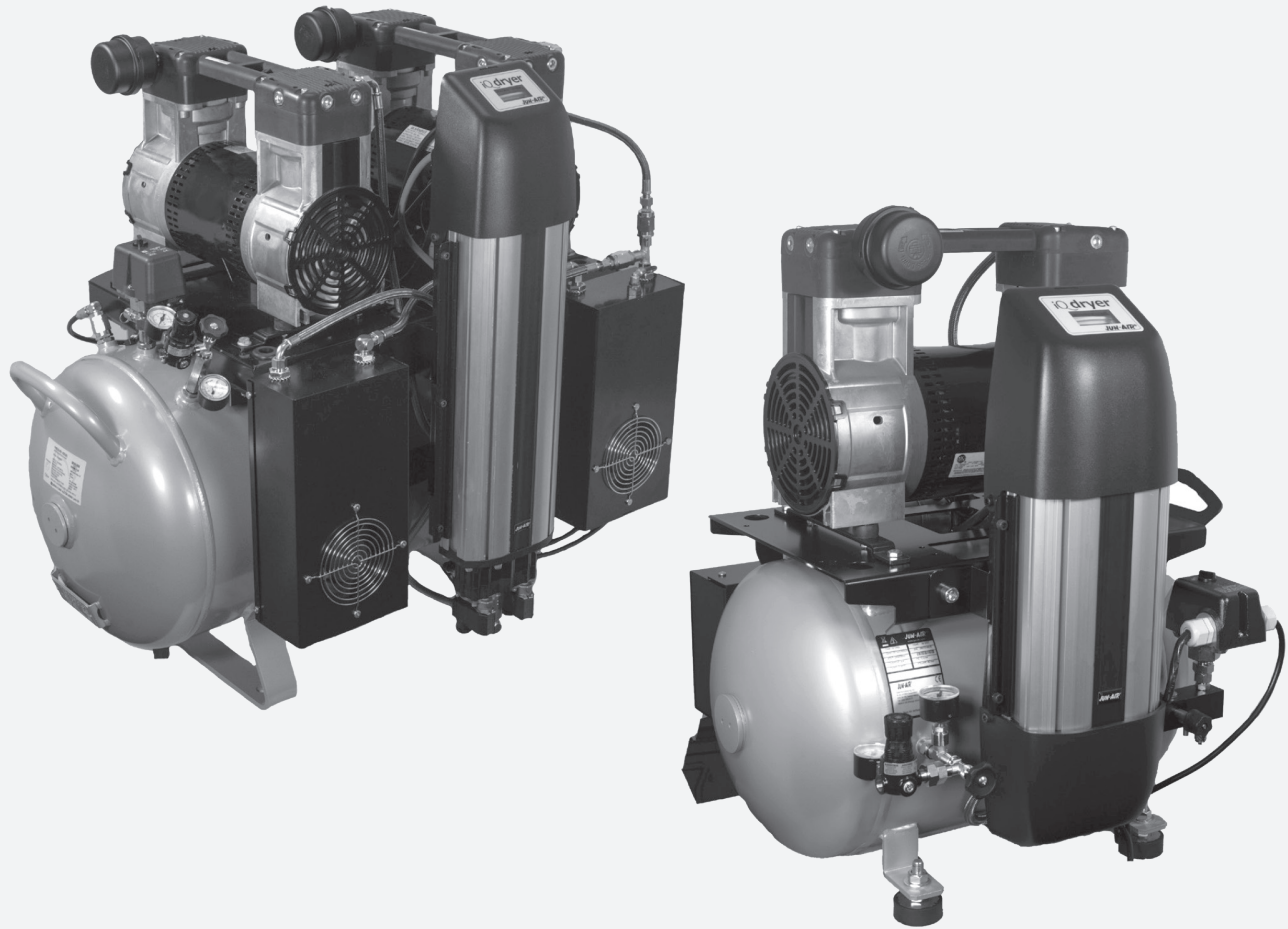




Operation and Maintenance Manual

120R Compressor Systems

1203310, 1203560, 1203730

Jun-Air®
powered by **gast**



Additional Languages.



Declaration of Conformity.

gastmfg.com

Dear Customer,

Congratulations on the purchase of your new Jun-Air® air compressor system. It is intended to be used in various commercial and industrial applications where compressed air is needed.

 WARNING



PLEASE READ THIS MANUAL COMPLETELY BEFORE INSTALLING AND USING THIS PRODUCT. SAVE THIS MANUAL FOR FUTURE REFERENCE AND KEEP IN THE VICINITY OF THE PRODUCT.

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SAFETY

Please note that pictures and figures referenced in the text can be found throughout the manual.

Important - read this first!

Please read the following information and operating instructions included with this product before use. This information is for your safety and it is important that you follow these instructions. It will also help prevent damage to the product. Failure to operate the unit in accordance with the instructions or using Jun-Air® unauthorized spare parts can cause damage to the unit and could cause serious injury.

CAUTION: To reduce risk of electric shock

- Only authorized service agents should carry out service. Removing parts or attempting repairs can create an electric shock. Refer all servicing to qualified service agents.
- If this unit is supplied with a three-pin plug, connect with a properly grounded outlet only.

WARNING: To reduce risk of electrocution

- Do not use this unit with electrical voltages other than stated on the rating plate.
- Always unplug this unit immediately after use and store in a dry place.
- Do not use this product in or near liquid or where it can fall or be pulled into water or other liquids.
- Do not reach for this product if it has fallen into liquid. Unplug immediately.
- This unit is not weatherproof. Never operate outdoors in the rain or in a wet area.

DANGER: To reduce risk of explosion or fire

- During spraying with combustible liquids, risk of explosion may arise, particularly in closed rooms.
- Do not use this product in or near explosive atmospheres or where aerosol products are being used.
- Do not pump any other gases other than atmospheric air.
- Do not pump combustible liquids or vapors with this product; do not use it in or near areas with combustible or explosive liquids or vapors.
- Do not use this unit near open flames.

CAUTION: To prevent injury

- Compressed air can be dangerous; do not direct airflow at a person's head or body.
- Always keep the system out of reach of children.
- Never operate this product if it has a damaged power lead or plug, if it has been dropped or damaged, or if it has fallen into water. Return the product to a service center for examination and repair.
- Keep the electrical cable away from hot surfaces.
- Ensure all openings are kept free of restriction and never restart when the unit cools and the overload resets. Never place the system on a soft surface where the openings may be blocked. Keep all openings free from dust, dirt and other particles.
- Never leave this product unattended when plugged in.
- Never insert fingers or any other objects into fans.
- This unit is thermally protected and can automatically restart when the overload resets.
- Wear safety glasses when servicing this product.
- Use only in well-ventilated areas.
- This product may only be connected to units or tools with a maximum pressure rating higher or equal to that of the compressor.
- The surface of the compressor can get hot. Do not touch compressor motor during operation.

Failure to observe these safety precautions could result in serious injury or, in extreme cases, death.

IMPORTANT: General directions for use

- Protect the system against rain, moisture, frost and dust.
- The compressor is constructed and approved for a maximum pressure as stated under Technical Data and Specifications.
- Do not operate the compressor at ambient temperatures exceeding 40°C/104°F or falling below 0°C/32°F.
- If the supply power lead on the compressor is defective, an authorized Jun-Air® distributor or other qualified personnel must carry out the repair.

INSTALLATION

Your Jun-Air® system is easy to operate. Follow the instructions and you will get many years of service from your compressor.

- Visually inspect unit for shipping damage, contact your supplier immediately if you think the unit may have been damaged.
- Check that the performance of the compressor matches the actual air consumption, please refer to the Technical Data and Specifications section.
- Check that the rating plate of the compressor corresponds with the electrical voltage offered and check that fusing is adequate.

Unpacking

- Cut the banding strap from the carton and remove the lid and cardboard inserts.
- Visually inspect the entire system for shipping damage and verify that the accessories have been included.
 - If the contents were damaged during shipping, contact the freight carrier to file a claim.
 - If parts are missing, contact the supplier.
- Use caution when removing the system from the remaining packaging. Retain the packaging material for future use, if necessary.

Placing

Place the compressor in a dust-free, dry and cool, yet frost-free room. Sufficient cooling from the surroundings is important.

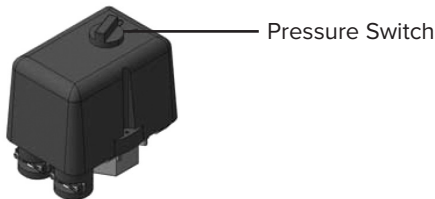
- Ambient temperature: 0°C to 40°C, 32°F to 104°F
- Relative humidity: Maximum of 90%

Transportation and Storage Conditions:

- Temperature: -25°C (-13°F) to 55°C (131°F)
- Relative humidity: Maximum of 90%
- Keep the system dry at all times.
- Do not stack units during shipment, installation, or usage.

OPERATION

- If the compressor has been stored at an extremely low temperature, allow it to heat to room temperature before switching it on.
- If the compressor is supplied with a receiver, connect equipment and open the filter regulator on the receiver.
- Turn on the compressor on the pressure switch.



- The compressor will automatically stop when the preset cut-out pressure is reached.
- If the compressor does not start, there might be pressure in the receiver. The compressor will automatically start when the pressure drops.
- The cut-in and cut-out pressure is preset from the factory and it is normally not necessary to change this. However, if it is necessary to change the preset settings, the instructions of this manual shall be followed carefully.
- All AC compressors are designed for 100% duty but 50% operation is recommendable to prolong the lifetime.
- Do not remove the protection covers during operation as it may cause electric shock or other personal injury.
- Do not lubricate the oil-less motor with oil, as it will destroy important components.
- Unit must be on level surface to ensure stability during use, transport, assembly, and servicing.

MAINTENANCE

To ensure a long lifetime of the compressor, it is important that inspection and maintenance is carried out regularly as described in the following.

Preventative Maintenance

	Activity	Weekly	Monthly	Once a year, or every 2,000 hours
a	Drain condensate	•		
b	Check filter regulator	•		
c	Check for leaks		•	
d	Clean the unit		•	
e	Check safety valve			•
f	Check inlet filter			•
g	Check non-return valve			•

a) Drain condensate

Drain condensate by opening the drain cock on the receiver.

If mounted with auto drain, condensate will be drained automatically. If drain bottle is installed, empty when necessary.

b) Check filter regulator

If a filter regulator is installed, check weekly and drain for condensate by pressing the button at the bottom.

If auto drain is installed, the filter will be emptied automatically.

Check and change the filter and filter element in accordance with the instructions in the table above.

c) Check for leaks

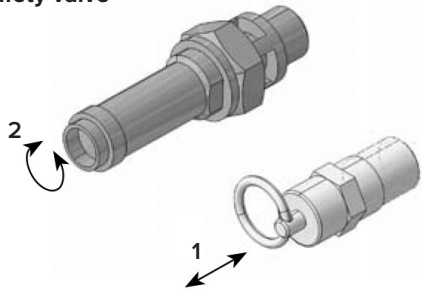
Check motor, hoses, and equipment for leaks.

Check the pumping time.

d) Clean the unit

Clean the unit when needed with a soft, damp cloth. If necessary, use paraffin to remove adhesions. Dust and dirt prevent cooling.

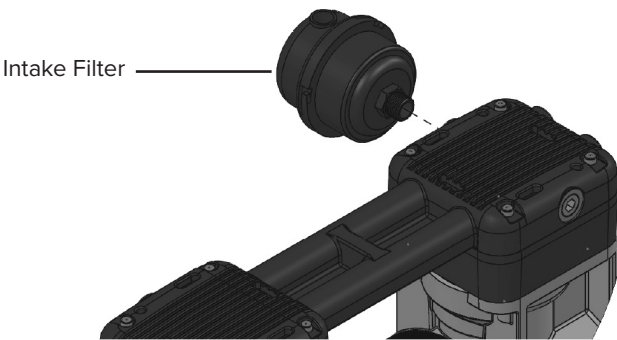
e) Check safety valve



Check the safety valve with pressure in the receiver. The safety valve is operated by pulling the ring (1) or turning the screw (2) depending on the valve type.

f) Check intake filter

Check the intake filter and change it if necessary.



Remove the filter and replace.

g) Check the non-return valve

Turn off the compressor on the mains switch and pull out the plug.

Empty the receiver of compressed air by operating the safety valve. When the receiver is empty, the reading of the pressure gauge is 0 bar.

Dismount the non-return valve from the receiver.



Disassemble the non-return valve and remove the o-ring (1) from the piston.

Clean the non-return valve.

Mount a new o-ring and re-assemble the non-return valve.

Re-install the non-return valve.

Please note that all service must be carried out by a qualified person.

MAINTENANCE

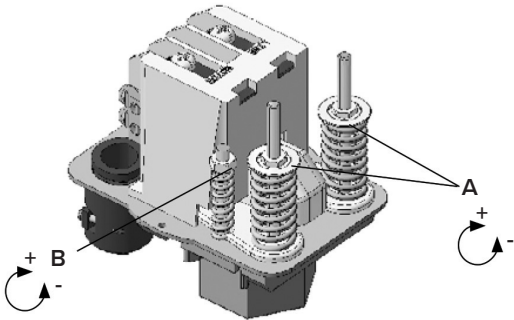
Adjustment of Pressure Switch

The working pressure has been preset from the factory, and it is normally not necessary to change this.

However, if it is necessary to change the preset settings, the instructions mentioned below should be followed carefully.

⚠ WARNING:
The compressor is constructed and approved for a maximum pressure as stated under Technical Data and Specifications - do not adjust to a higher pressure.
Higher working pressure will reduce the lifetime of the compressor.

The compressor will stop at maximum pressure (stop pressure) and start again at minimum pressure (start pressure). The difference between maximum and minimum pressure is the differential pressure.



Unscrew the lid of the pressure switch. Adjust maximum pressure by adjusting the two springs marked A (clockwise: higher pressure). Adjust the two springs identically.
Adjust the differential pressure by adjusting the spring marked B (clockwise: higher differential pressure, start pressure maintained).

Test of Pumping Time

The pumping time indicates the condition of the compressor.

- 1. Check that there are no leaks in the system.
- 2. Empty the air receiver of compressed air so that the pressure gauge shows 0 bar.
- 3. Close the filter regulator and check that the drain valve is closed.
- 4. Start the compressor and note the time it takes until it is turned off again by the pressure switch. Check that the pumping time agrees with the technical specifications for the actual compressor system.

Pump up times change if measuring other than from 0 psi to maximum pressure.

⚠ IMPORTANT:
Always test the pumping time when cold. If the compressor is warm, the pumping time will be considerably longer.

FAULT FINDING AND REPAIR

IMPORTANT!
SWITCH OFF AND ISOLATE FROM ELECTRICAL SUPPLY BEFORE REMOVING ANY PARTS FROM THE PUMP. EMPTY AIR RECEIVER OF AIR BEFORE PERFORMING ANY OPERATION ON THE COMPRESSORS' PRESSURE SYSTEM.

- 1. Compressor does not start**
 - a. The air receiver is pressurized. The motor will start when the pressure has dropped to the preset start pressure. Empty the receiver.
 - b. Check that the mains supply agrees with the motor label.
 - c. No power from mains. Check fuses and plug.
 - d. Bad connection or broken cable.
 - e. The motor is overheated and the thermal protection has switched it off. When cooled the motor will turn on automatically. Go to section 4.
 - f. The compressor has not been unloaded and there is back pressure on the piston. Ensure that the compressor is unloaded each time it stops.
 - g. The motor is blocked.
 - h. Defective capacitor.
- 2. The compressor makes a buzzing sound but does not start**
 - a. Leaky non-return valve. Dismount the pressure pipe and check if air leaks from the non-return valve. Clean and replace.
 - b. The motor is blocked.
- 3. The compressor runs but the pressure does not increase**
 - a. Intake filter clogged. Replace.
 - b. Non-return valve is clogged. Clean or replace.
 - c. Leaks in fittings, tubes or pneumatic equipment. Check with soapy water or by letting unit stay over night disconnected from mains. Pressure drop should not exceed 1 bar.
 - d. Check the piston gaskets. Replace if necessary.
 - e. Defective valve plate. Contact your Jun-Air® distributor.
- 4. The motor gets very hot**
 - a. The ambient temperature is too high. If the motor is installed in a cabinet, sufficient ventilation must be ensured.

- b. Leaks in fittings, tubes or pneumatic equipment. Check with soapy water or by letting unit stay over night disconnected from mains. Pressure drop should not exceed 1 bar.
 - c. The compressor is overloaded.
- 5. The compressor runs even if no air is tapped**
 - a. Leaks in fittings, tubes or pneumatic equipment. Check with soapy water or by letting unit stay overnight disconnected from mains. Pressure drop should not exceed 1 bar.
- 6. The compressor does not start at minimum pressure or does not stop at maximum pressure**
 - a. Defective pressure switch. Replace.

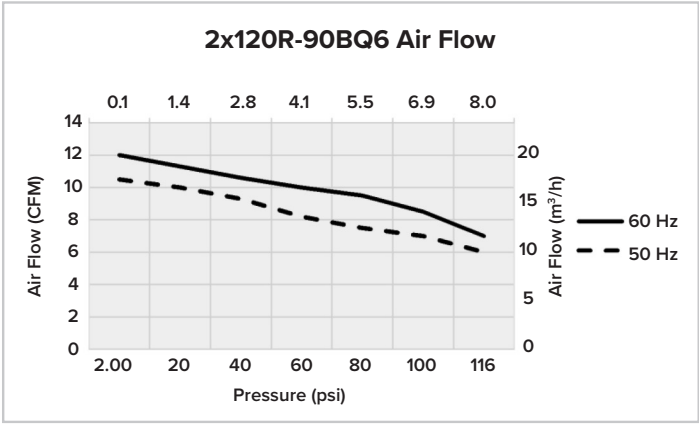
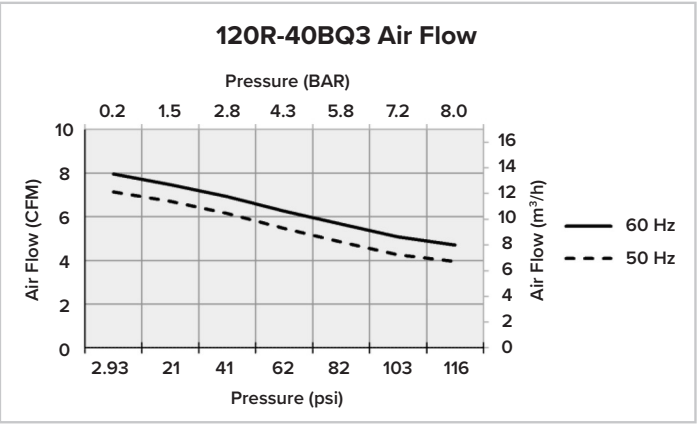
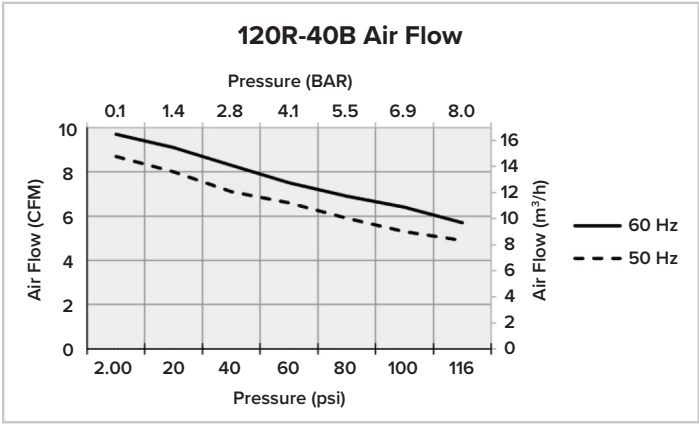
PRESSURE VESSEL	
Pressure tested at	14-25 liter 24 bar 40-50 liter 18.3 bar
Directions for use	
Application	Receiver for compressed air
Receiver specifications	See name plate
Installation	Tubes, etc. must be installed with suitable materials
Placement	Observe the working temperature of the receiver
	Ensure sufficient room for inspection and maintenance
Corrosion protection	The receiver must be kept in a horizontal position
	The surface treatment must be maintained as required
	Internal inspection at least every five years
Alternation/repair	Drain condensate at least once a week
	No welding must be made on pressurized parts
Safety valve	Ensures that PS will not be exceeded
	Never adjust to a higher pressure than PS
	The capacity of the valve must be calculated in accordance with the volume of air supplied by the compressor
	PS - Maximum working pressure of the receiver

TECHNICAL DATA AND SPECIFICATIONS

Specifications		120R-40B	120R-40BQ3	2x120R-90BQ6
Tank size	liter	40	40	90
	U.S. gallon	10.6	10.6	24
Weight	kg	55	66	102
	lbs	120	144	225
Dimensions (w x h x d)*	mm	556 x 443 x 678	556 x 581 x 678	1026 x 592 x 890
	in	21.9 x 17.4 x 26.7	21.9 x 22.9 x 26.7	40.4 x 23.3 x 35.0
Pumping time	@ 50 Hz	85 sec.	110 sec.	124 sec.
	@ 60 Hz	72 sec.	95 sec.	107 sec.
Noise level @ 1 m	@ 50 Hz	76 dB(a)	76 dB(a)	79 dB(a)
	@ 60 Hz	79 dB(a)	79 dB(a)	82 dB(a)

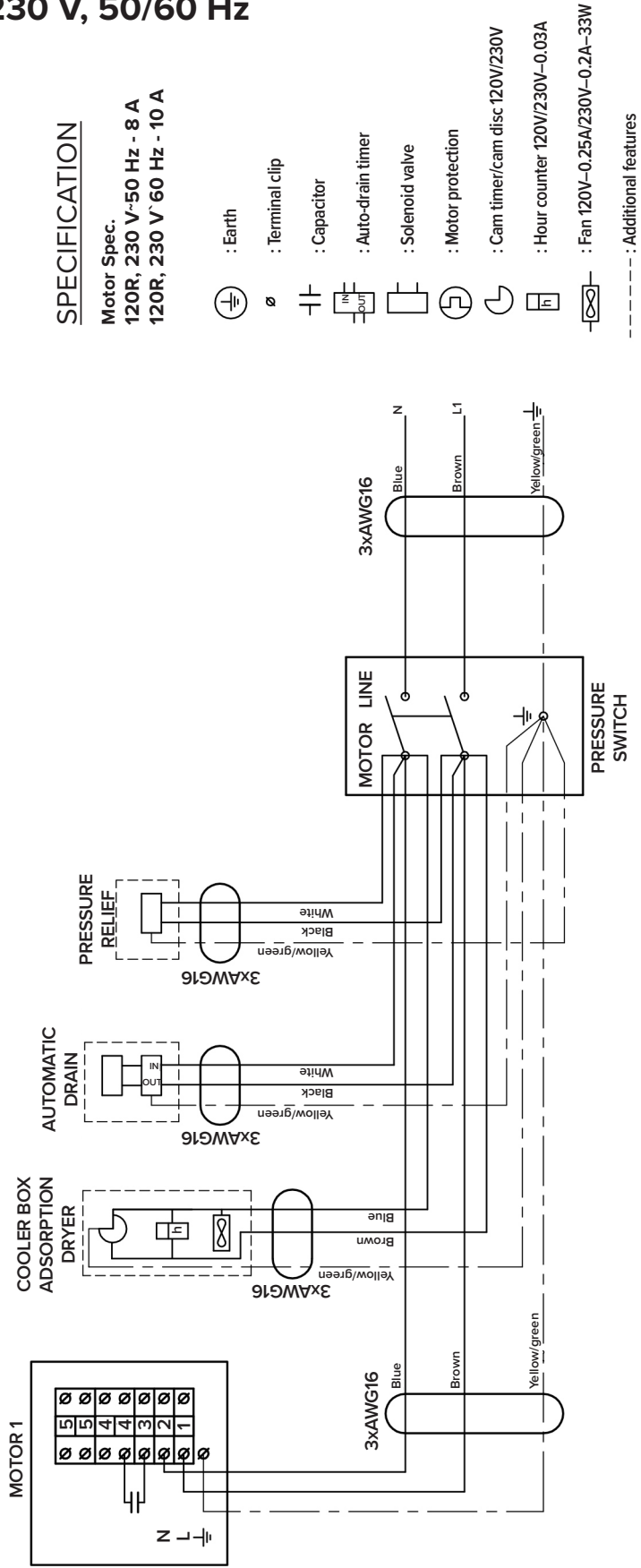
Technical modifications reserved.
*Three-phase units are approximately 100 mm wider than one-phase units.

PERFORMANCE CURVES



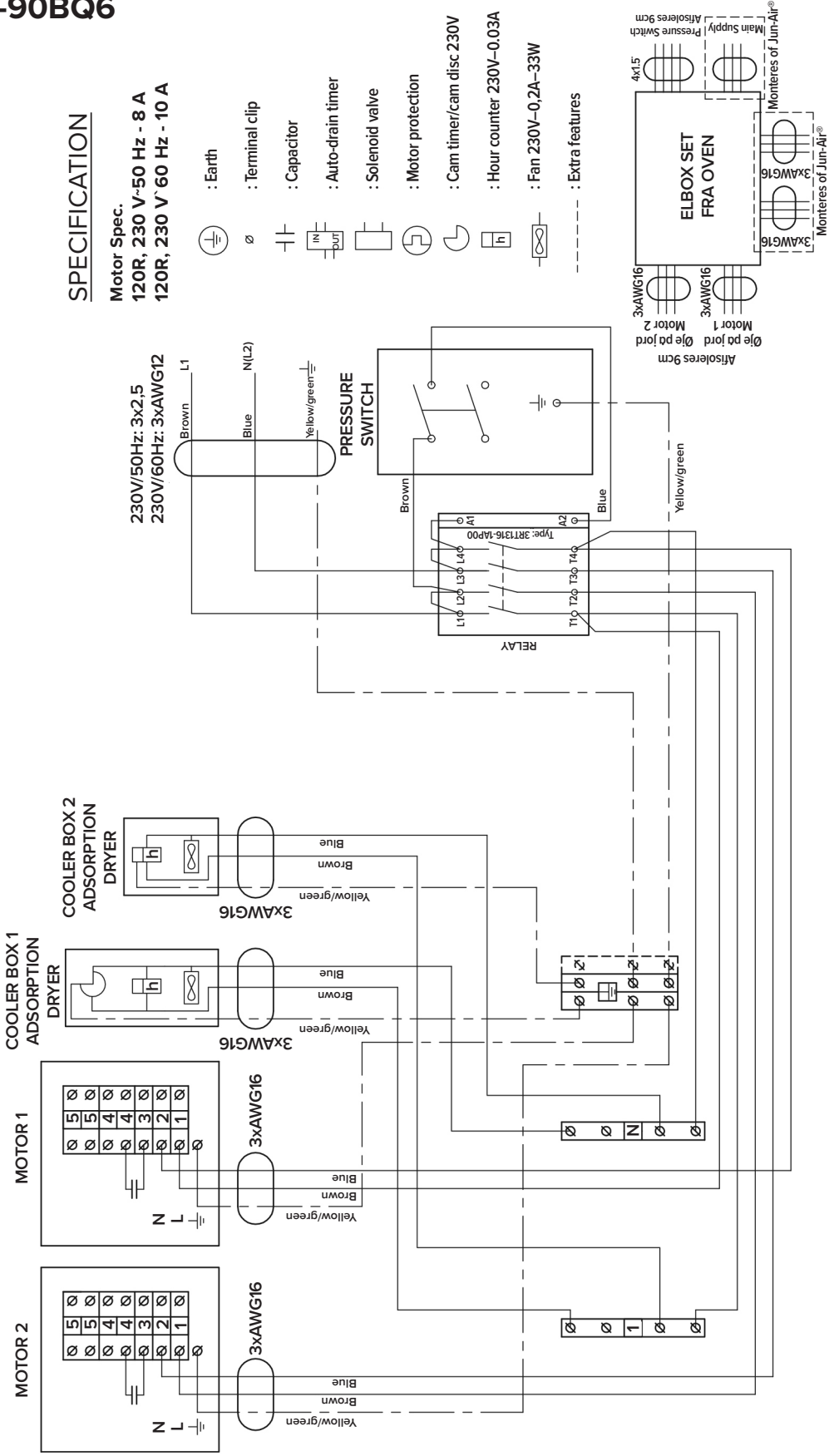
ELECTRICAL DRAWINGS

Model 120R-40B – 230 V, 50/60 Hz

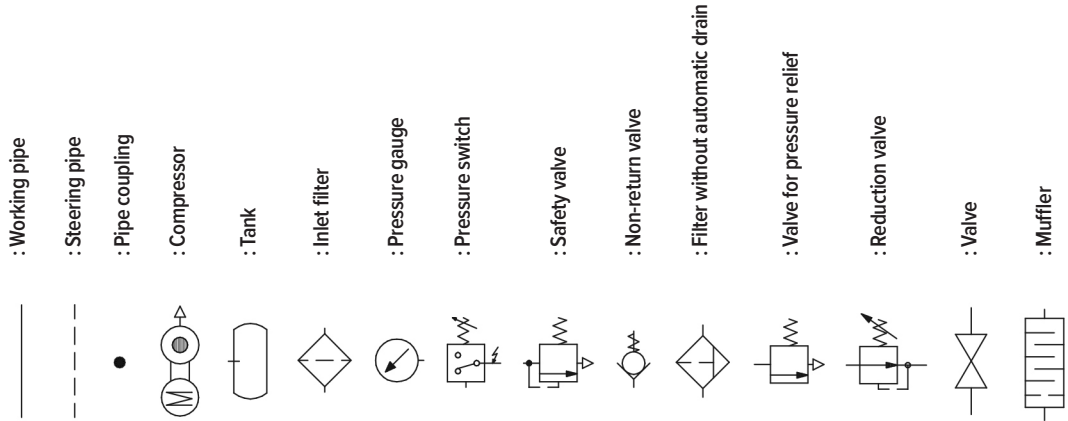


ELECTRICAL DRAWINGS

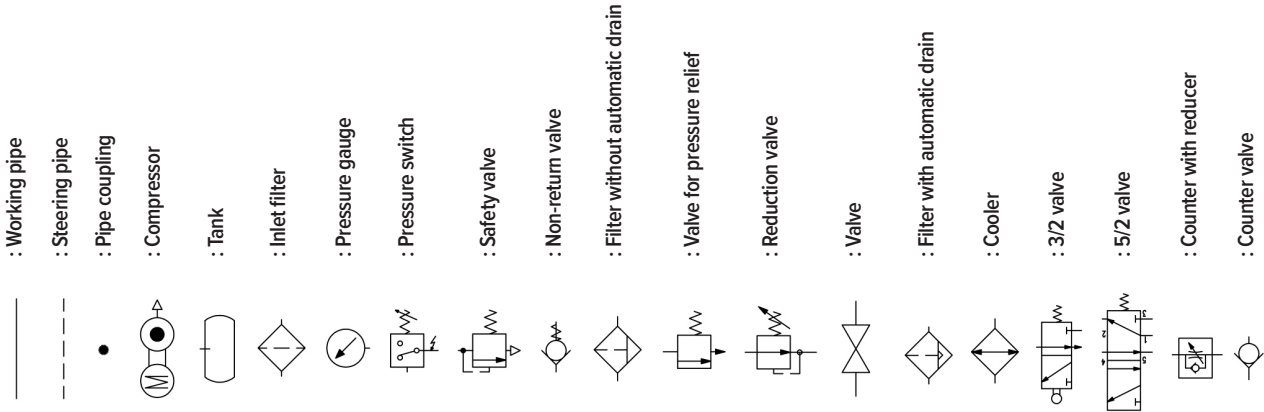
Model 120R-90BQ6



Model 120R-40B

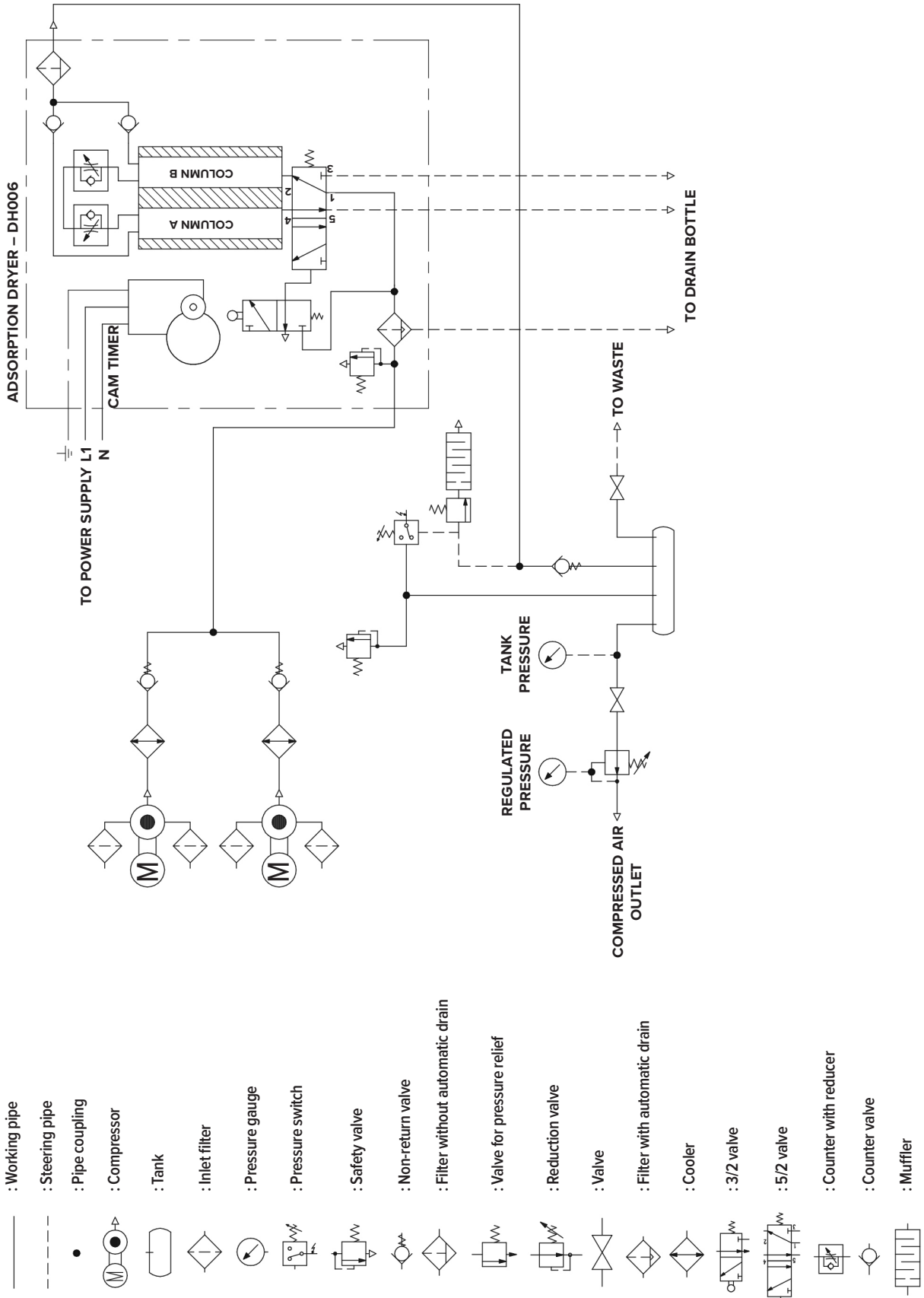


Model 120R-40BQ3



PNEUMATIC DIAGRAMS

Model 120R-90BQ6



PARTS AND ACCESSORIES

Part no.	Description
120R689-P101MN800NX	Compressor, 230 V, 50/60Hz
3440099	Receiver 25l horizontal CE/ASME
3512098	Receiver 40l silver w/inspection plug internally coated CE/ASME
3695299	Receiver 150l w/inspection plug, CE, silver and internally coated
4071020	Regulator R07-280-RNMG, 10 bar
4071030	Filter regulator 5um w/manual drain
4082927	Dryer f/2xOF302-25BD2/OF1201-25BD2 - OX - 8 bar
4082928	Dryer f/2xOF302-40BD2/OF1201-40BD2 - OX - 8 bar
4083407	Dryer 6000/2xOF1202 - OX - 8 bar
4146458	Rapid fitting Ø8 mm x Ø8 mm elbow
4738600	Box for motor protector M4000
4739301	Contact 5.5 kW 230V/400V
4739403	Thermo relay 4.0-6.2A Danfoss
4739500	Box for motor protection 1-2000
4740000	Connector 2.5Q yellow/green
4740200	Connector 2.5Q grey
4740300	Plate f/connector
4741000	Cage clamp connector
5031600	Pressure switch MDR 2/11 4-way compl.
5033000	Pressure switch MDR 21/11 w/unloader
5035000	Pressure switch MDR 2/11 w/unloader
5074800	Pressure switch MDR 21/11 4-way UL
5130000	Gauge Ø40 0-16 bar 1/8" down
5414500	Non-return valve
5416000	Safety valve 10 bar / 145 psi
5416100	Safety valve 12 bar / 177 psi
5417000	Safety valve 9 bar / 135 psi
5420000	Drain cock 1/4" 25l
5421001	Drain cock 1/4" 40l (new)
5422500	Drain cock 1/4" no tube
5424000	Outlet cock 1/4"
5425500	Safety valve TÜV 10 bar
5425700	Safety valve TÜV 12.2 bar
5427000	Connecting piece 1/4"
5445225	Radiator & fan MOF1200 w/camtimer 230V CE/UL
5445230	Radiator & fan 2xOF1202-150BD6 with camtimer 230V
5445231	Radiator & fan 2xOF1202-150BD6 without camtimer 230V CE/UL
5612310	Drain bottle 1 l multi excl. accessories
5820000	Spring f/non-return valve
6241800	O-ring f/1" plug - 32x5 mm
6242500	O-ring Ø16.1x1.6 mm
6243000	O-ring Ø7.3x2.4 mm brown f/non-return valve
6243710	O-ring f/plug Ø11.2x2.4 f/OF300
6245800	O-ring Ø47x5 f/1 1/2" plug
6246000	O-ring f/2" plug
6253200	Rubber base Ø50
6253300	Rubber base complete f/3-4000 models
6254131	Vibration damper OF1200
6293101	Nut M20x1.5 brass

PARTS AND ACCESSORIES

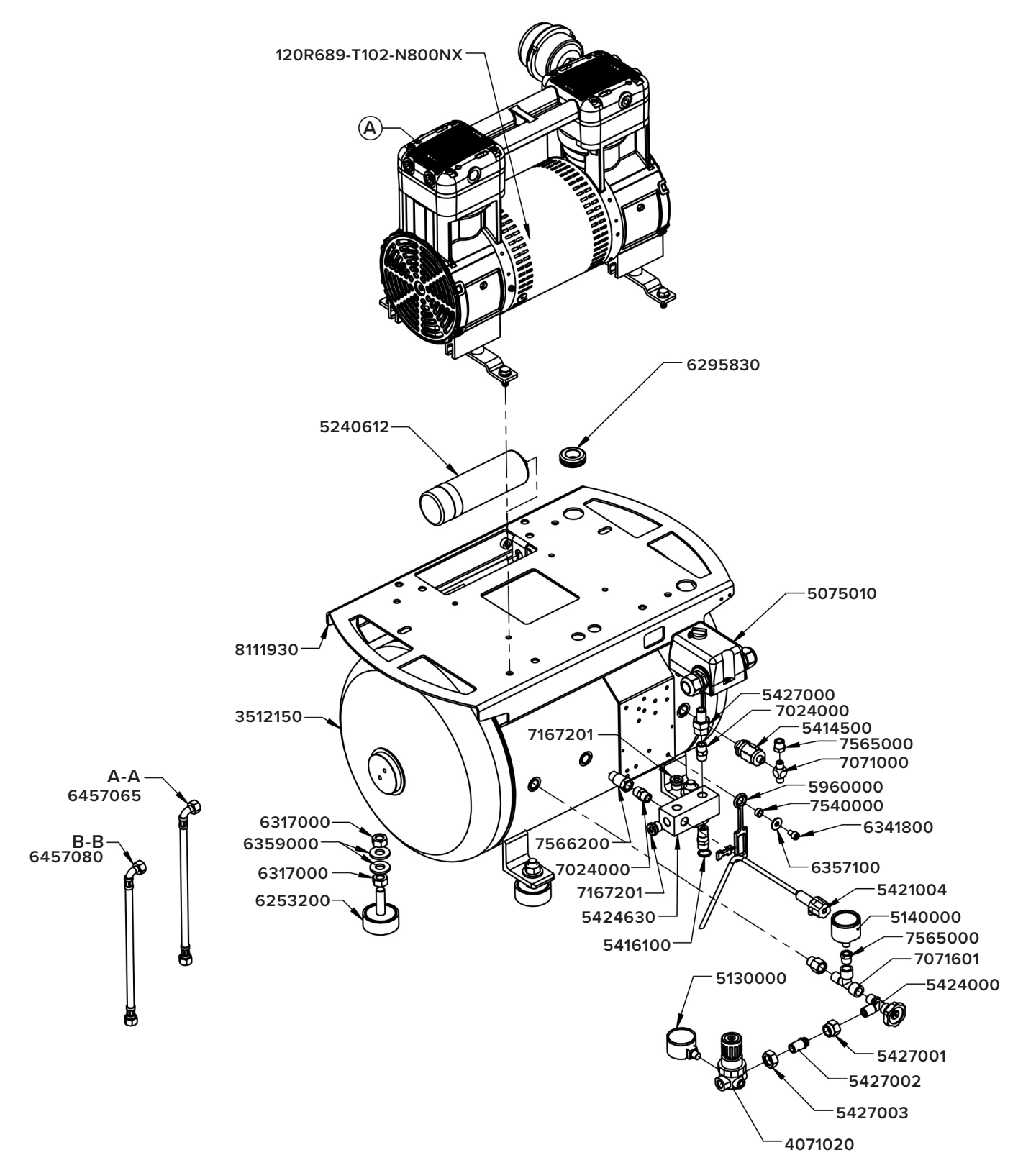
Part no.	Description
6294601	Screw joint M20 UL/CSA
6295600	Grommet black 9/14 mm
6295820	Cable grommet black Ø36x20x2mm
6295830	Cable grommet black Ø20x28x3mm
6295840	Cable grommet black Ø9/14/18x3mm
6317000	Nut M12 DIN934-8
6340500	Unbraco plug 1/8"
6357800	Washer Ø28.5xØ13x1.5 FZB
6420000	Flex hose 1/8" 20 (22) cm
6433000	Flex hose 1/8" 33 (35) cm
6451016	Teflon hose 1/4" 16 cm
6451062	Teflon hose 1/4" 62 cm
6451100	Teflon hose 1/4" 100 cm
6451115	Teflon hose 1/4" 115 cm
6452052	Teflon hose 1/4" 52 cm with elbow
6452065	Teflon hose 1/4" 65 cm with elbow
6452072	Teflon hose 1/4" 72 cm with elbow
6452090	Teflon hose 1/4" 90 cm with elbow
6470333	Unloader complete 33 cm with noise reduction
6973080	Unloader valve w/16.4 mm needle
6973302	Unloader valve w/silencer OF300
6975002	Silencer f/unloader valve OF300
7024000	Double nipple 1/4" L= 26 mm
7024002	Double nipple 1/4" w/o-ring track
7024100	Double nipple 1/4" L= 43 mm
7070601	Connection piece f/non-return valve model 4000
7071000	T-piece 1/8"
7071300	T-piece 1/4" (2x internal/external)
7071400	T-piece Condor
7156100	Extension piece f/cock long
7157001	Extension piece w/through 1/4"
7164900	Plug 1" f/inspection
7166033	Plug 1 1/2" f/inspection ASME
7166800	Plug 2" galvanized

Miscellaneous

Part no.	Description
5240607	Capacitor, 60 uF
K1027	Preventative Maintenance Kit
K1028	Service Kit
K1031	Spare Parts Kit

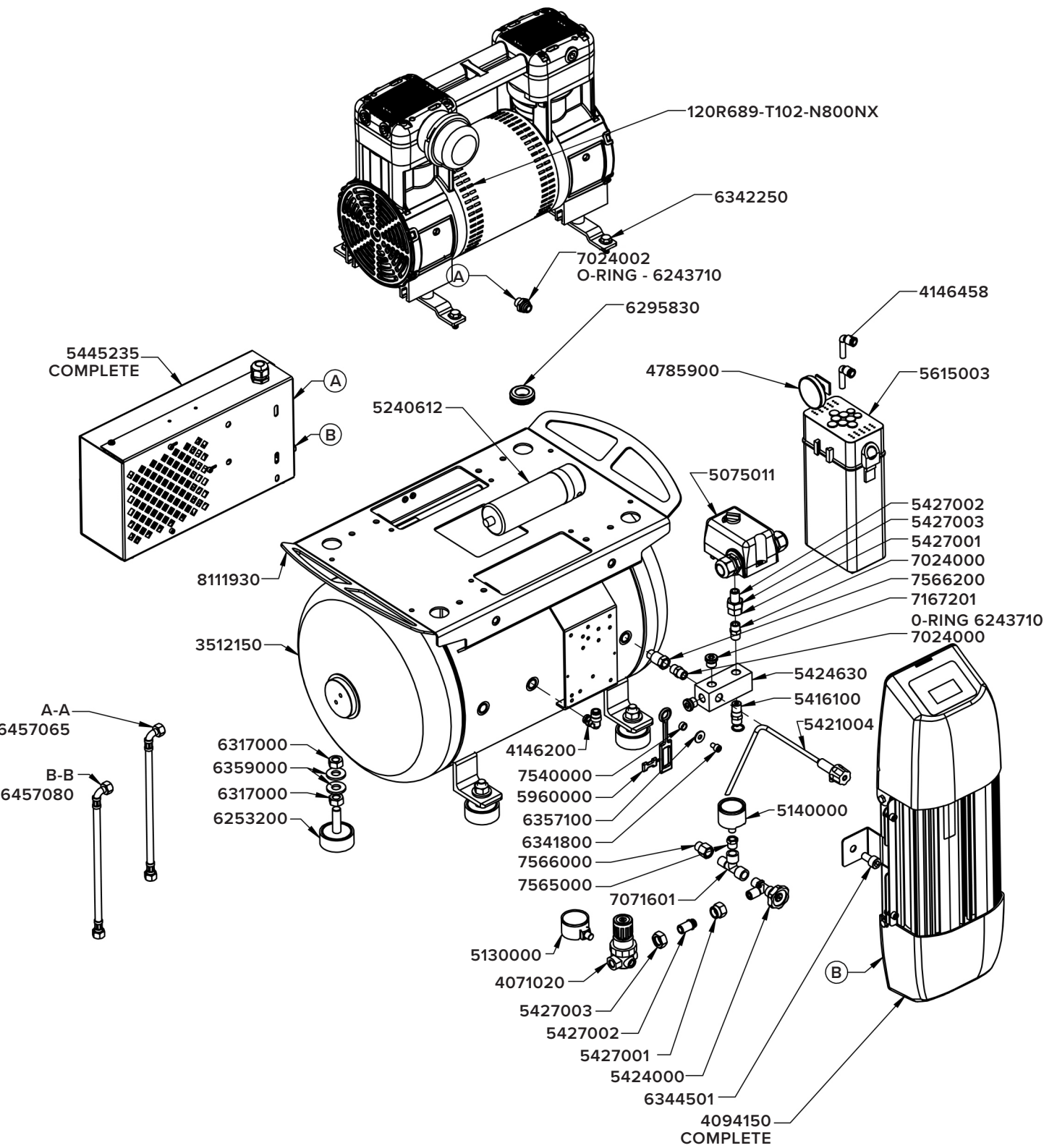
SPARE PARTS

Model 120R-40B



SPARE PARTS

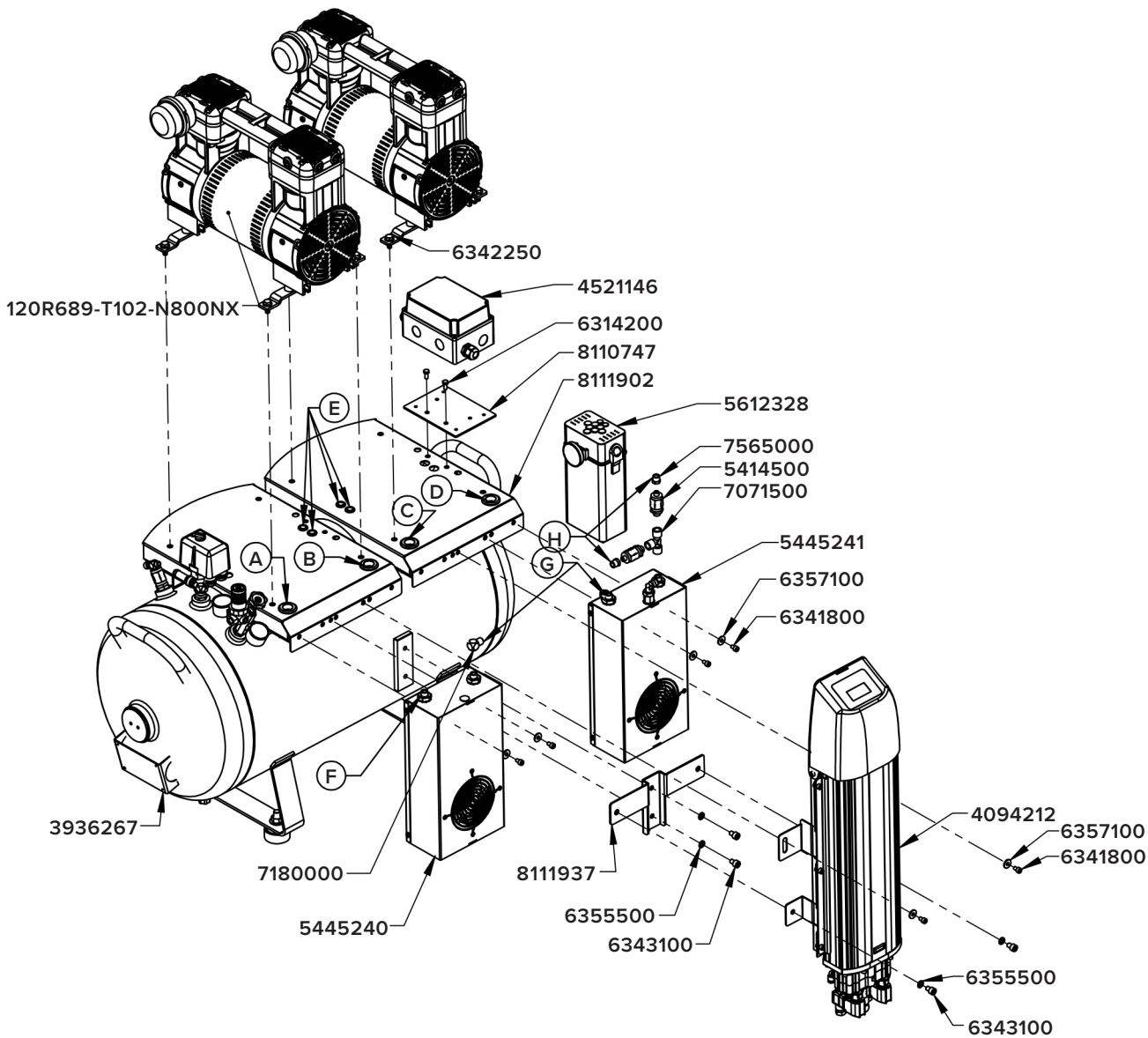
Model 120R-40BQ3



SPARE PARTS

2x120R-90BQ6

Letter	ATTACHMENT OR PASS THRU LOCATION
A	CABLE FROM PRESSURE SWITCH TO DRYER
B	HOSE FROM PS SIDE MOTOR TO FAN/RADIATOR BOX W/UNLOADER VALVE
C	CABLE FROM DRYER TO FAN/RADIATOR BOX W/UNLOADER VALVE
D	CABLE FROM TERMINAL BOX TO DRYER
E	CABLES FROM MOTOR(S) TO CAPACITOR(S) AND TERMINAL BOX
F	BRAIDED HOSE TO DRYER
G	CABLE FROM PRESSURE SWITCH TO DRYER
H	NON-RETURN VALVES W/T-FITTING CONNECTING 1 HOSE FROM EACH MOTOR



SYMBOLS

The symbols found on the product and packing are explained below.

Symbol	Description
	DANGER: Hazardous situation or extreme condition. Will result in serious or fatal injury if not avoided. WARNING: Hazardous situation. May result in serious injury if not avoided. CAUTION: Potentially hazardous situation/avoid unsafe practices. Could result in minor or moderate injury if not avoided.
	EQUIPMENT ALERT: Hazardous situation that could result in equipment damage if not avoided.
	WARNING: Hot surfaces. Risk of burns. Do not touch surface during operation.
	CAUTION: Risk of Bursting. Do not adjust regulator to result in output pressure greater than marked maximum pressure of attachment.
	WARNING: Risk of injury. Do not direct air stream at body.
	Keep dry. Do not expose to rain.
	Transport and storage: Temperature: -25°C to 55°C / -13°F to 131°F
	Transport and storage relative humidity: Maximum 90%
	Acceptable lowest barometric pressure conditions in which this unit can be shipped.
	This side up.
	Fragile. Handle with care.
	Disposal in accordance with existing regulations for electric and electronic equipment.
	Read operation and maintenance manual before operating.
	A/C power
	Ground
	ELECTRICAL SHOCK HAZARD: Risk of electric shock present. Make sure power is disconnected before attempting this procedure.

POTENTIAL WARNING LABELS ON PRODUCT

**WARNING**

THIS MOTOR IS THERMALLY PROTECTED AND WILL AUTOMATICALLY RESTART WHEN PROTECTOR RESETS. ALWAYS DISCONNECT POWER SUPPLY BEFORE SERVICING.

**WARNING**



ELECTRIC SHOCK RISK. DISCONNECT BEFORE SERVICING.

**WARNING**



INDUSTRIAL ELECTRICAL EQUIPMENT - WITH RESPECT TO ELECTRICAL SHOCK, FIRE, MECHANICAL, AND OTHER SPECIFIED HAZARDS, ONLY IN ACCORDANCE WITH UL1450.

**CAUTION**



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE TO RAIN. STORE INDOORS.

**CAUTION**



RISK OF BURSTING - DO NOT ADJUST REGULATOR TO RESULT IN OUTPUT PRESSURE GREATER THAN MARKED MAXIMUM PRESSURE OF ATTACHMENT.

**CAUTION**



RISK OF INJURY - DO NOT DIRECT AIR/NITROGEN STREAM AT BODY.

**WARNING**



MOVING PARTS PRESENT - CAN RESULT IN SERIOUS INJURY TO HANDS OR FINGERS. KEEP HANDS AWAY FROM MOVING PARTS. DISCONNECT AND LOCKOUT POWER BEFORE SERVICING.

**WARNING**



PLEASE READ THIS MANUAL COMPLETELY BEFORE INSTALLING AND USING THIS PRODUCT. SAVE THIS MANUAL FOR FUTURE REFERENCE AND KEEP IN THE VICINITY OF THE PRODUCT.

**WARNING**



IMPROPER INSTALLATION OF THE GROUNDING CABLE PLUG RESULTS IN A RISK OF ELECTRICAL SHOCK.

**CAUTION**



DISCONNECT POWER BEFORE OPENING.

POTENTIAL WARNING LABELS ON PRODUCT

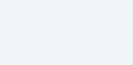
**WARNING**



TO AVOID SERIOUS BURNS,
DO NOT TOUCH SURFACE DURING
OPERATION.

**WARNING**

CONNECT DRAIN BOTTLE BEFORE OPERATION.

Jun-Air[®] powered by 		
SERVICE KIT	PART NUMBER	SERVICE INTERVAL



Scan this code or visit **gastmfg.com** for more information on where to purchase genuine Jun-Air[®] maintenance kits.

WARRANTY

Warranty Policy

Provided that the instructions for operation, maintenance, and service have been carried out, your Jun-Air[®] compressor is guaranteed against faulty material or workmanship for 2 years.

The air receiver is guaranteed for 5 years.

The guarantee does not cover damage caused by violence, misuse, incorrect repairs, or use of unoriginal spare parts. Costs of transportation of parts/equipment are not covered by the guarantee.

For more warranty information, visit **gastmfg.com/warranty**.

Jun-Air[®] Systems

Jun-Air[®] conditions for sale and delivery will generally apply.

Jun-Air[®] International A/S reserves the right to change technical specifications/constructions.

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Jun-Air®
powered by  **gast**



Additional Languages.



Declaration of Conformity.

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