Liquid Ring "Camel" Medical Vacuum Base Mount Modular System
Duplex Expandable Triplex System (10 - 15 HP)
SPECIFICATION

Vacuum System

The duplex expandable to a triplex medical vacuum system is fully compliant with the latest edition of NFPA 99. The system consists of two steel framed simplex modules with an oil-free liquid ring vacuum pump coupled to a standard NEMA frame motor and a reservoir tank mounted on each module. A triplex system control panel is mounted on one of the modules. A standalone corrosion resistant receiver sized for appropriate demand is provided for the system. The system is completely tested prior to shipment. The installer, during installation, provides wiring and intake manifold piping between the modules with provisions for the future expansion module.

Vacuum Pump

The pump is a Nash Vectra GL series oil-free, single-stage, positive displacement, cone-ported and non-pulsating liquid ring type. Materials of construction are all iron with steel shaft, ductile iron lobe, head, rotor and end plate. The shaft seals are standard internal mechanical seals, John Crane type 21.

Vacuum Pump Drive

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

Vacuum Pump Motor

The motor is a continuous duty, NEMA rated, open drip proof, with 1.15 service factor suitable for 208V or 230/460V, 60 hertz, 3 phase electrical service.

The 10 hp motor runs at 1800 RPM.

The 15 hp motor runs at 1200 RPM.

Intake Piping

Each vacuum pump has a factory piped intake with an intake check valve to prevent backflow through off-cycle units, a vacuum relief valve and an isolation valve. The installer, at installation, provides an intake manifold.

Re-circulation and Seal Water

The system includes a dielectric union, anti-siphon valve, strainer, solenoid valve, flow control valve and an orifice union. Under normal operation, the system does not use more than 1 gpm of seal water per operating pump. The system includes a reservoir sufficient for up to 48 hours operation without a fresh water supply. The reservoir serves as a separator/silencer. The system is self contained and air-cooled.

Vacuum Receiver

The vacuum receiver is corrosion resistant, ASME Code stamped and rated for a minimum 125 PSIG design pressure. Included but shipped separately are a sight glass with manual drain and a vacuum gauge. All receiver piping and bypass valving are by contractor.

Control System

The triplex control system is NEMA 12 and U.L. labeled. The control system provides automatic lead/lag sequencing with circuit breaker disconnects with external operators for each vacuum pump motor, full voltage motor starters with overload protection, a 120V control circuit transformer for each motor circuit, visual and audible reserve unit alarm with isolated contacts for remote alarm, hand-off-auto lighted selector switches and runtime hourmeters. A programmable logic controller (PLC) controls the automatic sequencing of all vacuum pumps and automatic activation of reserve unit if required. The control system includes a manually adjustable minimum run timer to minimize starts and stops on the package. A vacuum gauge is provided in the control panel.

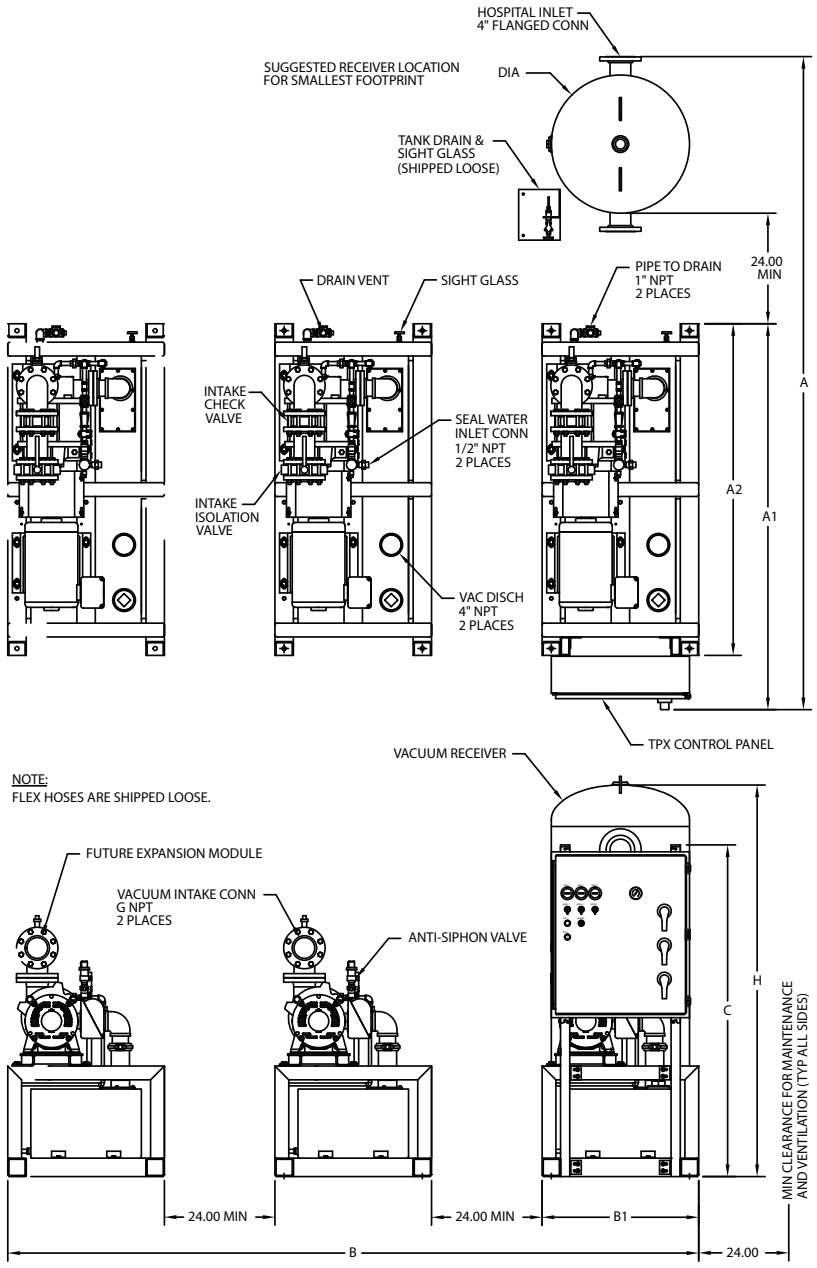
Accessories (shipped loose)

Intake flexible hose	2
Discharge flexible hose	2
Seal water flexible hose	2
Vibration isolator	8

Vacuum System Specifications[1] (Expanded System)									
System Model No.	HP	Capacity[2] @19" Hg	Receiver[3] (Gallons)	Noise[4] Level	System FLA @ 60 hz[5]			Module Weight (lbs.)	
					208V	230V	460V	Vacuum[6]	Receiver
LVS-10D-RC220V-T	10	55 SCFM (110 SCFM)	220*	63 (66)	94	82	41	2516 (3640)	565
LVS-10D-RC400V-T	10	55 SCFM (110 SCFM)	400	63 (66)	94	82	41	2516 (3640)	650
LVS-15D-RC220V-T	15	91 SCFM (182 SCFM)	220*	75 (78)	145	126	63	3234 (4717)	565
LVS-15D-RC400V-T	15	91 SCFM (182 SCFM)	400	75 (78)	145	126	63	3234 (4717)	650

Notes:
1. Normal operating condition 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. * Indicates standard receiver.
4. All noise levels are shown in dB(A) with the reserve vacuum pump on standby
5. FLA is rated for expandable panel.
6. Total weight for a 10 hp simplex module w/control panel (1392#) and 10 hp simplex modules (1124# ea.).
   Total weight for a 15 hp simplex module w/control panel (1751#) and 15 hp simplex modules (1483# ea.).

Standard Configuration



COMPLETE SYSTEM MODEL NUMBER	UNIT (HP)	PUMP MODEL	RECEIVER (GALLONS)	DIMENSIONS (IN)									SQ FEET REQUIRED
				A*	A1	A2	B*	B1	C	G	H	DIA	
LVS-10D-RC220V-T	10	GL-35	220	142	84	72	150	34	72	3	85	30	92
LVS-10D-RC400V-T			400	148							101	36	94
LVS-15D-RC220V-T	15	GL-60	220	142						4	85	30	92
LVS-15D-RC400V-T			400	148							101	36	94

15HP/220GAL SHOWN (DIA24-214X-SSB)

* SUGGESTED SYSTEM DIMENSIONS

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