English

Installation and Maintenance Manual

BioQualyAir 40 and 65L
Compressor

August_2013

GNATUS

PRESENTATION OF MANUAL

OPERATING INSTRUCTIONS

EQUIPMENT:

Technical Name: Air compressor

Brand Name: BioQualyAir

Model: 40 and 65L

Brand: GNATUS

Manufacturer/ Distribuitor:
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ATTENTION

For greater safety:

Read and understand all the directions contained in this Manual before installing or operating this equipment.

Note: This Manual must be read by all the operators of the equipment.

INDEX

IDENTIFICATION OF THE EQUIPMENT

Description of Equipment

The compressors BioQualyAir have a modern and compact design. Super quiet, it maintains a pleasant work environment and ensures the calmness of the patient during the procedure execution.

Designed to provide compressed air for clinical and laboratory use, it features stable performance, high flow capacity, low energy consumption and is free from oil or smoke emission, vapors or unpleasant odors.

Equipped with a pressure gauge (manometer) to measure the tank pressure, manometer for outlet pressure, outlet pressure regulator with air filter and water drain, register to control the outflow rate and register to drain the accumulated water in the tank, features which facilitate the equipment´s operation and maintenance.

Safety System with valve that starts running for pressure release if there is any failure from the pressure switch and overload shield in order to protect the equipment from overheating.

Models with tanks of 38 and 65 liters both with internal antioxidant painting, ensuring greater durability of the compressor.

Principles and fundamentals applied to the product operation

All components of the equipment are mounted over the air tank. One or more electric engines trigger the pistons´ system with rings made of non-metallic material resistant to abrasion and high temperatures that are able to operate without lubrication for a long period of time. The air is compressed within the tank and a manometer displays its pressure. A check valve, drain register, safety valve and solenoid valve are also installed.

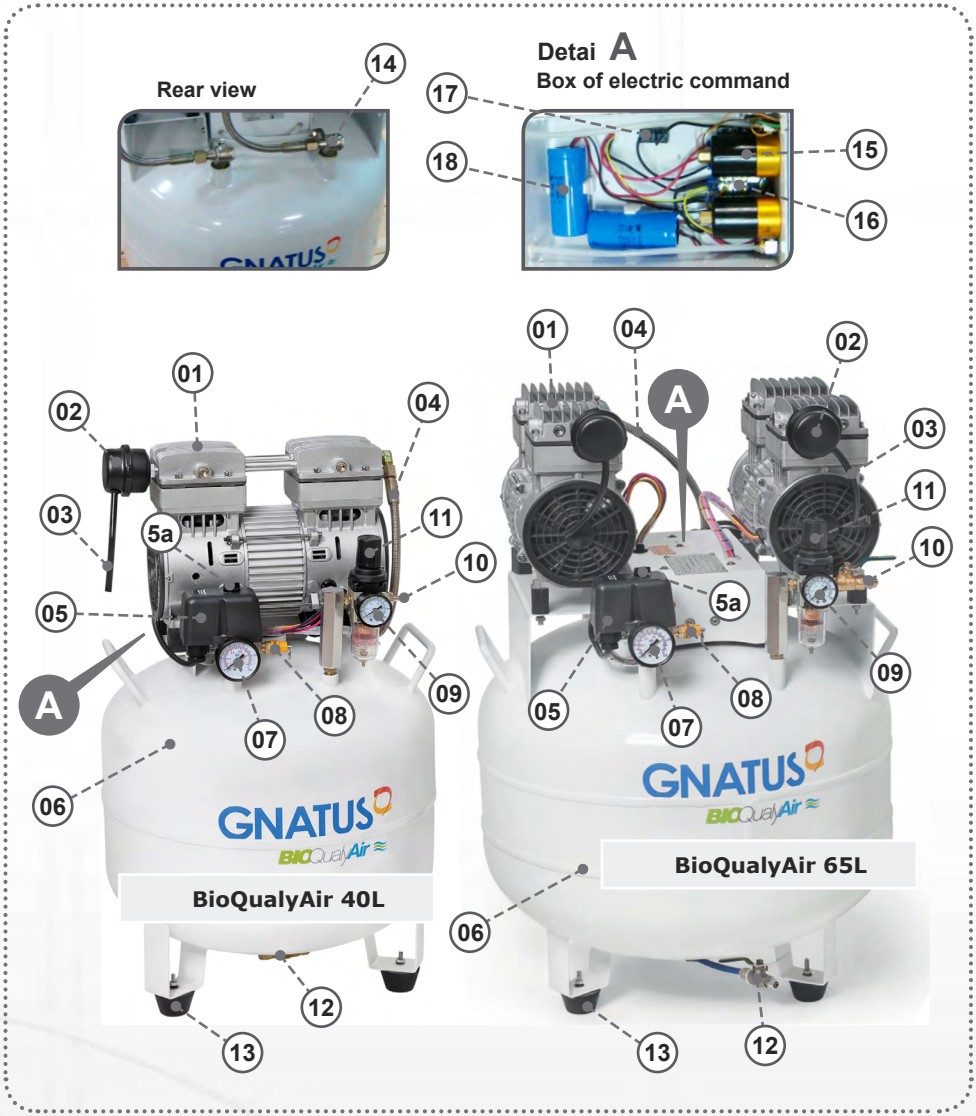
Indication of equipment

This equipment is exclusively for exams, and must be used and handled by a trained person (duly accredited professional, as per the country's local legislation), in compliance with the instruction of this manual.

It is mandatory to use the equipment in perfect conditions only and to protect the operator him or herself, the patient, and any other person against any eventual risks.

MODULES, ACCESSORIES, OPTIONS AND MATERIALS OF CONSUMPTION

Characteristics and operation



MODULES, ACCESSORIES, OPTIONS AND MATERIALS OF CONSUMPTION

Characteristic and operation

01	**Electric Motor (head)**
	Responsible for the capitation of the external air directing the same to the interior of the reservoir.
02	**Air input filter**
	It serves to filter the air that is sucked of the external ambient and led until the reservoir. In no hypothesis the compressor should work without this device, because this guarantees the air input exempt of impurity to the reservoir.
03	**Air input plastic tube**
	Should be always coupled to the filter of air input (item 02) whose function is to attenuate the noise caused by air suction.
04	**Metallic hose**
	Built in highly resistant material and flexible, it leads the motor air (head) until the reservoir.
05	**Pressostat**
	It is a pressure measuring instrument used as system component of equipment protection. Its basic function is to protect the integrity of the compressor against overpressure or underpressure applied to the same during your operation.
5a	**On / Off Key**
	Located at the top of pressostat, it serves to connect or disconnect the compressor.
06	**Air reservoir**
	Local where the compressed air is deposited.
07	**Air reservoir manometer**
	It indicates the pressure value inside the air reservoir.
08	**Safety valve (pressure relief)**
	They are recommended for use with liquids, compressed air or even some inert gases. Its function is to go in operation only when there is fault in the pressostat. In case the pressure inside the reservoir reaches levels above of the maximum allowed in project, the safety valve opens releasing the air and causing the relief of the internal pressure.
09	**Pressure regulator manometer**
	It indicates the pressure in the air output
10	**Air output slide valve**
	Responsible for releasing the reservoir compressed air for your use.

MODULES, ACCESSORIES, OPTIONS AND MATERIALS OF CONSUMPTION

Characteristic and operation

11	**Pressure regulator with air filter**
	It has the function of regulating the pressure in the air output and of retaining residues and humidity condensate from the air through filter coupled to the pressure regulator.
12	**Drainage tube slide valve**
	Responsible for the water condensate drainage accumulated inside the reservoir.
13	**Rubber feet**
	They serve to minimize the vibration between equipment and the floor.
14	**Retention valve**
	It owns the function of addressing the air for the reservoir interior and retains it so that it does not return for the motor head.
15	**Solenoid Valve**
	When the compressor disconnects, automatically the valve solenoid withdraws compressed air of the head interior, thus, when going again in operation, the motor initiates the process with less effort.
16	**Bar connector (terminal)**
	Multiple connectors for electric conductors.
17	**Overload protector (protection relay)**
	Its function against overload is to disconnect the equipment mains before that they are reached current and time values that cause deterioration of the motor insulation.
18	**Capacitor**
	Responsible for the motor departure, that is, the initial start for your operation.

TECHNICAL SPECIFICATIONS

General

Models
BioQualyAir 40L / BioQualyAir 65L
Classification of Equipment as per standard IEC 60601-1:
Protection against Electric Shock - Type BF and Class II Equipment (IEC 60601-1)
Protection against harmful water penetration
IPX 0
Mode of operation
Continuous operation.

TECHNICAL SPECIFICATIONS

Electrical

Supply voltage and frequency
220V~ ±10% / 60Hz ou 220V~ ±10% / 50Hz ou 127V~ ±10% / 60Hz
Rated current
BioQualyAir 40L 127V~: 7,3 A / BioQualyAir 40L 220V~: 5 A BioQualyAir 65L 127V~: 14,6 A / BioQualyAir 65L 220V~: 10 A
General power and energy consumption
BioQualyAir 40L 127V~: 830 VA / 0,83 KW/h / BioQualyAir 40L 220V~: 1100 VA / 1,1 KW/h BioQualyAir 65L 127V~: 1660 VA / 1,66 KW/h / BioQualyAir 65L 220V~: 2200 VA / 2,2 KW/h
Engine power
BioQualyAir 40L 127V~: 1 motor de 1,12 HP / BioQualyAir 40L 220V~: 1 motor de 1,14 HP BioQualyAir 65L 127V~: 2 motores de 1,12 HP / BioQualyAir 65L 220V~: 2 motores de 1,14 HP

Weight

Gross weight
BioQualyAir 40L: 45,8 Kg / BioQualyAir 65L: 71,2 Kg
Net weight
BioQualyAir 40L: 30,6 Kg / BioQualyAir 65L: 50,4 Kg

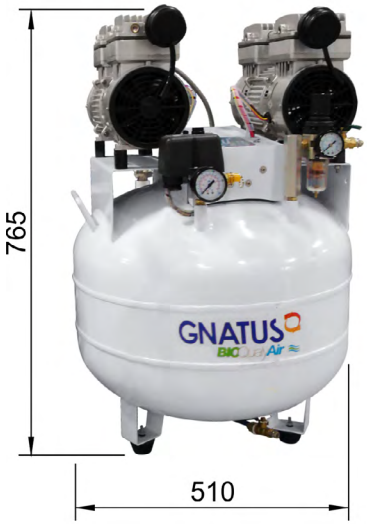
Other specifications

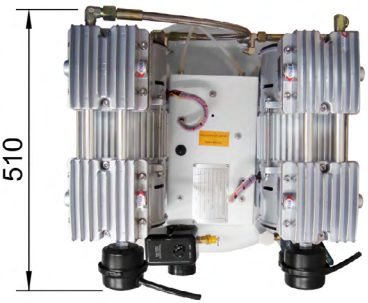
Capacity of dental sets
BioQualyAir 40L: 1 dental sets BioQualyAir 65L: 2 dental sets
Air Tank capacity
BioQualyAir 40L: 38 liters BioQualyAir 65L: 65 liters
Noise level (700mm from equipment)
BioQualyAir 40L: 65 db BioQualyAir 65L: 71 db
Minimum and maximum pressure
BioQualyAir 40L: 5,71 Kgf/cm² e 8,16 Kgf / cm² BioQualyAir 65L: 5,71 Kgf/cm² e 8,16 Kgf / cm²
Air displacement
BioQualyAir 40L: 212 l/min BioQualyAir 65L: 424 l/min

TECHNICAL SPECIFICATIONS

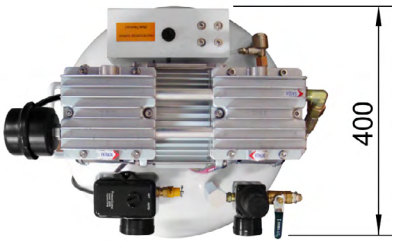
Dimensions (mm)

BioQualyAir 65L





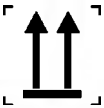
BioQualyAir 40L



TECHNICAL SPECIFICATIONS

Packing symbols

Maximum stack, determines the maximum amount of boxes that can be stacked during transport and storage "as packaging".

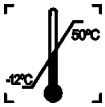


It determines that the equipment must be stored or transported with the arrow indication up.

It determines that the equipment must be stored and transported with care (no falls and impacts).

It determines that the equipment must be stored or transported with moisture protection (do not expose to rain, water splashing or

It determines that the equipment must be stored or transported with light shield.



It determines the temperature limits within the packaging must be stored or transported.

Product symbols

Careful: I t indi cates an important instruction for the operation of the product. Not following it can cause dangerous malfunctioning.

Note: It indicates useful information for operation of the product.

Important: It indicates an instruction of safety for operation of the product. Not following it, can lead to serious danger to the patient.

Warning - see the manual.

Turned on position.

Turned off position.

B type equipment

Grounding (at several points of the equipment) indicates the condition of being grounded.

INSTALLATION OF EQUIPMENT

Special providences or particular conditions for installation

- Check that the socket in which the device will be connected has a ground connection. According to the ABNT standard, this is essential for the safe operation of the system.
- Install the unit in a place where it will not be damaged by the pressure, temperature, humidity, direct sunlight, dust, salts.
- To guarantee an effective ventilation, the compressors should be installed or put with airing grid away at least 20 cm of any obstacle that can obstruct the air passage, in a way to facilitate the cleaning and maintenance operations.
- The unit should not be submitted to inclination, excessive vibrations, or blows (including during transportation and handling).
- Install the equipment on a firm and leveled surface.
- This equipment was not planned for use in an environment where vapors, anesthetic mixtures infl ammable with air, or oxygen and nitrous oxide can be detected.
- Check the voltage of the equipment at the moment of executing the electrical installation.

Electric installation

- It is compulsory the installation of a exclusive breaker in the distribution box for the outlet where will be connected the compressor;
- Never uses adapters, extensions or transformers to link the compressor to the electric net.

EARTHING OF THE ELECTRIC NET AND OF THE EQUIPMENT:
WARNING! Inadequate connection of the earth wire can result in electric shock risk.

Breaker dimensioning

BioQualyAir 40L

Voltage	Nominal Current	Breaker
127V~ ±10%	7,3 A	10 A
220V~ ±10%	5 A	10 A

BioQualyAir 65L

Voltage	Nominal Current	Breaker
127V~ ±10%	14,6 A	20 A
220V~ ±10%	10 A	16 A

Wire gauge dimensioning

Wire diameter (Gauge): For the distance up to 5m of breaker until the outlet of the equipment, the wire should have a section 2,5mm², from 5 to 15m wire 4mm and from 15 to 50m wire 6mm (As by standard of ABNT NBR-0148, metric series PVC 70°C).

INSTALLATION OF EQUIPMENT

Unpacking the compressor (Preparing the installation)

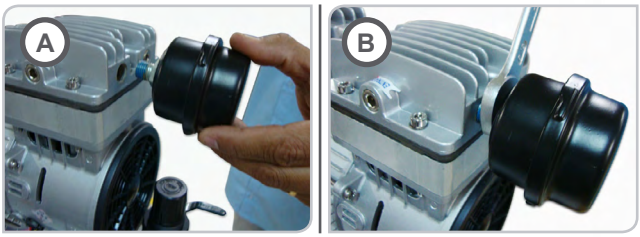
- Remove the compressor from its packing;
- Check through the check-list, if all the accessories are accompanying the equipment;
- Certify that all the compressor components are in perfect state and firmiiy coupled.
- Verify if the compressor voltage corresponds to the local the electric net (110 or 220V);
- Connect the air filter(s) of in the head(s) of the motor(s).

Procedure for air filter installation:

Connect the air filter in the motor head.

- Pass the lock thread Loctite 242 on the filter screw and fix it using one fix key type of 5/8" (Fig. A and B).

Never activate the compressor without the aspiration filter: the entrance of strange bodies or of dust can provoke serious damages in the internal components.



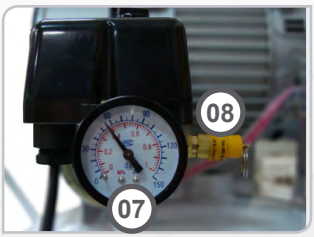
- Connect the linking hose (compressed air) in the air output slide valve (ítem 10) - pag. 05;
- Verify if the air slide valve (item 10) - pag. 05 and the drainage tube slide valve (item 12) - pag. 05 are closed;
- Connect the force cable in the outlet.

OPERATION OF EQUIPMENT

Powering the BioQualyAir up

Turn the power switch (05a) to position "AUTO". The compressor will be turned on until the inner pressure of the tank displayed on the gauge (07) reachs 8.16 kgf / cm ² (0.8 MPa - 116 psi), on this value the pressure switch will turn off the compressor which will be powered again when the inner pressure reaches of 5.71 Kgf/cm ² (0.56 MPa - 81,22 psi), and so successively and automatically.

If the pressure switch fails, the safety valve (08) will start running by releasing the excessive pressure.

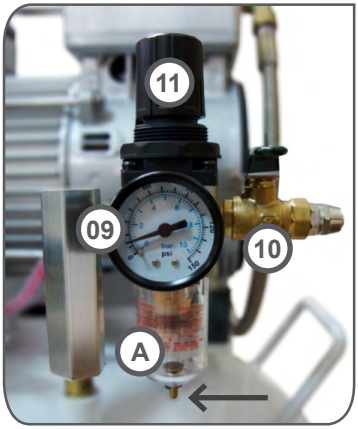


OPERATION OF EQUIPMENT

Compressed air outlet

The air pressure on the outlet can be adjusted through the register (11), check the setting on the pressure gauge (09). The air outflow rate can also be adjusted in the register (10).

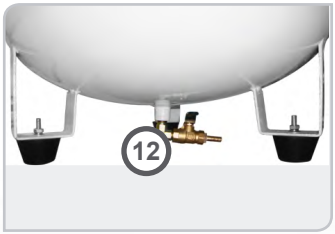
In tandem with the pressure and flow rate registers, there is a filter that removes moisture and impurities remaining in the air, the moisture that is removed from the outlet will get stored in the reservoir (A), to empty it press the pin underneath the reservoir.



Drainage

Drainage of the air tank should be performed to eliminate the condensed water accumulation inside the tank. The drainage frequency depends on environmental conditions and operating time, on average the drainage is recommended to be done on a daily basis.

To perform the drainage, insert the hose which is connected to the register (12) located underneath the tank inside a container for water disposal. Open the register slowly until all the accumulated water is drained and air starts to flow again. Close the register firmly so that no leakage can occur.



BioQualyAir 40L

BioQualyAir 65L

PRECAUTIONS, RESTRICTIONS AND WARNINGS

Transportation, storage and operation

This equipment must be transported and stored observing the following directions:

- Avoid falls and impacts;
- Keep it dry, do not expose it to rain, water drops or wet floor;
- Keep it away from water and direct sunlight, and in it original wrapping;
- Don't move it over irregular surfaces, protect it from rain and observe the maximum stack quantity specified in the packaging;
- Transportation and storage temperature range: -12°C to 50°C.
- Ambient temperature range recommended by Gnatus +10 ° C to +35 ° C.

PRECAUTIONS, RESTRICTIONS AND WARNINGS

The Equipment maintains its condition of safety and efficacy, provided that it is maintained (stored) as mentioned in this instruction of use. Thus, the equipment will not lose or alter its physical and dimensional features.

Before transporting the compressor, all air from the tank must be exhausted.

Precautions and warnings "during the use" of equipment

- The equipment should only be operated by duly enabled and trained technicians
- If any maintenance should be required, only use services of the Gnatus Authorized Technical Assistance.
- Although this equipment has been planned in accordance with the standards of electromagnetic compatibility, it can, in very extreme conditions, cause interference with other equipment. Do not use this equipment together with other devices very sensitive to interference or with devices which create high electromagnetic disturbance.
- Avoid spilling water or other liquids inside the equipment, which could cause short circuits.
- Do not allow patients and especially children get close to the compressor.
- Gnatus air compressor is designed for use according to its air flow capacity, while using it, does not exceed their technical specifications. Gnatus assumes no liability for damages/ accidents resulting from improper use or non-compliance with the instructions described in this manual.
- Do not touch the compressor head (the upper cooling part) during operation, even after the compressor is turned off, those parts still remain hot for some time, so avoid contact.
- Make sure periodically that the air inlet and outlet are not obstructed.
- If there is power outage, it is recommended to turn off the compressor power switch to prevent the disarming of the thermal relay when power returns again.
- Before disconnecting the pressure hose from the compressor for any reason, first close the air outlet register and release the residual pressure through the drainage register (12).

There is condensation from air humidity inside the tank that must be removed periodically, we recommend the removal of this water accumulation to be carried out daily.

NOTE: We recommend reading this manual to the full understanding of it. Use it as a resource of information.

Precautions and warnings "after" the use of equipment

- Turn off the main switch of the chair when it is not in use for an extended period of time.
- Always maintain the equipment clean for the next operation.
- Do not modify any part of the equipment. Do not disconnect the cable or other connections without need.

Precautions and warnings during the "cleaning" of equipment

- Before cleaning the equipment, turn off the main switch.
- Avoid spilling water, even accidentally, or other liquids inside the equipment, which could cause short circuits.
- Do not use microabrasive material or steel wool when cleaning, or employ organic solvents or detergents which contain solvents such as ether, stain remover, gasoline etc.

PRECAUTIONS, RESTRICTIONS AND WARNINGS

Sensitivity to environmental conditions in normal situations of use

The equipment has been planned not to be sensitive to interference such as magnetic fields, external electrical factors, electrostatic discharge, pressure or variance of pressure, provided that the equipment is installed, maintained, clean, preserved, transported and operated as per this instruction for use.

Precautions to be adopted against foreseeable or uncommon risks, related to the deactivation and abandoning of equipment

In order to avoid environmental contamination or undue use of the Equipment after it has become useless, it should be discarded in the suitable place (as per the local legislation of the country).

- Pay attention to the local legislation of the country for the conditions of installation and disposal of residue.

CORRECTIVE AND PREVENTIVE MAINTENANCE AND PRESERVATION

Preventive Maintenance

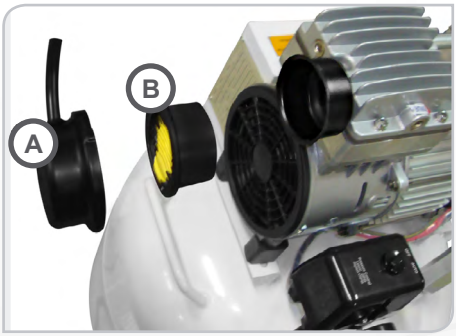
The equipment should be calibrated routinely, as per the legislation in force in the country. But never with a period exceeding 3 years.

Disconnect the compressor and unload the air reservoir before making any maintenance operation.

FIlter Change

Keep the air filter(s) (B) clean and in good condition of usage. The air filter (B) prevents dust from entering into the compressor and reduces the operating noise. Over time, the filter will become dirty, reducing the air inlet flow and causing the decrease of compressor performance. The filter should be replaced every 3 months on average or before, depending on the air quality. Additional filters are available for purchase through the Gnatus Technical Assistance network.

To perform the change, open the filter enclosure by turning the metal cover (A); remove the old filter and insert the new one; put the cover (A) again by turning it in the opposite direction.



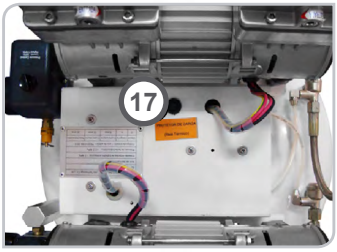
CORRECTIVE AND PREVENTIVE MAINTENANCE AND PRESERVATION

Corrective Maintenance

Overload protector

The overload protector is designed to protect the equipment from overheating. If the overload protector (17) trips, wait for 5 minutes until the compressor cools down and reset it again.

Important: Before making rearming verify the possible faults.



Cleaning

Never wet the compressor or any of their parts. The cleaning of outside surfaces should be performed weekly with a duster or soft cloth slightly moistened with water; the use of other products may damage the compressor finish or plastic parts. Be sure to thoroughly clean the head's upper part, responsible for its cooling. The accumulated dust affects the heat dissipation.

REPAIRS

Disconnect the compressor and unload the air reservoir before making any maintenance operation.

Tools description

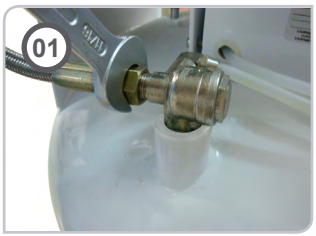
See below the tools set and necessary accessories for the maintenance of the Compressor.

Fixed key type - 14mm	Fixed key type - 1/2"
Fixed key type - 5/8"	Key type Allen - 14mm
Fixed key type - 11/16"	Key type Phillips
Fixed key type - 10mm	Cutting blade (style or similar)
Fixed key type - 1"	Crimping pliers
Fixed key type - 25/32"	Universal pliers
Activator Loctite 7471	Device to verify electric magnitude (multimeter, test lamp and others)
Lock thread "Loctite 242"	

REPAIRS

Replacing / repairing the retention valve(s)

- Disconnect of the retention valve the hose with steel mesh originating from the motor head (01);
- Loosen the screw that arrests the air plastic hose (02);
- Loosen the tank retention valve (03).



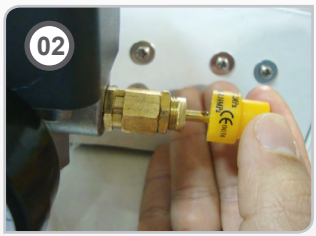
- Dismount the valve (A) and verify if the same is damaged. If yes, change it, if not, make its cleaning.

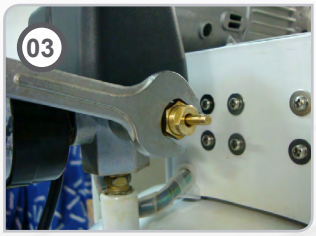
IMPORTANT: After the repair /substitution procedure of the components, mounting them again, it is of extreme importance that it is guaranteed the points complete sealing, using activator and lock thread glue**.**

Used tools:
- Fixed Key 11/16”
- Fixed Key 1/2”
- Fixed Key 25/32”
- Activator Loctite 7471
- Tread lock “Loctite 242”

Replacing / repairing the safety valve

- Remove the ring fixed in the valve stem (01);
- Remove the plastic sleeve of the valve finishing (02);
- Loosen the safety valve of the pressostat set (03).





REPAIRS

Replacing / repairing the safety valve

- Dismount the valve (B) and verify that if the same is damaged. If yes, change it, if no, make its cleaning.

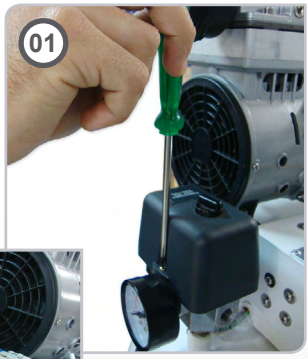
IMPORTANT: After the repair/substitution procedure of the components, when mounting them again, it is of extreme importance that it is guaranteed the points complete sealing, using activator and lock thread glue.

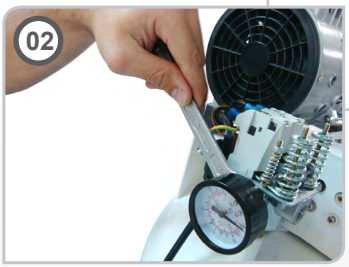
Used tools:
-Fixed Key 9/16”
-Fixed Key 14mm
-Activator Loctite 7471
-Lock thread “Loctite 242”

Replacing the air reservoir manometer

- Remove the connection box cover (01);
- Remove the manometer (02) and provide the substitution.

IMPORTANT: After the repair /substitution procedure of the components, when mounting them again, it is of extreme importance that it is guaranteed the points complete sealing, using activator and lock thread glue.

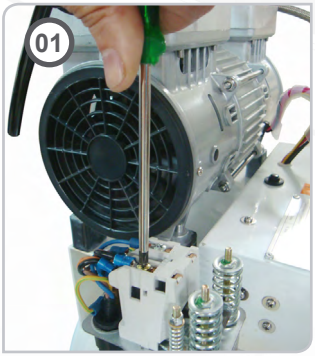




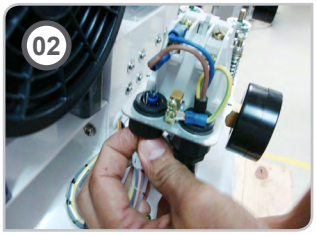
Used tools:
- Phillips Key
- Fixed Key 9/16”
- Activator Loctite 7471
- Thread lock “Loctite 242”

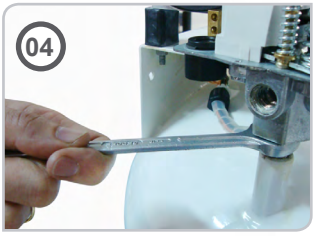
REPAIRS

Replacing the pressostat



- Remove the connection box cover (fig.01 - pag.18);
- Loosen all the wires of the connection box (01):
• Solenoid Connection
• Earth
• Motor feeding
- Unscrew the pass cables (02);
- Loosen the box of electric command removing the four screws (03);
- After loosening the command box, shift it to enable the pressostat removal;
- Remove pressostat and provide the substitution (04).





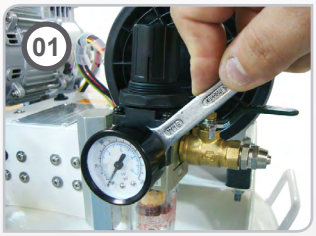
IMPORTANT: After the repair /substitution procedure of the components, when mounting them again, it is of extreme importance that it is guaranteed the points complete sealing, using activator and lock thread glue.

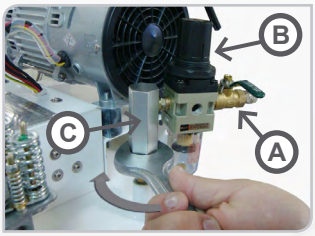
Used tools:

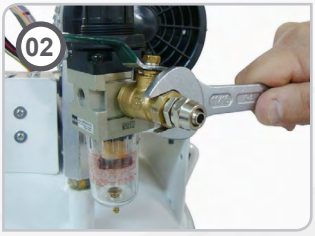
- Phillips key
- Fixed key 9/16”
- Activator Loctite 7471
- Thread lock “Loctite 242”

Replacing the pressure manometer – slide valve air output - pressure regulator

- Remove the pressure manometer (01) and provide the substitution.
- Position the pressure regulator (A) and slide valve air output (B) rotating the six sided connection (C) “1/4 turn” to enable the set removal.
- Remove the air output slide valve (02) and provide the substitution.





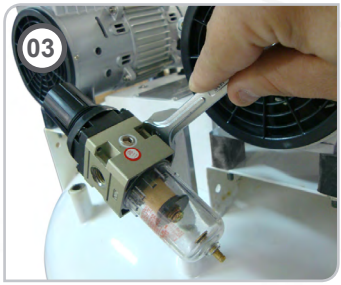


REPAIRS

Replacing the pressure manometer - output air slide valve - pressure regulator

- Remove the pressure regulator with filter (03) and provide the substitution.

IMPORTANT: After the repair /substitution procedure of the components, when mounting them again, it is of extreme importance that it is guaranteed the complete points sealing, using activator and lock thread glue.

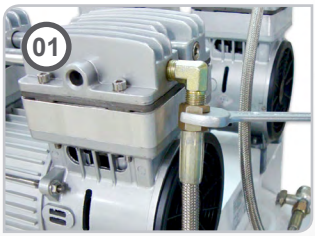


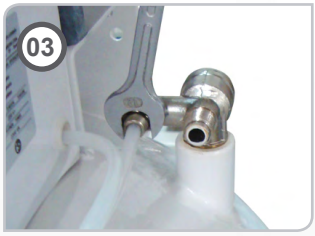
Used tools:
- Fixed key 7/16”
- Fixed key 1”
- Fixed key 11/16”
- Fixed key 14mm
- Activator Loctite 7471
- Thread lock “Loctite 242”

Replacing / repairing the solenoid valve(s) – overload protector - capacitor(s)

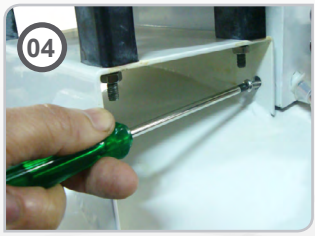
To make the maintenance procedures in the components: ”capacitor, solenoid valve and overload protector” it will be necessary the removal of one of the motors.

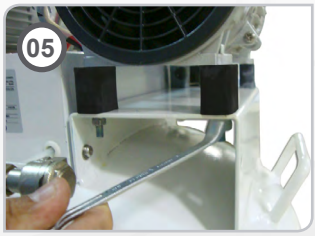
- Loosen the hose with steel mesh of the motor output head (01) and input of the retention valve (02);
- Loosen the air plastic hose unscrewing the squeeze nut (03).





- Loosen the electric command box removing the four screws (04);
- Loosen the motor loosening the four screws that hold it. (05).

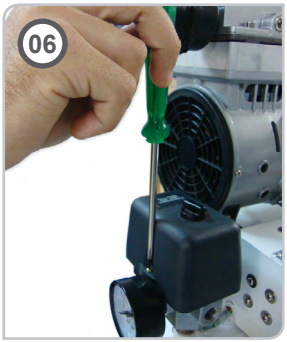


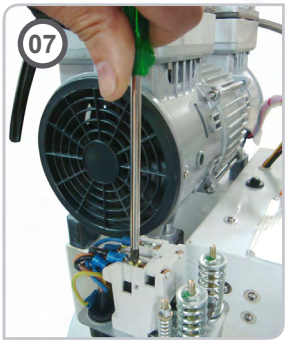


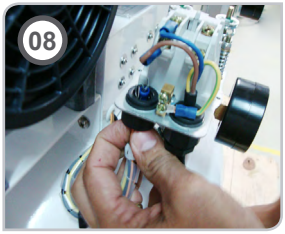
REPAIRS

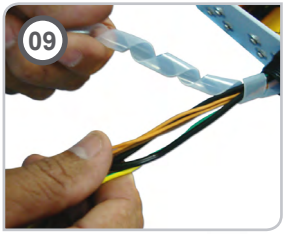
Replacing / repairing the valve(s) solenoid – overload protector - capacitor (s)

- Remove the cover of the connection box (06);
- Disconnect the wires (07);
- Unscrew the cables pass (08) and withdraw finishing spirals (09);
- Remove the wires completely.

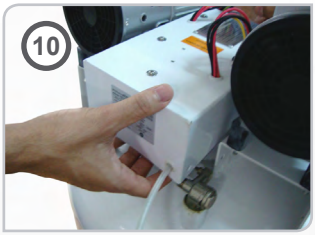


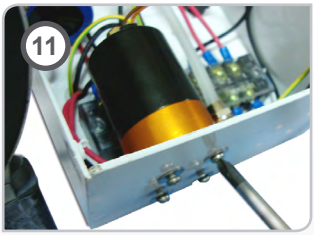


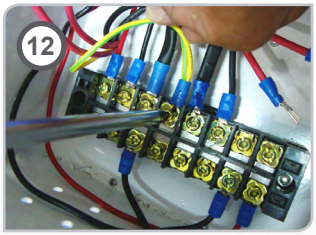




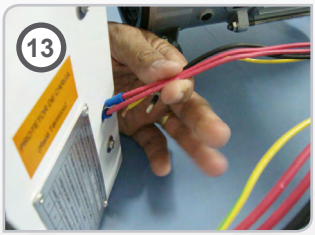
- After loosening the motor, shift it to enable the access to the box of electric command interior (10);
- Loosen the solenoid valve through the four screws and washers (11);
- Locate the connectors bar, remove the protection acrylic sleeve and disconnect the cables of the motor connection (12).

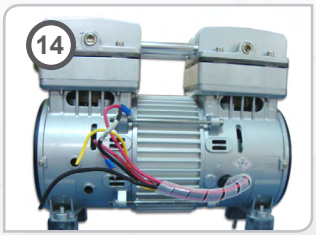






- After loosening the cables of the connector, remove it pulling by the command box orifice (13);
- Remove the motor (14).



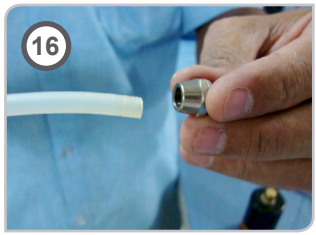


REPAIRS

Replacing / repairing the solenoid valve(s) – overload protector - capacitor (s)

Solenoid Valve

- With the valve solenoid already loose from command box (fig.11 - pag.21), loosen their electric cables and remove the plastic air hose unscrewing the squeeze nut of the elbow (15) and (16);
- Unscrew the elbow (17).

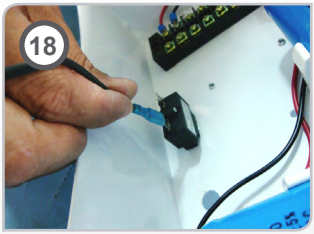


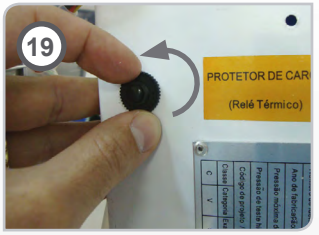
- Dismount the valve (A) and verify if the same is damaged. If yes, change it, if not, make its cleaning.

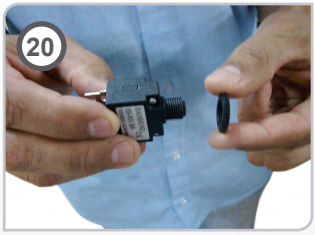
IMPORTANT: After the repair /substitution procedure of the components, when mounting them again, it is of extreme importance that it is guaranteed the complete points sealing, using activator and lock thread glue.

Overload protector

- Disconnect protector's overload terminals (18);
- Unscrew the fixing nut of the overload protector under the command box (19);
- Remove the overload protector and provide the substitution (20).



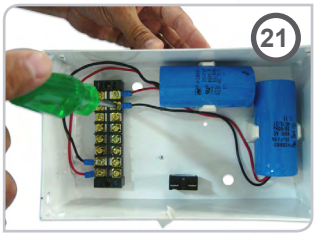




REPAIRS

Replacing / repairing the solenoid valve(s) - overload protector - capacitor (s)

Capacitor



- Disconnect the capacitor terminals, remove from it's support and provide the substitution (21).

OBSERVATION:

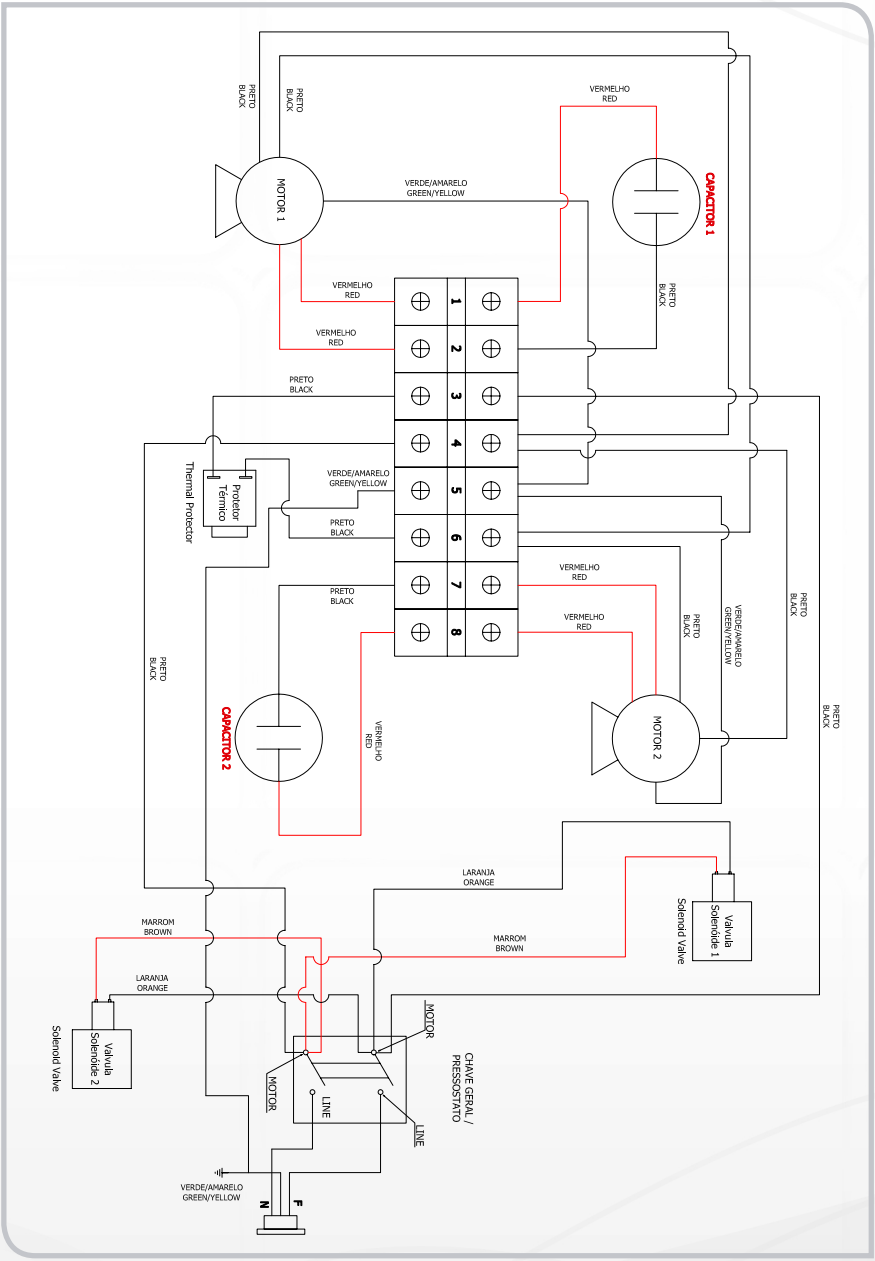
- Capacitors used in the compressors 220V/50Hz and 220V/60Hz are of 25 µF or 35 µF.
- Capacitors used in the compressors of 127V/60Hz are of 85 µF.

Used tools :
- Fixed key 14mm
- Fixed key 10mm
- Fixed key 1/2"
- Fixed key 11/16"
- Phillips key
- Crimping plier
- Activator Loctite 7471
- Thread lock "Loctite 242"

After making any maintenance procedure in the components: "solenoid valve overload protector and capacitor" the electric connections should be accomplished as the connection diagram (page.24).

DIAGRAM

Connection diagram



UNFORESEEN EVENTS – SOLUTION OF PROBLEMS

Disconnect the compressor and unload the air of the reservoir before making any maintenance operation.

Problem	Probable cause	Solution
The compressor does not connect.	Power plug disconnected of the outlet. General key disconnected. Missing power in the net. Overload protector disarmed (thermal relay).	Connect power plug in outlet. Connect the general. Wait normalization of the net. Rearm the protector as instruction (pag.16). **IMPORTANT:** Before making rearming verify the possible faults that caused it's activation.
The compressor does not connect and emits a not normal noise.	Capacitor damaged. Overload protector damaged.	Make the substitution of the capacitor. Make the substitution of the overload protector.
The compressor does not connect.	Feeding of electrical voltage smaller.	Connect the compressor to the correct net. Wait for the net normalization.
The compressor does not reach maximum pressure, smaller efficiency, it works for a short period of time.	Damaged pressostat. Air reservoir is with excess of condensate water. Air input filter with excess of residues. Motor head with damaged gasket.	Make the substitution of pressostat. Drain the reservatory water. Clean the air filter(s) or if necessary make its substitution. Make the motor substitution. Note: the motor head should be sent to the factory.
The compressor motor doesn't disconnect when reaching the maximum pressure and the safety valve is activated.	Damaged pressostat.	Make the substitution of the pressostat.

UNFORESEEN EVENTS – SOLUTION OF PROBLEMS

Problem	Probable cause	Solution
The compressor motor does not connect when reaching minimum pressure.	Damaged pressostat.	Make the substitution of the pressostat.
There is pressure fall in the reservatory.	Connections leaking.	Generally this happens all along of the air line between compressor and the equipment and not in the connections of the compressor. Fill the air compressor the máximum possible and with help of a sponge and detergent, apply a bit of foam on the connections, observe were are the leakages and remake the connection.
The compressor motor or the power cable presents super heating.	Electric net underdimen sioned (wire with gauge smaller than recommended).	The electric net should be in conformity with the specifications described in the manual.
Air loss by the solenoid valve with the compressor stopped.	Retention valve damaged or with residues interfe ring in its normal operation.	Unload the air contained in the reservoir, remove the retention valve, disassemble it and verify if the valve is damaged. If yes, change it, if no, make its cleaning.
Air loss by the valve solenoid with the compressor in operation.	Solenoid valve damaged or with residues interfering in it's normal operation.	Unload the air contained in the reservoir, remove the solenoid valve, disassemble it and verify if the valve is damaged. If yes, change it, if not, make its cleaning.
The compressor emits excessive noise with metallic and ritmic blows.	Bloqued bearing or motor excentric is loose of central shaft.	Make substitution of motor. Note: the head of the motor shall be sent to factory.

WARRANTY OF EQUIPMENT

This equipment is covered by the warranty terms counting from the date of installation, as specifi ed below; provided that the defect has occurred in normal conditions of use and that the equipment has not remained stored for more than 06 months counting from the issue date of the sales document until the date of the actual installation.

- WARRANTY TERMS: Verify the guarantee certificate;
- LOSS OF THE WARRANTY:

A) Attempt to repair using an inadequate tool or by unauthorized technicians;
B) Installation of the equipment by an unauthorized technician;
C) Damage arising from inappropriate storage or signs of infringement;
D) Incorrect use of the equipment;
E) Use of a cleaning product not indicated by the factory;
F) Falls or blows which the equipment may undergo or lack of observation of an compliance with the guidelines of the Owner's Manual, which was delivered with the present document, together with the equipment. Repair or replacement of parts during the warranty period shall not extend the validity term of their warranty.

- This warranty doe snot exempt the customer from paying the service charge for the visit and the travel expenses of the technician, except when the customer sends the equipment to execute the maintenance inside the establishment of the technical assistance. "Consumer Defense Code - art. 50, unique paragraph".
- The Warranty Certifi cate comes with the product and must be filled in upon the date of installation by the Gnatus Authorized Technician.
- Queries and information: GNATUS Help Desk (+55) 16 2102-5000.
- Check the warranty term attached to this manual.

Manufacturer/ Distribuitor:

GNATUS

Technical Duties:
Gilberto Henrique Canesin Nomelini – CREA-SP: 0600891412

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