

Open Frame Gas/Diesel Engine Driven Rotary Screw Compressor

Installation Guide

Notice: All air compressors must be installed by a qualified and trained technician. If you need a qualified technician, call 800-531-9656 or 972-352-6304. Improper installation may result in damage to the compressor, personal injury, and will void the warranty of the compressor package.

Warning: Read all installation steps, compressor package operation manual, notices and warnings prior to beginning compressor package installation. Failure to do so can result in personal injury or damage to compressor package.

Warning: Always wear proper protective eye wear, hearing protection, and other mandated safety clothing and devices when installing compressor packages

Notice: Compressor package should not be mounted to a moving piece of equipment that will be moving while the compressor package is in operation. The compressor package should not be mounted to a piece of equipment that adds additional vibration to the compressor package. The compressor package is only designed to handle its own organic vibration during operation. Failure to follow either one of these guidelines may result in pre-mature failure of compressor package, components and/or personal injury.

Attention: All incoming electrical power connections are to be made on the main motor contactor(s) DO NOT attach incoming power wires to package pressure switch. This will result in electrical component damage not covered under warranty.

Notice: To ensure full compressor tank warranty all tank mounted compressor packages must be mounted on factory supplied vibration isolation pads.

Warning: Before beginning steps 6-17 verify power supply is off to compressor disconnect, and compressor package

Notice: All compressor air receivers should be inspected by a certified pressure vessel technician at least once per year, to check for leaks, weak points in the metal or any other deformity of the air receiver. If at any time a receiver appears out of conformance with ASME/CRN certification or a deformity is believed to have developed no matter how minor it may appear the tank should be locked out of service immediately

Compressed Air Systems

Simplicity. It's What We Do.

compressed-air-systems.com | 1-800-531-9656 | Fax 972-352-6364

© Compressed Air Systems, LLC



Scan to find installation guides,
repair guides, manuals, and more.





Warning: Always wear proper protective eye wear, hearing protection and safety clothing when working around the compressor package. No loose or baggy clothing should be worn around compressor package at any time.



Warning: On electric motor powered air compressors make sure electrical system is up to National Electric Code (NEC) prior to installing compressor system. Failure to install a compressor with a proper NEC electrical system can cause personal injury, compressor package damage and void compressor package warranty.



Notice: To ensure full compressor tank warranty all tank mounted compressor packages must be mounted on factory approved vibration isolation pads. A compressor should NEVER be installed while still on or in its original packaging. Failure to properly install the compressor system with approved vibration isolation pads will result in the compressor tank warranty being void.



Notice: Compressed Air Systems compressors can operate at pressures from 0-250 PSI depending on the compressor package design and build specifications. Always verify that the system the compressor is installed into can handle the maximum operational pressure of the compressor. NEVER install a compressor in a system that can not handle the compressors maximum operating pressure.



Notice: Compressed air is extremely dangerous when not properly used or installed. Always make sure a trained compressed air professional has looked over the air system prior to use. Improper installation or use of compressed air can cause bodily injury or death. NEVER pressurize an object that was not designed to be pressurized. Pressurizing objects not properly engineered for the maximum operating pressure of the compressor system can cause bodily injury or death.

Step 1

Verify compressor package install site can handle weight load of compressor package.

Note: this should have been done prior to the sale of the compressor package.

Notice: Installing compressors on a steel floor, wood floor or other structure not mounted to the ground may require additional mounting apparatus to handle weight and vibration.

Step 2

Make sure compressor installation area is clear of debris and has adequate space around where the compressor will sit for service (minimum of 24") and ventilation (must be able to get clean fresh air through oil/air cooler during operation, without recirculating cooler hot air discharge). If site is excessively dusty or dirty due to grinding, sanding, or due to the nature of the selected application site a new site should be sought out.

- A. On some packages a remote air/oil cooler assembly is applicable to ensure proper fresh air intake to the compressor package cooler. It is critical to the operation of the compressor package that the drive engine and compressor air/oil cooler receive clean fresh air to maintain proper operating temperatures.
- B. It is critical that the compressor package be installed level to ensure proper operation of the package.

Step 3

On single cylinder engines with the fuel tank on the OEM engine, verify tank is clean and free of debris. On engines with auxiliary or fuel tanks not part of the OEM engine, make sure the tank is installed properly and fuel line is clean and free of debris.

- A. On applications requiring an auxiliary fuel tank: if more than 5' of fuel line is used between the drive engine and compressor package, an auxiliary fuel pump will be needed to ensure adequate fuel supply is delivered to the drive engine.
- B. On auxiliary fuel pumps: make sure the pump is installed in the proper direction. Failure to install the fuel pump properly will result in the driven engine running lean or not running at all.

NOTICE: Air compressors must be installed by trained installation personnel. Installation sheets must be sent back in for warranty activation. If you need help finding a qualified technician to properly perform installation, call 800-531-9656 or 972-352-6304.

Step 4

Uncrate compressor package (verify package is intact and not missing parts).

Step 5

Remove compressor from shipping pallet.

Warning: Only use forklift or approved lifting device to remove compressor from shipping pallet.

Step 6

Set compressor into place on vibration isolation pads, in mounting location.

Step 7

Drill holes in floor/substructure through vibration pads and mounting location on compressor package.

Step 8

Tighten compressor package mounting bolts or anchors. Bolts should be firm with no distortion seen in the mounting vibration pads. If distortion is seen, loosen mounting hardware.

Step 9

Connect airline to compressor package air discharge.

Note: It is recommended to use a flexible line between the compressor package and the system piping to avoid damage due to compressor vibration.

Step 10

In an open and ventilated area pour fuel into drive engine fuel tank.

Note: It is recommended to use premium octane 91 or higher on gas engines and premium diesel on diesel engines for initial start.

Step 11

Verify compressor tank discharge ball valve is open to system.

Step 12

Verify tank and system pressure is less than 10 PSI.

Step 13

On engine equipped with a choke function make sure choke is in proper starting setting.

Step 14

Turn engine key to START position to begin engine ignition.

Step 15

Replace choke function to RUN position on engines equipped with choke function.

On days with ambient temperatures below 42°F, Steps 13-15 may need to be repeated 3-4 times.

Step 16

Once engine is running and operational check for proper air flow around compressor package.

Step 17

Close ball valve on compressor storage tank discharge.

Step 18

Allow compressor package to reach maximum operating pressure.

Engine will begin to throttle down 10-15 PSI before maximum operating pressure.

Step 19

Once compressor package has reached maximum operating pressure it should begin running unloaded and in idle.

NOTE: Idle on rotary screw compressor packages is typically 300-500 RPM less than maximum running speed.

Step 20

Open tank discharge ball valve to pressurize air system.

Step 21

Warning: When releasing air from compressor safety relief valve or tank drain DO NOT look at valve or drain.

Using either compressor tank safety relief valve or tank discharge drain, release air pressure until compressor package reloads and begins compressing air again. You will also hear the drive engine speed up when the package reloads and begins compressing again.

Note: In most cases pressurizing the air piping system releases enough air from the system to cause package to reload and begin compressing again.

Step 22

Perform function test on compressor package operating system. Using STEP 21, allow the compressor package to build up to maximum operating pressure and unload. Once unloaded release air from the system to cause the compressor package to reload and compress air. Repeat this process a minimum of 6 times.

Step 23

Check compressor temperature gauge for current operating temperature.

Note: Record on the installation sheet.

Step 24

Check all compressor air and oil lines for leaks, tighten fittings as needed.

Step 25

Make sure compressor installation sheet is properly and completely filled out to be sent in for warranty registration.

Step 26

Go over general operation and maintenance instructions of compressor package with owner and other personnel that work around the compressor package. Verify if a maintenance agreement has already been set up or if one needs to be established.

Step 27

Once Steps 1-26 have been completed, turn compressor package off. Allow air end sump pressure to bleed off. (Complete sump depressurization takes approximately 0.5-1.5 minutes)

Step 28

Once sump pressure has bled off, pull sump safety relief valve to verify sump pressure is released.



Warning: Always wear proper protective eye wear, hearing protection and safety clothing when working around the compressor package. No loose or baggy clothing should be worn around compressor package at any time.



Warning: On electric motor powered air compressors make sure electrical system is up to National Electric Code (NEC) prior to installing compressor system. Failure to install a compressor with a proper NEC electrical system can cause personal injury, compressor package damage and void compressor package warranty.



Notice: To ensure full compressor tank warranty all tank mounted compressor packages must be mounted on factory approved vibration isolation pads. A compressor should NEVER be installed while still on or in its original packaging. Failure to properly install the compressor system with approved vibration isolation pads will result in the compressor tank warranty being void.



Notice: Compressed Air Systems compressors can operate at pressures from 0-250 PSI depending on the compressor package design and build specifications. Always verify that the system the compressor is installed into can handle the maximum operational pressure of the compressor. NEVER install a compressor in a system that can not handle the compressors maximum operating pressure.



Notice: Compressed air is extremely dangerous when not properly used or installed. Always make sure a trained compressed air professional has looked over the air system prior to use. Improper installation or use of compressed air can cause bodily injury or death. NEVER pressurize an object that was not designed to be pressurized. Pressurizing objects not properly engineered for the maximum operating pressure of the compressor system can cause bodily injury or death.

Step 29

Remove airend oil fill cap slowly (if hissing or air is coming out around oil cap, tighten back down and verify sump pressure has been relieved). Verify proper oil level in compressor package, add oil as needed.

Step 30

Wipe down surfaces and make sure installation sheet is complete.
Compressor is now ready for full operation.

LONG TERM STORAGE PROCEDURES:

(COMPRESSORS THAT WILL NOT BE USED FOR 60 DAYS OR MORE)

1. **Electric Powered Units-** Turn off power and disconnect power from main compressor disconnect panel.
Gas/Diesel/Natural Gas Powered Units- Drain any fuel from package/disconnect any fuel source from system.
2. Drain compressor oil and change filters, refill oil. If engine driven drain engine oil, change filters, refill with oil.
3. Check compressor intake for debris, clean out if needed.
(Cover compressor intake to prevent debris, insects, etc. from entering compressor intake).
4. Clean off compressor package.
5. Drain all moisture from air compressor tank.
6. Cover compressor to prevent debris from collecting on compressor and store in a location out of direct sunlight/rain/ weather. Do not seal compressor cover as moisture may form and prematurely rust parts due to humidity not being able to escape.
7. If storage last 90 days or more every 30 days, manually rotate compressor pump/airend 1/4 turn.
8. Before putting compressor back into operation drain oil, change all filters, and check belt tension if belt driven.
If compressor stored longer than 120 days inspect compressor intake and discharge valves on reciprocating, intake and MPV valve on rotary screws. If reciprocating, check compressor check valve for operation.
9. Follow install guide and proper start up procedures prior to putting air compressor back into service.
(Fill out a new compressor install data sheet at time of re-installation or initial installation).

NOTICE: Air compressors must be installed by trained installation personnel. Installation sheets must be sent back in for warranty activation. If you need help finding a qualified technician to properly perform installation, call 800-531-9656 or 972-352-6304.

Certificate of Limited Warranty Reciprocating Compressors and Parts

All component parts on this compressor, installed by the manufacturer, are warranted to be free of defects in workmanship and material for a period of one year. Transportation charges are the responsibility of the purchaser. This warranty extends to the original purchaser of the compressor only. The purchaser must use Synthetic Reciprocating Compressor Oil, Part Number 30100, in the compressor for the duration of the compressor warranty. There are NO express warranties other than those contained in this limited warranty statement. Covered in the one year period of the warranty are defective parts and labor only. Part defects are limited to original parts only. The compressor warranty is void in the case of abuse, lack of proper service, incorrect application, incorrect installation, and neglect. Industrial Electric stationary compressors may be repaired on site as long as the compressor is not located further than 50 miles from the service center. The purchaser is responsible for any additional travel expense beyond 50 miles from the service center. Gas/Diesel Engine Driven, Single Stage Stationary, and Contractor Series compressors must be repaired at the closest service center to the compressor. The purchaser is responsible for any travel expense if they do not wish to bring the compressor to the service center. ALL "SPECIALTY COMPRESSOR" WARRANTY SERVICE MUST BE PERFORMED AT THE CLOSEST SERVICE CENTER TO THE COMPRESSOR. A "SPECIALTY COMPRESSOR" is any compressor packaged with options other than those that apply to the standard models in the catalog. Warranty labor for the first year is only covered for work performed Monday-Friday 8am-5pm excluding all major US holidays. BEFORE WARRANTY SERVICE IS PERFORMED, CONTACT THE MANUFACTURER TECH SUPPORT FOR FASTEST SOLUTION AND APPROVAL (800-531-9656 or 972-352-6304). Warranty repairs must be authorized by the manufacturer prior to work being performed. Unauthorized work may void the package warranty. The warranty claim form MUST be submitted for any potential warranty claim to be reviewed. A copy of the original invoice must be sent in with the warranty claim form.

The limited warranty is not active until the installation sheet, included with the compressor manual, is properly filled out and returned. Failure to return the installation sheet will prevent the warranty from being active.

Certificate of Limited Warranty Parts Warranty

New parts purchased are warrantied to be free from defects for a period of 1 year. Parts warranty is repair or replace only. Parts warranty is limited to the repair or replacement of the defective part only. No labor allowed for parts warranty. The defective part will be repaired or replaced. Freight and labor are not covered under the parts warranty. FOR A DEFECTIVE PART, CONTACT THE WARRANTY SERVICE CENTER (800-531-9656 or 972-352-6304).

Certificate of Limited Warranty Rotary Screw Compressors

All component parts on this compressor, installed by the manufacturer, are warranted to be free of defects in workmanship and material for a period of one year. Transportation charges are the responsibility of the purchaser. This warranty extends to the original purchaser of the compressor only. The purchaser must use Synthetic Rotary Screw Oil, Part Number RS8000, in the compressor for the duration of the compressor warranty. There are NO express warranties other than those contained in this limited warranty statement. Covered in the one year period of warranty are defective parts and labor. Part defects are limited to original part only. The compressor warranty is void in the cases of abuse, lack of proper service, incorrect application, incorrect installation and neglect. Industrial Electric stationary compressors may be repaired on site as long as the compressor is not located further than 50 miles from the service center. The purchaser is responsible for any additional travel expense beyond 50 miles from the service center. Gas/Diesel Engine Driven compressors must be repaired at the closest service center to the compressor. The purchaser is responsible for any travel expense if they do not wish to bring the compressor to the service center. ALL "SPECIALTY COMPRESSOR" WARRANTY SERVICE MUST BE PERFORMED AT THE CLOSEST SERVICE CENTER TO THE COMPRESSOR. A "SPECIALTY COMPRESSOR" is any compressor packaged with options other than those that apply to the standard model in the catalog. The AIREND is covered by a 2 year warranty to be free from defects from manufacturing. This does not cover abuse, neglect, improper service, misapplication, or improper installation. An oil sample must be submitted with any AIREND warranty claim for verification. An "AIREND" is the rotors and bearings of the compressor. Warranty labor for the first year is only covered for work performed Monday-Friday 8am-5pm excluding all major US holidays. BEFORE WARRANTY SERVICE IS PERFORMED, PLEASE CONTACT MANUFACTURER TECH SUPPORT FOR FASTEST SOLUTION AND AUTHORIZATION (800-531-9656 or 972-352-6304). Warranty repairs must be authorized by the manufacturer prior to work being performed. Unauthorized work may void the package warranty. The warranty claim form MUST be submitted for any potential warranty claim to be reviewed. A copy of the original invoice must be sent in with the warranty claim form.

The limited warranty is not active until the installation sheet, included with the compressor manual, is properly filled out and returned. Failure to return the installation sheet will prevent the warranty from being active.

THIS POLICY IS LIMITED TO THE ITEMS ON THE INVOICE, WHICH IS ATTACHED WITH THIS DOCUMENT.

THIS INSTALLATION SHEET MUST BE FILLED OUT AND RETURNED FOR WARRANTY TO BEGIN

Gas/Diesel Engine Rotary Screw Compressor Installation Sheet

Compressor & Installer

Compressor Model # _____ Compressor Serial # _____

Installation Company: _____ Installation Technician: _____

Technician Signature: _____ Date: _____

Drive Engine & Installation Status

Drive Engine: ☐ Gasoline ☐ Diesel ☐ Natural Gas ☐ Battery Powered

Location of Install: ☐ Truck Body (Open) ☐ Van ☐ Trailer ☐ Box Truck ☐ Other: _____

Unit Installed in Weather-Proof Enclosure: ☐ Yes ☐ No

Auxiliary Fuel Tank Needed: ☐ Yes ☐ No

Auxiliary Fuel Pump Needed: ☐ Yes ☐ No

Wiring Extension Added: ☐ Yes ☐ No

Wiring Extension Technician: _____

Unit Cooling Fan: ☐ Pulls Air Through Cooler ☐ Pushes Air Through Cooler

Remote Air/Oil Cooler Installed: ☐ Yes ☐ No *If Yes, Distance From Compressor Package: _____ft*

Performance

Max Operating Pressure: _____ PSI

Tank Drain Functional: ☐ Yes ☐ No

Checked All Air Fittings for Leaks: ☐ Yes ☐ No

Checked Unit for Oil Leaks: ☐ Yes ☐ No

Checked Belt Tension After Start-Up: ☐ Yes ☐ No

Vibration Pads Properly Installed: ☐ Yes ☐ No

Tank Fill Time: 0-125 PSI: _____ *Write N/A if pressure not applicable to unit*

0-150 PSI: _____ *Write N/A if pressure not applicable to unit*

0-175 PSI: _____ *Write N/A if pressure not applicable to unit*

Compressor Temperature Gauge Readings: Before Start-Up: _____ After Start-Up: _____

All Install Steps Completed: ☐ Yes ☐ No *If No, Explain: _____*

Send a copy of this completed installation sheet to manufacturer to begin warranty.

Include the following:

- 1 image of the control panel wired up
- 1 image of the full install
- 1 image from each end of the compressor

Sales@compressed-air-systems.com

Fax 972-352-6304

Or mail to

Compressed Air Systems

600 S. 2nd Ave Mansfield, TX, 76063



Compressed Air Systems, LLC

600 S. 2nd Ave
Mansfield, TX, 76063

1-800-531-9656

Fax 972-352-6364

Simplicity. It's What We Do.