ROBERTS GORDON

EP-100 Pump

IRHS-VP-100

Installation, Operation & Service Manual

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can result in death, injury or property damage. Read the Installation, Operation and Service Manual thoroughly before installing or servicing this equipment.

Installation must be done by a contractor qualified in the installation and service of gas-fired heating equipment or your gas supplier.

Installer

Please take the time to read and understand these instructions prior to any installation. Installer must give a copy of this manual to the owner.

Owner

Keep this manual in a safe place in order to provide your serviceman with necessary information.

DESIGN CERTIFIED ®

CERTIFIED ®

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Quality in Any Language™

P/N 127201NA Rev. C 06/06

TABLE OF CONTENTS

Printed in U.S.A.

TABLE OF FIGURES

SECTION 1: HEATING SYSTEM SAFETY

Your Safety is Important to Us! This symbol is used throughout the manual to notify you of possible fire, electrical or burn hazards. Please pay special attention when reading and following the warnings in these sections.

Installation, service and annual inspection of heater and pump must be done by a contractor qualified in the installation and service of gas-fired heating equipment.

Read this manual carefully before installation, operation or service of this equipment.

This heating system is designed for heating nonresidential indoor spaces. Do not install in residential spaces. These instructions, the layout drawing, local codes and ordinances, and applicable standards that apply to electrical wiring, venting, etc. must be thoroughly understood before proceeding with the installation.

Thin sheet metal parts, such as the various venting components, have sharp edges. To prevent injury, the use of work gloves is recommended.

Do not attempt to operate the pump until all steps of the installation have been accomplished.

1.1 Manpower Requirements

To prevent personal injury and damage to the pump, two persons will be required for installation.

SECTION 2: INSTALLER RESPONSIBILITY

The installer is responsible for the following:

- To install the pump and electrical supplies, in accordance with applicable specifications and codes. Roberts-Gordon recommends the installer contact a local Building Inspector or Fire Marshal for guidance.
- To use the information given in a layout drawing and in the manual together with the cited codes and regulations to perform the installation.
- To furnish all needed materials not furnished as standard equipment.
- To plan location of supports.
- To provide access to pump for servicing on all sides and for pump removal.
- To provide the owner with a copy of this Installation, Operation and Service Manual.
- To never use pump or pump platform as support for ladder or other access equipment and never hang or suspend anything from pump or pump platform.
- To safely and adequately install pump using materials with a minimal working load of 400 lbs (181 kg).

2.1 Corrosive Chemicals

⚠ CAUTION

Do not use heater and pump in an area containing corrosive chemicals.

Avoid the use of corrosive chemicals to ensure a longer life of the pump, burner, tubing and other parts.

Failure to follow these instructions can result in property damage.

Roberts-Gordon cannot be responsible for ensuring that all appropriate safety measures are undertaken prior to installation; this is entirely the responsibility of the installer. It is essential that the contractor, the sub-contractor, or the owner identifies the presence of combustible materials, corrosive chemicals or halogenated hydrocarbons* anywhere in the premises.

** **Halogenated Hydrocarbons** are a family of chemical compounds characterized by the presence of halogen elements (fluorine, chlorine, bromine, etc.). These compounds are frequently used in refrigerants, cleaning agents, solvents, etc. If these compounds enter the air supply of the burner, the life span of the heater components will be greatly reduced. An outside air supply must be provided to the burners whenever the presence of these compounds is suspected. Warranty will be invalid if the heater is exposed to halogenated hydrocarbons.*

2.2 National Standards and Applicable Codes

All appliances must be installed in accordance with the latest revision of the applicable standards and national codes. This refers also to the electric, gas and venting installation. Note: Additional standards for installations in Public Garages, Aircraft Hangars, etc. may be applicable.

SECTION 3: UNPACKING THE PUMP

3.1 Open Shipping Cartons

Open cartons and remove packing inserts. Carefully remove pump components from the cartons. Lift assembly by gripping metal pump frame. Two people are required (weight 62 lbs, 28.1 kg). This pump has been tested prior to packing. The impeller was dynamically balanced before assembly and requires care in handling to avoid damage.

⚠ WARNING

Severe Injury Hazard

Install pump scroll and inlet assembly before operating high speed rotating impeller.

Keep hands, fingers and clothing away from inlet and outlet.

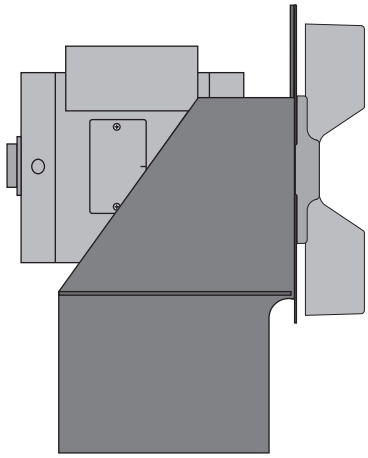
Install and operate equipment according to installation manual.

Failure to follow these instructions can result in death or severe injury.

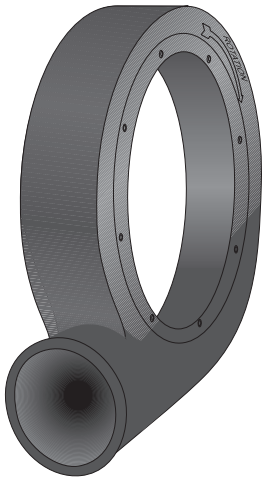
SECTION 4: MAJOR COMPONENTS

FIGURE 1: Major Component Descriptions

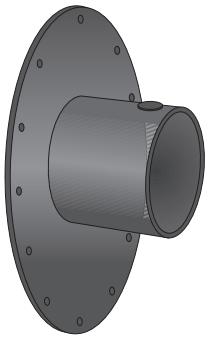
EP-100 Pump Assembly - P/N 02719100



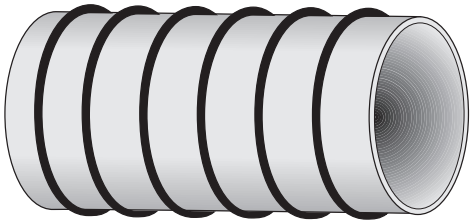
Pump Scroll - P/N 02757001



Pump Inlet Assembly - P/N 02724200

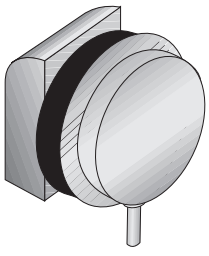


Pump Boot - P/N 91412800



Band Clamp 4" (10 cm) - P/N 91901300

Pressure Switch - P/N 90430600K



2 1/2'' S-Hook - P/N 91907302

Bird Screen 4" (10 cm) P/N 01365400

4.1 Standard Parts List

Table 1: EP-100 Pump Package 4" (10 cm) (P/N 02719105)

Part No.	Description	Quantity
	Box 1 of 2	
02719100	Pump Frame, Motor and Impeller Assembly	1
127102NA	CORAYVAC® Installation, Operation and Service Manual	1
	Box 2 of 2	
02724700	**EP-100 Accessory Package**	**1**
127201NA	EP-100 Installation, Operation and Service Manual	1
02724200	Pump Inlet Assembly	1
02757001	Pump Scroll	1
91901300	Pump Boot Clamps 4'' (10 cm)	5
91907302	2 1/2" S-Hooks	3
91412800	Pump Boots 4'' (10 cm)	2
92311600	#10-24 Keps Locknuts	12
90430600K	Pressure Switch	1
02757500	Motor Shaft Seal	1
01365400	Bird Screen 4'' (10 cm)	1
01327500	Damper Assembly	1
01329500	Damper Support Assembly	1
93413008	Bolt 1/4" - 20 x 1/2" Hex Head	1
95211600	5/16" Flat Washer	1
96211500	1/4" External Tooth Lockwasher	1

SECTION 5: PUMP INSTALLATION

5.1 Pump Assembly Instructions

5.1.1 Determine Orientation of Pump Discharge

To ensure your safety and comply with the terms of the warranty, all units must be installed in accordance with these instructions.

The pump must be installed in a location that it is readily accessible for servicing.

An arrow is affixed to the outside of the pump scroll to indicate the direction of rotation of the impeller.

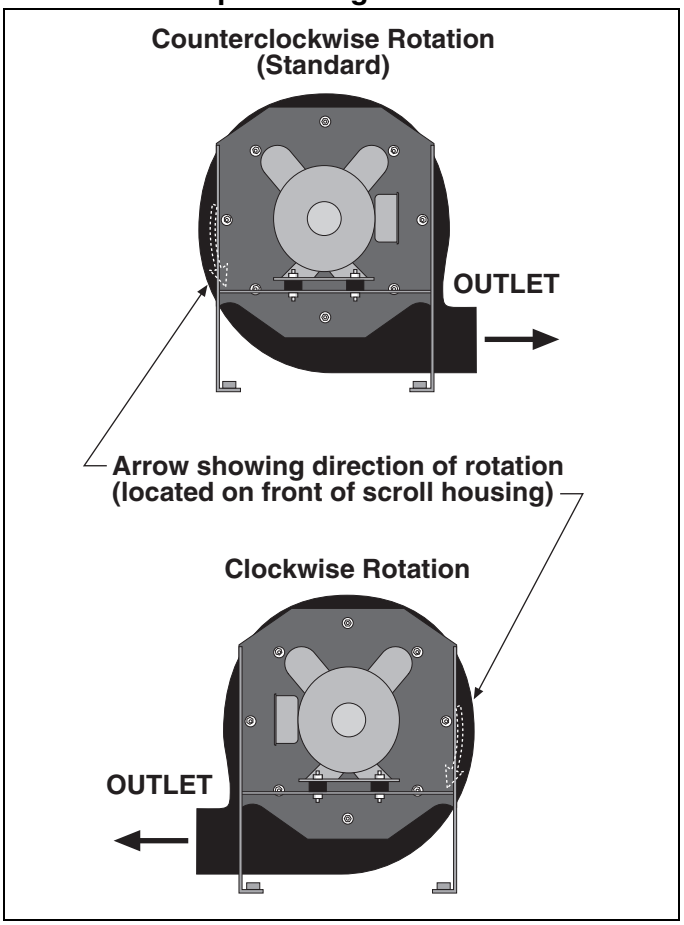
The standard rotation of the impeller is in the counterclockwise direction.

Pump discharge orientation is viewed from the rear of the motor as shown in *on Page 6, Figure 2*. Note that the pump scroll outlet must always be positioned at the bottom horizontal position.

5.1.2 Attaching Pump Scroll

After determining the correct orientation of the pump scroll outlet, attach the pump scroll to the pump frame using the #10 - 24 Keps locknuts provided. NOTE: Periodically spin the impeller to be sure that adequate clearance is maintained between the impeller blades and the body of the pump scroll.

FIGURE 2: Pump Discharge Orientation

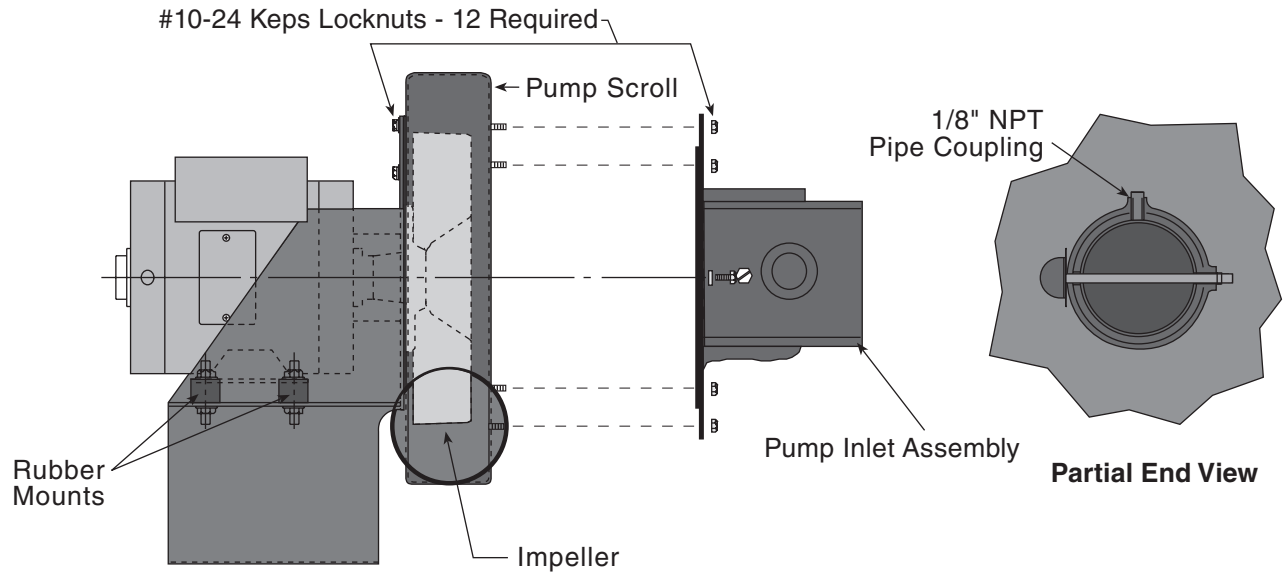


5.1.3 Attaching the Pump Inlet Assembly

From the scroll assembly side of the pump, orient the inlet assembly so the threaded pipe coupling is on the top. See partial end view *on Page 7, Figure 3*.

- Attach inlet assembly onto the scroll assembly by using the #10 - 24 Keps locknuts provided.

FIGURE 3: Pump Assembly



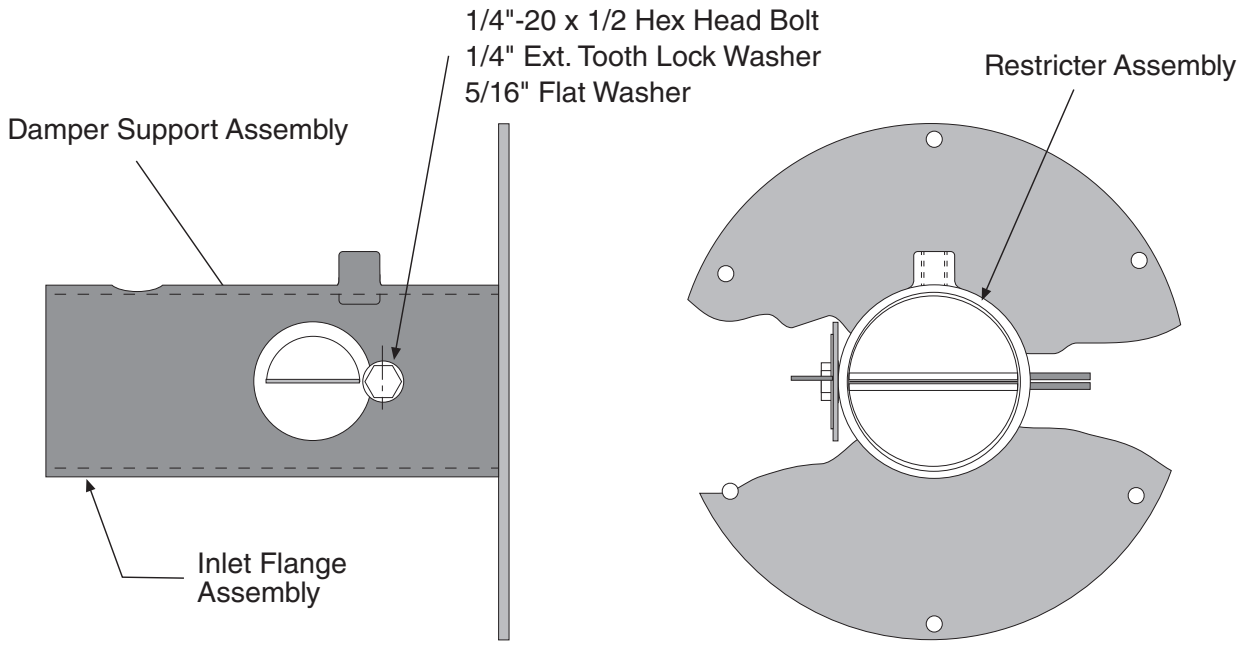
Description	Part Number
Rubber Mounts	91906100
Pump Scroll	02757001
Pump Inlet Assembly	02724200

5.1.4 Damper Assembly

The pump is equipped with a damper assembly which is used as a means of setting the system vacuum. See the appropriate Installation, Operation and Service Manual for additional vacuum setting information.

1. When the pump is installed, be certain to lock the damper in the full open position with the (1/4"- 20) Hex Head bolt. *See Figure 4*.
2. The pump inlet assembly is provided with a 1/8" N.P.T. tapping. This is to be located at the top and used for connection of the pressure switch (P/N 90430600K). *See Page 15, Figure 13*.

FIGURE 4: Damper Assembly



Description	Part Number
Damper Support Assembly	01329500
Inlet Flange Assembly	02724200
1/4"-20 x 1/2" Hex Head Bolt	93413008
1/4" Ext. Tooth Lock Washer	96211500
5/16" Flat Washer	95211600
Restrictor Assembly	01327500

5.1.5 Installing the Motor Shaft Seal

The motor shaft seal (P/N 02757500) eliminates air leakage around the motor shaft and reduces the associated noise. Install the shaft seal as follows:

1. Separate the motor shaft seal at the pre-cut score line.
2. Wrap the shaft seal around the motor shaft hub as shown.
3. Secure the shaft seal in position with the adhesive strip provided.

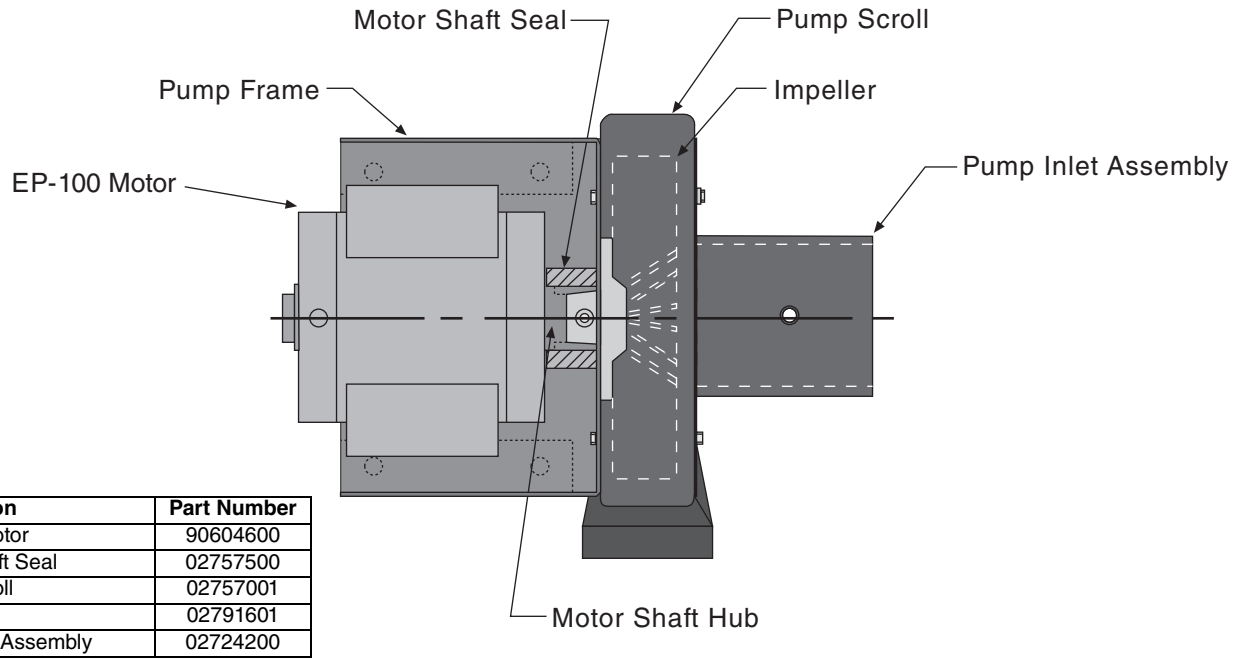
⚠ WARNING

Electrical Shock Hazard

Disconnect electrical power before service or maintenance.

Failure to follow these instructions can result in death or electrical shock.

FIGURE 5: Motor Shaft Seal Installation



Description	Part Number
EP-100 Motor	90604600
Motor Shaft Seal	02757500
Pump Scroll	02757001
Impeller	02791601
Inlet Plate Assembly	02724200

5.2 Pump Mounting Instructions

5.2.1 Chain Suspension

⚠ WARNING

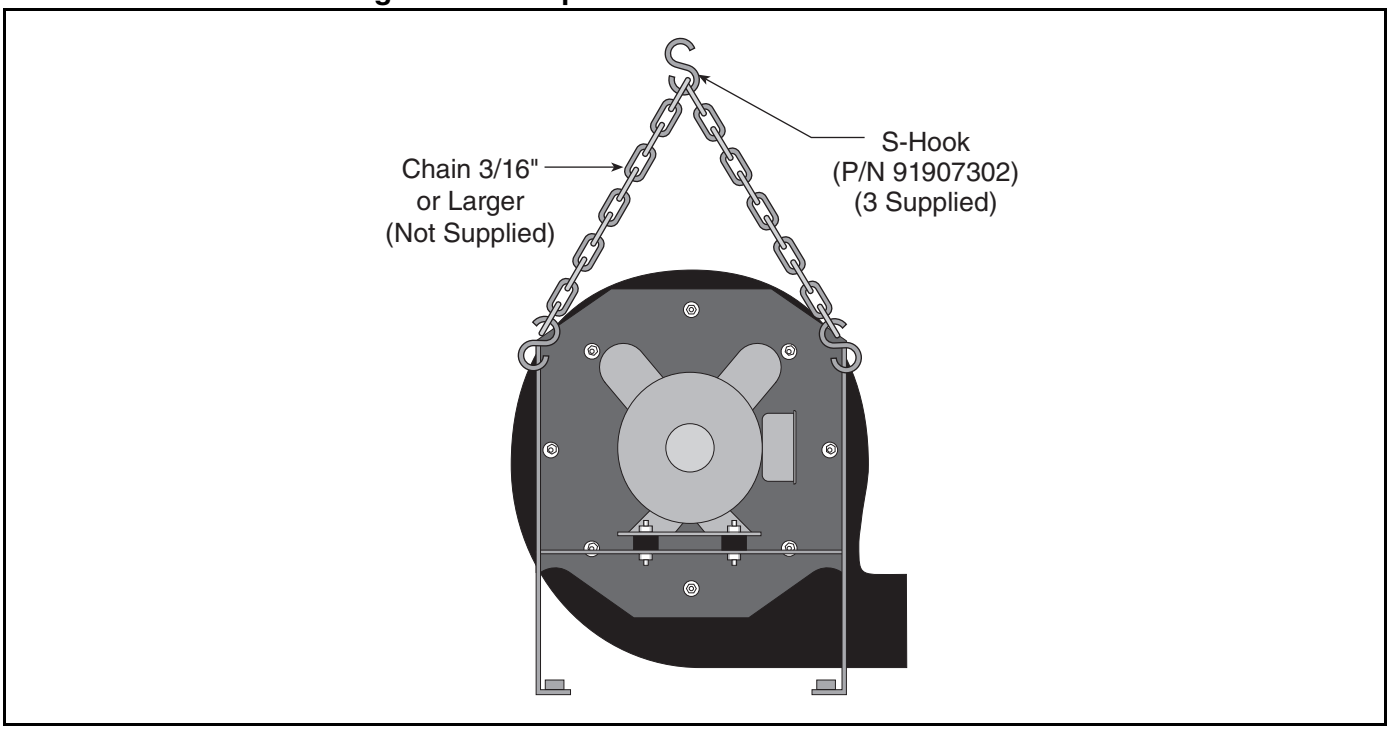
Crush Hazard

Securely hang pump according to this Installation, Operation and Service Manual.

Failure to follow these instructions can result in death, injury or property damage.

The standard method of mounting the EP-100 pump is suspending it from a chain and venting through the roof.

FIGURE 6: EP-100 Mounting - Chain Suspension



5.3 Wall Mounting

⚠ WARNING

Suspension Hazard

Mount pump with materials with a minimum working load of 400 lbs (181 kg).

Failure of the supports can result in death, injury or property damage.

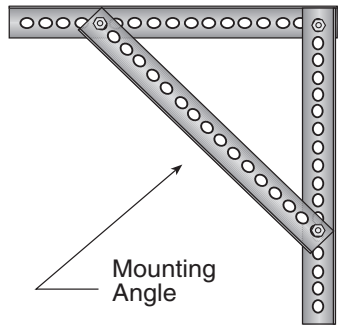
5.3.1 Wall Mounting Platform

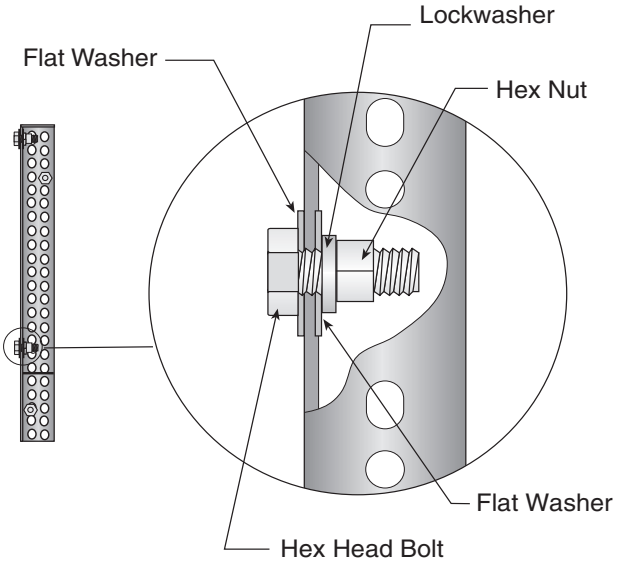
The alternative method of mounting the pump is on an outside wall and venting directly through the wall. The optional mounting angle package (P/N 01312102) must be ordered if this method is used.

The pump may be mounted by using mounting angles as shown in *Figure 7 and Figure 8, Page 12* . The two mounting angles form a mounting platform to which the pump will be attached.

Fix the mounting frame to the wall using anchors. Select an anchor that will give equal to or greater than 2000 lbs ultimate pull-out strength.

FIGURE 7: Wall Bracket Assembly





Description	Part Number
Mounting Angle Package	01312102
Mounting Angle	01365000
Hex Bolt 5/16" x 3/4"	93413912
Flat Washer	95211600
Lockwasher	96411600
Hex Nut	92113900

5.3.2 Mounting Platform (Angle Assembly)

Pump may be mounted by using mounting angles as shown in *Figure 8*.

FIGURE 8: Wall Mounting Angle Assembly

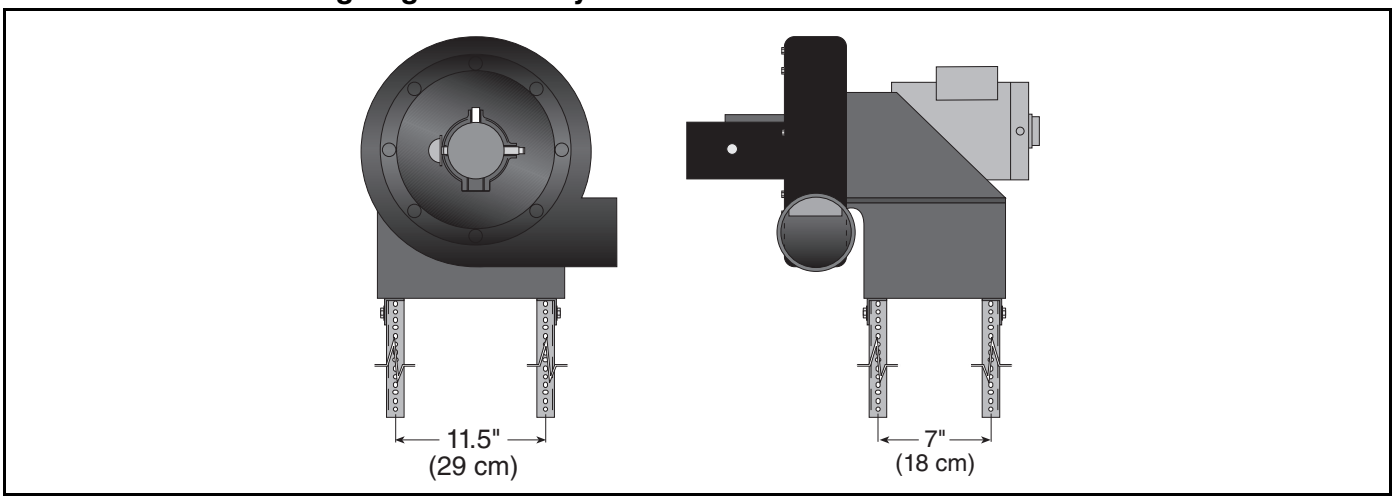
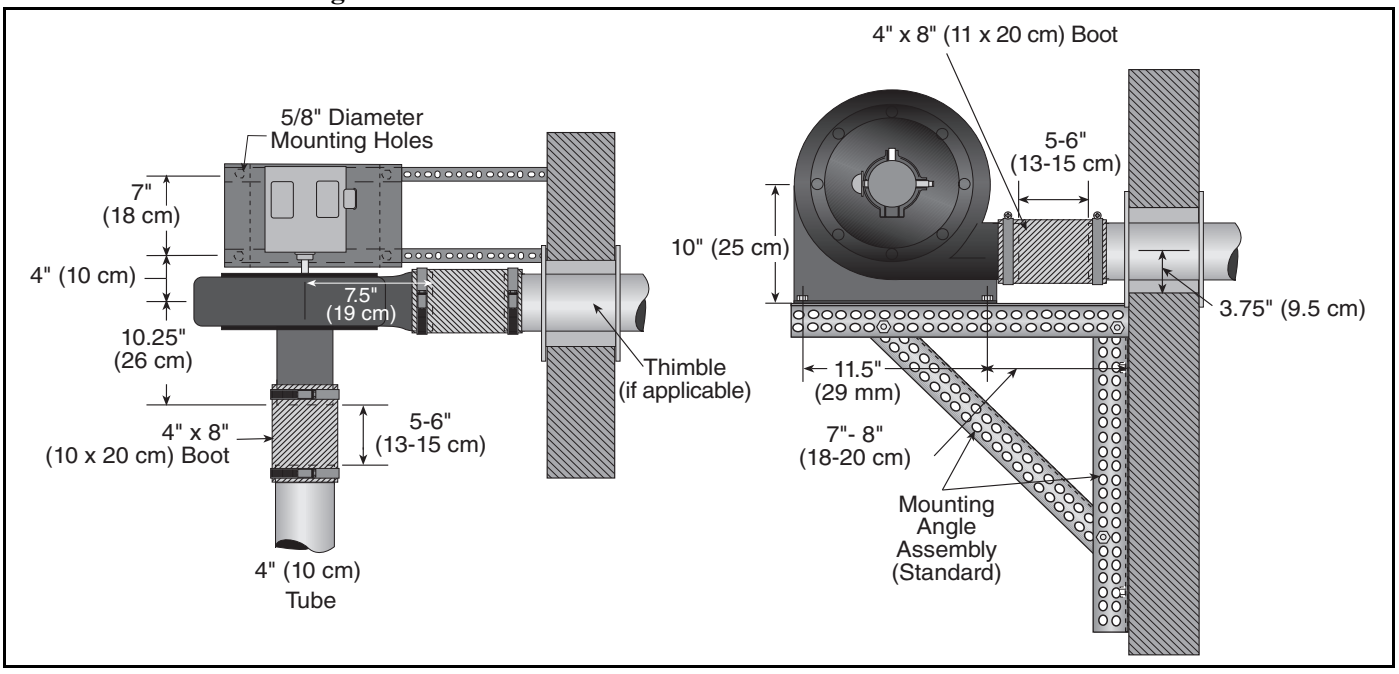


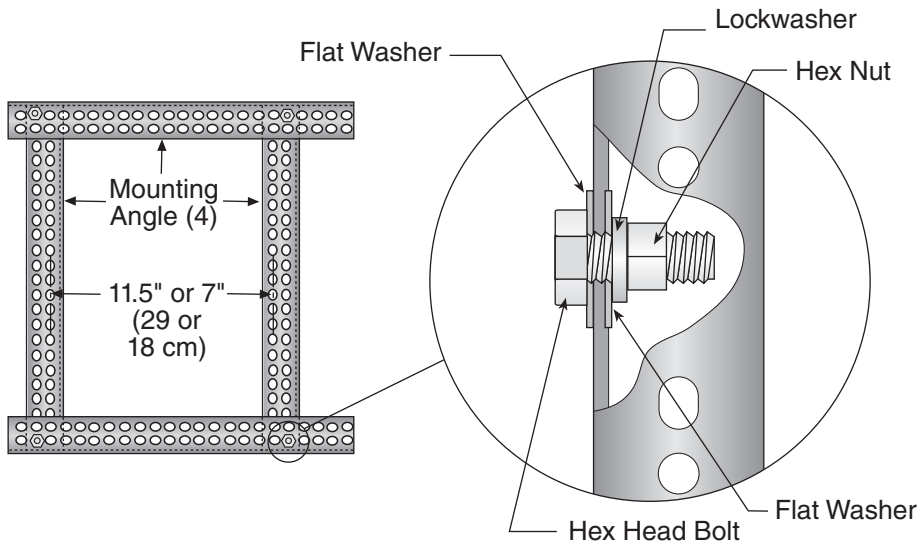
FIGURE 9: Wall Mounting



5.3.3 Mounting Platform (Optional Platform Assembly)

If mounting on an outside wall is not practical, it may be mounted on a platform suspended from the ceiling, or for noise reduction, in an enclosure.

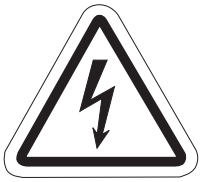
FIGURE 10: Optional Platform Assembly Mounting



Description	Part Number
Mounting Angle Package	01312102
Mounting Angle	01365000
Hex Bolt 5/16" x 3/4"	93413912
Flat Washer	95211600
Lockwasher	96411600
Hex Nut	92113900

SECTION 6: MOTOR WIRING

⚠ WARNING



Electrical Shock Hazard

Disconnect electrical power and gas supply before servicing.

This appliance must be connected to a properly grounded electrical source.

Failure to follow these instructions can result in death or electrical shock.

All wiring must comply with current wiring regulations and any local regulations which may apply. Always switch off the supply and disconnect before servicing.

6.1 Impeller Roatation Direction

Prior to operation of the pump in the heating system, operation and proper rotation of the impeller must be verified. See impeller rotation direction arrow label on the pump scroll for the correct rotation direction.

The motor must be wired for clockwise or counterclockwise rotation.

IMPORTANT: Improper rotation of the impeller can produce only half of the vacuum required for proper system operation.

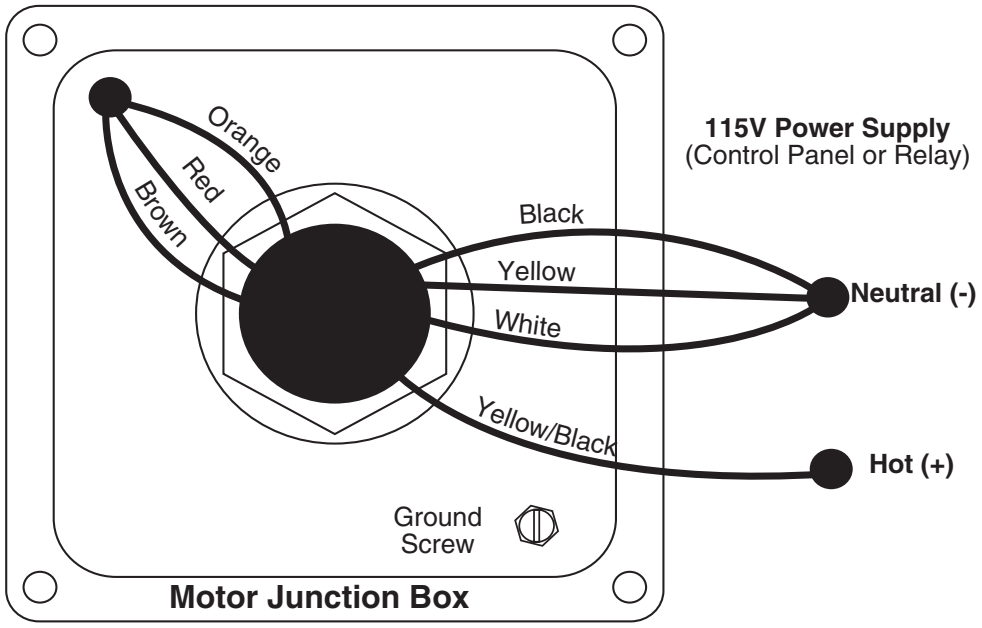
6.2 EP-100 Wiring

The EP-100 motor is wired for 1 Ø, 115 V, 60 Hz operation. However, the motor can be rewired for 230 V operation by changing the motor connections as indicated by the diagram on the motor connection box cover.

Motor operation can be changed from counterclockwise to clockwise as shown *on Page 6, Figure 2*.

Wire the pressure switch per the CORAYVAC® or VANTAGE® NP Installation, Operation and Service Manual.

FIGURE 11: EP-100 Contactor Wiring Diagram



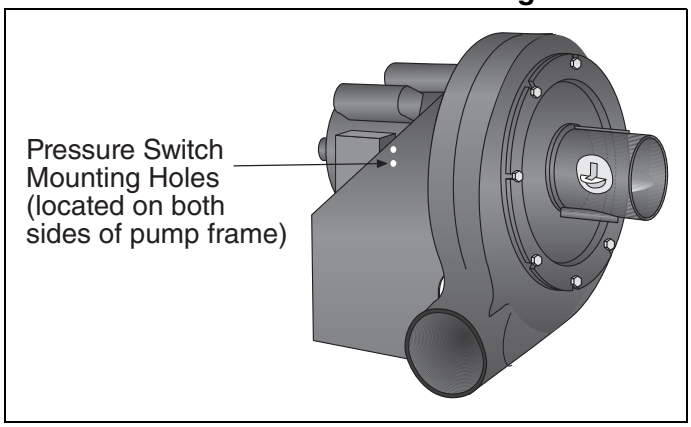
Magnetek TENV Motor:

To reverse rotation, interchange black and red leads.

SECTION 7: PRESSURE SWITCH MOUNTING AND WIRING

For connection to a pump, locate the two pressure switch mounting holes on the pump frame. If replacing an old pressure switch, you may need to drill two holes in the pump frame (7/32" dia. approximately 13/16" apart).

FIGURE 12: Pressure Switch Mounting Holes



Using hardware included, mount the switch to the pump frame. Thread the barbed fitting into the threaded hole at the pump inlet. Cut the silicone tube to the appropriate length to eliminate the possibility of kinks and securely attach the hose to the pressure switch and the barbed fitting.

FIGURE 13: Pressure Switch Mounting

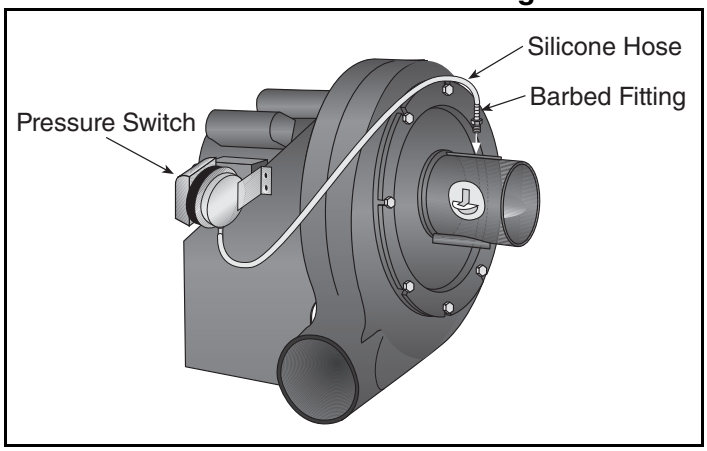
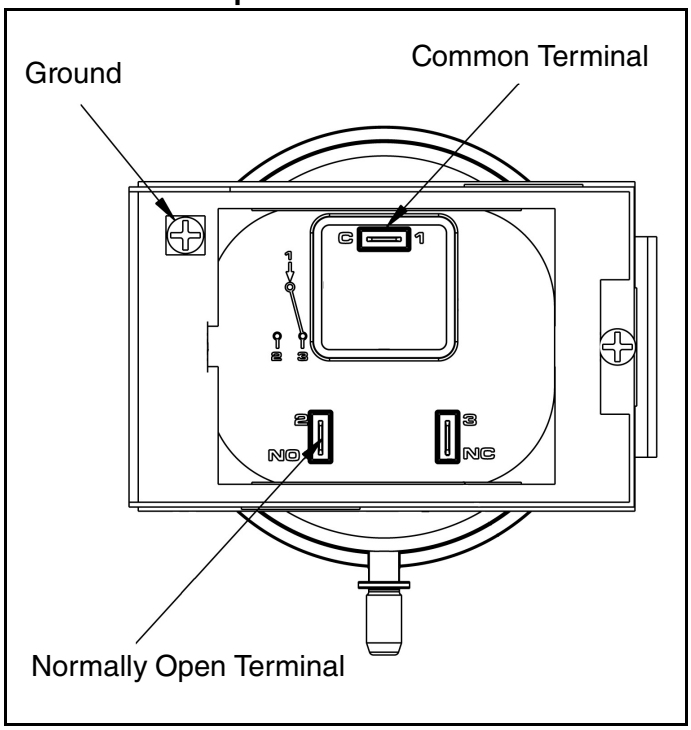


FIGURE 14: Pump Pressure Switch



SECTION 8: VENTING

⚠ WARNING

Carbon Monoxide Hazard

Pump must be vented to the outside.

Heaters must be installed according to the installation manual.

Failure to follow these instructions can result in death or injury.

8.1 General Venting Requirements

Install the venting in accordance with the requirements within this manual and the National Fuel Gas Code, ANSI Z223.1/NFPA-54 - latest revision and CSA 22.1 - latest revision. This section provides partial information about this specification with regard to size and configuration for venting requirements (*see Page 17, Figure 15* and *Page 17, Figure 16*). However, to provide assurance of proper and safe operation, it is the responsibility of the installer to make sure the installation is in strict accordance with all local and national codes.

8.2 Venting the Pump

- The exhaust connection from the pump is 4" (10 cm) diameter.
- Connect the 4" (10 cm) pump boot (provided) to the 4" (10 cm) flue pipe, using the 4" (10 cm) band clamp provided. Connections to flue pipe larger than 4" (10 cm) require use of an appropriate taper pattern reducer (not supplied).
- Venting from the pump may discharge either horizontally or vertically. **Horizontal discharge is preferred.** Corrosion resistant pipe is required.
- Both horizontal and vertical venting must be supported by suitable hangers.
- Vent lengths are allowed as follows:

VENT LENGTH	VENT SIZE
Up To 25' (8 m)	4" (10 cm) vent - 3 elbows
Up To 50' (15 m)	5" (12.5 cm) vent - 3 elbows

- *See Section 8.4* for vent material recommendations.

8.3 Horizontal Venting

If using vent lengths greater than 30' (9 m), condensation will form in the vent pipe. Insulation and additional sealing measures will be required. Seal all discharge pipe joints with high temperature silicone adhesive.

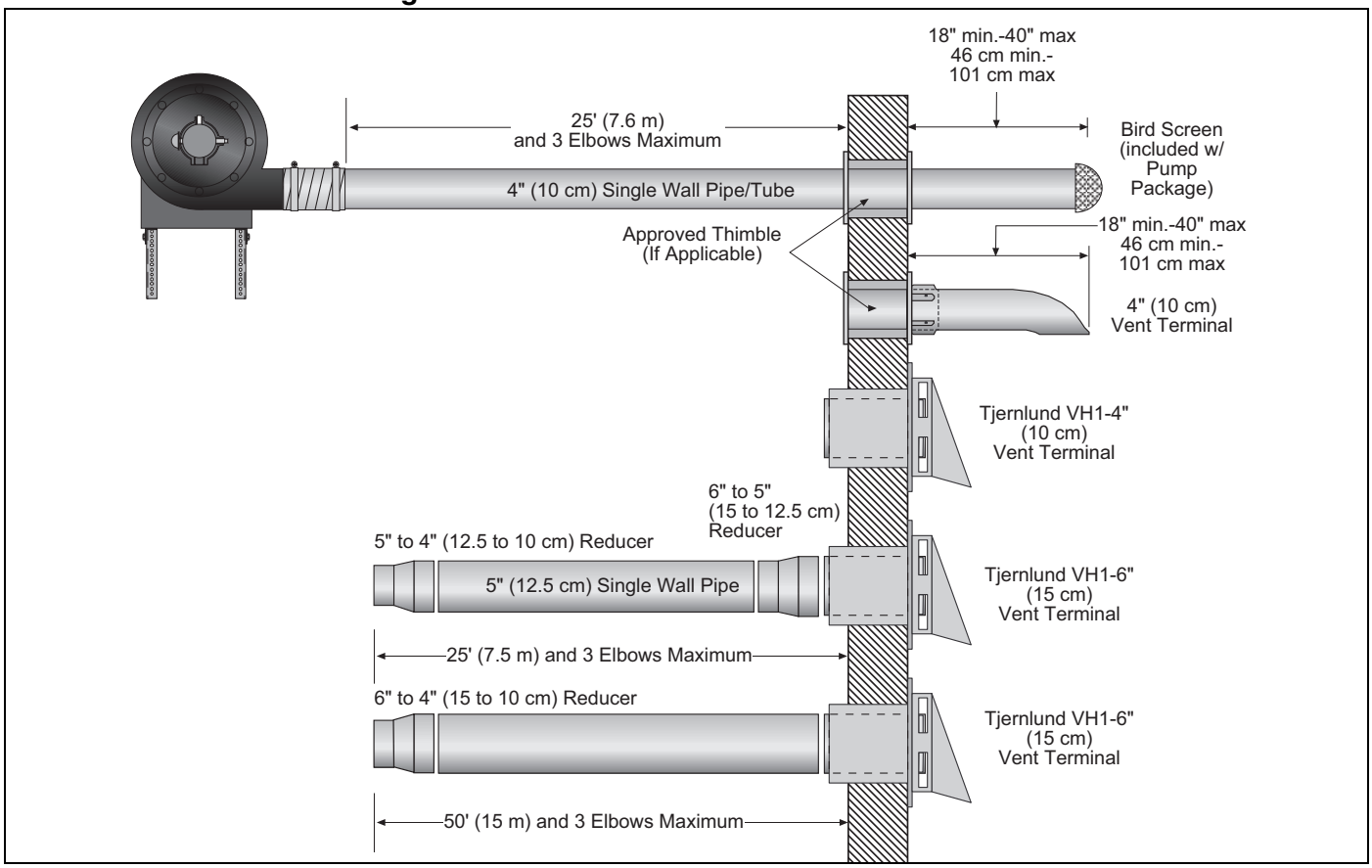
8.3.1 Horizontal Venting Guidelines

- Vent must exit building not less than 7' (2 m) above grade when located adjacent to public walkways.
- Vent must terminate at least 3' (1 m) above any forced air inlet located within 10' (3 m).
- Vent must terminate at least 4' (1.2 m) below, 4' (1.2 m) horizontally from, or 12" (30 cm) above any door, window or gravity air inlet into building.
- Locate vent terminal at least 12" (30 cm) from any opening through which vent gases could enter a building.
- Use only corrosion resistant materials for the discharge line from the pump to the point of discharge.
- Vent terminal opening must extend beyond any combustible overhang.
- Install vent terminal at a height sufficient to prevent blockage by snow.
- Protect building materials from degradation by flue gases.
- Any portion of flue pipe passing through a combustible wall must be dual insulated and an approved thimble must be used.

8.4 Vent Material Recommendations (in order of preferred use)

1. Porcelain coated tubing 4" (10 cm) O.D. (P/N 9141030C)
2. Heat treated aluminized tubing 4" (10 cm) O.D. (P/N 91409408)
3. Single wall flue pipe (corrosion resistant) - minimum 26 Ga.

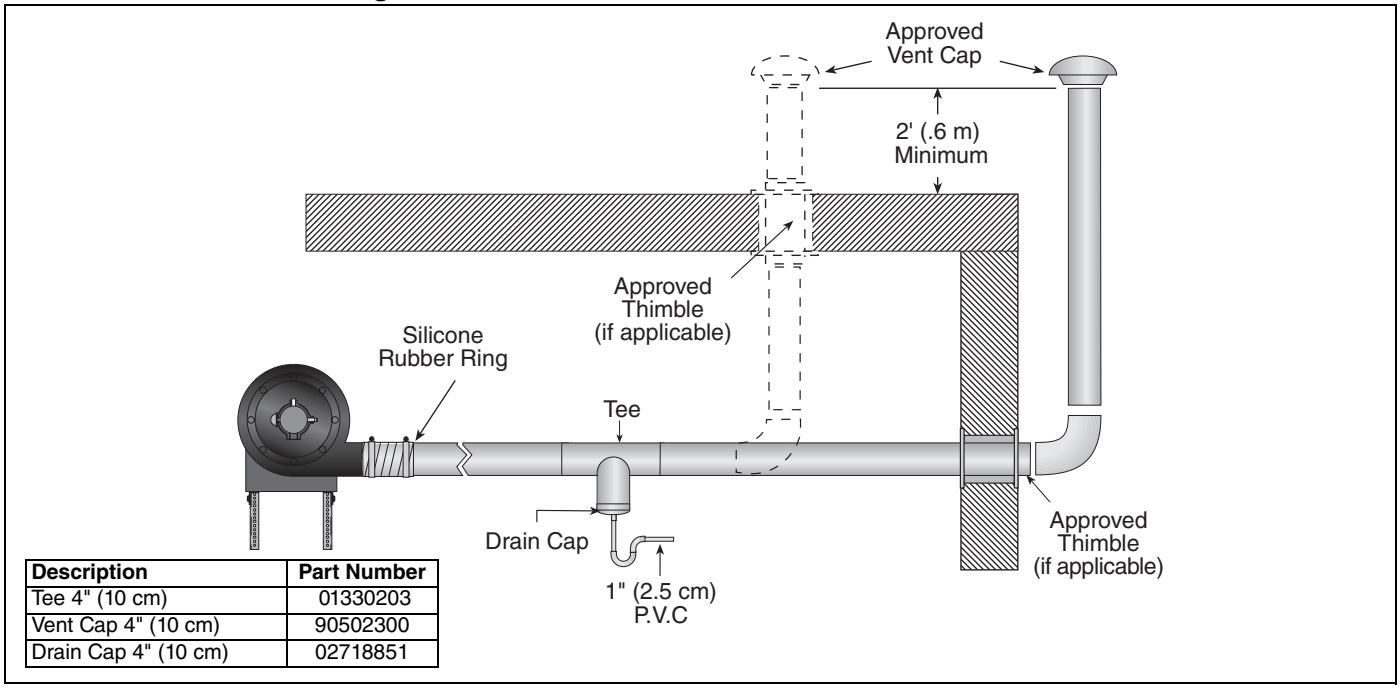
FIGURE 15: Horizontal Venting



8.5 Vertical Venting

Vent length should be limited to less than 30' (9 m). If using vent lengths greater than 30' (9 m), condensation will form in the vent pipe. Insulation and additional sealing measures will be required. Length of flue pipe is equal to total of vertical and horizontal length.

FIGURE 16: Vertical Venting



Description	Part Number
Tee 4" (10 cm)	01330203
Vent Cap 4" (10 cm)	90502300
Drain Cap 4" (10 cm)	02718851

SECTION 9: SERVICING INSTRUCTIONS

⚠ WARNING

Severe Injury Hazard

Install pump scroll and inlet assembly before operating high speed rotating impeller.

Keep hands, fingers and clothing away from inlet and outlet.

Install and operate equipment according to installation manual.

Failure to follow these instructions can result in death or severe injury.

⚠ WARNING

Electrical Shock Hazard

Heater must be installed and grounded according to national codes.

Disconnect electrical power and gas supply before installation or service.

Failure to follow these instructions can result in death or electrical shock.

Disassembly and removal or replacement of any pump components must be done by a service contractor or electrician qualified in the installation and service of gas-fired heating equipment.

Overtorquing can result in a failure of components.

Failure to follow these instructions can compromise pump operation and void warranty.

9.1 Pre-Season Maintenance and Annual Inspection

To ensure your safety and years of trouble-free operation of the pump, service and annual inspections must be done by a contractor qualified in the installation and service of gas-fired heating equipment.

Disconnect electric and gas supplies before performing service or maintenance.

Before every heating season, a contractor qualified in the installation and service of gas-fired heating equipment must perform a thorough safety inspection of the pump.

For safety and best performance, the electrical, venting, suspensions and overall pump condition are some of the areas requiring inspection.

Please *see Page 19, Section 9.3* for suggested items to inspect.

9.2 To Change the Motor and/or the Impeller

Disconnect electrical power before servicing.

Remove the pump boots from the inlet and outlet of the scroll assembly, disconnecting the pump from tailpipe and vent pipe.

To remove the motor or impeller, the scroll and inlet plate must be detached. Remove the six nuts attaching the scroll to the pump frame.

Remove the scroll assembly and inlet assembly from the frame as one piece.

The impeller can be removed by loosening the (2) 3/8"-24 set screws. With an appropriate wheel puller, remove the impeller.

The motor can now be detached, if necessary, by removing the attachment hardware.

Re-assembly of motor/impeller combination requires proper alignment. Make sure the impeller has a 1/4" (6 mm) clearance off the inside wall of the scroll. Be certain of the proper motor alignment and free rotation.

The (2) impeller set screws should be reinstalled with a drop of thread locking sealant and remain unseated during initial re-assembly.

Slide the impeller onto the motor shaft end.

Seat the (2) impeller set screws. Torque to 100 in/lbs.

Re-attach the scroll and inlet. Secure with all six nuts. Torque to 150 in/lbs.

9.3 Maintenance Checklist

Installation Code and Annual Inspections:
All installations and service of ROBERTS GORDON® products must be performed by a contractor qualified in the installation and service of products sold and supplied by Roberts-Gordon and conform to all requirements set forth in the ROBERTS GORDON® manuals and all applicable governmental authorities pertaining to the installation, service and operation of the equipment.

To help facilitate optimum performance and safety, Roberts-Gordon recommends that a qualified contractor annually inspect your ROBERTS GORDON® products and perform service where necessary, using only ROBERTS GORDON® replacement parts.

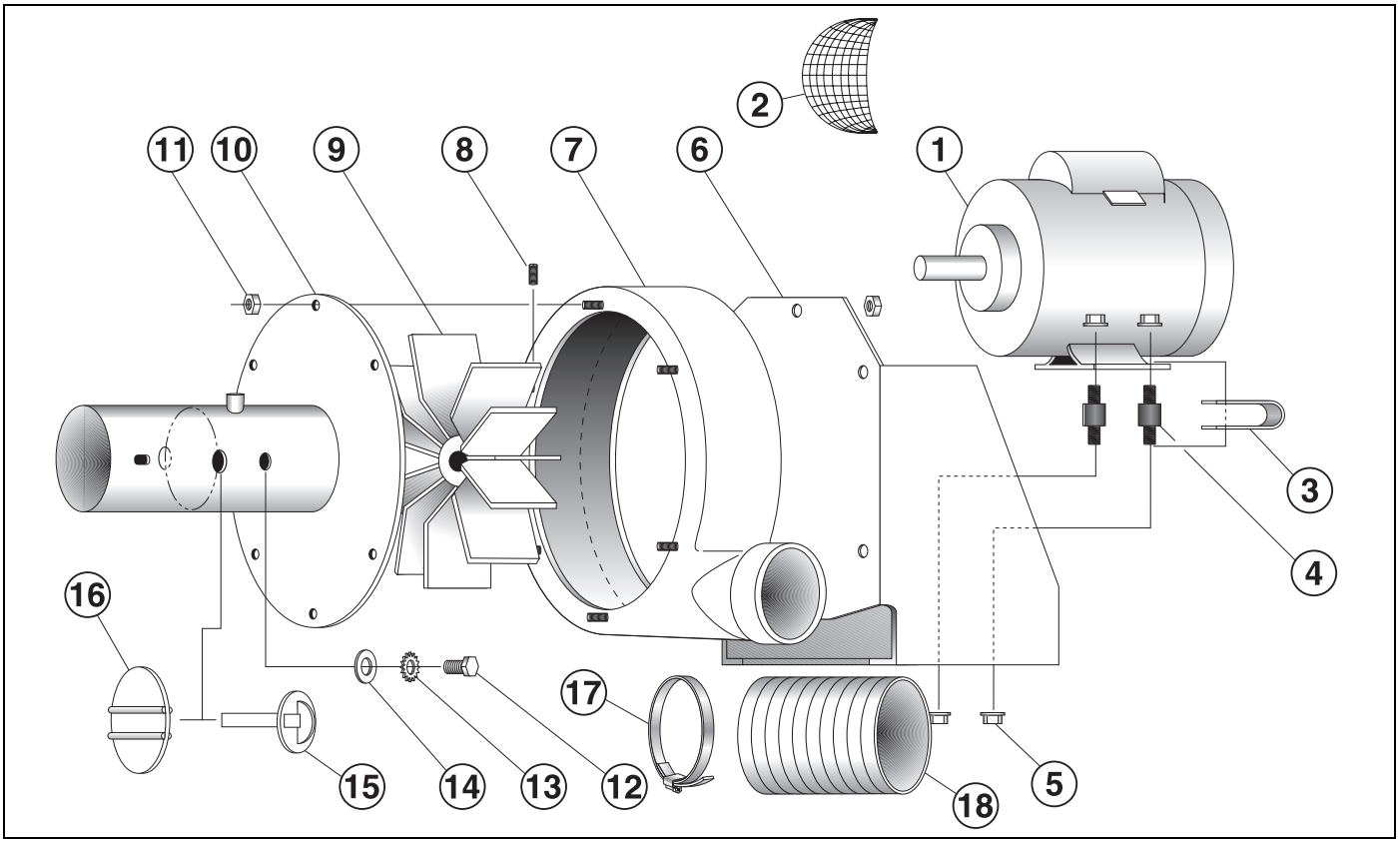
System Tubing and Vent Pipe	Venting must be intact. Using a flashlight, look for obstructions, cracks on the pipe, gaps in the sealed areas or corrosion. The area must be free of dirt and dust or blockage. Remove any carbon deposits or scale using a wire brush. Replace pipe if there are any holes due to corrosion. Seal any gaps in venting to prevent condensate leakage.
Pump Scroll, Impeller and Motor	Compressed air or a vacuum cleaner may be used to clean dust and dirt. Check for corrosion, if any parts have corroded through, replace as necessary. Ensure all hex nuts are tight for proper seal.
Suspension Points	Make sure the pump is hanging securely. Look for signs of wear on the mounting angles, wall mounting points or ceiling mounting points.
Pump Boot	Inspect pump boot at pump inlet and outlet for cracking or deterioration. Replace if cracks are found. Ensure band clamps are tight at all connection points.
Condensate Trap, Drain Cap	Check connection of tee to drain cap and between tee and condensate trap. Seal connections between tee and drain cap to prevent condensate leakage. Screw condensate trap tightly into drain cap to prevent leakage. Condensate trap should be filled with water.
Pressure Switch	Ensure that wiring is intact. Check silicone hose for cracks. Ensure secure connection between pressure switch and barbed fitting.

SECTION 10: REPLACEMENT PARTS AND ACCESSORIES

Use only genuine ROBERTS GORDON® replacement parts.

Use of parts not specified by Roberts-Gordon voids warranty.

Failure to follow these instructions can result in property damage.



10.1 Replacement Parts

Call Out #	Description	Part Number
1	Motor (1/3 H.P.)	90604600
2	Bird Screen with Clamp	01312200
3	Ground Strap	01370200
4	Mount	91906100
5	5/16" - 18 Hex Nut	92113900
5	5/16" Flat Washer	95211600
5	5/16" Helical Spring Washer	96411600
6	Pump Frame Assembly	01362500
7	Blower Housing (Scroll)	02757001
8	3/8" - 24 x 1/2" Set Screw	91118008

Call Out #	Description	Part Number
9	Impeller	02791601
10	Inlet Flange Assembly	02724200
11	#10 - 24 Keps Nut	92311600
12	1/4" - 20 x 1/2" Hex Head Screw	93413008
13	1/4" External Tooth Washer	96211500
14	5/16" Flat Washer	01329500
15	Damper Support Assembly	01329500
16	Restrictor Assembly	01327500
17	Pump Boot Clamp	91901300
18	Pump Boot	91412800
	Pressure Switch (not shown)	90430600K

SECTION 11: SPECIFICATIONS

11.1 Material Specification

11.1.1 Pump Frame, Inlet, Scroll and Impeller

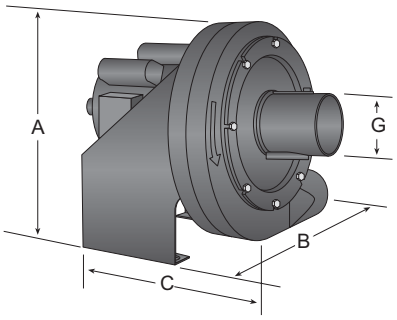
12 Gauge Stamped Steel Construction

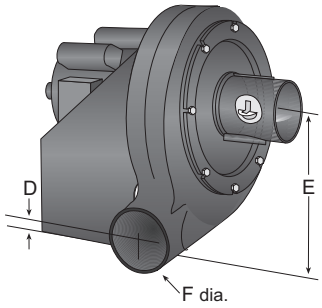
General Specifications

Pump Dimensional Data (in)							
Model	**A**	**B**	**C**	**D**	**E**	**F**	**G**
EP-100	17	14.5	21	3.75	10	4	4

Pump Specifications

Model	EP-100
Horsepower (Hp)	1/3
Phase (Ø)	1
Hertz (Hz)	60
Voltage (V)	4.8/2.4
Full Load Amp (A)	6.6/3.3
R.P.M.	3450
Motor Frame	56
Motor Enclosure	TENV
Noise Level @ 5' (DBA)	-
Inlet/Outlet (In.)	4/4
Weight (lbs.)	62





SECTION 12: THE ROBERTS GORDON® EP-100 SERIES PUMP LIMITED WARRANTY

ROBERTS-GORDON WILL PAY FOR:

Within 42 months from date of shipment from Roberts-Gordon, replacement parts will be provided free of charge for any part of the product which fails due to a manufacturing or material defect.

Roberts-Gordon will require the part in question to be returned to the factory. Roberts-Gordon will, at its sole discretion, repair or replace after determining the nature of the defect and disposition of part in question.

ROBERTS GORDON® Replacement Parts are warranted for a period of 18 months from date of shipment from Roberts-Gordon or the remaining ROBERTS GORDON® EP-100 PUMP warranty.

ROBERTS-GORDON WILL NOT PAY FOR:

Service trips, service calls and labor charges.

Shipment of replacement parts.

Claims where the total price of the goods have not been paid.

Damage due to:

- Improper installation, operation or maintenance.
- Misuse, abuse, neglect, or modification of the ROBERTS GORDON® EP-100 PUMP in any way.
- Use of the ROBERTS GORDON® EP-100 PUMP for other than its intended purpose.
- Incorrect gas or electrical supply, accident, fire, floods, acts of God, war, terrorism, or other casualty.
- Improper service, use of replacement parts or accessories not specified by Roberts-Gordon.
- Failure to install or maintain the ROBERTS GORDON® EP-100 PUMP as directed in the Installation, Operation and Service Manual.
- Relocation of the ROBERTS GORDON® EP-100 PUMP after initial installation
- Use of the ROBERTS GORDON® EP-100 PUMP in a corrosive atmosphere containing contaminants.
- Use of the ROBERTS GORDON® EP-100 PUMP in the vicinity of a combustible or explosive material.
- Any defect in the ROBERTS GORDON® EP-100 PUMP arising from a drawing, design, or specification supplied by or on behalf of the consumer.
- Damage incurred during shipment. Claim must be filed with carrier.

WARRANTY IS VOID IF:

The ROBERTS GORDON® EP-100 PUMP is not installed by an electrician qualified in the installation and service of control systems for heating equipment.

You cannot prove original purchase date and required annual maintenance history.

The data plate and/or serial number are removed, defaced, modified or altered in any way.

The ownership of the ROBERTS GORDON® EP-100 PUMP is moved or transferred. This warranty is nontransferable.

Roberts-Gordon is not permitted to inspect the damaged controller and/or component parts.

READ YOUR INSTALLATION, OPERATION AND SERVICE MANUAL.

If you have questions about your controller, contact your installing professional. Should you need Replacement Parts or have additional questions, call or write Roberts-Gordon:

U.S.A.
1250 William Street
P.O. Box 44
Buffalo, New York 14240-0044
716.852.4400

On the web at: www.rg-inc.com

Roberts-Gordon's liability, and your exclusive remedy, under this warranty or any implied warranty (including the implied warranties of merchantability and fitness for a particular purpose) is limited to providing replacement parts during the term of this warranty. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you. There are no rights, warranties or conditions, expressed or implied, statutory or otherwise, other than those contained in this warranty.

Roberts-Gordon shall in no event be responsible for incidental or consequential damages or incur liability for damages in excess of the amount paid by you for the ROBERTS GORDON® EP-100 PUMP. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

Roberts-Gordon shall not be responsible for failure to perform under the terms of this warranty if caused by circumstances out of its control, including but not limited to war, fire, flood, strike, government or court orders, acts of God, terrorism, unavailability of supplies, parts or power. No person is authorized to assume for Roberts-Gordon any other warranty, obligation or liability.

LIMITATIONS ON AUTHORITY OF REPRESENTATIVES:

No representative of Roberts-Gordon, other than an Executive Officer, has authority to change or extend these provisions. Changes or extensions shall be binding only if confirmed in writing by Roberts-Gordon's duly authorized Executive Officer. Roberts-Gordon's duly authorized Executive Officer.