

# **OIL-FREE Portable Air Compressor**

1.5 peak HP — 3 gallons
125 max psi
3.4 scfm @ 40 psi — 2.2 scfm @ 90 psi
120 VAC — 15 amp minimum circuit
Includes: 25 ft nylon coil hose and 17 pc accessory kit

# **OWNER'S MANUAL**

# and Parts List





### WARNING!

Read and understand all safety precautions and operating instructions before using Portable Air Compressor.



For customer service, contact: Midwest Air Technologies, Inc., 625 Barclay Boulevard, Lincolnshire, IL 60069, 1-800-628-8815 ext. 5000

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# **Safety Definitions**

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 utilize the symbols below to allow the reader to recognize important information about their safety.

| A DANGER  | A CAUTION   |  |
|---|---|--|
| Indicates an imminently hazardous situation which, if   | Indicates a potentially hazardous situation which, if not   |  |
| not avoided, will result in death or serious injury.  | avoided, may result in minor or moderate injury.  |  |
| A WARNING<br>Indicates a potentially hazardous situation which, if not<br>avoided, could result in death or serious injury. | <b>CAUTION</b><br>When used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage. |  |

# Glossary

- CFM: Cubic feet per minute.
- **SCFM:** Standard cubic feet per minute; a unit of measure for air delivery.
- **PSIG:** Pounds per square inch gauge; a unit of measure for pressure.
- ASME: American Society of Mechanical Engineers.
- California Code: Unit may comply with California Code 462 (I) (2)/ (M) (2).
- 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, CETL, have been evaluated by OSHA certified independent safety laboratories and meet the applicable Underwriters Laboratories Standards for Safety.

# **Duty Cycle**

This air compressor pump should not run more than 30 minutes of one hour. If the pump runs more than the 50% of the duty cycle then the air requirement is greater than that which is supplied by the unit. You may need to

check for restrictions in the air line, use a larger diameter hose, or purchase an air compressor that better matches your air requirements.

# **Description of Operation**

**Drain Valve:** Used to drain condensation from the air tank. 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 or press the reset button on the motor if applicable (not shown).

**Pressure Switch:** This controls the power to the motor and also 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 on a daily basis or before each use. Picture shown in assembly section.

Air Compressor Pump: Oil free direct driven pump that compresses air which is distributed to the tank (not shown).

**Check Valve:** When the pump is not in operation the valve closes to retain air pressure inside the tank. An internal component.

#### Description of Operation-Cont.

**Pressure Relief Valve:** The pressure relief valve, located on the side 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.

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

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

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

**Regulator:** The air pressure coming from the air tank is controlled by the regulator. To increase the pressure turn the knob clockwise and to decrease the pressure turn the knob counterclockwise.

# **Important Safety Instructions and Guidelines**

### Save all instructions •

**A WARNING** Improper operation or maintenance of this product could result in serious injury and/or property damage. Read and understand all of

the warnings and safety instructions provided before using this equipment.

| CAUTION                     | The air compressor should be operated on a dedicated 15 amp circuit. If the circuit does not have 15 free amps available, a larger circuit must be used. Always use more air hose before utilizing extension cords. All extension cords used must be 12 gauge with a maximum length of 25 ft. The circuit fuse type must be a time delay. Low voltage could cause damage to the motor. |
|-----------------------------|--|
| Risk of Moving Parts        | If the air compressor is in operation, all guards and covers should be attached or<br>installed correctly. If any guard or cover has been damaged, do not operate the<br>equipment until the proper personnel has correctly repaired the equipment. The power<br>cord should be free of any moving parts, twisting and/or crimping while in use and while<br>in storage.               |
| Risk of Burns               | There are surfaces on your air compressor that while in operation and thereafter can cause serious burns if touched. The equipment should be allowed time to cool before any maintenance is attempted. Items such as the compressor pump and the outlet tube are normally hot during and after operation.  |
| Risk of Falling             | Operation of the air compressor should always be in a position that is stable. Never use<br>the air compressor on a rooftop or elevated position that could allow the unit to fall or<br>be tipped over. Use additional air hose for elevated jobs.  |
| Risk from<br>Flying Objects | Always wear ANSI Z87.1 approved safety glasses 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 (12 inches) 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 will always need to be in another area away from the air compressor to not allow intake air to damage the air compressor filter. |
|------------------------------|--|
| Risk of<br>Electrical Shock  | Never utilize the air compressor in the rain or wet conditions. Any electrical issues or repairs should be performed by authorized personnel such as an electrician and should comply with all national and local electrical codes. The air compressor should also have the proper three prong grounding plug, correct voltage, and adequate fuse protection.  |
| Risk of<br>Explosion or Fire | Never operate the compressor near combustible materials, gasoline or solvent vapors.<br>If spraying flammable materials, locate the air compressor at least 20 feet away from<br>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 tank develops a leak, then replace the air compressor. Never use the air compressor after a leak has been found or try to make any modifications to the tank. Never modify the air compressor's factory settings which control the tank pressure or any other function.   |

### Handle Assembly

Attach the handle to the frame with the saddle bolts from the outside of the handle and the knobs on the inside.

# To Install the Air Intake Filter

Remove the assembly from the poly bag and thread the filter assembly onto the head of the compressor as shown.





# Installation

### Lubrication and Oil

This compressor requires no lubrication or oiling. No break in procedure is required by the user. This product is factory tested to ensure proper operation and performance.

### Location of the Air Compressor

The air compressor should always be located in a clean, dry, and well ventilated environment. The unit should have at a minimum, 12 inches of space on each side. The air filter intake should be free of any debris or obstructions. Please check the air filter on a daily basis to be sure it is clean and in working order.

### **Extension Cords**

Use only a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the product. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will

#### Installation-Cont.

draw. Cords must not exceed 25 feet and No. 12 AWG size must be used. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.



### **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 a qualified electrician or service personnel if these instructions are not completely understood or if in doubt as to whether the tool is properly grounded.

### **A** DANGER

Improper installation of the grounding plug can result in a risk of electric shock. If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded. 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 120 volts 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 adapter should be used with this product. If the product must be reconnected for use on a different type of electric circuit, qualified service personnel should make the reconnection.

# **Operating Procedures**

#### **Daily Start-Up Procedures**

- 1. Set the Auto-On/Off lever to the Off position.
- Check the air compressor visually for any damage or obstruction to the intake filter.
- 3. Close the drain valve.
- 4. Plug the power cord into the proper receptacle.
- Turn the Auto-On/Off lever to the On-Auto position and the compressor will start and build air pressure in the tank to cut-out pressure and then shut off automatically.
- 6. Adjust the regulator to a PSI 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 particular tool on operating PSI settings.
- 7. The air compressor is now ready for use.

#### **Daily Shut-Down Procedures**

- 1. Set the Auto-On/Off lever to the Off position.
- 2. Unplug the power cord from the receptacle.
- 3. Set the outlet pressure to zero on the regulator.
- 4. Remove any air tools or accessories.

### A CAUTION

When draining the tank, always use ear and eye protection. Drain the tank in a suitable location; condensation will be present in most cases of draining.

5. Open the drain valve allowing air to bleed from the tank. After all of the air has bled from the tank, close the drain valve to prevent debris buildup in the valve.

### **A** WARNING

Water that remains in the tank during storage will corrode and weaken the air tank which could cause the tank to rupture. Please be sure to drain the tank after each use or daily.

# Maintenance

**A WARNING** The air compressor should be turned off and unplugged from the power source before any maintenance is performed as well as the

**CAUTION** 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 on a daily basis. If necessary, the schedule should be modified to 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.

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.

### **Routine Maintenance Schedule**

#### Daily/Each Use

- 1. Check the air compressor for any visual damage or obstructions.
- 2. Inspect the air filter and replace if necessary.
- Manually check the safety valve to make sure of proper operation.
- 4. Drain any condensation from the air tank after use.
- 5. Always check for any unusual noise and/or vibration.

### CAUTION

Any service procedure not covered in the above mentioned maintenance schedule should be performed by authorized service personnel.

## Storage

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

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



### Parts List

| Reference<br>Number | e Part<br>Number | Description              | Qty |
|---------------------|------------------|--------------------------|-----|
| 1                   |                  | Bolt M6x1x40 SHCS        | 4   |
| 2                   |                  | Lock Washer              | 4   |
| 3                   | E100047          | Exhaust Elbow            | 1   |
| 4                   |                  | Cylinder Head            | 1   |
| 5                   | E100048          | Air Filter               | 1   |
| 6                   | E100050          | Motor Shroud             | 1   |
| 7                   |                  | Flat Washer              | 2   |
| 8                   |                  | Bolt M5x10               | 2   |
| 9                   |                  | Flat Washer              | 4   |
| 10                  |                  | Lock Washer              | 4   |
| 11                  |                  | Bolt M6x1x16 SHCS        | 4   |
| 12                  | * E100051        | Gasket, Cylinder Head    | 1   |
| 13                  |                  | Valve Plate              | 2   |
|                     |                  | Valve Seat               | 2   |
|                     |                  | Aluminum Gasket          | 1   |
|                     |                  | Gasket, Cylinder         | 1   |
| 17                  |                  | Cylinder                 | 1   |
| 18                  |                  | M8x1.25 Hex Nut          | 2   |
| 19                  |                  | Lock Washer              | 2   |
| 20                  |                  | Stud M8x1.25x32          | 2   |
| 21                  |                  | Side Seal, cylinder      | 2   |
|                     | * E100052        | M6x1x20 Screw            | 1   |
|                     |                  | Piston Ring Plate        | 1   |
|                     |                  | Piston Ring              | 1   |
|                     |                  | Connecting Rod           | 1   |
|                     |                  | Screw M4x0.7x18 SHCS     | 1   |
| 27                  |                  | Snap Ring                | 1   |
| 28                  |                  | Bearing, Rođ             | 1   |
| 29                  |                  | Screw M8x1.25x40 SHCS    | 1   |
| 30                  |                  | Lock Washer              | 1   |
| 31                  |                  | Eccentric                | 1   |
|                     | * E100053        | Fan                      | 1   |
|                     |                  | Lock Washer              | 1   |
|                     | * E100053        | Screw M6x1x40 SHCS       | 1   |
|                     | * E100054        | Front Cover Crankcase    | 1   |
|                     | * E100054        | Screw M6x1x16 SHCS       | 4   |
| 37                  |                  | Block, Motor PV cover    | 2   |
| 38                  |                  | Crankcase                | 1   |
| 39                  |                  | Glove, Over-Load         | 1   |
| •                   | nart numbe       | r field without a part : |     |

| Referenc<br>Number | e Part<br>Number | Description           | Qty |
|--------------------|------------------|-----------------------|-----|
| 40                 |                  | Screw M4x10           | 2   |
| 41                 | E100055          | Over-Load Switch      | 1   |
| 42                 |                  | Electric Motor        | 1   |
| 43                 |                  | Capacitor             | 1   |
| 44                 |                  | Bumper, Rubber        | 4   |
| 45                 |                  | Cover, Motor Back     | 1   |
| 46                 |                  | Screw M5x10           | 1   |
| 47                 |                  | Centrifugal Switch    | 1   |
| 48                 |                  | Fan, Motor            | 1   |
| 49                 |                  | Snap Ring             | 1   |
| 50                 | * E100066        | Protective Fin        | Ţ   |
| 51                 | * E100066        | Nut, Swivel           | 2   |
| 52                 | * E100066        | Outlet Tube           | 1   |
| 53                 |                  | Grip, Handle          | 1   |
| 54                 |                  | Tank                  | 1   |
| 55                 | E100083          | Foot Rubber Pad       | 2   |
| 56                 | * E100067        | Tank Wheel            | 2   |
| 57                 | * E100067        | Cap Nut               | 2   |
| 58                 | E100023          | Drain Valve           | 1   |
| 59                 | E100181          | Bolt, Saddle M8x25    | 2   |
| 60                 | E100192          | Handle                | 1   |
| 61                 | E100183          | Knob, Threaded        | 2   |
| 62                 | * E100068        | Pressure Relief Tube  | 1   |
| 63                 | * E100068        | Nut                   | 2   |
| 64                 | E100063          | Check Valve           | 1   |
| 65                 |                  | Unload Elbow          | 1   |
| 66                 | E100057          | Pressure Gauge        | 2   |
| 67                 |                  | Unload Elbow          | 1   |
| 68                 | E100058          | Pressure Switch       | 1   |
| 69                 |                  | Exhaust Elbow         | 1   |
| 70                 |                  | Manifold              | 1   |
| 71                 | E100061          | Safety Valve          | 1   |
| 72                 |                  | Nipple, male thread   | 1   |
| 73                 | E100059          | Regulator             | 1   |
| 74                 | E100060          | Quick Connect, Female | 1   |
| 75                 |                  | Clip                  | 1   |
| 76                 |                  | Electrical Cable      | 1   |
|                    |                  | Guttown Cubic         | -   |

Kit number and parts that are included are as follows: <u>Part # Reference</u> #

|    | T OT O D              | <u>rererence</u> h |
|----|-----------------------|--------------------|
|    | E100051<br>E100052    | (12-16)            |
| τ¢ | È100052               | (22-26)            |
|    | E100053<br>IS availab | 10 (32-34)         |
|    | EL00054               | (35, 36)           |
| 1  | EIGOGE                | (50-52)            |
|    | E100067               | (56, 57)           |
|    | E100068               | (62, 63)           |
|    |                       |                    |

| Note:Any part number field without a part number | is n |
|--|------|
| Descriptions are provided for reference of       | mly. |
| * This symbol represents that the part being off | ered |
| only in a kit. One of each part per kit wil      | l be |

# **Troubleshooting Guide**

**A WARNING** 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.

| PROBLEM   | POSSIBLE CORRECTION   |
|---|---|
| Air leaks at the check valve or at the pressure relief valve.                     | A defective check valve results in a constant air leak at the pressure release valve<br>when there is pressure in the tank and the compressor is shut off. Drain the tank,<br>then remove and clean or replace the check valve.   |
| Air leaks between head and cylinder.  | Be sure of proper torque on head bolts. If leak remains, then contact Midwest Air Technologies.   |
| Air leak from safety valve.   | Operate the safety valve manually by pulling on the ring. If the valve continues to leak when in the closed position, it should be replaced.  |
| Pressure reading on the regulated pressure gauge drops when an accessory is used. | If there is an excessive amount of pressure drop when the accessory is used, replace the regulator. NOTE: Adjust the regulated pressure under flow conditions (while accessory is being used). It is normal for the gauge to show minimal pressure loss during initial use of the tool.   |
| Excessive tank pressure.  | Move the Auto-On/Off lever to the Off position. If the unit doesn't shut off, unplug it from the power source and contact Midwest Air Technologies.   |
| Motor will not start.   | Make sure power cord is plugged in and the switch is on. Check the reset button<br>(if equipped) on the motor. Reset if needed or allow 30 minutes for cooling period.<br>Inspect for the proper size fuse in your circuit box. If the fuse was tripped, reset it<br>and restart the unit. If repeated tripping occurs, replace the check valve or contact<br>Midwest Air Technologies. |
| Excessive moisture in the discharge air.  | Remove the water in the tank by draining after each use. High humidity<br>environments will cause excessive condensation. Utilize water filters on your air<br>line.<br><b>CAUTION</b><br>Water condensation is not caused by compressor malfunction. Be sure the<br>compressor's air output is greater than your tool's air consumption rate.  |
| Air leaks from the tank body or tank welds.                                       | Never drill into, weld or otherwise modify the air tank or it will weaken. The tank can rupture or explode. Contact Midwest Air Technologies.   |

# **Limited Warranty**

Midwest Air Technologies, Inc. warrants to the original purchaser that each new air compressor and service part is free from defects in material and workmanship and agrees to repair or replace under this warranty any defective product or part as follows from the original date of purchase.

1 YEAR – Warranty on all air compressor products.

90 Days – Service parts

### THIS WARRANTY IS NOT TRANSFERABLE AND DOES NOT COVER:

- Products sold damaged or incomplete, sold "as is", sold reconditioned or used as rental equipment.
- · Delivery, installation or normal adjustments explained in the owner's manual.
- Damage or liability caused by shipping, improper handling, improper installation, incorrect voltage or improper wiring, improper maintenance, improper modification, or the use of accessories and/or attachments not specifically recommended by Midwest Air Technologies.
- Repairs necessary because of operator abuse or negligence, or the failure to install, operate, maintain and store the product according to the instructions in the owner's manual.
- Damage caused by cold, heat, rain, excessive humidity, corrosive environments and materials, or other contaminants.
- Expendable items that become worn during normal use such as drain valves, fuses, filters, air cleaners and pump oil.
- · Cosmetic defects that do not interfere with tool functionality.
- Freight costs from customer to Midwest Air Technologies.
- Repair and transportation costs of products or parts determined not to be defective.
- ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF ORIGINAL PURCHASE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

WARRANTY SERVICE is available by delivering or shipping the defective product to any Midwest Air Technologies authorized warranty service locations. To determine the nearest authorized warranty service location, call the toll free number, 1-800-628-8815 ext. 5000, 8 a.m. - 5 p.m. CST, M-F. Specific instructions regarding servicing arrangements and scheduling may vary depending on the type and size of the product and the availability of repair parts.

- DO NOT return the defective product to the retailer.
- Retain the original cash register sales receipt as proof of purchase for warranty work.

### **ENGINE WARRANTIES**

This is the responsibility of the engine manufacturer. Warranties of merchandise sold by Midwest Air Technologies which has been manufactured by and identified as the product of another company are the responsibility of the manufacturer of that product.

### Midwest Air Technologies, Inc. Lincolnshire, IL 60069