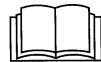
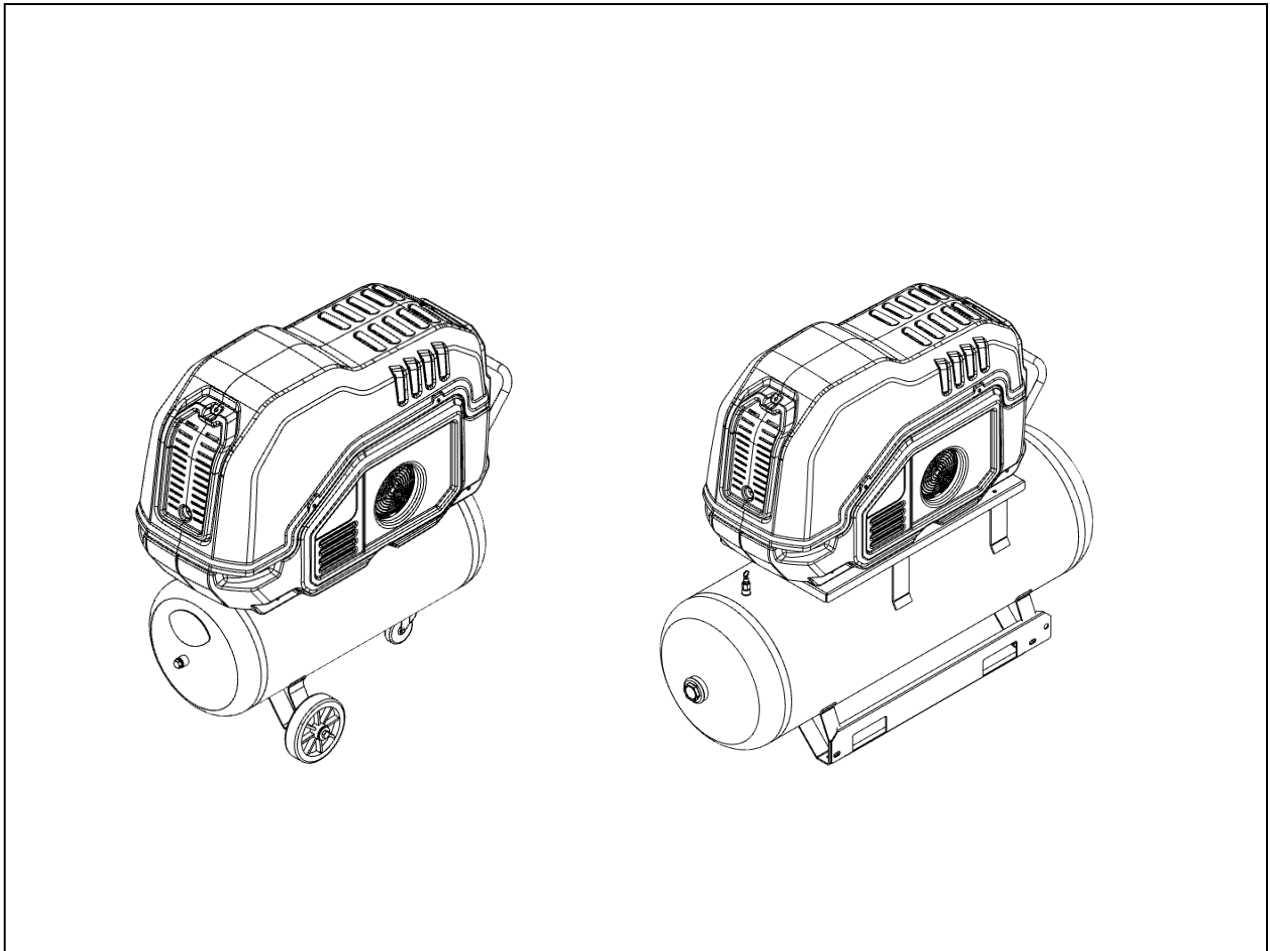




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Edition 04/2021	

USE & MAINTENANCE MANUAL

QUIET ROTARY SCREW AIR COMPRESSORS

**HP 3
KW 2.2**

READ THIS MANUAL CAREFULLY BEFORE PERFORMING ANY OPERATIONS ON THE AIR COMPRESSOR.



THIS MACHINE IS SUITABLE FOR BOTH CONTINUOUS AND INTERMITTENT OPERATION: IN ANY CASE, TO AVOID PROBLEMS OF CONDENSATE IN THE OIL, THE MACHINE MUST BE OPERATED WITH A LOAD EQUAL TO AT LEAST 10% OF ITS CAPACITY: CHECK FOR THE PRESENCE OF CONDENSATE IN THE OIL FOLLOWING THE INSTRUCTIONS IN CHAPTER 15.2

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PART A: NOTICES FOR THE USER

- 1.0 GENERAL CHARACTERISTICS
- 2.0 INTENDED USE
- 3.0 OPERATING PRINCIPLE
- 4.0 GENERAL SAFETY REGULATIONS
- 5.0 DESCRIPTION OF HAZARD SYMBOLS
- 6.0 HAZARDOUS AREAS
- 7.0 SAFETY DEVICES
- 8.0 POSITION OF LABELS
- 9.0 COMPRESSOR ROOM
- 10.0 TRANSPORT & HANDLING
- 11.0 UNPACKING
- 12.0 INSTALLATION
- 13.0 OVERALL DIMENSIONS AND TECHNICAL DATA
- 14.0 ILLUSTRATION OF MACHINE
- 15.0 ROUTINE MAINTENANCE BY THE USER
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- 19.0 TROUBLESHOOTING AND IMMEDIATE ACTIONS

PART B: NOTICES RESERVED FOR PROFESSIONALLY QUALIFIED PERSONNEL

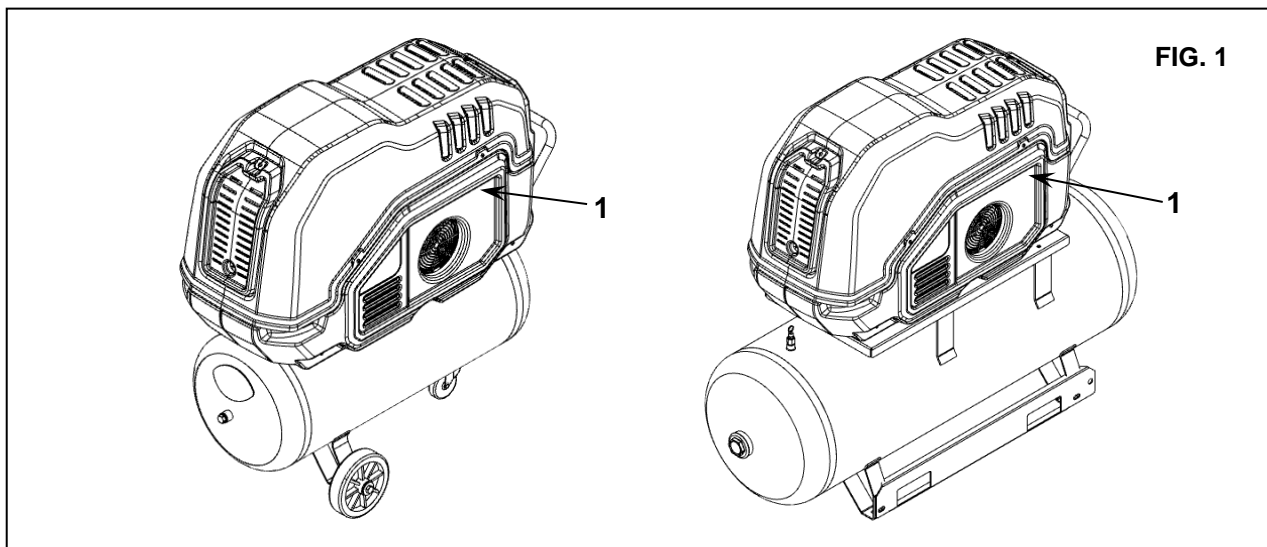
- 20.0 START-UP
- 21.0 GENERAL ROUTINE MAINTENANCE REQUIRES TRAINED PERSONNEL
- 22.0 OIL REPLACEMENT
- 23.0 OIL SEPARATOR FILTER AND OIL FILTER REPLACEMENT
- 24.0 OLEO-PNEUMATIC DIAGRAM
- WIRING DIAGRAMS ON LAST COVER PAGE

ATTENTION: A COPY OF THE WIRING DIAGRAMS IS INCLUDED IN THE ELECTRICAL CABINET OF THE COMPRESSOR

QUIET ROTARY SCREW AIR COMPRESSORS

**HP 3
KW 2.2**

IDENTIFICATION DATA OF MACHINE AND MANUFACTURER



1) Position of ID label

LOCATION OF SERVICE CENTRES

In case of machine faults or malfunction, turn the machine off immediately and do not tamper with it.

We remind you that our technical service centre is at your complete service to help you solve any problems that may arise or to provide you with all necessary information. The consistent and efficient performance of the compressor is only guaranteed if original spare parts are used. We therefore recommend strictly observing the instructions provided in the MAINTENANCE section and the use of ONLY original spare parts. The use of NON-ORIGINAL spare parts shall automatically invalidate the warranty. Failure to comply with the above may compromise the safety of the machine.

FOREWORD

Store this manual carefully for any future consultation; the use and maintenance manual constitutes an integral part of the machine.

Read this manual carefully before performing any operations on the compressor unit. Both the installation of the compressor unit and any operations on the same must be performed in total compliance with regulations concerning electrical installations and the safety of persons.

SAFETY CHARACTERISTICS AND PROVISIONS



MACHINE WITH AUTOMATIC RESTART

BEFORE REMOVING THE PROTECTIONS TO SERVICE THE MACHINE, DISCONNECT THE ELECTRICAL POWER SUPPLY AND CHECK THAT THERE IS NO RESIDUAL INTERNAL PRESSURE.



ALL OPERATIONS ON THE ELECTRICAL SYSTEM, EVEN IF MINOR, MUST BE PERFORMED BY PROFESSIONALLY QUALIFIED PERSONNEL.

THIS EQUIPMENT IS NOT SUITABLE FOR OUTDOOR INSTALLATION

THIS MACHINE SATISFIES THE ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF EUROPEAN DIRECTIVE (2006/42 EC).

LUBRICATING FLUIDS AND ANY OTHER FLUIDS MUST NEVER BE DISCHARGED IN THE ENVIRONMENT. THESE PRODUCTS, CONSIDERED POLLUTING AND HAZARDOUS, MUST NECESSARILY BE DISPOSED OF BY AUTHORISED COMPANIES SPECIALISED IN THE DIFFERENT TYPES OF PRODUCT.

SORT THE PARTS CONSTITUTING THE AIR COMPRESSOR BASED ON THE DIFFERENT TYPES OF CONSTRUCTION MATERIALS (PLASTIC, COPPER, IRON, OIL FILTER, AIR FILTER, ETC. ...)

The manufacturer is not liable for any damage caused by failure to comply with or observe the aforementioned instructions.

AIR TANK AND SAFETY VALVES:

- In order to limit internal corrosion, which may compromise the safety of the compressed air tank, **purge the condensate produced at least once per day**. If there is an automatic drain is connected to the tank, its correct operation must be checked every week and if necessary, it must be repaired
- **The thickness of the tank must be checked each year and in any case in accordance with laws in force in the country where the tank is installed.**
- **The tank can no longer be used and must be replaced if the thickness falls below the minimum value indicated in the documentation regarding tank use.**
- The tank can be used within the temperature limits indicated in its declaration of conformity.
- **The safety valves of the air and oil tank must be checked every year and replaced** in accordance with laws in force.

FAILURE TO COMPLY WITH THE ABOVE PROVISIONS SHALL CREATE A RISK OF EXPLOSION OF THE AIR TANK.

The manufacturer is not liable for any damage caused by failure to comply with or observe the aforementioned instructions.

1.0 GENERAL CHARACTERISTICS

The compressor units use single stage oil-injected rotary screw air compressors.

The system is self-supporting and does not require any bolts or floor anchoring devices.

The unit is completely factory assembled; the connections necessary for its operation are:

- connection to mains power: (see installation chapter)
- connection to compressed air network: (see installation chapter)

2.0 INTENDED USE

The compressor unit has been developed to supply compressed air for industrial use. **In any case, the machine cannot be used in places with an explosion or fire hazard, that is, in places where works are performed that release hazardous substances posing a risk to safety into the environment (for example: solvents, flammable vapours, alcohols, etc. ...)**. In particular, the equipment cannot be used to produce air intended for human respiration or used in direct contact with food substances. These uses are allowed if the compressed air is treated using a suitable filtration system. (Consult with the manufacturer for these special uses).

This equipment must be used only in accordance with the use for which it was expressly designed.

All other uses shall be considered improper and therefore unreasonable. The Manufacturer shall not be held liable for any damage caused by improper, erroneous and unreasonable uses.

3.0 OPERATING PRINCIPLE

OPERATING PRINCIPLE OF SCREW COMPRESSOR

The electric motor and the compressor unit are coupled by means of a flexible coupling transmission. The compressor unit withdraws air from the outside through the intake valve. The withdrawn air is filtered by the filter cartridge installed upstream of the intake valve. Inside the compressor unit, the air and lubricating oil are compressed and sent to the oil separator filter, where the oil is separated from the compressed air; the latter is filtered again by the oil separator cartridge to reduce the suspended oil particles to a minimum. The machine is equipped with an adequate air cooling system. The machine is protected by a special safety thermostat: if the oil temperature exceeds 120 °C the machine automatically stops.

4.0 GENERAL SAFETY REGULATIONS

Use of the equipment is allowed only by properly trained and authorised personnel.

All and any tampering with or modifications to the equipment not previously authorised by the Manufacturer shall release the latter from all liability for any damage resulting from or attributable to the aforementioned actions.

The removal of or tampering with safety devices constitutes violation of European Safety Standards











ATTENTION: A DISCONNECT SWITCH MUST BE INSTALLED UPSTREAM OF THE MACHINES WITH AUTOMATIC OVERCURRENT PROTECTION DEVICE, EQUIPPED WITH DIFFERENTIAL DEVICE.



ALL OPERATIONS ON THE ELECTRICAL SYSTEM, EVEN IF MINOR, MUST BE PERFORMED BY PROFESSIONALLY QUALIFIED PERSONNEL.

5.0 DESCRIPTION OF HAZARD SYMBOLS

FIG. 2

	1) FLUID EJECTION		6) HIGH PRESSURE
	2) HAZARDOUS VOLTAGE		7) HOT PARTS
	3) NON-RESPIRABLE AIR		8) MOVING PARTS
	4) NOISE		9) ROTATING FAN
	5) MACHINE WITH AUTOMATIC RESTART		10) PURGE EVERY DAY

5.1 DESCRIPTION OF OBLIGATION SYMBOLS

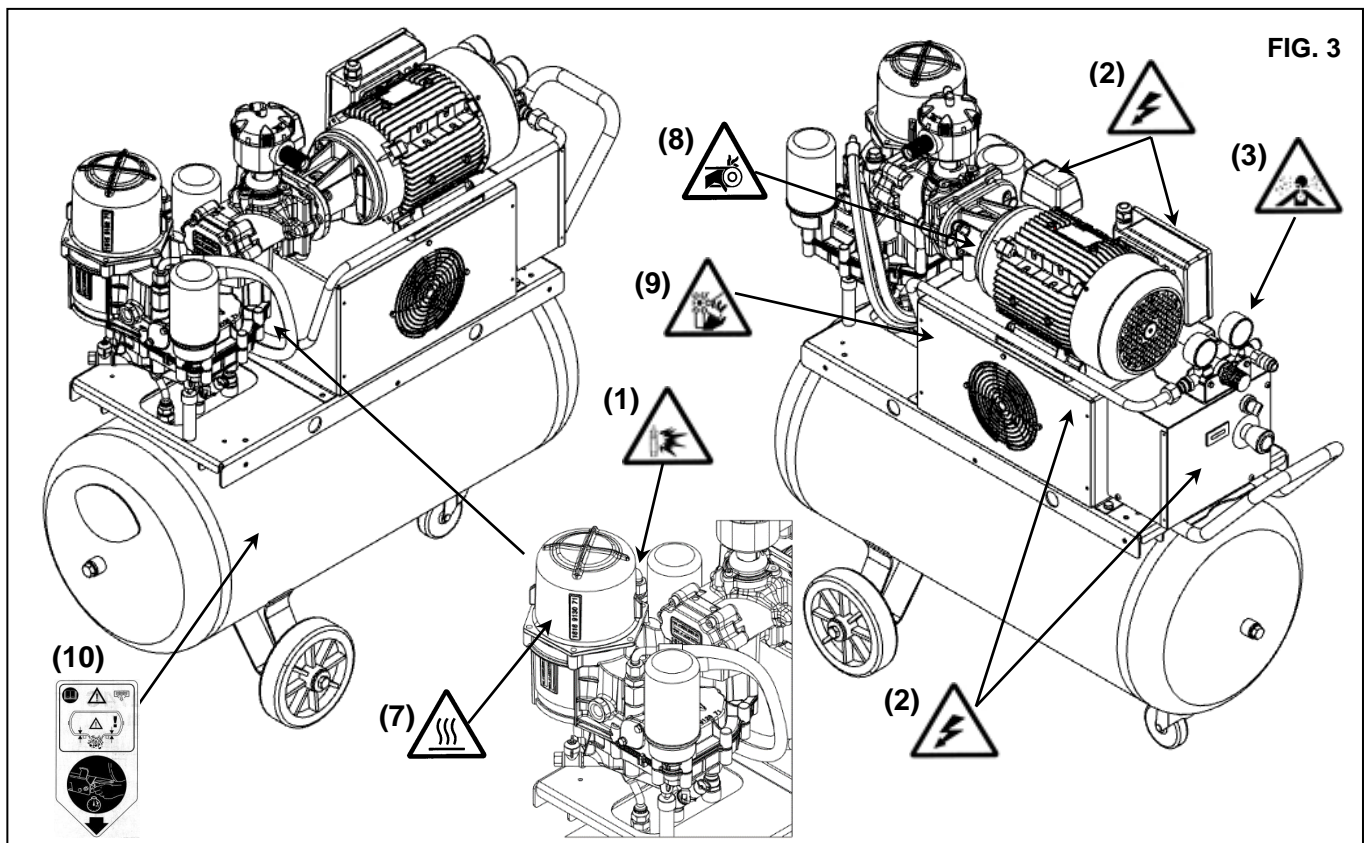
	11) READ THE USE & MAINTENANCE INSTRUCTIONS		
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6.0 HAZARDOUS AREAS

6.1 HAZARDOUS AREAS FOR SCREW COMPRESSOR



Hazards present on entire machine

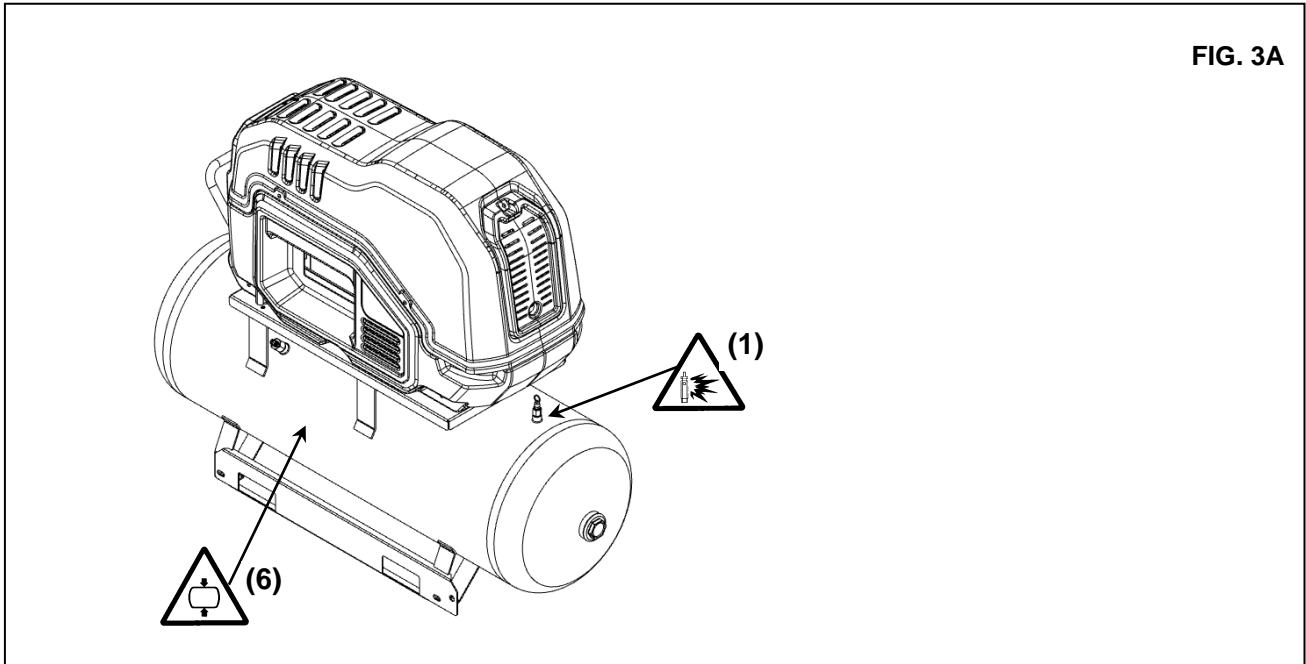


6.2 HAZARDOUS AREAS FOR TANK



Hazards present on entire machine

FIG. 3A

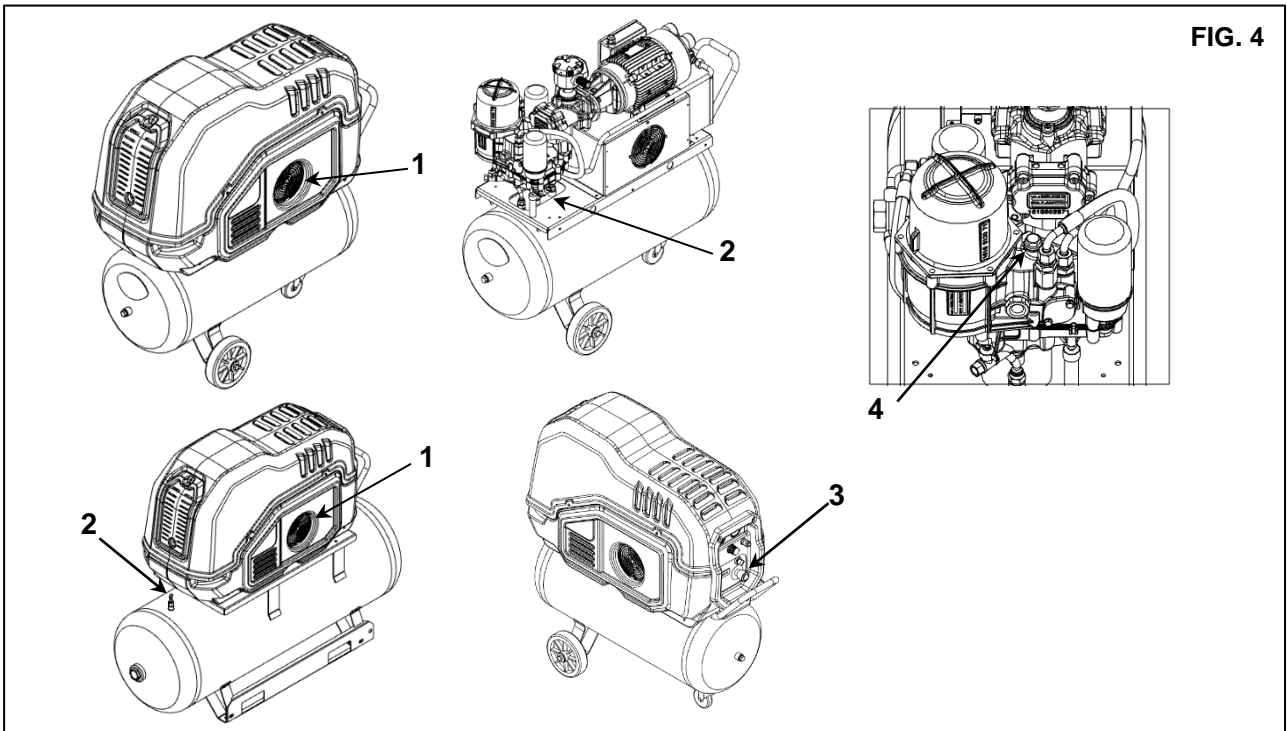


7.0 SAFETY DEVICES

7.1 SAFETY DEVICES FOR SCREW COMPRESSOR (FIG. 4)

- 1) Cooling fan protection
- 2) Safety valve
- 3) Emergency stop.
- 4) Oil fill cap (with breather)

FIG. 4



7.2 SAFETY DEVICES FOR TANK (FIG. 5)

1) Safety valve

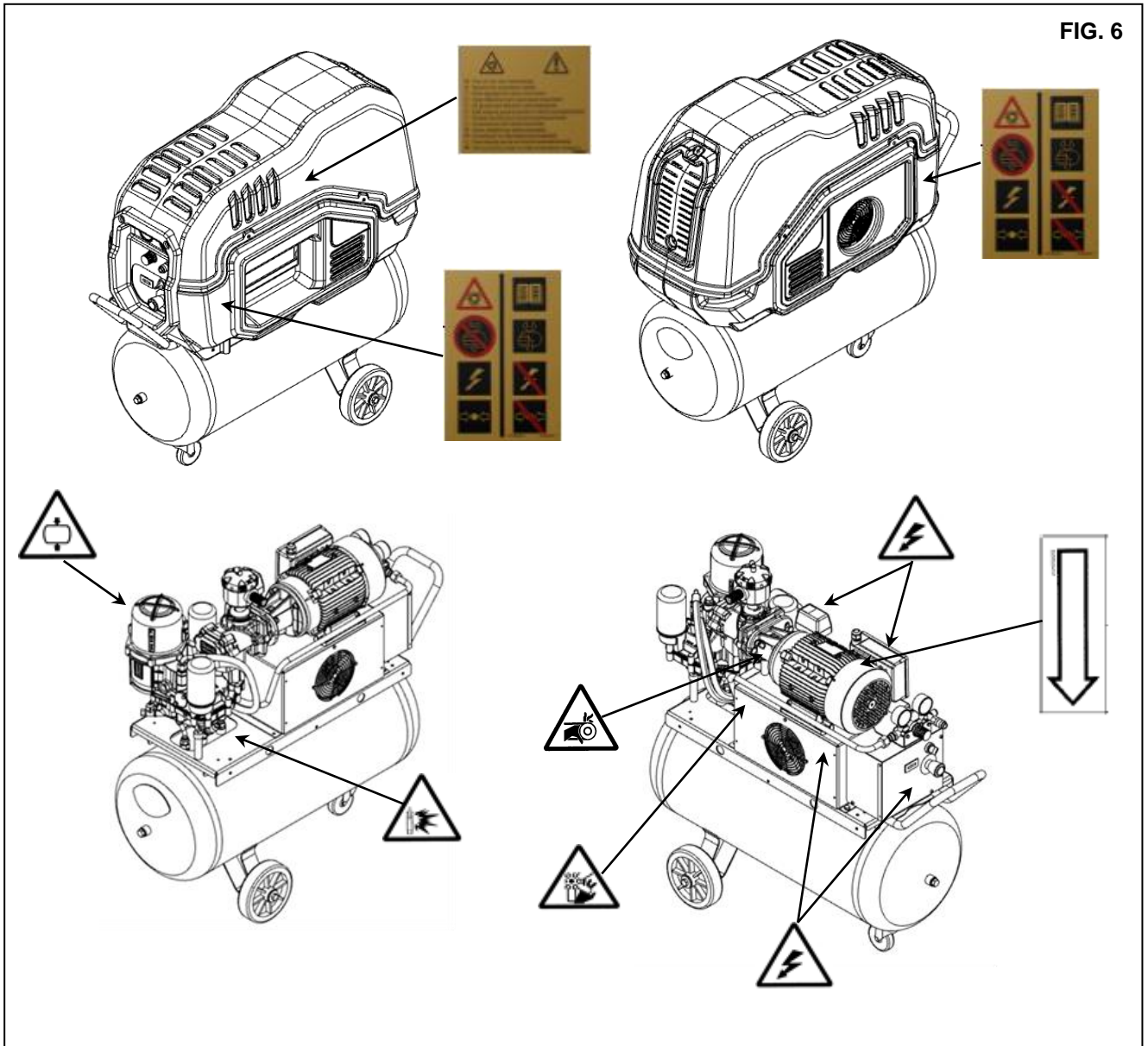


8.0 POSITION OF LABELS

8.1 POSITION OF HAZARD LABELS FOR SCREW COMPRESSOR (FIG. 6)

The labels applied to the compressor unit are part of the machine and have been applied for safety reasons and must not be detached or ruined for any reason whatsoever.

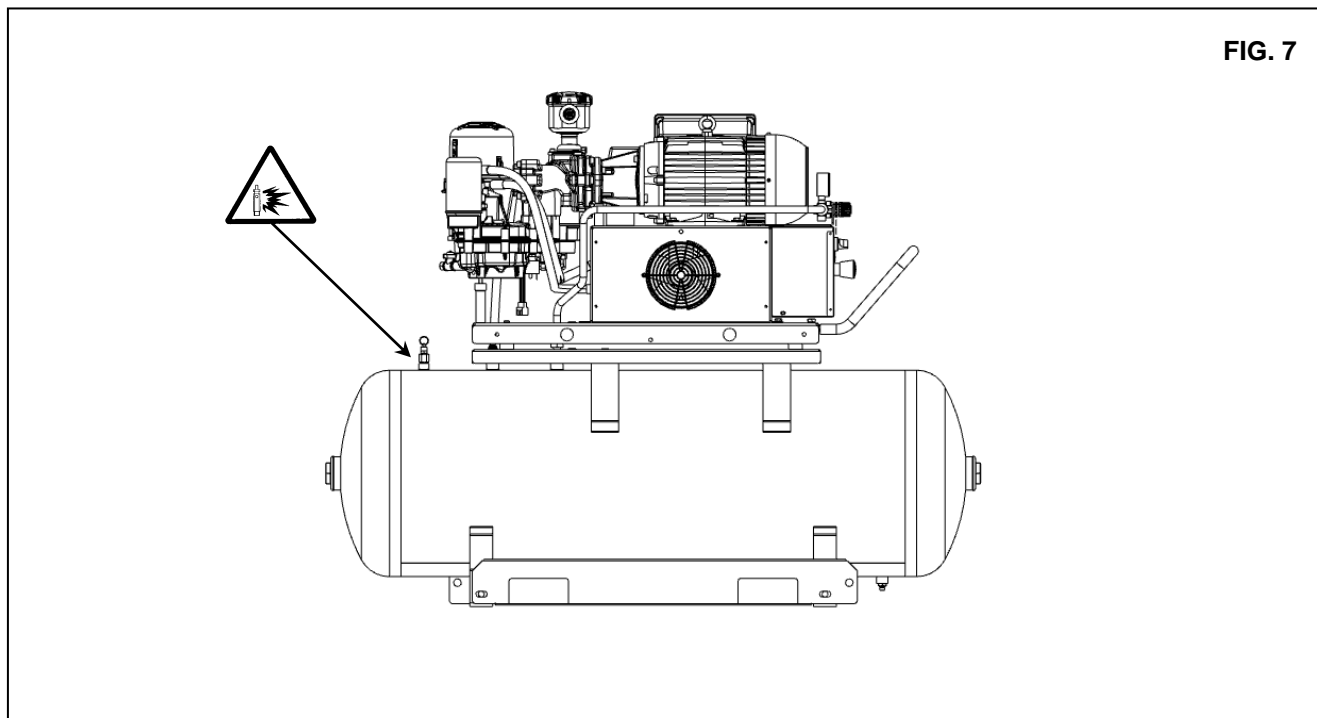
- 1) Hazard label Cod. 2202 2607 91
- 2) "Machine with automatic start" hazard label Cod. 2202 2607 91



8.2 POSITION OF HAZARD LABELS FOR TANK (FIG.7)

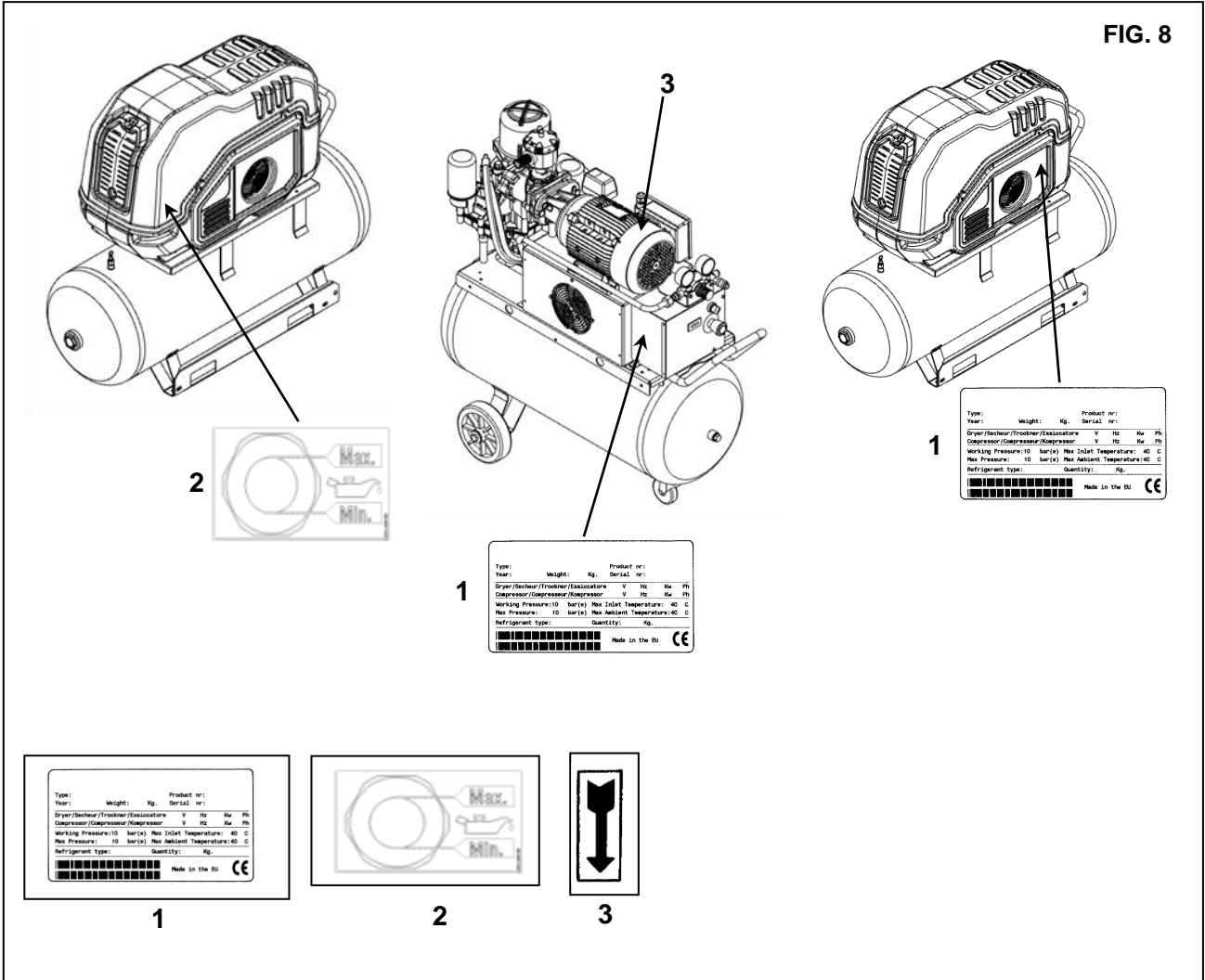
1) Hazard label Cod. 2202 2607 91

FIG. 7



8.3 POSITION OF INFORMATIVE LABELS FOR SCREW COMPRESSOR (FIG.8)

FIG. 8



8.4 POSITION OF INFORMATIVE LABELS FOR TANK (FIG.9)

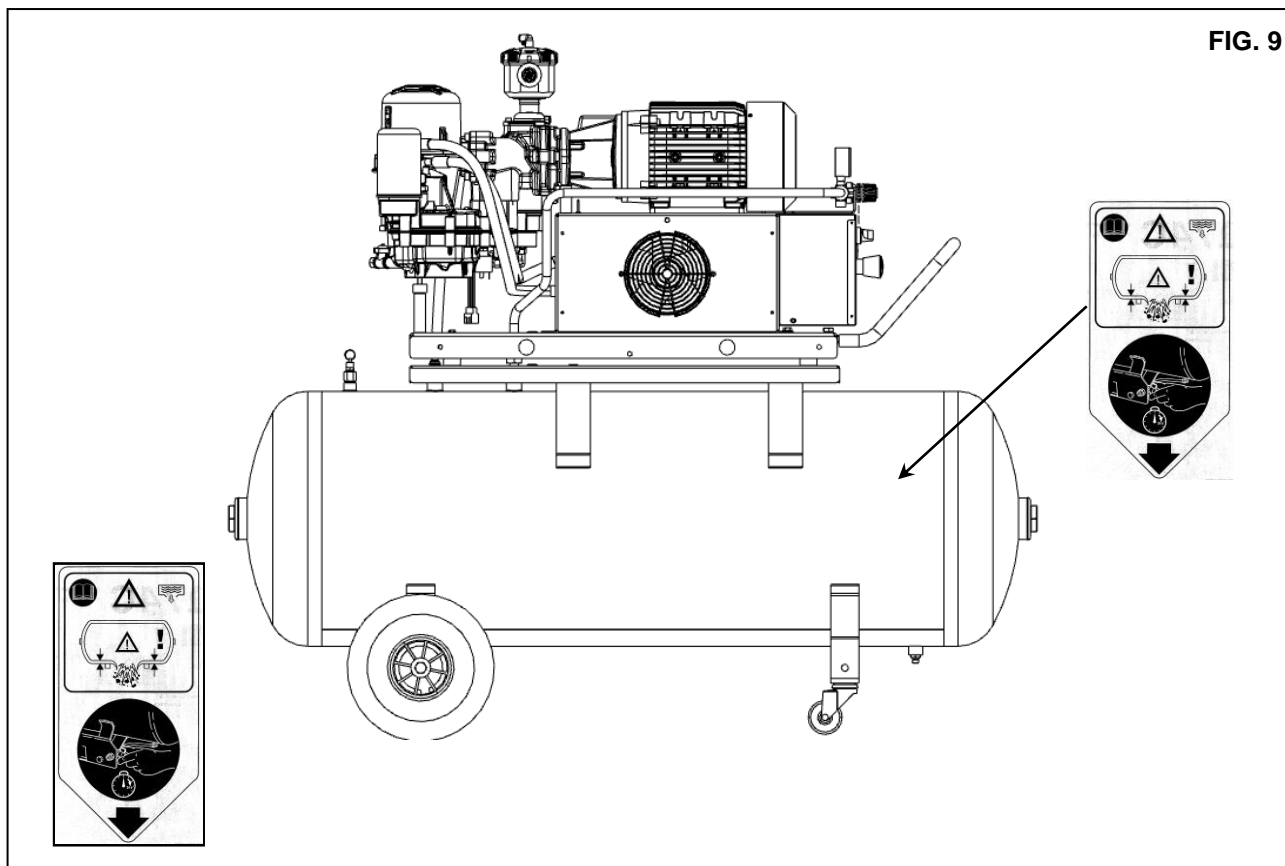


FIG. 9

9.0 COMPRESSOR ROOM (FIG.10)

9.1 FLOORING

The flooring must be level and of the industrial type, the overall machine weight is reported in Chap. 13.0. Keep the overall machine weight in mind for its positioning.

9.2 VENTILATION

An appropriate choice of room will extend the service life of your compressor; the room must be large, dry, well-ventilated and not dusty.

The ambient temperature, with the machine running, must not exceed **40°C** and must not be less than **5°C**. The room must have a volume of approximately **30 m³**. The room must have 2 openings for ventilation, each having a surface area of approximately **0.5 m²**. The first opening must be positioned up high to allow the evacuation of hot air, the second opening must be positioned down low to allow the intake of external ventilation air.

In the case of dusty environments, it is recommended to install a panel filter on these openings.

9.3 EXAMPLES OF COMPRESSOR ROOM VENTILATION (FIG.10)

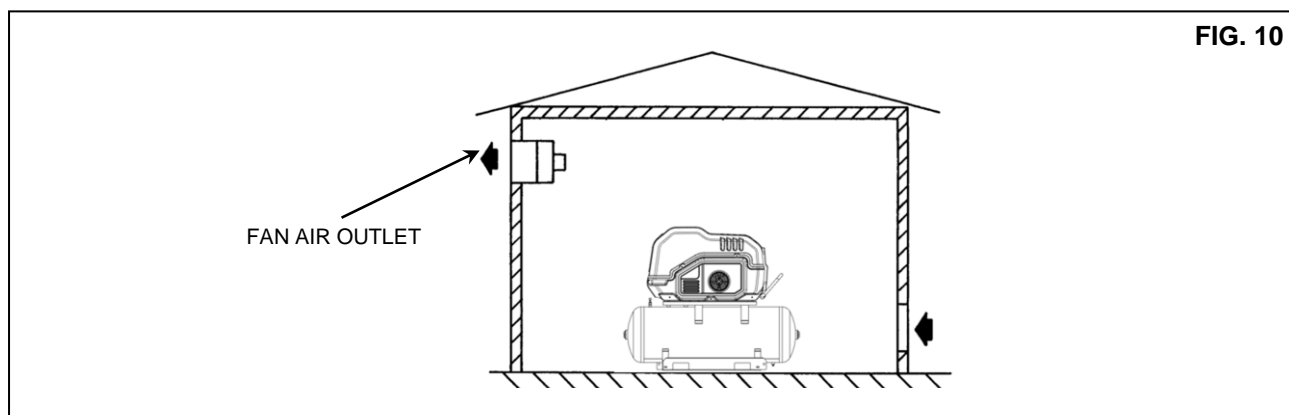


FIG. 10

10.0 TRANSPORT & HANDLING (FIG.11)

The machine must be transported as specified in the following figures.

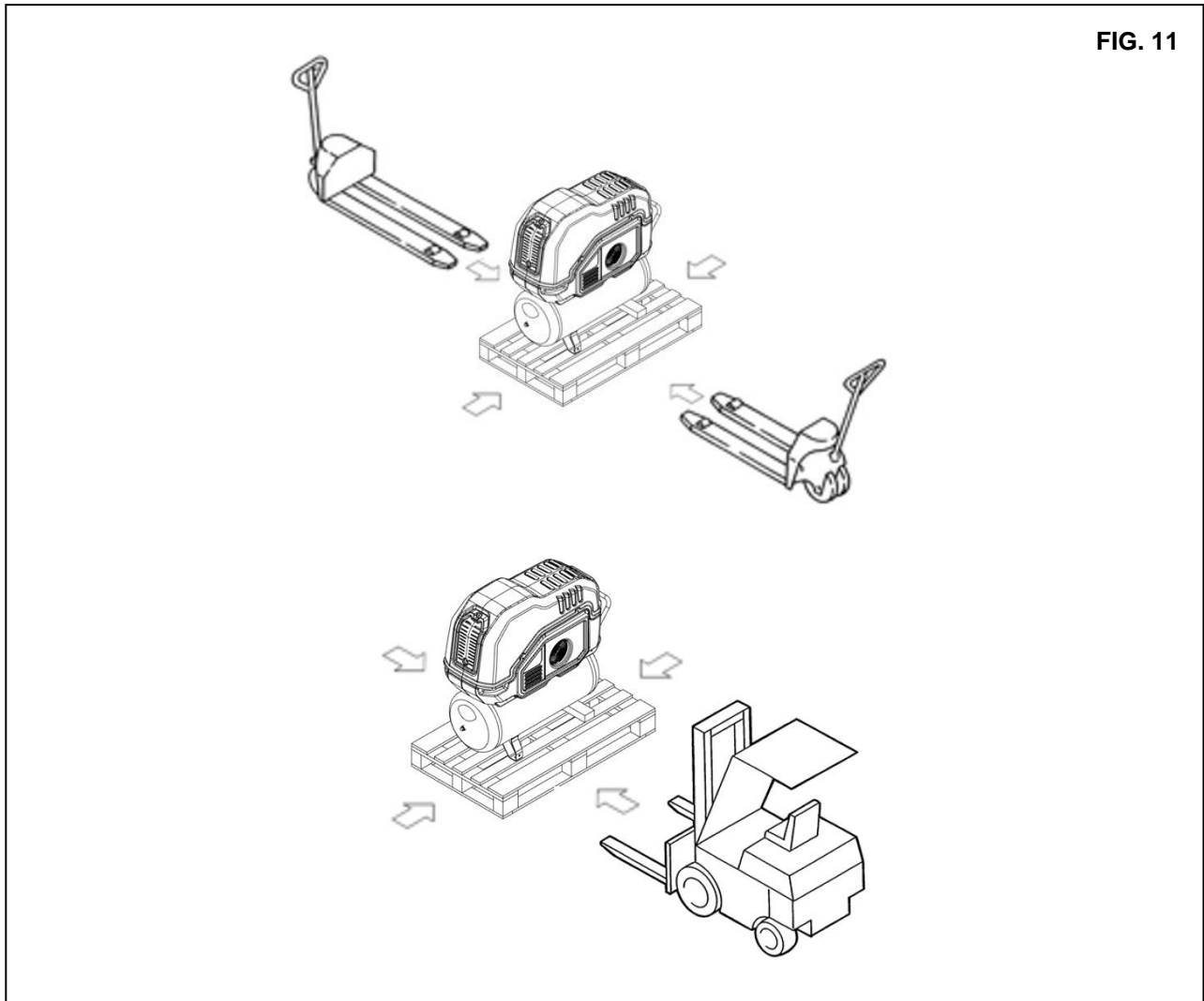


FIG. 11

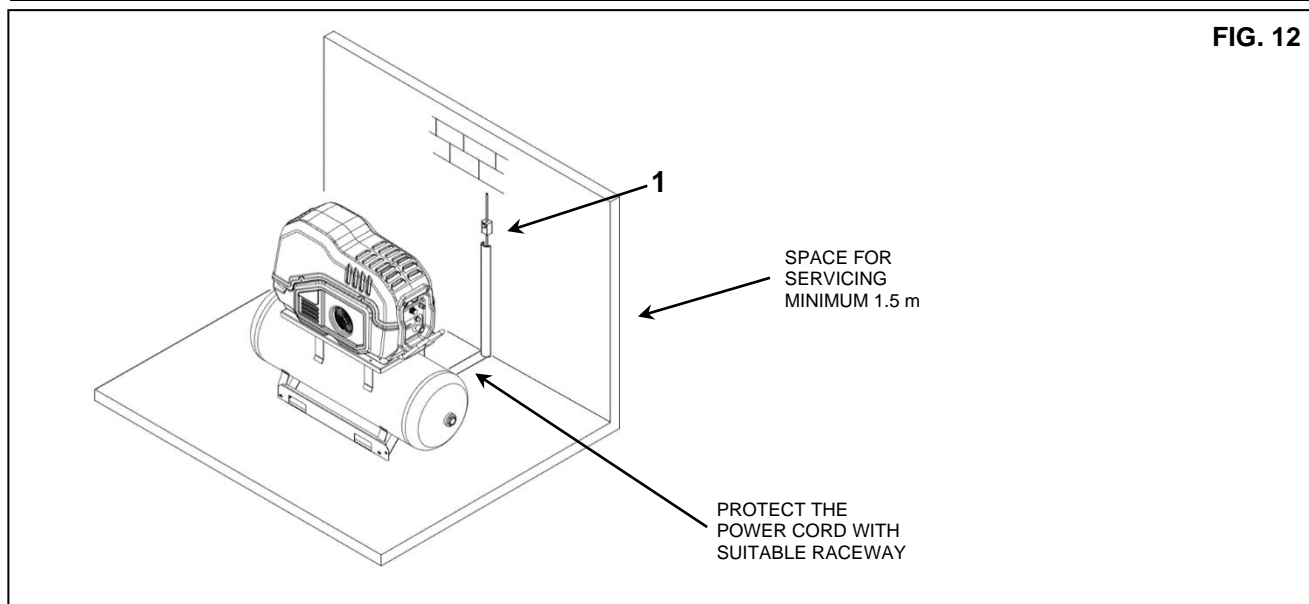
11.0 UNPACKING

After having removed the packaging, inspect the integrity of the machine and check that there are no visibly damaged parts. In case of doubt, do not use the machine and contact the manufacturer's service centre or your retailer. The packaging elements (plastic bags, polystyrene foam, nails, screws, wood, metal straps etc.) must not be left within reach of children or dispersed in the environment as they are potential sources of danger and pollution. Deposit such materials in dedicated collection areas.
Some models have wheels supplied that must be mounted under the tank.

12.0 INSTALLATION (FIG.12)**12.1 POSITIONING**

After having unpacked and set up the compressor room, position the machine, performing the following checks:

- check that there is sufficient space around the machine for servicing (see Fig. 12)
- check that the compressor is rested on a perfectly level floor.



CHECK THAT THE OPERATOR HAS A FULL VIEW OF ALL THE EQUIPMENT FROM THE CONTROL PANEL AND CHECK THAT THERE ARE NO UNAUTHORISED PERSONS IN THE VICINITY OF THE MACHINE.

12.2 ELECTRICAL CONNECTION

- Check that the supply voltage corresponds to the value on the machine data plate.
- Check the condition of the line conductors and for the presence of an efficient ground conductor.
- Ensure that there is an automatic cut-out device upstream for the machine against over currents, with a differential device (see Ref. 1) see electrical diagram.
- Connect the electrical cables of the machine with utmost care in compliance with current standards. Such cables must be developed as indicated by the machine's wiring diagram.



ACCESS TO THE ELECTRICAL CABINET IS ALLOWED ONLY BY PROFESSIONALLY QUALIFIED PERSONNEL. DISCONNECT THE POWER BEFORE OPENING THE ELECTRICAL CABINET.

COMPLIANCE WITH LEGISLATION IN FORCE REGARDING ELECTRICAL INSTALLATIONS IS ESSENTIAL TO ENSURE THE SAFETY OF WORKERS AND PROTECTION OF THE MACHINE.

CABLES, PLUGS AND ALL OTHER TYPE OF ELECTRIC MATERIAL USED FOR THE CONNECTION MUST BE SUITABLE FOR THE USE AND COMPLYING WITH THE REQUIREMENTS STATED BY THE REGULATIONS IN FORCE.

12.3 COMMANDS AND CONTROLS (FIG.13)

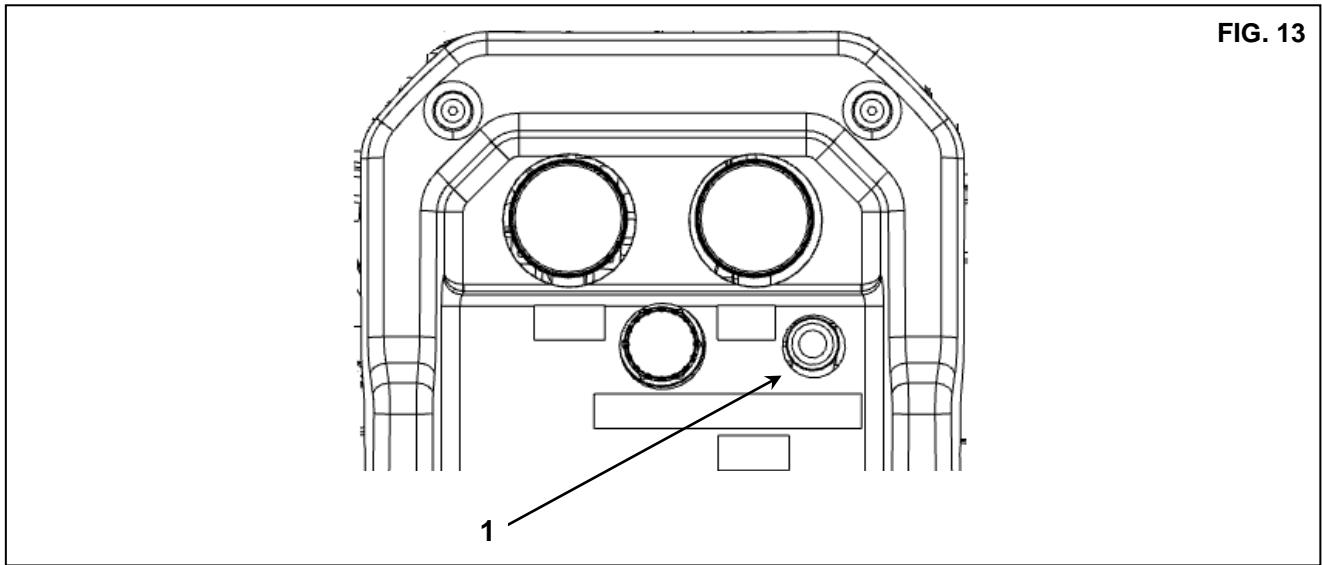
Connect the tank to the main compressed air supply using the quick coupling Rif.1 Fig.13 Use a pipe with diameter greater than or equal to the compressor outlet.



PIPES, FITTINGS AND CONNECTIONS USED FOR THE CONNECTION OF THE ELECTROCOMPRESSOR TO THE COMPRESSED AIR NETWORK MUST BE SUITABLE TO THE USE ACCORDING TO THE PRESCRIPTIONS OF THE REGULATIONS IN FORCE IN THE COUNTRY OF USE.



ALL DAMAGE DUE TO THE FAILURE TO COMPLY WITH THESE INDICATIONS CANNOT BE ATTRIBUTED TO THE MANUFACTURER AND MAY CAUSE INVALIDITY OF THE GUARANTEE CONDITIONS.



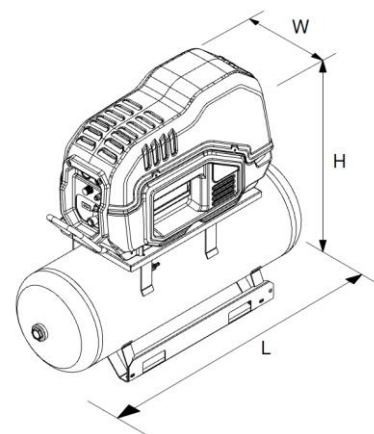
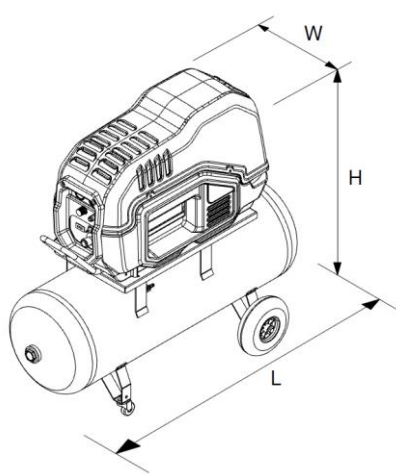
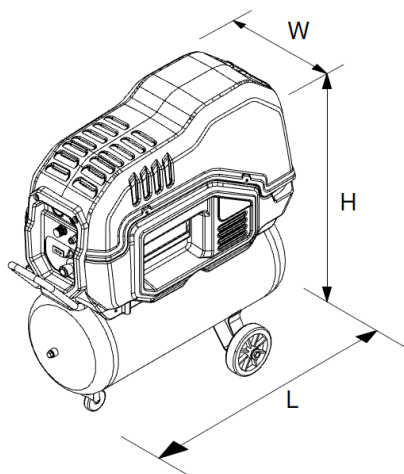
12.4 START-UP

See part B of this manual in **Chap. 20.0**

13.0 OVERALL DIMENSIONS AND TECHNICAL DATA 3 Hp

with 90 litre tank

with 200 litre tank



HP 3 KW 2.2	Dimensions mm (inch)			Air couplings
	L	W	H	quick type
	1105 (43.5)	495 (19.5)	1085 (42.7)	

HP 3 KW 2.2	Dimensions mm (inch)			Air couplings	
		L	W	H	quick type
	with wheels	1430 (56.3)	616 (24.25)	1268 (49.92)	
	without wheels	1430 (56.3)	450 (17.71)	1157 (6.18)	

60Hz

	HP 3 kW 2.2 - 230/1	HP 3 kW 2.2 - 230/3
Calibration pressure <i>bar(e) / psi</i>	7-9 (101-130)	7-9 (101-130)
Standard air flow l/min.	320	320
Net weight <i>Kg. / lb (90L/25gal)</i>	118 (260)	118 (260)
Net weight <i>Kg. / lb (200L/60gal with wheels)</i>	165 (364)	165 (364)
Net weight <i>Kg. / lb (200L/60gal without wheels)</i>	165 (364)	165 (364)
Thermostat calibration °C / °F	120 (248)	120 (248)
Oil capacity Litres (gal)	~2.5 (~0.5)	~2.5 (~0.5)

50Hz

	HP 3 kW 2.2 - 230/1	HP 3 kW 2.2 - 400+N
Calibration pressure <i>bar(e) / psi</i>	8-10 (116-145)	8-10 (116-145)
Standard air flow l/min.	244	244
Net weight <i>Kg. / lb (90L/25gal)</i>	112 (247)	110 (242.5)
Net weight <i>Kg. / lb (200L/60gal with wheels)</i>	160 (353)	157 (346)
Net weight <i>Kg. / lb (200L/60gal without wheels)</i>	160 (353)	157 (346)
Thermostat calibration °C / °F	120 (248)	120 (248)
Oil capacity Litres (gal)	~2.5 (~0.5)	~2.5 (~0.5)

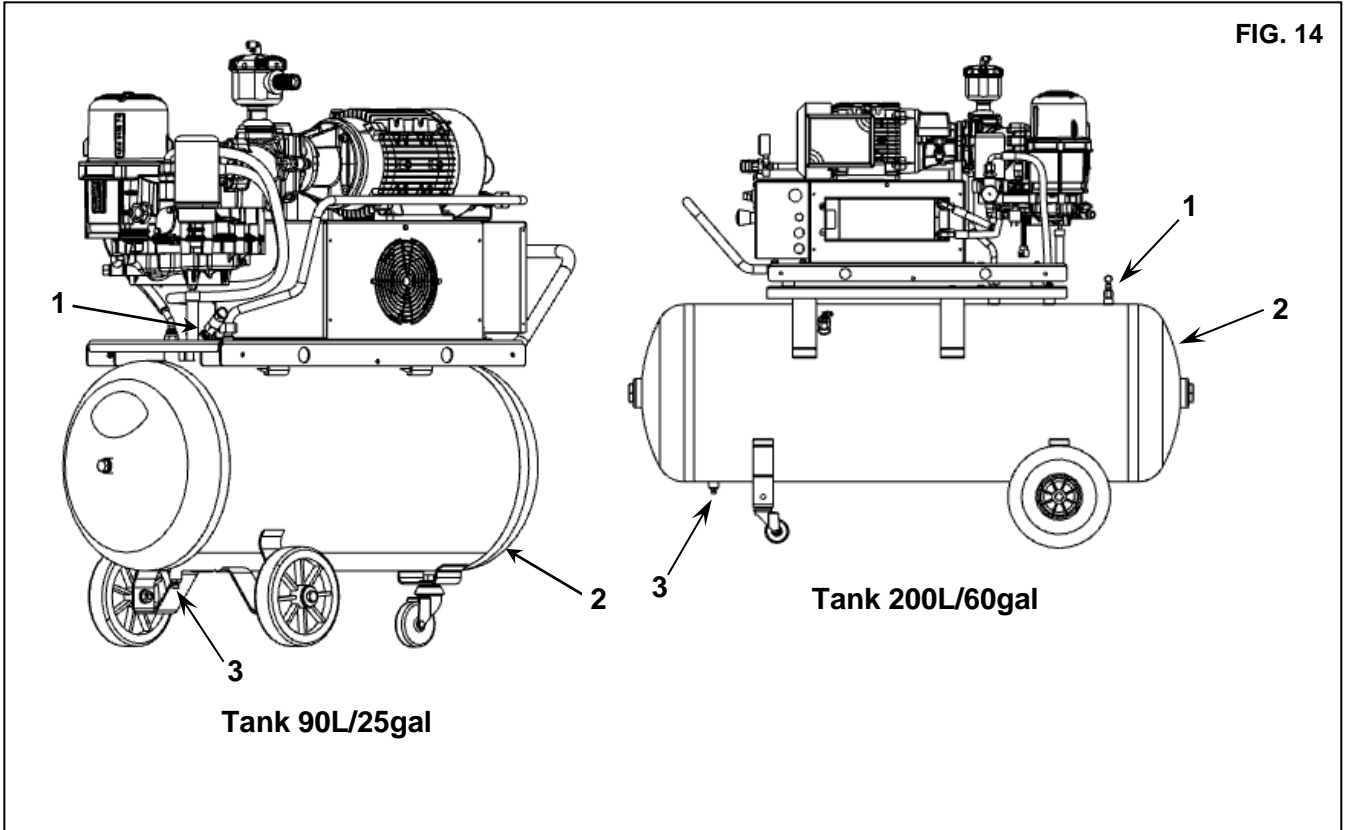
14.0 ILLUSTRATION OF MACHINE (FIG.14)

14.1 GENERAL LAYOUT FOR TANK

- 1 Safety valve (air tank) *
- 2 Compressed air tank
- 3 Manual condensate drain

*** IT IS PROHIBITED TO TAMPER WITH THE CALIBRATION OF THE SAFETY VALVE**

FIG. 14



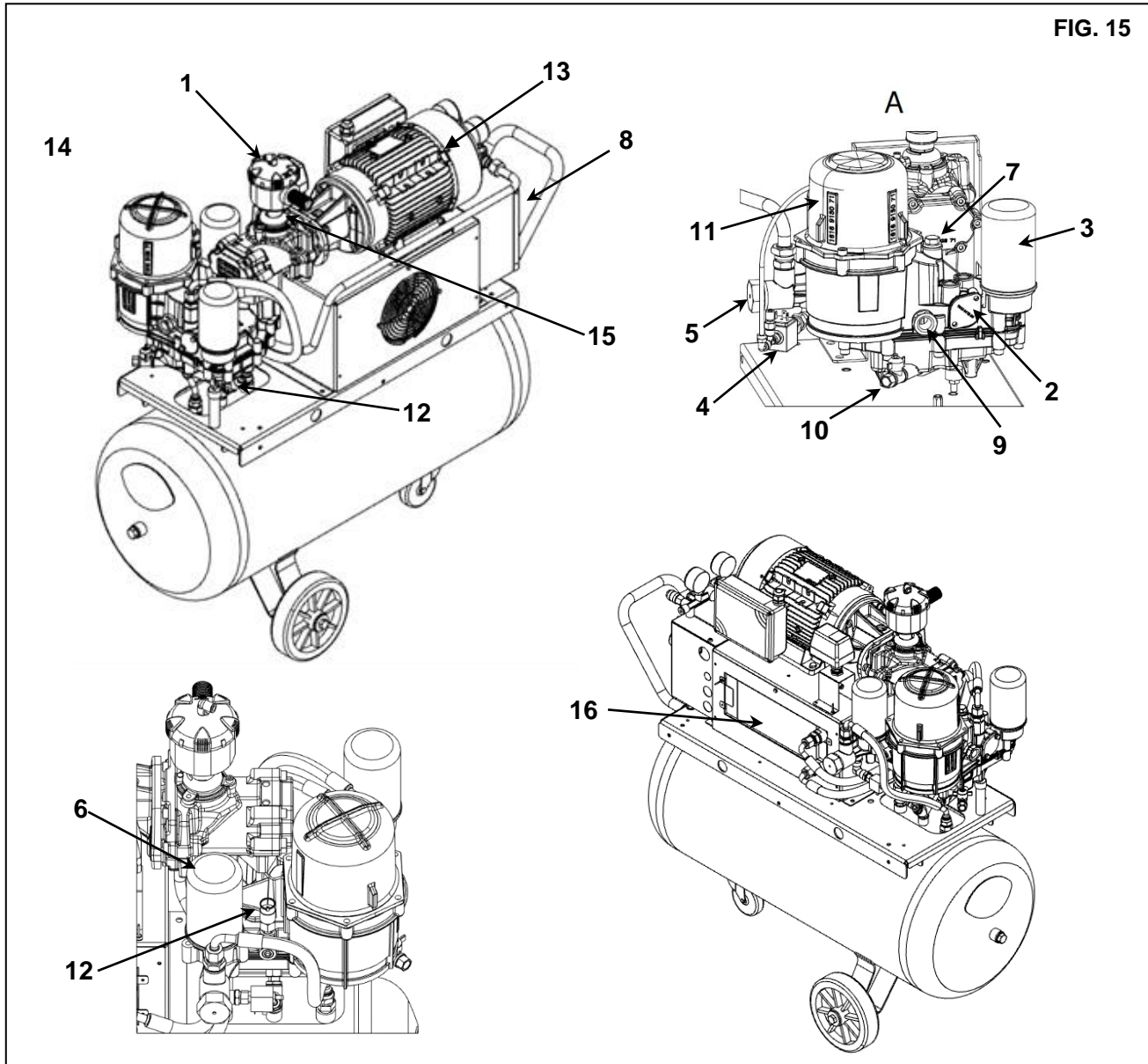
14.2 GENERAL LAYOUT FOR SCREW COMPRESSOR (FIG.15)

- 1 Air intake filter
- 2 Thermostatic valve
- 3 Oil filter
- 4 BLOW-OFF solenoid valve
- 5 Minimum pressure valve
- 6 Air/oil separator filter
- 7 Oil top-up and fill cap
- 8 Control panel
- 9 Oil level

- 10 Oil drain
- 11 Oil catcher
- 12 Safety valve *
- 13 Electric motor
- 14 Screw compressor
- 15 Intake unit
- 16 Oil cooler

* IT IS PROHIBITED TO TAMPER WITH THE CALIBRATION OF THE SAFETY VALVE

FIG. 15

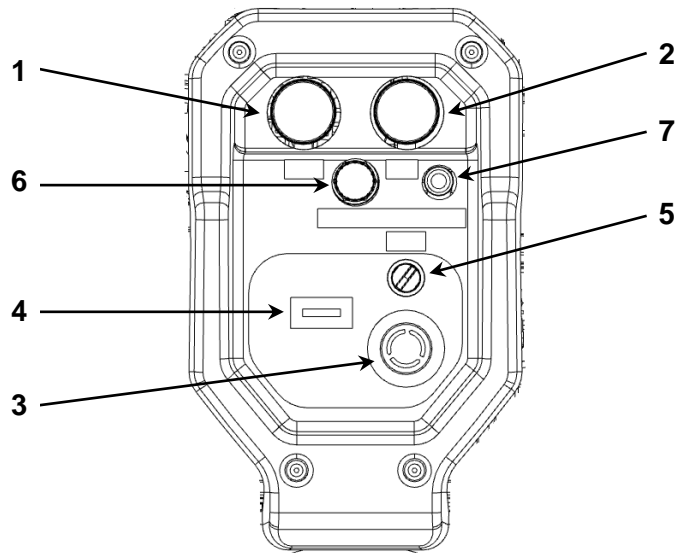


14.3 COMMANDS AND CONTROLS (FIG.16)



BEFORE RUNNING THE OPERATING TEST, CAREFULLY READ AND ACQUIRE THE NECESSARY FAMILIARITY WITH THE FUNCTIONS OF THE CONTROLS.

FIG. 16



- 1) Tank pressure gauge
- 2) Supply pressure gauge
- 3) Mushroom-shaped emergency button – **used to trigger an emergency stop.**
- 4) Operation hour counter: Indicates the hours of operation
- 5) Start/stop selector
- 6) Pressure regulator
- 7) Air outlet quick coupling



ATTENTION: WHEN THE SELECTOR RIF.5 FIG.16 IS IN THE “OFF” POSITION THERE IS STILL VOLTAGE ON THE POWER TERMINALS

- RUN:** Turn the selector Ref. 5 to position “I”.
- STOP:** Turn the selector Ref. 5 to position “O”



ATTENTION: TO RESTART THE MACHINE IMMEDIATELY AFTER A STOP, WAIT AT LEAST 30 SECONDS.

15.0 ROUTINE MAINTENANCE BY THE USER

BEFORE PERFORMING ANY TYPE OF SERVICING, THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE MAINS POWER AND COMPRESSED AIR DISTRIBUTION NETWORK.

The service operations reported in this chapter can be carried out by the user. More complex service operations requiring the intervention of professionally qualified personnel are reported in the chapter **GENERAL ROUTINE MAINTENANCE Chap. 21.0**

15.1 MAINTENANCE PROGRAMME

- **OPERATIONS THAT CAN ALSO BE PERFORMED BY THE USER**
- ■ **OPERATIONS THAT MUST BE PERFORMED BY TRAINED PERSONNEL; THESE OPERATIONS ARE ILLUSTRATED IN PART "B" OF THIS MANUAL**

These service intervals are recommended for non-dusty and well-ventilated environments. For particularly dusty environments, the frequency of controls must be doubled.

Every Day (after use)	■ Drain the condensate from the air tank
Every 50 working hours (or at least weekly)	■ Drain condensate from the oil tank ■ Check the oil level
Every 500 hours (or at least every 3 months)	■ Clean the air intake filter
Every 2000 hours (or at least every 1 year)	■ Change the suction filter ■ ■ Change the oil ■ ■ Change the oil filter ■ ■ Check electrical wires inside the cubicle box ■ ■ Clean the finned surface of the air-oil cooler ■ ■ Safety temperature test
Every 4000 hours (or at least every 2 years)	■ ■ Clean the finned surface of the air-oil cooler ■ ■ Change the oil separating filter
Every 6000 hours (or at least every 3 years)	■ ■ Change the inlet valve. ■ ■ Service kit minimum pressure valve and thermostatic valve ■ ■ Replace the non-return valve of the oil scavage line

15.2 DRAINING THE CONDENSATE FROM THE OIL CATCHER

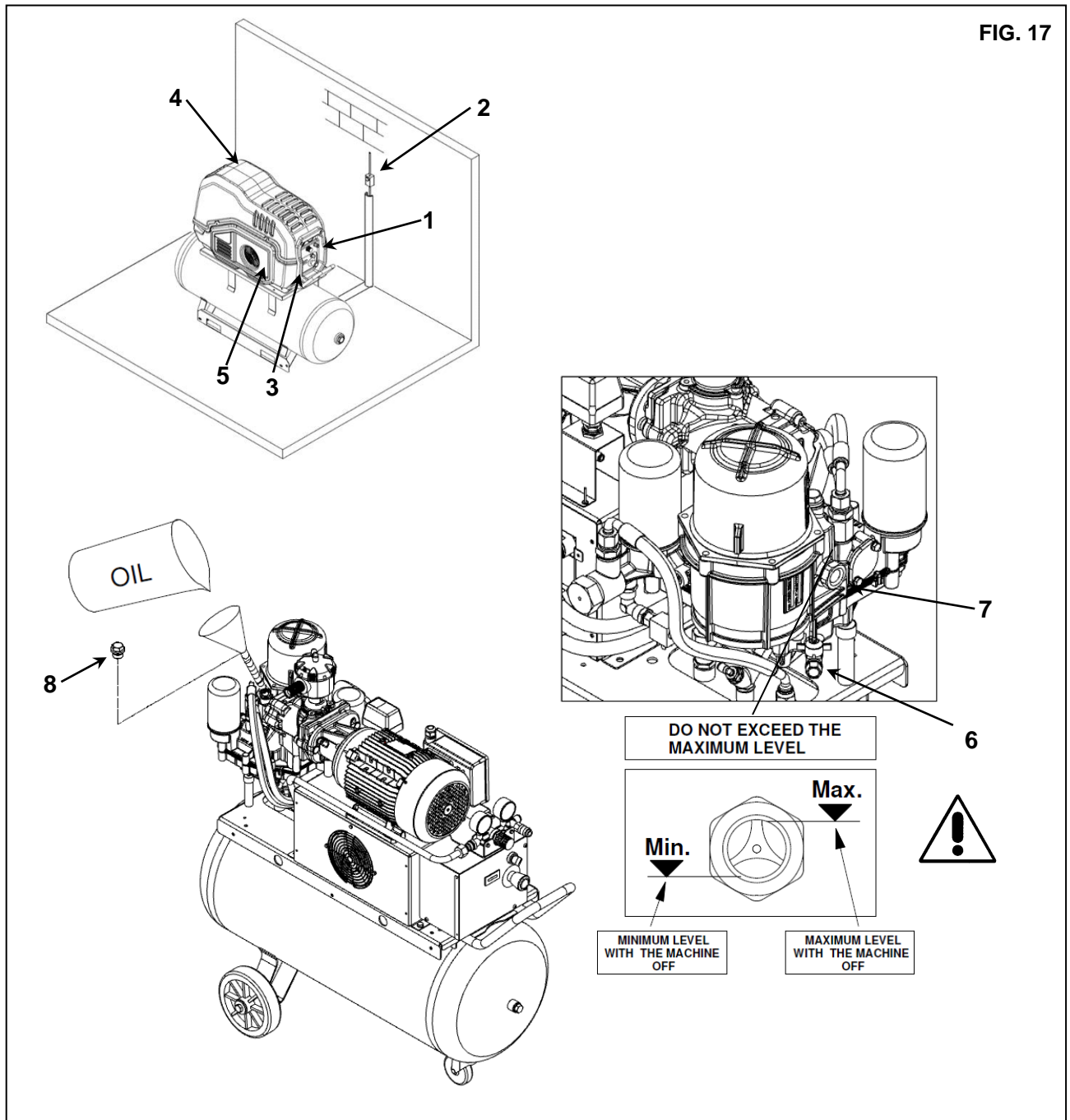
If the compressor work cycle involves extended periods of downtime with cooling of the machine, a certain quantity of water condensate will accumulate in the oil catcher.
This occurs, for example, during night-time or weekend shutdowns.
The condensate must be drained every 50 hours **or every week**.
This operation can only be performed with the machine cold, that is, it must have been off for at least 8 hours.



BEFORE DRAINING THE CONDENSATE, THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE POWER MAINS.

Proceed as follows:

- Turn off the machine turn off the switch Ref. 1 Fig. 17.
- Close the power differential switch Ref. 2 Fig. 17.



- Wait for the machine to cool.
- Remove the front panel Ref. 3 Fig. 17.
- Remove the machine cover Ref. 4 Fig. 17.
- Remove the side panels Ref. 5 Fig. 17.
- SLOWLY open the tap Ref. 6 Fig. 17 and drain the condensate.
- When the first traces of oil appear, close the tap.



CONDENSATE MUST BE DISPOSED OF IN ACCORDANCE WITH LOCAL REGULATIONS IN FORCE

- Check the oil level using the tell-tale Ref. 7 Fig. 17.
- If the oil level is below the minimum, top it up as described in point 15.3.



USE THE SAME TYPE OF OIL AS THAT PRESENT IN THE MACHINE, DO NOT MIX DIFFERENT TYPES OF OIL

15.3 OIL LEVEL CONTROL AND TOP-UP

- Turn off the machine.
- **WAIT A FEW MINUTES FOR THE FOAM IN THE OIL CATCHER TO SUBSIDE.**
- Check the oil level using the tell-tale Ref. 7 Fig. 17.
- If the oil is below the minimum level, top up following the instructions below.
- Close the power differential switch Ref. 2 Fig. 17.



BEFORE PERFORMING ANY OPERATIONS ON THE MACHINE, CHECK THAT IT HAS BEEN ISOLATED FROM THE ELECTRICAL POWER SUPPLY.

- Remove the front panel Ref. 3 Fig. 17.
- Remove the machine cover Ref. 4 Fig. 17.
- Remove the side panels Ref. 5 Fig. 17.
- Slowly open the oil cap Ref. 8 Fig. 17, making sure there is no residual pressure.
- Top up until the maximum level Ref. 7 Fig. 17 with the same type of oil as that in the compressor.
- Close the oil catcher cap Ref. 8 Fig. 17.
- Close the side panels again Ref. 5 Fig. 17 with the relative screws.
- Close the machine cover again Ref. 4 Fig. 17 with the relative screws.
- Close the front panel again Ref. 3 Fig. 17 with the relative screws.

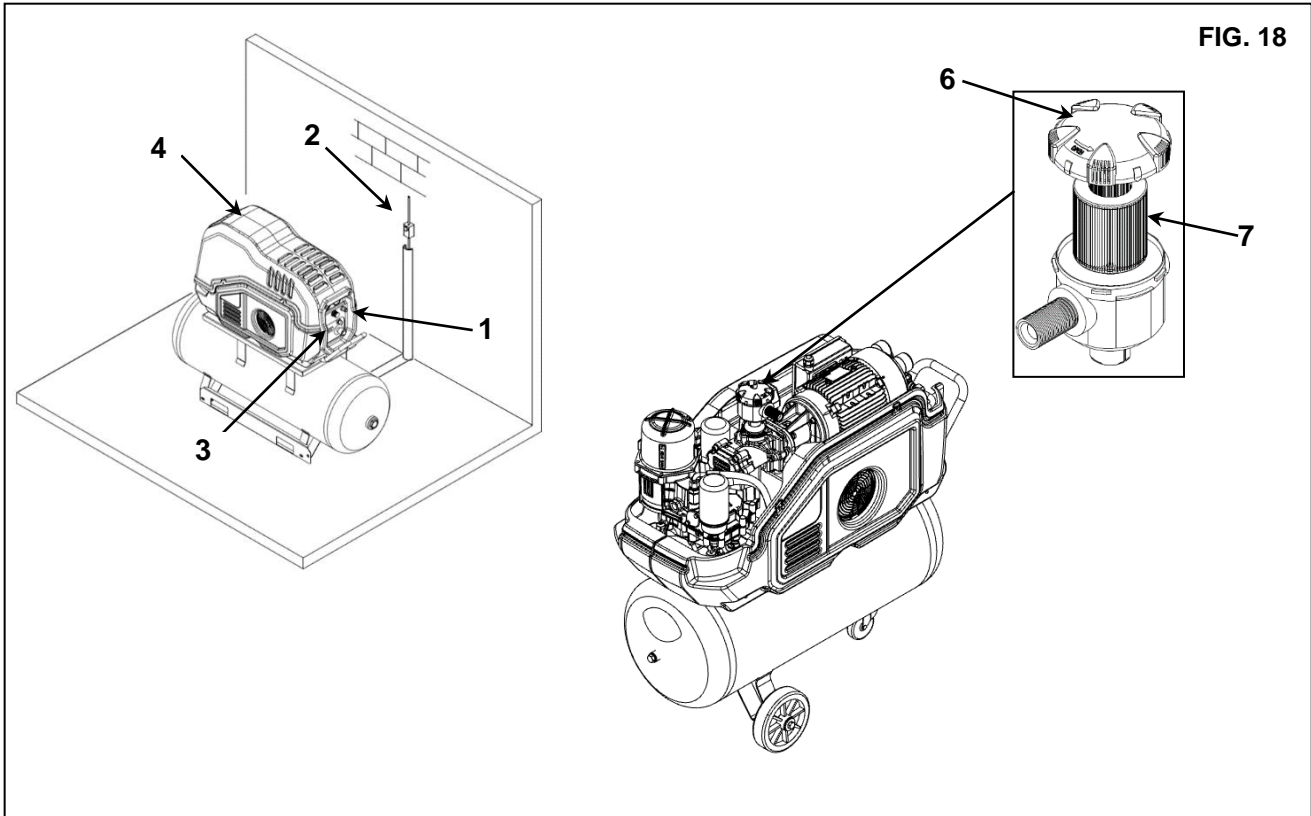
15.4 INTAKE FILTER CLEANING OR FILTER REPLACEMENT

- Turn off the machine.
- Turn off the switch Ref. 1 Fig. 18.
- Close the power differential switch Ref. 2 Fig. 18.



HOT INTERNAL PARTS

- Remove the front panel Ref. 3 Fig. 18.
- Remove the machine cover Ref. 4 Fig. 18.
- Remove the cover Ref. 6 Fig. 18. (see direction of arrow)
- Remove the filter Ref. 7 Fig. 18.



DO NOT ALLOW FOREIGN BODIES TO FALL INTO THE INTAKE MANIFOLD

- Clean the filter with a blast of air from inside out, **DO NOT USE WATER OR SOLVENTS**, or: grab a new filter.
- Clean the filter support disc with a clean cloth.
- Refit the filter and cover.
- If necessary, dispose of the old filter in accordance with local regulations in force.
- Close the machine cover again Ref. 4 Fig. 18 with the relative screws.
- Close the front panel again Ref. 3 Fig. 18 with the relative screws.

15.5 CHECKING THE TANK MANUAL CONDENSATE DRAIN

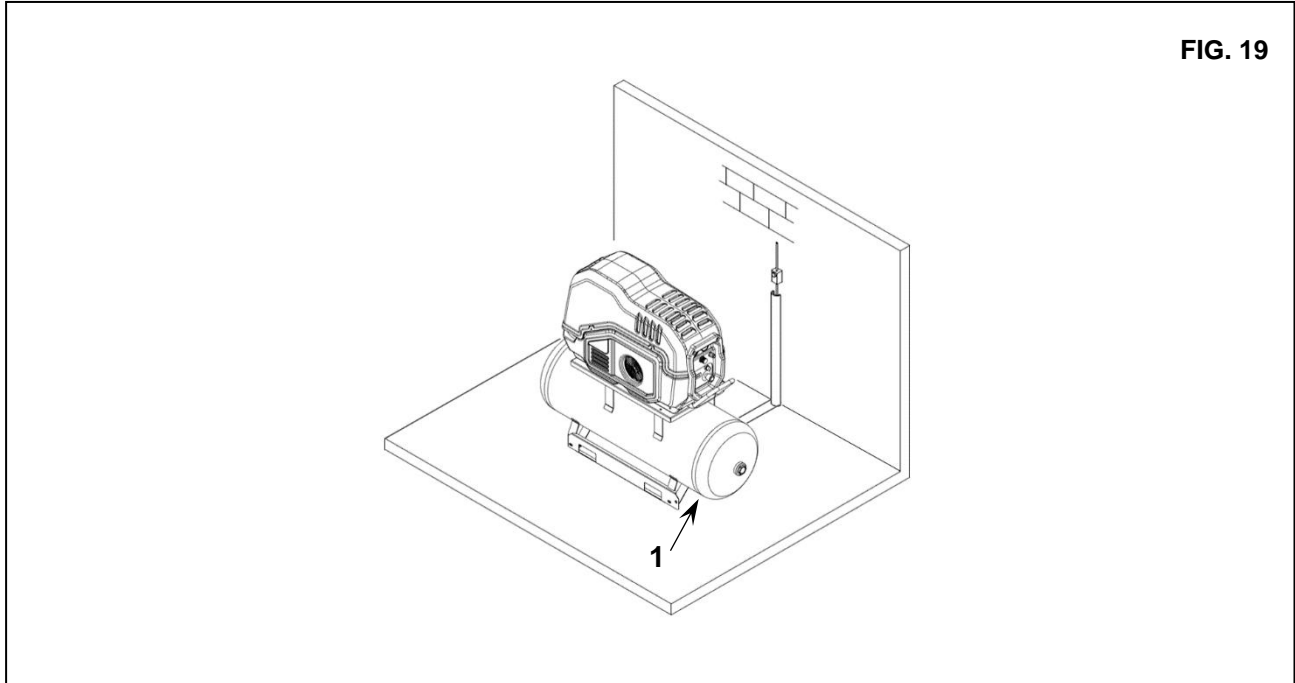


BEFORE PERFORMING ANY TYPE OF SERVICING, THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE MAINS POWER AND COMPRESSED AIR DISTRIBUTION NETWORK.

The manual condensate drain (Ref. 1 Fig. 19.) must be checked every day.

Proceed as follows:

- Check the manual condensate drain of the tank to make sure the condensate is properly drained through the tap Ref. 1 Fig. 19 (**purge every day**).



16.0 STORAGE

If the machine is to remain inactive for long periods:

- Turn off the machine.
- Close the power differential switch Ref. 1 Fig. 20.
- Discharge the tank pressure by opening the condensate drain tap Ref. 2 Fig. 20.
- Close the tap Ref. 2 Fig. 20 once all the residual pressurised air has been discharged.

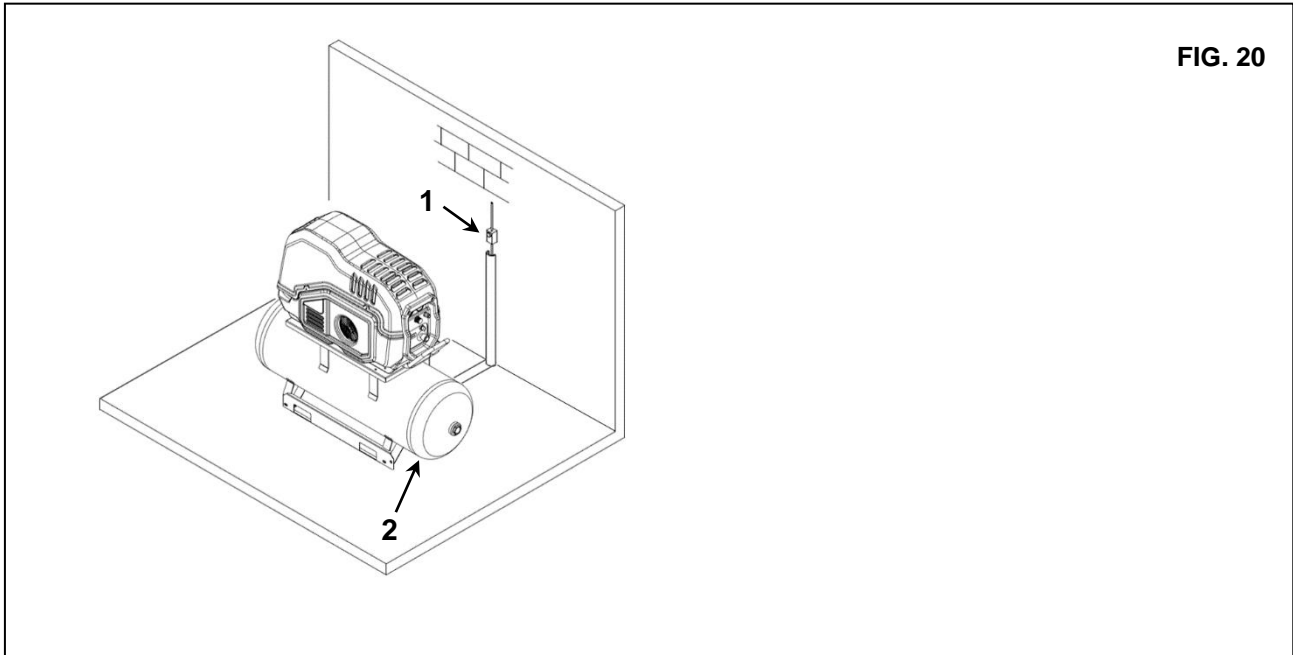


FIG. 20

During downtime, the machine must be protected against atmospheric agents, dust and humidity, which may damage the motor and electrical system.

For the subsequent start-up, consult the manufacturer's technical service centre.

17.0 DISMANTLING THE COMPRESSOR UNIT

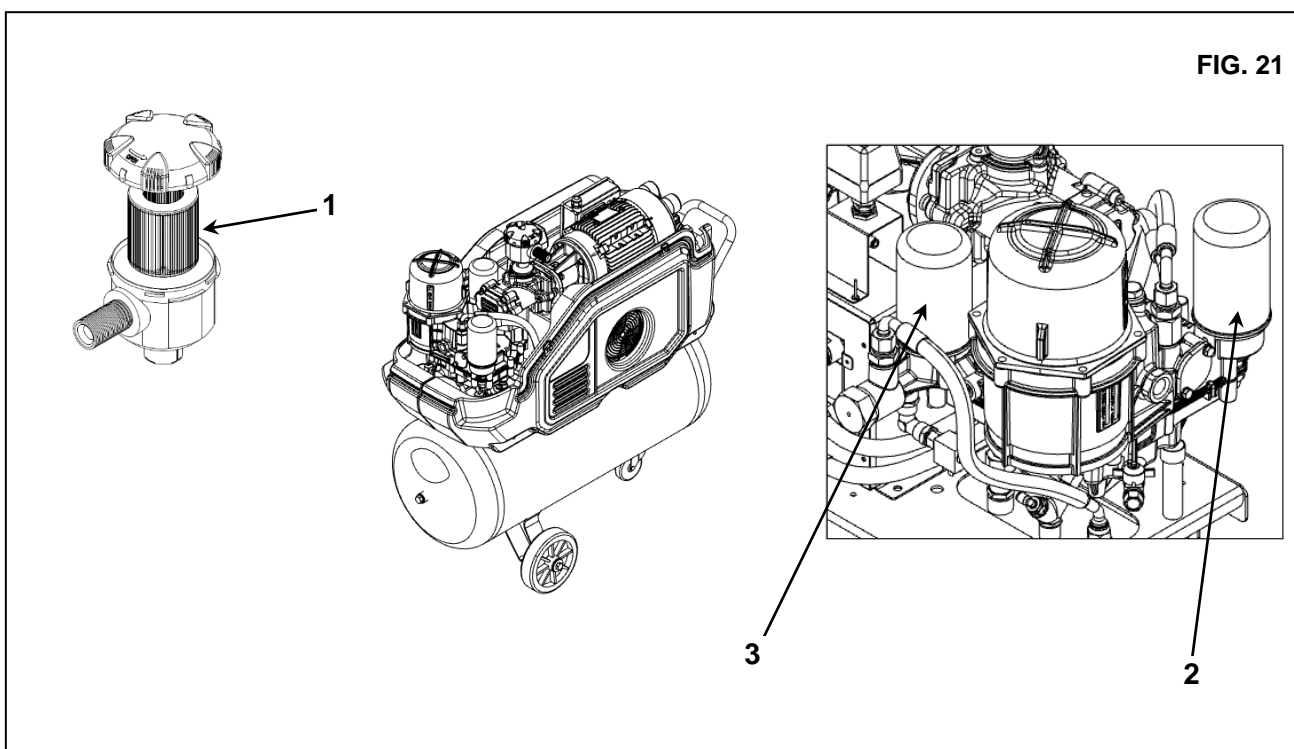
If the machine is dismantled, it must be separated into similar parts for disposal in accordance with local regulations in force.



IT IS RECOMMENDED TO COMPLY WITH REGULATIONS IN FORCE FOR THE DISPOSAL OF USED OIL AND OTHER POLLUTING MATERIALS SUCH AS THERMAL INSULATING SOUNDPROOF FOAM, ETC.

18.0 SPARE PARTS LIST FOR ROUTINE MAINTENANCE

Ref.	NAME	Code	HP 3
			kW 2.2
			10 bar
1	Intake filter	6211 4737 50	■
2	Oil filter	6211 4726 50	■
3	Oil separator filter	6221 3726 50	■



19.0 TROUBLESHOOTING AND IMMEDIATE ACTIONS

N.B. OPERATIONS MARKED BY ■ ■ MUST BE PERFORMED BY PROFESSIONALLY QUALIFIED PERSONNEL, AUTHORISED BY THE MANUFACTURER.



ALL OPERATIONS MUST BE PERFORMED BY PROFESSIONALLY QUALIFIED PERSONNEL THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE MAINS POWER BEFORE ANY TYPE OF SERVICING

19.1 TROUBLESHOOTING AND IMMEDIATE ACTIONS FOR SCREW COMPRESSOR

PROBLEM FOUND	POSSIBLE CAUSES	OBSERVATIONS
1) The machine won't start	1A - there is no electrical power supply 1B - the power supply has two inverted phases (only for three-phases machines) 1C - the safety fuse is blown transformer protection has tripped	- check the electrical power line Chap. 12.2 - replace the fuse
2) The machine won't start	2A - the main motor thermal cut-off has tripped	- to reset it, press the reset button on the thermal relay F21
3) The machine won't start	3A - the oil temperature thermostat has tripped	- ambient temperature too high; improve ventilation in compressor room Chap. 9.2 ■ ■ - cooler radiator dirty; clean the radiator - oil level too low; top up the oil tank
4) The compressor doesn't reach the working pressure	4A - the compressed air consumption is too high 4B - the drain solenoid valve stays open Ref. EV/SC wiring diagram	■ ■ - check the electrical system
5) Excessive oil consumption	5A - worn oil separator filter - oil level too high	■ ■ - replace the oil separator filter see CHAP. 23

PART “B”



THIS PART “B” OF THE INSTRUCTION MANUAL IS RESERVED TO PROFESSIONALLY QUALIFIED PERSONNEL, AUTHORISED BY THE MANUFACTURER.

20.0 START-UP



BEFORE PERFORMING ANY OPERATIONS ON THE MACHINE, CHECK THAT IT HAS BEEN ISOLATED FROM THE ELECTRICAL POWER SUPPLY

20.1 PREPARATION FOR START-UP

After making all the checks listed in Chap. 12, follow the instructions below

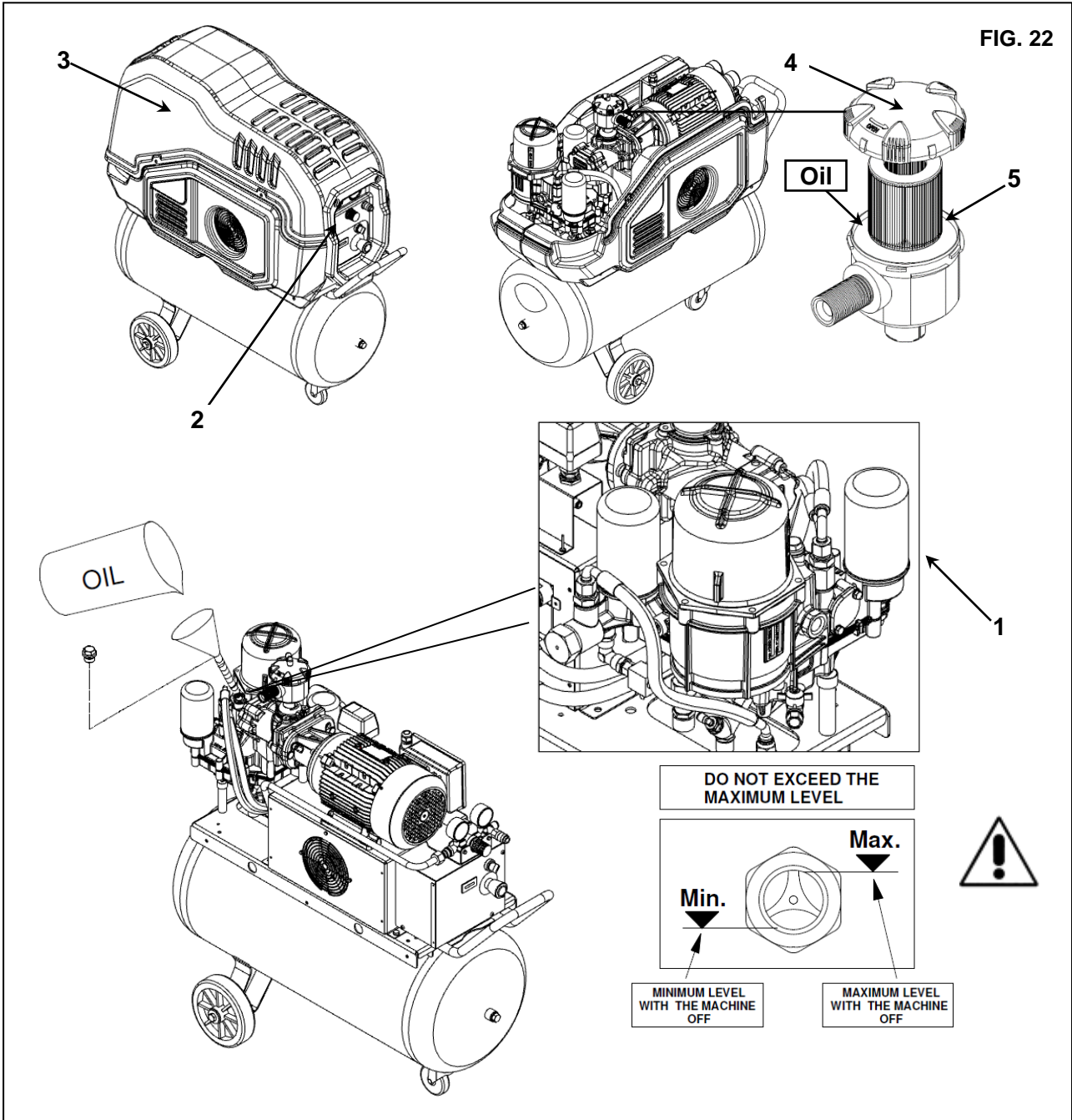
20.2 PRELIMINARY CHECKS

Check the oil level Ref. 1 Fig. 22; the machine is supplied with a full tank of oil; if the oil level is incorrect, top it up using the same oil as the original type.

If the period of time between factory commissioning and the installation date is greater than 3 months, re-lubricate the screw unit before starting it up, following the procedure below:

- Remove the front panel cover Ref. 2 Fig. 22.
- Remove the machine cover Ref. 3 Fig. 22.
- Remove the cover Ref. 4 Fig. 22.
- Remove the air filter Ref. 5 Fig. 22.
- Pour some oil into the intake unit.
- Refit the air filter Ref. 5 Fig. 22.
- Refit the cover Ref. 4 Fig. 22.

If the period of time between factory commissioning and the installation date is greater than 6 months, consult the manufacturer's service centre.



21.0 GENERAL ROUTINE MAINTENANCE (REQUIRES TRAINED PERSONNEL)

BEFORE PERFORMING ANY TYPE OF SERVICING, THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE POWER MAINS.

MAINTENANCE PROGRAMME

These service intervals are recommended for non-dusty and well-ventilated environments.
For particularly dusty environments, the frequency of controls must be doubled

Every Day (after use)	<ul style="list-style-type: none"> ■ Drain the condensate from the air tank
Every 50 working hours (or at least weekly)	<ul style="list-style-type: none"> ■ Drain condensate from the oil tank ■ Check the oil level
Every 500 hours (or at least every 3 months)	<ul style="list-style-type: none"> ■ Clean the air intake filter
Every 2000 hours (or at least every 1 year)	<ul style="list-style-type: none"> ■ Change the suction filter ■ Change the oil ■ Change the oil filter ■ Check electrical wires inside the cubicle box ■ Clean the finned surface of the air-oil cooler ■ Safety temperature test
Every 4000 hours (or at least every 2 years)	<ul style="list-style-type: none"> ■ Clean the finned surface of the air-oil cooler ■ Change the oil separating filter
Every 6000 hours (or at least every 3 years)	<ul style="list-style-type: none"> ■ Change the inlet valve. ■ Service kit minimum pressure valve and thermostatic valve ■ Replace the non-return valve of the oil scavange line

N.B. OPERATIONS SHOWN WITH ■ ARE DESCRIBED IN PART "A" OF THIS MANUAL IN CHAP. 15.1

22.0 OIL REPLACEMENT

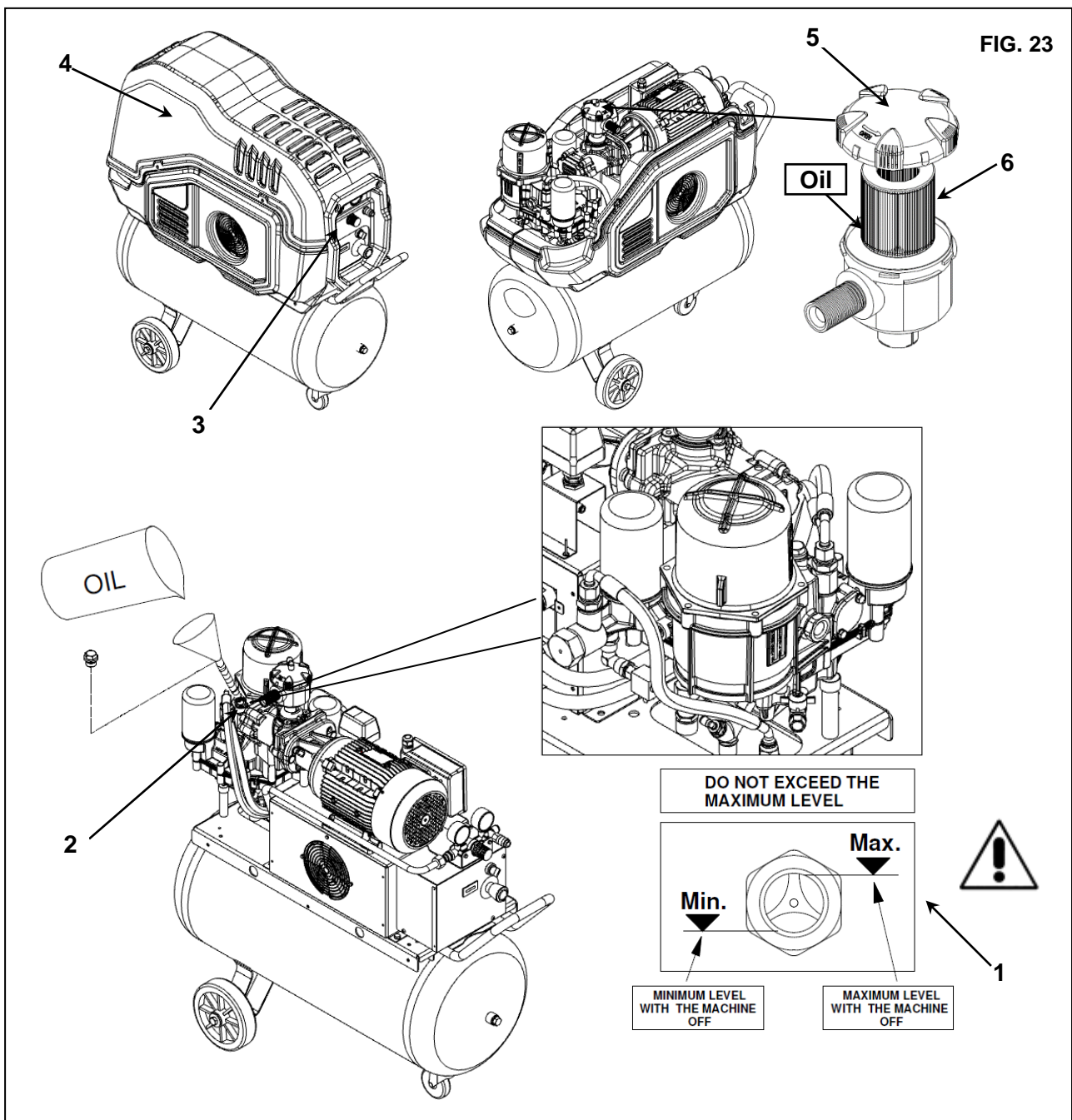
ATTENTION: THIS OPERATION MUST BE CARRIED OUT TOGETHER WITH THE REPLACEMENT OF THE OIL FILTER AND AIR FILTER.



BEFORE PERFORMING ANY TYPE OF SERVICING, THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE MAINS POWER AND COMPRESSED AIR DISTRIBUTION NETWORK

Replacing the oil is an important operation for the compressor: if the bearings are not properly lubricated, the service life of the compressor will be reduced. The oil must be replaced with the machine warmed up, that is, as soon as it is stopped. Therefore, it is recommended to strictly follow the suggestions reported below.

- Remove the front panel Ref. 3 Fig. 23.
- Remove the machine cover Ref. 4 Fig. 23.
- After draining the used oil from the machine through the tap Ref. 6 Fig. 17
- Fill the oil catcher Ref. 2 Fig. 23. up to the marked level (Ref. 1 Fig. 23).
- Pour a bit of oil into the intake unit as described in CHAP. 20.1
- Close all the protections again (cover and front panel) Ref. 3 Fig.23
- Start the compressor.
- After about 1 minute turn off the machine.
- **PROCEED AS DESCRIBED IN CHAPTER 15.3**



**USED OIL MUST BE DISPOSED OF IN ACCORDANCE WITH REGULATIONS IN FORCE****NOTES ON LUBRICANTS**

The machine is supplied filled with oil.

This lubricant, in normal operating conditions, has demonstrated to be able to withstand prolonged use for up to 2,000 hours. However, due to external pollutants introduced into the compressor through the intake air, it is advisable to replace the oil at more frequent intervals as indicated in the routine maintenance schedule.

In case of use at high temperatures (continuous operation above 90°C of oil) or particularly intense use, it is advisable to change the oil more frequently with respect to that indicated in the maintenance schedule.

DO NOT TOP UP WITH DIFFERENT OILS

23.0 OIL SEPARATOR FILTER AND OIL FILTER REPLACEMENT



BEFORE PERFORMING ANY TYPE OF SERVICING, THE MACHINE MUST BE SHUT DOWN AND ISOLATED FROM THE MAINS POWER AND COMPRESSED AIR DISTRIBUTION NETWORK, AND CHECK THAT THE MACHINE IS NOT UNDER PRESSURE.

N.B. the internal pressure is automatically discharged when the machine is turned off, wait time approximately 30 seconds.

Proceed as follows:

- Remove the front panel Ref. 1 Fig. 24.
- Remove the machine cover Ref. 2 Fig. 24.
- Remove the side panels Ref. 3 Fig. 24.
- Remove the oil separator filter Ref. 4 and the oil filter Ref. 5 Fig. 24.
- Lubricate the filter gaskets with some oil before installation.
- The lubrication must be carried out by hand.
- Close the side panels again Ref. 3 Fig. 24 with the relative screws.
- Close the machine cover again Ref. 2 Fig. 24 with the relative screws.
- Close the front panel again Ref. 1 Fig. 24 with the relative screws.

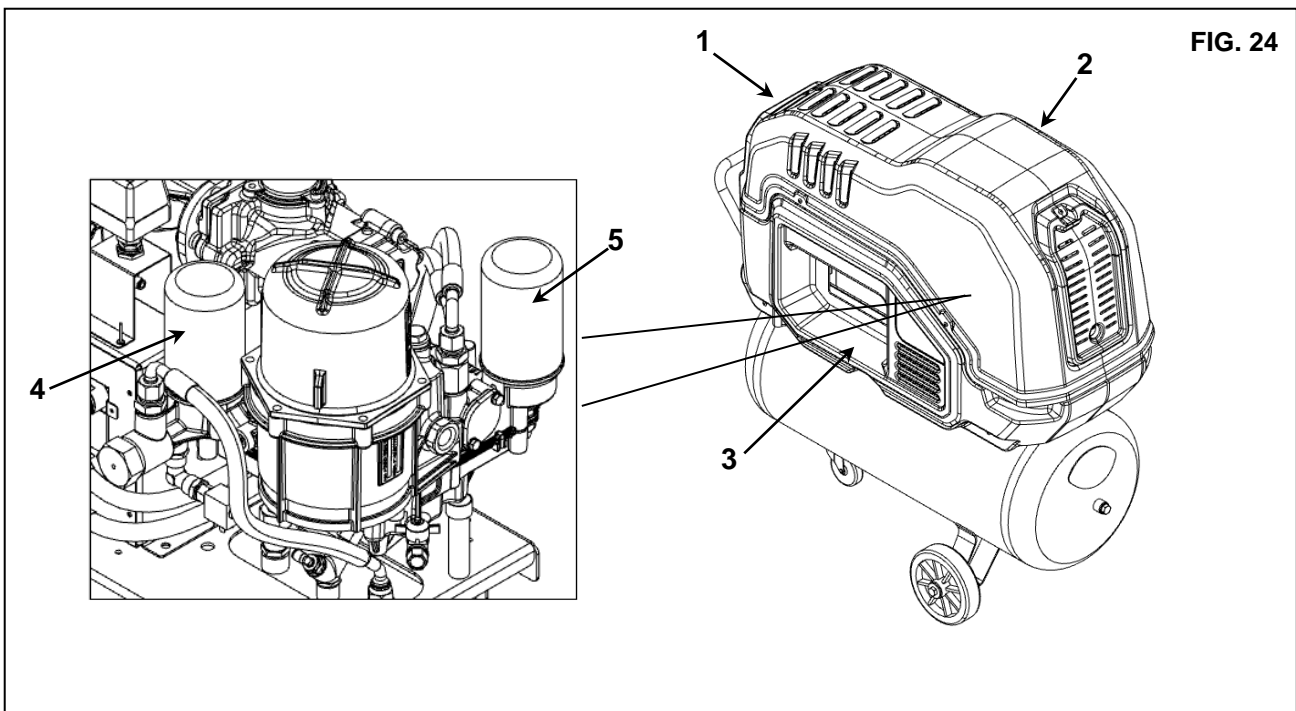
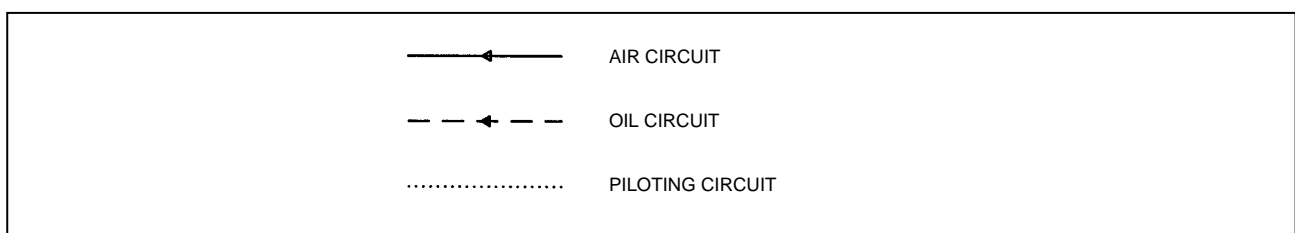
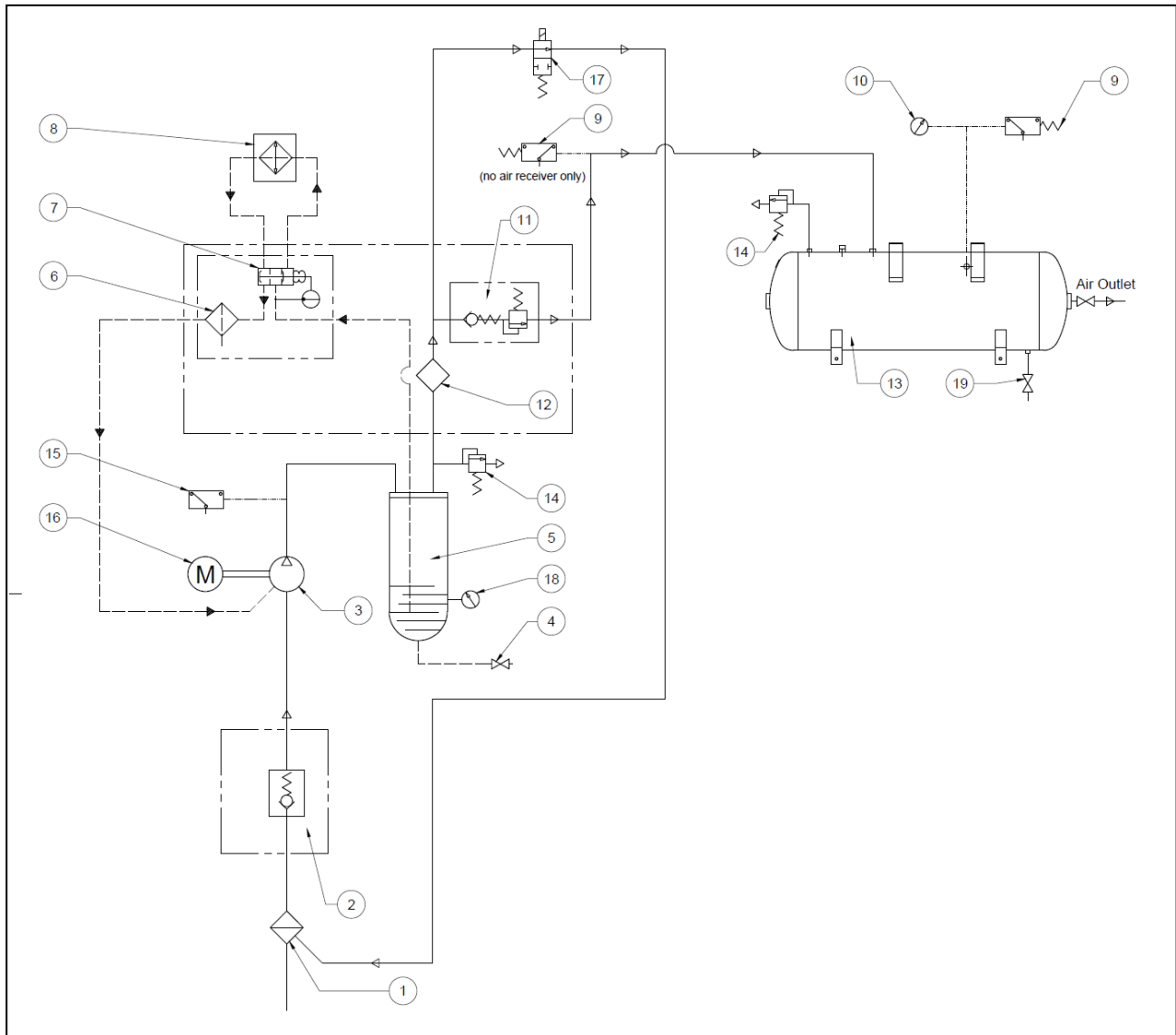


FIG. 24

NOTE. IF THE OIL SEPARATOR FILTER IS REPLACED AFTER THE SCHEDULED MAINTENANCE DATE, REMEMBER TO DISCHARGE THE OIL TO PREVENT IT FROM SPLASHING.

24.0 OLEO-PNEUMATIC DIAGRAM



- | | |
|---------------------------|--------------------------------|
| 1 INTAKE FILTER | 13 AIR TANK |
| 2 INTAKE REGULATOR | 14 SAFETY VALVE |
| 3 SCREW COMPRESSOR | 15 SAFETY THERMOSTAT |
| 4 OIL DRAIN GATE VALVE | 16 ELECTRIC MOTOR |
| 5 OIL CATCHER | 17 DRAIN SOLENOID VALVE |
| 6 OIL FILTER | 18 OIL LEVEL |
| 7 THERMOSTATIC VALVE | 19 CONDENSATE DRAIN GATE VALVE |
| 8 AIR-OIL COOLER | |
| 9 PRESSURE SENSOR | |
| 10 PRESSURE GAUGE | |
| 11 MINIMUM PRESSURE VALVE | |
| 12 AIR OIL COOLER | |

PIECES 5,7 AND 11 ARE INTEGRATED IN 1 BLOCK.