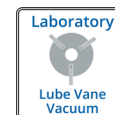




**VerusLab Lubricated Rotary Vane Laboratory Vacuum
Simplex Vertical Mount
Basic (PLC) Control System
1.5 - 5 HP**



SPECIFICATION

Vacuum System

The Lubricated Rotary Vane vacuum package features a common base with single point connections for the electrical panel, intake, and discharge. The system is capable for transport through a standard 34.5" doorway. Designed and manufactured with ISO 13485 processes, each system is completely tested before shipment and includes:

- One oil-sealed rotary vane vacuum pump with one motor
- Integral pre-wired control panel
- Vertical air receiver with full-size three-valve bypass system sized for appropriate demand

Vacuum Pump

The pump is a direct driven, oil-sealed rotary vane vacuum pump, with an end (ultimate) vacuum of 29.3" Hg. The pump is completely air-cooled with no water requirements. The 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
- Pump is mounted on vibration isolators

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

The 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
- 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 and Lag Alarm

The motor is continuous duty, NEMA rated, C-face, foot-mounted, TEFC, 1800 RPM, available in 60 hertz (208V, 230V, or 460V) and 50 hertz (380V), 3-phase electrical service.

Vacuum Receiver

The vacuum receiver is ASME Code stamped, and rated for a minimum 200 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.

Automatic Purge System

The vacuum pump is equipped with an automatic purge system to flush any gases from the pump to prevent condensation as the pump cools. The purge system incorporates a 24V electric controlled automatic isolation valve, and controls to operate an adjustable 1 to 15-minute shutdown purge with factory setting at 7 minutes. This vacuum pump system requires no air supply.

Intake Piping

The vacuum pump has a factory piped intake with integral flexible connector, isolation valve with 24V electric actuator, and check valve. Interconnecting piping consists of powder-coated steel tubing and flanges.

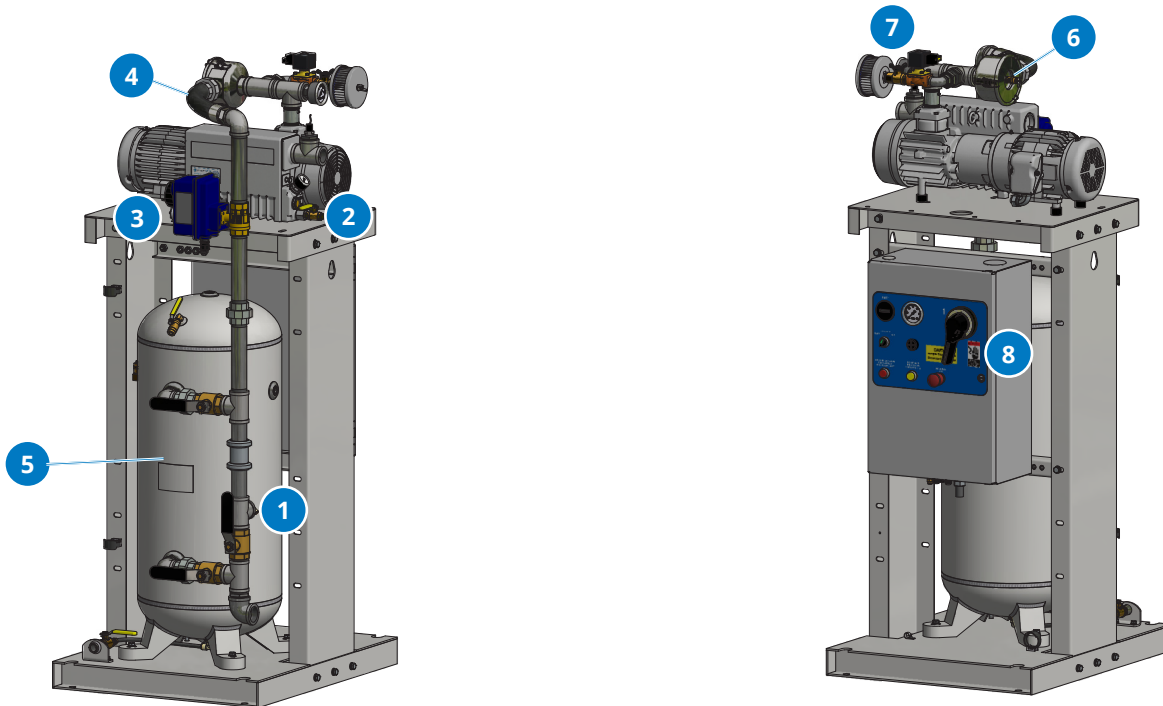
Basic Control System

The basic control system is U.L. labeled.

Additional components include:

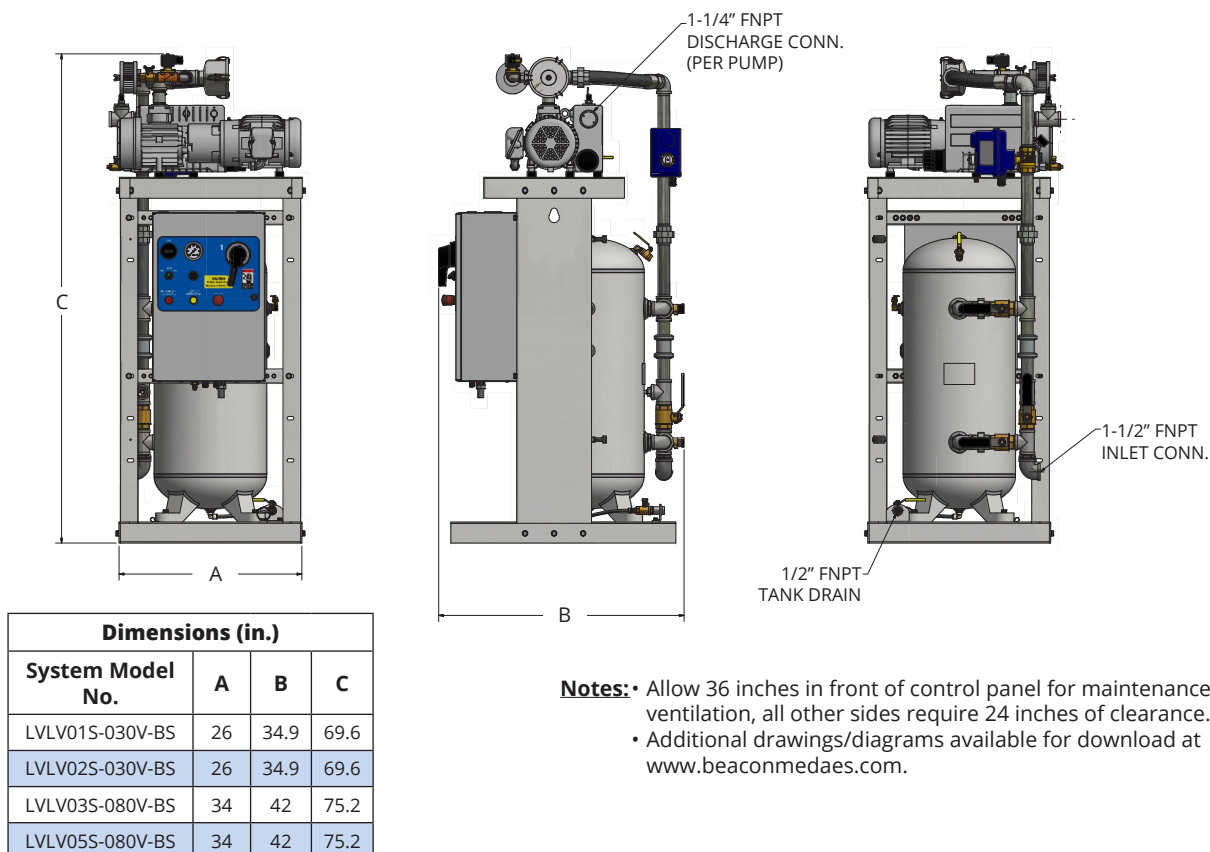
- NEMA 12 control panel enclosure
- Circuit breaker disconnects for each motor with external operators
- Full voltage motor starters with overload protection
- 24V control circuit
- Visual alarms for high discharge temperature shutdown with isolated contacts for remote alarm.
- Hand-Off-Auto lighted selected switches
- Runtime hourmeters
- Vacuum gauge

Standard Configuration



- 1** Full-size 3-valve receiver bypass.
- 2** Oil sight glass and filler plug with ease of access for annual oil changes.
- 3** Isolation valve with 24 V electric actuator.
- 4** Flex connectors on vacuum inlet to isolate pump vibration from facility pipeline.
- 5** Vertical receiver.
- 6** Individual 5 micron air inlet filter per vacuum pump to protect pump from incoming particulates.
- 7** Automatic Purge System.
- 8** Through the door disconnects for pumps for safety during service.

Standard Configuration



Vacuum System Specifications ¹ @ Sea Level													
System Model No.	Hz	HP	Nominal Pumping Speed (acfm/pump)	Capacity ² @19" HgV (scfm/system)	Capacity ² @25" HgV (scfm/system)	End Pressure inch of HgV (Torr)	System BTU/Hr	db(A) per Pump	System Weight (lb)	System FLA			
										208V	230V	380V	460V
LVLV01S-030V-BS	50	1.5	15	6	2	29.3 (15)	3,054	70	470	N/A	N/A	3.0	N/A
LVLV01S-030V-BS	60	1.5	18	7	3	29.3 (15)	3,054	70	470	5.9	5.0	N/A	2.6
LVLV02S-030V-BS	50	2	23	9	3	29.3 (15)	4,072	70	498	N/A	N/A	3.6	N/A
LVLV02S-030V-BS	60	2	28	11	4	29.3 (15)	4,072	70	498	7.1	6.0	N/A	3.1
LVLV03S-080V-BS	50	3	38	14	5	29.3 (15)	6,108	70	852	N/A	N/A	5.1	N/A
LVLV03S-080V-BS	60	3	45	17	6	29.3 (15)	6,108	70	852	9.7	8.4	N/A	4.3
LVLV05S-080V-BS	50	5	59	22	11	29.3 (15)	10,180	71	878	N/A	N/A	7.8	N/A
LVLV05S-080V-BS	60	5	71	26	13	29.3 (15)	10,180	71	878	14.5	13.8	N/A	7.0

- Notes:**
1. Normal operating conditions at a maximum ambient of (41°C) 105° F. Consult factory for higher ambient conditions.
 2. Capacity measured at reference conditions of absolute inlet pressure 1 bar (14.5 psi), intake air temperature 20°C (68° F). System capacities include one pump running.