POWER EQUIPMENT

AIR COMPRESSOR OPERATORS MANUAL

Version 5.1

Congratulations on purchasing your new BE Air Compressor

Your BE Compressor has been designed to give many years of reliable service when used in accordance with the following instructions.
The following should be carried out before using your new compressor:

1. **READ INSTURCTION MANUAL**
Carefully read this instruction manual and understand before starting your new compressor.

2. **CHECK OIL LEVEL**
(Refer Lubrication – Page 8)

3. **CHECK VOLTAGE**
For electric models ensure voltage supply and amp rating are compatible with motor (Typically 240 volts).

4. **RUNNING-IN PERIOD**
Before using your new air compressor run it for 15-30 minutes under no load by opening tank drain valve to permit air to escape. This will lubricate pistons and bearings.

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WARRANTY, TERMS & CONDITIONS

BE Australia warrants to the original purchaser of each BE Compressor, to be free from defects in material and workmanship.

Industrial Series: 3yr Pump, 5yr Tank and 12 months Limited Warranty on accessories and motor from the date of initial purchase.
Commercial & Workshop Series: 12 months Limited Warranty on complete unit. All Engines are covered by manufacturer's warranty.

BE Australia will provide a new part or total replacement at its discretion in place of any part or complete which is found upon its inspection to be defective in material and workmanship during the warranty period.

Such parts will be repaired or replaced without charge to the initial user upon proof of purchase to the store of purchase at the time of claiming under this warranty.

This warranty does not apply to failure occurring because of abuse, misuse, negligent repairs, corrosion, erosion and normal wear and tear. Alterations or modifications made to the product without express written consent of BE Australia or failure to follow the recommended operating and maintenance procedures as provided in this publication are also not warranted or guaranteed by BE Australia.

Irrespective of whether warranty is approved or rejected, the following costs are not covered under this warranty policy. Fares, charter fees, car hires, freight, tolls, hire or loan equipment, loss of earnings or stock, medications.

SAFETY INSTRUCTIONS

The information listed below should be read and understood by the operator. This information is given to protect the user while operating and storing the air compressor. We utilise the symbols below to allow the reader to recognize important information about their safety.

⚠ DANGER Indicates an imminently hazardous situation which, if avoided, will result in death or serious injury.	**⚠ CAUTION** Indicates a potentially hazardous situation which, if avoided, may result in minor or moderate injury.
⚠ WARNING Indicates a potentially hazardous situation which, if avoided, could result in death or serious injury.	**CAUTION** When used without the safety alert symbol indicates a potentially hazardous situation which, if avoided, may result in property damage.
⚠ WARNING	Improper operation or maintenance of this product could result in serious and/or property damage. Read and understand all the warnings and safety instructions provided before using this equipment.

CAUTION	Air compressor model E7025 should be operated on a dedicated 10amp circuit, for model E7035 + E16035 these units should be operated on a 15amp circuit. Always use more air hose before utilising extension cords. Low voltage **will** cause damage to the motor and void motor warranty.
Risk of Moving Parts 	If the air compressor is in operation, all guards and covers should be attached and installed correctly. If any guard or cover has been damaged, do not operate the equipment until the proper personnel has correctly repaired the equipment. The power cord should be free of any moving parts, twisting and/or crimping while in use and while in storage.
Risk from Flying Objects 	Always wear AS/NZS1336 approved safety glasses/eye protectors with side shields when the air compressor is in use. Turn off the air compressor and drain the air tank before performing any type of maintenance or disassembly of the hoses or fittings. Never point any nozzle or sprayer toward any part of the body or at other people or animals.

Risk to Breathing 	Avoid using the air compressor in confined areas. Always have adequate space (30cm) on all sides of the air compressor. Also keep children, pets, and others out of the area of operation. This air compressor does not provide breathable air for anyone or any auxiliary breathing device. Spraying material always needs to be in an area away from the air compressor to prevent damage to the air compressor filter.
Risk of Electrical Shock 	Never utilise the air compressor in the rain or wet conditions. Any electrical issues or repairs should be performed by authorised personnel such as an electrician and should comply with all Australian electrical codes. The air compressor should also have the proper three prong grounding plug, correct voltage, and adequate fuse protection.

Risk of Explosion or Fire 	Never operate the compressor near combustible materials, petrol, or solvent vapours. If spraying flammable materials, locate the air compressor at least 10 metres away from the spray area. Never operate the air compressor indoors or in a confined area.
Risk of Bursting 	Always drain the air compressor tank daily or after each use. If the air tank develops a leak, then replace the air compressor. Never use the air compressor after a leak has been found or attempt to make any modifications to the air tank. Never modify the air compressor's factory settings which control the tank pressure or any other function.
⚠ WARNING	Modification of the 15amp power plug will void warranty. Electric compressors are not recommended to be run on generators.
CAUTION	It is **NOT RECOMMENDED** to use an electric extension lead/cord. Use longer pneumatic hose for remote locations.

SPECIFICATIONS

MODEL	LENGTH cm	HEIGHT cm	WIDTH cm	WEIGHT kg
E 4025	72	66	33	30.5
E 4030V	72	66	33	38.5
E 5020-S	78	68	33	45
E 5025-C	88	73	38	56
E 5030-C	88	73	38	57
E 7025	94	85	43	70
E 7035	94	85	43	85
E 10030-C	106	78	38	65
E 11035	122	95	42	120
E 16035	135	95	55	140
E 30075	160	118	60	280
E 30010	160	118	60	290
P 5065C-H	88	73	38	38
P 5070C-R	88	73	38	55
P 7065 + P7070	94	85	43	85
D 7048 + D7050	94	95	43	90
P 16065	135	100	55	130
P 16013 + P 16015	135	104	55	135
D 16010	135	115	55	150

GLOSSARY

L/Min: Litres per minute. a metric unit of air flow

C.F.M Cubic Feet per Minute; an imperial unit of air flow (convert to metric multiply by 28.32)

K.P.A Kilopascals; a metric unit of measure for pressure.

Psi: Pounds per square inch; an imperial unit of measure for pressure.

F.A.D: Free air delivery (L/Min or C.F.M)

Cut-In Pressure: The air compressor will automatically start to refill the tank when the pressure drops below the prescribed minimum.

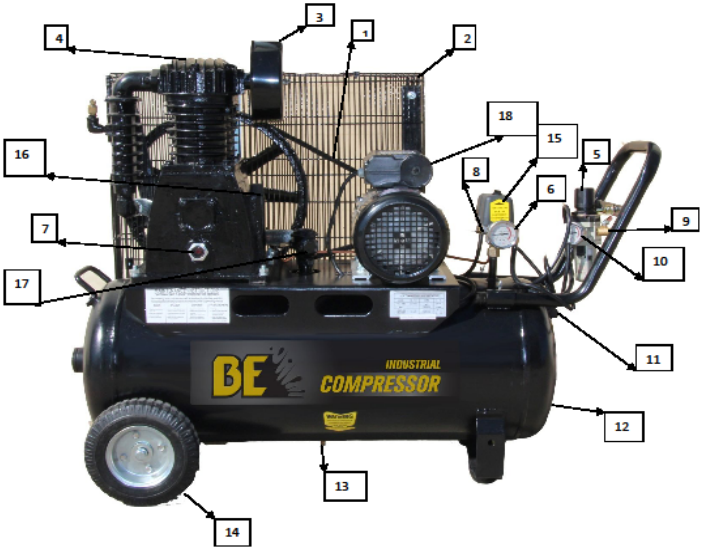
Cut-Out Pressure: The point at which the motor stops when the tank has reached maximum air pressure

Code Certification: Products that bear one or more of the following marks: UL, CUL, ETL, CSA, EMC, have been evaluated by OSHA-certified independent safety laboratories and meet the applicable Underwriters Laboratories Standards for Safety

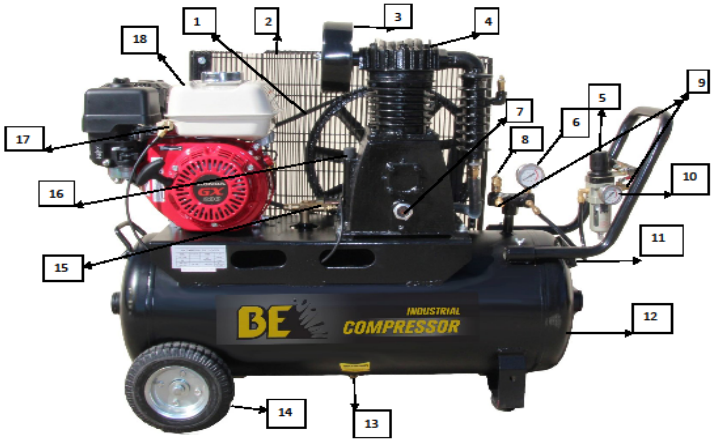
DUTY CYCLE

BE recommend a maximum duty cycle of 60% of on-load and 40% off-load for all BE Industrial compressors and 30% on load and 70% off load on domestic range. Cycle times over this may cause damage to your compressor.

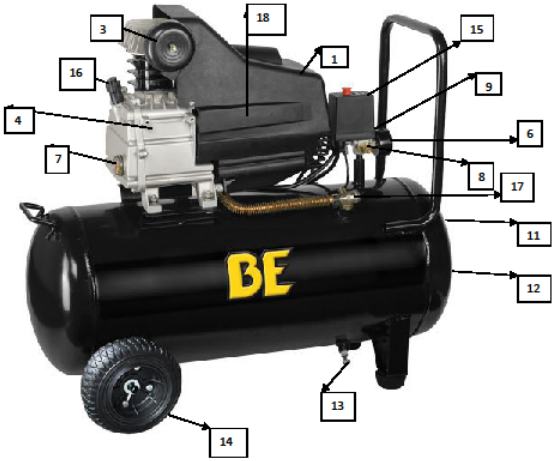
AIR COMPRESSOR PARTS AND FEATURES



1; "V" Belt	7; Oil sight glass	13; Tank drain valve
2; Belt guard	8; Safety valve	14; Wheel
3; Air filter assembly	9; Air outlet valve	15; Pressure switch
4; Pump	10; Filter regulator gauge	16; Oil filler
5; Filter regulator	11; Tank name plate	17; Non return valve
6; Tank pressure gauge	12; Tank	18; Electric motor



1; "V" Belt	7; Oil sight glass	13; Tank drain valve
2; Belt guard	8; Safety valve	14; Wheel
3; Air filter assembly	9; Air outlet valve	15; Idle control valve
4; Pump	10; Filter regulator gauge	16; Oil filler
5; Filter regulator	11; Tank name plate	17; Engine idle valve
6; Tank pressure gauge	12; Tank	18; Engine



1; Motor cover	7; Oil sight glass	13; Tank drain valve
2; N/A	8; Safety valve	14; Wheel
3; Air filter assembly	9; Air outlet valve	15; Pressure switch
4; Pump	10; N/A	16; Oil filler
5; N/A	11; Tank name plate	17; Non return valve
6; Tank pressure gauge	12; Tank	18; Electric motor (under cover)

AIR COMPRESSOR PARTS AND FEATURES

Drain Valve: Used to drain condensation from the air receiver. Located at bottom of tank.

Motor Thermal Overload: The motor has an automatic thermal overload protector. If the motor overheats, this protector will shut off the motor. The motor must be allowed 30 minutes to cool before restarting (not shown).

Pressure Switch: This controls the power to the motor and the cut-in/cut-out pressure settings. This switch serves as the Auto-On/Off positions for the unit.

Air Intake Filter: Provides clean air to the pump and must always be kept free of debris. Check daily or before each use. Picture shown in assembly section.

Air Compressor Pump: Oil lubricated pump that compresses air which is distributed to the tank.

Non-Return Valve: When the pump is not in operation the valve closes to retain air pressure inside the receiver.

Air Relief Valve: The air relief valve located on the bottom of the pressure switch is designed to automatically release compressed air when the air compressor reaches cut-out pressure. The released air should only escape momentarily, and the valve should then close.

Safety Valve: Used to allow excess tank pressure to escape into the atmosphere. This valve should only open when the air tank pressure is above the maximum rated pressure.

Outlet Pressure Gauge: Indicates the outgoing air pressure to the tool and is controlled by the filter regulator.

Tank Pressure Gauge: Indicates the reserve air pressure in the tank.

Filter Regulator: The air pressure coming from the air tank is controlled by the filter regulator. To increase the pressure, turn the knob clockwise and to decrease the pressure turn the knob counter clockwise

INSTALLATION AND ASSEMBLY

The air compressor should be turned off and unplugged from the power source before any maintenance is performed as well as the air bled from the tank and the unit allowed time to cool. Personal injuries could occur from moving parts, electrical sources, compressed air, or hot surfaces. The filter regulator assembly must be attached before use. Failure to assemble correctly could result in leaks and possible injury. If unsure of assembly instructions or you have trouble with assembly, please call your local service dealer for further instruction.

⚠ WARNING

Location of the Air Compressor

The air compressor should always be in a level, clean, dry, and well-ventilated environment. The unit should have a minimum, 30cm of space on each side. The air filter intake should be free of any debris or obstructions. Check the air filter daily to be sure it is clean and in working order.

Grounding Instructions

This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances. Check with qualified electrician or service personnel if these instructions are not completely understood of if in doubt as to whether the tool is properly grounded. For 3 phase machines ensure correct rotation.

Improper installation of the grounding plug will result in a risk of electric shock. If repair or replacement of the cord or plug is necessary. **Only use a qualified electrician**. Do not modify the plug provided; if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

This product is for use on a circuit having a nominal rating of 240v or 415v and is factory-equipped with a specific electric cord and plug to permit connection to a proper electric circuit. Make sure that the product is connected to an outlet having the same configuration as the plug. No adaptor should be used with this product. If the product must be reconnected for use on a different type of electric circuit, a qualified electrician should make the reconnection.

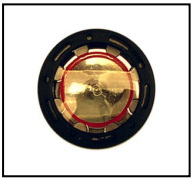
To install the Air Intake Filter

Remove the air intake filter from the poly bag and screw it onto the head of the compressor.

LUBRICATION AND OIL

1. Stop compressor.
2. Check oil level.
3. Add or replace oil as required.

Oil level should be maintained above midpoint of sight glass and filled to the centre of the red circle in the sight glass (as shown below).



Remove the oil fill cap by turning it counter clockwise by hand. Fill the compressor pump with Air compressor oil at slow intervals until the oil reaches the centre of the red circle in the sight glass (as shown).

Use oil such as SAE-30 (measured@100^{O}C) Mineral based Compressor Oil.
BE Pump Oil part number 85.490.000 is recommended.

⚠ WARNING

Drain the tank to release all tank air pressure before removing the oil fill cap. Be sure the air vent in the oil fill cap (see figure to the right) is free from debris. If air vent is blocked, pressure can build in crankcase causing damage to the compressor and possible personal injury.

OPERATING PROCEDURES

Daily Start-Up Procedures

1. Before connecting your Air compressor to a power source, be sure that the voltage supply is the same as that specified on the name plate of the compressor.
2. Set the Auto-On/Off lever to the Off position.
3. Check the air compressor visually for any damage or obstruction.
4. Ensure that the location for the air compressor is clean, dry, and well ventilated.
5. Close the drain valve.
6. Check the oil level of the pump.
7. Connect plug to main power supply, do not use extension leads as this may result in a drop in voltage causing motor damage.
8. Start compressor by switching the knob on the pressure switch to the on position and the compressor will start and build air pressure in the tank to cut-out pressure and then shut off automatically.
9. Adjust the filter regulator to a psi/kpa setting that is needed for your application and be sure it is within the safety standards required to perform the task. If using a pneumatic tool, the manufacturer should have recommendations in the manual for that tool on operating pressure (psi/kpa) settings.
10. The air compressor is now ready for use

Daily Shut-Down Procedures

1. The on/off lever located on the pressure switch **MUST BE USED TO SHUT DOWN COMPRESSOR**. To ensure pressure is unloaded through the vented check valve via the pressure switch in the loader valve.
2. Unplug the power cord from the receptacle.
3. Set the outlet pressure to zero on the filter regulator.
4. Remove any air tools or accessories.
5. When draining air tank always use ear and eye protection. Drain the air tank in a suitable location; condensation will be present in most cases of draining.
6. Open the drain valve allowing air to bleed from the tank. After all the air has bled from the tank close the drain valve to prevent debris build-up in the valve.
7. When draining the air tank always use ear and eye protection.

⚠ WARNING

Water that remains in the air tank during storage will corrode and weaken the air tank which could cause it to rupture. To avoid serious injury, be sure to drain the tank after each use or daily.

CAUTION

Do not use your electric or engine drive air Compressor outdoors while it is raining or on a wet surface. Either of these situations could result in electric shock or damage to the machine.

IMPORTANT

It is important to re-tension the head bolts on the compressor pump after the first 2 hours of use and every 3 months thereafter.
Head tensions should be set to 24Nm QH 50+80 pumps and 43 Nm on JC pump

PREVENTATIVE MAINTENANCE

⚠ WARNING

The air compressor should be turned off and disconnected from the power source before any maintenance is performed as well as the air bled from the air tank and the unit allowed time to cool. Personal injuries could occur from moving parts, electrical sources, compressed air, or hot surfaces.

To ensure efficient operation and longer life of the air compressor unit a routine maintenance schedule should be followed. The following schedule is geared toward a consumer whose compressor is used in a normal working environment daily. If necessary, the schedule should be modified to suit the conditions under which your compressor is used. The modifications will depend upon the hours of operation and the working environment. Air compressors used in an extremely dirty and/or hostile environment will require a greater frequency of all maintenance checks.

Disconnect compressor from power supply and release air prior to any servicing/maintenance.

A good maintenance program will add years of service to your air compressor. The following is recommended as a minimum maintenance program.

DAILY MAINTENANCE

1. Check and maintain oil level and add oil as necessary
2. Drain air tank of moisture via drain valve
3. Check for unusual noise or vibration (see “Troubleshooting”)

WEEKLY MAINTENANCE

1. Clean the air filters. A clogged air filter can seriously affect the efficiency of the compressor and cause overheating and excessive oil usage.
2. Clean all external parts of the compressor. A dirty compressor can cause abnormally high discharge temperature and resulting oil carbonisation on internal valve components.
3. Check the safety valve manually (by pulling ring or lever) to ensure correct operation.

MONTHLY MAINTENANCE

1. Inspect condition of oil and change if necessary
2. Check drive belt tension and tighten if needed

EVERY THREE MONTHS OR 600 HOURS OF OPERATION

We recommend an Authorised BE service agent carry out this service.

1. Change oil
2. Inspect valves. Clean the carbon from valves and head if necessary
3. Check all nuts, bolts, etc and tighten as necessary
4. Check non return valve operation.

STORAGE

For storing the air compressor, be sure to do the following:

1. Turn the unit off and unplug the power cord from the receptacle.
2. Remove all air hoses, accessories, and air tools from the air compressor.
3. Perform the daily maintenance schedule.
4. Open the drain valve to bleed all air from the air tank.
5. Close the drain valve.
6. Store the air compressor in a clean and dry location.

TROUBLESHOOTING GUIDE

Trouble Reference ..... Checkpoint

Oil in discharge air 1,4,7,14,19

Knocks or rattles 2,14,15,16,17

Air delivery has dropped off 1,6,14.17

Trips motor overload or draws excessive current 5,11,12,14

Moisture in frame or rusting in cylinders 9

Excessive starting and stopping 6,10,14,19

Compressor runs excessively hot 3, 8,10,13,14.19

Compressor does not come up to speed 2,11,17

Motor will not run 12,13,18

Check Point	Possible Cause	Corrective Action
1	Clogged or dirty air inlet filter.	Clean or replace filter element.
2	Loose belt wheel or motor pulley. Excessive end play in motor shaft.	Check belt wheel, motor pulley and shaft. Repair or replace as required.
3	Inadequate ventilation around flywheel.	Relocate compressor for adequate airflow.
4	Oil viscosity too low	Drain oil from pump and refill with correct oil.
5	Oil viscosity too high	Drain oil from pump and refill with correct oil.
6	Air leaks in piping (on compressor or external piping/system).	Check hoses and connections. Repair or replace as required.
7	Oil level too high	Drain oil to proper level
8	Oil level too low	Add oil to bring level up to acceptable point.
9	Compressor located in damp or humid spot	Relocate compressor
10	Tank non return valve leaking	Tighten or replace non return valve
11	Improper line voltage	Check line voltage, change lines as required
12	Poor power supply	Consult local power company
13	V-belt is pulled too tight	Adjust belt tension
14	Compressor pump worn or damaged	Contact BE authorised service agent
15	Excessive condensate in air tank	Drain tank
16	Loose guard or fittings	Tighten all fittings
17	V-belt is too loose	Tighten V belt
18	Motor overloaded	Reset motor overload
19	Compressor rating too small (air delivery)	Refer dealer for correctly rated machine

MAINTENANCE AND REPAIR RECORD

DATE OF PURCHASE	MODEL NUMBER	SERIAL NUMBER	PLACE OF PURCHASE

DATE	MAINTENANCE AND REPAIR ACTIVITY

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CONTACT DETAILS

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POWER EQUIPMENT

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Errors and omissions excepted
Specifications and performance may change
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