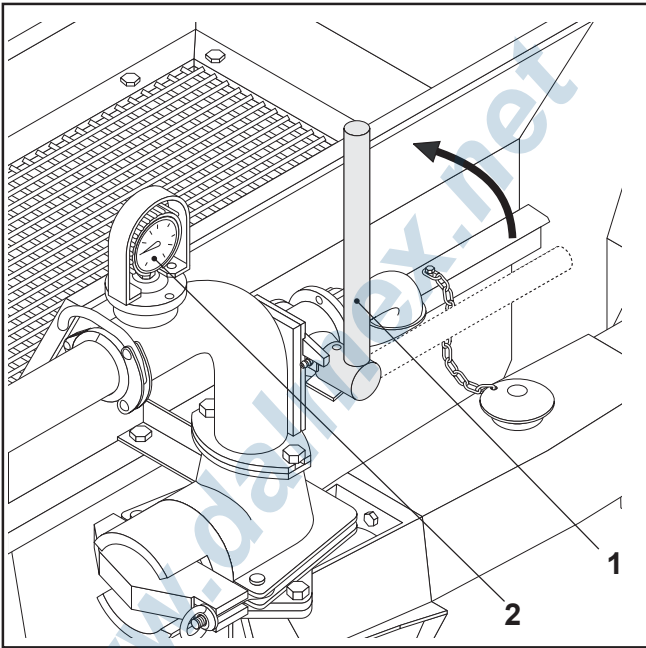
To insert the motor protector:

- Position the master switch (FIG.32-REF.1) in position 0 (zero). In the EMF version, before switching the machine off, put the mortar pump motor (FIG.32-REF.2) and mixer (FIG.32-REF.3) switches at 0.
- ricercare la causa (cavo elettrico di sezione inadeguata, intasamento tubazioni, pistola e valvole; composizione impasto non corretto) e provvedere al necessario rimedio.
- Per riavviare la macchina portare gli interruttori in posizione I.

7.8 MACHINE SWITCH-OFF

When the last mixture has been pumped, which is better if it more fluid than normal, when the base of the mixing device can be seen, stop the pump by closing the air flow cock, take the by-pass lever to the vertical position (FIG.40-REF.1) and check that the manometer (FIG.40-REF.2) falls to 0 bar.

Stop the motor and place the mortar pump motor switch and the master switch (FIG.41-REF.1) in position 0.



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Before loosening a material flow pipe joint or disconnecting the gun, make sure that the pressure manometer indicates a pressure of 0 (zero) bar and that there is no residual pressure in the pipes.

The operator must have been specifically trained to perform this operation.

In particular, before opening a joint make sure there is no residual pressure inside the piping and that no one is standing nearby.

This operation is potentially dangerous and should always be performed with caution and by qualified staff only.

7.9 CLEANING THE MACHINE



Put the machine in "machine off" mode (chap.2.5 FIG.01-02).

- Remove the gun and wash it carefully, disassembling the deflector (FIG.42-REF.1).
- Check that the hole in the nozzle (FIG.42-REF.2) is free (clean it if necessary).
- Remove the vibrating sieve and wash it.



Do not direct the water jet at electric components.

Never direct the water jet at people.

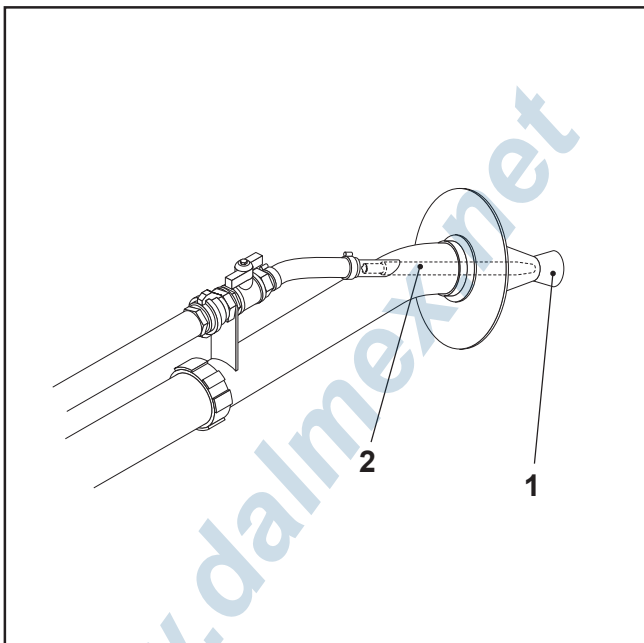


FIG.42

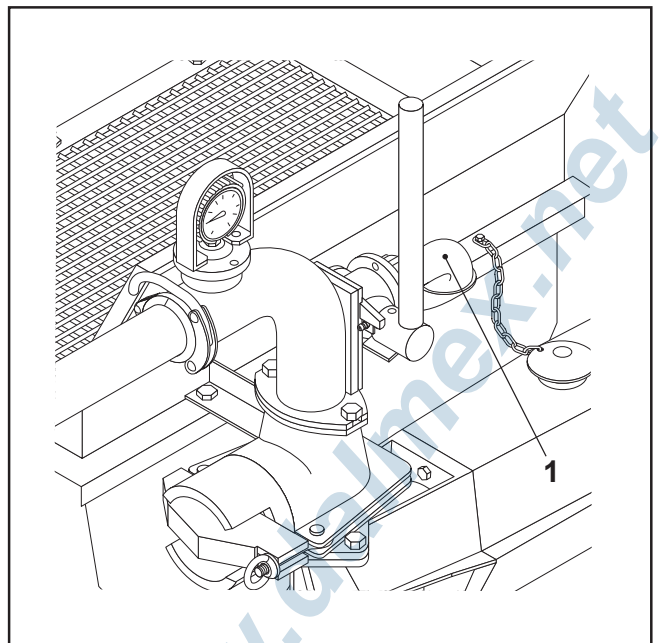


FIG.43

Disassemble and carefully wash the material discharge bend (FIG.43-REF.1) of the by-pass and the by-pass itself.

Open the stands (FIG.44-REF.1) with the relevant key (FIG.44-REF.2) supplied.

Disassemble the inspection caps (FIG.45-REF.1) of the valves and remove the two rubber balls (FIG.45-REF.2) that are found inside and wash the intake valve body (FIG.45-REF.4) and the flow valve body (FIG.45-REF.3) well.

Togliere il tappo di scarico (FIG.45-RIF.5) del condotto di aspirazione.

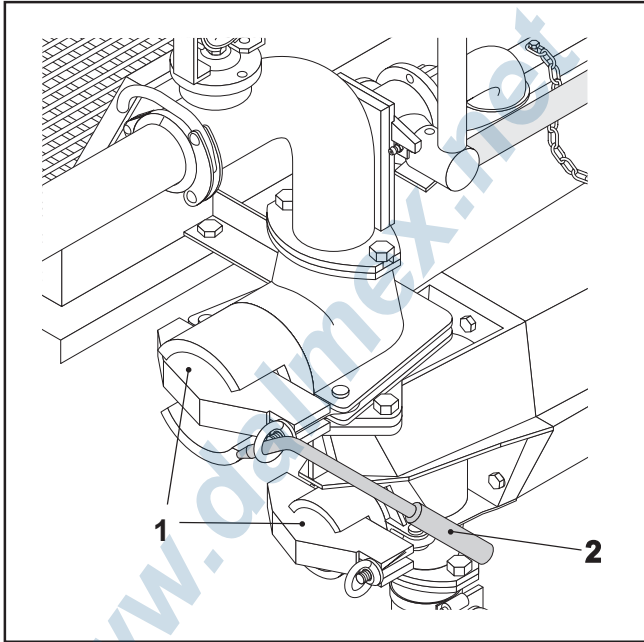


FIG.44

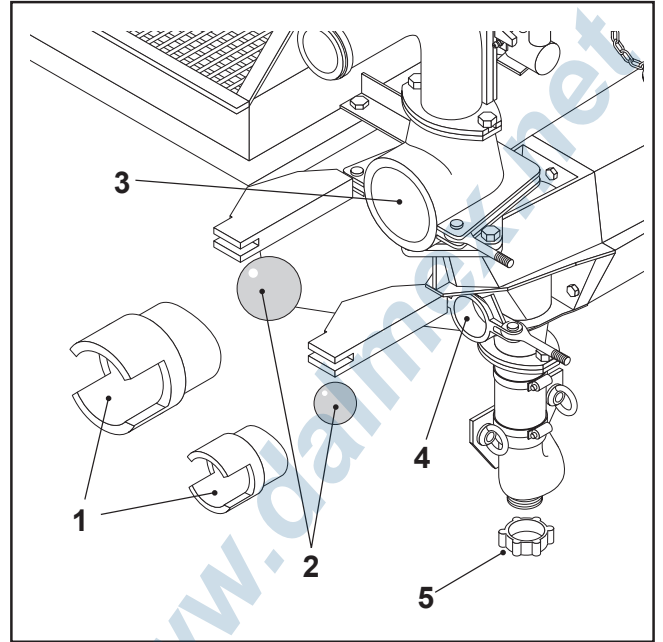


FIG.45

Wash the entire plastering machine using a pressurised jet, more precisely: the hopper, the mortar diverter unit, the inside of the valves and all dirty parts.

In the plastering machines with incorporated mixer (EMF version), first wash the mixer, taking care to open the material discharge hatch with the lever (FIG.46-REF.1).

During washing operations make sure that the bodywork is closed in order to protect the motor and the other parts that could be damaged.

When the plastering machine has been washed, wash the mortar piping.

Insert a washing sponge at the mouth of the pipe.

Re-connect the pipe to the machine and then re-mount the rubber balls, the various types of caps as well as the vibrating sieve, in a way that the machine is ready for functioning again.

Make sure that the inspection caps and the junction fitting between the mortar pipe and the machine are well locked.

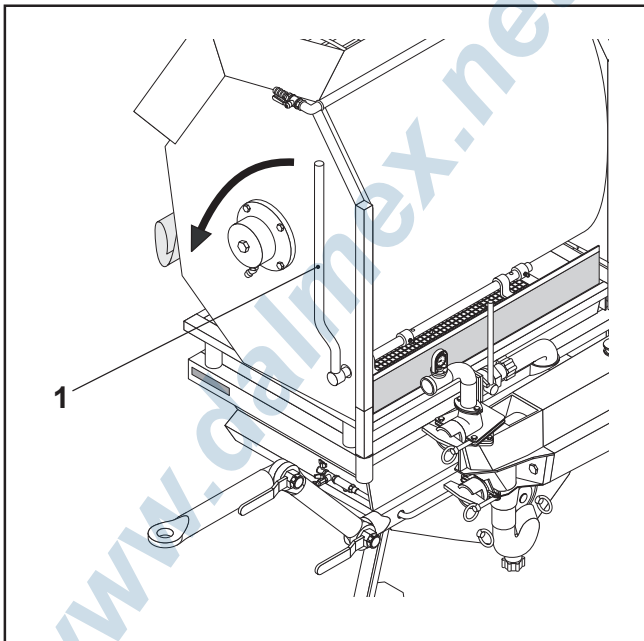


FIG.46

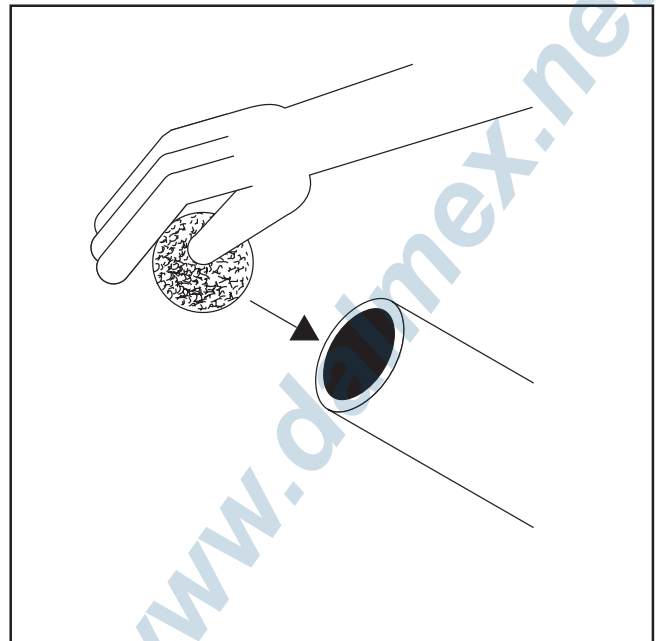


FIG.47

Fill the machine hopper with water, keeping it almost full until washing has been performed. Activate the machine.

Take the by-pass lever to the horizontal position, the water will push the washing sponge out and this will send the mortar in the pipe out, washing the inside of the pipe itself at the same time (make sure that the air discharge cock is open). Repeat the operation until clean water escapes from the piping.

Remove the water remaining in the hopper by opening the hopper drain cap.

Disconnect the air flow pipe from the material flow collector and check that it is clean.

At the end of the job it is good practice to spray the machine with a disarming liquid.

7.10 IMPORTANT WARNING



Only use sieved material.



Before loosening a material flow pipe joint, make sure that the master switch is in position "0" (zero), that the by-pass lever is in vertical position and make sure that the manometer (FIG.27-REF.7) drops to 0 bar.



The operator must have been specifically trained to perform this operation.

In particular, before breaking a joint make sure there is no residual pressure inside the piping and that no one is standing nearby.

This operation is potentially dangerous and should always be performed with caution and by qualified staff only.

8.1 TO BE CARRIED OUT BY OPERATOR

The following are the basic instructions for performing proper maintenance on the machine. More detailed information relative to maintenance of the diesel engine is given in the respective use and maintenance manual, which operators are required to read and understand (along with the present manual) before using the machine.

OPERATIONS THAT MUST BE PERFORMED DAILY

At the start of work

• **CHECK COMPRESSOR OIL**

Check the compressor oil level:

the level of compressor oil must always correspond to the maximum level indicated on the stick.

It is unlikely that the compressor works in a perfectly horizontal position on site, as recommended by the manufacturer. Therefore, to guarantee correct lubrication comply with that stated above scrupulously.

To top-up:

use SHELL RIMULA EXTRA D 15W40 or equivalent.

• **CHECK LUBRICATION TANK WATER**

Check the level of water in the lubrication tank, remembering in winter to empty it in the evening or at least add a suitable percentage of anti-freeze to prevent the formation of ice during standstill periods.

Remove the cap to empty the lubrication tray (FIG.49-REF.1).



the water must be replaced every 5 working days.

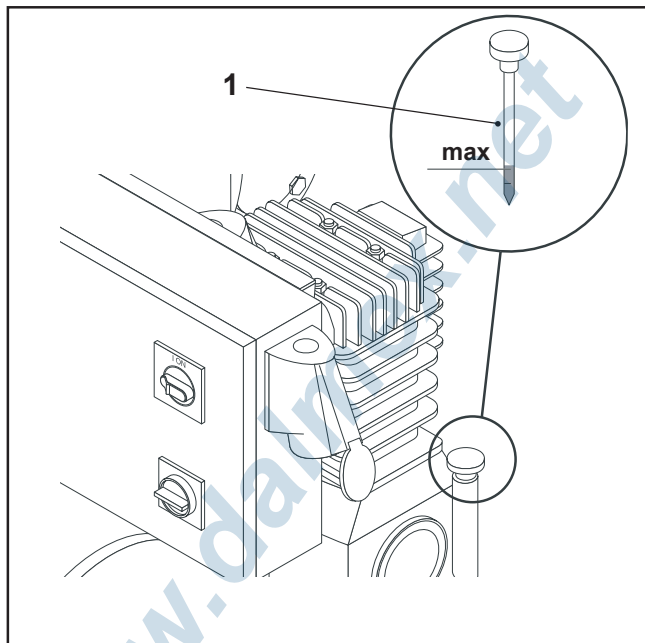


FIG.48

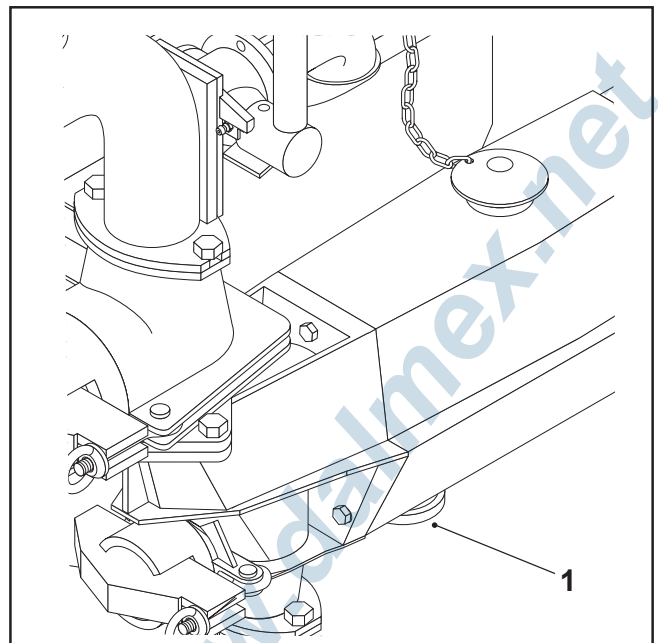


FIG.49

• **Reducer oil level:**

Check the visible level control device (FIG.51-REF.1) and top-up if necessary (FIG.51-REF.2) with ELF POLYTELIS 100 or equivalent.

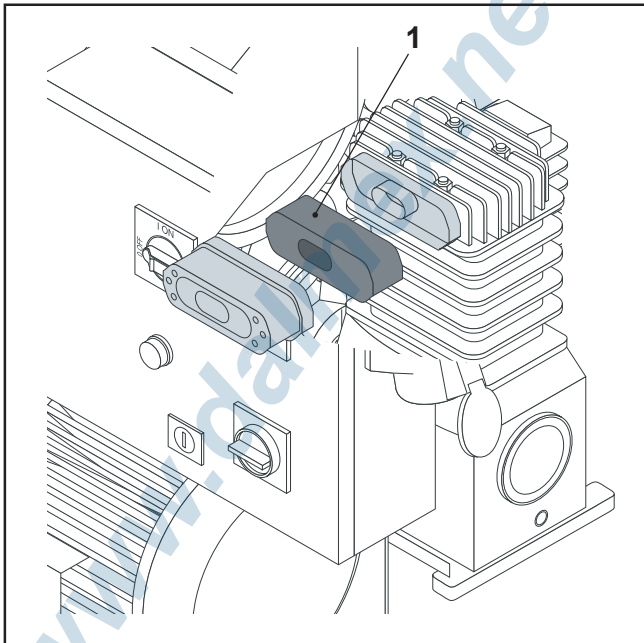


FIG.50

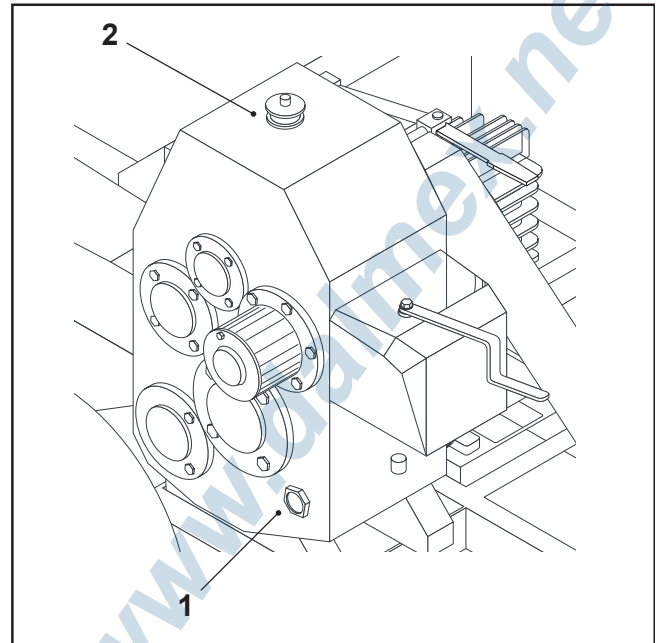


FIG.51

- Check and clean the compressor air filter.
Check and clean the filter (FIG.50-REF.1) positioned inside the protective lid using compressed air.

- Check mixer reducer oil
To check the mixer reducer oil level, open the cap above the reducer. If necessary, top up using ELF REDUCTELF SP220 oil or equivalent.

At the end of a work session

Grease:
the by-pass lever (FIG.52-REF.1) mixing device support (FIG.52-REF.4), the belt-tensioner arm (FIG.52-REF.3) and the reducer (FIG.52-REF.2).
Do not exaggerate with greasing the reducer (FIG.52-REF.2) as problems could occur.

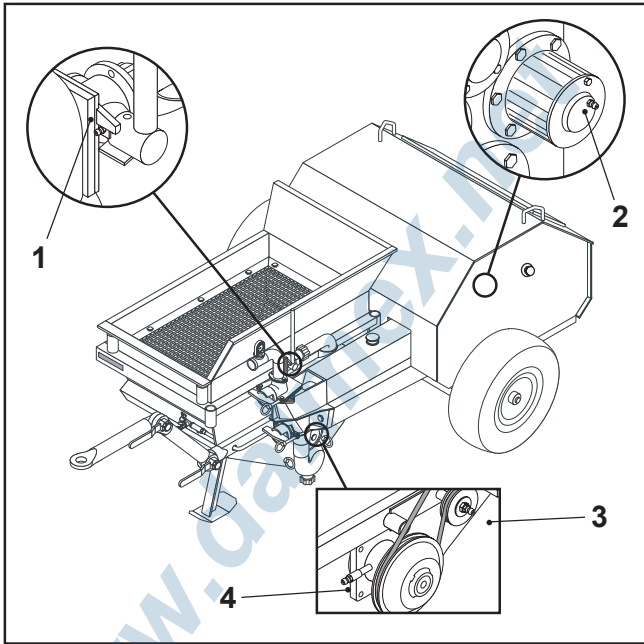


FIG.52

In the version with mixer (EMF) also grease: the hatch shaft (FIG.53-REF.2), the blind support body (FIG.53-REF.1), the ring support flange (FIG.53-REF.3).

For the execution of the operation to be correct, the grease must escape from the sealing cups.

If you forget to perform this operation, in a brief period of time (days) the sealing gaskets and the supports are ruined.

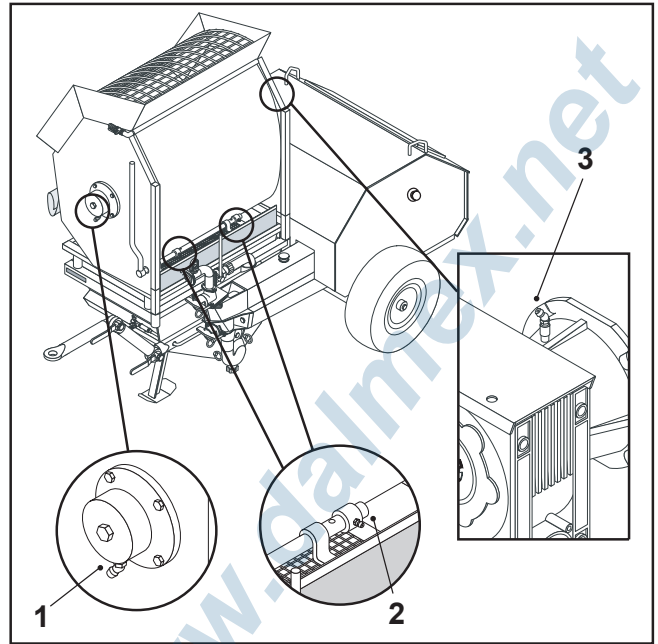


FIG.53

The operator must also make sure that programmed maintenance is respected, by the qualified staff, described successively.

The Manufacturer is not liable for any consequences deriving from the failure to comply with the maintenance table or for the operator performing operations that are the responsibility of qualified staff.

Period of inactivity of the plastering machine.

When putting the plastering machine in storage for a period of inactivity the following operations and checks must be performed:

- Discharge the water contained in the lubrication tank, removing the discharge cap.
- Disassemble the hopper discharge cap situated on the intake collector.
- Disassemble the various pieces of pipe collecting them in just as many rolls, so that they are not bent.
- Protect painted parts of the machine from rust by spraying them with a layer of naphtha or oil.
- Do not spray the rubber parts.
- Lift the machine so that the wheels do not touch the ground.
- Make sure that the last machine washing has taken place in compliance with the instructions; that the various fittings have been spread with grease and that all tools and accessories have been put in the relative box.

8.2 A CURA DEL PERSONALE ABILITATO

OPERATIONS TO BE PERFORMED EVERY MONTH OR EVERY 100 HOURS

- Compressor oil replacement.

OPERATIONS TO PERFORM EVERY 3 MONTHS OR 250 HOURS

- Check and if necessary replace the ball valves.
Proceed as follows to replace the worn ball valves:
Open the stands (FIG.54-REF.1) acting on the ring nuts with the relevant key (FIG.54-REF.2) supplied.

Disassemble the inspection caps (FIG.55-REF.1) of the valves and remove the two rubber balls (FIG.55-REF.2) that are found inside.

Replace the balls and re-mount everything taking care to fix the stands well.

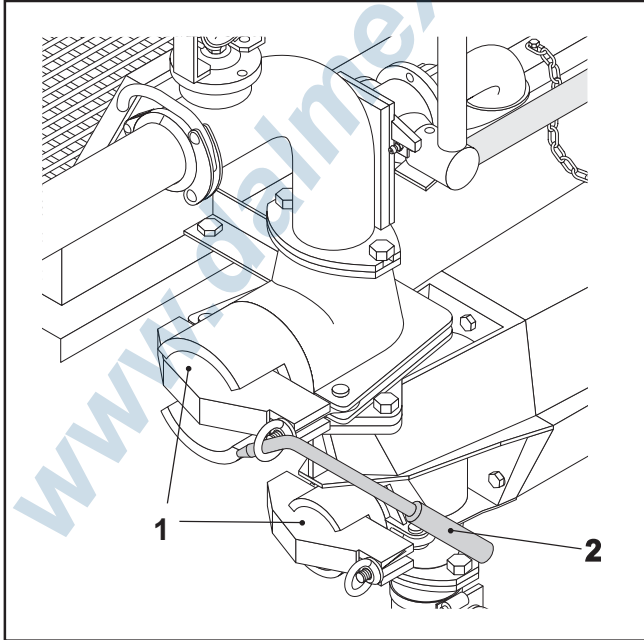


FIG.54

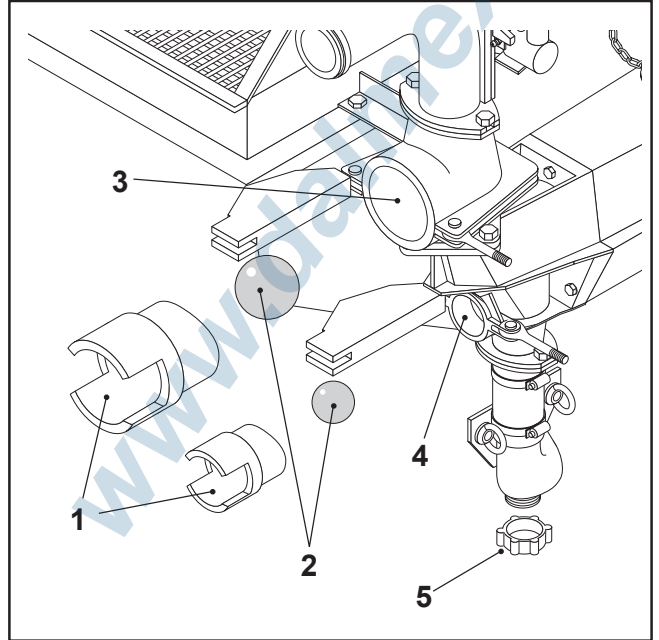


FIG.55

- Check and if necessary replace the inspection cap gaskets (FIG.56-REF.1).
To replace the inspection cap gaskets:
Open the stands (FIG.54-REF.1) acting on the ring nuts with the relevant key (FIG.54-REF.2) supplied.
Disassemble the inspection caps (FIG.55-REF.1) of the valves and remove the two gaskets (FIG.56-REF.1) positioned in the housing.
Sostituire le guarnizioni e rimontare il tutto avendo cura di fissare bene i cavallotti.

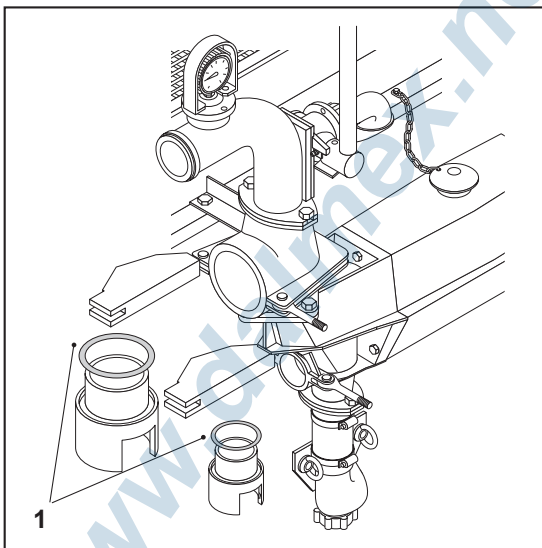


FIG.56

OPERATIONS TO PERFORM EVERY 6 MONTHS OR 500 HOURS

Check:

- Check the flexible air pipes.
- Check and if necessary replace the trapezoidal belts.
- Check piston, balls, seals, manometer, by-pass, and generally that there are no anomalies.
- Replace the oil in the compressor
- Replace the oil in the pump reducer.
- Replace the oil in the mixer reducer.

OPERATIONS TO PERFORM EVERY YEAR OR 1000 HOURS

- Replacing the worn valve seats.

Flow valve seat.

Loosen the screw (FIG.58-REF.1) that blocks the flow valve body to the hopper and the four screws (FIG.58-REF.2) that fix it onto the intake valve body.

Remove the worn flow valve seat (FIG.57-REF.1) and replace it.

Re-mount the valve body fixing it using the relevant screws.

Intake valve seat.

Unscrew the hose clamps (FIG.57-REF.2) that fix the rubber fitting, which connects it to the intake collector and the two screws (FIG.57-REF.3) that fix the intake valve body to the intake collector flange.

Remove the worn intake valve seat (FIG.58-REF.3) and replace it.

Rimontare la flangia di aspirazione.

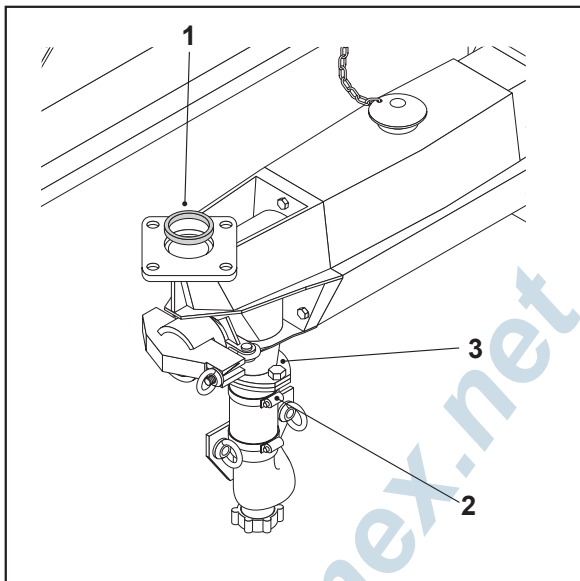


FIG.57

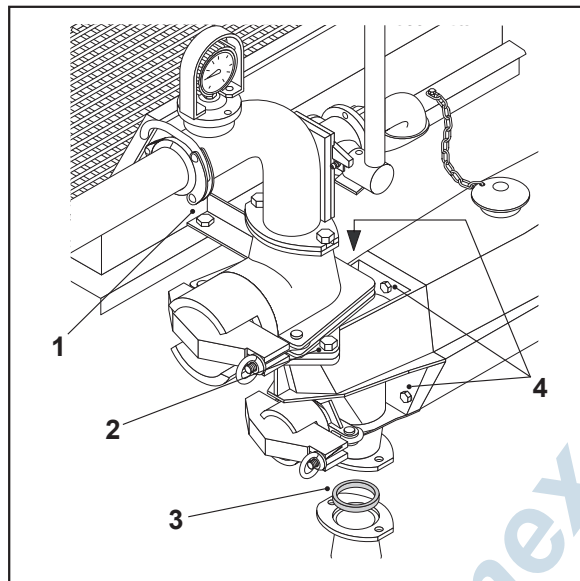


FIG.58

- Replacing the worn pump piston.

Make sure that the rubber gun has been stopped in the front part of the cylinder i.e. towards the valves.
 Disassemble the flow and intake valves unit by loosening the screw (FIG.58-REF.1) that blocks it onto the hopper, the 3 screws (FIG.58-REF.4) that connect it to the monolithic cylinder and the hose clamp (FIG.57-REF.2) that fix the rubber fitting, which connects it to the intake connector.

To replace the worn rubber gun, slide it out from its seat loosening the nuts (FIG.59-REF.1) and retracting the piston guide rod, by acting on the compressor large pulley.

Use a threaded bar to extract the piston by screwing it onto the piston itself and pulling.

Insert the new piston into the housing putting the guide rod in position and fixing it using the nuts (FIG.59-REF.1).

Once the piston has been replaced, re-mount everything following the procedure indicated above.

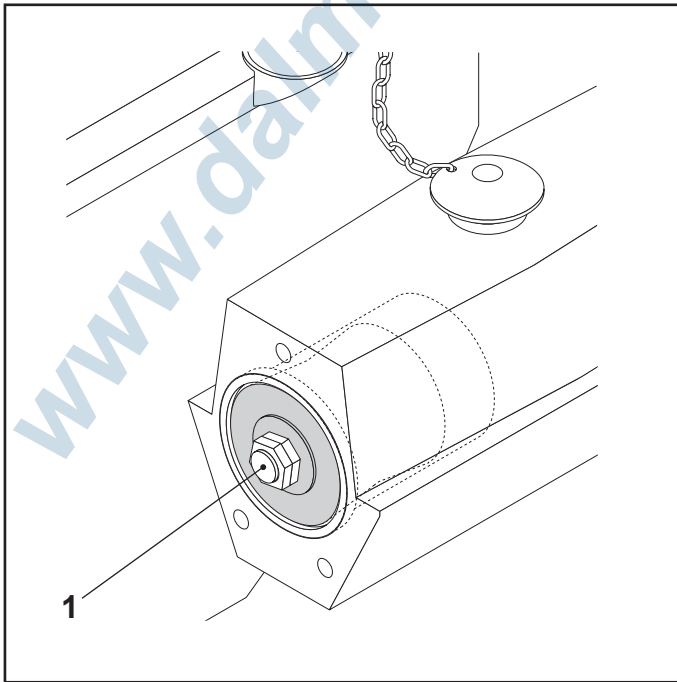


FIG.59

9.1 GENERAL RECOMMENDATIONS

Follow the local regulations in the country of use when scrapping the machine.

Separate the machine parts according to the type of material (plastic, rubber, iron, etc.).

The oils must be consigned to companies that are authorised and specialised for disposal of these pollutant products.

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10.1 INCORRECT MIXTURE

- Gun blockage.

- The mortar does not escape from the gun

A mixture that is too thin, a crust of hardened material, a stone, a deflector with passage too reduced for the material used can cause the gun to block.

- Material does not escape from the gun and the mortar pipe pressure manometer indicates a pressure that exceeds normal working pressure.

Stop the machine taking the master switch to the "0" position, discharge the pressure in the material flow pipes by turning the by-pass activation lever to a vertical position (FIG.27-REF.6); wait for the pressure on the manometer (FIG.27-REF.7) to drop to zero.

Before loosening a material flow pipe joint or disconnecting the gun, make sure that the pressure manometer indicates a pressure of 0 (zero) bar and that there is no residual pressure in the pipes.

The operator must have been specifically trained to perform this operation.

In particular, before opening a joint make sure there is no residual pressure inside the piping and that no one is standing nearby.

This operation is potentially dangerous and should always be performed with caution and by qualified staff only.

Disassemble the deflector and if necessary the gun and remove the cause of the blockage.

- Before re-mounting the deflector or the gun, make sure that the nozzle is free (clean it if necessary using wire).

Re-start the machine to check that the material escapes freely from the piping.

- Mortar pipe blocked.

An incorrect mixture or prolonged standstill can cause the material flow pipe to become blocked.

- Material does not escape from the gun and the mortar pipe pressure manometer indicates a pressure that exceeds normal working pressure 20÷25 bar.

Close the air cock to the gun: the machine stops;

Discharge the pressure in the material flow pipes by turning the by-pass activation lever to the vertical position (FIG.27-REF.6); wait for the pressure indicated on the manometer to drop to zero.



Before loosening a material flow pipe joint or disconnecting the gun, make sure that the pressure manometer indicates a pressure of 0 (zero) bar and that there is no residual pressure in the pipes.



The operator must have been specifically trained to perform this operation.

In particular, before opening a joint make sure there is no residual pressure inside the piping and that no one is standing nearby.

This operation is potentially dangerous and should always be performed with caution and by qualified staff only.

Identify where the material flow line is blocked: the pipe is hard and rigid in this point;

Disconnect the blocked pipe, strike it with a mallet in correspondence with the blockage in order to break the "tap" that has formed and to make the hardened material escape.

Start the machine for a few seconds and make sure that the pipe has been freed from the "tap": the material escapes regularly.

Pour the slurry into the pipe downstream from that where the blockage occurred, re-connect the piping line and re-start.

- Valves blocked.

A mixture that is too thin can cause blocking in the valves

- Material does not escape from the piping and the pressure manometer indicates a pressure of 0 bar.

Stop the machine taking the master switch to the "0" position (FIG.27-REF.2), discharge the pressure in the material flow pipes by turning the by-pass activation lever to a vertical position (FIG.27-REF.6); wait for the pressure on the manometer (FIG.27-REF.7) to drop to zero.

Open the stands (FIG.54-REF.1) with the relevant key (FIG.54-REF.2) supplied.

Disassemble the inspection caps (FIG.55-REF.1) of the valves and remove the two rubber balls (FIG.55-REF.2) that are found inside and wash the intake valve body (FIG.55-REF.4) and the flow valve body (FIG.54-REF.4) well.

Remove the discharge cap (FIG.55-REF.5) of the intake pipe.

Modify the mixture according to that indicated in paragraph 7.2.

Empty the hopper and use a jet of water to remove all material.

Re-mount everything and make the correct mixture and re-start.

- Belt loose

The belt slides and the pressure manometer indicates a pressure lower than 20 bar.
In this case tighten the belt using the contrast screw.

10.2 OPERATOR INTERVENTION

PROBLEMS	CAUSES	SOLUTIONS
The mortar does not escape from the gun	Gun blocked Mortar pipe blocked Ball valves blocked Safety equipment disconnected Mortar pipe bent Start disconnected, lever in "idle" position Mortar too dry No mortar in hopper The pump does not suck and does not compress	<ul style="list-style-type: none"> •Disassemble the gun and clean the blocked part (chap. 10.1). •Look for the blockage and eliminate it (chap. 10.1). •Remove the inspection caps and wash the valves (chap. 10.1). •Insert the safety equipment (chap. 7.7). •Look for the bend and straighten it •Stop the motor and insert the desired gear. •Fluidify it, add water. •Introduce it. •See "the pump does not engage" problem.
The mortar escapes discontinuously	Valves blocked Insufficient air Unsuitable pipes or insufficient pipe length. Mortar too consistent	<ul style="list-style-type: none"> •Remove the inspection caps and wash the valves (chap. 10.1). •Check the efficiency of the compressor making sure that the filters are clean (chap. 8.1) and that the belt is taught. •Check that there are no air leaks in the machine system and in the thin pipes that go to the gun. •Make sure that the air line cock is completely open and that the drain cock is completely closed (chap. 7.6). •Gun nozzle dirty. Disassemble the gun and clean it. •Use the pipes indicated (chap. 5.2). •Specific piping for the machine and piping recommended according to the distance to be served. •Check the composition of the mixture and modify it if necessary (chap. 7.2).

<p>The safety equipment trips frequently</p>	<p>Mortar too dry</p> <p>Flow valve blocked due to unsuitable mixture</p> <p>Mortar pipe blocked</p> <p>Mortar diverter blocked</p> <p>Mortar too thin</p> <p>Valve body dirty</p> <p>Mortar pipe bent</p>	<ul style="list-style-type: none"> •Fluidify it, add water. •Wash the flow valve (chap. 7.9) and modify the mixture (chap. 7.2). •Look for the blockage and eliminate it (chap. 10.1). •Wash the mortar diverter. •Check the composition of the mixture and modify it if necessary (chap. 7.2). •Wash the flow and intake valve body (chap. 10.1). • Look for the bend and straighten it.
<p>The gun blocks frequently</p>	<p>Deflector hole too small</p> <p>Sand aggregates too large</p> <p>Mortar too thin</p>	<ul style="list-style-type: none"> •Replace the deflector with a suitable one. •Use sand with smaller aggregates. •Make it more consistent. Consult the mixtures chapter (chap. 7.2).
<p>The pump does not engage</p>	<p>Intake valve body dirty or blocked</p> <p>Ball valves dirty or worn</p> <p>Valve seats dirty or worn</p> <p>Piston consumed</p>	<ul style="list-style-type: none"> •Wash the intake valve body. Make sure there are no deposits on the valve seat and on the inspection cap (chap. 8.2). •Wash the ball valves (chap. 7.9). Replace them if they are worn (chap. 8.2). •Wash them and replace them with new ones if necessary (chap. 8.2). •Replace the piston (chap. 8.2).
<p>Mortar dripping from the gun</p>	<p>Deflector with hole that is too large.</p> <p>Mortar too consistent</p> <p>Insufficient air</p>	<ul style="list-style-type: none"> • Replace the deflector with a smaller hole. •Check the mixture according to that indicated (chap. 7.2). •Check that the compressor filters are clean (cap. 8.1). Replace them if necessary. •Make sure that the cock to the gun is completely open. •Check that there are no air leaks in the machine system or in the thin pipes that go to the gun. •Make sure that the air line cock is completely open and that the drain cock is completely closed.
<p>The manometer does not indicate any pressure</p>	<p>Safety equipment disconnected</p> <p>Flow valve body blocked due to unsuitable mixture</p> <p>Start disconnected, lever in "idle" position</p> <p>No mortar in hopper</p>	<ul style="list-style-type: none"> •Insert it using the relevant lever (chap. 7.7). •Wash the flow valve body (chap. 8.2) and modify the mixture (chap. 7.2). •Stop the motor and insert the desired gear. •Introduce it.

<p>The plastering machine does not start-up</p>	<p>Safety equipment disconnected No diesel Motor-protector intervention</p> <p>Gun cock closed Gun air nozzle blocked Air line cock closed Air line blocked</p>	<ul style="list-style-type: none"> •Insert it using the relevant lever (chap. 7.7). •Introduce diesel into the tank. •A block has occurred, after the cause has been removed; rearm the motor protector (chap. 7.7). If the intervention of the motor protector is repeated apparently without any anomaly occurring, have the power supply line checked by an electrician. •Check and open it if necessary. •Clean the nozzle. •Check and open it if necessary. •Check all piping, making sure that the air passes regularly.
<p>The plastering machine Starts-up alone during pauses</p>	<p>Air loss in the piping</p>	<ul style="list-style-type: none"> • Check the air piping, in particular the fittings and identify the air leak.
<p>The plastering machine stops alone during pauses</p>	<p>Air line partially blocked</p> <p>The safety device intervenes</p> <p>The motor-protector intervenes</p>	<ul style="list-style-type: none"> • Check that the cock to the machine is not partially closed, that the air piping is not bent and that the nozzle is not partially blocked. •Check that the work pressure indicated by the mortar piping manometer does not exceed the maximum values (chap. 7.7). If this occurs, modify the mixture (chap. 7.2) and the piping (chap. 5.2). •Check that the work pressure indicated by the mortar piping manometer does not exceed the maximum values stated (chap. 7.7). If this occurs, modify the mixture (chap. 7.2) and the piping (chap. 5.2).

TAB.06

11.1 RESPONSIBILITY

The person in charge of the machinery is responsible for assuring that whoever operates such machinery is well aware of the instructions contained in this use and maintenance manual, and in particular that said operator has received special training in the proper execution of those operations marked in the manual

The warranty offered by the manufacturer becomes null and void if this machinery is not used in accordance with the instructions in this manual. In addition, this manual must always accompany the machine.

The machine's operator must be thoroughly taught and trained in regard to the operation and use of the machine itself and must sign this use and maintenance manual on the line reading "read and approved". If this procedure is not complied with, the operator is prohibited from using this machine.

Signature of the person in charge _____

Read and approved _____

Signature of the operator _____

Read and approved _____

11.2 WARRANTY

The machinery manufactured by Turbosol Produzione S.p.A. is guaranteed for a period of twelve (12) months or one thousand (1,000) hours of operation - whichever comes first - from the date said machinery is delivered to the end consumer, and in any event not more than eighteen (18) months from its shipment. The date upon which these products are delivered to the end consumer must be entered on the special warranty certificate which comes with all new machinery leaving the factory.

This warranty shall be valid only if the Manufacturer receives the attached warranty certificate card within thirty (30) days of delivery of the machinery in question. This card must be filled out completely and signed by the Purchaser.

This guarantee is to be understood as covering any defect in manufacturing or in the materials employed in said manufacture. Component parts supplied by Turbosol Productions S.p.A. by third parties shall be covered by the guarantee said parties have provided Turbosol and which Turbosol in turn shall make available to the end consumer.

In the event that anomalies should appear during the period covered by the warranty, the right to intervene to correct said anomalies shall be limited to the Manufacturer itself or to parties specially authorised by the Manufacturer. The end consumer shall be responsible for having the defective machinery brought to the designated repair facility during regular working hours. Defective parts must be sent free port to the Manufacturer, which shall either repair said parts or replace them free of charge when and if, in the final judgement of the Manufacturer, said parts show defects in quality. The replacement parts shall remain the exclusive property at the Manufacturer.

The Purchaser shall be responsible for those expenses related to shipping the materials in question as well as for the costs of possible intervention on the part of the Manufacturer's personnel.

Repairs or replacements shall in no way extend the life of the overall warranty period. The warranty does not cover normal wear of parts or their deterioration through improper use, said parts to include: valve housings and spherical valves made of rubber, piston liners, rubber stators and pump screws, axle boxes, deflectors, stirring blades, wear protection for vessel, wear plates and cones, filters, etc

The Purchaser shall forfeit his rights under this warranty when and if he fails even on but one single occasion, to comply with the payment terms and/or if the breakdowns reported prove to have originated: from circumstances introduced by the Purchaser himself, by his employees or by third parties, when the damage is due to incorrect use, poor installation, or utilization that is improper or in conflict with the instructions given in the use and maintenance manuals provided with the machinery.

This warranty shall no longer be valid if the injection systems are damaged by unsuitable or polluted fuel, if the electrical systems break down due to an improper feed or because of such components as relays, condensers, remote control devices, etc., the latter of which are covered by warranties issued by the supplier.

The warranty shall likewise no longer be valid following questionable tampering and/or the use of non-original spare parts or rubber hosing different from that furnished by the Manufacturer.

The Manufacturer shall rightfully decline all responsibility arising from an impossibility to utilise the product or from damages due to interruption in work, or loss of direct or indirect profits, or for damages likewise caused by removal of the cowling or protective carters; on moving parts and safety devices.

Imperfections and defects must be reported in writing to the Manufacturer as indicated by law.

In the case of disputes arising from interpretation of the clauses above, the original Italian text shall apply.