

**Duplex Lubricated Rotary Vane Lab Vacuum Package 2 HP  
Vertical Tank Mounted with Automatic Purge Control**

**Vacuum Package**

- Two lubricated rotary vane type vacuum pumps with inlet filter and isolation valve for each
- Two motors
- ASME coded Vertical vacuum receiver with bypass and manual drain
- Duplex control panel with automatic lead/lag controls
- System designed for access through a standard 36" doorway
- All components completely pre-piped and pre-wired to single point service connections
- Liquid tight conduit, fittings and junction boxes for all control and power wiring
- All interconnecting piping and wiring is completed and operationally tested prior to shipment

**Vacuum Pump**

- Lubricated rotary vane pump
- Three non-metallic, non-asbestos vanes with minimum life of 30,000 hrs.
- Direct-driven through a shaft coupling
- Air-cooled
- End (ultimate) vacuum = 29.3" Hg
- Integral, fully recirculating oil supply
- Spin-on oil filter
- High discharge temperature switch
- Oil drain valve assembly with temperature gauge
- Integral oil separation system with three stage oil and smoke eliminators capable of removing 99.9+% of particles from the exhaust gas stream
- Built-in, anti-suck-back valve mounted at the pump inlet
- 2 micron inlet filter for removal of particulates
- Shipped with initial charge of pump fluid

**Vacuum Motor**

- NEMA rated
- C-face
- TEFC
- 208 or 230/460V 3-phase

**Vibration Isolation System**

- Vacuum and motor - fully isolated from the package base by means of a four-point, heavy duty, isolation system
- Minimum of 95% isolation efficiency
- Optional seismically restrained isolators at an additional cost

**Intake Piping**

- Vacuum pumps are connected to a common manifold and piped to a vertical receiver
- Inlet check valve on each pump
- Inlet isolation valve on each pump
- Flexible connectors between pumps and receiver
- Flexible connectors for discharge connections

**Vacuum Receiver**

- Vertical orientation with integrally mounted bypass and manual drain
- ASME Code stamped
- National Board Certified
- Rated for a minimum 200 PSIG design pressure
- Liquid level sight glass (**OPTION "V"**)
- Vacuum gauge
- Manual drain

**System Health**

- Monitoring and Trending of key components to provide notification of potential issue with the Health of the System
- Vacuum monitoring
- Current monitoring for each motor
- Ambient Temperature monitoring
- Trending of pumps running

**Control System**

- Mounted and wired duplex control system
- NEMA 12 and UL 508A labeled
- Automatic lead/lag sequencing
- Circuit breaker disconnects for each motor with external operators
- Full voltage motor starters with overload protection
- 120V control circuit transformers for each motor circuit
- Visual and audible reserve unit alarm with isolated contacts for remote alarm (**ability to turn OFF**)
- Hand-off-auto selector switches for reliable back-up
- Automatic alternation of compressors based on a first-on/first-off principle with provisions for simultaneous operation
- Automatic activation of reserve unit if required
- Visual and audible alarm indication for high discharge air temperature shutdown with isolated contacts for remote alarm
- SIGNAL 1™ – touch screen gateway

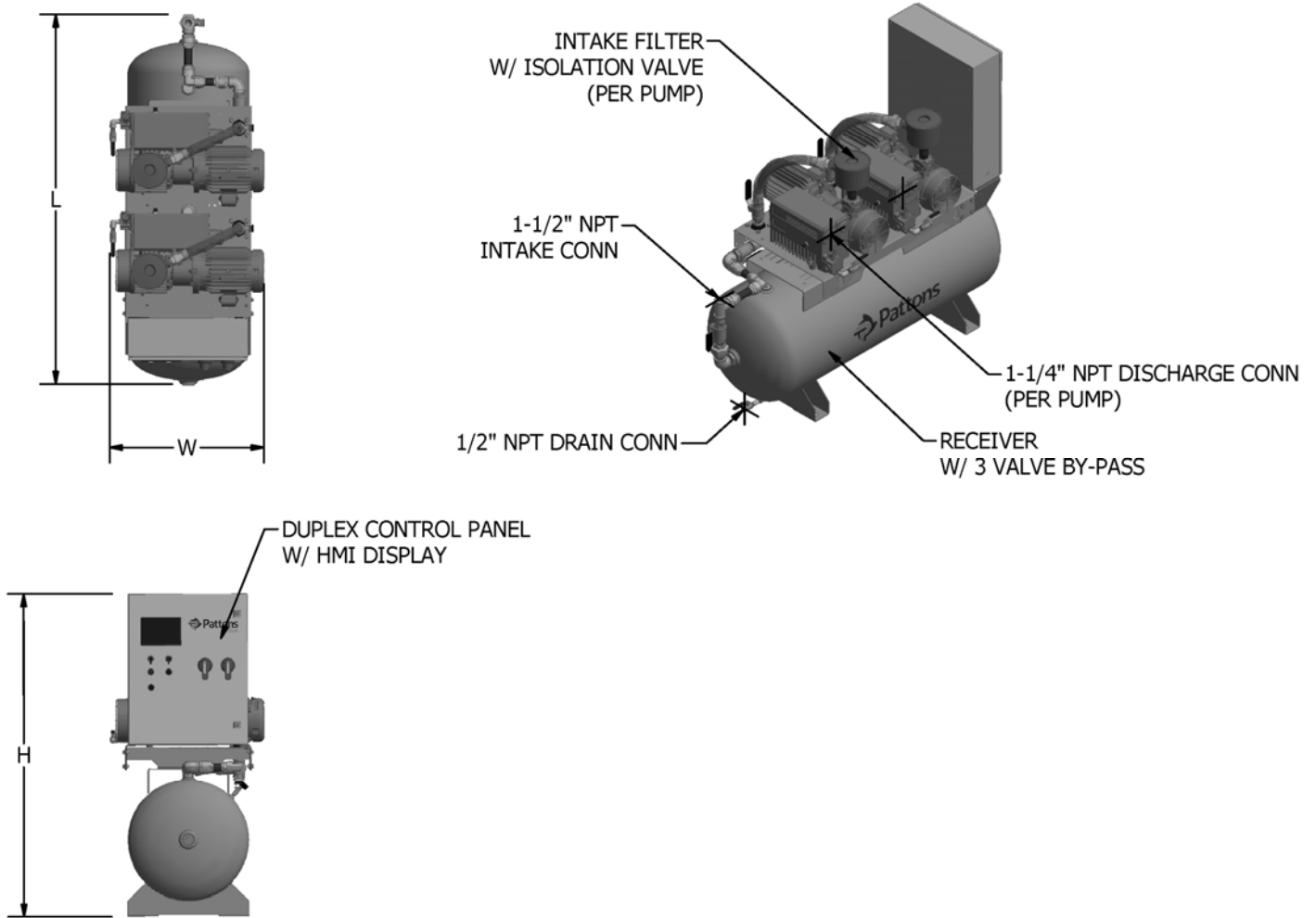
Standard Screen Displays

- |                        |  |
|------------------------|--|
| + Air level/Runtime    | + Replacement parts                    |
| + Alarm history        | + Troubleshooting guidelines           |
| + Service Indicator    | + Historical trending of system status |
| + Maintenance Schedule | + System Health                        |

- 7" Wide TFT Graphic Touch Screen with Motion Actuated Backlit LED and Bright 65,536 (16-bit) Colors
- Downloadable Trend Information via USB Host Port or Network Device
- 128MB Flash Memory, 64MB DRAM
- Built-in Ethernet Port 10/100 Base-T (RJ45)
- Supports over 100 Communication Protocols including Ethernet IP, and Modbus TCP/IP
- BACnet IP communication available (**Option "N"**)
- Built-in VNC server allowing remote monitoring of live graphics through standard browser, smart phones & mobile devices
- Share data between HMI and Building Management systems

**Automatic Purge Control**

- Each pump intake is equipped with an automatic purge valve and automatic isolation valve
- Minimum run and purge cycle are controlled via SIGNAL 1 purge control function
- Selection of automatic purge, manual purge, or purge off
- 15 minute purge cycle per pump
- Can be set to exit purge if vacuum falls below a setting



Duplex Lubricated Rotary Vane Lab Vacuum Package Specification											
Model Number	HP	Capacity @19" Hg <sup>2</sup>		Package BTU/HR <sup>3</sup>	Noise Level <sup>4</sup>	System FLA			Receiver Size (gallons)	L/W/H (inches)	Package Weight (pounds)
		Pump (SCFM)	System (SCFM)			208V (A)	230 (B)	460 V (C)			
73L-21-022(A/B/C)	2	11	22	10,200	73	13	13	6	80	72/31/60	813
73L-21-023(A/B/C)									120	77/31/64	943
73L-21-024(A/B/C)									200	79/31/70	985

Notes:

- <sup>1</sup> Normal Operating conditions at a maximum ambient of 105° F. Consult factory for higher ambient conditions.
- <sup>2</sup> Capacities are shown will all pumps running.
- <sup>3</sup> Package BTU/HR are shown with all pumps running.
- <sup>4</sup> Noise levels are shown in dB(A) and reflect all vacuum modules running.

**Statement of Warranty**

Patton's Medical warrants all Lab Air packages, to be free of defects in material and workmanship under normal use for a period not to exceed thirty (30) months from date of shipment, or twenty-four (24) months from date of start-up.