

Precision Sizing for Flexible and Rigid Medical Tube Products

MedLine® MedVac flood-cooling/sizing tanks are uniquely designed to meet the specialized process needs of medical tubing manufacturers. These high technology, simple-to-use systems feature advanced digital controls and rock-steady precision alignment systems to ensure optimum product quality for tubes from single and multilumen microbore heart catheters to large-gauge medical tubing.



Model MedVac-235
(Gauge is not included.
Shown without pump
cover.)

Absolutely Consistent Dimensional Control

Available in five models, MedLine® MedVac series vacuum tanks provide exceptional tube ovality and concentricity for product sizing under vacuum or as a process aid for free extrusion.

Industrial duty, stainless steel construction combined with bow resistant half-inch {12.7 mm} tempered glass lids and an integrated proportional valve allow fine-control of the vacuum level to within 0.1 inch of water for repeatable, precise process control. An optional water tempering unit controls the bath to ± 1 degree optimizing heat transfer rates and obtaining specific material properties.

Pivoting overhead controls allow process adjustments and monitoring right at the extrusion die.

Specialized non-contact tooling is available for processing of low durometer materials.

▶ Cleaner interior design

Tank interior is designed to ease daily cleanout by minimizing sharp corners and exposed threads where bacteria, pyrogens and other particulate matter can build up. Telescoping drip tray is one piece to aid wipe-down by eliminating open seams. Guide rollers inside the tank are fixed to free-standing removable mounts for cleaning.

▶ Medical-grade filtration

Process water is segregated from the heat/cool circuit to minimize contamination. System can be optionally fitted with a UV water purifier and a 5 micron sedimentary pre-filter.

▶ Easy set-up and operation

Narrow tank frame accommodates almost any extruder or melt pump, even three layer. Three-axis tank alignment system with hand wheels, linear slides and ball-screw actuators provide stable, precision positioning to within thousandths of an inch.

▶ Process validation

Optional PAVC control offers a serial interface for a host microprocessor to record process settings. Optional Patriot Transducer provides digital linear readout for measuring/recording distance from die face to where the tube enters the water.



Features

01

Stainless steel tank

02

Single piece, telescoping drip tray - easier to clean since there are no separate pieces to hide pyrogens or other contaminants.

03

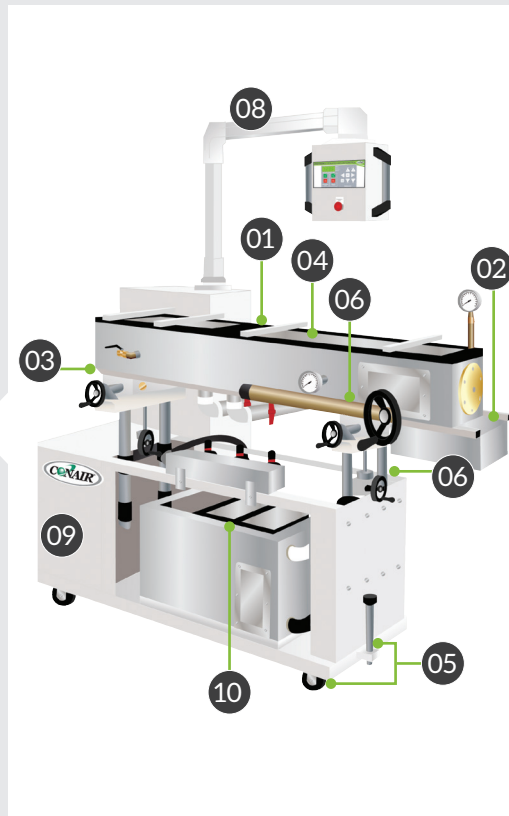
Rounded bottom for easier cleaning - eliminates corners to ease cleanout and removal of contaminants.

04

Hinged one-half inch {12.7 mm} tempered glass tank lids - solid design restricts bending to provide excellent visibility of the product and uncompromised sealing.

05

Highly durable urethane swivel casters with jackscrews for positive positioning.



06

Rock-steady, 3-axis precision position adjustment offers fine adjustment, is tighter and less prone to vibration and unwanted movement during process of critical tubes.

07

Manual 12 inch {305 mm} longitudinal adjustment with hand wheel provides smooth linear movement to and from the die.

08

Swing arm fully pivoting control pod with ten-turn potentiometer control and vacuum gauge offers ease of access while allowing use of a co-extruder without frame interference.

09

Painted steel frame

10

Full capacity stainless steel reservoir with easy access glass lids.

- **Variable speed VFAC vacuum pressure blower**
High CFM capacity with low RPM allows operation to 130 inches water {3.3 meters water} with minimum noise.

- **Stainless steel (306) centrifugal water circulation pump** and heat exchanger.
- **Quick change, spin off filter**
- **Float valve** for automatic filling and make up.

- **Adjustable water level control** with thermometer.
- **Free-standing blank product roller assemblies** lift out of the tank for ease of cleaning.

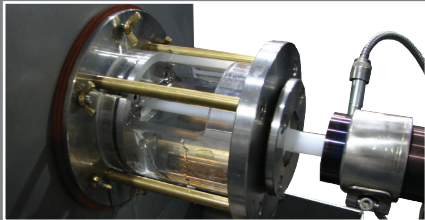
Options

- Left to right direction
- Special non-automotive powder coat
- Stainless steel frame
- Full-length stainless steel splash tray under main tank
- Passivation of stainless components to minimize corrosion
- Stainless steel plumbing package for deionized water for medical applications
- Mounting of customer supplied ultra sonic wall unit in first 18 inches {457 mm} of vacuum chamber with water connections, including de-bubbling unit for water input
- Ultraviolet water treatment unit
- Filter housing with 5 micron rating filter
- Three additional view windows in vacuum compartment for total of four.



Tooling Options

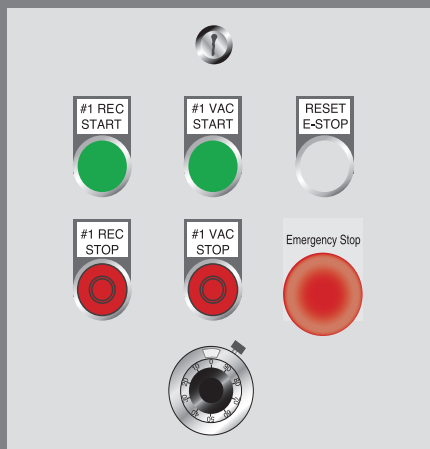
- Pre-skinning chamber with independent water flow control valve complete with one set of tooling.
- Additional sets of pre-skinner inserts for other product sizes.
- Flow meter rated for 0 to 75 gallons per hour {0 to 284 liters per hour} with pressure regulator.
- Split design air wipe assembly with mounting bracket.
- Additional blank product guide roller assemblies.
- Contoured product guide roller assemblies.



Pre-skinning chamber with tooling inserts for flexible polymers

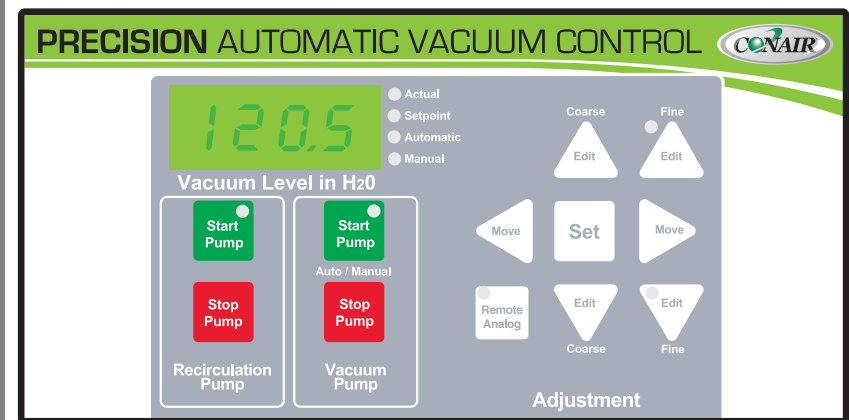
- Calibrate/quench assembly for flexible materials
- Hold-down guide rollers, contoured or non-contoured
- Split-design air-wipe assemblies
- Split design air wipe assembly with mounting bracket
- Adjustable water level

Controls



Potentiometer Control

This potentiometer control provides push buttons to start and stop the vacuum blower and the water recirculation pump. Vacuum levels are adjusted using a 10-turn potentiometer, which controls the RPMs of the vacuum blower.



Optional Digital Control

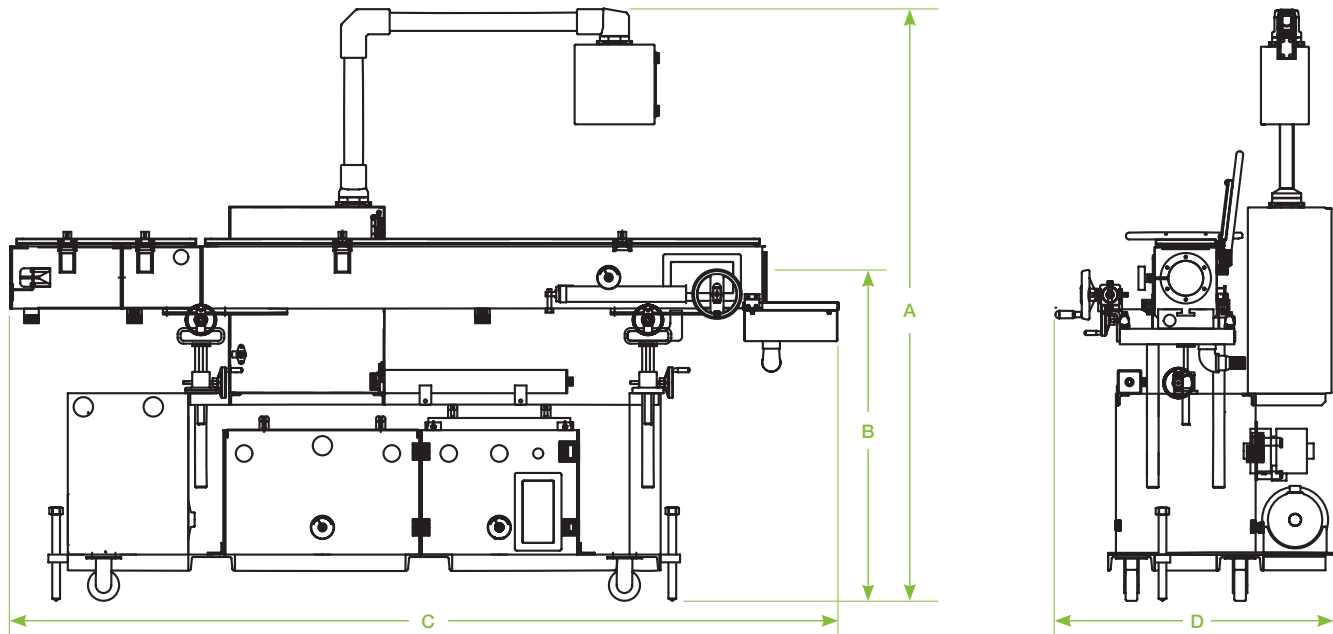
The Precision Automatic Vacuum Control (PAVC) provides manual or automatic control of the vacuum system. Using a PID program and built-in vacuum transducer, the PAVC controls the vacuum level to the setpoint entered.

The PAVC can be connected to an in-line product gauge for automatic adjustment of the vacuum setpoint. The PAVC also has a serial port for data acquisition or remote control.

A remote digital potentiometer is available only with the addition of this option.



Specifications



Models	MedVac-235	MedVac-238	MedVac-2311	MedVac-2317	MedVac-2323
Performance characteristics					
Tube/profile capacity	Up to 2 inch {51 mm}				
Vacuum system	Variable-speed vacuum blower / 0 to 130 In. H2O {0 to 32.38 kPa}				
Water system	Stainless steel centrifugal water circulation pump and heat exchanger with spin-off filter				
Recirculating pump Hp {kW}	1 {0.75}				
Vacuum pump Hp {kW}	1.70 {1.26}				
Tank length inches {mm}	60 {1524}	96 {2438}	132 {3353}	204 {5181}	276 {7010}
Number of compartments	3	3	4	5	6
Compartment type					
Vacuum inches {mm}	36 {914}	72 {1829}	108 {2743}	180 {4572}	252 {6401}
Water (flood) seal inches {mm}	10 {254}				
Air wipe inches {mm}	14 {355.6}				
Blank roller assemblies included	2	3	4	8	12
Dimensions inches {mm}					
A - Height	76.8 {1951}				
B - Height to centerline	42 ± 2 inch {1067 ± 51 mm}				
C - Overall length	77.5 {1969}	106 {2692}	142 {3607}	214 {5436}	285 {7239}
D - Overall depth	33 {838}	33 {838}	33 {838}	36 {914}	36 {914}
Longitudinal adjustment (manual)	8 - 12 inches {203 - 305 mm}				
Tank compartment cross section	8 x 8 inch {203 x 203 mm}				
Weight lb {kg}					
Shipping	1250 {567}	1400 {635}	1600 {726}	2100 {953}	2600 {1180}
Voltage *	460 volts/3phase/60Hz				
Water requirements	City, tower or chiller water. Main supply line: 1 inch NPT fitting				

Specification Notes

* FLA data for reference purposes only. Does not include any options or accessories on equipment. For full FLA detail for power circuit design of specific machines and systems, refer to the electrical diagrams of the equipment order and the nameplate applied to the machine.

Specifications may change without notice. Consult with a Conair representative for the most current information.

