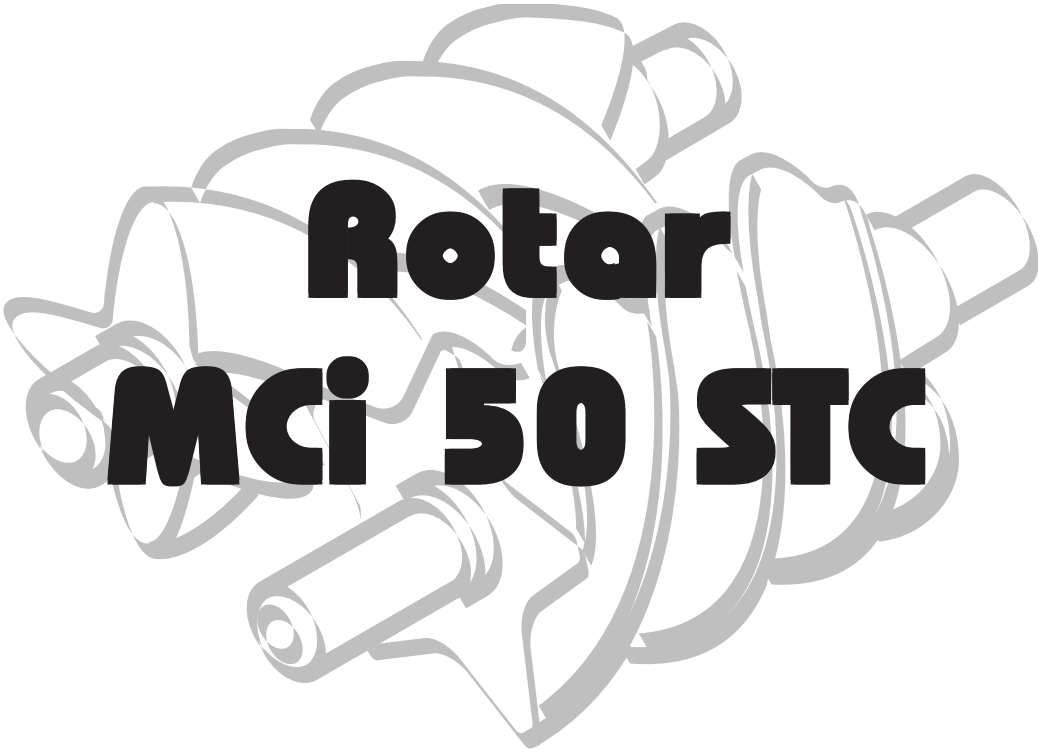
RotarScrew COMPRESSORS

GB

MANUAL

Use and maintenance



Rotar MCi 50 STC

CE

جهان کمپرسور ۱۳۶۲

INDEX

STANDARD SUPPLIES

The following accessories are supplied with your compressor:

- user and mainteance manual,
- line tap + flexible connection pipe and Teflon strips
- 1 panel opening spanner
- condensate/oil discharge pipe

Always check that these accessories are present, claims successive to delivery will not be accepted.

STATUS OF THE SUPPLY

Every compressor undergoes an ispection period in the factory and is delivered ready for installation and commissioning. The oil used is: RotEnergy Plus

SAFETY REGULATIONS

GENERAL WARNINGS

- The rotating compressors are destined for arduous and continuous industrial use. They are particularly adapt for application in industries where a large consumption of air is requested for long periods of time.
- The compressor must be used exclusively as indicated in this manual, which must be kept carefully in an easily accessible place known to everyone, as it must remain with the machine for its entire duration.
- The company in which the compressor is to be installed must appoint a person in charge of the compressor itself. Controls, adjustments and maintenance interventions are under his responsibility: if this person must be replaced, the substitute must read the user and maintenance manual and any notes made regarding technical and maintenance interventions carried out up to this time.

SYMBOLS USED IN THE MANUAL

Several symbols have been used inside the manual, which highlight dangerous situations, give practical advice or simple information. These symbols are found at the side of a text, at the side of a figure or at the top of a page (in this case they refer to all subjects considered on the entire page).

Pay attention to the meaning of the symbols.

ATTENTION!
Highlights an important description regarding: technical interventions, dangerous conditions, safety warnings, advice and/or very important information.

REMOVE VOLTAGE!
It is compulsory to deactivate the electric power supply to the machine before carrying out any interventions on the machine.

MACHINE AT A STANDSTILL!
Every operation highlighted by this symbol must only be carried out with the machine at a standstill.

SPECIALISED STAFF!
All interventions highlighted with this symbol must be carried out exclusively by a specialised technician.

SYMBOLS USED ON THE COMPRESSOR

Several different labels are applied to the compressor. Their function is most of all to highlight any hidden dangers and to indicate correct behaviour during use of the machine or in particular situations.

It is of fundamental importance that they are respected.

Warning symbols

High temperature risk

Electric shock risk

Risk from hot or dangerous gases in the work area

Pressurised container

Moving mechanical parts

Maintenance in progress

Prohibition symbols

Do not open hatches when the machine is functioning

If necessary, always use the emergency stop button and not the line isolating switch

Do not use water to put out fires on electrica appliances

Obligation symbols

Carefully read the user instructions

SAFETY REGULATIONS

TO DO:

Check that the mains voltage corresponds to the voltage indicated on the CE label, and that the electric connection has been carried out using cables with adequate section.

Always control the oil level before starting-up the compressor.

Understand how to stop the compressor unexpectedly and understand the use of all commands.

Before any maintenance intervention remove the power supply to prevent accidental start-up.

After maintenance operations ensure that all components have been re-assembled correctly.

Always keep children and animals away from the working area to prevent injury caused by any appliance connected to the compressor.

Ensure that the environmental working temperature is between +5 and + 45 ºC.

The compressor must be installed and used in an environment that is not potentially explosive and in the absence of flames.

Leave at least 80 cm free between the compressor and the wall; so as not to obstruct the air passage to the motor fan.

The emergency button placed on the bridge must only be used in the cases of real necessity to prevent injury to persons or damage to the machine.

In the case of intervention and/or consultancy request always specify the model and serial number stated on the CE label.

Always follow the maintenance programme in the manual.

DO NOT:

Do not touch the internal components or pipes as they reach high temperatures during functioning and remain hot for a period of time after shutdown.

Do not position inflammable, nylon or textile objects near to and/or on the compressor.

Do not transport the compressor with the tank pressurised.

Do not use the compressor if the power supply cable is faulty or the attachment is precarious.

Do not use the compressor in damp, dusty environments.

Never direct the jet of air towards persons or animals.

Do not allow anyone to use the compressor that has not received adequate training.

Do not strike the fans with contusive or metal objects as they could cause sudden breakage during functioning.

Do not allow the compressor to function without the filter and/or air pre-filter.

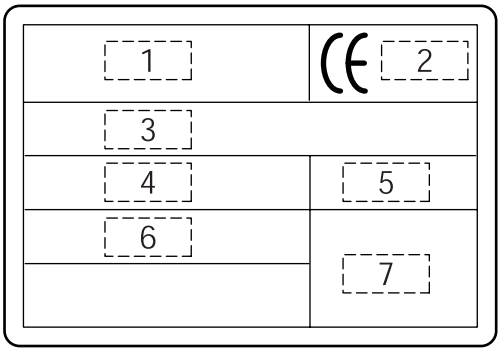
Do not tamper with safety and adjustment devices.

Never allow the compressor to function with the hatches/panels open or removed.

IDENTIFICATION OF THE PRODUCT

The product you have purchased is identified by the CE label, which states the following data:

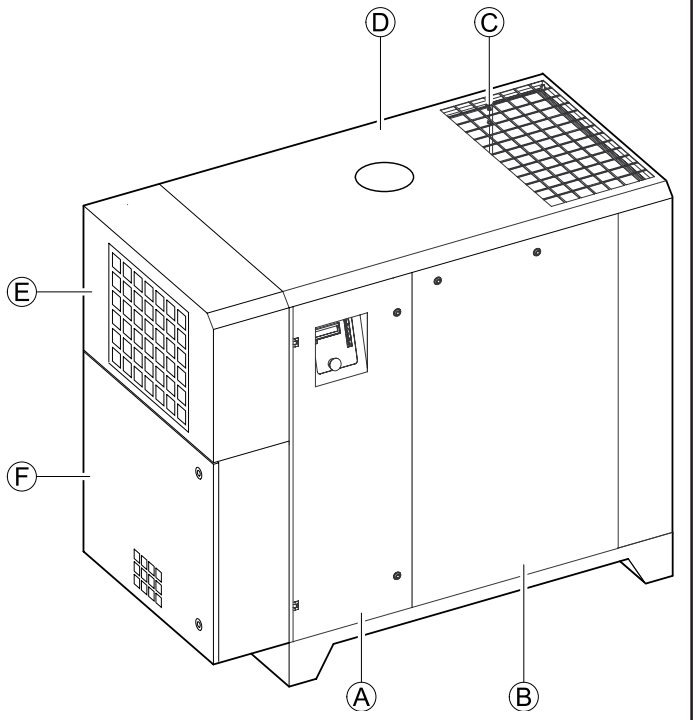
1) manufacturer data
2) CE mark- year of manufacture
3) TYPE = compressor name
   CODE = compressor code
   SERIAL N. = the serial number of the compressor you have purchased (to be stated when requesting assistance)
4) air output from the compressor measured in (l/min) and (cfm)
5) maximum working pressure (bar and PSI) - noise produced by the compressor dB(A)
6) electrical data: power supply voltage (V/ph), frequency (Hz), absorption (A) - power (HP e kW), revs. per minute (Rpm).
7) any other standardisations

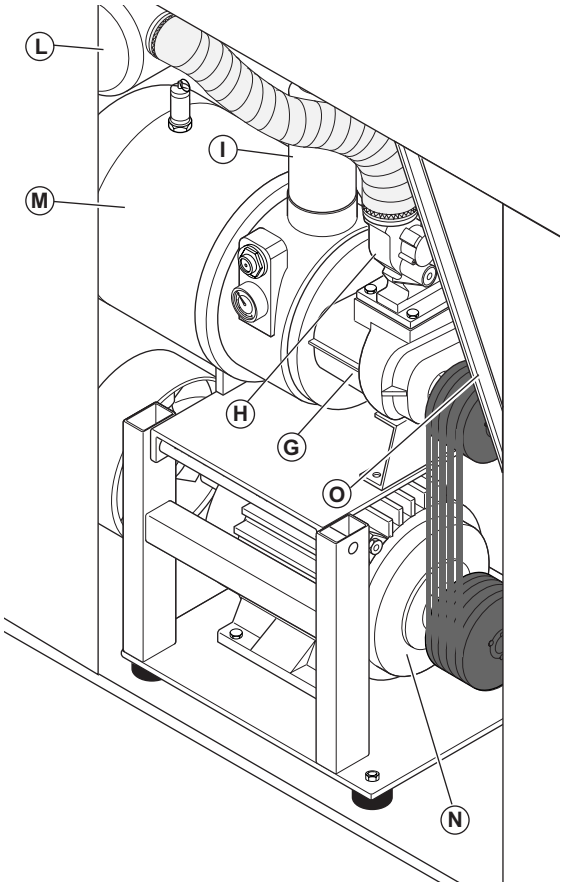


read this page carefully before carrying out any intervention on the compressor

INSTALLATION

1





DESCRIPTION OF THE COMPRESSOR (fig.1)

The compressors described in this manual are part of the series for industrial use.
The main components are stated below. The successive chapters will also examine those not stated here.

External view

A. Electrical-command bridge appliance compartment
B. Front panel
C. Radiator compartment
D. Cover
E. Suction compartment
F. Inverter compartment

Internal view

G. Screw compressor
H. Suction adjuster
I. Deoiler filter
L. Air suction filter
M. Deoiler tank
N. Electric motor
O. Air-oil radiator

UNPACKAGING AND HANDLING

The compressor is delivered to the client protected on the upper part by cardboard packaging. Wear protective gloves and use scissors to cut the external bands and remove the cardboard from the upper part. Before removing the compressor, check the perfect integrity (external) of the machine and open the access hatch to visually check that the various components are not damaged. Also check that the accessories are present.

Lift the machine using a transpallet or fork lift truck with adequate capacity (see technical table), and transport it carefully to the place selected for installation.

It is recommended to preserve the packaging material for any eventual transfer of the compressor, or at least for the warranty period. In this case it will be easier and safer to send it to an assistance centre.

Successively, dispose of this material using bodies authorised for this task.

POSITIONING (fig.2)

Ensure that the pre-selected room, as well as satisfying all safety standards in force in the country of use. is in compliance with the following requisites:

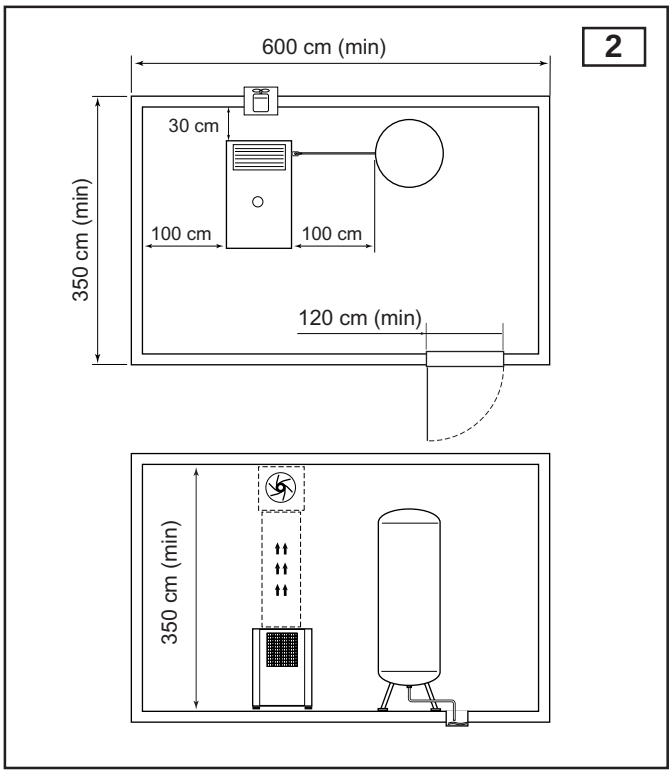
- **low percentage of dust** in the air,
- **air circulation and dimensions of the room** sufficient to prevent, with the compressor functioning, that the environmental temperature exceeds 45 °C. If it is not possible to respect these conditions one or more suction devices must be installed to convey the hot air. It is advised that they are installed as high as possible.

The dimensions of the spaces are indicative, but it is advised to respect them the most faithfully possible.

A small well or container must also be present for collection of the condensate that forms inside the tank.

Once the machine has been positioned in a stable and definitive manner, assemble the supplied line tap and flexible pipe, ensuring tightness using the Teflon strip.

Connect the compressor to the mains air distribution without placing the non-return valve between the tank and the mains distribution so as not to cause reading errors of the line pressure.



ELECTRIC ATTACHMENT (fig.3)

This operation must be carried out exclusively by a qualified electrician.

• To operate correctly it will be necessary to remove the front and rear panels, using the supplied spanner.

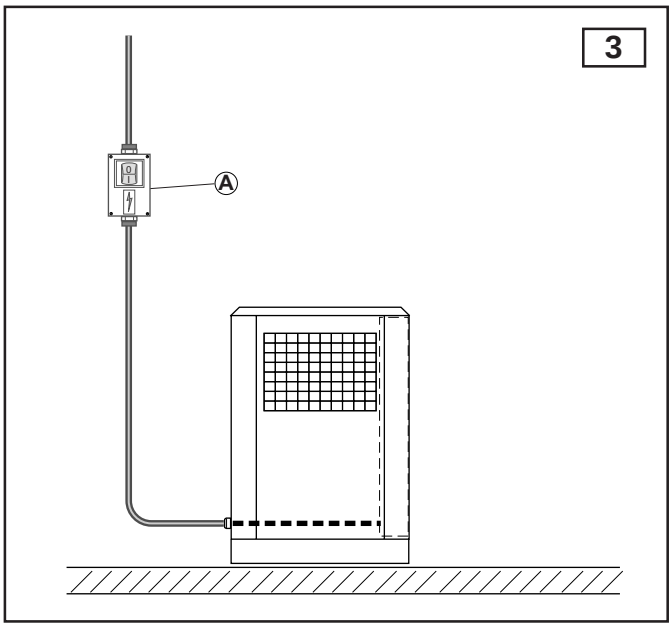
• The electric power supply line must be realised using cables that have an adequate section for the power of the machine and must include n° 3 phase cables and n° 1 earth cable.

• It is indispensable to install a switch (A) between the power supply line and the compressor control board, situated in proximity of cable entry into the machine and equipped with suitable fuses.

• The switch (A) must be easy for the operator to reach.

• The cables must be type-approved and installed with a protection level: minimum IP44.

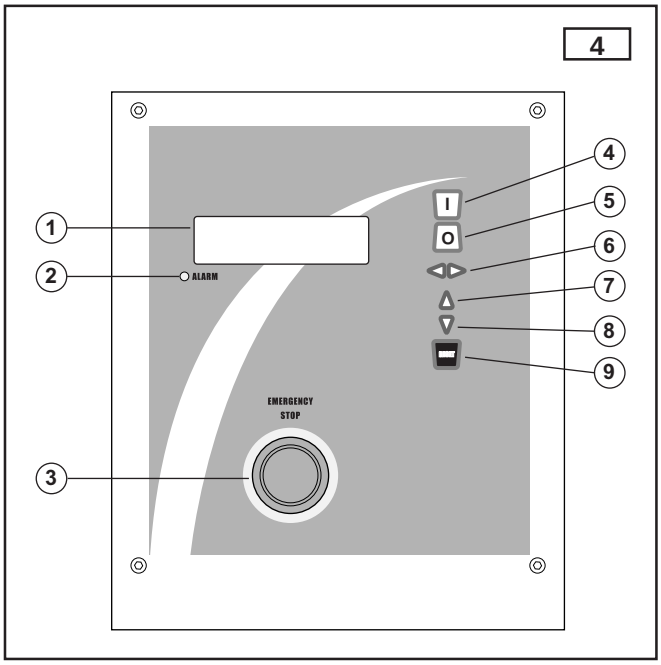
To select the section of the cables, follow the indications stated in the technical tables.



COMMANDS AND SETTINGS

CONTROL PANEL (fig.4)

The compressor's main functions are managed via an electronic power unit on the control panel.

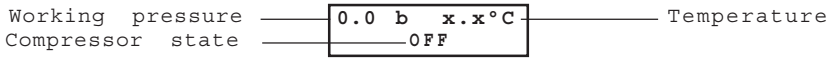


1. **Display:**
displays information on compressor state.
2. **Alarm indicator light:**
if the light switches on, consult the display to view cause of alarm.
3. **Emergency button:**
this stops the compressor and should only be used in the real event of an emergency.
4. **Start button (ON):**
starts the compressor.
5. **Programmed stop button (OFF):**
stops the compressor with programmed delay.
6. **Menu button:**
to view contents of the menu
7. Increase button
8. **Decrease button**
9. **Reset/Enter button:**
use after resolving causes of an alarm,
use to confirm set values,
use after maintenance to reset maintenance hour counter.

N.B. Before switching on, open the door of the electric equipment cabinet (A-fig.1) and check that the connectors behind the electronic circuit card are properly on.

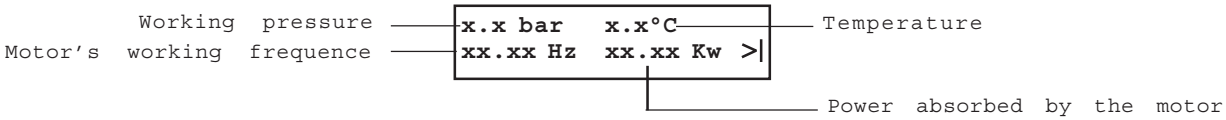
⚠

- When the compressor is connected to the electricity supply and the wall switch is in the I/ON position, pressure of the transducer and compressor temperature are shown in the first line of the display and compressor state is shown on the second line.



- Compressor is ready: press [I] button to start.

During normal operation, compressor state is the following:



The simbol >| can have different meanings:
>| ..... compressor in action (if fixed)
>| ..... compressor in vacuum mode (if flashing)
>|< ..... set it's reached

- At other times, compressor state can be:

IN SET	machine at standstill to achieve work set
COMPRESSOR IN ACTION	machine in operation
COMPRESSOR IN VACUUM MODE X SET	machine working in vacuum mode (not charging) to achieve work set
COMPRESSOR IN VACUUM MODE (flashlight)	the button [O] is pushed and the machine stops.
OFF TO STOP OUTSIDE	start remote control
WAIT FOR ON	machine waits (safety time intervenes)

A relevant message appears instead if there is an alarm or programmed maintenance (see "Search Failures")

Choice of language and measurement unit (default= Italian, bar, °C)
Press Δ to access the menu

The message "OK" flashes when accessing the menu.
Press [▬]
" °C-°F" starts flashing

with ◁▷ set the required measurement unit and then press ▬ to confirm.
" ITAL." starts flashing
with △▽ select a language other than the ones available and then press ▬ to confirm.
Press △ to return to the main menu.

Change SET pressure / Delta P – View alarms
Press ◁▷ to access the menu:

A) PARAMETERS to read and change Start and Stop pressure values.
B) ALARMS to view the list of alarms

Press ◁▷ to select A (flashlight), and confirm with ▬

"SET PRESSURE"
to change the value, press △▽, the value flashes and confirm with ▬
"DELTA PRESSURE"
to change the value, press △▽, the value flashes and confirm with ▬
Press △ to return to the main menu.

TYPE OF SERVICE

Automatic operation

• In inverter-controlled operation, the compressor runs continuously based on a preset fixed pressure (factory setting) and automatically regulates motor rotation frequency to constantly meet the demand for compressed air. In other words, the compressor operates in such way to match air supply to actual plant requirement.

When there is no air demand, the compressor runs at the set minimum frequency.

Upon reaching "unloaded" pressure – which is calculated by the formula (set pressure + delta pressure), the stop procedure begins, while message (IN SET) is displayed.

The compressor is started again at a pressure calculated by the formula: (set pressure - delta pressure).

• Factory settings: on purchase the compressor will be delivered with the following settings.

	Work pressure	SET pressure	DELTA pressure	Empty run time	Shutdown time
	bar	*bar*	*bar*	*seconds*	*seconds*
MCi 5008	8	7.5	0,5	240	30
MCi 5010	10	9.5	0,5	240	30

* The empty run time can be modified. In this case contact an authorised assistance centre.

SAFETY DEVICES

SAFETY DEVICES (fig.5)

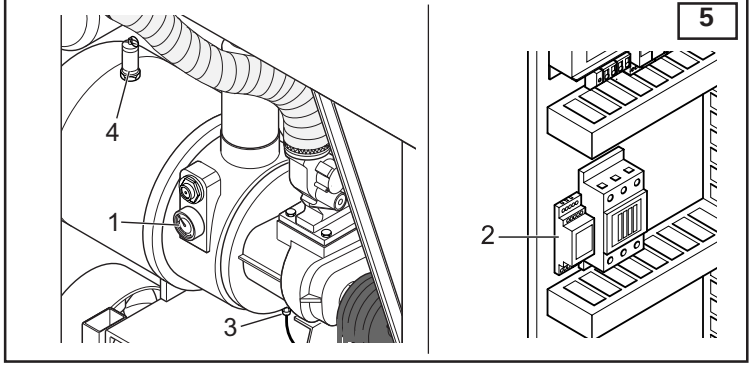
The following safety devices are installed on the compressor:

1. Maximum pressure control manometer: indicates the pressure inside the deoiler tank.

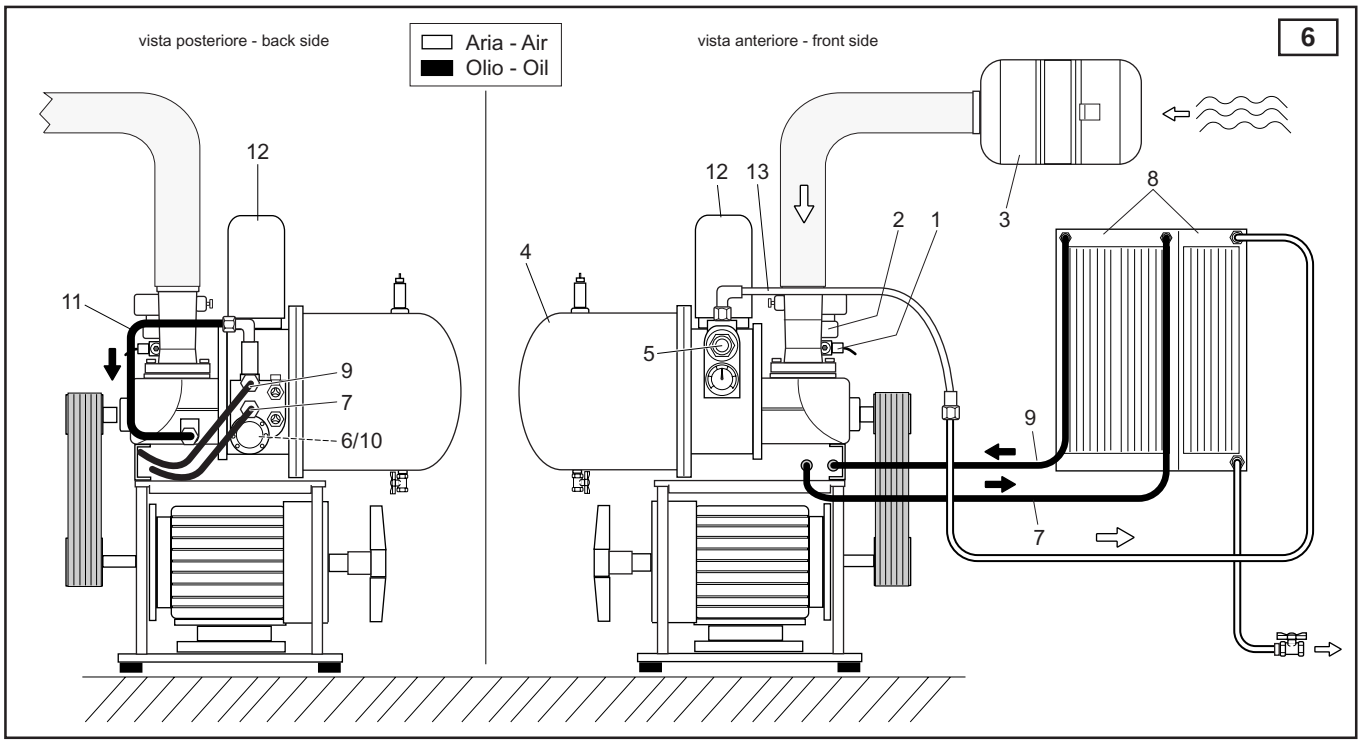
2. Phase sequence "KR" relay: prevents start-up of the compressor in the case of incorrect direction of rotation, due to inversion of power contacts (see "Commissioning").

3. Screw compressor maximum temperature probe: stops the motor when a temperature of +110°C is exceeded.

4. Safety valve: opens the air discharge at the safety value.



FUNCTIONING CYCLE



FUNCTIONING CYCLE (fig.6)

• During commissioning, the motor starts powered by the “star” connection. In this phase the compressor starts up slowly, **the electrovalve (1)** is open, the **suction adjuster (2)** is closed.

• The compressor remains in these conditions for about 4 seconds.

• When this time has passed, the motor is fed by “triangle”. The electrovalve **(1)** receives current and closes allowing the opening of the suction adjuster **(2)**, which sucks atmospheric air through the **air filter (3).**

• In this phase the compressor functions in normal working conditions and starts to compress air inside the **deoiler tank (4)**.

• The compressed air cannot escape through the **minimum pressure valve (5)** which is adjusted at 3.5÷4.5 bar.

• The compressed air compresses the oil inside the tank **(4)** and forces it to flow towards the **thermostatic valve (6)**.

If the oil temperature is lower than 80°C, the oil is sent directly to the screw compressor.

If the oil temperature exceeds 80°C the thermostatic valve closes the passage and the oil, by means of the **oil delivery pipe (7),** goes to the **radiator (8)**.

The cooled oil returns to the screw compressor through the **oil return pipe (9).**

• Transiting through the **oil filter (10)** the oil reaches the compressor, through the **connection pipe (11)**, and mixing with the aspired air creates an air/oil mix that guarantees tightness and lubrication of moving parts.

• The air/oil mix returns to the tank **(4)**, where the air undergoes centrifugal pre-separation and definitive separation from the oil, by means of the **deoiler filter (12)**.

• Therefore, only air exits from the tank **(4)**, which through the **piping (13)** reaches the radiator **(8)** and through the line tap goes to the distribution network.

• The minimum pressure valve **(5)** acts as a non-return valve.

• The compressor sends the compressed air to the external air tank.

• The internal pressure of the tank rises to the maximum calibration value.

• On reaching the maximum set level, the pressure sensor sends a signal that starts the timer and removes current from the electrovalve**(1)**.

• The adjuster **(2)** closes and the compressor stops compressing and enters empty run.

• The timer continues to count up to the set value. On reaching this value, if there has been no pressure variation, it commands shutdown of the electric motor. If the pressure has descended to the minimum set value (start P), before the timer has finished counting, the electrovalve **(1)** receives current and closes, the adjuster **(2)** opens and the compressor re-starts normal loading; the timer is zeroed.

• This cycle is repeated automatically.

COMMISSIONING

Commissioning of the compressor (operational inspection) must be carried out exclusively by qualified technicians.

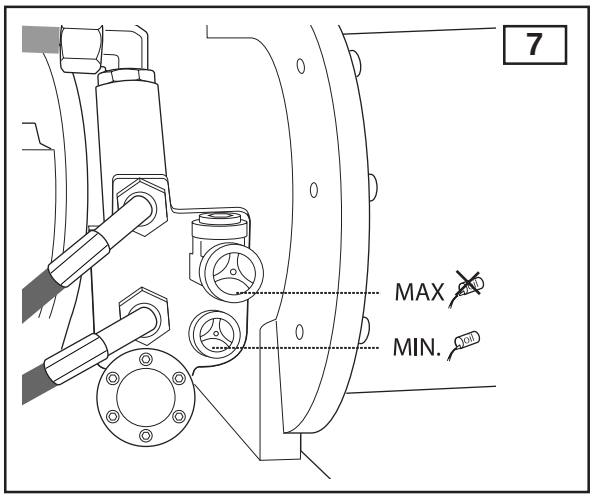
Before starting-up the machine for the first time:

- check that the power supply voltage and frequency correspond to those indicated on the plate (V/Hz).
- check that electric connections with cables that have an adequate section,
- check that the master switch (wall) has suitable fuses.
- Remove the rear panel and check:

1) that the oil level is above minimum (fig.7), if necessary, only top-up with RotEnergy Plus oil (see maintenance chapter under “top-up oil”),

2) that belt tension is correct: check that the length of the spring corresponds to the data stated in the table (see Fig.8). If necessary, consult the maintenance chapter under “belt tensioning”.

- Turn the screws manually for 2 or 3 revs.
- Open the line tap completely.



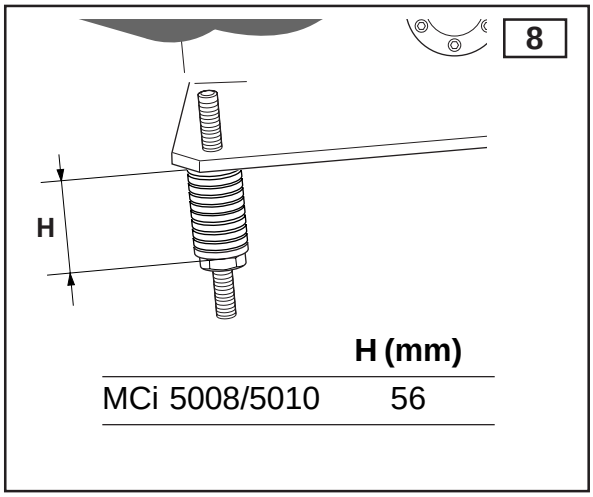
At this point position the line switch at I/ON

If “OFF” appears on the display, the compressor is ready to start functioning. Press I .

If “PHASE INVERTED” appears, immediately position the line switch at the 0/OFF position,

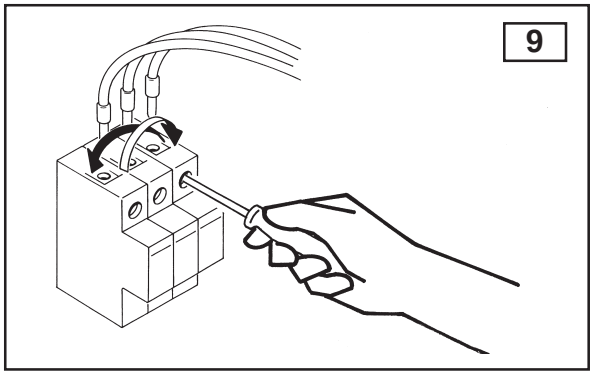
- open the electric compartment hatch and invert the connection phases to the power supply line (fig.9),
- re-close (with key) the electric compartment hatch and supply voltage by means of the master switch.

“OFF” should appear on the display, in this case the compressor is ready to start functioning. Press I .



	H (mm)
MCi 5008/5010	56

N.B. It is recommended to carry out the previously mentioned checks also when the compressor is put back into service after a long period of non-use.



SHUTDOWN

Normal shutdown

Press O :

“COMPRESSOR IN VACUUM MODE” will appear,

after about 30 seconds it will change to “OFF”.

At this point place the line switch at 0/OFF to put the machine in total safety conditions.

Shutdown due to lack of line voltage

The compressor could shutdown following interruption of the electric power supply line.

- In the case of micro-interruptions, the warning light 2 (seefig.4) will light up and “PHASE MISSING” will appear on the display

press ■ and “OFF” will appear,

press I to re-start.

- If longer interruptions occur, it is recommended to place the line switch in the 0/OFF position and wait for the current to return.

Emergency shutdown

Only use the emergency button 3 in extreme cases (see fig.4). In this case place the line switch immediately in the 0/OFF position, eliminate the cause leading to the emergency and ONLY AFTER, re-arm the emergency button. Successively, press ■ . Re-start by pressing I .

Shutdown due to alarm

The warning light 2 (see fig.4) switches on and a message corresponding to the alarm in progress appears on the display. CONSULT THE “TROUBLESHOOTING” CHAPTER.

MAINTENANCE

BEFORE CARRYING OUT ANY INTERVENTION ON THE MACHINE:

- Command compressor shutdown using the O switch (do not use the emergency button).
- Place the line switch in the 0/OFF position so that the machine is in total safety conditions.
- Close the line tap and wait for the manometer positioned on the deoiler tank to show pressure equal to 0 (zero).
- Remove the air from the deoiler tank, by loosening the cap and only partially opening in the discharge tap (fig.10).
- Before removing any protections, ensure that the line switch has been positioned in the 0/OFF position.
- The person performing maintenance must have READ AND UNDERSTOOD all safety indications illustrated in this manual; he must also be equipped with the necessary I.P.D.

AFTER THE FIRST 100 HOURS

Control the **oil level** and top-up with oil of the same type, if necessary.
Control **screw tightness**: in particular that of electric power contacts.
Visually control the **tightness of all connections**.
Control **belt tension** and restore, if necessary.
Check the **environmental temperature**.

EVERY 100 HOURS

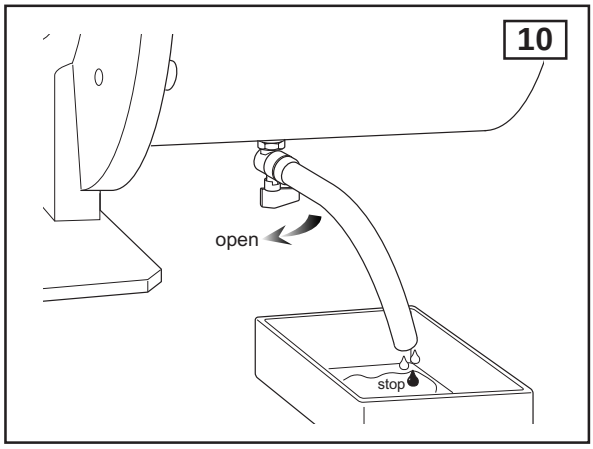
CONDENSATE discharge (fig.10)

Every 100 hours or every 2 weeks of functioning, the condensate must be discharged before starting the compressor.

Remove the rear panel, remove the cap and connect the supplied pipe to the tap, under the deoiler tank. Open the tap and close it as soon as oil starts to flow out instead of water.

Check the oil level and top-up if necessary.

THE CONDENSATE IS A POLLUTANT MIXTURE! and must not be introduced into the drain system. Dispose of it by complying with the laws in force regarding environmental protection.



EVERY 200 HOURS

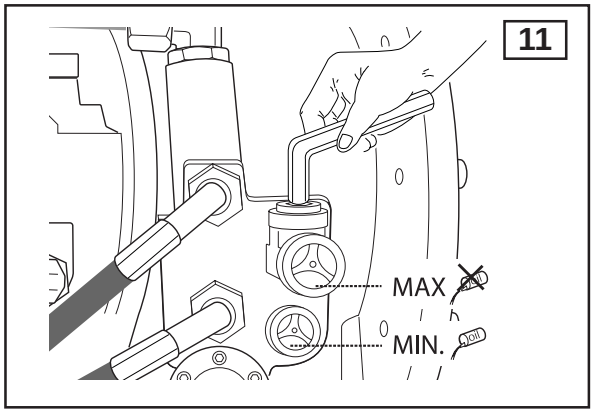
Control the OIL LEVEL (fig.11)

To carry out the control DO NOT wait for the compressor to go into stand-by, but command programmed shutdown using the O button and wait about 10 minutes for the oil to flow completely inside the deoiler tank before removing the rear panel.

Check the oil using the relevant peep holes, and if it is below the maximum level, unscrew the inlet well cap and top-up with oil of the same type (RotEnergy Plus).

Before topping-up, always wait for the pressure value inside the deoiler tank to reach 0.

About 4.5 litres of oil are necessary to top-up from minimum to maximum level.



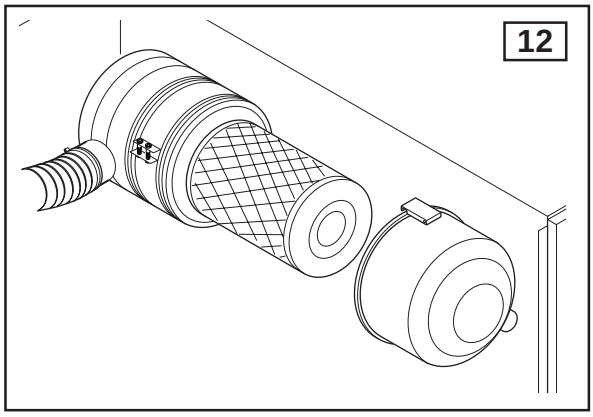
EVERY 500 HOURS

Cleaning the AIR FILTER (fig.12)

Remove the rear panel, unhook the clips and remove the front filter cover. Extract the filtering element and clean it using compressed air, acting from the inside towards the outside.

Control, against the light, for the presence of splits: in this case replace the filter.

The filtering element and the cover must be assembled carefully, so as not to allow the passage of dust into the compressor unit.



EVERY 1500 HOURS

Replacement of the AIR FILTER (fig.12)

Replace the filtering element after the third cleaning intervention.

EVERY 3000 HOURS

OIL replacement (Fig.13)

Remove the rear panel.

Wait for the discharge of pressure in the deoiler tank.

Emptying of deoiler tank

- Unscrew the cap on the spherical tap underneath the tank, and connect the supplied flexible pipe.
- Remove the cap from the inlet well (A), open the spherical tap and leave the oil to flow out completely into a container. Close the tap, remove the pipe and tighten the cap on the discharge tap.

Emptying of radiator

Place a container underneath the radiator and unscrew the cap of the spout (B) positioned in the lower part of the radiator. Leave the oil to flow out completely and then replace the cap.

Poor in new oil through the inlet well (A) (amount to fill totally: 15 lt.) and screw on the cap.

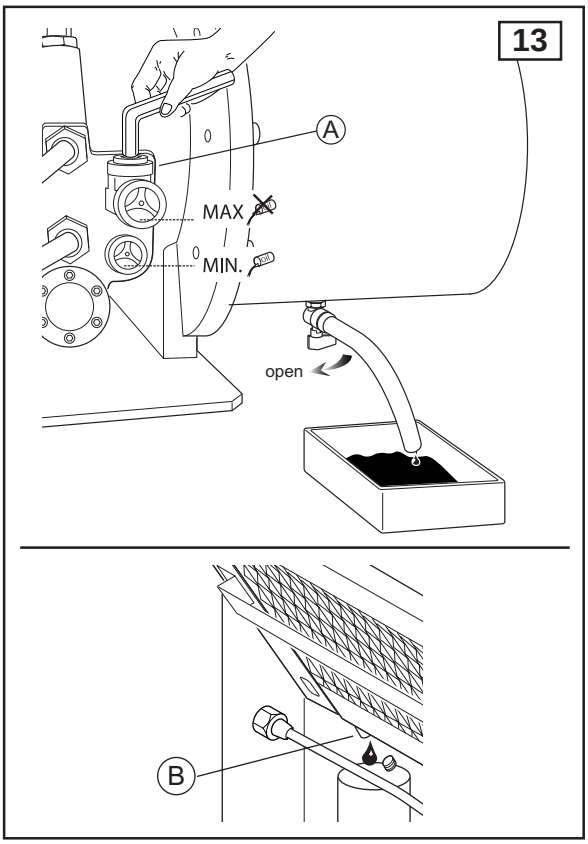
Supply voltage to the machine.

Start-up the machine and leave it to function for 5 minutes, then stop the machine and wait for the pressure to be discharged.

Re-control the oil level; top-up if necessary.

OLD OIL IS HIGHLY POLLUTANT! Dispose of the old oil in compliance with the laws in force regarding environmental protection.

Recommended oil: RotEnergy Plus



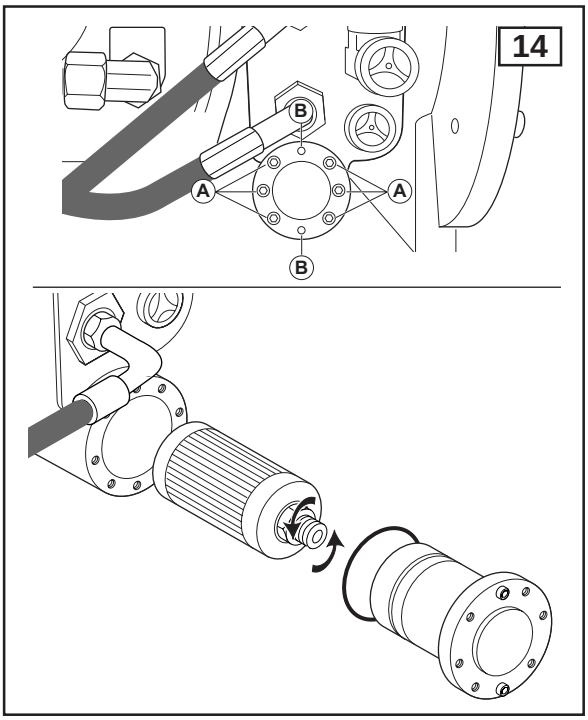
- **Replacement of the OIL FILTER (fig.14)**

When changing the oil, once the tank has been emptied and before pouring in new oil, also replace the oil filter.

Proceed as follows:

- completely unscrew the 6 screw fasteners in the flange, identified by the letter A,
- screw two of the previously-removed screws into the threaded holes identified by the letter B,
- extract the flange-thermostatic valve block,
- unscrew the oil filter and replace it, screwing the new one fully home,
- also replace the OR ring,
- re-insert everything,
- unscrew the two screws from holes B and tighten the 6 screws into holes A again.

Complete the oil change.

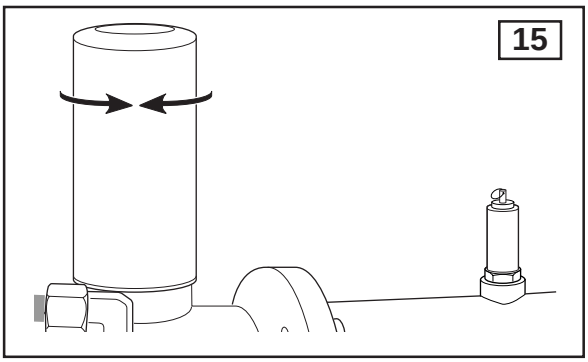


- **Replacement of the DEOILER FILTER (fig.15)**

A round sheet steel cap is present on the cover of the compressor (seefig.1). Remove it using the three fixing nuts to allow the replacement of the deoiler filter.

Unscrew the filter, use the relevant tools if necessary.

Before inserting the new filter, grease the seal and thread with oil of the same type used for the compressor.

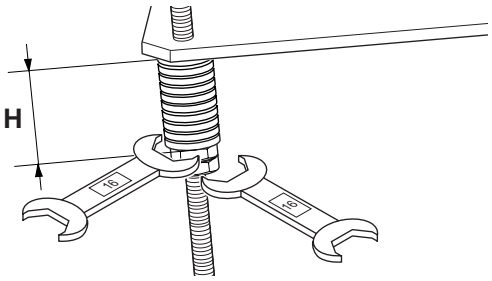


EVERY 3000 HOURS

- **Check the tension of the TRANSMISSION BELT (fig.16)**

Check that the length (H) of the spring corresponds to the data stated in the table. If necessary restore the correct length by acting on the nut and counter-nut at the base of the spring.

16



	H (mm)
MCi 5008/5010	56

EVERY 6 MONTHS

- **Control and clean the radiator**

The radiator maintains high efficiency and a limited level of blocking. It is recommended that cleaning is carried out in the case of anomalous overtemperatures, and however at least once a year.

Proceed as follows:

remove the rear panel and the upper panel of the compressor cabin;
position a sheet of protective plastic underneath the radiator pack;
spray (with washing gun + solvent) from the outside towards the inside;
control the perfect passage of the air through the radiator.

EVERY 12000 HOURS

- **Replacement of FLEXIBLE PIPES**

Loosen the pipe connections, replace and re-assemble them, tightening the connections with force.

EVERY 20000 HOURS

- **Replace**

Compressor sealing ring
Tank safety valve
Electric motor bearings

DISPOSAL OF MATERIALS

Both during and at the end of the compressors operational life, ALWAYS DISPOSE OF EXPENDABLE AND NON-EXPENDABLE MATERIALS WITH RESPECT TO ENVIRONMENTAL REGULATIONS. In particular, do not dispose of lubricants and refrigerants in the environment but consign them ONLY to bodies authorised in this sector in the country in which the compressor is used.

If the compressor must be scrapped, ALWAYS and ONLY contact CENTRES AUTHORISED for the disposal and recycling of special waste.

TROUBLESHOOTING

Alarm message	Cause	Solution
"MOTOR OVERLOADED" compressor blocked	1. Excessive load.	1. Control the work pressure and check calibration of motor protection relay. Carry out new calibration if necessary.
	2. High environmental temperature	2. Provide good air circulatio in order to maintain the temperature below 45°C.
	3. Low line voltage	3. Control voltage.
"PHASE MISSING" compressor blocked	1. Interruption of power supply. 2. Damaged cables	1. See page 11 "Shutdown". 2. Check connection cables.
"INVERTED PHASE" compressor blocked	Inverted wire phases	Invert the phases (see "Commissioning" page 11).
" PRESSURE TRANSDUCER BROKEN" compressor blocked	----------	Replace the transducer.
"SCREW PROBE BROKEN" compressor blocked	----------	Replace the probe
"HIGH PRESSURE" compressor blocked	1. Pmax value too high 2. The suction adjuster does not close at cycle end. 3. Deoiler filter blocked 4. Line tap closed 5. Minimum pressure valve blocked .	1. Check the value and modify if necessary. 2. Check that current is removed from the electrovalve and that the sealing plug opens regularly. If necessary, disassemble and clean the suction adjuster. 3. Replace the deoiler filter. 4. Open the tap. 5. Control and clean the valve, if necessary replace the seal.
"SCREW TEMPERATURE HIGH" compressor blocked	1. High environmental temperature 2. Oil radiator blocked 3. Oil level too low 4. Deoiler filter blocked 5. Thermostatic valve faulty	1. Increase ventilation in the room. 2. Control the radiator and clean if necessary. 3. Top-up the oil. 4. Replace the filter 5. Replace the thermostatic element.
"SCREW TEMPERATURE LOW" compressor blocked	Low environmental temperature	Heat the room
"EMERGENCY STOP" compressor blocked	Emergency switch intervention	Remove the cause that lead to emergency shutdown
"LINE MISSING" compressor blocked	No power supply.	Check the power supply line, if it is an external power cut wait for the power supply to return.

ONCE THE PROBLEM THAT CAUSED BLOCKING HAS BEEN SOLVED, PRESS .

Problem	Cause	Solution
High oil consumption.	1. Faulty draining. 2. Oil level too high. 3. Deoiler filter broken. 4. Deoiler filter seal not tight.	1. Control drainage pipe and the unidirectional valve. 2. Check the oil level and discharge if necessary. 3. Replace the deoiler filter. 4. Replace the seals .
Oil leak from suction filter in emergency stop phase	The suction adjuster does not close	Check the suction adjuster and the electrovalve

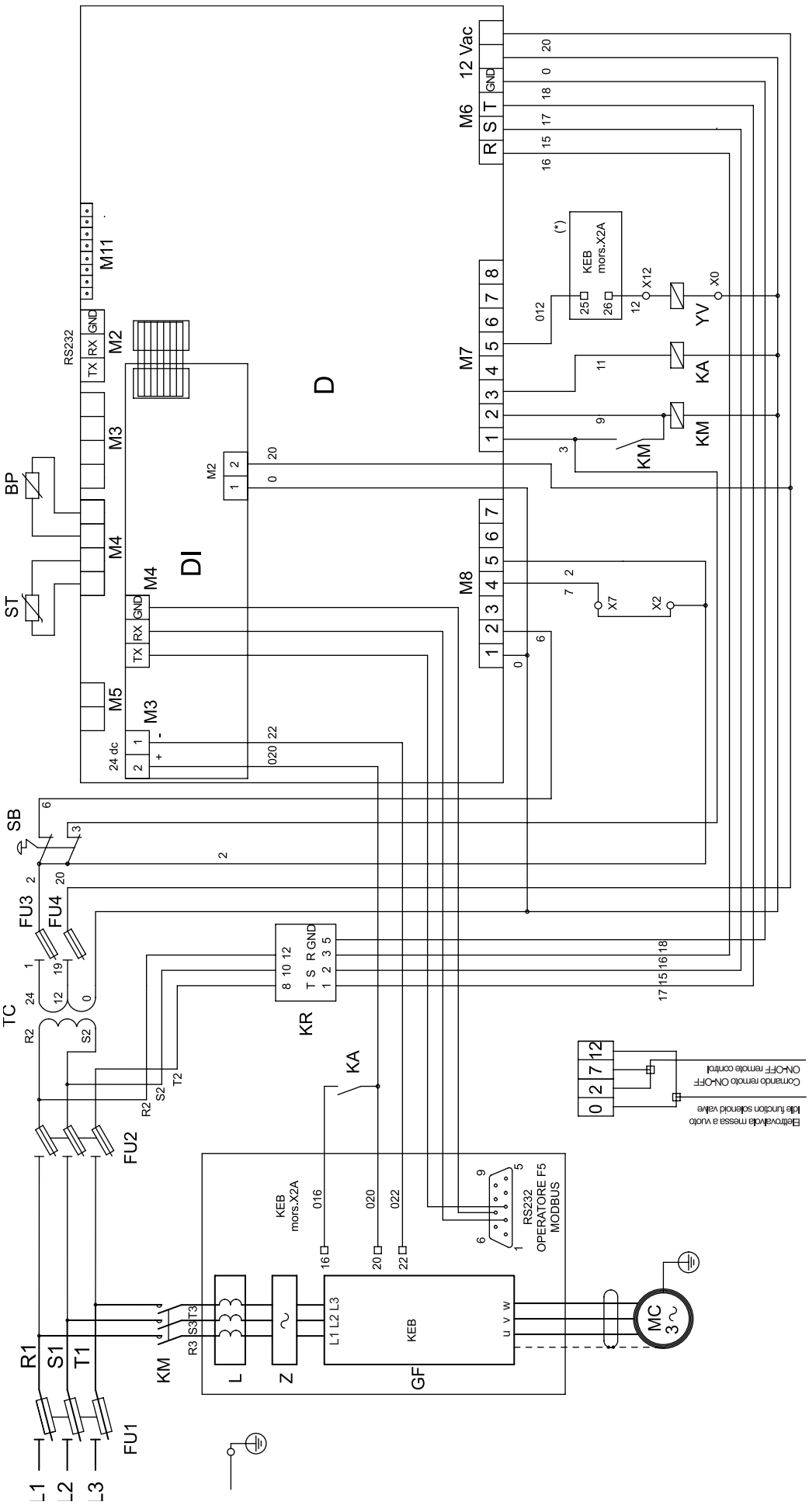
TROUBLESHOOTING

Problem	Cause	Solution
The compressor does not compress air	1. The suction adjuster is closed and does not open because dirty. 2. The suction adjuster is closed and does not open due to lack of command. 3. The minimum pressure valve does not close perfectly.	1. Check opening, if necessary disassemble and clean. 2. Check electrovalve functioning, replace if necessary. 3. Disassemble the valve and clean it, replace the seals if necessary.
Comp. does not re-start	Low line voltage	Check the mains voltage.
Presence of oil in the cabin	Leak from pipes	Tighten the connections and/or replace the damaged piping

TECHNICAL DATA

Technical features		**Mci 50 STC**	
Max. Pressure	**bar**	8	10
Screw compressor	**type**	IKD100S	
Compressor rotation speed	**rpm**	5950	5600
Air volume supplied (ISO 1217 annex C)	**l/min**	5900	5200
Oil quantity	**l**	15	
Oil quantity for topping-up	**l**	4,5	
Max. final over temperature	**°C**	10	
Removed heat	**kJ/h**	126540	
Fan flow rate	**m3/h**	5000	
Oil residues in the air	**mg/m3**	4	
Electric motor	**type**	180LBB3	
Motor power	**kW**	37	
Max. power absorbed	**kW**	42	
Max. Start-up per hour	**n°**	10	
Ambient limit temperature	**°C**	45	
Noise level (Pneurop/Cagi PN2CPTC2)	**dB(A)**	73	
Electrical data			
Voltage	**V/Hz**	400/50-60	
Auxiliary voltage	**V/Hz**	24/50-60	
Start absorbed current	**Amp**	180	
Full load current	**Amp**	76	
Idle operation absorbed current	**Amp**	32	
Motor insulation class	**IP**	54	
Electrical box protection class		F	
Service factor		1,2	
Protection devices			
Max. Oil temperature	**°C**	110	
Oil temp. pre-alarm setting	**°C**	105	
Motor thermal-relay setting	**Amp**	44,5	
Safety valve setting	**bar**	14	
Dimensions and weight			
Dimensions	**mm**	2000	
	mm	940	
	mm	1610	
Weight	**kg**	700	
Air outlet	**Rp**	1-1/4"	

WIRING DIAGRAM



TC	Transformer pr.0/230/400 sec.0/12/24 150VA
SB	E-stop button + n.2 NC 230V 10A
FU1	No.3 fuses 22x58 80A
FU2-FU4	No.4 fuses10,3x38 2A
FU3	Fuse 10,3x38 6A
KM	Line contactor Inverter 24V 50/60 Hz 120AAC1
KR	Phase sequence realy
KA	Auxiliary relay 24V 50/60 Hz

D	Electronic controller LogikaControl Mutitronic Evol.
DI	Inverter expansion module
GF	Inverter KEB 37 Kw
L	Three phase inductance KEB 90A 0,33 mH
Z	Three phase filter KEB
YV	Solenoid valve 24V 50/60 Hz
BP	Pressure trasducer 0-16 bar 4-20 mA
	Cable cross section=1 mmq - (*) = inverter compartment