



Receiver Mounted



# Duplex Liquid-Ring Laboratory Vacuum System

✓ 3/4 HP to 10 HP

## Features

- ✓ No Oil
- ✓ Meets CSA Z305.1

## Specifications

Class 1 Inc. duplex receiver mounted liquid-ring laboratory vacuum system, factory assembled and tested, as follows:

Model: LRV\_\_\_0-R\_\_\_X2  
Capacity (each pump): \_\_\_ SCFM @ 20" Hg  
Maximum end vacuum: 27" Hg  
Electrical (each pump): \_\_\_ HP, [\_\_\_] V, [ ] Phase, [\_\_\_] Hz  
Receiver Capacity: \_\_\_ USG, Horizontal

Vacuum Pumps and accessories: Sterling LEM series single stage, close-coupled, liquid-ring vacuum pump complete with:

- bronze impeller
- high efficiency TEFC motor
- 63.5 mm liquid filled vacuum gauge
- soft-seat inlet check valve, isolation ball valve, and 316L stainless steel flexible inlet connector
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- high flow air/water separator with water return line and flow control valve to allow 50% water recirculation.

System Piping: Galvanized, Schedule 40, steel pipe and fittings, three receiver bypass isolation valves, one main isolation valve, and one Vacuum DISS demand check valve.

Receiver: Welded steel, ASME Certified and CRN Registered, galvanized inside and out, and complete with:

- liquid level sight glass
- 63.5 mm liquid filled 0 to 760 mm Hg vacuum gauge
- manual bleed valve with muffler
- manual drain valve

Water Piping: 1/2" brass, bronze or copper pipe and fittings including: inlet ball valve, strainer, back-flow preventer, pressure switch with gauge, flow control orifice, and compound pressure / vacuum gauge.

Control Panel: CSA special inspection approved, NEMA 12 enclosure, factory prewired, system mounted and tested and complete with:

- two lockable door interlock motor disconnect switches
- two motor circuit controllers with thermal motor overload protection, short-circuit protection and push-button manual disconnect



- two magnetic motor contactors
- two control transformers with primary and secondary fusing
- one transformer control relay
- two Manual / Off / Auto selector switches
- 90 dB alarm buzzer, Silence Button, Alarm Reset Button
- PLC controls
- Dual output electronic vacuum switch complete with digital display, security, and four user adjustable setpoints.
- 4-line interactive text display complete with system status and alarm events, hour meters, user adjustable settings, and password protection.
- Numbered terminal strip with dry contacts for site connection to Master Alarm panel for: Lag / Failure; Motor Overload; Transformer Failure; Low Water Pressure; Low Vacuum.

Programming and Control:

- All system settings to be user adjustable and accessible with the system in operation and the control panel door closed
- Lead pump to operate between 21" Hg and 26" Hg.
- Lead pump to automatically alternate.
- Lag pump to start at 20" Hg.
- Lag/Failure alarm to require manual reset.
- Minimum run operation to reduce pump cycling.
- Maximum run operation to ensure pump alternation.
- SmartStart controls to accommodate emergency generator power transfers
- Low Vacuum alarm to be set at 16" Hg.
- Lag/Failure alarm contacts to open on: Lag condition; Motor Overload; Power Failure; Transformer Failure; Selector switch not in Auto position, motor disconnect not in Auto position, Low Water Pressure.

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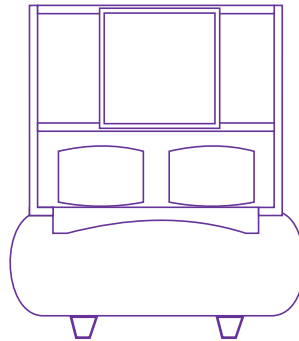
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Receiver Mounted

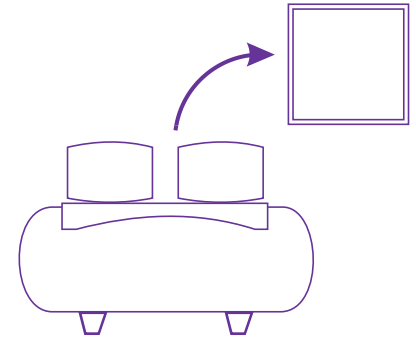


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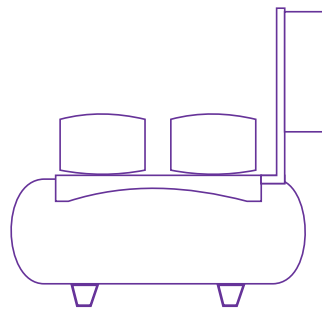
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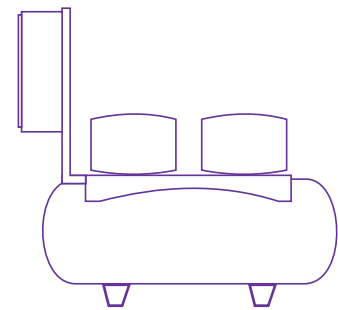
Standard



Wall-mount Panel



Right-hand Panel



Left-hand Panel

## Capacities & Dimensions

HP	Model	*Flow Each		*Flow Total		Length		Width		**Height		***Weight	
		SCFM	LPM	SCFM	LPM	In.	mm	In.	mm	In.	mm	Lb.	kg
3/4	LRV75-R60X2	2.1	59	4.2	119	56	1422	30	762	48	1219	510	232
1	LRV100-R60X2	4.0	113	8.0	227	56	1422	30	762	48	1219	530	241
2	LRV200-R60X2	7.3	207	14.6	413	56	1422	30	762	48	1219	650	295
3	LRV300-R80X2	11.0	312	22.0	623	66	1676	32	813	56	1422	780	355
5	LRV500-R120X2	23.2	657	46.4	1314	80	2032	34	864	56	1422	1200	545
7.5	LRV750-R120X2	31.0	878	62.0	1756	80	2032	34	864	60	1524	1400	636
10	LRV1000-R120X2	46.0	1303	92.0	2605	80	2032	34	864	60	1524	1600	727

\* Flow capacities shown @ 20" Hg

\*\* Height does not include control panel

\*\*\* Weights are approximate.