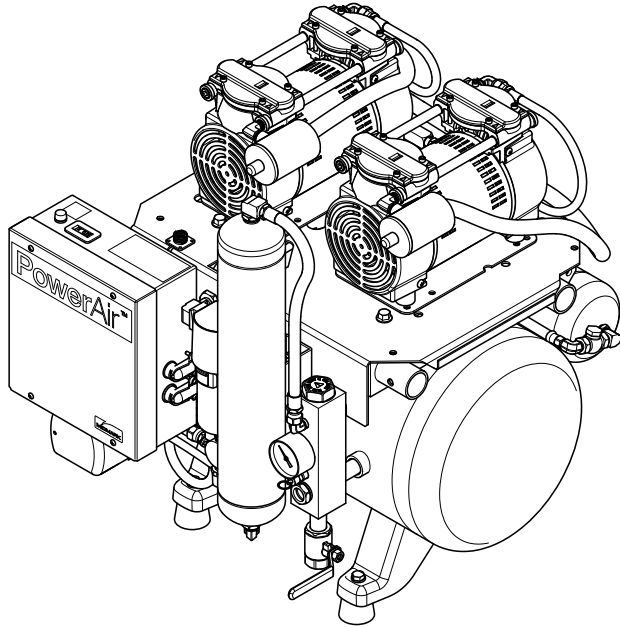




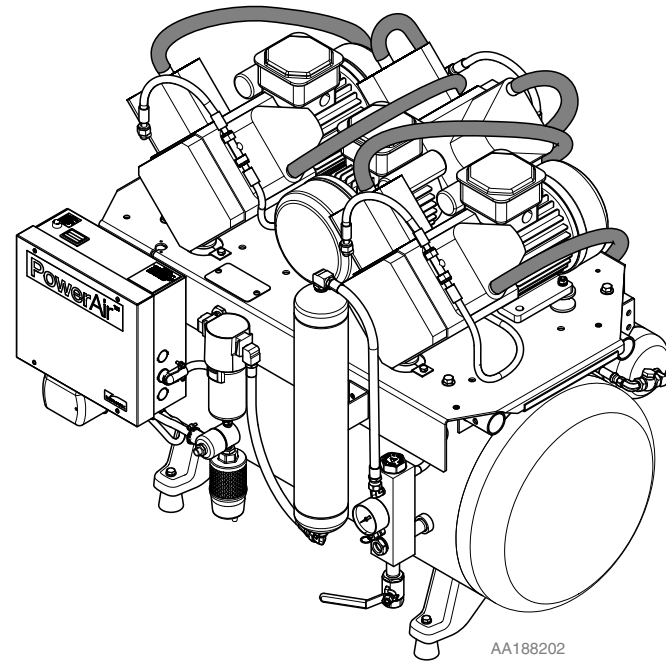
PowerAir™ Compressor Installation

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.



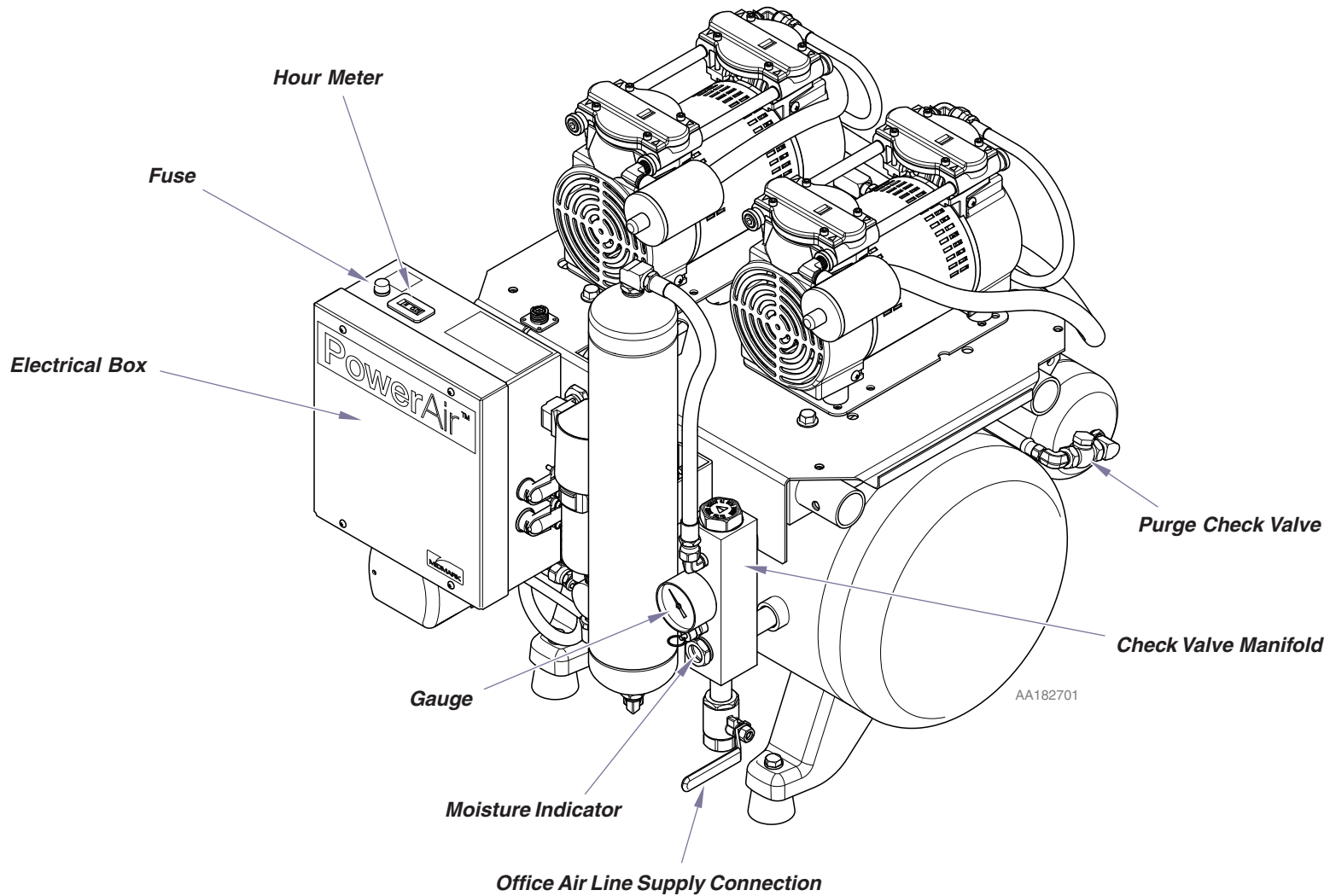
Model P21 (115 Volt) or P22 (230 Volt) - Twin .75 HP Heads



Model P72 - Triple 1.6 HP Heads

AA188202

Compressor Main Component Locations

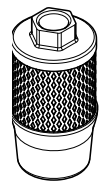


P22 Model Shown
Components Shown are Typical on all PowerAir™ Compressor Models

Compressor Site Requirements

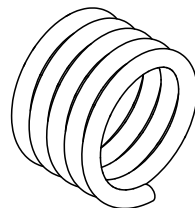
Electrical		Models				
Supply	P21	P22	P32	P52	P72	
Voltage	115	208-230	208-230	208-230	208-230	
Single Phase						
Disconnect Switch Box - Fused - User Supplied - Box(es) must be located within 3 ft. of compressor	20 Amps	20 Amps	20 Amps	30 Amps	40 Amps	
Plumbing						
Fresh Air Intake Line						
Type	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.					
Operator Branch Lines	FPT at Operator junction box location.					
Environmental						
Equipment Room Ambient Temperature - Operational	40° - 104° Fahrenheit / 4° - 40° Celsius					

Installation Kit Provided with Compressors



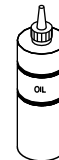
Exhaust Silencer

Indicator for Coalescing Filter



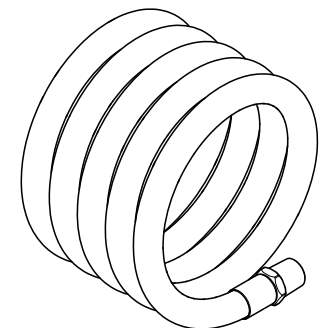
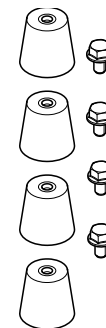
**Fresh Air Intake Hose
Length - 10'**

Elbow for Operator Line Connection



Oil

Feet with Hardware

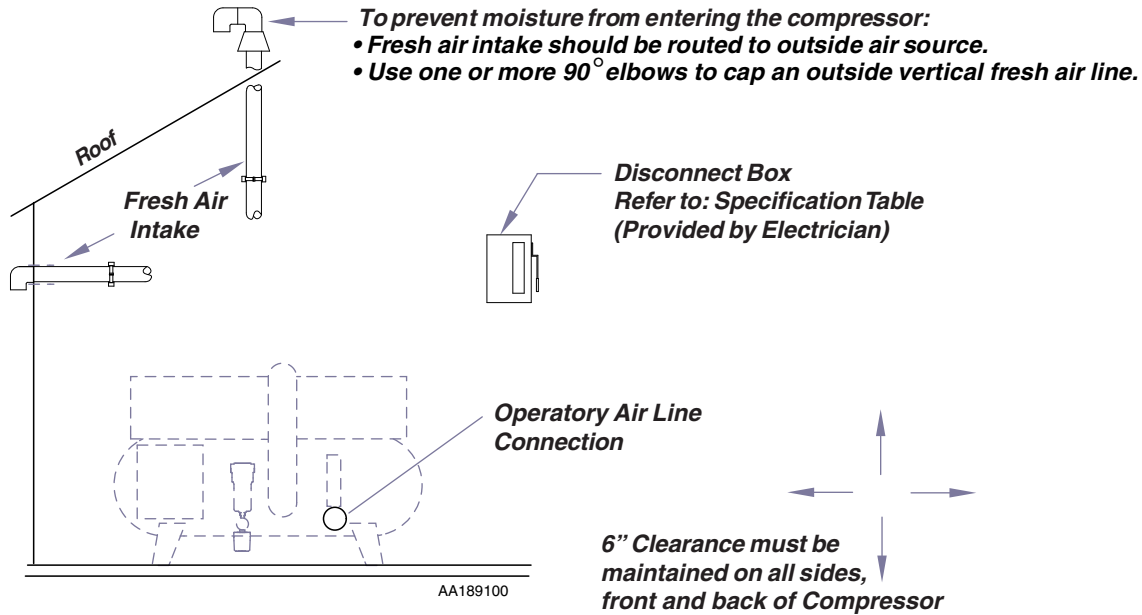


**Operator Air Line
Length - 6'**

AA189300

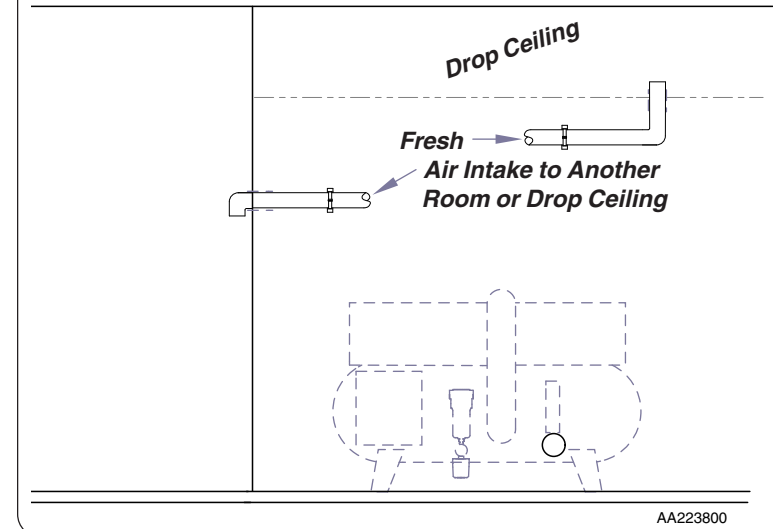
Compressor Site Layout

Elevation View



OR

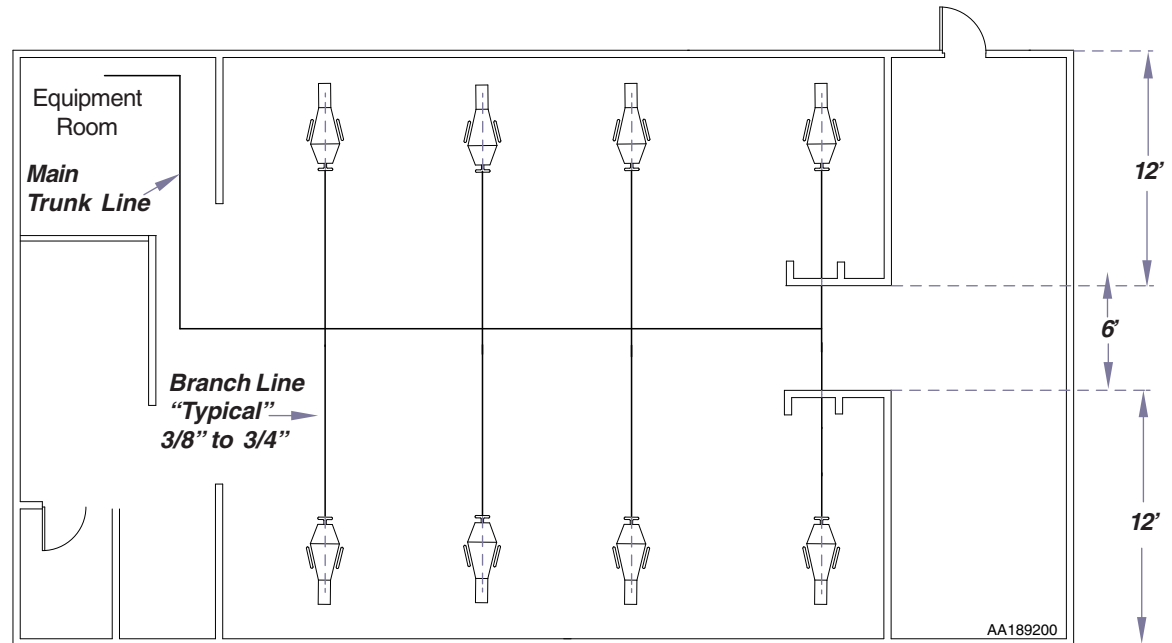
- Fresh air intake can be set-up to pull air from a drop ceiling or another room.



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 compressed air 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

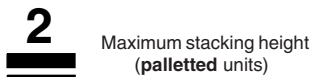
At the end of product life, the unit(s), accessory, and other consumable goods may become contaminated from normal use. Consult local codes and ordinances for proper disposal of equipment, accessories and other consumable goods.

Transportation / Storage Conditions

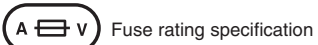
Ambient Temperature Range: 40°F to 104°F (4°C to 37°C)
Relative Humidity 10% to 90% (non-condensing)
Atmospheric Pressure 500hPa to 1060hPa (0.49atm to 1.05atm)



Keep dry



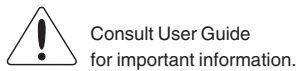
Maximum stacking height (palletted units)



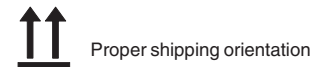
Fuse rating specification



Caution hot surface



Consult User Guide for important information.



Proper shipping orientation



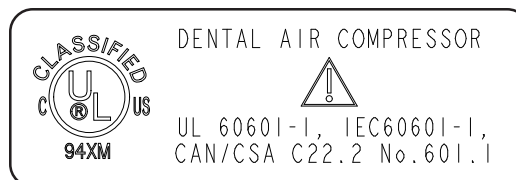
Fragile




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.



 **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...



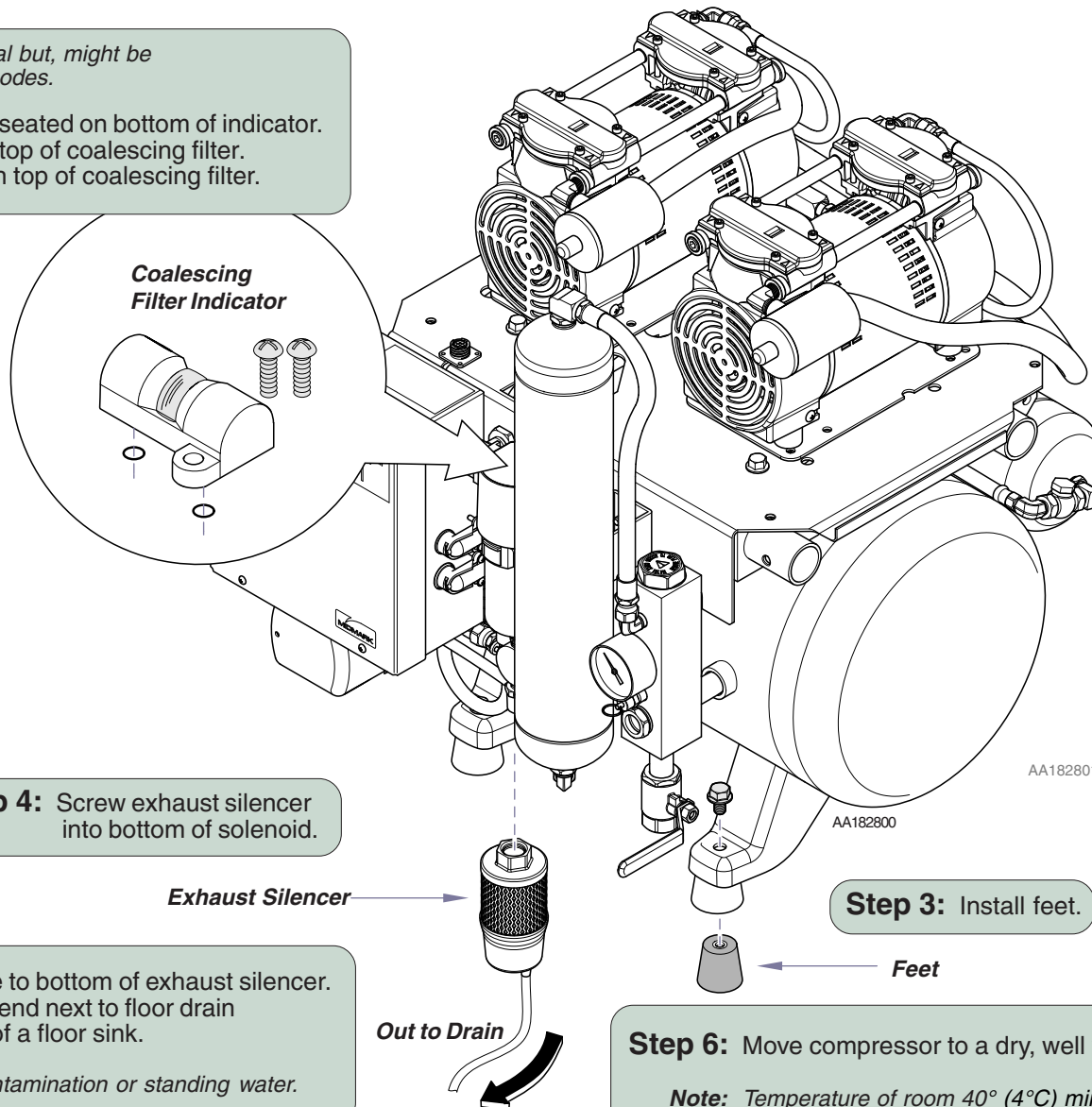
Equipment Alert

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.

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.



Step 4: Screw exhaust silencer into bottom of solenoid.

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.

Step 3: Install 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.

Installation

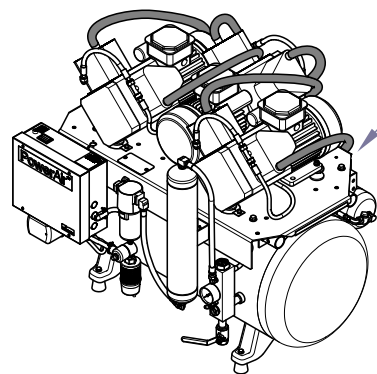
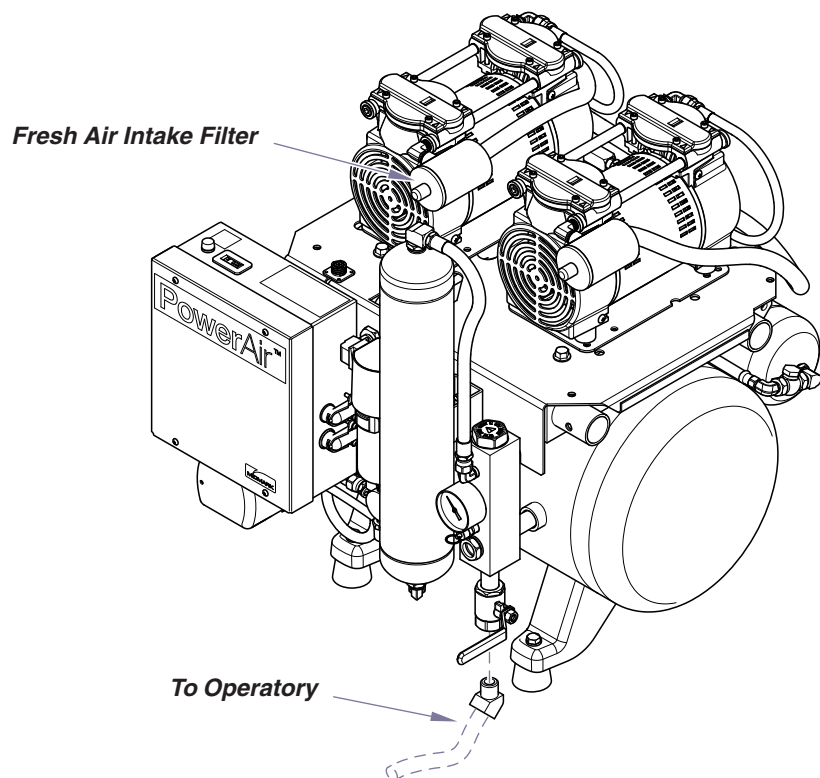
Plumbing Connections



Equipment Alert

To prevent moisture from entering the compressor...

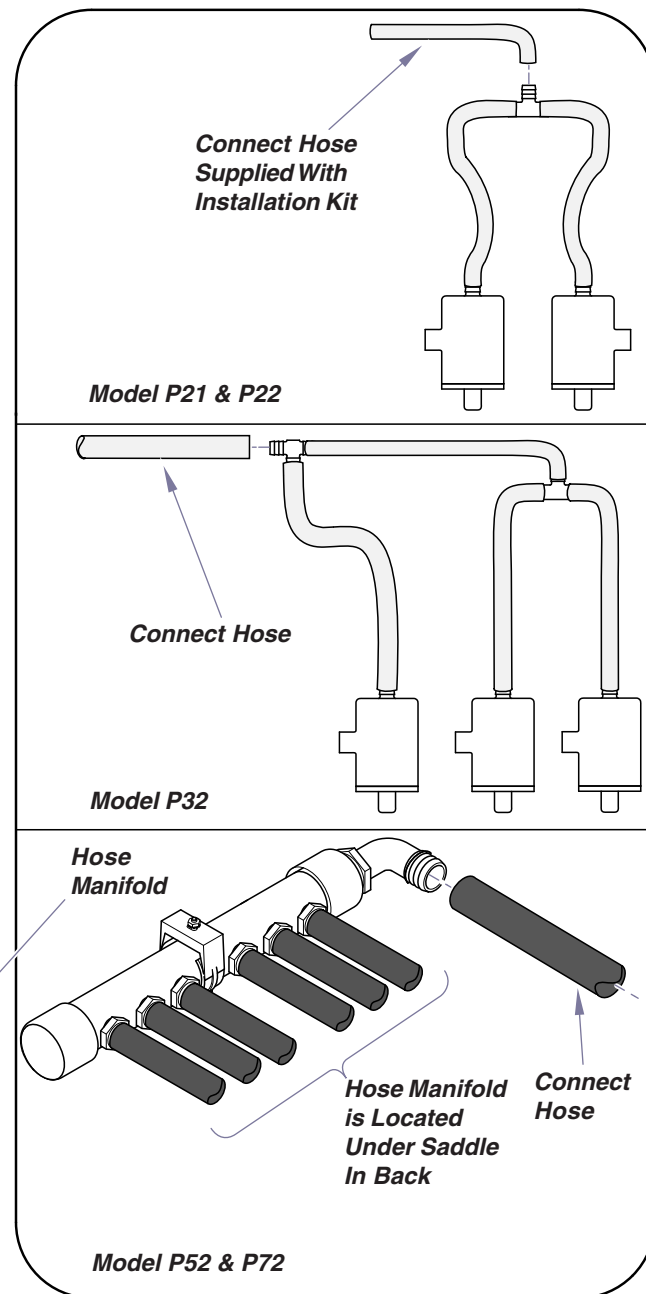
- Incoming fresh air temperature must not exceed room temperature by more than 20° Fahrenheit or -6 Celsius.
- Fresh air intake should be routed to an air source outside the equipment room.
- Refer to "Site Layout" in this manual for routing recommendations.
- Tight bends in the fresh air intake hoses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



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.



AA2221011

Installation

Electrical Connections

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

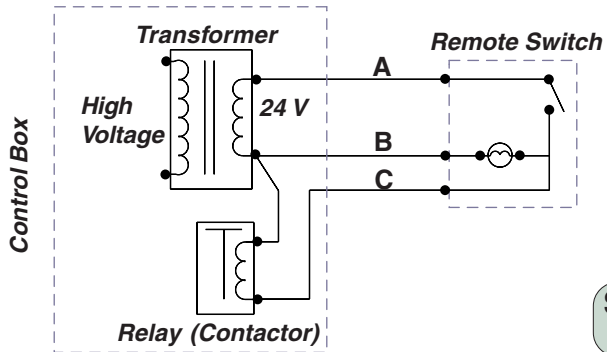


WARNING

Connect in accordance with NEC Class 2, wiring methods.

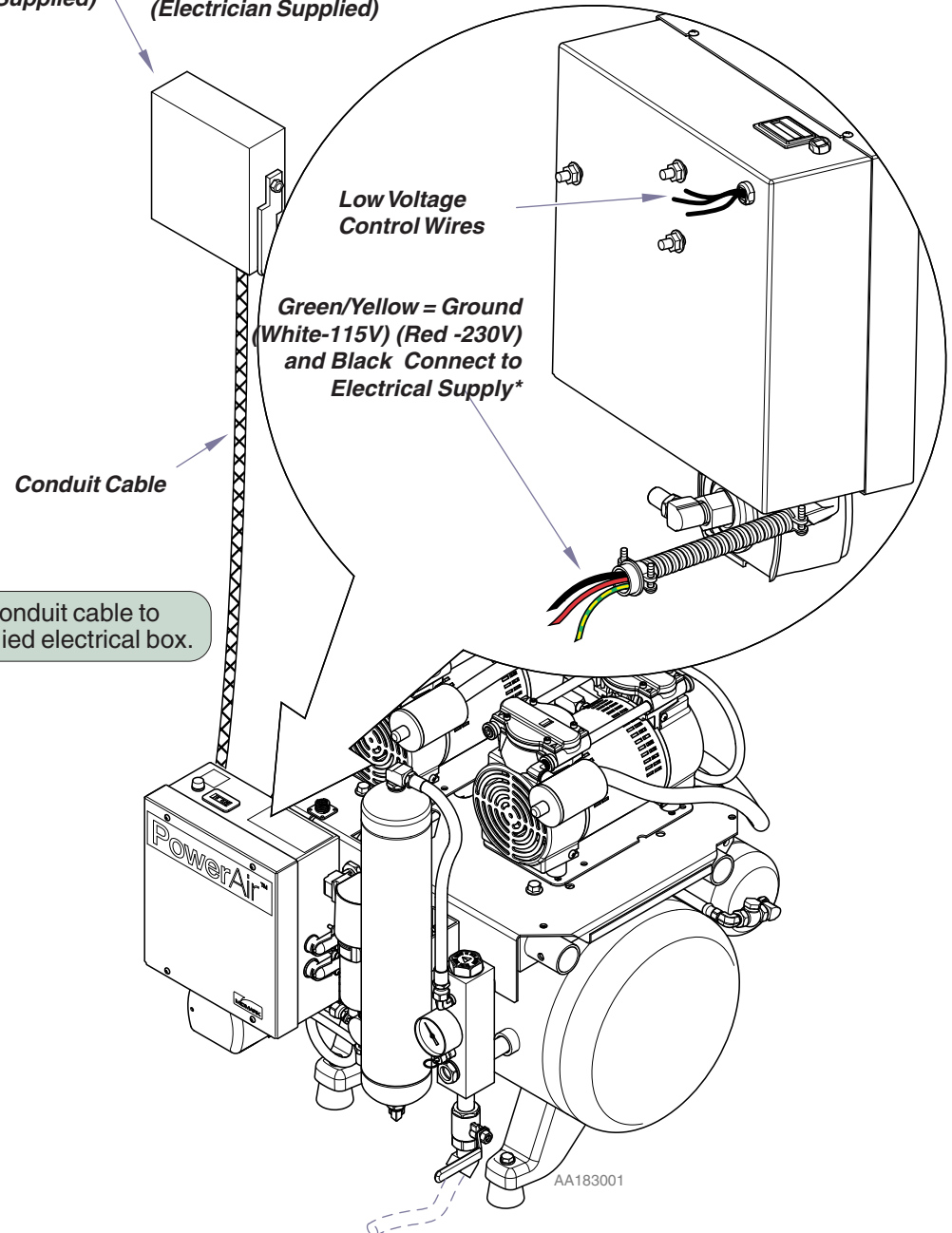
Step 9: Connect remote panel wires to Low Voltage Control wires if applicable.

Remote Panel



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

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



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

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

Installation

Check & Test

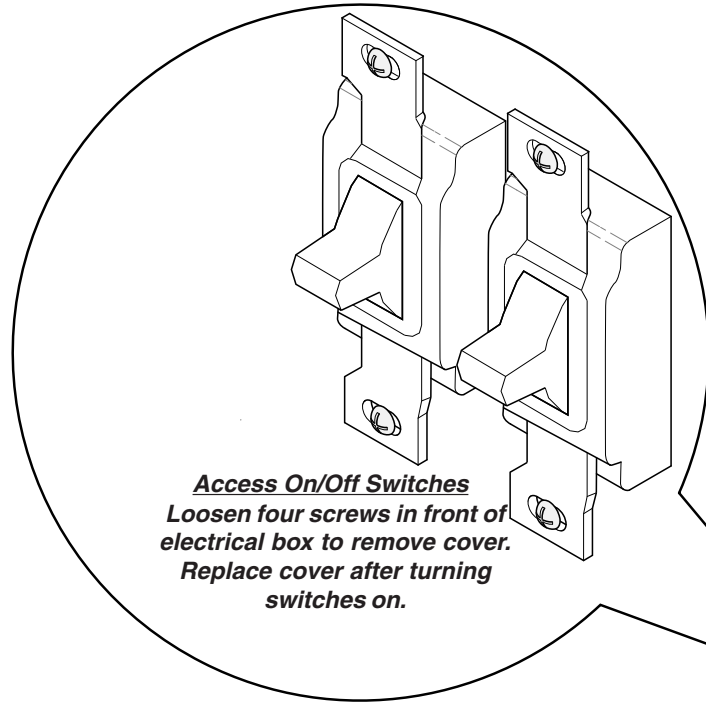


WARNING

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.

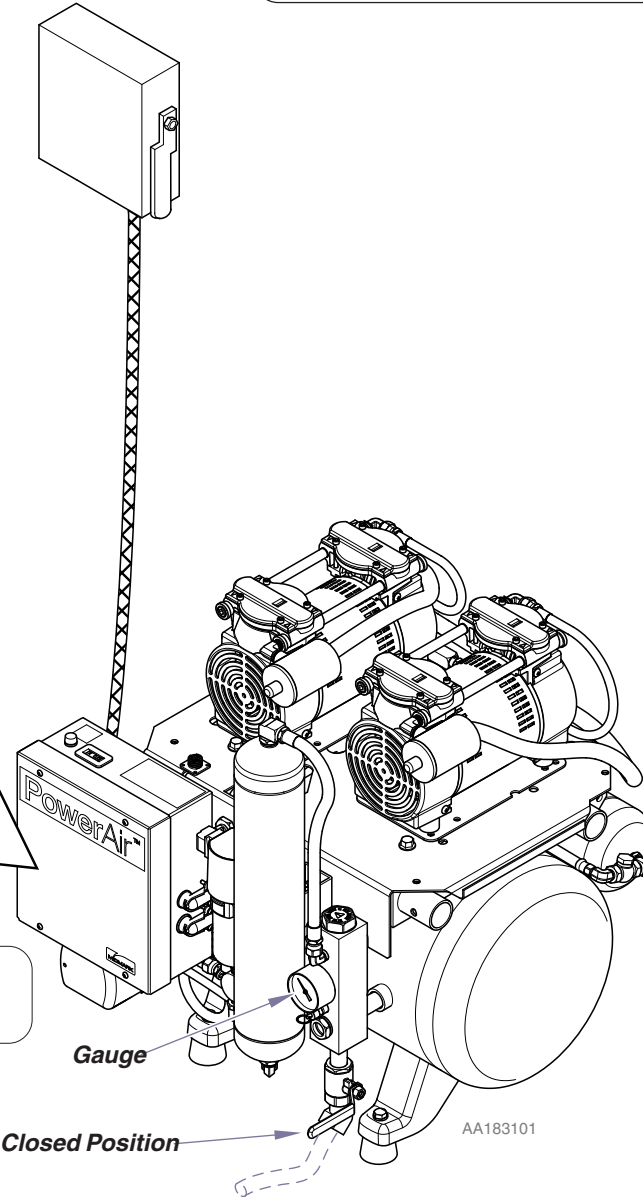


Access On/Off Switches
Loosen four screws in front of electrical box to remove cover.
Replace cover after turning switches on.

Note:

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

Step 11: Verify shut-off valve is closed.



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.

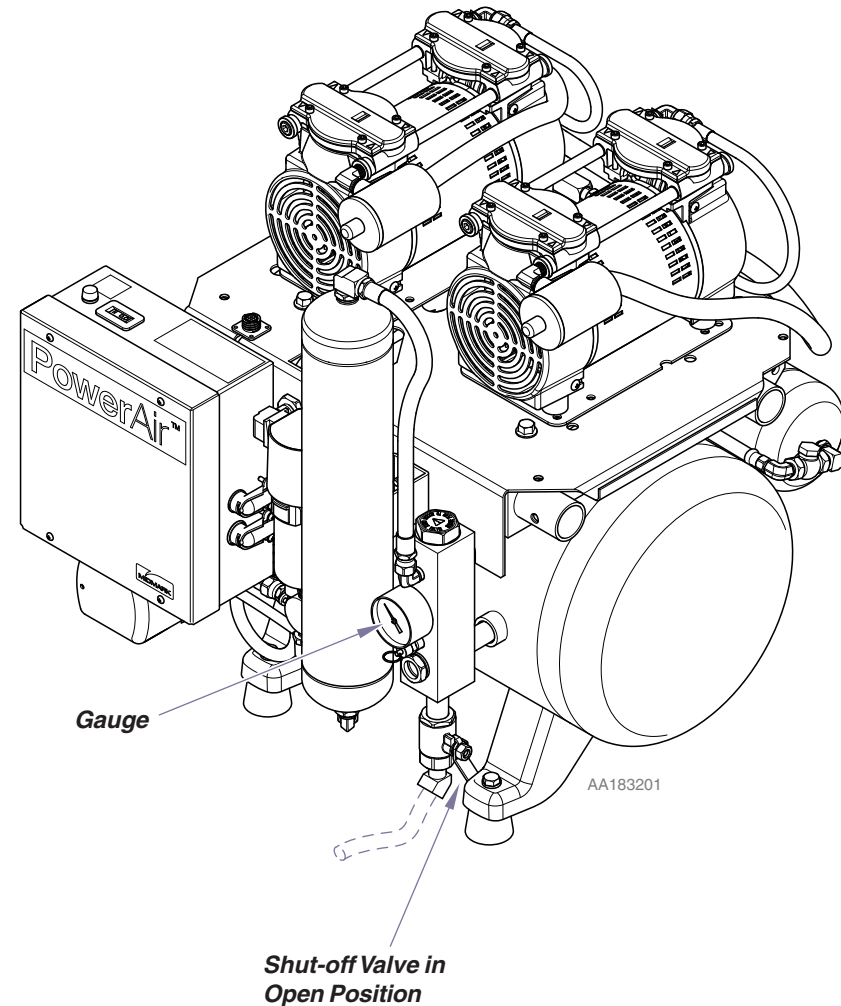
Step 16: Check gauge reading after 10 minutes.

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.

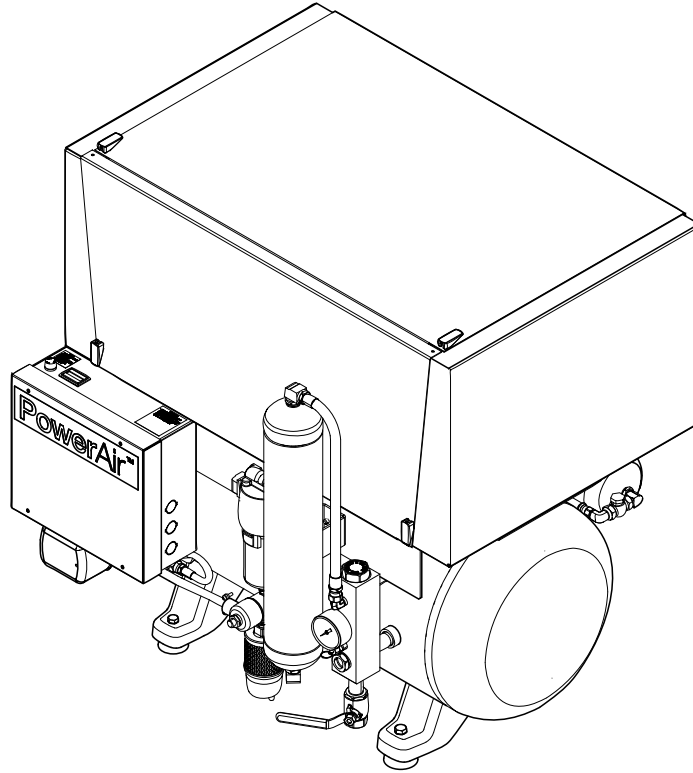


Equipment Alert

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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