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Silent compressor for laboratory (Item Code F41 045)

INSTRUCTIONS MANUAL





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1. Presentation

Silent compressor for laboratory



Dedicated to the silent production of compressed air for needs up to 17 litres/min. Is suitable for areas where noise level is very important: laboratory, education, research centre etc.... Delivered with quick coupling s kit and air filter.

1.1 Technical characteristics

Power supply: Power: Capacity: Production: Max. pressure: Sound level: Net weight: Dimensions: 220 V AC, 50/60 Hz 135 W 1 litre 25 litres / min 6 bars 30 dB 12 Kg 21 x 46 x 53 cm

Noise lower than 70 dB (A) No needs of special installation.

2. Transport

The compressors must be moved with precaution, eventually using transpallet.

3. Safety

- Sitted working no needs of special installation.
- Do not use the compressor for another use it is conceived for.
- Keep the compressor in a covered area and from rain and humidity.
- Use the compressor in a ventilated area only.
- During use, keep the compressor out of children reach, and in general way, never let it unattended.
- Do not direct compressed air to people.
- In case of flammable liquids sprays, there is a risk of fire or explosion, above all in closed areas: well ventilate.
- Use without any precaution can cause fire.
- Do not use in explosion proof atmosphere.
- Do not repair the compressor when it is plugged or when the tank is under pressure.



 The safety valve is adjusted and sealed by the manufacturer. *DO NOT MODIFY THE ADJUSTMENT.* During use, the unit motor/tube reaches high temperatures. When we work near those components, avoid contacts as they can cause burns.

• The heat can be given to flammable materials you can not see.

Non respect of those recommendations can damage people or the compressor.

4. Machine installation

Install the compressor on a flat area, in a well ventilated, well dimensioned and non humid area, with a temperature up to 35°C at the maximum. If the ventilation is enough, install a well dimensioned vacuum cleaner or a ventilator.



In order that during transport the oil do not enter into compression chambers which can cause a bad functioning of the equipment.

Get off the rubber cap off the suction tube, remove the suction filter and the spout from the nylon pocket, screw the spout on the oil bottle.





Fill in up to the maximum level, as indicated on the light.





Oil level must never be up to the maximum level. Only use recommended oil, in order to keep the guarantee.

Keep remaining oil for future uses.

Set again the suction filter in the tube pressing on it.



After this operation you must not turn over or incline the compressor, to avoid loosing oil.

The power supply must be the same as indicated on the motor: 230V/50Hz (115V/60Hz). The plug must be 2 poles + ground.

5. Start up

5.1 Instructions for use

Always use the compressor on a flat area. The switch on is the pommel placed on the cover of the pressure controller. Push the pommel of the pressure controller up to position "0"



Plug and switch on the compressor drawing the pressure controller pommel up to position "1 ".

Functioning is automatic.

The pressure controller stops the compressor when the pressure in the tank reaches the maximum value (8 bar 120psi standard), and star tit again when the pressure decreases to the minimum value (6 bar 90psi standard).

Adjust the air pressure at the outlet thanks to the pommel of the reducer filter. The pressure is indicated on the manometer near the regulator.





5.2 Pressure adjustment

1. Adjustment of the maximum pressure (stop) The maximum pressure must be adjusted thanks to the 2 screws " A " et " B "



View of the pressure controller

Turn the 2 screws " A " et " B " to the right to increase the pressure.

2. Adjustment of the differential pressure (start).

The differential pressure can be adjusted thanks to the screw " C ".

Turn the screw " C " in the right way to reduce the differential pressure.



The operation of pressure adjustment must be done by a dedicated staff.

In case of bad functioning of the pressure controller (**overpressure**), the safety valve automatically opens when the pressure is over the maximum adjusted pressure.

5.3 Use limits in continuous functioning.

- The curve 1 indicates the continuous functioning time, with variable pressures, before the protective thermic relay of the motor switches off the compressor (motor temperature about 115°C). These times are calculated from the starting with a temperature of 20"C. Example: 6 bar= 116 minutes.
- The curve 2 indicates the recommended proportion between using and stopping time. Example: at 4 bar advised functioning time is 76%, relevant to a use of 46 minutes for 14 stopping minutes per hour.



The curves represent average values at 230V150Hz, with a temperature ambiante of 20°C.

5.4 Control of filling time.

Control the compressor according to the following instructions:

1. Empty the tank of compressed air.

2. Closed the compressor outlet on the tank and control the draining tap is closed.

3. Switch on the compressor and control the time between the start and tha automatic stop. (25 seconds for this model).

4. Verify there is no escape from the couplings.

5. Verify the maximum pressure = 8bars/120Psi.

6. Maintenance

6.1 Regular maintenance.



Those hereunder operations must be done by specialise staff only.

	Once a week	Once a month	Once a year
Control oil level once a week. When the motor stops, the oil level you see through the light must be the same as the one indicated on the board.	Х		
Drain the water of the filter reducer as shown fig. 6 (the operation must be done with the tank under pressure).		x	
Drain the condensation water of the air tank. For that, switch on the compressor, put it in an area where air can not damage the ground, unscrewing the draining tap at the tank base.		x	
Control the good functioning of the compressor: possible unscrewing of the couplings, use of the pressure tubes, screwing, electric part good functioning, etc.		x	
Control the air suction filter. Replace the filter when it is stopped.		Every 3 months	
Clean the compressor with a soft rag. The dust prevents the coolness.		X	
Dismantle and clean the cartridge with coalescence of the filter (Fig.8) blowing with compressed air. This operation must be done when the tank is completely under pressure.		Every 6 months	
Control the filter reducer an dits components for optimisation.			X
Control the safety valve (fig 9) softly drawing the pressure ring of the tank.			x
Complete replacement of the oil.			X

6.2 Oil Replacement.

Proceed as shown Fig.10.

1. Dismantle the motor group if necessary.

2. Get the cover off unscrewing the 4 vices.

3. Incline the motor group (without turning it over)

maintaining the internal block at its place with the hand. 4. Empty oil

Nota! Used oil must be recycling according to the rules in force .



5. Control the cover gasket.

6. Replace the cover and during this operation control the gasket is well positionned to ensure a good closing at

100% between the box and the cover.

8. Assemble the motor group upon the tank.

IMPORTANT

Always use oil « ROLOIL-SINCOM/32 » as other types of oil can mechanically damage the compressor. As a consequence, the guarantee will be valid only with the relevant oil.

7. Maintenance

CAUTION

- Unplug before any intervention.
- Completely empty the air tank, before dismantling some component.
- Each operation must be exclusively done by specialised staff.

1- The compressor does not start	 a) There is no power in the electrical network. Verify the fuses and the plug. b) Broken or damage of electrical connections. Control the continuity thanks to a tester acording to electrical schemes. c) The tank is under pressure. The compressor only starts when the pressure is upper than the adjusted minimal value of the pressure controller. d) Loss on the non-return valve. Dismantle the flexible tube and verify if air escapes from the valve. In case of escapes, unscrew the valve head (Fig. 11 pos. 1) and carefully clean the rubber tap (pos. 2) (thanks to a soft rag); then assemble the whole taking care. In case of the escape continues, totally replace the valve. e) Starting relay does not work: Contact the distributor. a) Bad condensator. Replace it. g) The thermic relay stops the compressor because of over heat. When it is getting cold, the compressor will automatically start again at the good temperature.
2- The compressor works but does	a) Verify ther is no air escapes (See point 6).
not reach the maximum pressure	b) Control the nice functioning of the pressure
	controller and adjust it i necessary (page 8
	Pressure adjustment).
	c) Non return valve is bad (or blocked) and
2 The compressory starts but the	causes a air loss. Replace the valve.
5- The compressor starts but the	a) The circulation tap is not get off the air Suction tube (or the bole)
(or softly increases)	b) The air filter is blocked. Clean or change the
(0) 30/119 110/203033.	filter
	c) Verify there is no air escapes (Voir 6).
4- The compresseur works but does	The problem can be caused by the broken valves
not charge.	or gaskets (Fig.12). Immediately proceed to the
	replacement of the damaged piece.

Fig.12	
5- The compressor stops during use.	The motor is equipped of a protective thermic relay with automatic rearmament which stops the
	compressor when the temperature reaches too
	high values. The compressor starts again after 15/20 minutes.
6- Air loss	Can be caused because of a bad sealing of some
	sopa water.
7- Loss upon valve situated under the	The valve is damaged, replace it. The problem can
pressure controller	be caused by a bad sealing of the non return valve (See 1d).
8- The compressor starts and stops	a) In the tank there is a big quantity of condensate.
most frequently than usual.	Drain the tank letting the condensate go.
9- The compressor does not start	The pressure controller is had. Replace it
when the pressure is under the	
minimal value and/or does not stop	
when the maximum pressure is	
reached.	
10- The compressor heats too much	a) Oil level is too high.
	Only use the recommended oil by the supplier
	c) Air loss (See 6).
	d) Air filter is blocked. Clean or replace the filter.
	e) The air temperature is too high. Never install the
	compressor inside the box unless there is a nice
	aeration.
	t) The compressor is over weighted. Ensure the
	compressor you use suits to your needs.

7.1 Special information.

7.1.1 Compressor demolition.

During the compressor demolition, all safety standards must be respected to avoid hurt staff or damage the equipment.

The metallic parts should be thrown away to reinforce; the rubber and plastic parts should be eliminated according to the standards in force.

7.1.2 Curves sucked air/pressure volume.



8.Nomenclature

8.1 Electric scheme.



1	Relais de démarrage	L1	Marron
2	Relais thermique de protection	L2	Bleu
3	Boîte à bornes	L3	Jaune/Vert
4	Pressostat	A	Noir
5	Condensateur	В	Blanc
		D	Marron
		Ε	Bleu clair
		F	Jaune/Vert

8.1.1 Spare parts.

The wrong part replacement must exclusively be done by specialised staff, respecting safety standards to avoid damaging staff and equipment.

To order spare parts, you need:

- Give the compressor serial number and the year.
- Give the requested quantity.



The non -respect of the safety standards can cause severe problems to people or damage equipment.

The manufacturer can not be held responsible in case of damages due to a bad use of the compressor.

8.1.2 Guarantee.

• The compressor is guaranteed 12 months.

• The guarantee is only dedicated to free replacement of wrong parts recognised by the manufacturer. The electric parts subject to use are non inclusive.

- The deterioration or bad use of the compressor cancels the guarantee.
- Freight charge are not included into the guarantee.

9.Appendix



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