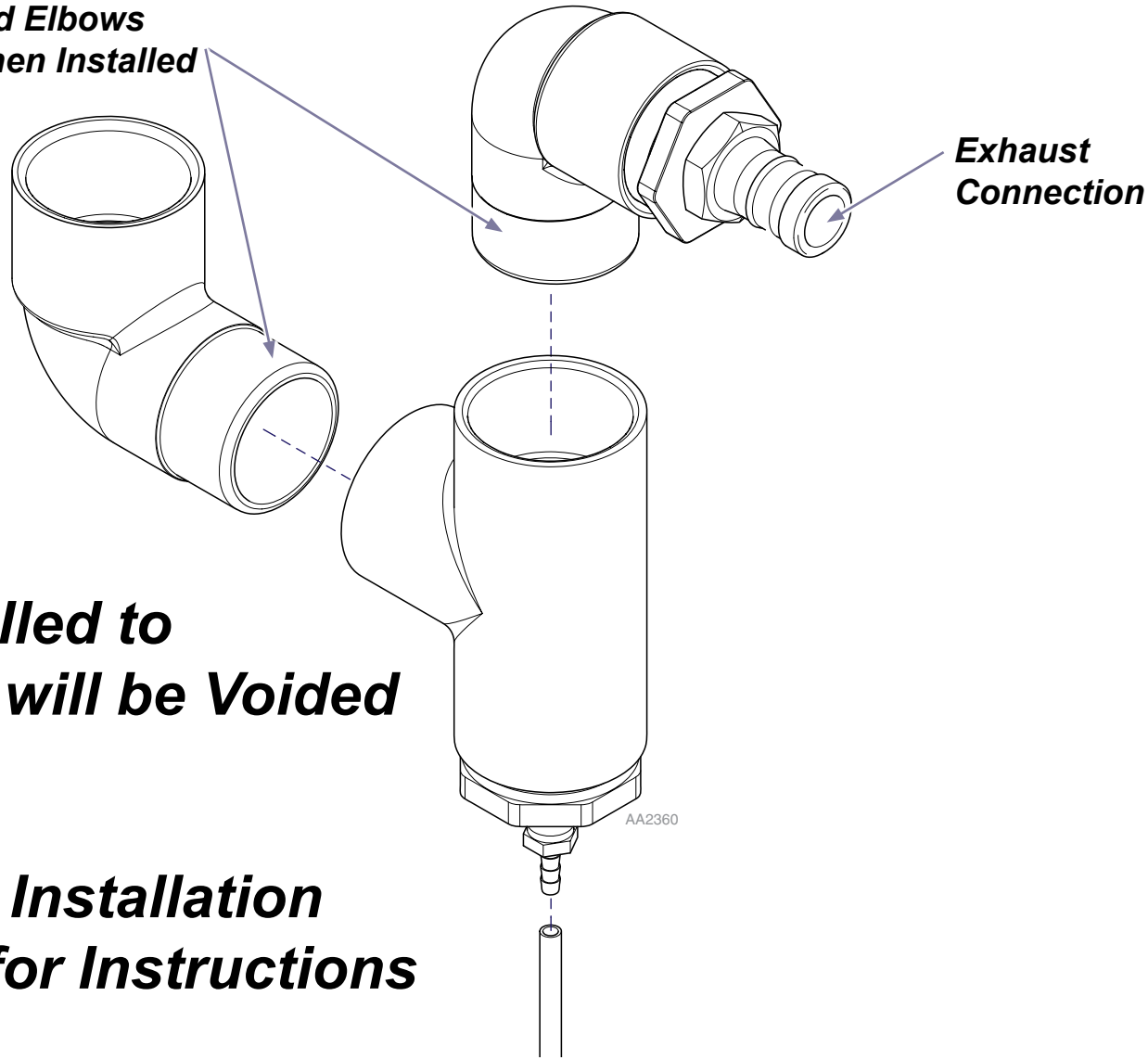
MIDMARK®

Equipment Alert



P-Trap Must Be Installed to Exhaust or Warranty will be Voided

Refer to PowerVac G Installation Manual 003-2025-00 for Instructions

MIDMARK®

PowerVac® G Installation

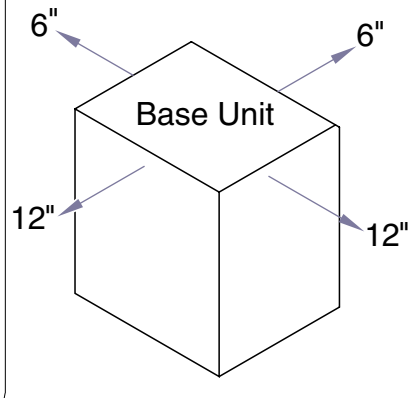
Applies to Models:
Single Vac Units
G3, G5, G7
Twin Vac Units
G6, G10, G14

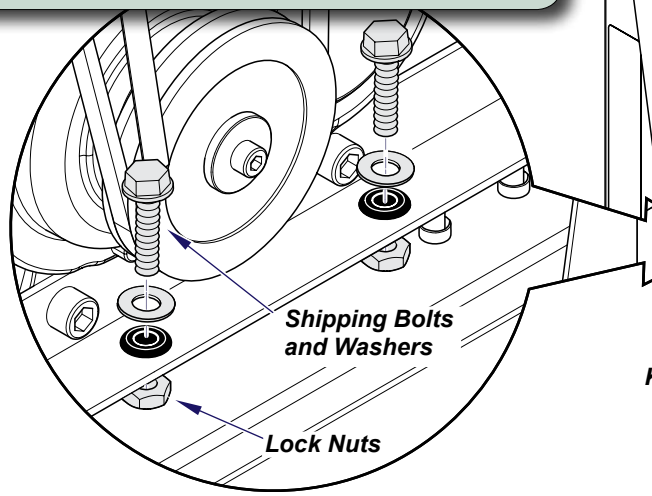
WARNING
Motors are thermally protected with automatic reset. Unit may start without warning.

Caution
Vac unit weighs 375 lbs (170 kgs). Use care when moving to prevent personal injury. Raise leveling feet to roll base unit or use lift handles (77001455).

Equipment Alert
Vacuum system must be installed per local plumbing and electrical codes.
Do not operate without cover.
Place vacuum system in a dry, well ventilated area on a solid, level surface.
Verify all sides of base unit are not obstructed. Recommended - 6" inches on left and back side. Required - 12" inches on front and right side.

Pre-Install, remove shipping bolts...
A) Unfasten front cover by turning each fastener 1/4 turn, counter clockwise.
B) Lift front cover straight up to remove from side panels.
C) Remove lock nuts, washers and bolts, replace front cover.
Shipping hardware can be thrown away, they will not be reused.





Important Information

Intended Use

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

Electromagnetic Interference

This Midmark PowerVac® G 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
- Increase separation between vacuum and interfering device
- Contact Midmark if interference persists

Disposal of Equipment

At the end of product life, the units, accessories, 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:..... 50°F to 104°F (+10°C to +40°C)
Relative Humidity.....10% to 90% (non-condensing)
Atmospheric Pressure .....700hPa (20 " Hg) to 1060hPa (31 "Hg)

Safety Symbols

DANGER
Indicates an imminently hazardous situation which <u>will</u> result in serious or fatal injury. This symbol is used only in the most extreme conditions.

WARNING
Indicates a potentially hazardous situation which could result in serious injury.

Caution
Indicates a potentially hazardous situation which <u>may</u> result in minor or moderate injury. It may also be used to alert against unsafe practices.

Equipment Alert
Indicates a potentially hazardous situation which could result in equipment damage.

Safety Symbols continued...

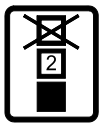
Consult User Guide for important information.

Proper shipping orientation

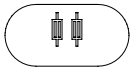
Fragile

Protective earth ground

Keep Dry



Maximum stacking height (palliated units)



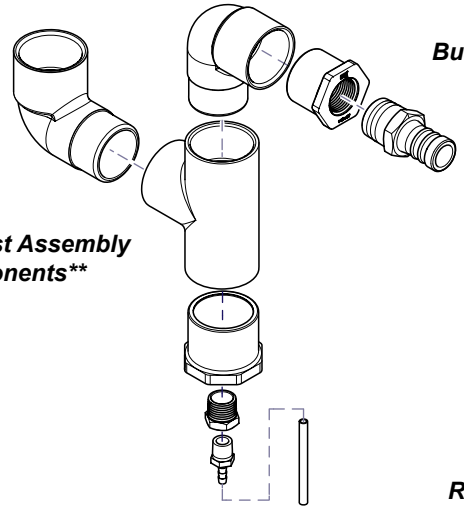
Fuse rating specification

Caution hot surface

IPXO Ordinary Equipment

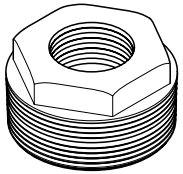
PowerVac® G Loose Parts

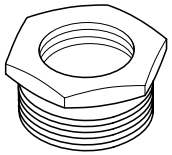
Exhaust Fittings



Exhaust Assembly Components**

Bushing - 1” FPT x 2” MPT**

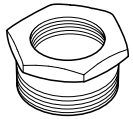




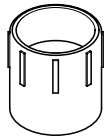
Reducer - 1 1/2” x 1” NPT**

Intake Fittings

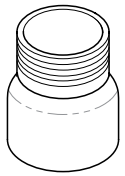
Bushing - 2” NPT x 1 1/2” FPT, PVC*



Adapter, 1 1/2” NPT x Socket, PVC*

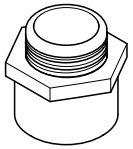


Coupling Reducer SOC 2” x 1” *



Pipe Nipple, 1 1/2” NPT, Plastic*

Coupler, 1 1/2” SOC 2” x 1” *



Adapter, 1 1/2” NPT x Socket, PVC*

Extra Fittings for Hose Connections to Existing Pipes

Note

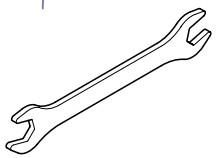
* Included with Separator Loose Parts Kit - 002-1441-00

** Included with Base Loose Parts Kit - 002-1440

Equipment Alert

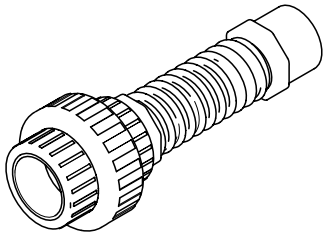
A sample bottle of Precision Clense Plus is packaged with the separator assembly, refer to care guide for instructions.

PowerVac G Parts

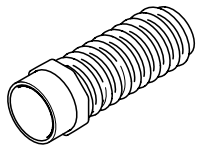


Foot Wrench 1/2” Twin Opened End**

Garden Hose Adapter* Refer to “Care Guide” on Base Unit or www.Midmark.com



Intake Hose Assembly*



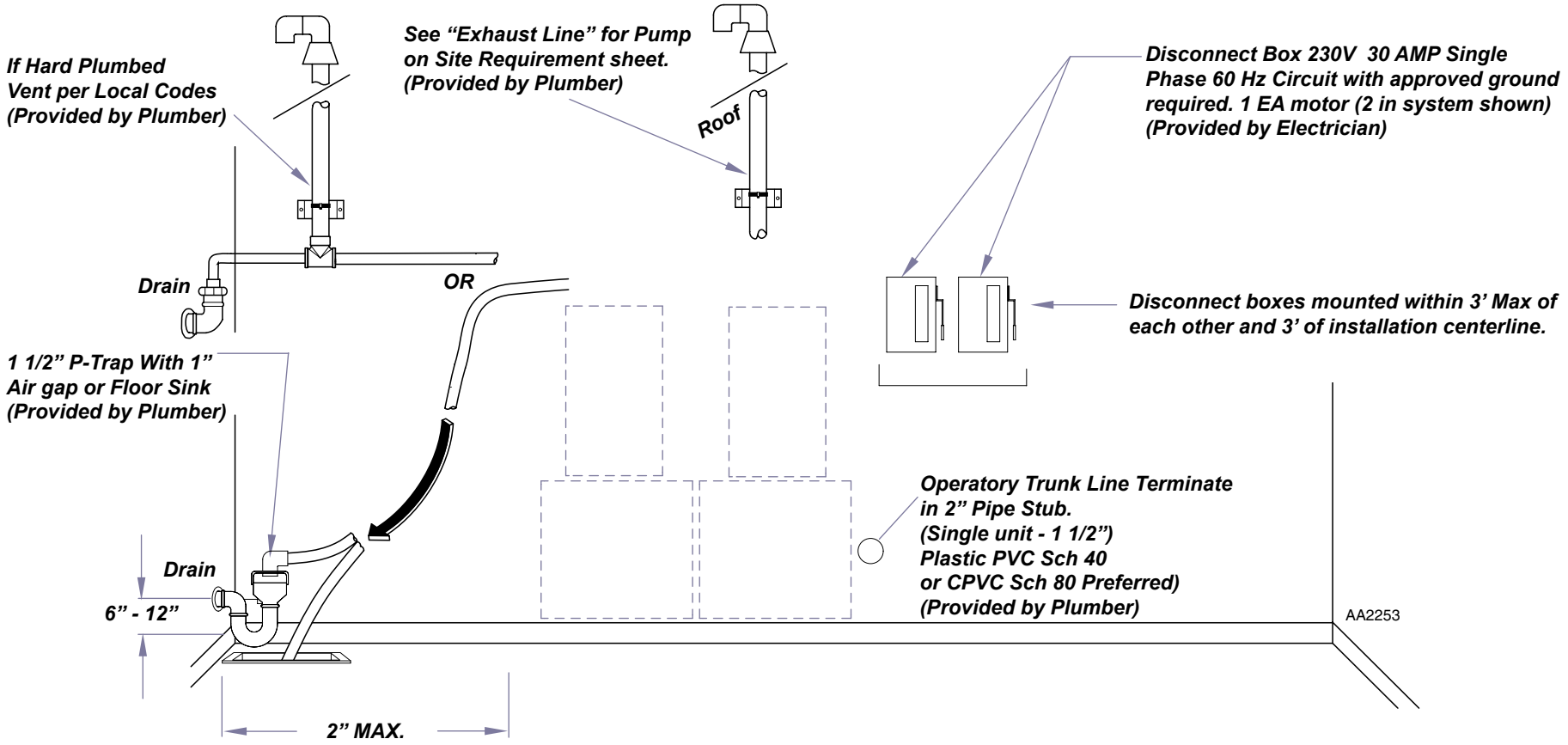
Drain Hose Assembly*

AA2244

PowerVac® G Site Requirements

Plumbing	**Exhaust Line**	***Single Models G3, G5, G7***	***Twin Models G6, G10, G14***
	Type	PVC Sch 40, CPVC Sch 80, Copper or Galvanized Steel	CPVC Sch 80, copper or Galvanized Steel
	Size	1-1/2” for up to 15’ exhaust line length 2” for greater than 15’ exhaust line length	2” for all exhaust line lengths
	Termination	1 1/2"" PVC Sch 40	
	Intake (Suction) Line	***Single Models G3, G5, G7***	***Twin Models G6, G10, G14***
	Type	PVC Sch 40 Pipe Recommended - for Main Trunk and Branch Lines	
	Line Size	Refer to: "Site Requirement Layout", located in this document.	
	Pump Termination	1 1/2”	2”
	Drain	***Single Models G3, G5, G7***	***Twin Models G6, G10, G14***
	Type	Floor Drain or 1 1/2" PVC Sch 40 P-Trap	
	Flow Capacity	Minimum 25 Gallons per Minute	
	Tank Wash Supply	3/4"" Garden Hose Fitting Provided per Tank for Non-Permanent Supply Water Connection	
Electrical ***Note: All PowerVac® G models electrically designed to be sold in U.S.A. or Canada.***	**Boxes**	***Single Models G3, G5, G7***	***Twin Models G6, G10, G14***
	Supply	(1) 230 Volt, Single Phase, 60Hz	(2) 230 Volt, Single Phase, 60Hz
	User Supplied Fused Disconnect Switch Box ***Note:*** *Boxes) to be located within 6’ of Vacuum Unit(s).*	1 @ 30 AMP Required	2 @ 30 AMP Required
	Supply Leads	***Single Models G3, G5, G7***	***Twin Models G6, G10, G14***
	Leads (10 GA Wires)	(1) 6’ Supply Conduit Provided	(2) 6’ Supply Conduits Provided
Environmental	**Temperature**	***Single Models G3, G5, G7***	***Twin Models G6, G10, G14***
	Equipment Room Vent	Continuous-run 800 CFM Fan	Continuous-run 1600 CFM Fan
	Equipment Room Ambient Temperature	40° to 104° F 4° to 40° C	
	Note: All PowerVac® G models are recommended to be installed and operated in a thermostatically or otherwise stable ambient temperature environment. Forced air and HVAC input should be used in addition to an exhaust fan if normal ambient temperatures vary from specified operating temperature range.		

PowerVac® G Site Requirement Layout - Elevation View

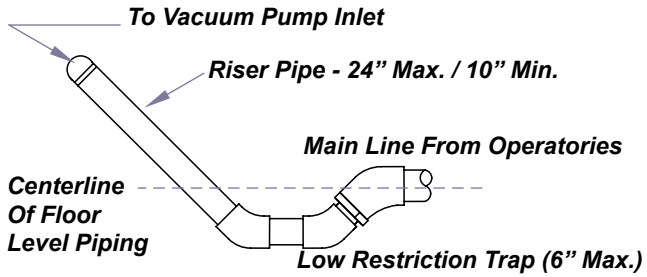


Note

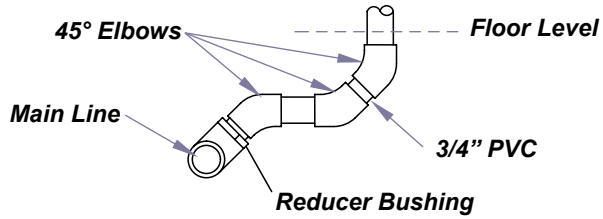
Ventilation required for room to remain in the range of 40° to 104° F or 4° to 40° C with 4500 BTU/HR equipment heat input.
Twin Unit Shown, a single unit only requires one disconnect box.

PowerVac® G Site Requirement Layout - Sample Plumbing Layout

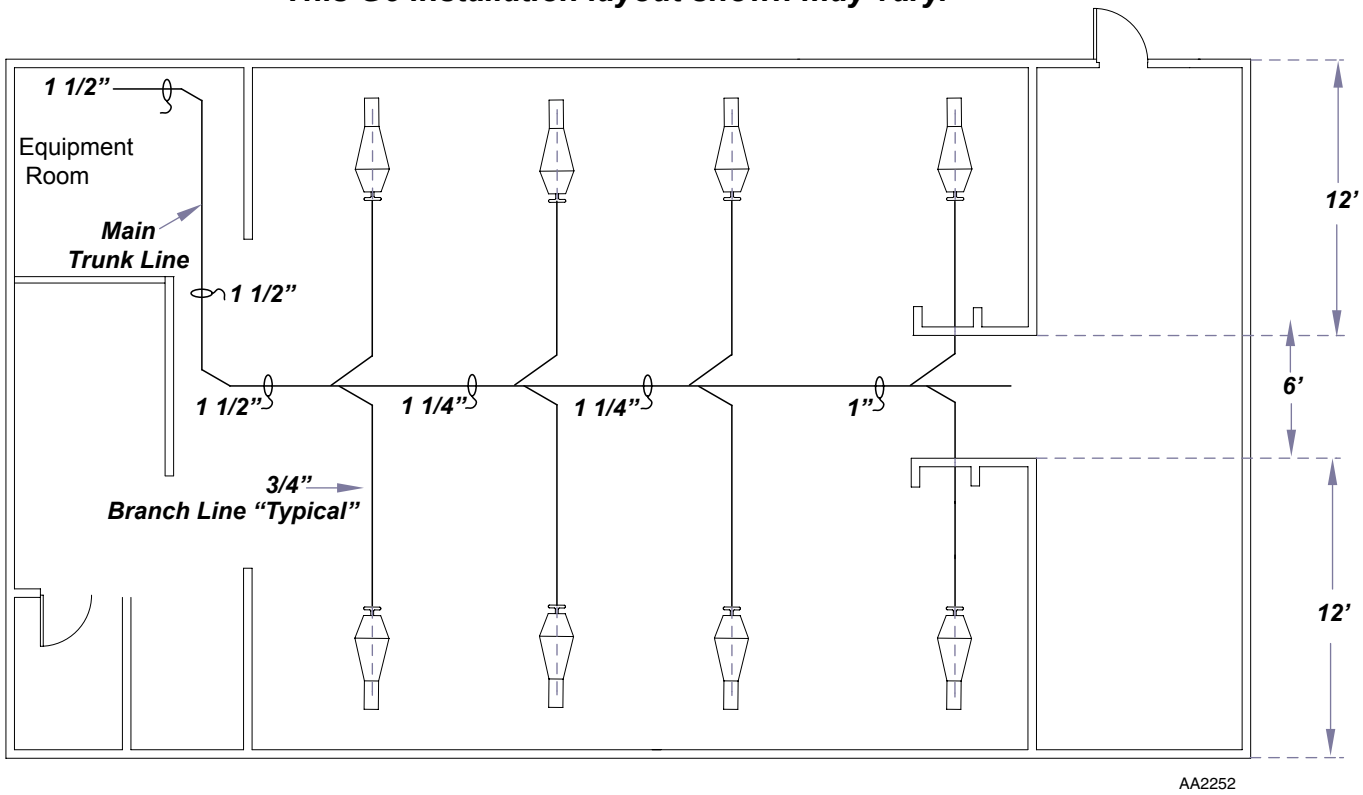
Line Termination at Vacuum Pump



To Junction Box / Inlet (Branch Plumbing)



***This G5 installation layout shown may vary.**

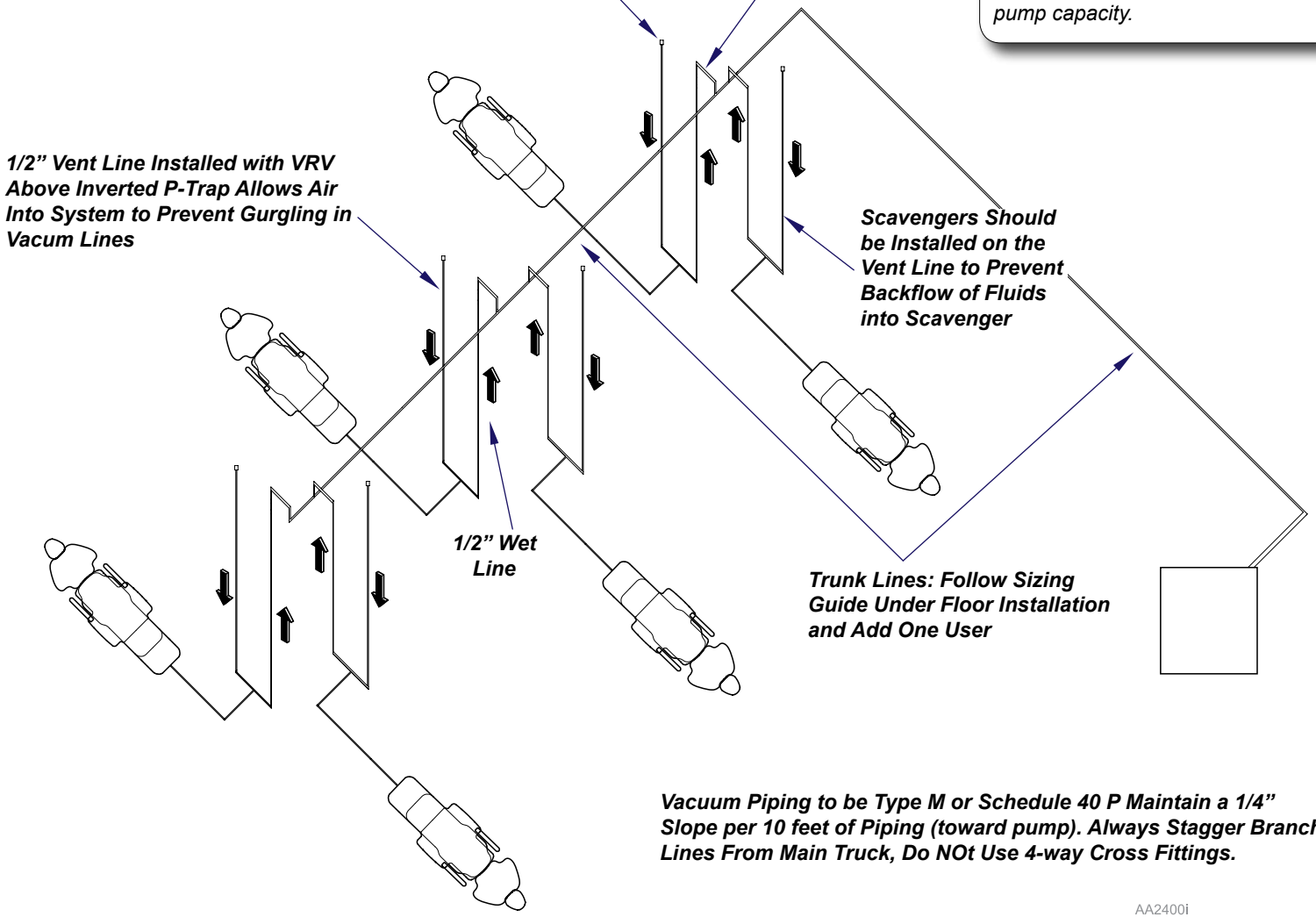


AA2252

Equipment Alert

When performing positive pressure leak tests to validate plumbing installation, verify vacuum systems are not connected to office piping.

PowerVac® G Site Requirement Layout - Sample Plumbing Layout continued...



Equipment Alert

Subfloor plumbing is preferred. Operatory utilization to be modified to allow flow up walls. Upsize pump as per number of operatories. At least 1/2 user per VRV and 8 ft. riser. More than 8 ft. riser requires more pump capacity.

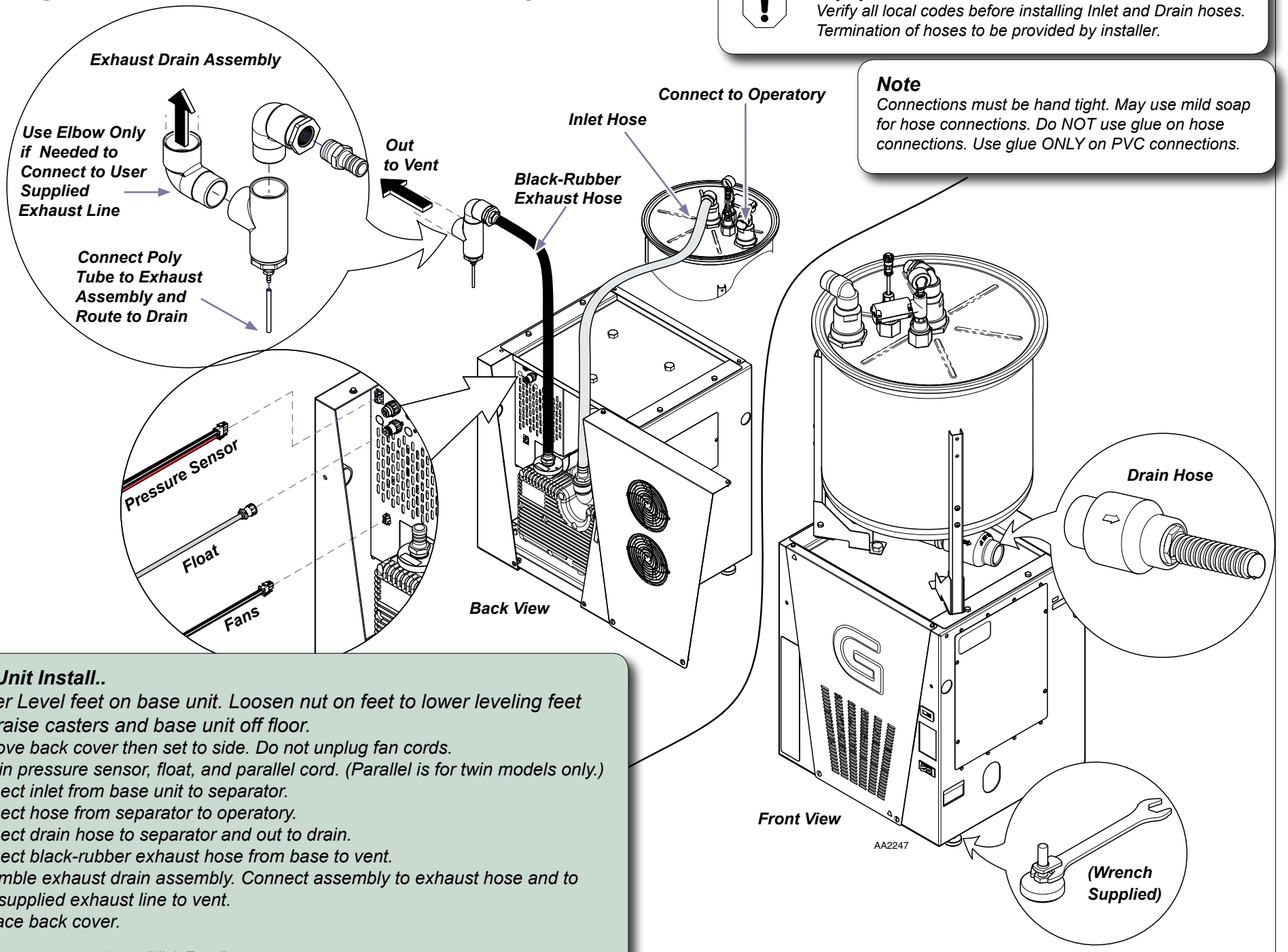
Vacuum Piping to be Type M or Schedule 40 P Maintain a 1/4" Slope per 10 feet of Piping (toward pump). Always Stagger Branch Lines From Main Truck, Do NOt Use 4-way Cross Fittings.

AA2400i

Plumbing & Exhaust Installation for Single Models

Equipment Alert
Verify all local codes before installing Inlet and Drain hoses. Termination of hoses to be provided by installer.

Note
Connections must be hand tight. May use mild soap for hose connections. Do NOT use glue on hose connections. Use glue ONLY on PVC connections.



Single Unit Install..

A) *Lower Level feet on base unit. Loosen nut on feet to lower leveling feet and raise casters and base unit off floor.*
B) *Remove back cover then set to side. Do not unplug fan cords.*
C) *Plug in pressure sensor, float, and parallel cord. (Parallel is for twin models only.)*
D) *Connect inlet from base unit to separator.*
E) *Connect hose from separator to operatory.*
F) *Connect drain hose to separator and out to drain.*
G) *Connect black-rubber exhaust hose from base to vent.*
H) *Assemble exhaust drain assembly. Connect assembly to exhaust hose and to user supplied exhaust line to vent.*
I) *Replace back cover.*

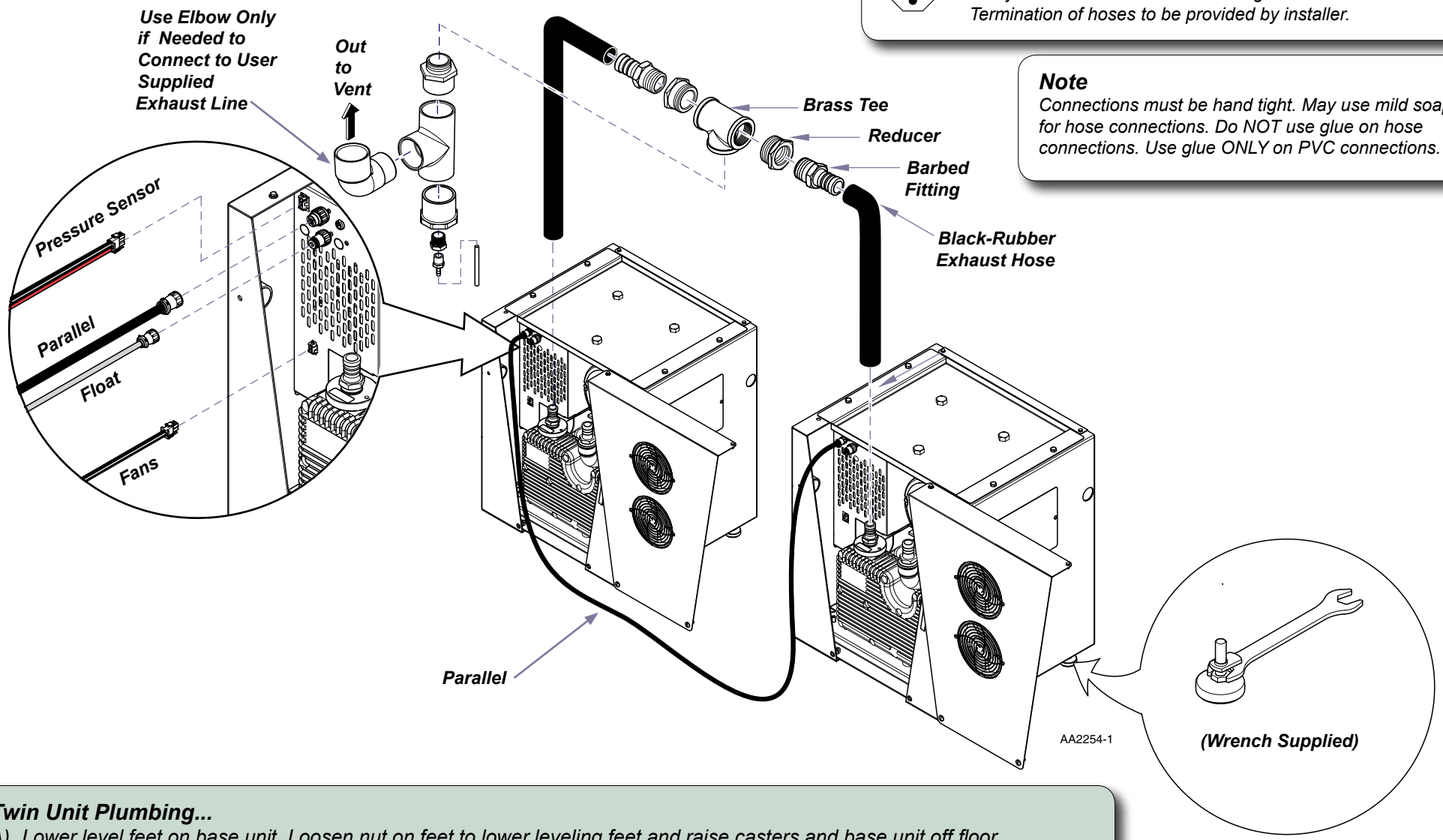
Note: Do not cut or shorten hose, "High Temp".

(Continue with Single Model on "Electrical Connections" Page)

Exhaust Install - Twin Models

Equipment Alert
Verify all local codes before installing Inlet and Drain hoses. Termination of hoses to be provided by installer.

Note
Connections must be hand tight. May use mild soap for hose connections. Do NOT use glue on hose connections. Use glue ONLY on PVC connections.



Twin Unit Plumbing...

A) *Lower level feet on base unit. Loosen nut on feet to lower leveling feet and raise casters and base unit off floor.*
B) *Remove back covers, set to side, do not need to unplug fan cords.*
C) *Plug in pressure sensor, float and parallel (twin models only).*
D) *Install a reducer and barbed fitting into each end of brass tee.*
E) *Connect two black-rubber exhaust hoses from base unit to barbed fittings.*
F) *Assemble exhaust drain assembly. Connect assembly to exhaust hose and to user supplied exhaust line to vent.*
F) *Replace back covers.*

Note: Do not cut or shorten hose, "High Temp".

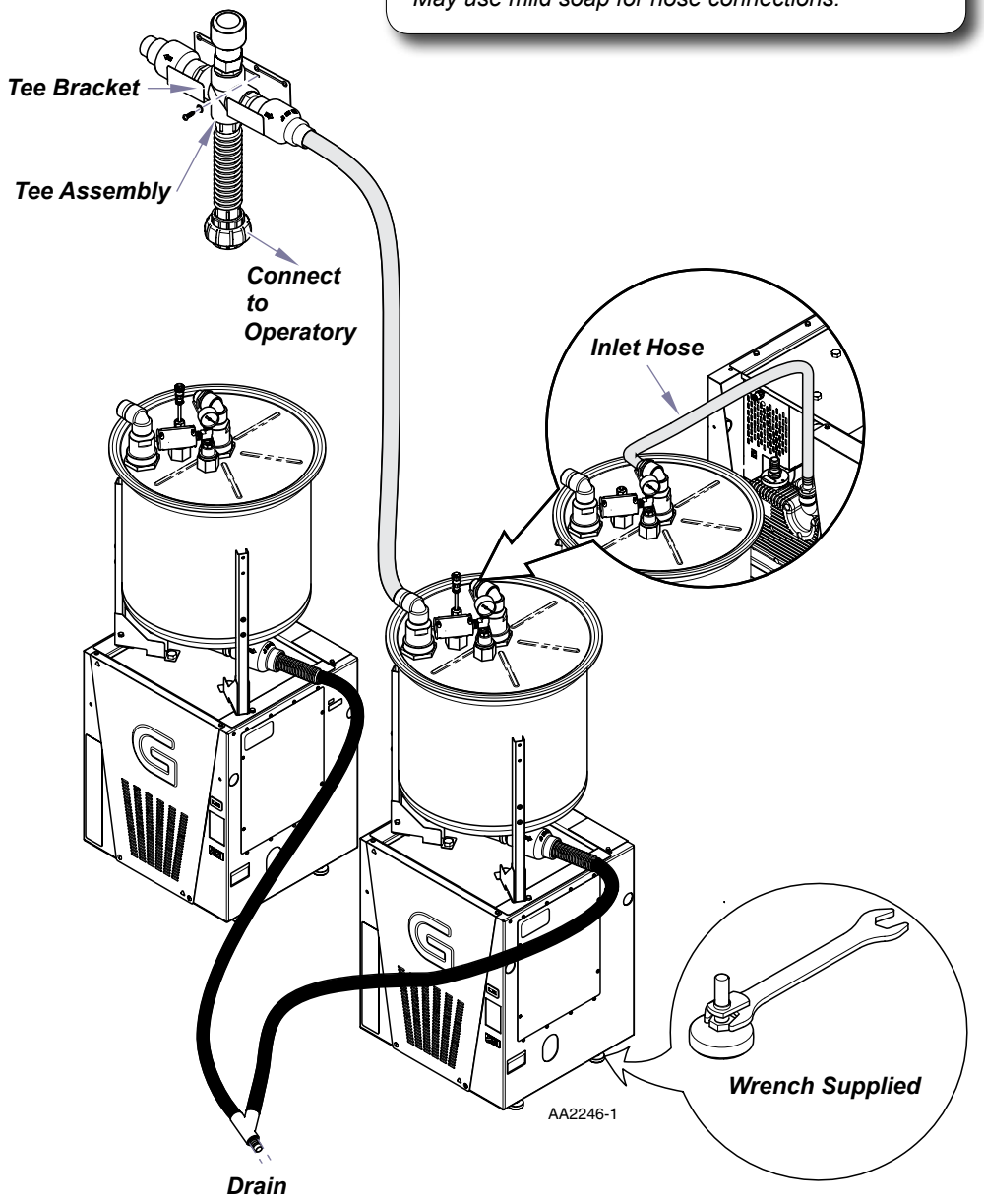
Continue with Twin Model on Page 10

Note
When working on twin units (replacements or adjustments), unplug parallel harness.

Plumbing Install - Twin Models

Equipment Alert
Verify all local codes before installing Inlet and Drain hoses.
Termination of hoses to be provided by installer.

Note
Connections must be hand tight. Do not use glue.
May use mild soap for hose connections.



Twin Unit Plumbing Continued..

A) Mount tee assembly bracket, place tee assembly on bracket.
B) Connect inlet hose from base unit to separator.
C) Connect inlet hose from each separator to tee assembly.
D) Connect inlet hose from tee assembly to operatory
E) Connect each drain hose to drain hose connector and out to drain.
F) Connect each drain hose to drain tee assembly.
G) Connect main drain hose to tee and out to drain.

(Continue with Twin Model on "Electrical Connections" Page)

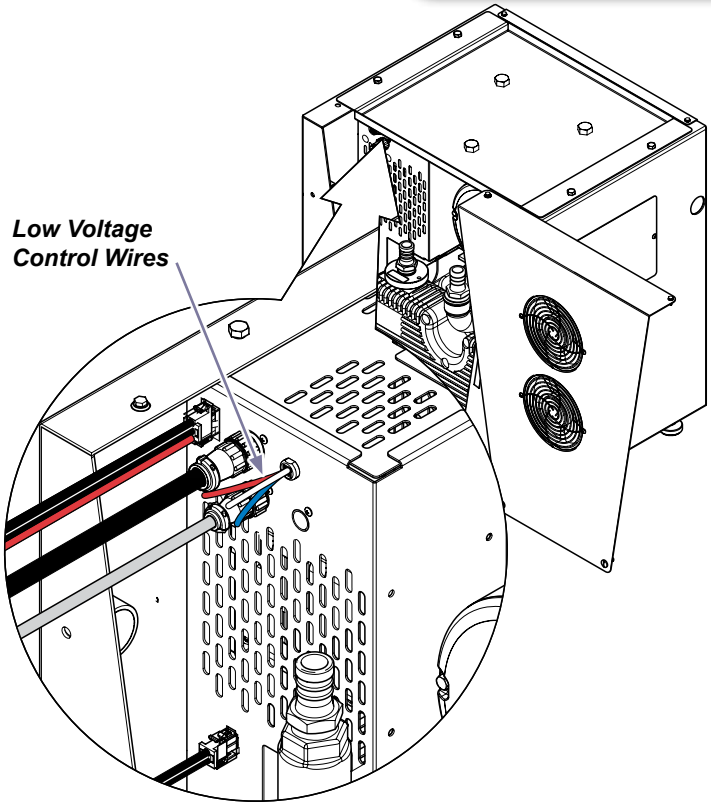
Electrical Install - ALL Models

Electrical Connections...

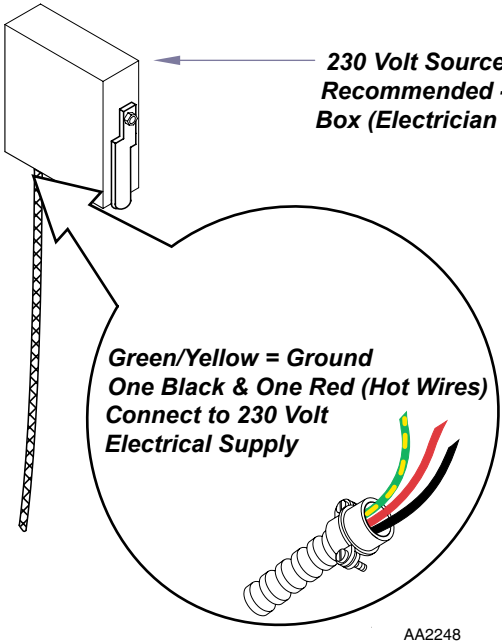
A) Connect remote panel wires to low voltage control wires if applicable.

B) Hard wire power supply conduit (back of base unit) to user supplied electrical boxes).

Note: Refer to "Control Panel Cross Wiring" chart to connect Low Voltage wires.



Control Panel Cross Wiring			
Brand	Wire		
	A	B (Light)	C
Midmark	Blue	White	Red
Air Techniques	Yellow	Brown	Orange
Den-Tal-Ez	Black	Brown	Yellow
Matrx	Red	Blue	White

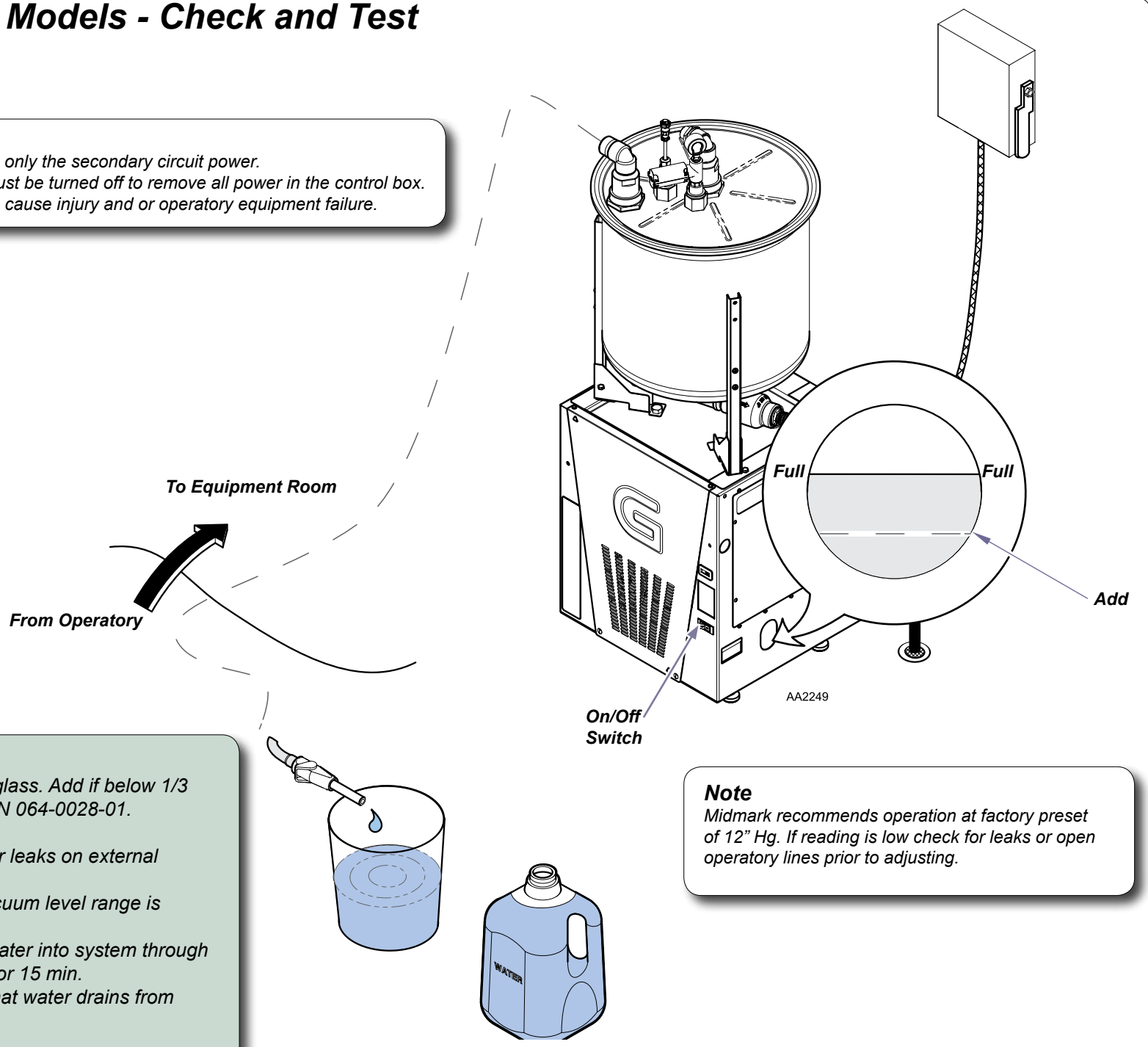


Equipment Alert

All vacuum systems are to be installed according to local electrical codes.
Never operate the equipment without complete and proper grounding.
Refer to specification sheet for electrical ratings in this manual.

Installation for ALL Models - Check and Test

Caution
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.
Too high vacuum level can cause injury and or operatory equipment failure.



To Test...

A) Check gear lube level on site glass. Add if below 1/3 full. Only use Midmark lube, PN 064-0028-01.
B) Start Vacuum.
C) Spray soapy water to check for leaks on external plumbing parts.
D) Check the vacuum gauge. Vacuum level range is 6" Hg to 18" Hg.
E) Vacuum 1-2 gallons of fresh water into system through operatory lines. Run vacuum for 15 min.
F) Turn vacuum off and ensure that water drains from separator without leaks.

Note: Vacuum will not run without front cover.

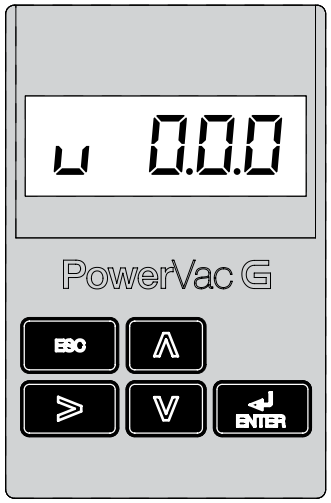
Note
Midmark recommends operation at factory preset of 12" Hg. If reading is low check for leaks or open operatory lines prior to adjusting.

Vacuum Adjustment

Note
When working on Twin units, unplug parallel harness.

Adjust Vacuum Level (Only if needed)...
Note: Adjustment can only be made if unit is running and NOT in sleep mode. If unit is in sleep mode, turn unit off and back on before making adjustment. Unit will enter back into sleep mode in 60 seconds.
Adjust vacuum level ("Hg) by .....
A) Press the "ESC" button until "V xx" shows on the screen.
B) Press "Enter" to enter the vacuum setting.
C) Press the right arrow to highlight the number you would like to change (flashing number is selected).
D) Use up and down arrows to change the flashing number.
E) Press Enter to confirm the vacuum setting.
F) To get back to displaying the pressure value, press the "ESC" button until the "V xx" shows on the screen.
G) Press the up or down arrows until you see "Mon" on the display. Press enter.
H) Press up or down to select U8-02, press enter. Pressure value should appear on the display.

"Vxx" xx is a Variable Reading



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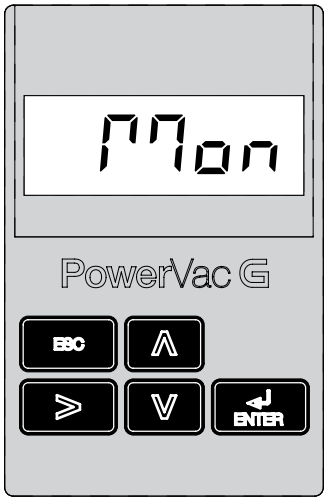
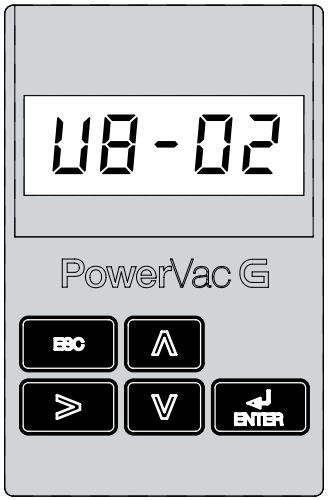
"Mon" Reading



AA2327

"U8-02" Reading



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Note
Vacuum level range is 6" Hg - 18" Hg. Midmark recommends operation at factory preset of 12" Hg. If reading is low check for leaks or open operatory lines prior to adjustment.

Installation is Complete

PowerVac® G Specifications

Classifications: Class 1, Type B Applied Part

Model	Max Users	Base Unit HxWxD	Separator HxWxD	Actual Weight (LBS.)	Total HP	Voltage	Amps	Hertz	Recommended Breaker Size (Amps)	Inlet Connection Size (IN.)	Fuses	Drain Connection Size (IN.)
G3	3-5	25 x 22 x 20 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 49	3	230	20	60	30	1 1/2”	1/8 A, 250V Type T	1 1/2”
G5	5-7	25 x 22 x 20 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 49	3	230	20	60	30	1 1/2”	1/8 A, 250V Type T	1 1/2”
G7	7-10	25 x 22 x 20 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 49	3	230	20	60	30	1 1/2”	1/8 A, 250V Type T	1 1/2”
G6	6	25 x 22 x 20 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 49	6	230	40	60	2 x 30	2”	1/8 A, 250V Type T	1 1/2”
G10	10	25 x 22 x 20 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 49	6	230	40	60	2 x 30	2”	1/8 A, 250V Type T	1 1/2”
G14	14	25 x 22 x 20 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 49	6	230	40	60	2 x 30	2”	1/8 A, 250V Type T	1 1/2”

Midmark Corporation
For contact information, go to:
www.midmark.com