

USER INSTRUCTIONS

SINGLE STAGE BELT DRIVEN ELECTROCOMPRESSORS

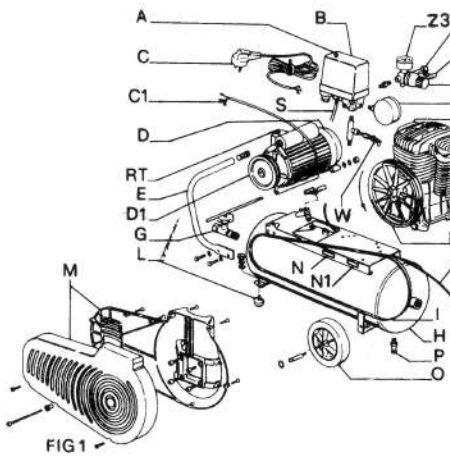


FIG 1

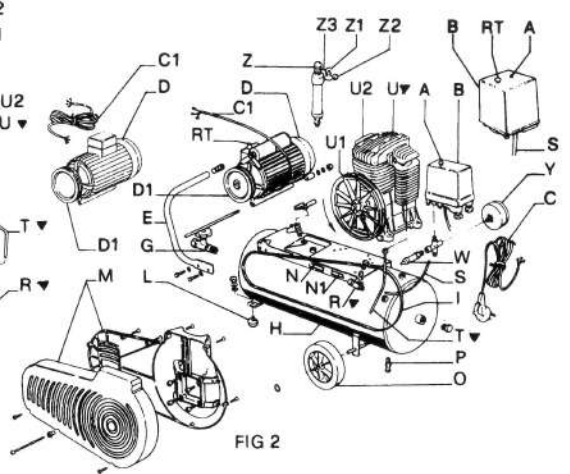


FIG 2

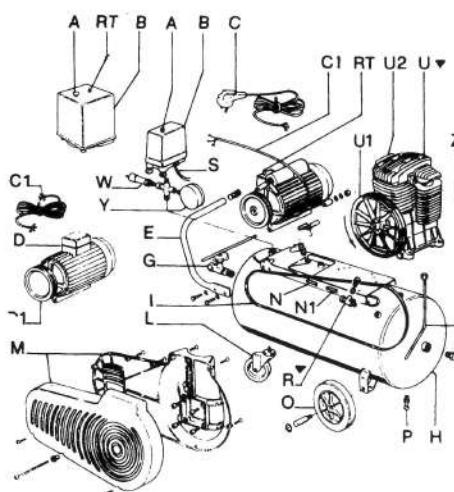


FIG 3

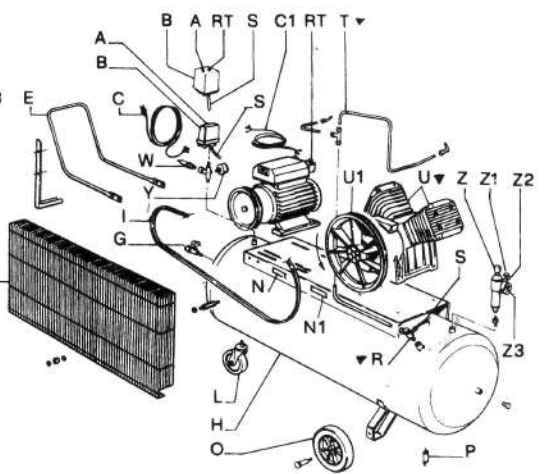


FIG 4

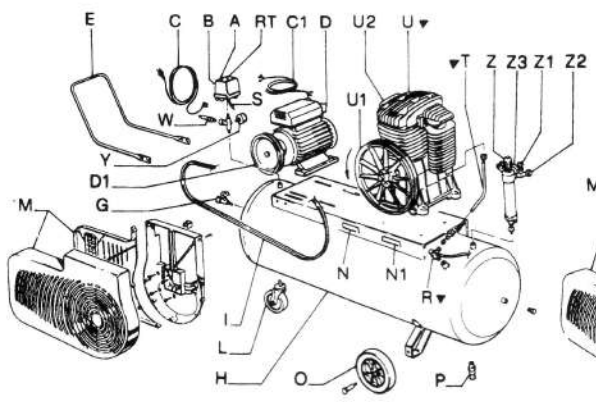


FIG 5

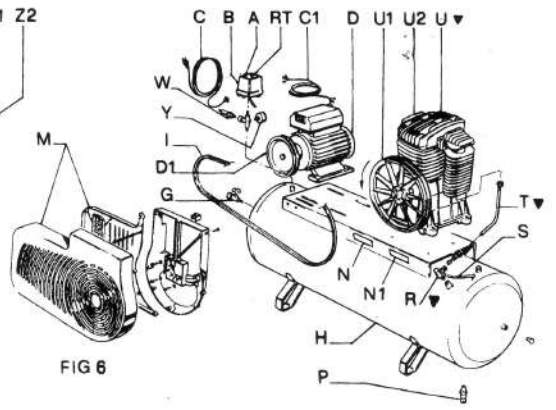


FIG 6

SUMMARY OF YOUR MACHINE

| | |
|-------|---|
| | ✦ DO NOT TAMPER WITH THESE COMPONENTS |
| A | on-off switch |
| B | ✦ pressure switch - starter/pressure switch |
| C-C1 | ✦ mains cable - plug - air press. S. motor |
| D-D1 | ✦ motor - pulley |
| E | handle for compressor transportation |
| G | direct outlet air from tank |
| H | ✦ air tank |
| I | driving belt motor-pump |
| L | front support or revolving wheel |
| M | plastic belt guard |
| N-N1 | ✦ information plate - manufacturer's data |
| O | rear wheels |
| P | water drain |
| R-R1 | non-return valve |
| S | rilsan tube |
| T | outlet pipe |
| U-U1 | ✦ pump - fly - wheel |
| U2-U3 | intake filter - cartridge |
| U4 | oil change filled plug - breather pipe |
| U5-U6 | oil drain plug |
| W | ✦ safety valve |
| Y | ✦ tank pressure gauge |
| Z | ✦ pressure regulator |
| Z1-Z2 | outlet regulated air tap - regulated air |
| Z3 | ✦ air pressure gauge regulated air |
| RT | ✦ overload protection |

The products relative to the pictures no. 1-2-3-5-6 can be supplied with standard motor and metallic belt-guard as per picture no. 4. In case of particular versions, not stated expressly on drawings or tables, you have to refer to similar models.

WORKING DETAILS

SAFETY VALVE - PRESSURE SWITCH

PUMP ◊ NON RETURN ◊ TANK ◊ PRESSURE ◊ USER
VALVE VALVE REDUCER

The compressor (U) connected to the motor (D) belt drive, produces compressed air which goes into the air receiver (H) through the delivery pipe (T) and the non return valve (R). When the air pressure arrives to the set-pressure of 9 bar the air pressure switch (B) shuts of the supply of the electric motor (D) and at the same time discharges the air head in the cyklinders and in the delivery pipe through the Rilsan tube (S) connected to a valve situated inside the same pressure switch. The next re-start will occur when the pressure in the air receiver falls below the minimum valve of 7 bar. The pressure switch (B) on single phase version is supplied with a delayed discharged valve which make easier the starting of the motor. Then the compressor is operating correctly when there is a bleed of air every time the motor is switched off and extended a bleed of air every time it's switched on with no pressure in the tank. The safety valve (W) set at 11,5 bar is connected directly to the air receiver, and will action should the pressure switch fail and gives security to the unit.

ELECTRIC WIRING DIAGRAM (fig. 25-26)

| | |
|----|----------------------------------|
| A | On - Off Switch |
| B | Pressure Switch Contacts |
| RT | Termal overload |
| AP | Main Electric Motor Winding |
| AA | Auxiliary Electric Motor Winding |
| CO | Capacitor |

GENERAL WORKING INSTRUCTIONS -

Precautions

THE AIR COMPRESSOR MUST BE USED IN A SUITABLE ENVIRONMENT (GOOD VENTILATION - WITHIN AMBIENT TEMPERATURE +5/+40°C). THE AREA IN WHICH THE COMPRESSOR IS OPERATED MUST BE FREE FROM DUST, ACIDS, VAPOUR, EXPLOSIVE GAS, FLAMMABLE OR UNSTABLE MATERIALS.

When using the electrically operated equipment certain fundamental rules must be obeyed:

- Do not touch the machine with wet hands or with bare feet.
- Do not pull the compressor by the cable (C) but use only (E) handle - do not attempt to remove the plug by pulling the cable.
- In damp environment do not use multiple plugs of cable extensions even if they are of correct diameter.
- Do not leave the machine in the open where it can be affected by the weather.
- Do not allow inexperienced operators to use the equipment.
- Make sure that children and animals are kept well away from area.
- Keep a safety distance between the compressor and the working area specially in using paints or liquids goods. External possible colourings of the compressor show enough distance.
- Do not clean the machine with solvents of flammable liquids; only use soapy water but never on the electrical components.
- Some parts, marked with symbol (▼) when working will heat up and can cause burns. Do not remove any protective devices or guards from the machine.
- Use suitable plugs and sockets (according to specifications and with proper fusing and earthing).
- The compressor when working must be situated on stable surface so that to prevent falling over. At the end of operation stop the machine via the on-off button located on the pressure switch unplug from the electricity supply and fully drain the air receiver.
- Never transport the compressor with the tank under pressure.
- The compressor is designed only for use with air and no other gas must be used.
- Compressed air is an energy fluid and therefore potentially dangerous. The pipes carrying compressed air must be suitable fixed especially rubber hoses; if not properly fixed they can cause damage or hurt somebody. Do not pull rubber hoses to try and move the compressor.
- Do not weld or make any modifications whatsoever to the tank (H). If you find some defects, air leak or corrosion the unit must be returned to the Service Centres for a replacement to be fitted.
- Never aim compressed air towards people or towards your body and remember that the use of protective glasses is necessary for protecting the eyes from dust and other particles moved by compressed air.
- The use of compressed air in its applications (tyre inflation, pneumatic tools, spray painting, washing, detergent washing etc.) must comply with the relevant regulations for the individual cases guaranteeing the minimum distance of 6 meters between the working area and the compressor.
- Compressed air from a compressor cannot be used for pharmaceutical, food or health uses without further treatment. Do not use the compressed air to fill the cylinders for breathing/diving apparatus.

START UP AND USE

- Assemble the wheels (O) and components (L-C) as per fig. (7-8). Check the information shown on the plate (N) with the characteristics of the installation (+ or -10% voltage fluctuation is acceptable).
- Check oil level on the viewer (U5) and eventually fill-in through the breather pipe (U4) fig. 10. Level under the lower edge, is

dangerous for the integrity of the pump, and excess of oil will cause passing of oil in the compressed air.

Start and stop actions have to be made only through the on-off switch (A) situated on pressure switch or starter/pressure switch (B) fig. (11-25), to stop the compressor at the plug can cause grave damage to the electric motor in the next starting. The motor is supplied with overload protection (RT), included in the terminal board box on single phase version and on starter/pressure switch on 3-phase version. They have manual re-setting, they are preset at test-stage, and should not to be modified.

- At the first start, it is necessary on 3-phase version to check the direction of rotation, shown by an arrow on the belt guard (fig. 1-2-3-4-5-6). This precaution is not necessary on single-phase version.
- Position the unit at least 50 cm from any wall or obstruction to enable correct cooling. To ensure correct lubrication position the unit on a level surface.

PRESSURE ADJUSTMENT

- Air pressure switch (B) has already been set at the test stage, do not change pressure valve (increase of pressure is dangerous for the motor).
- Keeping the tap (Z2) open rotate the regulation knob (Z) pulling it up first and then rotating clockwise to increase the pressure and anti-clockwise to reduce it (fig. 12-13) never exceed the max. set value having verified the requested value on the gauge (Z3) push down the knob locking it into the chosen value. At the end of operation return to 0 bar. On tank (H) there is if required a direct outlet for max. pressure.
- The pressure of air supplied depends on the value of the set pressure and the excessive air consumption is shown by the low gauges values (Y).

MAINTENANCE

(The life of the machine depends on the quality of maintenance). BEFORE ANY INSPECTION UNPLUG THE CABLE (I) AND DRAIN THE COMPRESSED AIR COMPLETELY FROM THE TANK (G).

- Make sure that the cylinder head bolts are tight after the first hour of work to allow the running in of the machine (fig. 14). Torque 25 Nm ~ 2,5 Kgm.
- Replace oil after the first 100 hours and then after each 300 hours (using filler plug/breather U4, oil level sight glass U5 and drain plug U6).
- Use mineral oil APICC Sae 20 for 1ph version and Sae 40 for 3 ph. For cold weather we advise Sae 20.
- Do not mix different types. If there are changes of colour (white = presence of water - black = too hot) replace it completely.

Tighten the drain plug (U6) checking that there are no losses during the use. Keep oil level to the high of the red central ref. (fig. 10) testing it weekly to assure correct lubrication.

Clean the intake filter (U2) depending on ambient conditions, and at least every 2 weeks. (A clogged filter determines a lower output and a decrease in efficiency resulting in additional wear to the compressor).

- Humidity of the air which condenses in the air receiver (H) must be drained, at least weekly through tap (P) as shown on (fig. 16) both to retain the space in the air receiver and to extend its life.

If there is no oil in the condensed water than it may be drained without fear and pollution.

- Drive belts require a precise tensioning of the belt because at low values there are slippings on the pulley causing overheating, and rapid wear of the belt. High values cause excessive load on the bearing causing fast wear of the same and motor over heating. The correct tension value is obtained pushing with a screwdriver on the intermediate area and you obtain a deflection of 1 cm. (fig. 17).

On versions B1900, B2500, B3000 (serie Raider) tension is automatically made by the tensioning spring on the motor.

- Regulation of the belt or substitution, on the other versions, require disassembly of the belt guard, positioning of the motor, fitting of belt, re-mounting of belt guard as shown on fig. 18-19-20-21-22.

POSSIBLE PROBLEMS AND REMEDIES

(Before any inspection unplug from the electricity supply and drain the compressed air completely from the tank)

| Problem | Cause | Remedy |
|---|---|--|
| Air leaks through the pressure switch (B) when the compressor is stoppea. | Non return valve (R) worn or dirty not working properly. | Dismantle the non return valve head (R), clean rubber disc (R1) and/or replace it Reassemble with care (fig. 24). |
| Reduction in performance, starting too often, low pressure. | If the demand on the air supply remains the same, check for air leaks on pipe and hoses, the conditions of the intake filter or belt-driven regulation. | Replace the seals of the fittings-clean or. change air intake cartridge U. Recheck the regulation of belts (fig. 18-19-20-21-22). |
| The motor or the pump overheats On the threephase motor overheats makes excessive noise and vibrations. | Not enough cooling air on the motor or the pump. The motor rotates in wrong direction. Improper voltage. | Check ambient temperature, rotating direction, oil level and quality, intake filter, proper voltage in all phases (electric wiring diagram of fig. 25-26). |
| The compressor stops after trying to start or stops and will not start again. | Overload cut-out switch has occurred (low ambient temperature-improper voltage or lubrication) - bad connection. | Check all parameter as before. After a few minutes press the re-set button. If the problem is not resolved contact specialist service organisation. |
| Anomal presence of oil in the compressed air. | Excessive oil level. Wear of piston rings. | Check oil level - ask for Assistance. |

Any other service must be carried out by an authorised SERVICE CENTRE or appointed SERVICE ENGINEER using original spares. Unauthorised work on the machine may invalidate the warranty and be a safety risk.

WARRANTY

Please refer to the "terms of warranty" printed in our general catalogue and price-list. The technical indications and dimensions of this document have indicative purpose only. The Manufacturer reserves the right to carry out any modifications without prior notice.

DISTRIBUTION AND SERVICE CENTRES

A network of distributors and service centres is at your disposal. For any requirements and technical advice, you may need, ask head office for the nearest centre to you. Spare parts can be ordered using the reference and clearly stating the model type and the year of the machine.

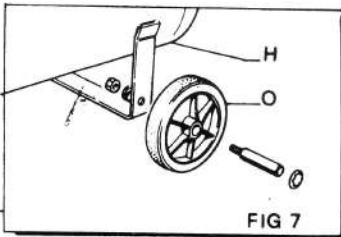


FIG 7

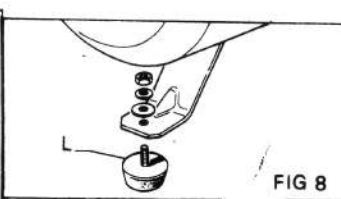


FIG 8

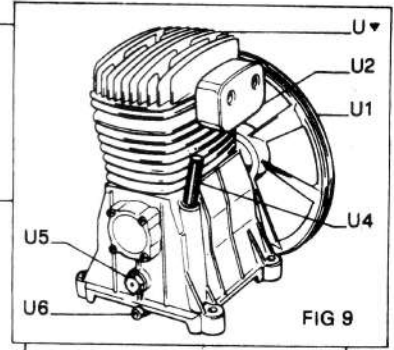


FIG 9

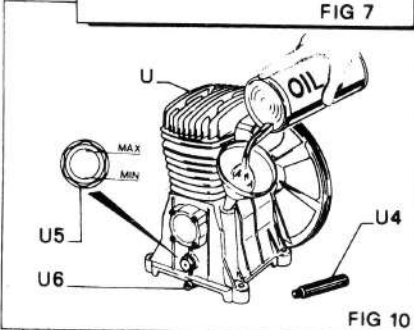


FIG 10

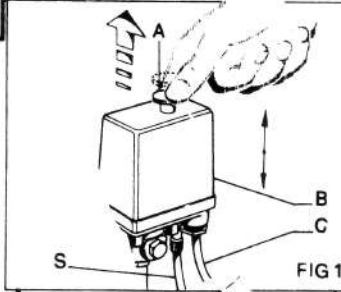


FIG 11

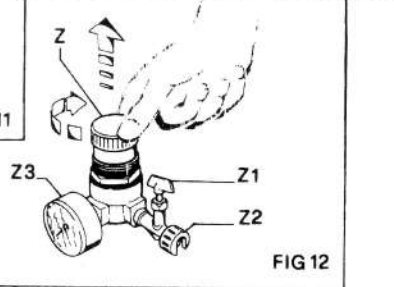


FIG 12

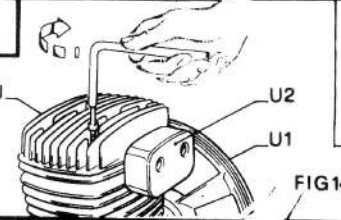


FIG 14

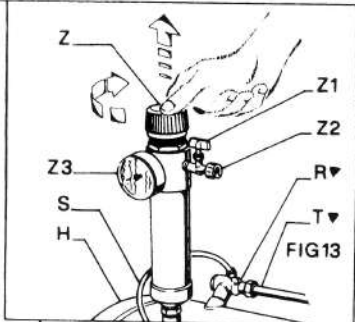


FIG 13

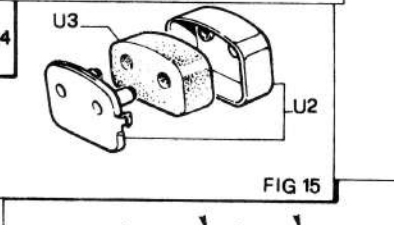


FIG 15

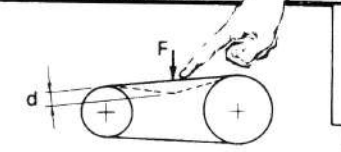


FIG 17

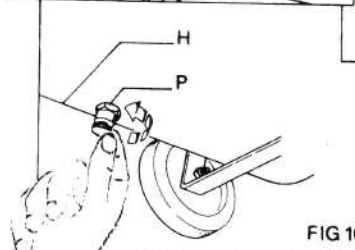


FIG 16

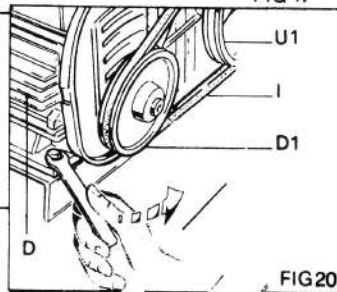


FIG 20

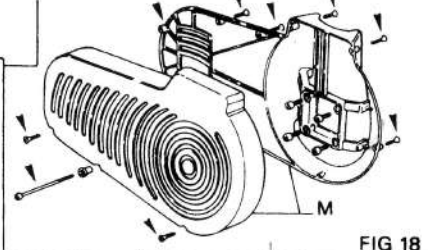


FIG 18

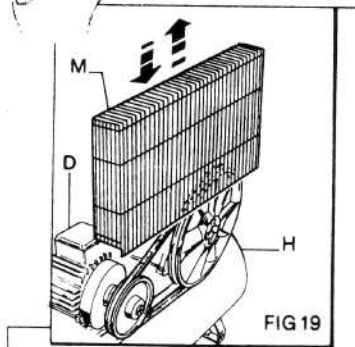


FIG 19

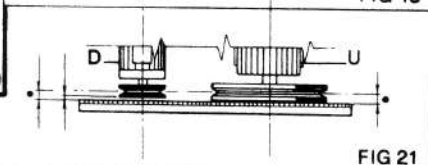


FIG 21

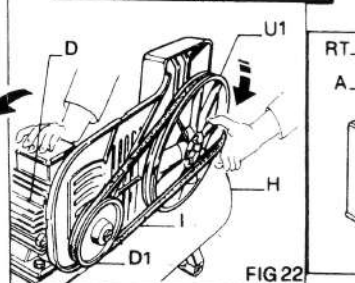


FIG 22

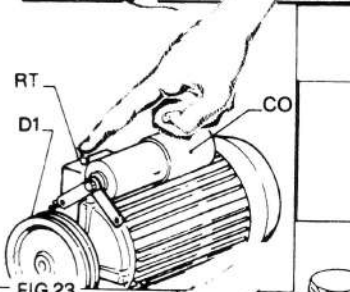


FIG 23

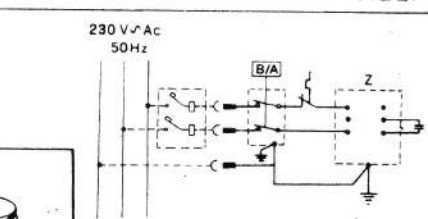


FIG 25

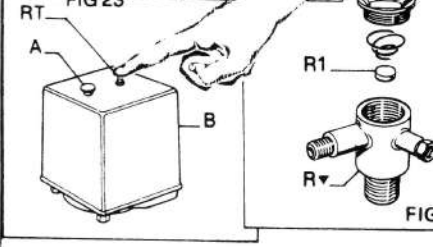


FIG 24

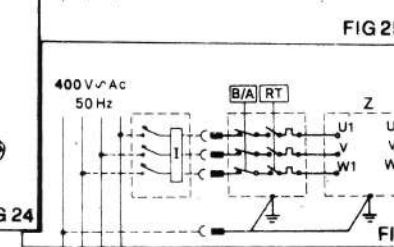


FIG 26