

LR1D SERIES OF LIQUID RING VACUUM PUMPS

edwardsvacuum.com

The Edwards LR1D series of liquid ring pumps are ideal for pumping either dry or wet gasses. They have a high tolerance to liquid carryover, especially on condensable processes. All our liquid ring pumps are available as part of standard preconfigured modules manufactured according to Edwards design principles for easy installation, use, and service.

LR1D single-stage liquid ring vacuum pumps feature a high-efficiency impeller design and state-of-the-art compression technology to achieve reliable and efficient vacuum performance from atmospheric down to ultimate vacuum.

The LR1D series are ideal for specific, humid, dirty and/or high-capacity applications in heavy industries and are ideal for filtration, wet conveying, vacuum forming, impregnation, sterilisation and rapid evacuation duties.



LR1D - M
Monoblock design



LR1D - C
Long-coupled design



LR1D - B
Bareshaft design



A CHOICE OF CONFIGURATIONS

With more than 100 years of experience and thousands of global installations, we know how to configure a liquid ring module that works for you. We can help you choose the best configuration for your application anytime. All our liquid ring pumps are offered in a variety of configurations to suit your needs. They can be installed in a single- or multi-pump set-up as required. The LR1D series are offered in pre-engineered plug-and-play modules, suitable for operation in the once-through partial recirculation or total recovery mode. The easy-to-install accessories from our standard range help you complete the installation for your application.



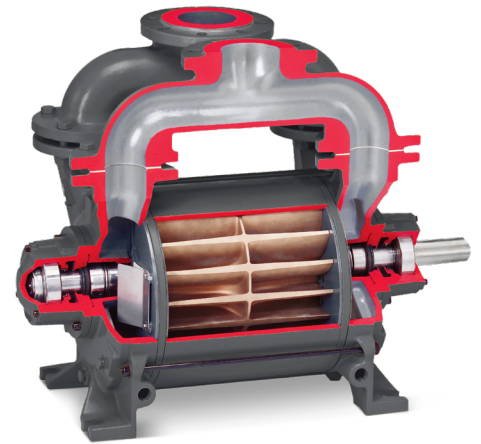
ENGINEERED TO ORDER

We can help you meet your process and project specific requirements using our years of experience to design, engineer, and assemble LR1D pumps to order. For more complex requirements, our project team is here to develop a unique engineered system tailored to your needs. Our liquid ring pumps form the backbone of multistage systems in your choice of materials as per the specifications you need. Using our years of experience to design, engineer, and assemble LR1D pumps to order, the possibilities are endless.



KEY FEATURES

- State-of-the-art bearing design allowing for reduced clearances and improved suction performance.
- Variable area discharge porting for optimum efficiency across all inlet pressures.
- Motor-mounted pumps featuring economical UL/CS EPACT compliant motors.
- Sturdy bearing pedestal mounts to standard NEMA, C-face motor.
- Mechanical seals as standard.
- Robust and reliable low maintenance construction.
- Modular design of 3 package types: once-through, partial recirculation and total recovery.
- Optional materials of construction: stainless steel fitted and stainless steel complete.
- Short lead times, minimum life cycle costs and optimised reliability.
- Low noise level.



Internal Mechanism

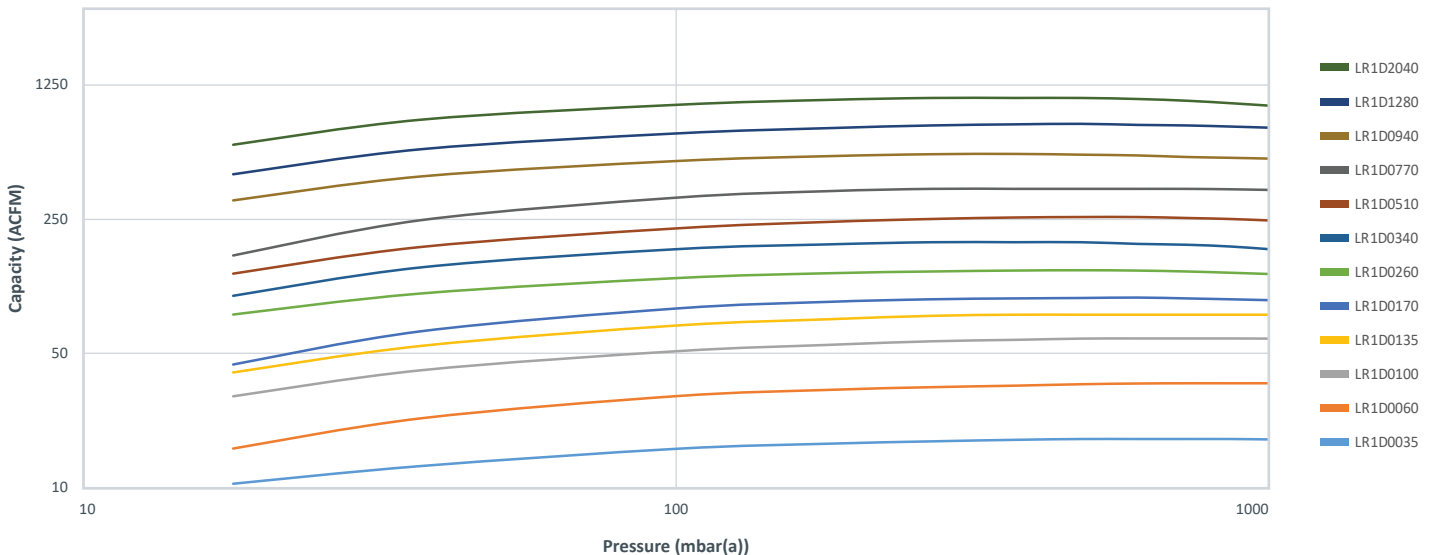
MATERIALS OF CONSTRUCTION

Component	Version		
	All iron**	Stainless steel fitted	Stainless steel full
Casing	Cast iron	Cast iron	SS316
Port plate	Cast iron	Cast iron	SS316
Impeller	Ductile iron	SS316	SS316
Shaft*	SS420	SS420	SS316
Mechanical Seal	Carbon/Carbide/Viton	Carbon/Carbide/Viton	Carbon/Carbide/PTFE

*Shaft not in contact with the process | **Only applicable for LR1D0770 to LR1D2040

PERFORMANCE RANGE

LR1D series



TECHNICAL SPECIFICATIONS


		LR1D0035C/M	LR1D0060C/M	LR1D0100C/M	LR1D0135C/M
60 Hz					
Nominal capacity ACFM (m ³ /h)		18 (31)	34 (58)	58 (99)	80 (136)
Ultimate pressure "HgV (mbar(a))		29 (30)	29 (30)	29 (30)	29 (30)
Motor power hp (kW)*		1.5 (1.1)	3 (2.2)	5.5 (4.1)	5.5 (4.1)
Inlet/Outlet connection inches (DN mm)		1 FNPT	1 FNPT	Flange 1-1/2 (40)	Flange 1-1/2 (40)
Seal water connection inches FNPT		3/8	1/4	3/8	3/8
Approximate block dimensions (L x W x H) inches (mm)	C	15.3 x 8.7 x 4.7 (388 x 220 x 120)	16.3 x 9.3 x 4.7 (414 x 235 x 120)	20.7 x 13.2 x 13 (527 x 335 x 330)	21.5 x 13.2 x 13 (546 x 335 x 330)
	M	17.4 x 9.3 x 7.2 (443 x 238 x 183)	19.9 x 7.2 x 3.5 (506 x 234 x 183)	22.4 x 13.8 x 12.9 (570 x 351 x 330)	23.2 x 13.8 x 12.9 (589 x 351 x 330)
Dry weight lbs (kg)	C	57.3 (26)	63 (28.6)	164 (74.4)	169.5 (76.9)
	M	73 (33)	82 (38)	196 (89)	202 (91)


		LR1D0170C/M	LR1D0260C/M	LR1D0340C	LR1D0510C
60 Hz					
Nominal capacity ACFM (m ³ /h)		97 (165)	138 (234)	201 (342)	254 (432)
Ultimate pressure "HgV (mbar(a))		29 (30)	29 (30)	29 (30)	29 (30)
Motor power hp (kW)*		7.5 (5.6)	10 (7.5)	15 (11)	20 (15)
Inlet/Outlet connection inches (DN mm)		Flange 1-1/2 (40)	Flange 2-1/2 (65)	Flange 2-1/2 (65)	Flange 2-1/2 (65)
Seal water connection inches FNPT		3/8	1/2	1/2	1/2
Approximate block dimensions (L x W x H) inches (mm)	C	21.8 x 13.2 x 13 (388 x 220 x 120)	27.7 x 16.1 x 15.2 (703 x 408 x 387)	28.9 x 16.1 x 15.2 (734 x 408 x 387)	30.7 x 16.1 x 15.2 (779 x 408 x 387)
	M	25 x 15.8 x 12.9 (635 x 402 x 330)	27.9 x 16.2 x 15.2 (711 x 412 x 387)		
Dry weight lbs (kg)	C	170.6 (77.4)	297.2 (134.8)	307 (139.3)	322.7 (146.4)
	M	214 (97)	326 (148)		


		LR1D0770B	LR1D0940B	LR1D1280B	LR1D2040B
60 Hz					
Nominal capacity ACFM (m ³ /h)		382 (650)	545 (926)	737 (1252)	1038 (1764)
Ultimate pressure "HgV (mbar(a))		29 (30)	29 (30)	29 (30)	29 (30)
Motor power hp (kW)*		25 (19)	40 (30)	50 (37)	75 (56)
Inlet/Outlet connection inches (DN mm)		Flange 4 (100)	Flange 4 (100)	Flange 5 (125)	Flange 5 (125)
Seal water connection inches FNPT		3/4	3/4	1-1/2	1-1/2
Approximate block dimensions (L x W x H) inches (mm)		27.4 x 25.1 x 18.5 (697 x 638 x 470)	31.5 x 25.1 x 18.5 (801 x 638 x 470)	39.7 x 33.5 x 23.4 (1008 x 851 x 595)	45.2 x 33.5 x 23.4 (1149 x 851 x 595)
Dry weight lbs (kg)		457.4 (207.5)	516.4 (234.2)	1102.2 (500)	1277.8 (579.6)


*Smaller motor sizes can be used in certain cases. Please consult Edwards for more details. | C - Without motor | M - With motor | B - Bareshaft


WHY CHOOSE THE EDWARDS LR1D SERIES


 Application flexibility through modularity

 Easy installation that saves time

 Up to 95% reduction of water consumption with total recovery

 High reliability for a lifetime

 Cost savings through quick and easy maintenance

 Low noise for a comfortable working environment

APPLICATIONS



- Automotive industry
- Brick extrusion
- Chemical industries
- Cement and allied products
- Food processing
- General manufacturing
- Metalwork industries
- Mining
- Oil and gas
- Paper and allied products
- Petroleum industries
- Plastics
- Power and utilities
- Textile industry



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