

# Designing Better Care



WE BELIEVE WHO'S USING OUR EQUIPMENT IS JUST AS IMPORTANT AS HOW AND WHY IT'S BEING USED.

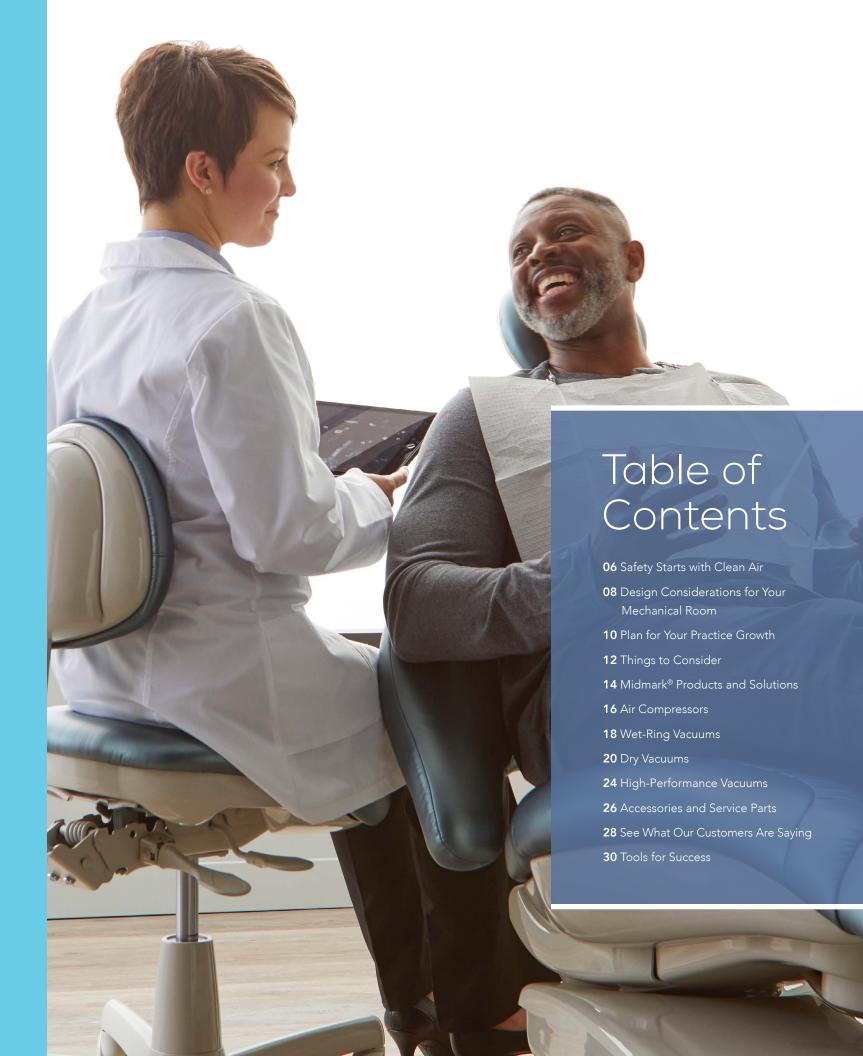
Midmark mechanical room solutions are designed for peak performance to keep your practice up and running so you can deliver safe, high-quality care in the way that works for you.



# Choose a Safer Life Source

Your vacuum and air compressor are the heart and lungs that pump clean air into your handpieces and help safely evacuate aerosols, saliva and other liquids. Ensure the safety of your team and your patients with our premium products designed for superior performance.





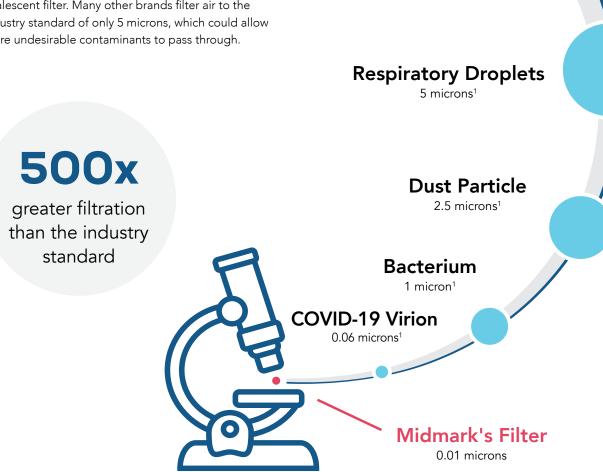
## Safety Starts with Clean Air

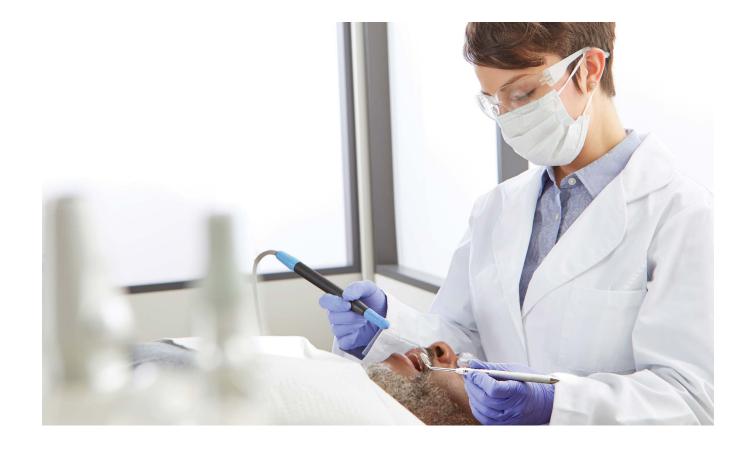
**Human Hair** 

50 microns<sup>1</sup>

Midmark air compressors use coalescent filters rated to 0.01 microns—500-times greater filtration than the industry standard—to effectively capture 99.997% of contaminants in compressed air, including bacteria, dust and some viruses.

How Big Is a Micron? The largest circle represents the outside diameter of a single human hair. Midmark PowerAir Oil-Less Air Compressors utilize a 0.01-micron coalescent filter. Many other brands filter air to the industry standard of only 5 microns, which could allow more undesirable contaminants to pass through.





High-volume evacuation (HVE) helps reduce the aerosols and splatter produced by ultrasonic and air polishing treatments containing saliva and potentially blood, bacteria and/or other pathogens.

Midmark vacuums are designed to provide your office with suction that exceeds the requirements for dental operation.



Studies show that the use of HVE can reduce aerosols by 90–98% regardless of source.<sup>2</sup>

1, 2 See back page for details and sources

# Design Considerations for Your Mechanical Room

As the clinical utility space, the Mechanical Room is often out of sight, out of mind. Yet, it is the driving force behind a successful dental practice. If your mechanicals go down, your practice comes to a standstill. Keep your practice running smoothly by providing the right environment for your air compressor and vacuum equipment.



#### **ADEQUATE SPACE**

Best practices recommend allowing at least 12 inches of space between pieces of mechanical room equipment and between your equipment and the walls. Check your specific equipment instructions for minimum required distances.

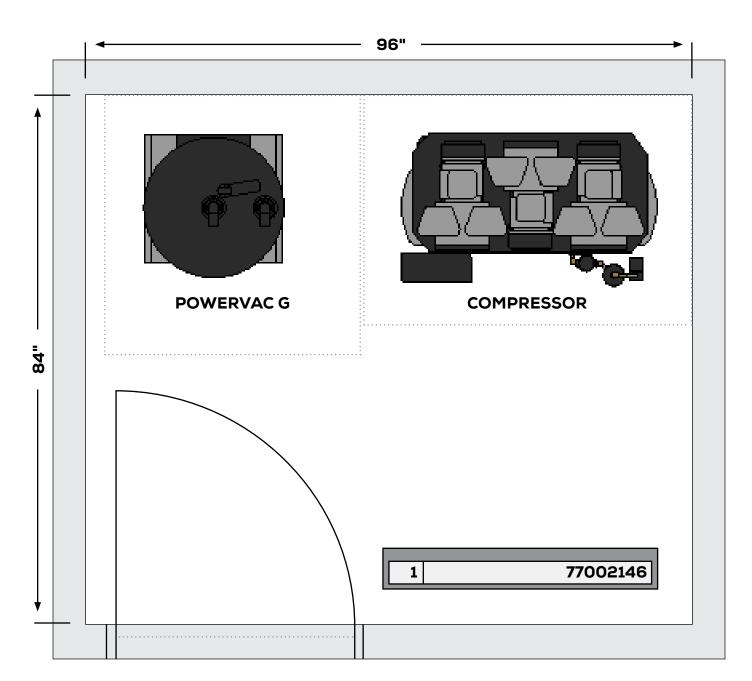
Proper space not only provides room for service technicians to access the equipment for installation, maintenance and repairs, but also helps improve air flow for better ventilation and a longer life.

#### **TEMPERATURE + HUMIDITY CONTROL**

Be sure to put your mechanicals in a temperature-controlled environment with proper ventilation. Mechanical equipment naturally generates heat, but too much heat and humidity can wear on your equipment and shorten its lifespan.

#### **NOISE REDUCTION**

Vacuums and air compressors can be noisy, so consider soundproofing the room to help minimize the impact of sound disturbances.





01 Reduce motor wear and tear with the PowerVac twin 200-CFM fan that keeps your vacuum cool and increases the performance of your equipment.



02 Protect your handpieces from the damage of air saturated with contaminants and moisture. PowerAir® compressors are designed to provide the ultimate in clean, dry air.



03 Keep noise levels low with the exhaust silencer/filter.

### Plan for Your Practice Growth



#### PROPER EQUIPMENT SIZING (USER CAPACITY)

Using equipment with the right capacity to meet demand is critical to avoid excess heat, premature wear on the equipment and inefficient handpiece performance. Ensure your mechanical room equipment can meet the demand of your practice both today and into the future by considering user count.

To calculate your user count, start with the following general equivalencies:<sup>3</sup>

- Each HVE equals 1 user
- Each saliva ejector equals 1/2 user
- Each nitrous oxide scavenger equals 1/2 user

Piping length and configuration can also affect vacuum performance and add to user count.





For quick calculations, use our convenient user calculator at midmark.com/usercount.

## Let Us Design Your Mechanical Room With You





Midmark design experts are ready to help you create your optimal mechanical room. From proper equipment sizing to the plumbing layout, we've got you covered. Call **1.800.MIDMARK** to get started.

3 See back page for details and sources

# Things to Consider

DESIGN CONSIDERATIONS								
	CONSIDER	WHY THIS CONSIDERATION IS IMPORTANT	HOW TO SOLVE	MIDMARK SOLUTION	RATE IMPORTANCE (scale of 1–3 where 1 is lowest and 3 is highest)			
1	Room size Does your mechanical room equipment have enough space for ventilation and maintenance?	The right space not only provides room for service technicians to access your equipment for installation, maintenance and repairs, but also helps improve air flow for better ventilation and longer life.	Consider working with an experienced dental practice designer to make sure your mechanical room layout is optimal.	Midmark Design Experts (Call 1.800.MIDMARK)				
< The state of the sta</td <td>Noise level Is noise an issue with your current mechanical room?</td> <td>Vacuums and air compressors can be noisy, which can increase patient anxiety and your team's levels of stress.</td> <td>Consider locating the room away from patient spaces and soundproofing to help minimize the impact of noise disturbances.</td> <td>Midmark Design Experts (Call 1.800.MIDMARK)</td> <td></td>	Noise level Is noise an issue with your current mechanical room?	Vacuums and air compressors can be noisy, which can increase patient anxiety and your team's levels of stress.	Consider locating the room away from patient spaces and soundproofing to help minimize the impact of noise disturbances.	Midmark Design Experts (Call 1.800.MIDMARK)				
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	CONSIDER	WHY THIS CONSIDERATION IS IMPORTANT	HOW TO SOLVE	MIDMARK SOLUTION	RATE IMPORTANCE (scale of 1–3 where 1 is lowest and 3 is highest)			
	Energy consumption Do you find it difficult to keep your mechanical room temperature cool?	Many vacuums operate at full force regardless of demand, resulting in higher heat emissions and more electricity consumption than vacuums with variable frequency drives.	Consider vacuums that run as needed to match demand while providing the consistent vacuum level and power you need while in use.	PowerVac® G Dry Vacuum				
$\Diamond$	Water bills and water conservation Is water costly in your area? Or is water conservation important to you?	A single wet-ring vacuum can use about 60,000 gal of water per year. Some dual platform pumps can use up to 240,000 gallons of water each year. You could fill the average backyard swimming pool 12 times a year with that much water.	Consider dry vacuums.	PowerVac and PowerVac G Dry Vacuums				
×	Handpiece service life Do you seem to be replacing your handpieces more often than their stated service life?	Improperly maintained and older compressors don't properly clean and dry air. Air saturated with oil and moisture can lead to damaged handpieces.	Consider a new, dental-grade air compressor with adequate filtration.	PoweAir® Oil-Less Air Compressors				
ŶŶ	Practice growth and using continuous HVE  Do you anticipate adding more clinicians to your practice or using continuous HVE to combat aerosols?	Increasing user count increases the demand on your vacuum. A demand higher than your vacuum's capacity can limit the obtainable suction.	Consider a vacuum that can grow with your practice.	Classic Series® Wet-Ring, PowerVac Dry and PowerVac G Dry Vacuums				
<u></u>	Air compressor filtration Have you considered the importance of your air compressor's filtration?	Industry-standard filtration is graded to 5 microns, which is larger than dust, bacteria, and many viruses.	Consider a compressor with filtration graded to 0.01 microns and the capacity to capture 99.9997% of compressed air contaminants, including dust, bacteria and some viruses.	PowerAir Oil-Less Air Compressors				

# Midmark® Products and Solutions



### 20,000 Gallons

The average backyard swimming pool holds 20,000 gallons of water. You could fill it 12 times a year with the water you could save using a PowerVac G.



## PowerAir® Oil-Less Air Compressors

Safety starts with clean air. Midmark air compressors provide one of the highest cubic feet per minute (CFM) rates of compression on the market while filtering out 99.9997% of compressed air contaminants.





01 Sound covers (optional) enable quieter operation and include high-output cooling fans and a quick-connect electrical plug.

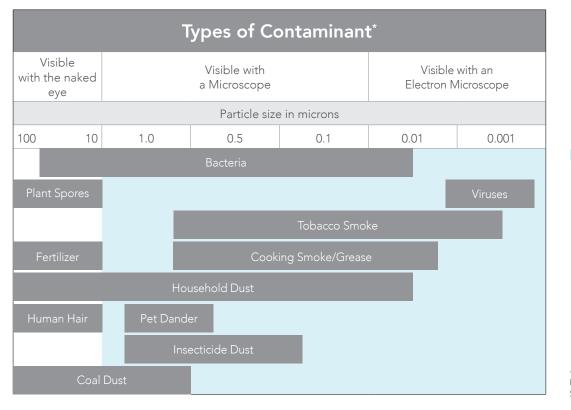


**02** Simple and effective, the service access manifold houses all critical compressor operating controls in one convenient location.



03 All PowerAir oil-less compressors include a 0.01-micron coalescent filter to provide ultra-clean air.

#### The Ultimate in Clean Air



Contaminants that pass through an industry-standard 5-micron filter

Competitive compressor brands filter air to 5 micron. Midmark PowerAir oil-less compressors filter air to 0.01 micron.

\*Adapted from: https://cleanaire.co.nz/designyour-hrv/air-filters-explained/

#### **POWERAIR SPECIFICATIONS**

Model/Order No.	P21	P22	P32	P52	P72
User Capacity	1–3	1–3	3–5	5–7	7–10
No. of Heads	2	2	3	2	3
CFM at 80 psi	5.2 CFM	5.2 CFM	7.8 CFM	10.6 CFM	15.9 CFM
Total Horsepower	1.5 hp	1.5 hp	2.25 hp	3.2 hp	4.8 hp
Voltage / Frequency	115 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz
Total Amps	16 A	7 A	11 A	20 A	29 A
Circuit Breaker	20 A	20 A	20 A	30 A	40 A
Temperature Range	40–104 °F	40–104 °F	40–104 °F	40–104 °F	40–104 °F
dBA	65 dBA	65 dBA	67 dBA	70 dBA	73 dBA
dBA with Sound Cover	60 dBA	60 dBA	62 dBA	65 dBA	68 dBA
Tank Capacity	10 gal	10 gal	20 gal	20 gal	32 gal
Overall Size (H x W x D)	27" x 26" x 24"	27" x 26" x 24"	29" x 33" x 26"	31" x 33" x 26"	33" x 40" x 27"
Size with Sound Cover	32" × 26" × 26"	32" x 26" x 26"	33" x 33" x 28"	33" × 33" × 28"	39" × 40" × 30"
Shipping Weight	285 lb	285 lb	360 lb	410 lb	500 lb

# Classic Series® Wet-Ring Vacuums

Midmark Classic Series Wet-Ring Vacuums help dental offices to deliver dependable performance with a space-saving, compact design.





01 The intake manifold allows for smooth air flow and greater efficiency.



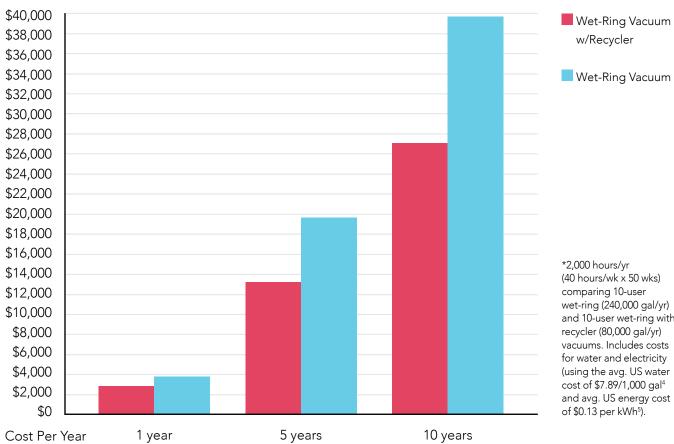
02 Separate twin model on/off switches and hour meters provide operational versatility.



03 Water recycler bypass valve provides extra protection against water mineral deposits.

#### Spend Less with Water Recycling

#### **WATER + ENERGY COSTS OVER TIME\***



#### wet-ring (240,000 gal/yr) and 10-user wet-ring with vacuums. Includes costs (using the avg. US water and avg. US energy cost

#### **CLASSIC SERIES SPECIFICATIONS**

Model/ Order No.	CV3 (SINGLE)	CV3R (SINGLE)	CV5 (SINGLE)	CV5R (SINGLE)	CV6 (TWIN)	CV6R (TWIN)	CV10 (TWIN)	CV10R (TWIN)
User Capacity	3	3	5	5	6	6	10	10
Water Recycling	No	Yes	No	Yes	No	Yes	No	Yes
Horsepower	1.25 hp	1.25 hp	2 hp	2 hp	2.5 hp	2.5 hp	4 hp	4 hp
Voltage (Single Phase) / Frequency	115/230 V 50/60 Hz	115/230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz	115/230 V 50/60 Hz	115/230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz
Amperage	15.0/7.5 A	15.0/7.5 A	13 A	13 A	15.0/7.5 A x2	15.0/7.5 A x2	13 A x2	13 A x2
Circuit Breaker	20 A	20 A	20 A	20 A	20 A x 2			
Overall Size (H x W x D)	15" x 12" x 13"	15" × 12" × 13"	17" x 12" x 13"	17" x 12" x 13"	18.5" x 25.5" x 20"			
Shipping Weight	70 lb	70 lb	76 lb	76 lb	188 lb	188 lb	208 lb	208 lb

4, 5 See back page for details and sources

# PowerVac® Dry Vacuum

The Midmark PowerVac dry vacuum is both oil-less and waterless, keeping your water bills lower and conserving water for a greener planet.





01 The PowerVac pump has an integrated silencer to reduce the noise level, making it one of the quietest dry vacuums on the market.



02 Exclusive, heavy-duty casters make moving and maneuvering the PowerVac easy. The adjustable leveling feet keep it level even on irregular surfaces.



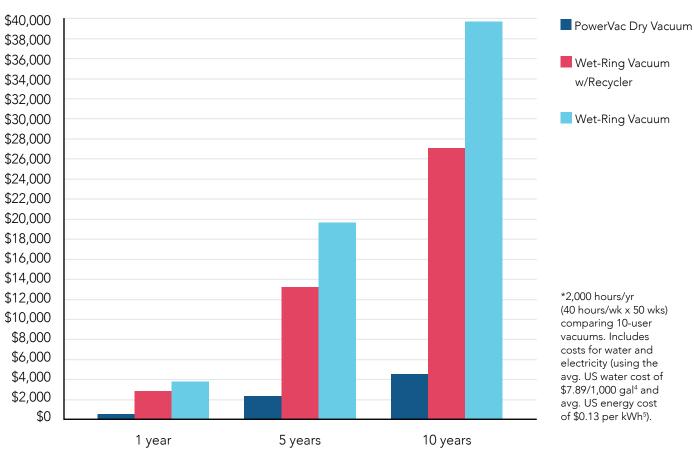
03 A twin 200 CFM fan keeps the PowerVac cool, which helps reduce wear and tear on the motor and other internal components.



04 Plug and play hose connections mean no tools are required for installation.

# Spend Less with the PowerVac Dry Vacuum Compared to Wet-Ring Vacuums

#### **WATER + ENERGY COSTS OVER TIME\***



#### **POWERVAC SPECIFICATIONS**

Model/Order	D2 (CINICIE)	DE (CINICIE)	D/ /T/A/IAI)	DZ (CINICIE)	D40 (TVA/INI)	D4.4 (TVA(INI)
No.	P3 (SINGLE)	P5 (SINGLE)	P6 (TWIN)	P7 (SINGLE)	P10 (TWIN)	P14 (TWIN)
User Capacity	3–5	5–7	6–10	7–10	10–14	14–20
No. Vacuums	1	1	2	1	2	2
Vacuum Pressure	up to 18" Hg	up to 18" Hg	up to 18" Hg	up to 18" Hg	up to 18" Hg	up to 18" Hg
Total Horsepower	2 hp	2 hp	4 hp	2 hp	4 hp	4 hp
Voltage / Frequency	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz
Total Amps	11.4 A	11.4 A	11.4 A x 2	11.4 A	11.4 A x 2	11.4 A x 2
Circuit Breaker	30 A	30 A	30 A x 2	30 A	30 A x 2	30 A x 2
Overall Size (H x W x D)	58" x 22" x 22"	58" x 22" x 22"	58" x 56" x 22"	58" × 22" × 22"	58" × 56" × 22"	58" × 56" × 22"
Base Size (H x W x D) Tank Size (H x W x D)	25" x 22" x 20" 34" x 22" x 22"	25" × 22" × 20" 34" × 22" × 22"	25" x 22" x 20" 34" x 22" x 22"	25" × 22" × 20" 34" × 22" × 22"	25" x 22" x 20" 34" x 22" x 22"	25" x 22" x 20" 34" x 22" x 22"
Shipping Weight	Base – 402 lb Tank – 90 lb	Base – 402 lb Tank – 90 lb	Base – 402 lb x 2 Tank – 90 lb x 2	Base – 402 lb Tank – 90 lb	Base – 402 lb x 2 Tank – 90 lb x 2	Base – 402 lb x 2 Tank – 90 lb x 2

# PowerVac® G Dry Vacuum

The Midmark PowerVac G provides on-demand energy management, using up to 83% less electricity than other systems. Many vacuums operate at full force regardless of demand. The PowerVac G automatically increases the pump speed to match demand, maintaining consistent vacuum pressure while in use and giving you exactly the vacuum power you need, no more and no less.





**01** The PowerVac G control panel allows you to easily select the vacuum level that meets your needs.



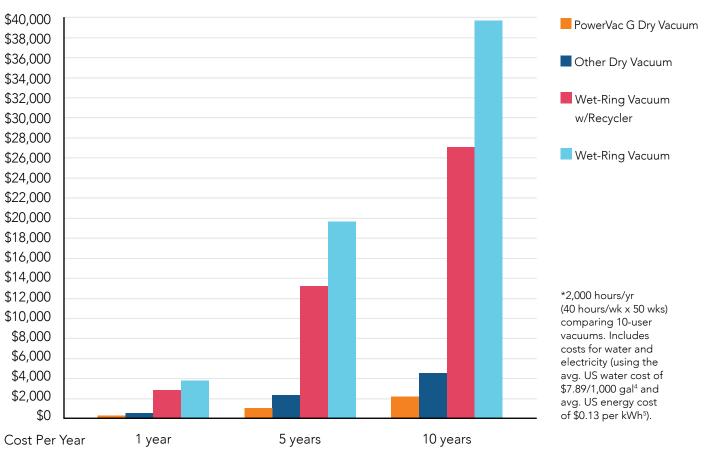
**02** The PowerVac G is capable of producing just as much vacuum as you demand and nothing more.



**03** The powerful 3-hp motor can meet the vacuum demands of up to 10 users simultaneously.

# Minimize Operating Costs with the PowerVac G

#### WATER + ENERGY COSTS OVER TIME\*



#### **POWERVAC G SPECIFICATIONS**

Model/Order No.	G3 (SINGLE)	G5 (SINGLE)	G6 (TWIN)	G7 (SINGLE)	G10 (TWIN)	G14 (TWIN)
User Capacity	3–5	5–7	6–10	7–10	10–14	14–20
No. Vacuums	1	1	2	1	2	2
Vacuum Pressure	up to 18" Hg	up to 18" Hg	up to 18" Hg	up to 18" Hg	up to 18" Hg	up to 18" Hg
Total Horsepower	3 hp	3 hp	6 hp	3 hp	6 hp	6 hp
Voltage / Frequency	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz	208–230 V 60 Hz
Total Amps	20 A	20 A	20 A x 2	20 A	20 A x 2	20 A x 2
Circuit Breaker	30 A	30 A	30 A x 2	30 A	30 A x 2	30 A x 2
Overall Size (H x W x D)	59" x 22" x 22"	59" x 22" x 22"	59" x 56" x 22"	59" x 22" x 22"	59" x 56" x 22"	59" x 56" x 22"
Base (H x W x D) Tank (H x W x D)	25" x 22" x 20" 34" x 22" x 22"	25" x 22" x 20" 34" x 22" x 22"	25" x 22" x 20" 34" x 22" x 22"	25" × 22" × 20" 34" × 22" × 22"	25" × 22" × 20" 34" × 22" × 22"	25" × 22" × 20" 34" × 22" × 22"
Shipping Weight	Base – 431 lb Tank – 90 lb	Base – 431 lb Tank – 90 lb	Base – 431 lb x 2 Tank – 90 lb x 2	Base – 431 lb Tank – 90 lb	Base – 431 lb x 2 Tank – 90 lb x 2	Base – 431 lb x 2 Tank – 90 lb x 2

4, 5 See back page for details and sources

# PowerMax<sup>™</sup> High-Performance Vacuums

Midmark PowerMax vacuums are designed to satisfy the needs of dental specialists who require the highest performance from their vacuum systems. Unlike typical specialist vacuum systems that must continuously operate in order to provide instantaneous chairside suction, the PowerMax operates only when needed, saving electricity and helping promote the overall longevity of the system.



#### **MAXIMUM SUCTION - EFFICIENT AND RELIABLE**





- **01** PowerMax vacuums utilize an easy-to-read hour meter to gauge operational hours and assist with product service and warranty.
- **02** Vibration-isolating feet help reduce noise.

O3 Combine the optional operatory recovery room package for in-room containment and procedure monitoring of oral cavity waste.

#### **POWERMAX SPECIFICATIONS**

Model/Order No.	PM-1	PM-3	PM-4
User Capacity	1	2–3	3–4
CFM Maximum	8 CFM	16 CFM	24 CFM
Horsepower	1 at 3/4 hp	2 at 3/4 hp	3 at 3/4 hp
Volts / Frequency	230 V 50/60 Hz	230 V 50/60 Hz	230 V 50/60 Hz
Total Amps	5.1 A	9.7 A	14.3 A
Circuit Breaker	20 A	20 A	20 A
Temperature Range	40–104 °F	40–104 °F	40–104 °F
Tank Capacity	20 gal	20 gal	20 gal
Overall Size (H x W x D)	31" × 32" × 25"	31" x 32" x 25"	34" x 38" x 27"
Shipping Weight	205 lb	255 lb	355 lb

# Accessories and Service Parts

#### PARTS, ACCESSORIES AND KITS TO MAKE THE MOST OF YOUR MECHANICAL EQUIPMENT.

For more information on Midmark parts and accessories, please contact Midmark Customer Experience at 1.800.MIDMARK.

#### AIR COMPRESSOR ACCESSORIES AND SERVICE PARTS



PowerAir® Sound Covers Reduce compressor sound by 5 dBA



PowerAir Tandem Compressor Kit Enables simultaneous operation of two Midmark dental air compressors connected to a common operatory air supply line

#### AIR COMPRESSOR AND VACUUM ACCESSORIES



Stack Rack Lets you stack certain compressor and vacuum models to save space



**Lifting Handles** Help you move equipment in a set of 4 heavy-gauge steel handles with foam comfort-grip handheld pads and attached lock pins



**Low-Voltage Control Relays** Provide a mechanical switch to turn the unit on and off from your control panel



Voltage Buck and **Boost Transformers** Decrease or increase incoming voltage by 10% when incoming line voltage is too high or too low for equipment specifications

#### **VACUUM ACCESSORIES**



PowerVac® G Conversion Kit Converts two single PowerVac G units into a twin unit



PowerVac Conversion Kit Converts two single PowerVac units into a twin unit



Solmetex® Unit Provides a certified (ISO 11143:2008) 99% separation rate



Mounting Kits Mount a Solmetex® amalgam separator to the PowerVac or

PowerVac and PowerVac G



Water Filter/Bypass Systems Provide safe water supply shutoff from the dental operatory



**Control Panels** Provide customizable remote switches to control your air, vacuum and water lines



Dispos-A-Bowl Provides a safe, smart way to dispose of used vacuum filters and waste



**Precision Clense Plus** Cleans, disinfects and deodorizes the entire evacuation system



Mineral Deposit Reducer Kit Reduces mineral deposit buildup in wet-ring vacuums located in regions with mineralized ground water or "hard water"



**Recovery Room Accessories** Include a package of 5 disposable canisters, a DISS free-flow regulator, a DISS outlet station, and 6 feet of conductive tubing



Waste Water Hookup Kit Plumbs wastewater for two Classic Series Vacuums (CV3 or CV5) to run them like a dual vacuum system (CV6 or CV10, respectively); must be installed in conjunction with either the CV3 or CV5 Dual Hookup Kit



Multi Vacuum Intake / **Exhaust Water Valve Kits** Plumb intake/exhaust water for two Classic Series Vacuums (CV3 or CV5) to run them like a dual vacuum system (CV6 or CV10, respectively); must be installed in conjunction with either the CV3 or CV5 Dual Hookup Kit



PowerMax Exhaust Kits Vent the PowerMax Vacuum system to the outside



exhaust air from exhaust water

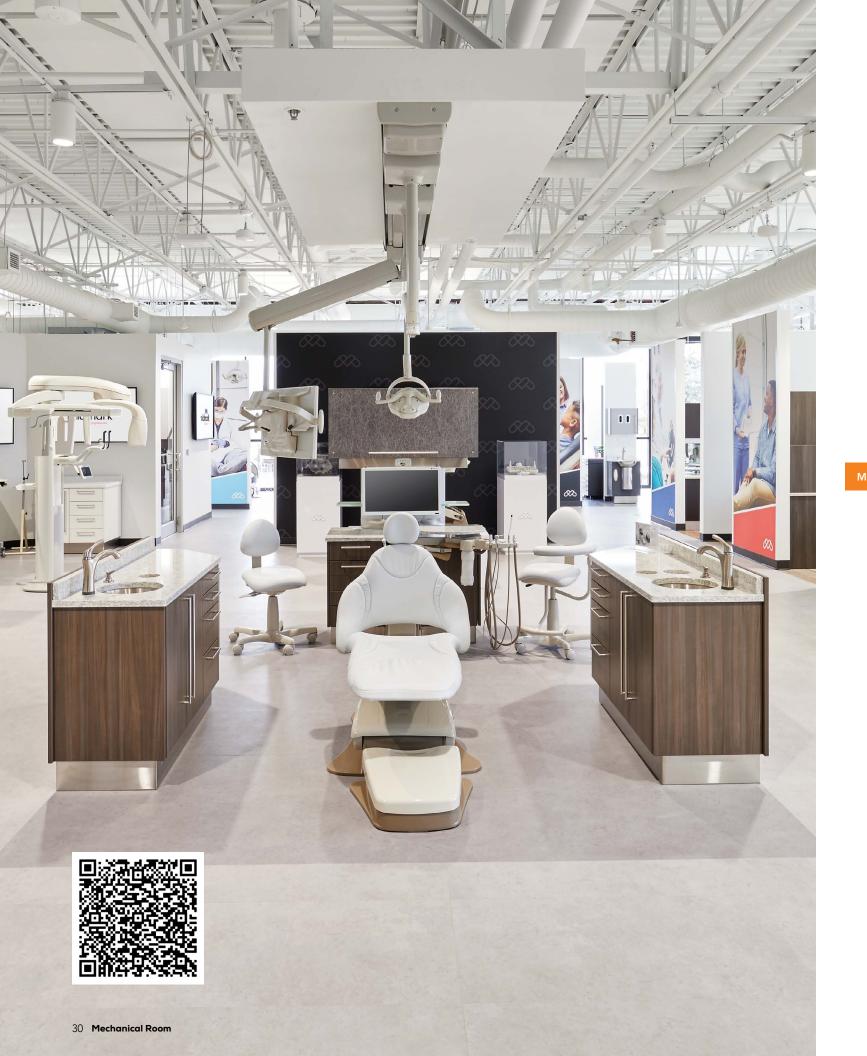
Air/Water Separators Mount to the wall and separate

# See What Our Customers Are Saying

"I'm thrilled with the cost savings, thanks to the PowerVac® G. We cut our electric usage by 30%, water usage by 50%, and sewer cost was down 40%. This entire savings and no reduction of suction performance in any of our 13 operatories."

#### Jill Nesbitt

Practice Administrator HealthPark Dentistry





# Visit the Midmark Experience Center

A team of Midmark design experts are ready to help you personalize and equip your entire clinical environment from the layout of every room to each sterilizer, chair, door and drawer—down to the smallest detail. Let us help you bring your dental practice vision to life. Call 1.800.MIDMARK or visit midmark.com/experience to get started.



#### **USER COUNT CALCULATOR**

Calculate your user count to determine which mechanical room equipment can meet the demand of your practice now and into the future.

midmark.com/usercount



#### **UTILITY SAVINGS CALCULATOR**

Compare the costs of wet-ring, wet-ring with recycler and dry vacuums with the expected costs of a new oil-less, waterless PowerVac® G Dry Vacuum.

midmark.com/utilitycalc



#### Designing better care®

#### midmark.com/dental

- Sources:

  1 Sizes provided are within the typical size ranges for each particle listed.

  2 http://medcraveonline.com/JDHODT/JDHODT-09-00371.pdf

  3 Typical equivalencies provided. User satisfaction is a subjective matter.

  Ratings are shown for planning purposes only.
- 4 https://dripfina.com/water-bill-by-us-states/ 5 https://www.eia.gov/todayinenergy/detail.php?id=46276

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For more information, contact your Midmark dealer or call: 1.800.MIDMARK Outside the USA call: 1.937.526.3662 or visit our website: midmark.com

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