Important Information on Commissioning

Before taking the compressor into operation, it is mandatory to thoroughly read the enclosed operating manual.

However, in the following we provide information how to make the most of your compressor throughout its entire service life by correct maintenance and servicing.

These instructions do no replace any operating manual. They are merely intended to provide handy information in short form.

Attention: Service work at electrical components must only be performed by qualified and certified specialist personnel.

For pneumatic compressors, the regulations of the Industrial Safety Ordinance shall apply.

Prior to Start of Work

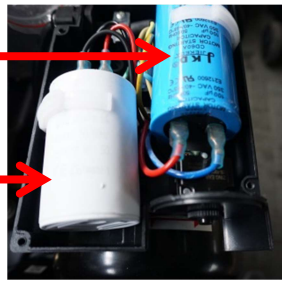
NEVER use cable drums with the cable reeled up.

ALWAYS unreel cable completely, since otherwise electrical resistance and voltage drop will occur.

Compressors with 380/480 V generally must be operated by means of an all-pole automatic circuit breaker. Stationary systems must be generally taken into operation by a qualified electrician – verification must be furnished.

The capacitor stores voltage that is additionally required during start-up of the motor.

In case of motor overload, the motor circuit breaker is triggered.
The motor protection relay is integrated either in the motor terminal box or in the pressure switch, depending on the model.

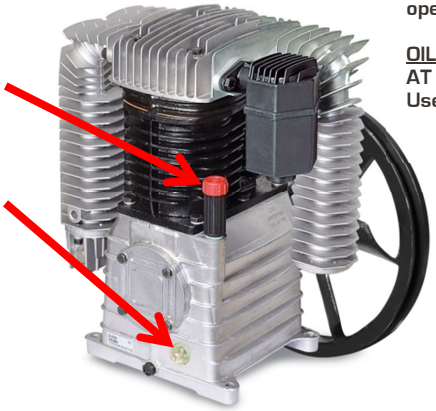


OIL FILL LEVEL CHECK

Oil sealing screw with oil dipstick

Oil filling screw with bleeder valve.

The oil fill level must be in the middle. Depending on the model, the oil level indication may also be on the dipstick.



ELECTRICAL SUPPLY LINE

We generally do not recommend using extension cables.
However, if you need to use an extension cable, the cross section must correspond to the power consumption of the motor. With a cable length of 5 m a minimum cross section of 2.5 mm² is required. The cable must be completely unreeled from the cable drum (due to line resistance and/or voltage drop).
In case of undervoltage, the motor protection switch will trip.

Compressors with AC MOTORS (230 V):

If the motor protection switch trips, never attempt restarting the compressor motor by acknowledging or resetting the condition. This might damage the coil insulation. In that case leave the motor to cool down and improve the motor running conditions! (See “electrical supply line”). Only then reactivate the motor protection switch by pressing the button.

Operation during winter:

After prolonged storage in cold ambient temperatures (< 5 °C), the motor will be difficult to start.
The main reason is its increased current consumption, since the oil in the crank case is very cold and thus highly viscous.

Remedy:

Storage at a warm temperature range
Using oil with low viscosity (5W-30)

The start-up conditions can be improved by completely emptying the tank to have the aggregate start up in unpressurised condition.

IMPORTANT:
Check the cylinder head screws after the first hour of operation to prevent damage to the gaskets.
For the correct torque, please see the operating manual.

OIL FILL LEVEL.:
Check and/or refill.
Should always be performed prior to beginning of operation.

OIL CHANGE:
AT LEAST 1x per year.
Use compressor oil VG100 or 5W-30.

Prior to Start of Work

WHEELS:
For transport reasons, the wheels of the compressor are loosely included in the package during delivery. Do not forget to assemble them prior to commissioning.

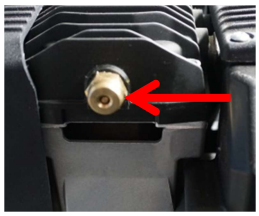
SUCTION FILTER:
With some models, the same applies to the suction filter. Before assembling the suction filter, check that you have removed the sealing cap in the cylinder head.

The direction of rotation is indicated on the V-belt cover on the side of the compressor.
The arrow indicates the correct direction of

COMPRESSORS WITH 400 VOLT MOTOR
Before you start operating the motor, it is mandatory to check its correct direction of rotation, since wrong direction of rotation may lead to overheating and damage of the gaskets. The direction of rotation can be changed by means of the phase-reverse plug using a screwdriver.

Attention: Close the condensate water cock prior to start-up and check that all vessel orifices are closed.
With 50 and 90 litre compressors, a separate quick coupling is included, which must be screwed in at the front of the vessel.

Switching on and off



SWITCH-ON
By pulling, turning or pressing the switch at the red button, you put the compressor into operation (depending on pressure switch version).

SWITCH-OFF
Always switch off the compressor using the switch-off button or the rotary button. Never pull the plug for switch-off, since in that case the relief valve for the required unpressurised start-up is deactivated.

START-UP RELIEF
In some models with AC-motor (230 V) an additional start-up relief valve is installed, which only closes if counterpressure of approx. 1.2–2 bar is reached in the pressure line.

Operating and Maintenance Instructions

Drain valve
at the vessel

Drain valve at the pressure f
(if used!)

PRESSURE CONTROLLER for operating pressure
The operating pressure is set at the pressure controller.
Clockwise turn – higher pressure
Counter-clockwise turn – lower pressure
Control range of operating pressure = 0–7 bar (standard version)

ATTENTION:
Overturning may damage the controller mechanics.

ATTENTION:
If the pressure is constantly kept at the highest value, this will result in faster wear of the diaphragm. We therefore recommend setting the value to zero after use.

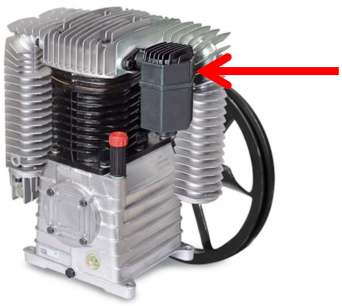
CONDENSATE:
Intake air always contains condensate water. This is separated and discharged through cooling of the compressed air.

Condensate is present:
- in the filter separator (if used)
- in the pressure vessel

Regularly drain condensate from the filter to prevent it from being carried along by the working air to the tool or the paint spray gun and causing damage there.
The condensate level must not flood the filter cartridge.

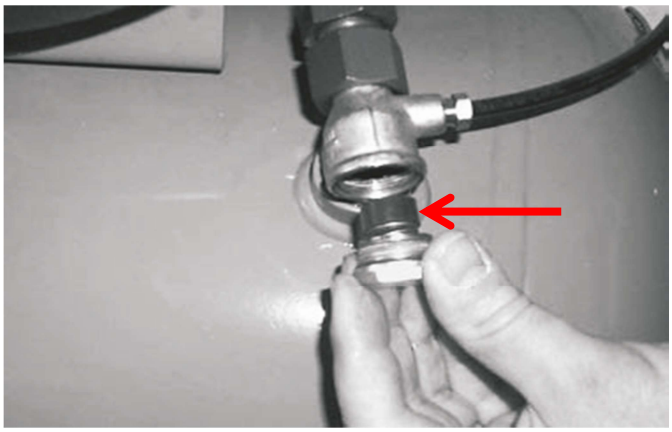
Attention:
Valves are pressurised.
Open by max 1/2 turns or briefly push upwards – depending on the version – then condensate is drained under pressure.

Operating and Maintenance Instructions



SUCTION FILTER:
The suction filter is used for purification of the intake air and will be soiled after time, depending on the amount of dust present in the ambient air.

Regular cleaning and/or replacement ensures optimum efficiency of the compressor and trouble-free operation of the valves. Soiled suction filters prevent free air intake and decrease performance of the compressor.



NON-RETURN VALVE
The non-return valve prevents compressed air flowing back from the vessel.
In case of wear or soiling, the valve seat or one of the valve tappets may be damaged.
In that case the compressed air will be blown out through the relief valve below the pressure switch while the compressor is in standstill.

Remedy:
Replace the valve tappet or the complete non-return valve or, in case of minor soiling, clean thoroughly.

IMPORTANT: Prior to any such work, always disconnect the mains plug and depressurise the pressure vessel first!

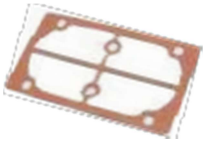
Twin cylinder

Cylinder head

Suction filter

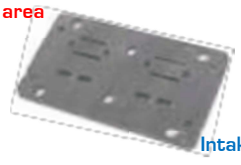
Single

Suction filter



Cylinder head gaskets

Pressure area

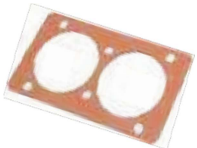


Intake area

Valve plate

Pressure area

Intake area



Gasket

If the compressor only builds up pressure of 2–3 bar or not at all, it may be the case that the cylinder head gaskets or the valve plate are worn or defective.

REPLACING THE VALVE PLATE

For that purpose, undo the nuts at the cylinder head and lift it off. Lift off the valve plate and remove all gaskets.

IMPORTANT:
When installing the new valve plate, make sure that the intake side of the valve is positioned along the upper side of the air intake channel.

It is indicated by an orifice in the compression chamber of the cylinder head in the direction of the suction filter.

The screws at the cylinder head are tightened in a cross-wise pattern with 15–20 Nm.

ATTENTION:
The Nm tightening torques vary for every device. For spare parts drawings of your device, please see:
www.aerotec.info

Please note that cylinder head gaskets and valve plates are spare parts that are subject to certain wear, depending on operating duration and intake conditions. If valve plates are heavily worn, this will also impair performance of the compressor.

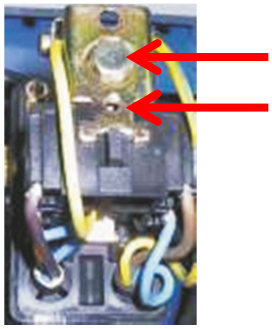
IMPORTANT: Prior to any such work, always disconnect the mains plug and depressurise the pressure vessel first!

Setting of the Required Switching Pressure Ranges

Attention: Service work at electrical components must only be performed by certified qualified personnel.

NEMA 380 VOLT
Only shut-off pressure can be changed –
Counter-clockwise turn: lower shut-off pressure
Clockwise turn: higher shut-off pressure

The pressure difference is simultaneously adjusted by approx. 2–2.5 bar below shut-off pressure.
A motor protection relay is installed.

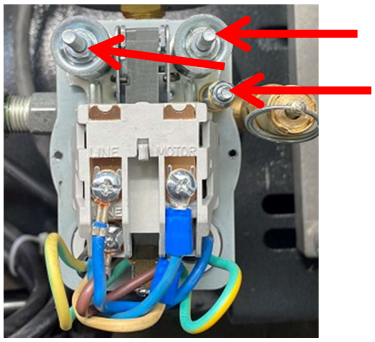


NEMA 230 VOLT
Only shut-off pressure can be changed –
Counter-clockwise turn: lower shut-off pressure
Clockwise turn: higher shut-off pressure

The pressure difference is simultaneously adjusted by approx. 2–2.5 bar below shut-off pressure.
A motor protection relay is NOT installed.

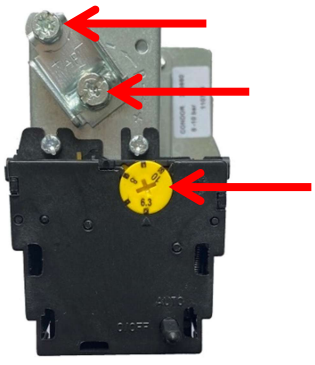
MDR1 – 230 V
Shut-off and start-up pressure can be changed –
Counter-clockwise turn: lower shut-off pressure
Clockwise turn: higher shut-off pressure

The pressure difference is simultaneously adjusted by approx. 2–2.5 bar below shut-off pressure.
A motor protection relay is NOT installed.



MDR2 – 230 V
Shut-off and start-up pressure can be changed –
Counter-clockwise turn: lower shut-off pressure
Clockwise turn: higher shut-off pressure
(parallel screw setting)

The pressure difference is simultaneously adjusted by approx. 2–2.5 bar below shut-off pressure.
A motor protection relay is NOT installed.



MDR3 – 400 V
Shut-off and start-up pressure can be changed –
Counter-clockwise turn: lower shut-off pressure
Clockwise turn: higher shut-off pressure

The pressure difference can be adjusted by means of a screw at the side –
Counter-clockwise: lower
Clockwise: higher (approx. 2–2.5 bar)

A motor protection relay is installed
Adjustment scale for motor protection relay.
Important: When replacing the pressure switch, always check the setting of the motor protection relay!

Info: The maximum pressure variation range must not exceed 20 %.

Vers. 9070387-V2020