

# INSTALLATION INSTRUCTIONS

For Platinum and Red Series AirVac Units  
 (for Household Use Only)

## IMPORTANT SAFETY NOTES

Please read the instructions carefully! Through many years of continuous use -- and through quality tests that are ongoing at our factory -- AirVac central vacuums, attachments and accessories have built a remarkable record for cleaning effectiveness and safety. However, there are potential hazards that could occur if the system is not installed and operated correctly and safely. **READ ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE.**

THE FOLLOWING FORMATS ARE USED FOR SAFETY NOTES IN THESE INSTRUCTIONS.

<b>CAUTION</b>	<b>WARNING</b>
<p>This type of warning note is used to indicate the possibility of damage to the vacuum power unit or vacuum duct system.</p>	<p>This type of warning note is used to indicate possible fire or electrical shock hazards that may cause serious injuries or death.</p>

## IMPORTANT SAFETY INSTRUCTIONS

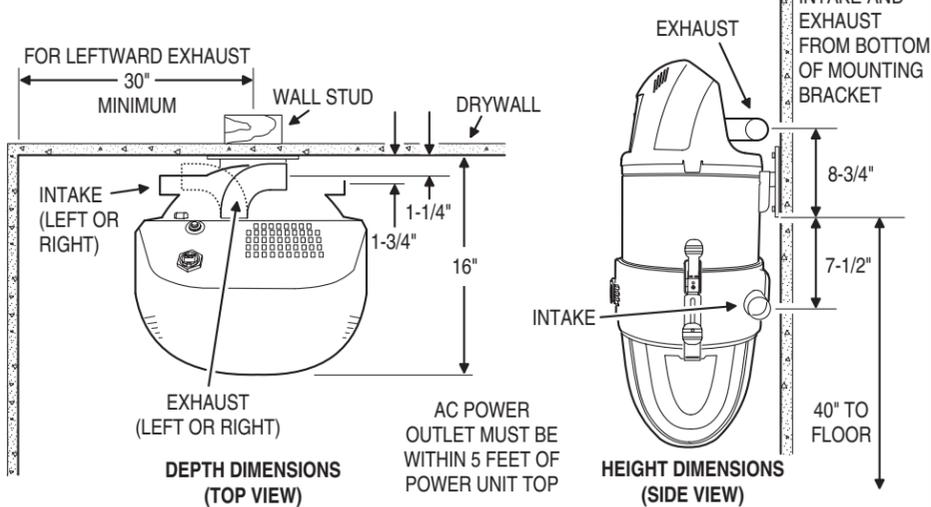
### WARNING

### TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK, OR INJURY:

- NEVER OPERATE THE SYSTEM ON WET SURFACES OR TO PICK UP LIQUIDS.
- DO NOT USE THE SYSTEM TO VACUUM UP FLAMMABLE OR COMBUSTIBLE LIQUIDS SUCH AS GASOLINE or use in areas where they may be present.
- Connect the power unit to a properly grounded AC outlet only on a dedicated branch circuit.
- Current-carrying vacuum hose contains electrical wires. DO NOT USE THE HOSE IF IT IS DAMAGED, CUT, OR PUNCTURED. Avoid vacuuming up sharp objects with the hose.
- The AirVac system is not a toy. NEVER LET CHILDREN OPERATE, OR PLAY WITH THE AIRVAC SYSTEM.
- Use only as described in the Owner's Manual and only with the manufacturer's recommended attachments.
- Do not vacuum up anything that is burning or smoking, such as cigarettes, matches, or hot ashes.
- Do not use without the dust bag (Platinum Series only) and filters in place.
- Keep hair, loose clothing, fingers, and all parts of the body away from openings and moving parts.
- Do not put any object into any of the wall inlet valves or vacuum auxiliary air inlet. Do not use the system with any vacuum opening blocked; keep all ducting free of dust, lint, hair, or anything that may reduce the air flow.
- Turn off all controls before unplugging the power unit.
- Use extra care when cleaning stairs to prevent a fall.

## SAVE THESE INSTRUCTIONS.

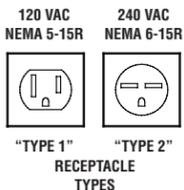
### ARCHITECT'S SPECIFICATIONS



### SPECIFICATIONS

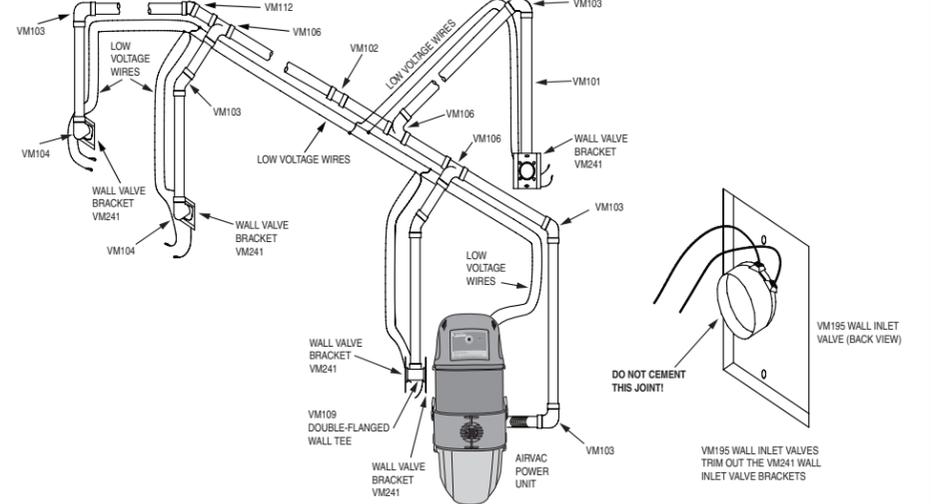
**CAUTION**

All circuit breakers must be SEPARATE and DEDICATED as with any other major appliance. The electrical outlets MUST match the plug WITHOUT USE OF ADAPTERS



POWER UNIT SPECIFICATIONS										
AIRVAC MODEL	OPERATING VOLTAGE	OPERATING CURRENT	HOUSE CIRCUIT BREAKER SIZE	RECEPTACLE TYPE	HOME SQUARE FOOTAGE	MAXIMUM DUCT LENGTH	DEBRIS CAPACITY	AIR WATTS	WATER LIFT	AIR FLOW
AVR3000	120 VAC	13.5 AMPS	20 AMP	TYPE 1	3000	150 FEET	6 GALLONS	537 PEAK	123"	118 CFM
AVR7500	120 VAC	13.5 AMPS	20 AMP	TYPE 1	7500	200 FEET	6 GALLONS	551 PEAK	131"	118 CFM
AVR12000	120 VAC	13.5 AMPS	20 AMP	TYPE 1	12000	350 FEET	6 GALLONS	570 PEAK	127"	122 CFM
AVR24000	240 VAC	7 AMPS	15 AMP	TYPE 2	12000	500 FEET	6 GALLONS	627 PEAK	137"	124 CFM
AVP3000	120 VAC	13.5 AMPS	20 AMP	TYPE 1	3000	150 FEET	5.2 GALLONS	537 PEAK	123"	118 CFM
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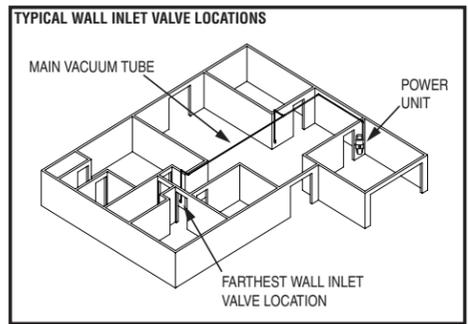
### TYPICAL VACUUM SYSTEM INSTALLATION



## 1 New Construction Vacuum Duct and Wall Inlet Valve Installation

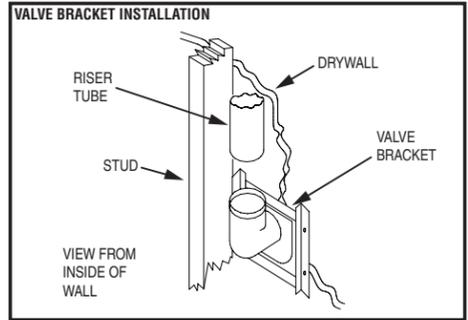
### Valve Brackets for Wall Inlet Valves

- Locate the first valve bracket at a point the farthest distance from the power unit. From this location, select additional valve locations. Each location should allow vacuuming in all corners of the room with a 30' hose. Remember walls and furniture can shorten the distance serviced by a valve in some areas, so be sure to locate inlets with furniture and walls in mind.
- Nail the valve brackets to the wall studs 12" to 15" above the floor, usually the same distance from the floor as electrical wall outlets. Alternate wall valve bracket configurations are possible.



### Vacuum Duct System

- After the valve brackets are nailed in place, drill a 2-9/16" diameter hole in the header plate directly above each valve bracket. Cement a RISER tube from the valve bracket, extending the tube through the hole in the header plate for each valve.
- Starting from the farthest valve bracket, lay tubing (cut-to-length) on top of ceiling joist and work toward the power unit location. All sweep fittings must curve in the direction of air flow. Connect all risers from valve brackets to the main duct line using only 90° Sweep Tee Fittings (VM106) or 90° Sweep Fittings (VM103). Cement all duct connections at the time of installation. There cannot be any air leaks in the duct systems. Testing of vacuum integrity with wall inlet valves installed is highly recommended. Vacuum leaks will affect system performance.



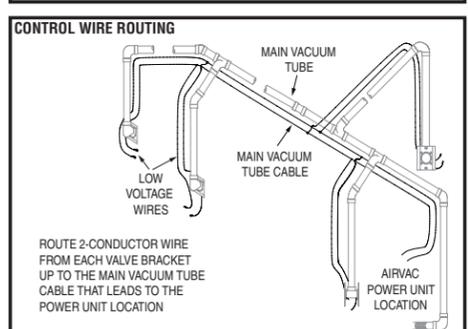
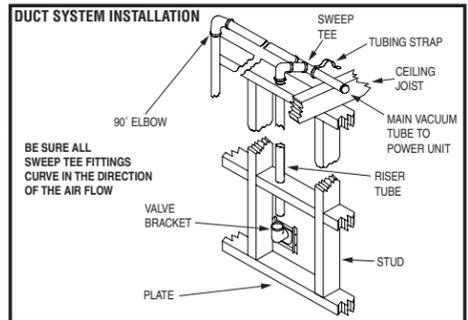
► **NOTE:** The use of nail guards (VM118) and plaster guards (VM196) are highly recommended to protect the wall valve brackets and vacuum duct system during construction.

### Low Voltage Vacuum Control Wiring

**CAUTION**

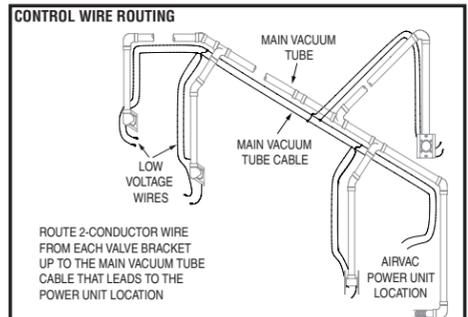
All wiring installation must conform to local electrical codes. Wiring in the ground (soil) must be in conduit. All wiring installation must have a good, solid mechanical connection. Protect all connections and/or splices against short circuits using wire nuts.

- Low voltage 18-gauge, 2-conductor cable connects all inlet valves to the power unit. When a hose is inserted into the wall inlet valve, the switch in the hose activates the power unit automatically; turning the switch off or removing the hose stops the power unit. Low voltage cable follows the same route as the vacuum duct system. Route the 2-conductor cable from each valve bracket, up the risers to the main duct line.
- Splice each additional riser cable to the main duct cable using wire nuts. All connections will be in PARALLEL.
- Secure the wiring to the horizontal main line ducts with tape or quick clips (VM450), but DO NOT TAPE THE CABLE TO THE RISERS. Secure the loose cable end at each valve bracket, allowing 6" of extra cable for each inlet valve connection and 18" of extra cable at the power unit location.



### Wall Inlet Valve Trim-out

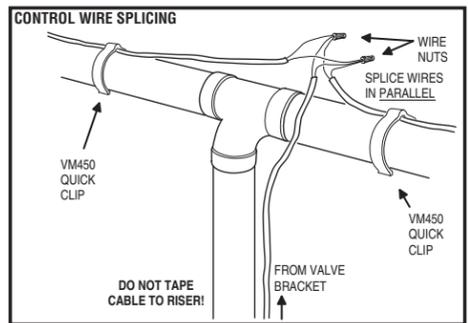
- When the installation is ready for trim-out, connect the wires from a wall inlet valve to the cable that descends from the riser at the valve bracket.
- Slide the wall inlet valve into the fitting on the valve bracket.



**CAUTION**

DO NOT CEMENT WALL INLET VALVES TO THE VALVE BRACKET FITTING! Occasionally, wall inlet valves require replacement due to leaky gaskets or other damage. If the wall inlet valve is cemented to the valve bracket fitting, the wall inlet valve cannot be replaced.

- Secure the wall inlet valve to the valve bracket with the two wall plate screws.
- Repeat steps for each wall inlet valve location.

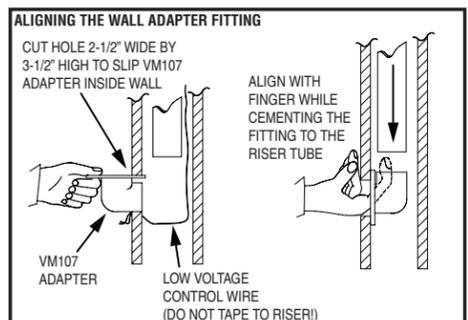
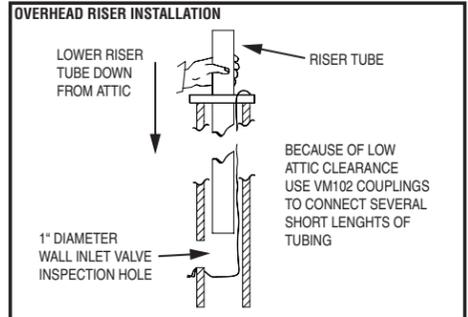


## 2 Existing Construction Vacuum Duct Installation Techniques

### Overhead Vacuum Duct Installation

Two people are normally required to perform overhead vacuum duct installations. Power unit installation requirements are the same as in new construction. Wall inlet valves should be limited to interior walls. Exterior walls contain insulation and are not normally accessible from inside the roof to drill holes for the vacuum duct.

- After marking a wall valve location, check inside the roof area to see if a hole can be drilled in the header plate for the tubing. BEFORE DRILLING, CHECK FOR ELECTRICAL WIRING. If there are no obstructions, drill a 2-9/16" diameter hole in the header plate. It is possible that you will hit a fire block about halfway down the wall. If this is the case, you must use an extension drill and drill through the fire block. Make sure the drill is straight up and down or you might drill through the side of the wall!
- After holes are drilled, lower tubing and the low-voltage control wire from inside the roof to the wall valve. Seldom is the roof high enough to use a single length of tubing. As the tube is dropped down the wall to the valve location, several short lengths of tubing should be cemented together with a straight coupling (VM102).
- At the wall valve location, drill a 1" diameter hole in the wall. Using a flashlight from the attic, check for hole alignment. Then cut a rectangular hole 2-1/2" horizontal and 3-1/2" vertically from the center of the 1" diameter hole. This hole will allow an adapter (VM107) to make contact with tubing inside the wall. CEMENT THE ADAPTER TO THE TUBING.
- Secure the adapter to the mounting bracket (VM142) with screws. After the mounting bracket is attached to the adapter, the completed assembly inside the wall is ready for the inlet valve (VM195).
- Connect the low-voltage control wires and slide the inlet valve into the fitting on the valve bracket. DO NOT CEMENT THE INLET VALVE TO THE WALL BRACKET FITTING. Tighten the valve against the wall with screws to the mounting bracket.



### Overhead Vacuum Duct Installation (continued)

- Secure the inlet valve to the valve bracket with the two wall plate screws.
- Repeat steps for each wall inlet valve location.

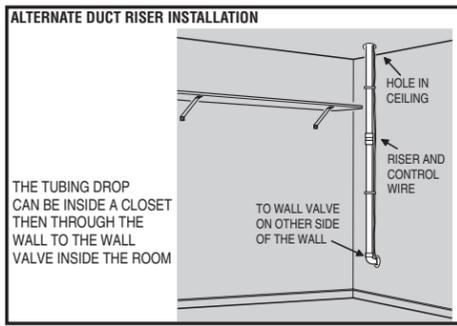
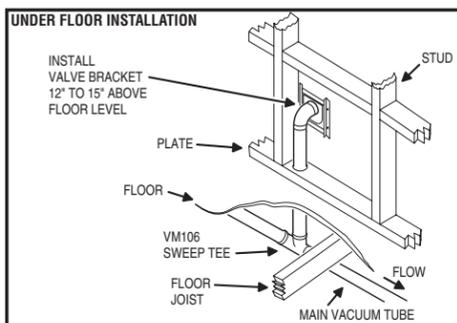
### Under the Floor Installation

In homes with a pier and beam foundation or basement, either the overhead or an under the floor installation can be made. Sometimes under the floor installation is easier in an existing home, especially if the roof has a low pitch and clearances in the attic adds to the installation problem. Under the floor installation also eliminates encountering fire blocks in the wall. Shorter risers are also utilized, eliminating the longer tube drop from the attic.

- Vacuum tubing should be secured to floor joist with perforated nailing strips or tube straps.
- Generally, follow the overhead installation steps, but from below the floor, to install each wall inlet valve.

### Alternate Vacuum Duct Riser Installation

An effective technique highly suitable for many types of construction with adequate working room inside the attic is to make drops to the wall inlet valves through the ceiling, then route the tube through the wall at inlet level for the inlet valve on the opposite side of the wall. If this method is used, the drop from the inside of the attic for the riser can be made in the corner of a closet, utility room, etc. where the tubing is not visible or not objectionable to the Homeowner. On occasion this might be the only alternative for placing an inlet valve in a desired location.

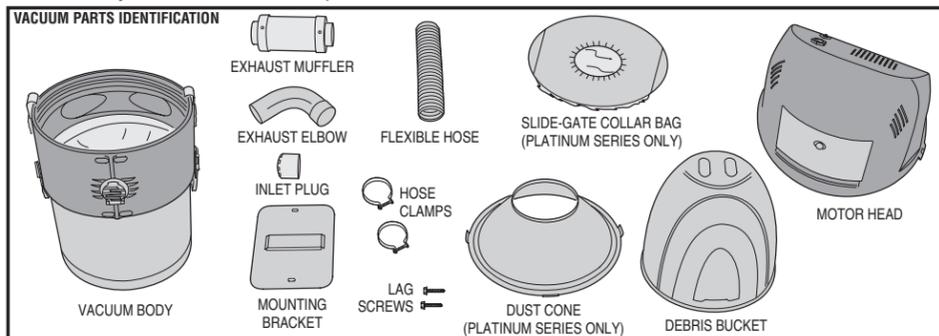


## 3 Power Unit Installation

### Power Unit Unpacking and Pre-assembly

This AirVac power unit is packaged disassembled in a nested configuration which reduces the size of the shipping carton and allows for much smaller shelf space requirements than previous AirVac models. The power unit must be assembled during installation.

- Carefully remove the nested vacuum from the box.
- Separate each of the nested parts and place them gently on the floor.
- Refer to the parts identification figure below to familiarize yourself with each of the parts.



**CAUTION**  
Do not mount the motor head onto the vacuum body until AFTER the vacuum body is hung on the mounting bracket. Placing the motor head on the vacuum body before mounting causes the unit to be top heavy and may tip the vacuum over, causing damage to the vacuum.

- Connect the 90° steel exhaust elbow to the motor head. The exhaust elbow can point to the left or right depending on the installation requirements. Secure the exhaust elbow to the motor head flange with the #4 self-tapping screw.
- PLATINUM SERIES ONLY:** Install the dust cone inside the bottom end of the vacuum body as shown in the figure. Be sure the cone snaps against the large ridge in the vacuum body. **DO NOT PUSH DUST CONE PAST THE LARGE RIDGE!**
- PLATINUM SERIES ONLY:** Install the slide-gate collar dust bag into the debris bucket. **BE SURE TO FULLY EXPAND THE BAG WITH YOUR HAND TO FILL THE BUCKET.**

### Power Unit Mounting

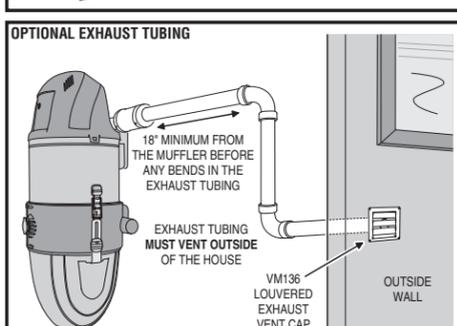
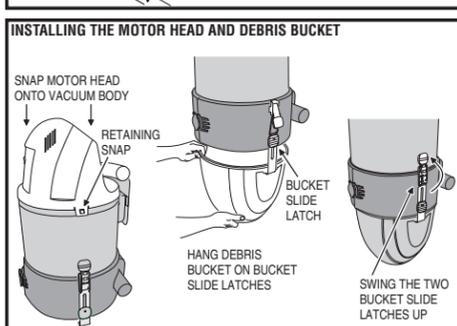
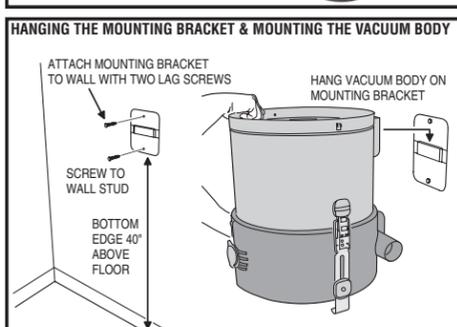
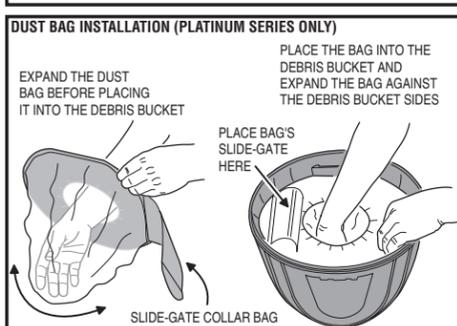
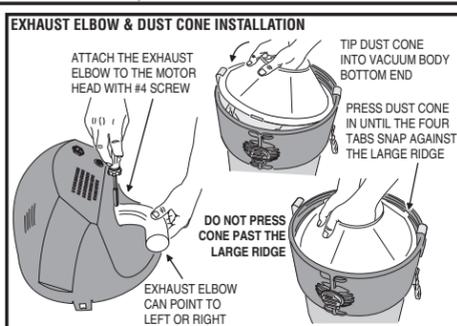
- Determine the mounting location for the power unit. Be sure clearance dimensions are followed. The power supply cord length is 5 feet. An AC power outlet of the proper type on a dedicated circuit breaker must be available within 5 feet so the power supply cord can be directly plugged into the electrical outlet. **DO NOT USE AN EXTENSION CORD.**
- Use a stud finder to locate a wall stud for attaching the mounting bracket. Mark the stud location.
- Attach the mounting bracket to the wall, centered on the marked stud, with the bottom edge 40" above the floor, using the two 1/4" x 2" lag screws and a 7/16" socket.
- Carefully hang the vacuum body by sliding the body's mounting tab into the mounting bracket slot.
- Fit the motor head onto the vacuum body with the controls facing forward latching the two locking snaps.
- Hang the debris bucket on the two bucket slide latches. Swing the two slide latch handles up to lock the debris bucket into place.
- Slide the exhaust muffler onto the exhaust elbow.

### Optional Exhaust Tubing

The vacuum's exhaust can be piped away from the power unit if desired or required. The exhaust tubing must vent to the outside of the house, **NOT INTO THE ATTIC.** A louvered exhaust vent cap (VM136) is available to terminate the exhaust tubing. Steel tubing is also available for the exhaust tubing and may be required by local building codes.

**CAUTION**  
In order to avoid motor failure resulting from excessive back pressure, DO NOT install more than 30 feet of exhaust tubing and DO NOT install any bends in the exhaust tubing closer than 18" from the exhaust muffler.

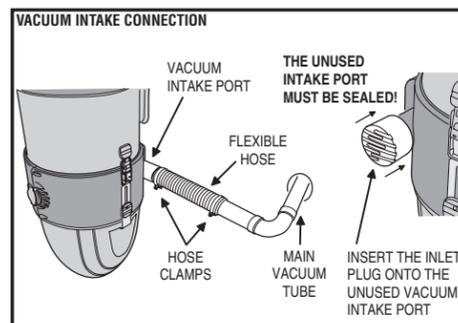
- Install any optional exhaust tubing following the guidance above.
- Connect the optional exhaust tubing to the muffler.



### Vacuum Intake Connection

Depending on the requirements of the installation, the main vacuum duct line can be connected to the left or right side intake port of the power unit.

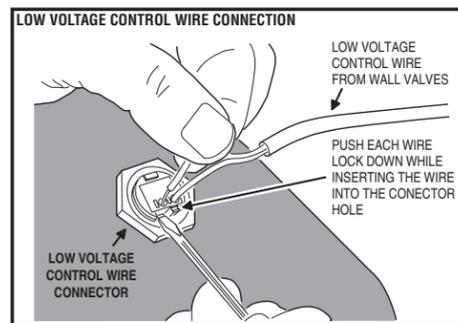
- Cut a 4" piece of duct tubing.
- Slide the tubing piece into the left or right power unit intake port. **DO NOT CEMENT TUBING.**
- Slide a hose clamp onto the flexible hose. Slide the flexible hose onto the tubing piece. Tighten the hose clamp.
- Slide another hose clamp onto the flexible hose. Connect the flexible hose to the drop from the main vacuum duct system line. Tighten the hose clamp.
- The unused power unit intake port **MUST** be sealed, slide the inlet plug onto the unused intake port.



## 4 Power Unit Electrical

### Low Voltage Control Wire Connection

- Strip back the insulation about 1/2" from the two-conductor low voltage control wire cable at the power unit.
- Using a small screwdriver or other object, press down on one of the wire locks on the control wire connector (top rear of motor head) while inserting the wire into the connector hole. Release the wire lock while holding the wire in. Repeat with the other wire and the other hole. Polarity is not important, either wire can be connected to either hole.



### Grounding Instructions

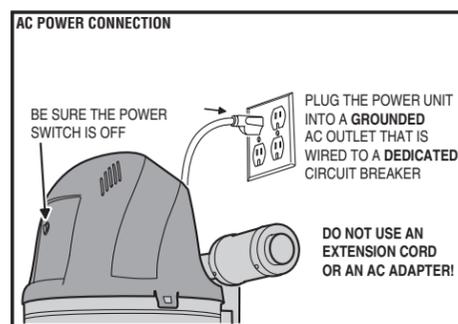
This appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electrical current to reduce the risk of electrical shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**WARNING**  
Improper connection of the equipment-grounding conductor can result in risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

**CAUTION**  
All circuit breakers must be SEPARATE and DEDICATED as with any other major appliance. The electrical outlets MUST match the plug WITHOUT THE USE OF ADAPTERS. DO NOT USE AN EXTENSION CORD.

### Power Connection

- BE SURE THE UNIT'S POWER SWITCH IS OFF. Plug the line cord into the AC receptacle.
- Verify that power is available to the vacuum by switching the unit's power on then off.



### System Testing

The AirVac central vacuum system should be tested for good suction throughout the system. Use a vacuum gauge (VM181) at each wall inlet valve location to measure the vacuum suction.

## 5 Troubleshooting

**NOTE: NO USER SERVICEABLE PARTS INSIDE, DO NOT LUBRICATE MOTOR. IF THE MOTOR FAILS TO OPERATE**

- Be sure the power unit is plugged into a working AC outlet.
- Push breaker reset button on the power unit.
- Check the panel circuit breaker that connects the power unit.

### AFTER CHANGING OF THE BAG (PLATINUM SERIES ONLY)

- Push down the RESET button for 7 seconds to reset the bag indicator.

### IN CASE OF LOW VACUUM POWER

- Be sure that the inlet plug is inserted into the unused power unit intake port.
- Check that all wall valves are closed.
- Check that all gaskets on wall valves are sealed.
- Check to see if debris bucket or bag (Platinum Series only) needs emptying.
- Check for obstructions in the hose, tools, or vacuum lines.
- Check for any ruptures or breaks in the vacuum duct system.

If you are unable to resolve the operational problems, please contact AirVac technical support at (800) 421-1587.

## 6 Limited Warranty

Linear LLC warrants AirVac Platinum Series power units to be free of defects for 10 years, and AirVac Red Series power units to be free of defects for 5 years. The warranty period begins from either (1) the date of "first user" purchase of this product or (2) the first close of escrow date on a residence in which this new product was originally installed. This warranty extends to the original user of the product and to each subsequent owner of the product during the term of this warranty. Linear LLC will repair or replace, at its option, parts and materials at no charge. Parts supplied under this warranty may be new or rebuilt at the option of Linear LLC.

If, during the limited warranty period, it appears as though this product contains a defect which is covered by this limited warranty, call our toll free service number before dismantling the product (1-800-421-1587). Remember to obtain a Return Product Authorization number (RPA) before returning any product to Linear LLC. Send this product freight pre-paid and insured to our service center for warranty repair. You will be advised on shipping instructions when you call the toll free service number. Linear LLC will return the repaired product freight pre-paid within the U.S.A. The installing dealer or distributor may assist you, at your choice and expense, with returning product for repair. Please include a brief description of the problem and a dated proof-of-purchase receipt with any product that is returned for warranty repair. ANY PRODUCT RETURNED WITHOUT A RETURN PRODUCT AUTHORIZATION NUMBER WILL BE REFUSED.

THIS LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, AND OF ANY OTHER OBLIGATIONS OR LIABILITY ON THE SELLER'S PART. THIS LIMITED WARRANTY DOES NOT COVER DAMAGE CAUSED BY ACTS OF GOD, IMPROPER INSTALLATION, NORMAL SYSTEM WEAR AND TEAR AS DEFINED BY THE MANUFACTURER, THE VIOLATION OF APPLICABLE BUILDING OR ELECTRICAL CODES, OR THE USE OF NON-AIRVAC WIRE, CABLE, OR WALL HOUSINGS. THIS LIMITED WARRANTY APPLIES ONLY TO PRODUCTS INSTALLED IN A PRIVATE RESIDENCE.

UNDER NO CIRCUMSTANCES SHALL THE SELLER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES ARISING IN CONNECTION WITH USE, OR INABILITY TO USE THIS PRODUCT. IN NO EVENT SHALL SELLER'S LIABILITY, FOR BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, OR STRICT LIABILITY, EXCEED THE COST OF THE PRODUCT COVERED HEREBY. NO PERSON IS AUTHORIZED TO ASSUME FOR US ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT.

Some states do not allow the exclusion or limitation of consequential, incidental or special damages, so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**AIRVAC**<sup>TM</sup>  
Purely Powerful

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www.purelypowerful.com

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