

LifeLine® Lubricated Rotary Vane Medical Vacuum Vertical Duplex System (3 - 7.5 HP)

SPECIFICATION

Single Point Connection (SPC) System Design

The LifeLine® Lubricated Rotary Vane Medical vacuum package is fully compliant with NFPA 99 and features a common base with single point connections for the electrical panel, intake, and discharge. Each pump and the receiver are connected to a common intake manifold. Each pump is connected to a common discharge manifold. The system is capable of transport through a standard 34.5" doorway. Designed and manufactured with ISO 13485 processes, each system is completely tested before shipment and includes:

- Two oil-sealed rotary vane vacuum pumps with two motors
- Integral pre-wired control panel
- Horizontal air receiver with full-size three-valve bypass system sized for appropriate demand

Vacuum Pump

Each pump is a direct driven, oil-sealed rotary vane vacuum pump, with an end (ultimate) vacuum of 29.3" Hg. Each pump is completely air-cooled with no water requirements. Each pump contains:

- Integral, fully recirculating oil supply to provide lubrication
- An automotive-type, spin-on oil filter for oil filtration
- High-discharge temperature switch
- Oil drain valve assembly with temperature gauge

The oil separation system is integral and consists of the following:

- No less than three stages of internally installed oil and smoke eliminators through which the exhaust gas stream must pass
- Bulk separation, oil mist elimination, and smoke elimination
- Capability to remove 99.9+ percent of all oil and smoke particles from the exhaust gas stream

Each vacuum pump includes the following:

- Built-in, anti-suck-back valve mounted at the pump inlet
- Three non-metallic, non-asbestos vanes, each having a minimum life of 30,000 hours
- 5 micron inlet filter for removal of particulates
- Inlet filter housing with bleed valve for service
- Mounting on vibration isolators
- Flexible connector and isolation valve

Vacuum Pump Drive

The pump shall be direct driven. Torque is transmitted from the motor to the pump through a shaft coupling.

Vacuum Pump Motor

Motors are continuous duty, NEMA rated, C-face, foot-mounted, TEFC, suitable for 230/460 or 208V, 60 hertz, 3-phase electrical service and 380V, 50 hertz, 3-phase electrical service.

Intake Piping

Each vacuum pump has a factory piped intake with integral flex connector, isolation valve, and check valve. Interconnecting piping consists of powder-coated steel tubing and flanges.

Vacuum Receiver

- The vacuum receiver is ASME Code stamped, and rated for a minimum 150 PSIG design pressure.
- The receiver has a full-size three-valve bypass system to allow for draining of the receiver without interrupting the vacuum service. A manual drain is provided on the receiver.

Control System

The duplex mounted and wired control system is U.L. labeled. The control system provides automatic lead/lag sequencing. A programmable logic controller (PLC) controls the automatic alternation of both vacuum pumps with provisions for simultaneous operation if required, and automatic activation of reserve unit if required. Automatic activation of reserve unit, if required, activates an audible alarm as well as a visual alarm on the control panel. The control system includes an automatic run timer.

Additional components include:

- NEMA 12 control panel enclosure
- Circuit breaker disconnects for each motor with external operators
- Full voltage motor starters with overload protection
- 24V control circuit
- Visual/audible reserve unit alarm with isolated contacts for remote alarm, visual alarms for high discharge temperature shutdown with isolated contacts for remote alarm.
- Hand-Off-Auto lighted selector switches
- Runtime hourmeters
- Vacuum gauge
- 65kAIC SCCR rating

Specification Table

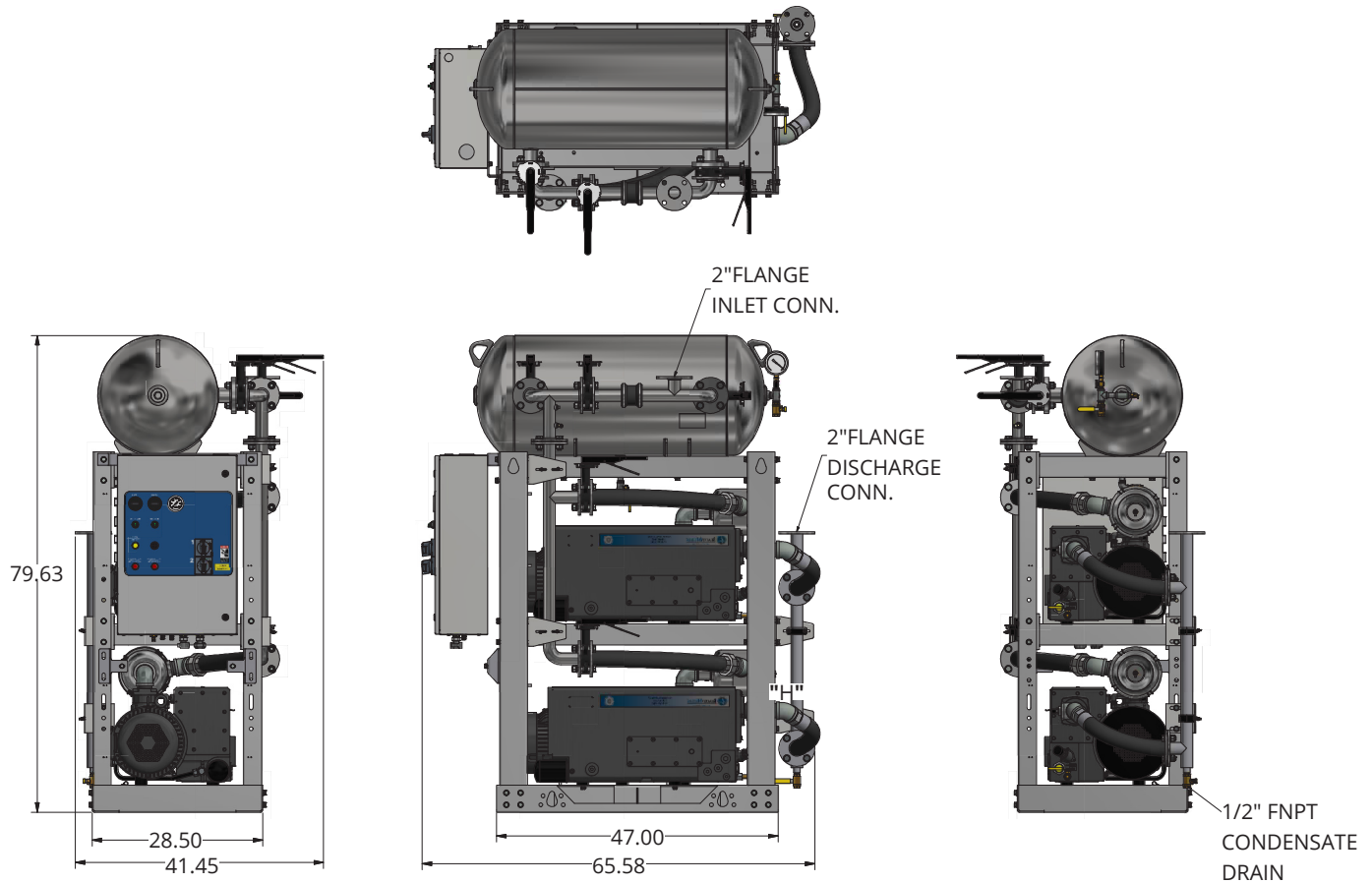
Vacuum System Specifications ¹											
System Model No.	HP	Capacity ² @19" Hg (scfm)		System ³ BTU/Hr	Receiver (gallons)	Noise ⁴ Level	System FLA			System Weight (lbs)	Dimensions
		Pump	System				208V	230V	460V		A
Vertical Duplex - 60 Hz											
VLV03D-060H-BD	3	17	17	6,108	60	70	19.4	16.9	8.6	1,220	79.63
VLV05D-060H-BD	5	37	37	10,180	60	71	31	27.1	13.7	1,601	79.63
VLV07D-060H-BD	7.5	52	52	15,270	60	79	48.2	44.9	22.6	1,747	79.63
Vertical Duplex - 50 Hz							380V				
VLV03D-060H-BDE	3	14	14	6,108	60	70	10.2			1,220	79.63
VLV05D-060H-BDE	5	31	31	10,180	60	71	16.5			1,601	79.63
VLV07D-060H-BDE	6.8	43	43	15,270	60	79	23.8			1,747	79.63

Specification Table Notes:

1. Normal operating conditions at a maximum ambient of 105° F. Consult factory for higher ambient conditions.
2. All capacities are shown as NFPA system capacities (reserve vacuum pump on standby).
3. All system BTU/HR are shown with reserve vacuum pump on standby.
4. All noise levels are shown in dB(A) and reflect reserve pump on standby.

Standard Configuration

Model Shown: 7.5 Hp Dulex



Drawing Notes:

- Allow 36 inches in front of control panel for maintenance and ventilation, all other sides require 24 inches of clearance.
- Additional drawings/diagrams available for download at www.beaconmedaes.com.