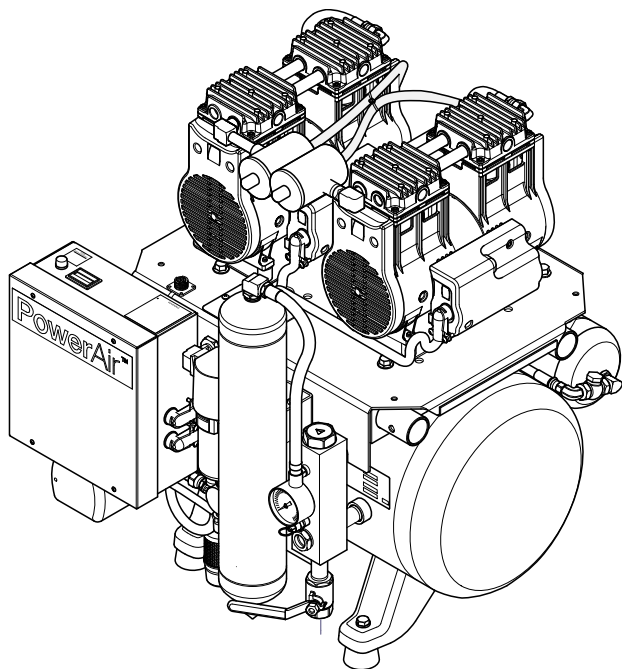




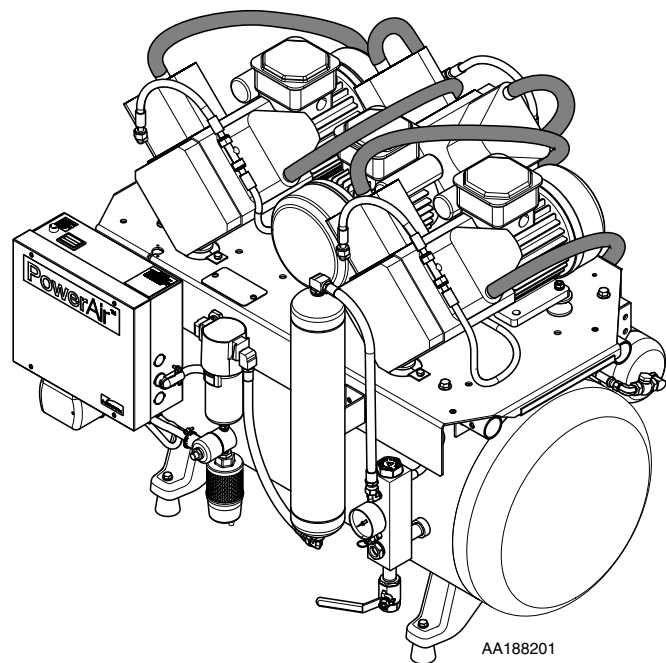
PowerAir™ Compressor Installation

Applies to Models:
P21 - 115 Volts
P22, P32 - 230 Volts
P52, P72 - 230 Volts

Equipment Alert
Compressor system must be installed per local plumbing and electrical codes.



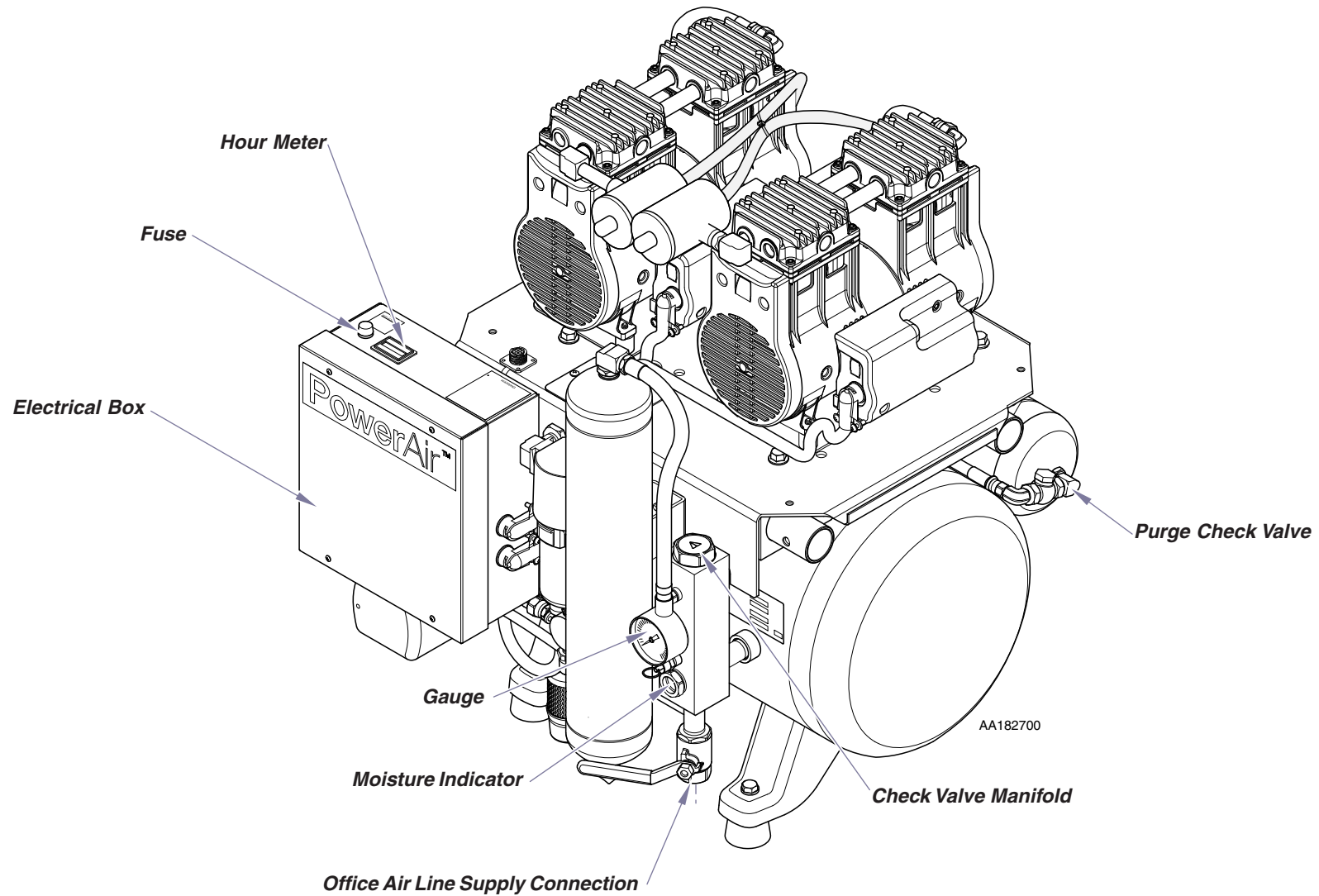
Model P21 (115 Volt) or P22 (230 Volt) - Twin .75 HP Heads



Model P72 - Triple 1.6 HP Heads

AA188200

Compressor Main Component Locations



P22 Model Shown
Components Shown are Typical on all PowerAir™ Compressor Models

Compressor Site Requirements

Electrical

Models

Supply	CL21	CL22	CL32	CL52	P21	P22	P32	P52	P72
Voltage	115	208-230	208-230	208-230	115	208-230	208-230	208-230	208-230
Single Phase	60 Hz								
Disconnect Switch Box - Fused - User Supplied - Box(es) must be located within 3 ft. of compressor	20 Amps	20 Amps	20 Amps	30 Amps	20 Amps	20 Amps	20 Amps	30 Amps	40 Amps

Plumbing

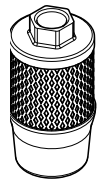
Fresh Air Intake Line	
Type	PVC
Line Sizing	1" Minimum (Provided by Contractor)
Compressor Connections	1" MPT or 1" PVC Slip Connectors
Drain	
Type	Poly Tube (Provided with Install Kit)
Delivery Line	
Main Trunk Line	3/8" to 3/4" Copper, as site layout dictates. Terminate in mechanical room with 1/2" FPT. Flex hose provided for service connection. Trunk line to slope 1/4" / 10ft toward source compressor.
Operatory Branch Lines	3/8" to 3/4" Copper - Same size as trunk line. Terminate 1/2" or 5/8" FPT at Operatory junction box location.

Environmental

Equipment Room Ambient Temperature - Operational	40° - 104° Fahrenheit / 4° - 40° Celsius
--	--

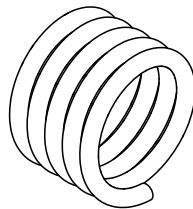
Installation Kit Provided with Compressors

Feet with Hardware



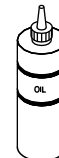
Exhaust Silencer

Indicator for Coalescing Filter

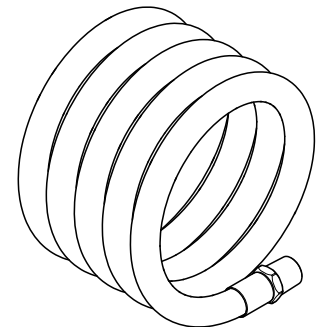
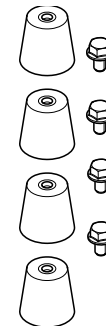


**Fresh Air Intake Hose
Length - 10'**

Elbow for Operatory Line Connection



Oil

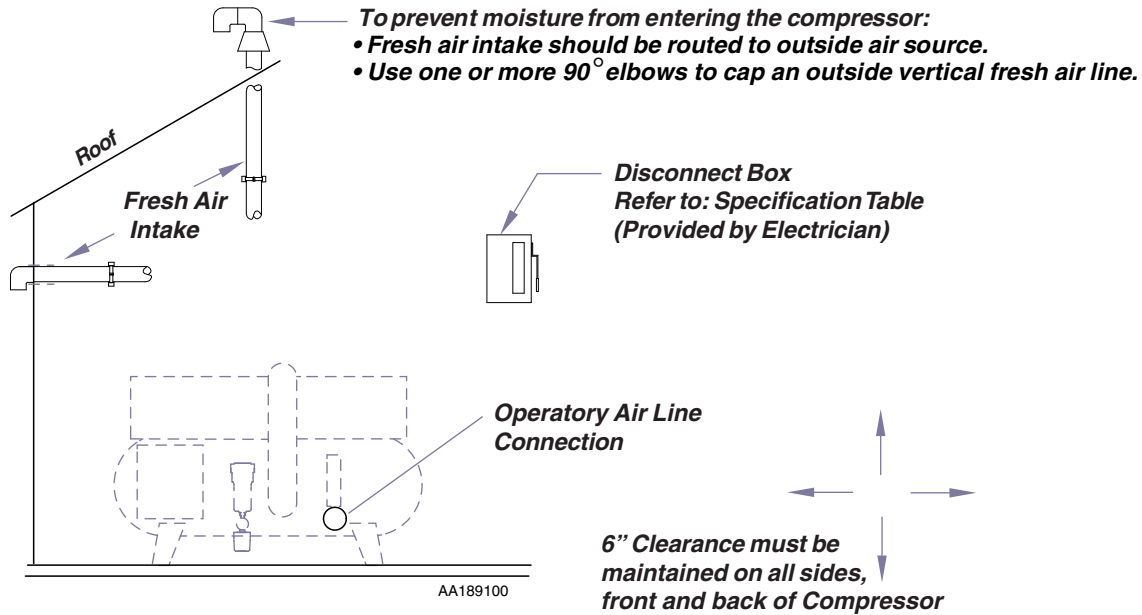


**Operatory Air Line
Length - 6'**

AA189300

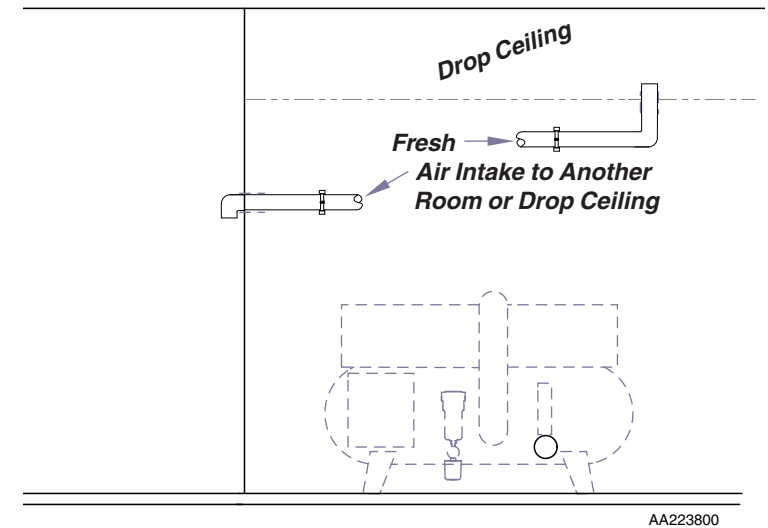
Compressor Site Layout

Elevation View



OR

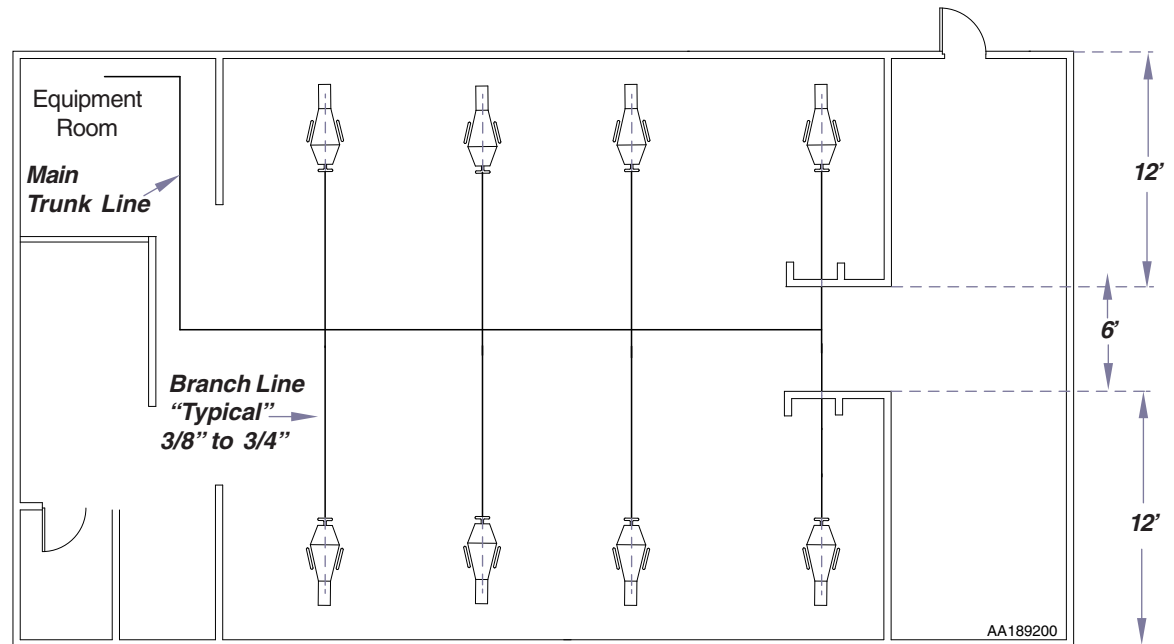
- Fresh air intake can be set-up to pull air from a drop ceiling or another room.



Sample Plumbing Layout

AIR LINE SIZING CHART

Compressor CFM @ 80 psig	Main Header Line Size
5 - 10	3/8" ODT
10 - 20	1/2" ODT
20 - 30	5/8" ODT
30 - 40	3/4" ODT



Important Information

Intended Use

To provide suction during general examinations and procedures conducted by qualified dental professionals.

Electromagnetic Interference

This Midmark Liquid Ring Vacuum is designed and built to minimize electromagnetic interference with other devices.

However, if interference is noticed between another device and these units:

- Remove interfering device from room
- Plug interfering device into an isolated circuit
- Increase separation between unit and interfering device
- Contact Midmark if interference persists

Disposal of Equipment

At the end of product life, the unit(s), accessory, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment, accessories and other consumable goods.

Transportation / Storage Conditions

Ambient Temperature Range: 40°F to 104°F (4°C to 37°C)

Relative Humidity 10% to 90% (non-condensing)

Atmospheric Pressure 500hPa to 1060hPa (0.49atm to 1.05atm)



Keep dry

2

Maximum stacking height
(palletted units)



Fuse rating specification



Caution hot surface



Consult User Guide
for important information.



Proper shipping orientation



Fragile



Protective earth ground

IPX0 Ordinary Equipment

This product has been evaluated with respect to electrical shock, fire & mechanical hazards only, in accordance with UL60601-1 and CAN/CSA C22.2 NO. 601.1.



DENTAL AIR COMPRESSOR



UL 60601-1, IEC60601-1,
CAN/CSA C22.2 No.601.1



DANGER

Indicates an imminently hazardous situation which ***will*** result in serious or fatal injury if not avoided. This symbol is used only in the most extreme conditions.



WARNING

Indicates a potentially hazardous situation which ***could*** result in serious injury if not avoided.



CAUTION

Indicates a potentially hazardous situation which ***may*** result in minor or moderate injury if not avoided. It may also be used to alert against unsafe practices.



Equipment Alert

Indicates a potentially hazardous situation which could result in equipment damage if not avoided

Note

Amplifies a procedure, practice, or condition.

AA2369

Before you Install...

Step 1: Remove compressor and accessories from shipping skid.

Note: This step is optional but, might be required by local codes.

Step 2: Verify o-rings are seated on bottom of indicator. Remove plate on top of coalescing filter. Install indicator on top of coalescing filter.

Coalescing
Filter Indicator

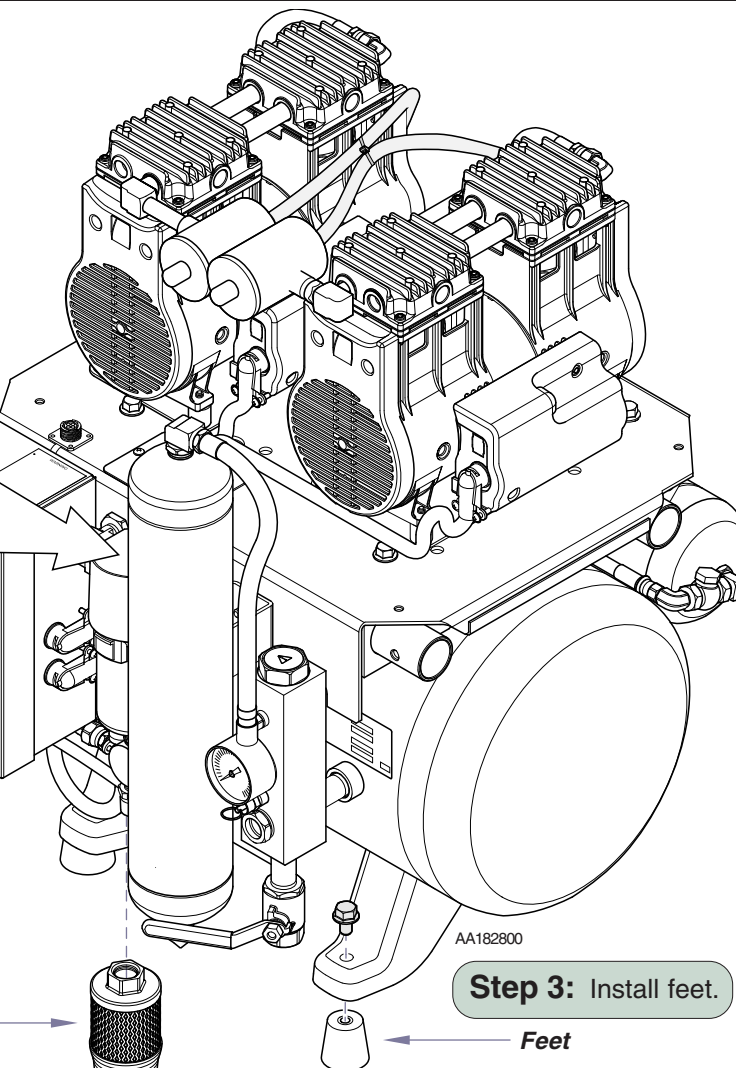
Step 4: Screw exhaust silencer into bottom of solenoid.

Exhaust Silencer

Step 5: Connect poly tube to bottom of exhaust silencer. Position opposite end next to floor drain or over the edge of a floor sink.

Note: Do not place in contamination or standing water.

Out to Drain



AA182800

Step 3: Install feet.

Feet

Step 6: Move compressor to a dry, well ventilated area on a solid, level surface.

Note: Temperature of room 40° (4°C) min. - 100° (38°) max.



Equipment Alert

Compressor system must be installed in an air conditioned and or ventilated room to ensure operational ambient temperature of 40° to 104° Fahrenheit (4° - 40° Celsius). A 6" clearance is required on the rear and one side to allow air flow around the unit. Failure to do so could cause premature loss of system performance and void warranty.

Installation

Plumbing Connections

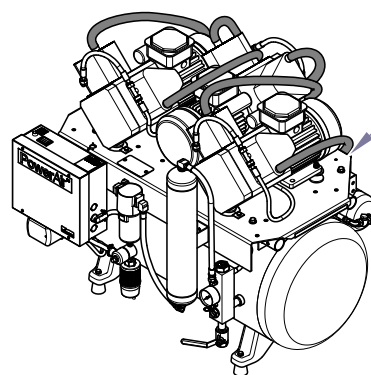
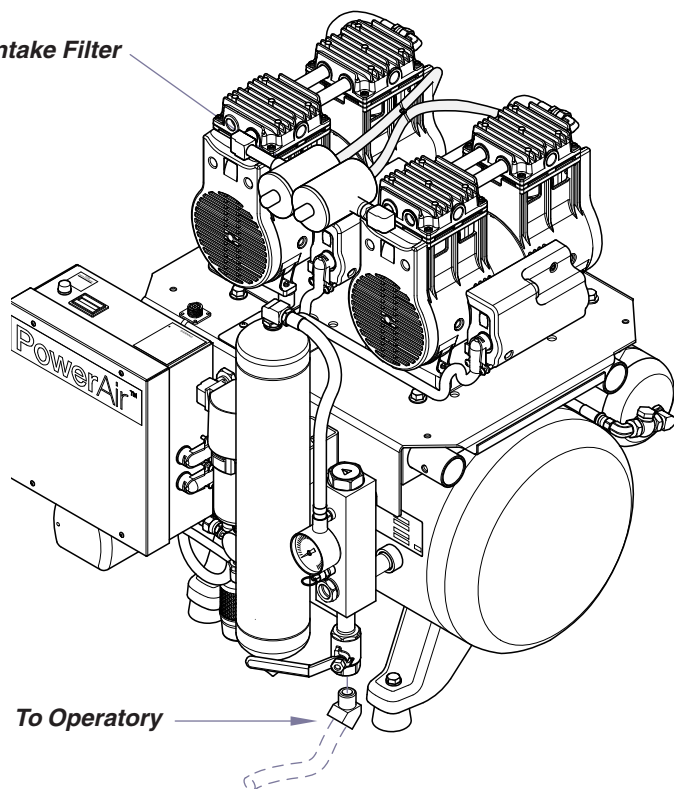


Equipment Alert

To prevent moisture from entering the compressor...

- Incoming fresh air temperature must not exceed room temperature by more than 20° Fahrenheit or -6 Celsius.
- Fresh air intake should be routed to an air source outside the equipment room.
- Refer to "Site Layout" in this manual for routing recommendations.
- Tight bends in the fresh air intake hoses may cause them to collapse, potentially leading to premature compressor failure.

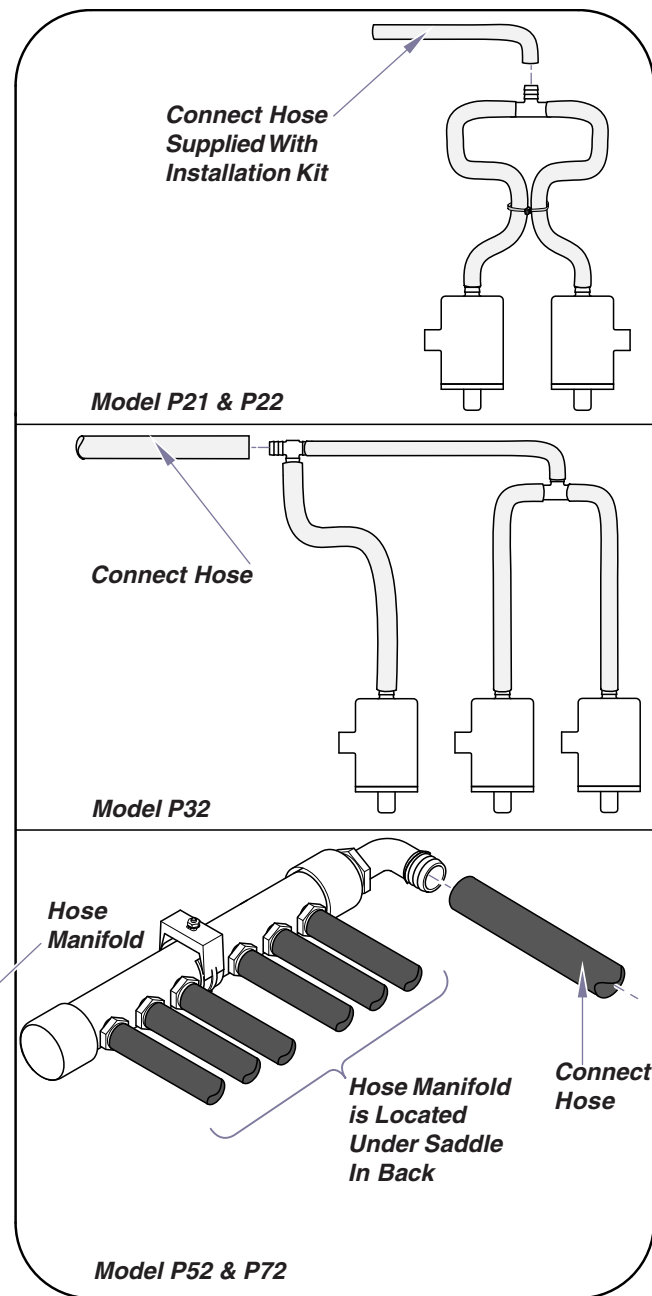
Fresh Air Intake Filter



Step 7: Install elbow to valve.
Connect hose assembly to valve.
Connect office air supply line.

Note: Hose assembly included in the installation kit.

Step 8: Connect fresh air intake hose to barbed fitting behind compressor to fresh air intake pipe.



AA222100

Installation

Electrical Connections

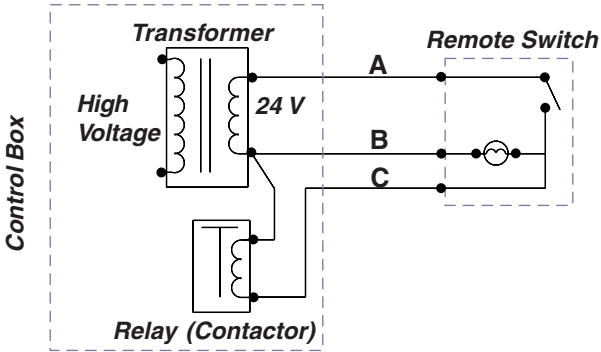
*Refer to Specification Sheet
for Electrical Ratings in this manual.



WARNING
Connect in accordance with NEC
Class 2, wiring methods.

Step 9: Connect remote panel wires to
Low Voltage Control wires if applicable.

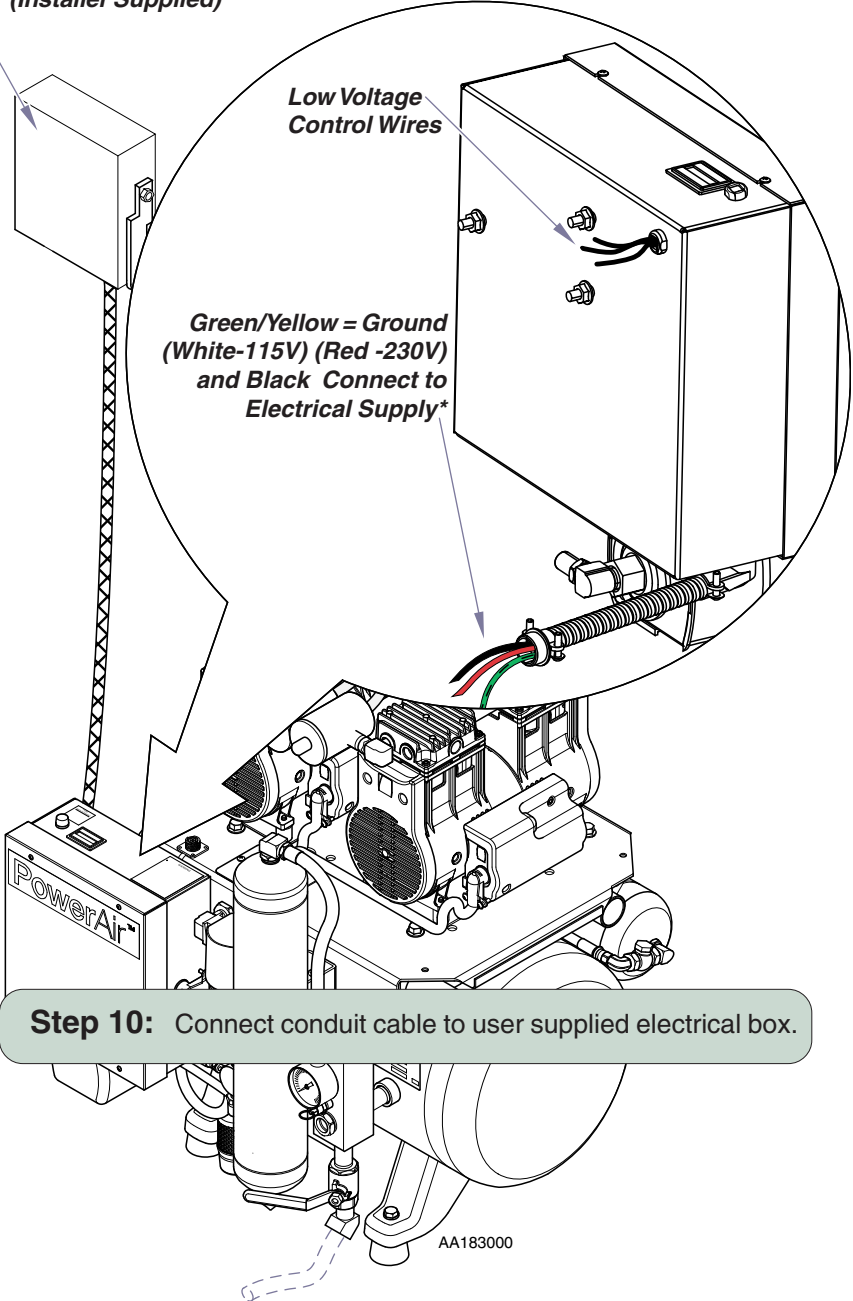
Remote Panel



Control Panel Cross Wiring			
Brand	Wire		
	A	B (Light)	C
Midmark	Blue	White	Red
Air Techniques	Yellow	Brown	Orange
DentalEz	Black	Brown	Yellow
Matrx	Red	Blue	White
Apollo	Blue	White	Red

P21-115 Model
115 Volt Source
Single Phase, 60 Hz
20 Amp Fuse
Circuit Breaker Box
(Installer Supplied)

P22, P32, P52, P72 Models
208-230 Volt Source
Single Phase, 60 Hz
20 Amp Fuse
Circuit Breaker Box
(Installer Supplied)



Step 10: Connect conduit cable to user supplied electrical box.

Installation

Check & Test



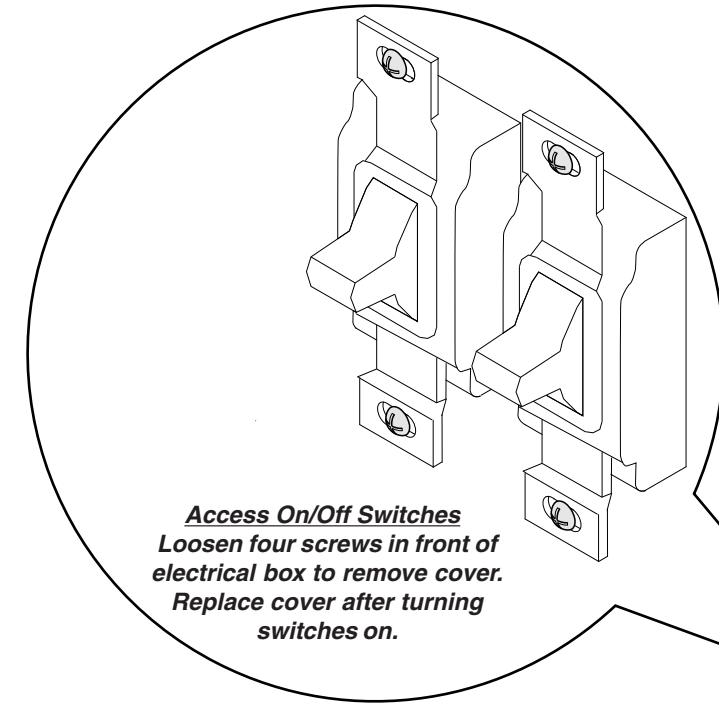
WARNING

The On/Off switch controls only the secondary circuit power. The main power source must be turned off to remove all power in the control box. The circuit breaker panel is the main power disconnect.

Step 12: Turn power on.

Note: Compressor should run quietly and storage tank will begin to pressurize.

Access On/Off Switches
Loosen four screws in front of electrical box to remove cover.
Replace cover after turning switches on.

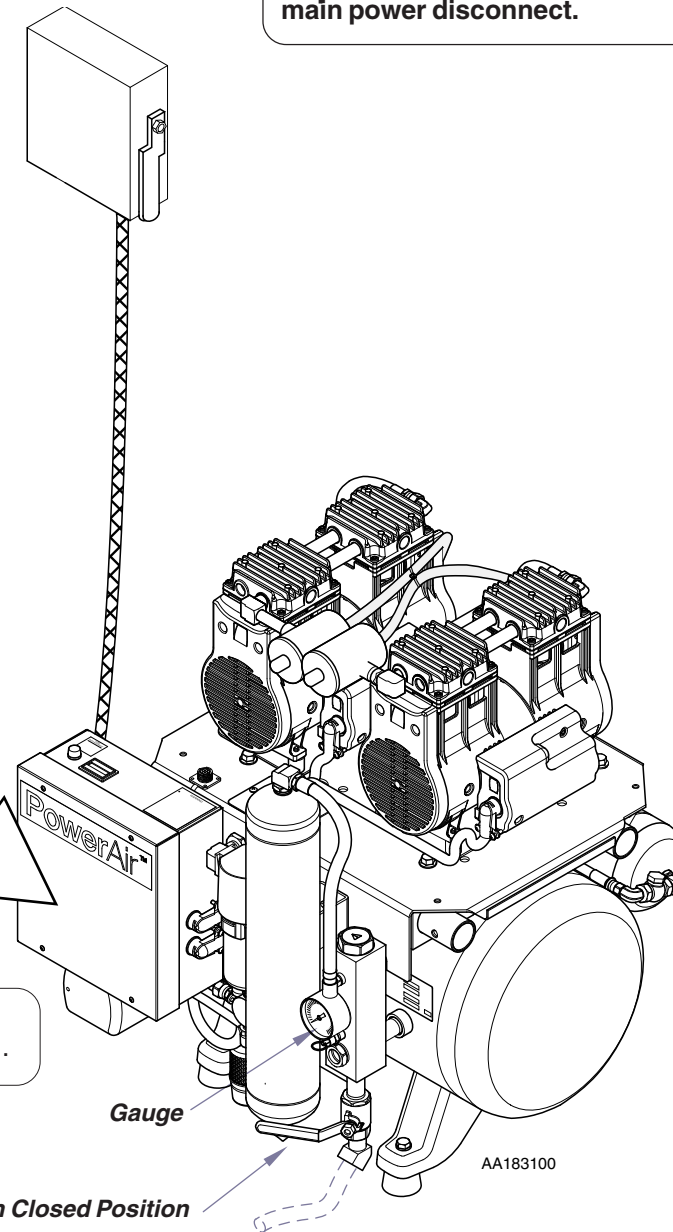


Note:

Compressor will shut-off automatically when gauge registers 100 PSI.

Step 11: Verify shut-off valve is closed.

Shut-off Valve in Closed Position



Step 13: Use soapy water to check for pressure leaks.



Installation

Check & Test

Note:

Monitor line pressure gauge when testing for leaks.

Step 14: Open the shut-off valve slowly and allow air to flow into the office air system.

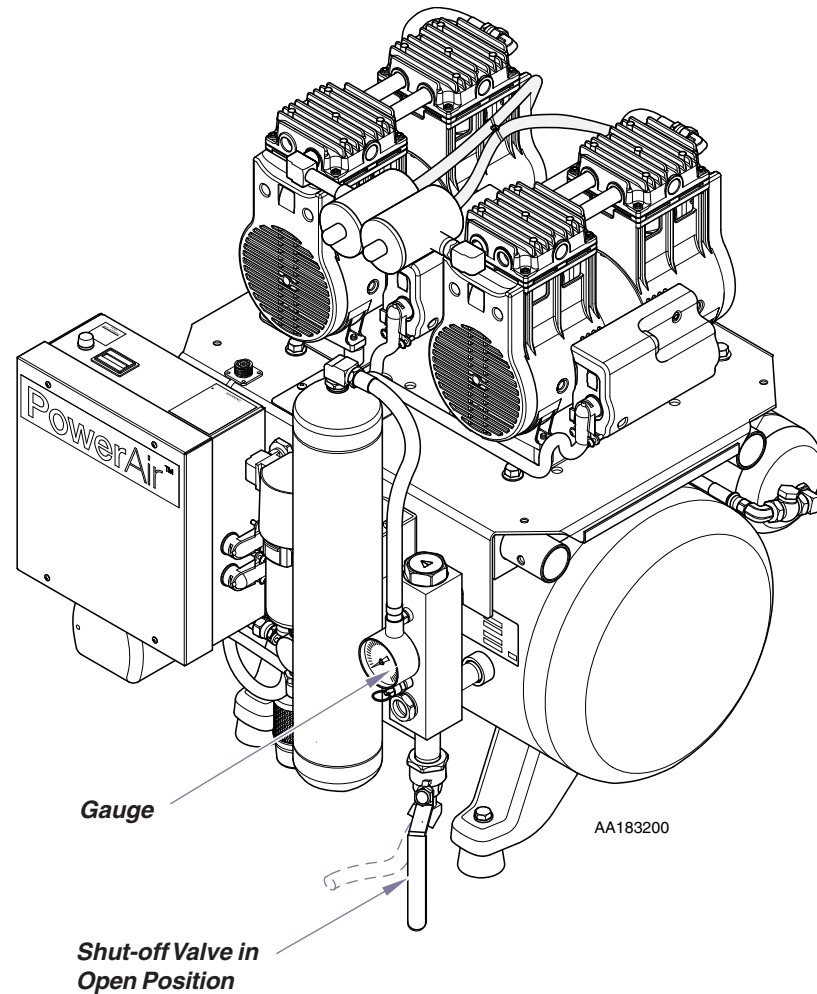
Step 15: Allow office line to pressurize for 20-30 seconds. Check storage pressure gauge reading.

Step 16: Check gauge reading after 10 minutes.

Note: If the storage pressure gauge registers a lower reading, an air leak exists. Locate the leak(s) and repair.

**WARNING**

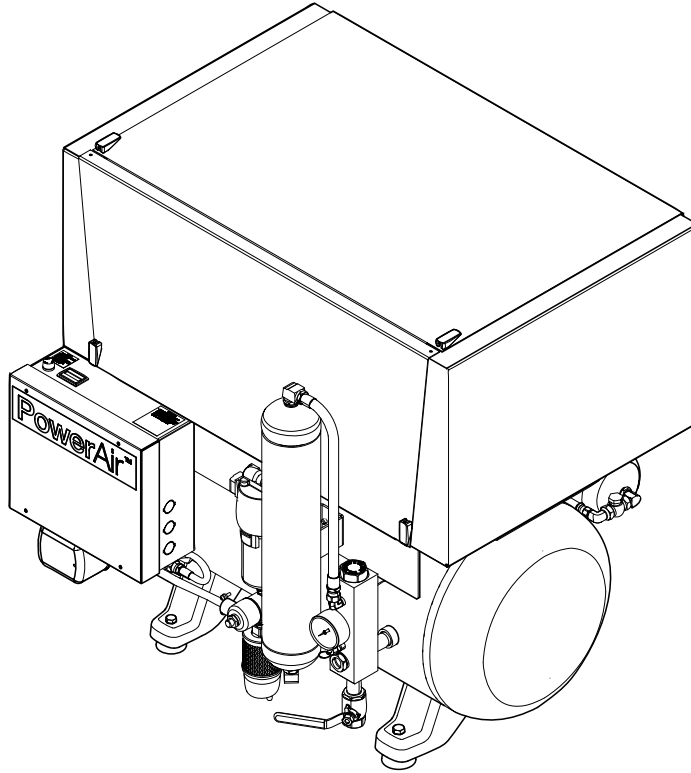
Always disconnect the power before servicing. The head(s) surface(s) can be very hot depending on compressor usage. Do not touch these parts during or directly after operation.

**Equipment Alert**

Verify all leaks are sealed. Air leaks are the main cause of premature compressor failures!

Specification Sheet

PowerAir™ Compressors



Classifications: Class 1, No Applied Part

AA183300

Model	# Users	CFM @ 80 PSI	Total HP	Tank Capacity	Voltage	Total Amps	Breaker Size	Sound Level (dBA)	Sound Level (dBA) With Quiet Cover	Dimensions H x W x D (IN.)	Dimensions With Sound Cover H x W x D (IN.)	Product Weight (LBS.)
P21	1 - 3	5.2	1.5	10	115	16.0	20	65	60	27 x 26 x 24	32 x 26 x 25	225
P22	1 - 3	5.2	1.5	10	208-230	7.0	20	65	60	27 x 26 x 24	32 x 26 x 25	225
P32	3 - 5	7.8	2.25	20	208-230	11.0	20	67	62	29 x 33 x 26	33 x 33 x 28	295
P52	5 - 7	10.6	3.2	20	208-230	20.0	30	70	65	31 x 33 x 26	33 x 33 x 28	345
P72	7 - 10	15.9	4.8	32	208-230	29.0	40	73	68	33 x 40 x 27	39 x 40 x 30	425

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