

Instruction Manual

Ring Compressor EXV Series

Thank you for purchasing our Ring Compressor. Our product is produced with high quality materials and manufacturing processes. Our superior workmanship will give you the best product available in the air moving market place.

WARNING

- This unit is designed to operate indoors, and is an environment that is a water-free and dust-free.
- To avoid damaging this device, it must be absolutely prevented from dropping during transportation.
- Please read all instructions prior to installation.
- For safety reason, please don't modify or repair the rotating part of this device.
- The manufacturer has the right to modify the product without notice.
- This unit is only a component, it must be installed in a machine or part of a machine which meets the terms of the machine directive 2006/42/EC.

Contents

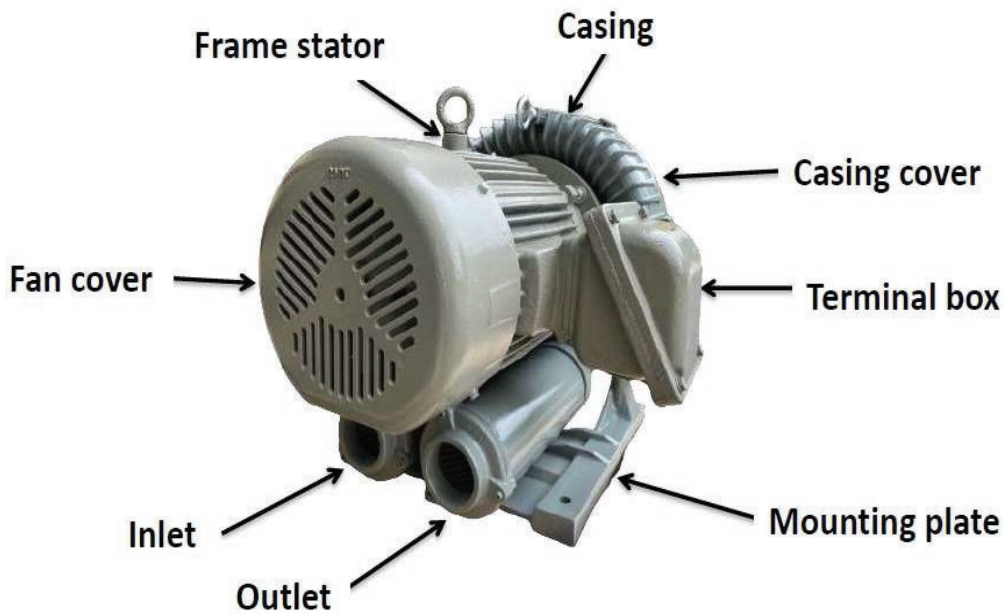
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1. Safety Requirements

WARNING

- 1.1 The maximum permissible ambient and air temperature at the intake is + 40°C.
- 1.2 Max. permissible pressure in the device: 2 bar abs. At this pressure, the operation of the device may be considerably impaired.
- 1.3 All the works of transportation, installation, maintenance and trouble - shooting must be executed by a responsible, qualified personnel.
- 1.4 This device must be set up according to this instruction manual.
- 1.5 The grounding wire must be connected well accordingly.
- 1.6 The lead wires as a conductor to the power supply should be properly sized and have strain relief to the wires at the connection terminals. If this is failed, electric shock and fire will be possible.
- 1.7 While rotating, human body must be kept away from the rotating portions such as the cooling fan and do not reach into the device through the intake or outlet.
- 1.8 Once the power electricity was interrupted, the power switch must be turned **OFF** immediately.
- 1.9 If the device does not reach its rated speed in 15 seconds from the power switch turned on, please turn off the power immediately and check it carefully.
- 1.10 The power supply must be turned off before moving, maintaining, or repairing this device. Please note that, due to rotating inertia, the device may continue running several minutes after power turned off.
- 1.11 These devices are only used to handle or convey dust-free air, non-combustible, non-corrosive and non-explosive gases, vapors.
- 1.12 The intake must be properly sited and covered so that no dirt or solid particles can be sucked in.
- 1.13 When the device is operated at impermissible high pressure condition, a suitable pressure-relief valve must be used to prevent overheating of motor.
- 1.14 The End Cover is used to prevent contact and direct the cooling air flow and cannot be removed; otherwise the motor will overheat.
- 1.15 Pilot type of thermal protector is provided. This protector should be externally connected with a magnetic switch which is used to control the power input **ON/OFF**.
- 1.16 This device is designed for continuous operation, in case of non-continuous running or high ambient temperature, checking suitability (maximum permissible temperature) with the representatives of manufacturer.

1. Installation



Fuji Model				
Model	Voltage(V)	Phase (PH)	Frequency (Hz)	HP
EXV500-7W	230/460	3	60	5
EXV1000-7W	230/460	3	60	10

2.1 Application

2.1.1 This device is used to handle non-combustible, non-corrosive and non-explosive gases and air. The ambient or gas temperature should be less than +40°C.

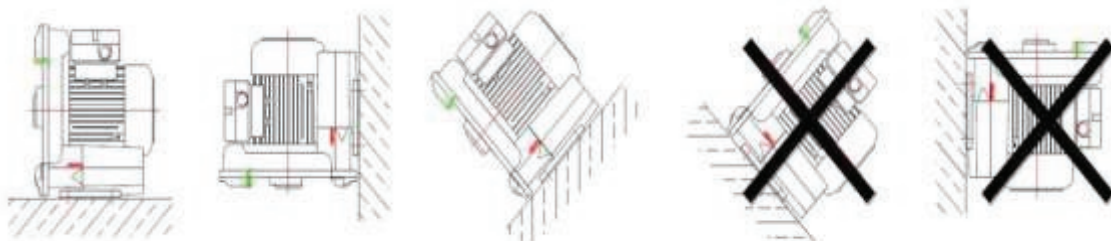
2.1.2 Dirt and solid particles must be filtered before entering intake of the device.

2.1.3 These devices must not be operated with closed intake or outlet.

2.1.4 The permissible pressure for continuous operation is under the rated current that shown in the nameplate of the motor.

2.2 Installation

2.2.1 The Ring Blowers can be installed in any direction ,but when mounted vertically, the motor side should be upward.



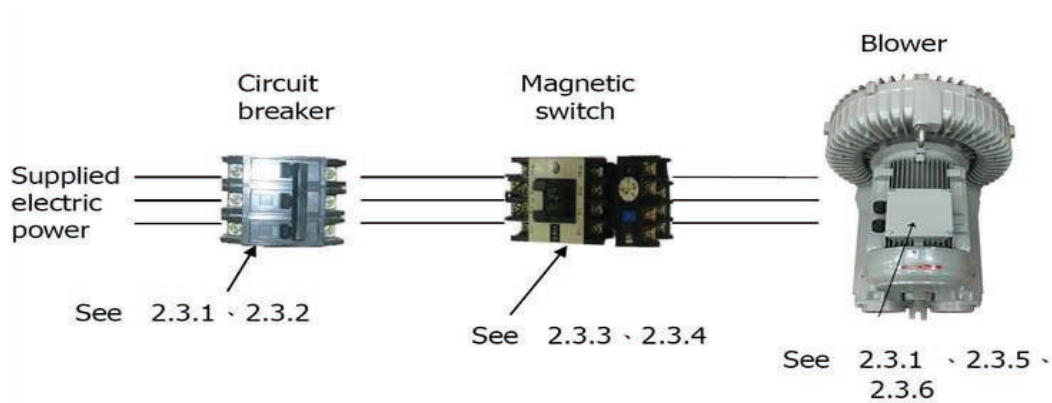
2.2.2 To avoid vibration, the unit must be mounted on a rigid base.

2.2.3 Any flammable materials must be kept away from the unit.

2.2.4 Air and gases should be filtered before entering the intake by an intake or inline filter.

2.3 Electric Connection

⚠ WARNING: No connecting work is allowed before the electric power is disconnected.



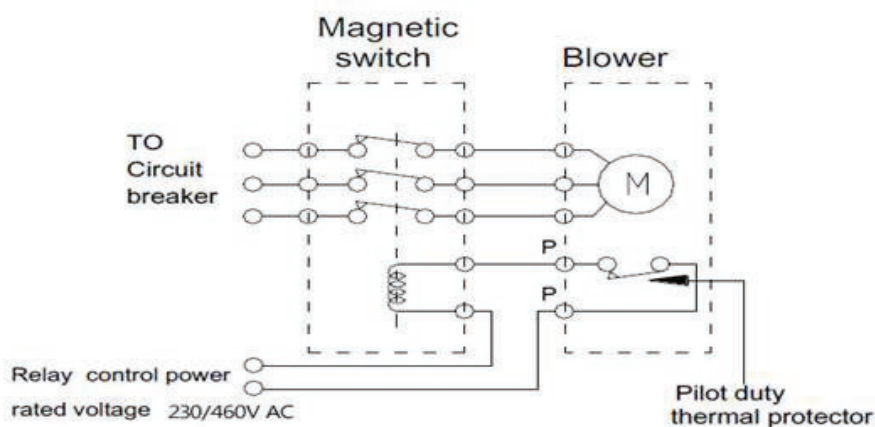
2.3.1 The supplied power voltage must be the same as the rating stated on the nameplate.

2.3.2 Select the correct circuit breaker to match the motor's rated current.

2.3.3 We recommend when using the magnetic switch, the setting value of electric current is the motor's rated current of 0.91 times.

2.3.4 Thermal protectors connection:

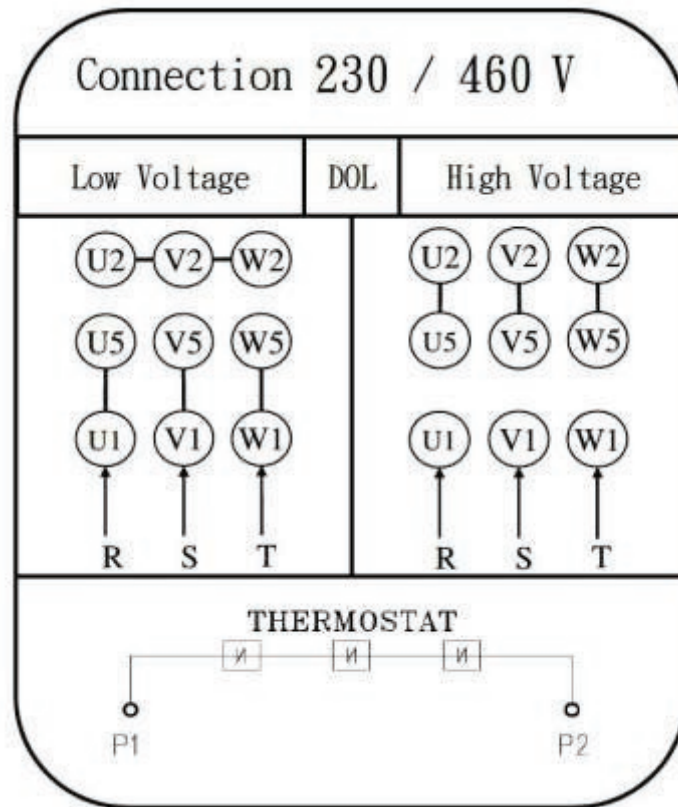
Recommended protector connection (Three Phase)



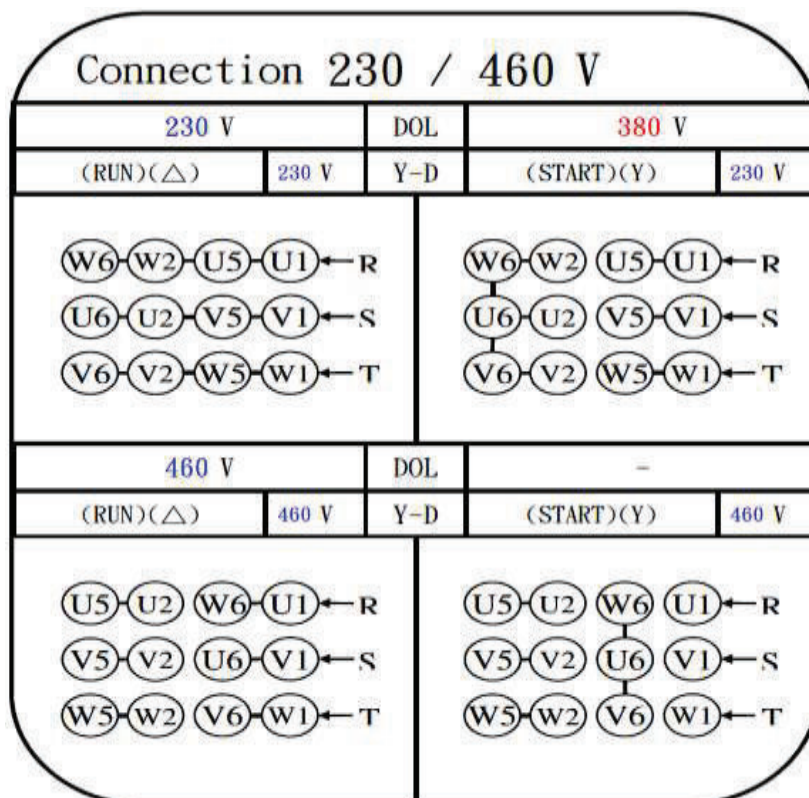
2.3.5 The protective earth conductor must be connected to the grounding terminal.

2.3.6 The lead wires must be connected according to the diagram attached on the terminal box.

1HP - 5HP (530V/460V)




7.5HP - 20HP (230/380V/460V)



3. Operation

- 3.1 These devices must be rotated in the "Arrow" direction marked on the casing.
- 3.2 For three phase, changing direction may be done by exchanging any two of the lines of power input.
- 3.3 These devices should be operated with the rated current and pressure within the permitted range listed in the nameplate of the Ring Compressors.
- 3.4 To avoid operating over the permitted range, the pressure release valve is recommended.

4. Maintenance

-  **WARNING:** No maintaining work is allowed before the electric power off.
- 4.1 To maintain a good cooling performance, it's necessary to clean the inside and outside of the Fan Cover to remove dirt and dust in a period of time; otherwise the motor might be burnt.
- 4.2 The bearing , oil seal and silencers are subject to wear; these parts should be replaced with new ones as necessary .



CAUTION: Never disassemble the motor. If a malfunction occurs after changing the outlet direction, please contact with your nearest sales office.

4. Trouble-shooting

Impeller DOES NOT turn	Humming sound	<ol style="list-style-type: none"> 1. One phase of line not connected 2. One Phase of stator winding open 3. Bearings defective 4. Impeller jammed by foreign material 5. Impeller jammed against housing or cover 	<ol style="list-style-type: none"> 1. Connect 2. Contact factory 3. Change bearings 4. Clean 5. Adjust
	No sound	<ol style="list-style-type: none"> 1. Two phases of power line not connected. 2. Two phases of stator winding open 	<ol style="list-style-type: none"> 1. Connect 2. Contact factory
Impeller turn	Blown fuse	<ol style="list-style-type: none"> 1. Insufficient fuse capacity 2. Short circuit 	<ol style="list-style-type: none"> 1. Use fuse or proper rating 2. Repair
	Motor overheated or protector trips	<ol style="list-style-type: none"> 1. High or low voltage 2. Operating in single phase condition 3. Bearing defective 4. Impeller rubbing against housing or cover 5. Impeller or air passage clogged by foreign material 6. Unit operating beyond performance range 7. One phase of stator winding short circuited 	<ol style="list-style-type: none"> 1. Check input voltage 2. Check connections 3. Change bearings 4. Adjust 5. Clean 6. Contact factory 7. Contact factory
	Abnormal sound	<ol style="list-style-type: none"> 1. Impeller rubbing against housing or cover 2. Impeller or air passages clogged by foreign material 3. Bearings defective 	<ol style="list-style-type: none"> 1. Adjust 2. Clean 3. Change bearings
	Performance below standard	<ol style="list-style-type: none"> 1. Leak in piping 2. Piping and air passages clogged 3. Impeller rotation reversed 4. Leak in compressor 5. Low voltage 	<ol style="list-style-type: none"> 1. Tighten 2. Clean 3. Check wiring 4. Tighten cover, flange 5. Check input voltage

Note: The high pressure blowers is a precision instrument, if there is necessity to dismount the parts, users had better leave it to the specialist so as to avoid the damage.

6. Parts List

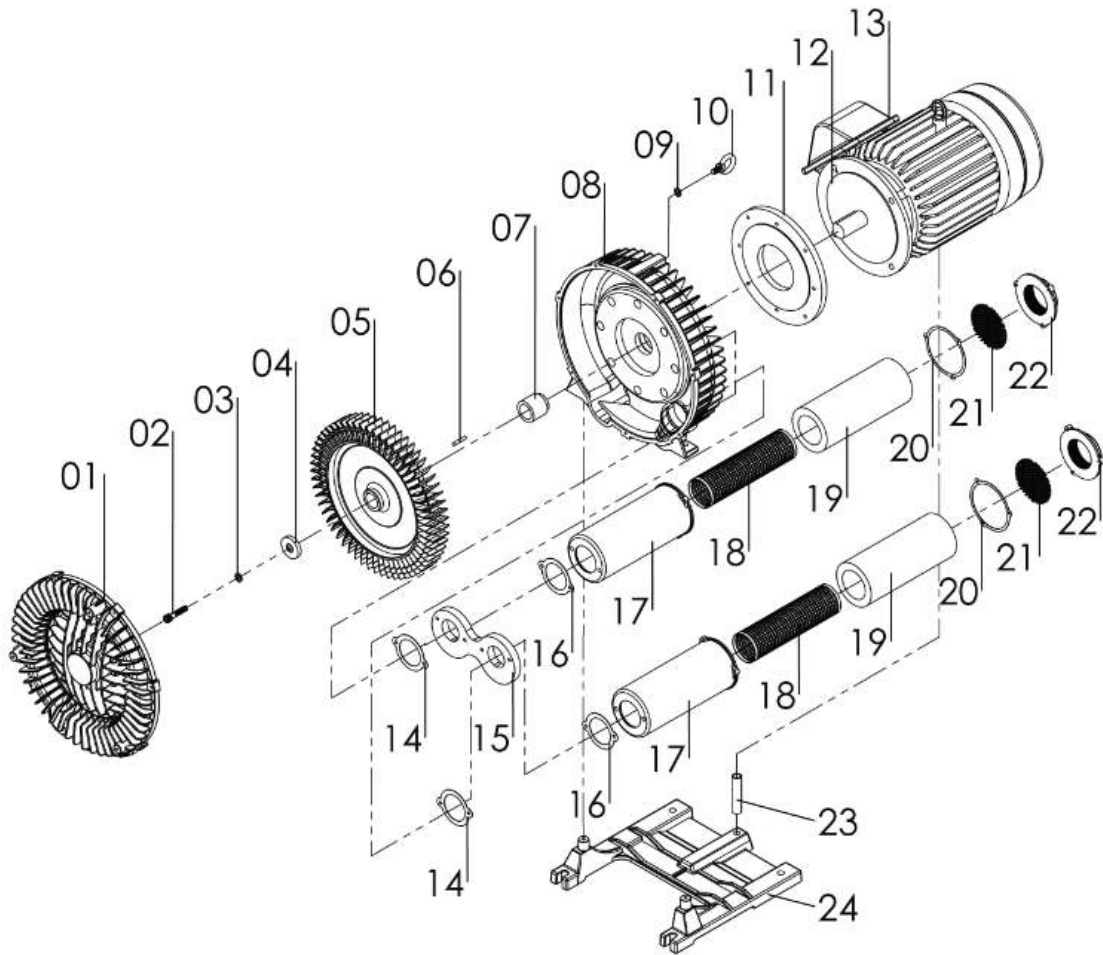


Fig. #	Name of Part	Fig. #	Name of Part
1	Casing cover	13	Terminal box
2	Bolt	14	Gasket (silencer housing)
3	Spring washer	15	Joint plate (silencer housing)
4	Washer (impeller)	16	Gasket (silencer housing)
5	Impeller	17	Silencer housing
6	Pin	18	Silencer filter pipe
7	Shaft seal	19	Silencer foam
8	Casing	20	Gasket (inlet/outlet flange)
9	Spring washer	21	Filter mesh
10	Eye bolt	22	Inlet/Outlet flange
11	Joint plate (motor)	23	Motor bracket
12	Motor	24	Mounting plate



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