



WARNING

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



Caution

Vac base 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).



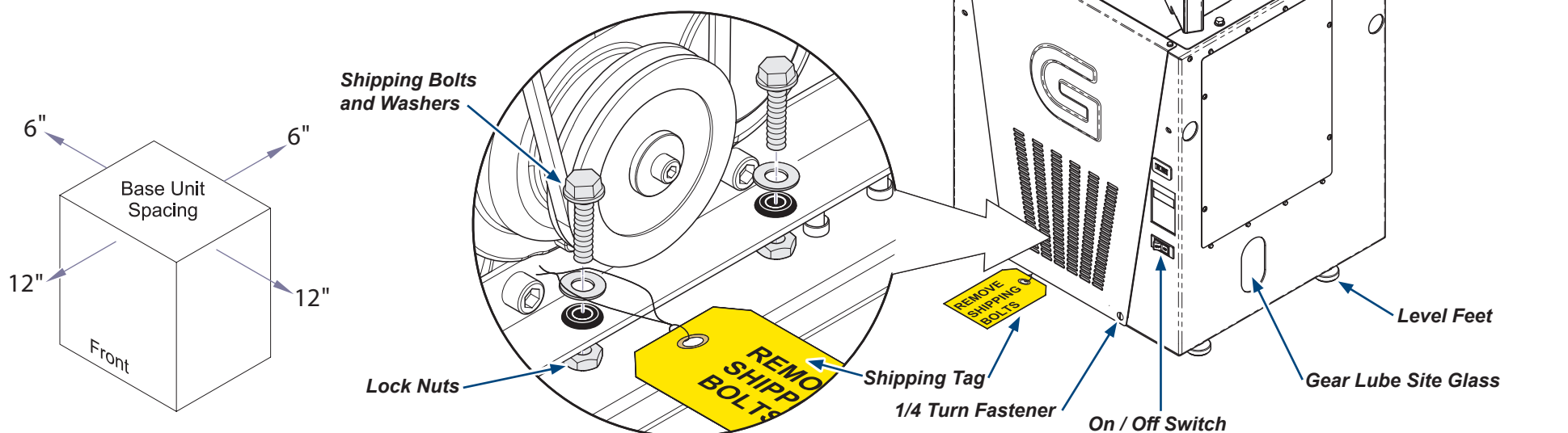
Equipment Alert

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...

- Disconnect power at on/off switch and main power supply box.
- Remove front cover. Turn bottom fasteners 1/4 turn counter clockwise. Lift front cover straight up to free plastic cones from holes in side panels.
- Remove lock nuts, washers and bolts, shipping tag, 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 and Midmark Smart G-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
- 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



WARNING

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



Caution

Indicates a potentially hazardous situation which may 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



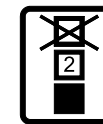
Fragile



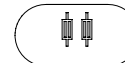
Protective earth ground



Keep Dry



Maximum stacking height (palletted units)



Fuse rating specification



Caution hot surface

IPXO

Ordinary Equipment

Plumbing Installation



Equipment Alert

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



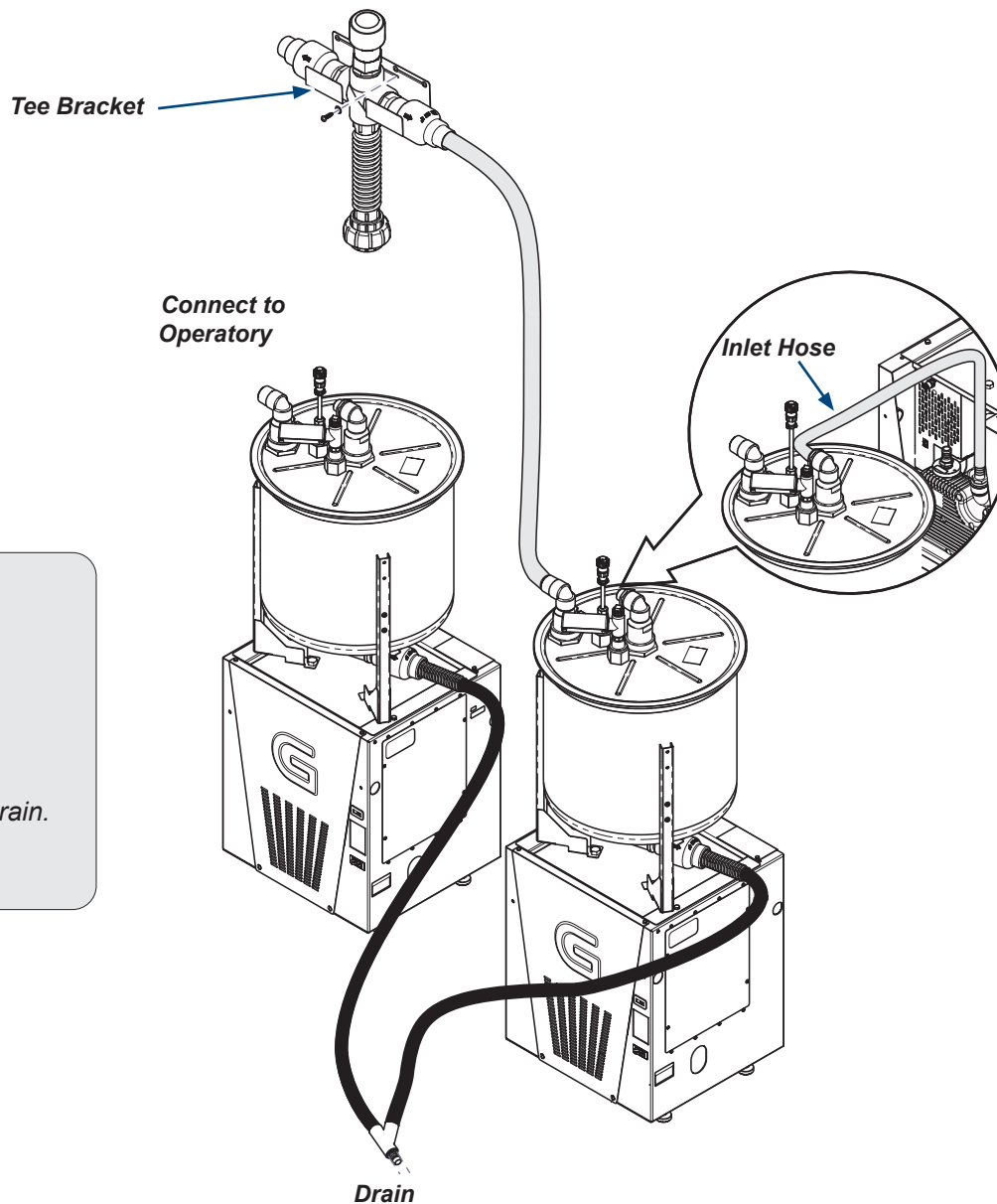
Caution

Turn Power Off to existing Vac unit.
On/Off switch only controls the secondary circuit power.
Main Power Source must be turned off to remove all power in the control box.

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.

Tee Assembly



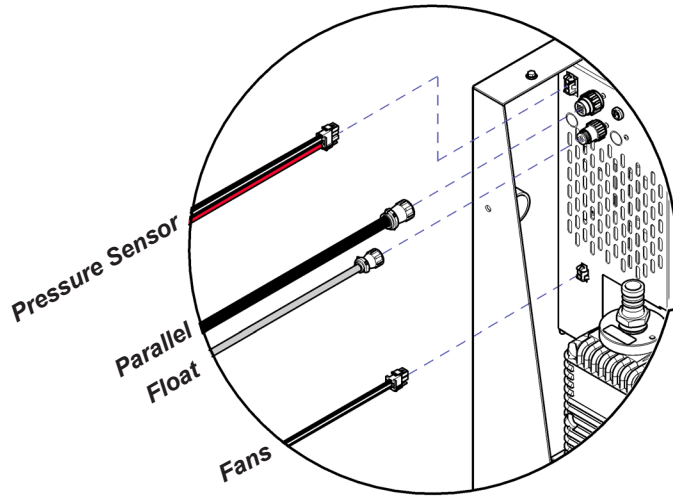
Twin Unit Plumbing...

- A) Lower level feet on base unit. Loosen nut on feet to lower leveling feet and raise casters and vac unit off floor.
- B) Mount tee assembly bracket, place tee assembly on bracket.
- C) Connect inlet hose from base unit to separator.
- D) Connect inlet hose from each separator to tee assembly.
- E) Connect inlet hose from tee assembly to operator
- F) Connect each drain hose to drain hose connector and out to drain.
- G) Connect each drain hose to drain tee assembly.
- H) Connect main drain hose to tee and out to drain.

Exhaust Install - Twin Models

Note

Exhaust trap to be located approximately 32" from floor. The black vac exhaust hose can be put into a loop.



2" Adapter required on Twin vacuum

Out to Vent

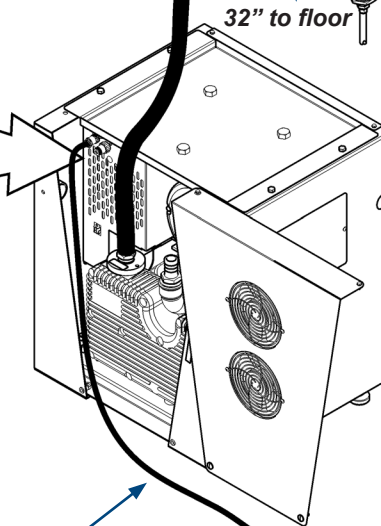
Equipment Alert

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

Exhaust Trap Assembly on Twin Vacuum

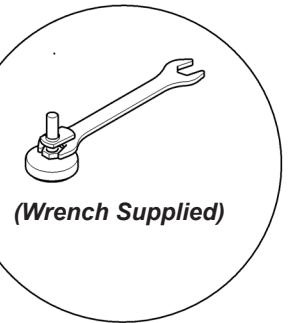
Note

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.



Black-Rubber Exhaust Hose

Parallel



Twin Unit Plumbing...

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

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

Continue with Twin Model on Page 8

Note

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

Exhaust Install - Smart Vacuum Twin Models

2" Adapter required
on Twin vacuum

Out to
Vent



Equipment Alert

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

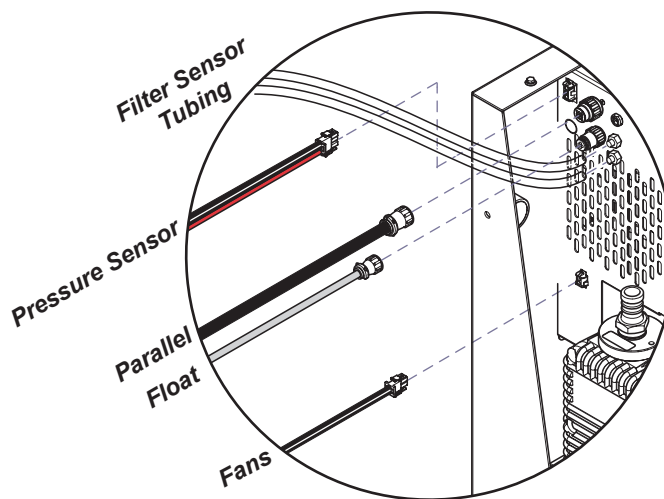
Note

Exhaust trap to be located approximately 32" from floor. The black vac exhaust hose can be put into a loop.

Exhaust Trap Assembly
on Twin Vacuum

Note

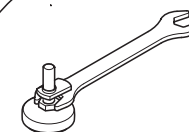
Connections must be hand tight. May use mild soap for hose connections. Do NOT use glue on hose connections. Use glue ONLY on PVC connections.



32" to floor

Black-Rubber
Exhaust Hose

Parallel



(Wrench Supplied)

Twin Unit Plumbing...

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

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

Continue with Twin Model on Page 9

Note

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

Electrical Install - All Models

Electrical Connections...

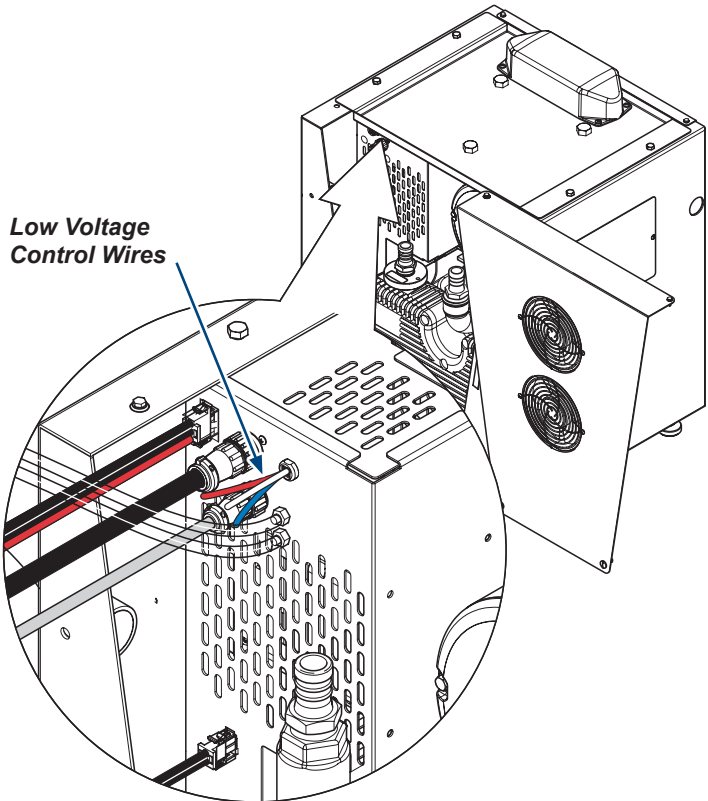
- A) Connect remote panel wires to low voltage control wires.
- B) Hard wire power supply conduit (back of base unit) to user supplied electrical boxes).

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



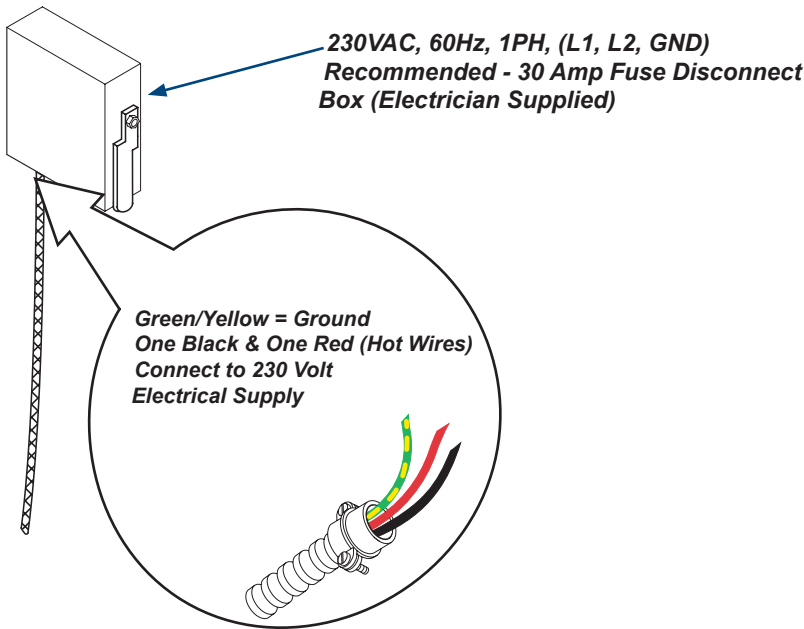
Equipment Alert

Pump must have line voltage present and be turned on & off with the low voltage circuit in order for the timer to work properly.
DO NOT modify the length of the cables used on the separator tank floats or the pressure sensor.



Control Panel Cross Wiring

Brand	Wire		
	A	B (Light)	C
Midmark	Blue	White	Red
Air Techniques	Yellow	Brown	Orange
Dental-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



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



Equipment Alert

Do Not introduce foaming cleansers into vacuum system

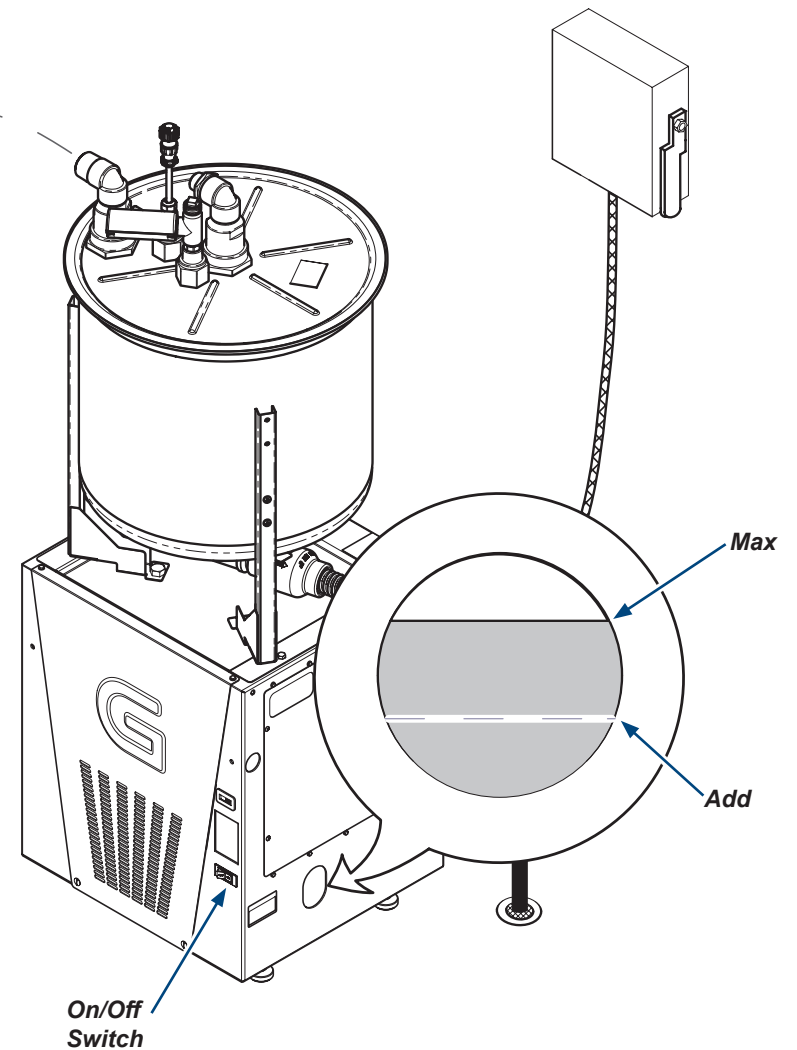
To Equipment Room

From Operatory

To Test...

- Check gear lube level on site glass. Add if below 1/3 full. Only use Midmark lube, PN 064-0028-01.
- Start vacuum.
- Use soapy water to check for leaks on external plumbing parts.
- Check the vacuum gauge. vacuum level range is 6" Hg to 18" Hg.
- Vacuum 1-2 gallons of fresh water into system through operatory lines. Run vacuum for 15 min.
- 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.

Vacuum Adjustment

Note

When working on Twin units, unplug parallel harness.

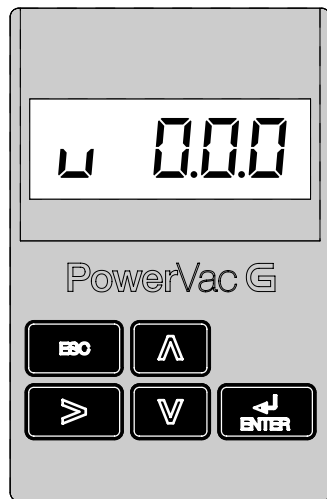
Adjust Vacuum Level (Only if needed)...

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



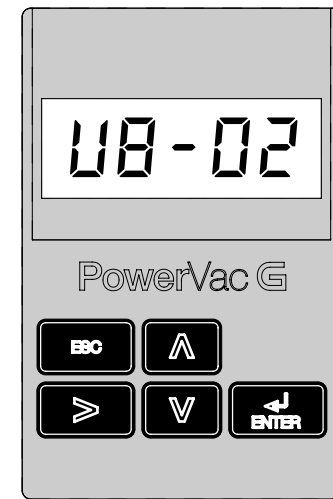
AA2326

"Mon" Reading



AA2327

"U8-02" Reading



AA2328

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.

Vacuum Adjustment - Smart Vacuum Models

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.

Note

When working on Twin units, unplug parallel harness.

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.

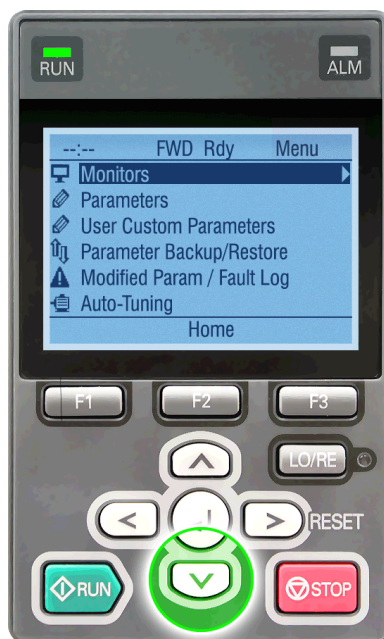
Step 1:

Press "F2" Menu button.



Step 2:

Press Down arrow to highlight "User Custom Parameters".



Step 3:

Press "Enter" button.

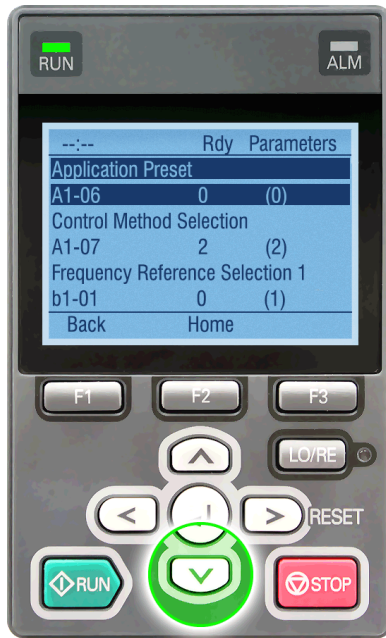


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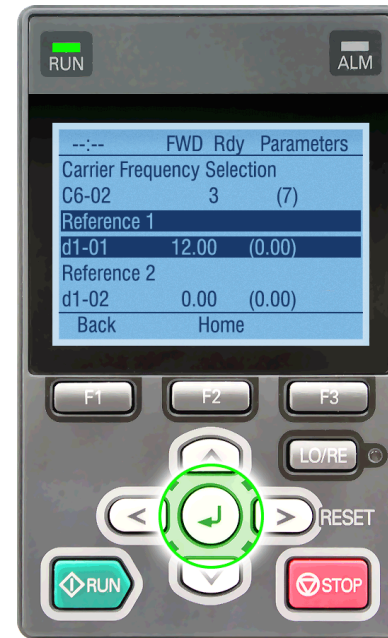
003-2026-00

Step 4:

Scroll down to Reference 1: d1-01.

**Step 5:**

Press "Enter" button.

**Step 6:**

Use Right / Left and Up / Down arrows to change vacuum to desired level.

**Step 7:**

Press "Enter" button.



Installation is Complete
003-2026-00

PowerVac® G Specifications

Classifications: Class 1, Type B Applied Part

<i>Model</i>	<i>Max Users</i>	<i>Base Unit HxWxD</i>	<i>Separator HxWxD</i>	<i>Actual Weight (LBS.)</i>	<i>Total HP</i>	<i>Voltage</i>	<i>Amps</i>	<i>Hertz</i>	<i>Recommended Breaker Size (Amps)</i>	<i>Inlet Connection Size (IN.)</i>	<i>Fuses</i>	<i>Drain Connection Size (IN.)</i>
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"

PowerVac® G-050 Specification Sheet

Classifications: Class 1, Type B Applied Part

Model	Max Users	Base Unit HxWxD	Separator HxWxD	Actual Weight (LBS.) Each	Total HP	Voltage +/-10%	Amps	Hertz	Recommended Breaker Size (Amps)	Inlet Connection Size (IN.)	PCB Fuses	Transformer Fuse	Drain Connection Size (IN.)
G3-050	3-5	26 x 19.5 x 18.5 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 56	3	230	20	60	30	1 1/2"	2.5A, 250V, Slo-Blo	200mA, 250V, Slo-Blo	1 1/2"
G5-050	5-7	26 x 19.5 x 18.5 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 56	3	230	20	60	30	1 1/2"	2.5A, 250V, Slo-Blo	200mA, 250V, Slo-Blo	1 1/2"
G7-050	7-10	26 x 19.5 x 18.5 Each	34 x 22 x 22 Each	Base Unit - 375 Separator - 56	3	230	20	60	30	1 1/2"	2.5A, 250V, Slo-Blo	200mA, 250V, Slo-Blo	1 1/2"
G6-050	6-10	26 x 19.5 x 18.5 Each (qty 2)	34 x 22 x 22 Each (qty 2)	Base Unit - 375 Separator - 56	6	230	40	60	2 x 30	2"	2.5A, 250V, Slo-Blo	200mA, 250V, Slo-Blo	1 1/2"
G10-050	10-14	26 x 19.5 x 18.5 Each (qty 2)	34 x 22 x 22 Each (qty 2)	Base Unit - 375 Separator - 56	6	230	40	60	2 x 30	2"	2.5A, 250V, Slo-Blo	200mA, 250V, Slo-Blo	1 1/2"
G14-050	14-20	26 x 19.5 x 18.5 Each (qty 2)	34 x 22 x 22 Each (qty 2)	Base Unit - 375 Separator - 56	6	230	40	60	2 x 30	2"	2.5A, 250V, Slo-Blo	200mA, 250V, Slo-Blo	1 1/2"



Equipment Alert

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.

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