

LR1C - LANTERN SINGLE STAGE LIQUID RING VACUUM PUMPS



EDWARDS THE PARTNER OF CHOICE

Edwards is a world leader in the design, technology and manufacture of vacuum pumps for industrial applications with over 100 years' history.

We believe in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

EDWARDS LR1C LANTERN SERIES OF SINGLE STAGE LIQUID RING VACUUM PUMPS

The LR1C Lantern series liquid ring pumps offer significant advantages when pumping wet gases and vapours. Under the circumstances, suction pressure can reach 33 mbar (97% vacuum). When a pump is operating under a certain condition close to the ultimate vacuum (i.e., the saturated vapour pressure of the sealing liquid), an anti-cavitation tube can be chosen to protect the pump. The LR1C Lantern series is designed to pump explosive gases or operate in a flammable and explosive environment.

The LR1C Lantern series has compact structure, stable operation, high efficiency, easy installation and service. All our liquid ring pumps are offered in a variety of configurations to suit your needs. They could be offered as a complete system including separator, heat exchanger, valves, gauges, anti-cavitation device, internal pipeline, etc. Such vacuum solutions are believed to serve you better.



A CHOICE OF CONFIGURATIONS

With more than 100 years of experience and thousands of global installations, we can help you choose the best configuration that is right for your application. 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 setup as required. The LR1C lantern series is 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.

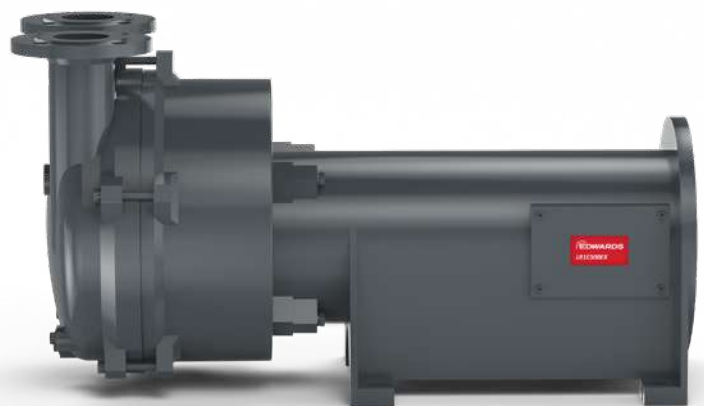


ENGINEERED TO ORDER

We can help you meet your process and project specific requirements with our rich experience of successful installations in various applications. 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 multi-stage systems in your choice of materials as per the specifications you need. Using our years of experience to design, engineer, and assemble LR1C pumps to order, the possibilities are endless.

KEY FEATURES

- Low operating noise and vibration
- Operation across the entire vacuum range
- Various materials of construction
- Low maintenance
- No metal-to-metal contact
- Anti cavitation protection
- Rugged and robust construction
- Various seals are available upon request
- Variable port design for high pressure running
- Low temperature operation
- Tolerance to high back pressure
- Manufactured to ISO 9001



LR1C150EX



MATERIALS OF CONSTRUCTION

Component	CI/SS	SS 304	SS 316L
End casings	CI/HT200	SS 304	SS 316L
Port plates	CI/HT200	SS 304	SS 316L
Pump body	CI/HT200	SS 304	SS 316L
Impeller		SS 304	SS 316L
Shaft	2Cr13	SS 304	SS 316L
Bracket		CI/HT200	
Valve plate		PTFE	
Shaft seals			
Single mechanical seal	Faces	Cermet vs carbon	SiC vs carbon
	Elastomers	FKM	
	Metal parts	SS 316	
Gland packing*	PTFE fibre with graphite impregnation		
Double mechanical seal*	For details, contact Edwards		

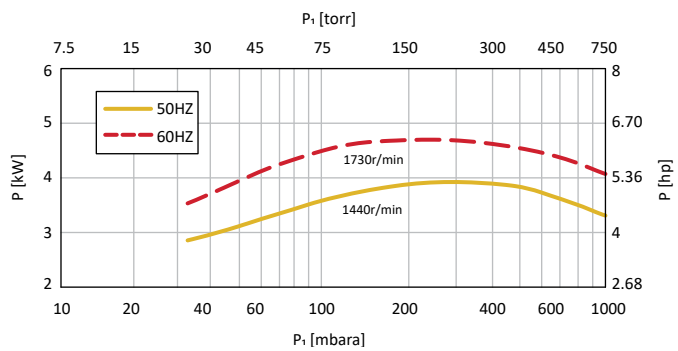
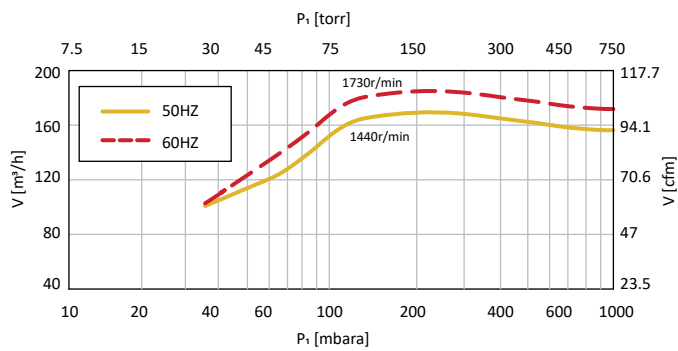
*Optional configuration

TECHNICAL SPECIFICATIONS

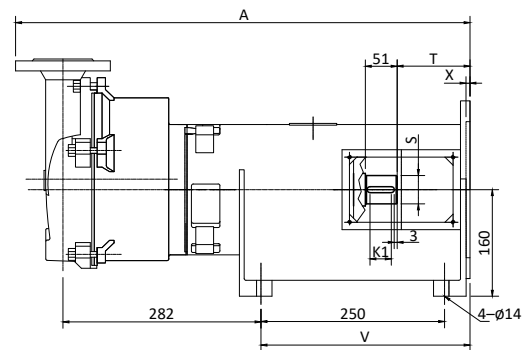
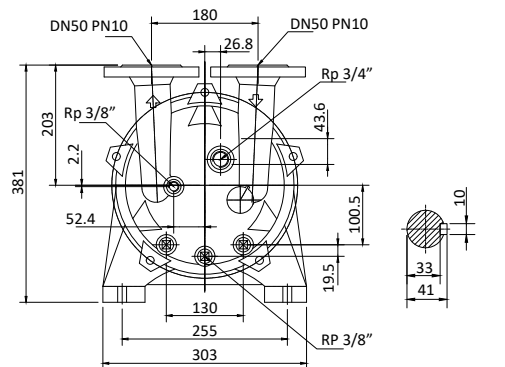
Model	Capacity m ³ /h	Speed rpm	Flow rate m ³ /h	Motor rating kW	Ultimate vacuum mbara	Back pressure mbara	Weight kg	Noise dB(A)	Vibration mm/s
LR1C150EX (50 Hz)	165	1440	0.43	4	33	1300	112	63	2.8
LR1C150EX (60 Hz)	185	1730	0.48	5.5	33	1300	112	63	2.8

PERFORMANCE CURVES

LR1C150EX



DIMENSIONS



All dimensions are in mm.

Pump	A	S	T	V	K1	X
LR1C150EX 50 Hz	651	Ø38	96	289	35	5
LR1C150EX 60 Hz	671		116	309		4.5

The performances as shown are based on operating conditions with saturated air at 20 °C, the service water at 15 °C, and exhaust pressure at the standard atmospheric pressure of 1,013.25 mbar. The performance tolerance is ±10%.

LR1C200EX



MATERIALS OF CONSTRUCTION

Component	CI/SS	SS 304	SS 316L
End casings	CI/HT200	SS 304	SS 316L
Port plates	CI/HT200	SS 304	SS 316L
Pump body	CI/HT200	SS 304	SS 316L
Impeller		SS 304	SS 316L
Shaft	2Cr13	SS 304	SS 316L
Bracket		CI/HT200	
Valve plate		PTFE	
Shaft seals			
Single mechanical seal	Faces	Cermet vs carbon	SiC vs carbon
	Elastomers	FKM	
	Metal parts	SS 316	
Gland packing*	PTFE fibre with graphite impregnation		
Double mechanical seal*	For details, contact Edwards		

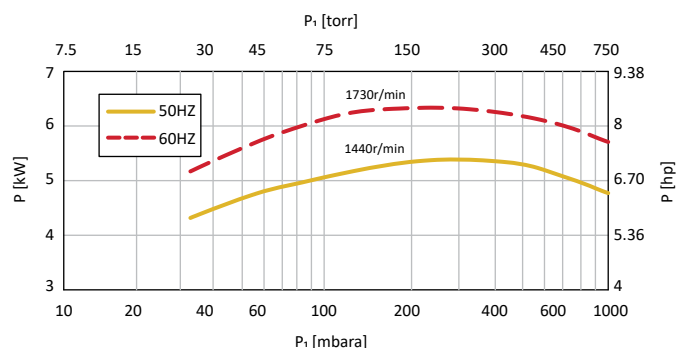
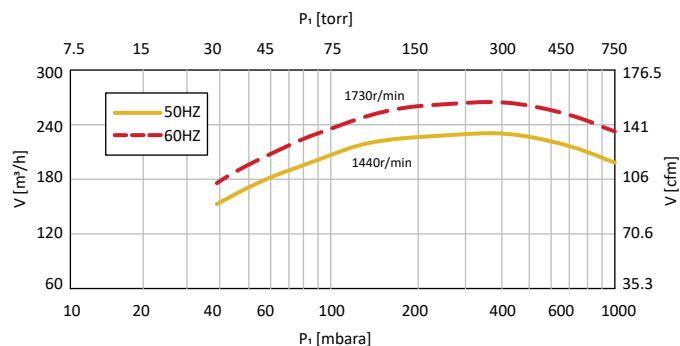
*Optional configuration

TECHNICAL SPECIFICATIONS

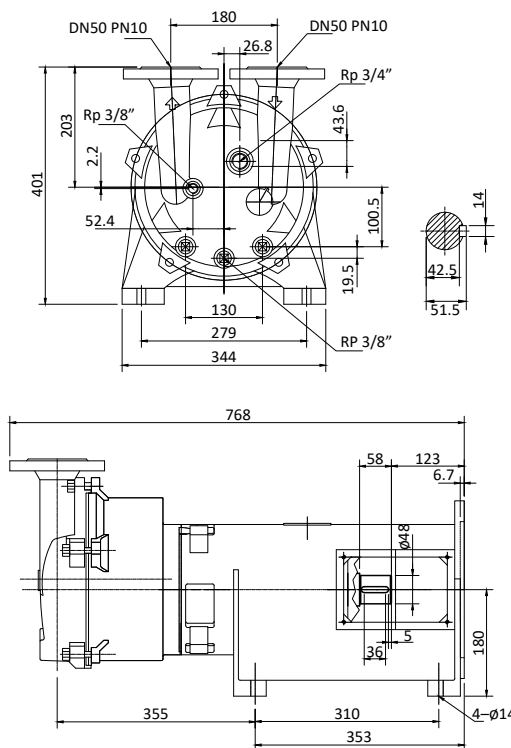
Model	Capacity m ³ /h	Speed rpm	Flow rate m ³ /h	Motor rating kW	Ultimate vacuum mbara	Back pressure mbara	Weight kg	Noise dB(A)	Vibration mm/s
LR1C200EX (50 Hz)	230	1440	0.53	5.5	33	1300	148	68	2.8
LR1C200EX (60 Hz)	265	1730	0.64	7.5	33	1300	148	68	2.8

PERFORMANCE CURVES

LR1C200EX



DIMENSIONS



All dimensions are in mm.

The performances as shown are based on operating conditions with saturated air at 20 °C, the service water at 15 °C, and exhaust pressure at the standard atmospheric pressure of 1,013.25 mbar. The performance tolerance is ±10%.

LR1C300EX



MATERIALS OF CONSTRUCTION

Component	CI/SS	SS 304	SS 316L
End casings	CI/HT200	SS 304	SS 316L
Port plates	CI/HT200	SS 304	SS 316L
Pump body	CI/HT200	SS 304	SS 316L
Impeller		SS 304	SS 316L
Shaft		2Cr13	SS 304
Bracket		CI/HT200	
Valve plate		PTFE	
Shaft seals			
Single mechanical seal	Faces	Cermet vs carbon	SiC vs carbon
	Elastomers	FKM	
	Metal parts	SS 316	
Gland packing*	PTFE fibre with graphite impregnation		
Double mechanical seal*	For details, contact Edwards		

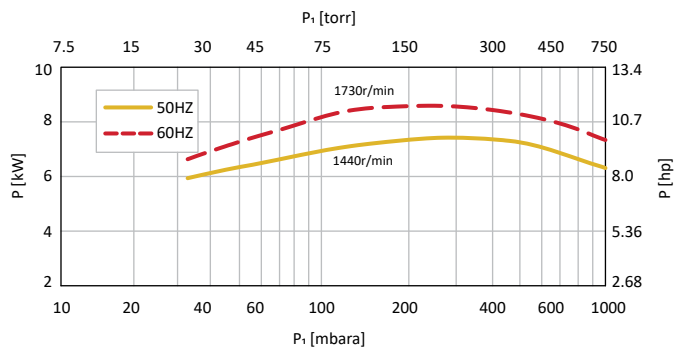
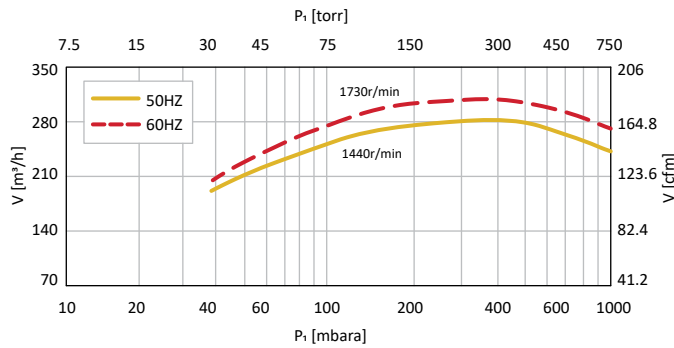
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TECHNICAL SPECIFICATIONS

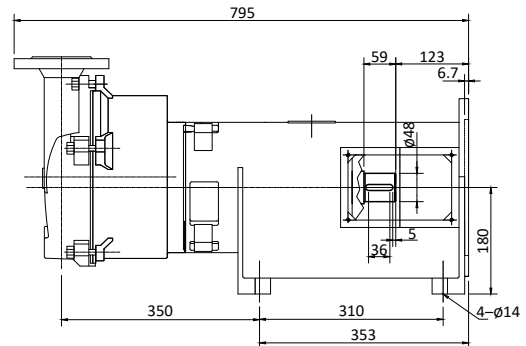
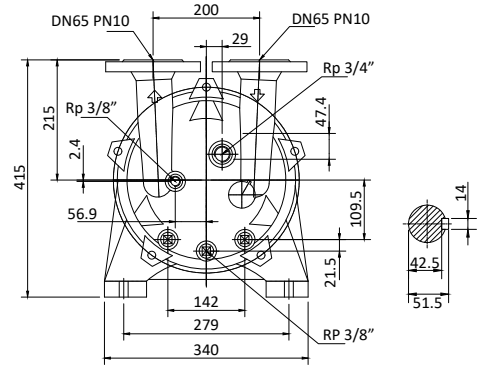
Model	Capacity m ³ /h	Speed rpm	Flow rate m ³ /h	Motor rating kW	Ultimate vacuum mbara	Back pressure mbara	Weight kg	Noise dB(A)	Vibration mm/s
LR1C300EX (50 Hz)	280	1440	0.66	7.5	33	1300	166	69	2.8
LR1C300EX (60 Hz)	310	1730	0.72	11	33	1300	166	69	2.8

PERFORMANCE CURVES

LR1C300EX



DIMENSIONS



All dimensions are in mm.

The performances as shown are based on operating conditions with saturated air at 20 °C, the service water at 15 °C, and exhaust pressure at the standard atmospheric pressure of 1,013.25 mbar. The performance tolerance is ±10%.

LR1C400EX



MATERIALS OF CONSTRUCTION

Component	CI/SS	SS 304	SS 316L
End casings	CI/HT200	SS 304	SS 316L
Port plates	CI/HT200	SS 304	SS 316L
Pump body	CI/HT200	SS 304	SS 316L
Impeller		SS 304	SS 316L
Shaft	2Cr13	SS 304	SS 316L
Bracket		CI/HT200	
Valve plate		PTFE	
Shaft seals			
Single mechanical seal	Faces	Cermet vs carbon	SiC vs carbon
	Elastomers	FKM	
	Metal parts	SS 316	
Gland packing*	PTFE fibre with graphite impregnation		
Double mechanical seal*	For details, contact Edwards		

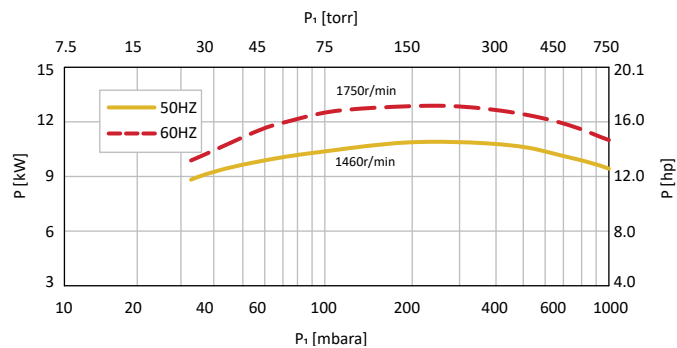
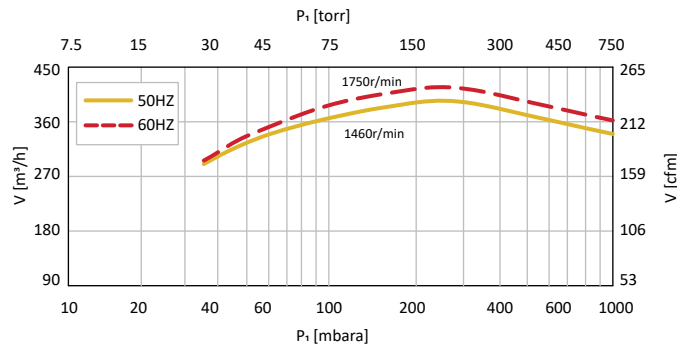
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TECHNICAL SPECIFICATIONS

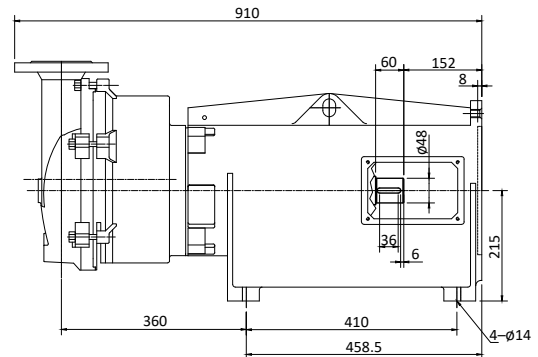
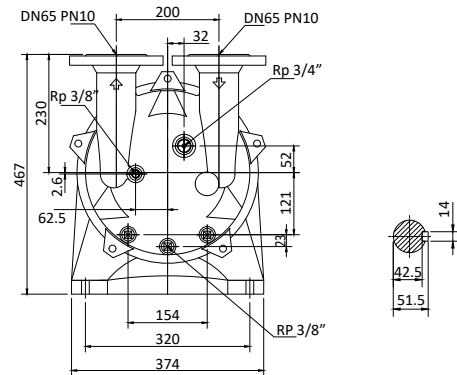
Model	Capacity m ³ /h	Speed rpm	Flow rate m ³ /h	Motor rating kW	Ultimate vacuum mbara	Back pressure mbara	Weight kg	Noise dB(A)	Vibration mm/s
LR1C400EX (50 Hz)	400	1460	0.96	11	33	1300	212	73	2.8
LR1C400EX (60 Hz)	420	1750	1.05	15	33	1300	212	73	2.8

PERFORMANCE CURVES

LR1C400EX



DIMENSIONS



All dimensions are in mm.

The performances as shown are based on operating conditions with saturated air at 20 °C, the service water at 15 °C, and exhaust pressure at the standard atmospheric pressure of 1,013.25 mbar. The performance tolerance is ±10%.

LR1C500EX



MATERIALS OF CONSTRUCTION

Component	CI/SS	SS 304	SS 316L
End casings	CI/HT200	SS 304	SS 316L
Port plates	CI/HT200	SS 304	SS 316L
Pump body	CI/HT200	SS 304	SS 316L
Impeller		SS 304	SS 316L
Shaft	2Cr13	SS 304	SS 316L
Bracket		CI/HT200	
Valve plate		PTFE	
Shaft seals			
Single mechanical seal	Faces	Cermet vs carbon	SiC vs carbon
	Elastomers	FKM	
	Metal parts	SS 316	
Gland packing*	PTFE fibre with graphite impregnation		
Double mechanical seal*	For details, contact Edwards		

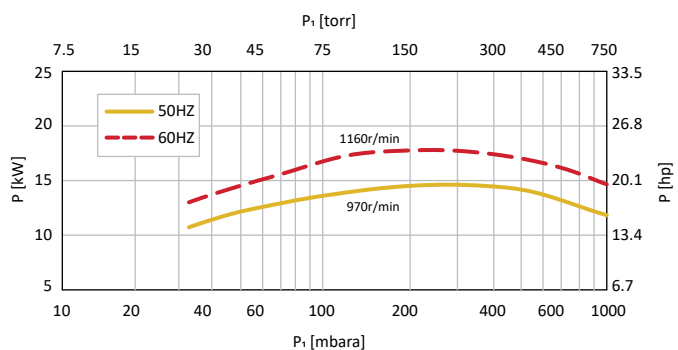
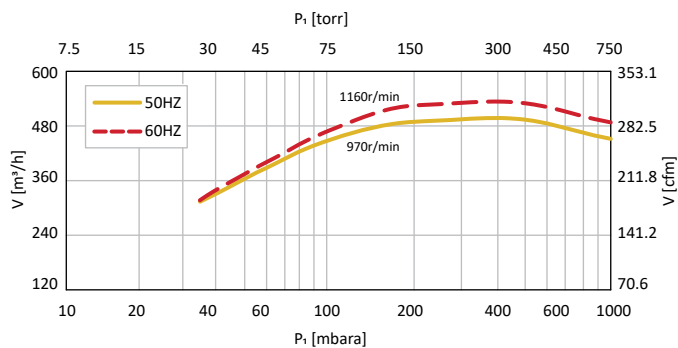
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TECHNICAL SPECIFICATIONS

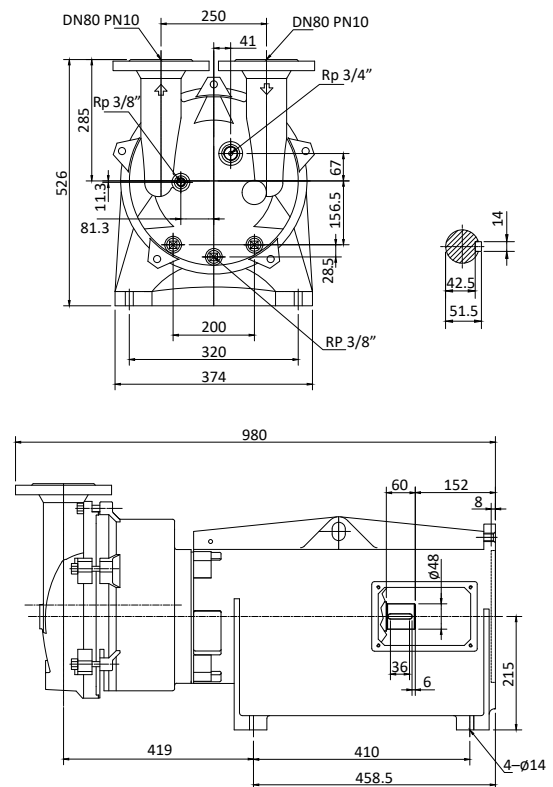
Model	Capacity m ³ /h	Speed rpm	Flow rate m ³ /h	Motor rating kW	Ultimate vacuum mbara	Back pressure mbara	Weight kg	Noise dB(A)	Vibration mm/s
LR1C500EX (50 Hz)	500	970	1.32	15	33	1300	334	74	2.8
LR1C500EX (60 Hz)	535	1165	1.45	18.5	33	1300	334	74	2.8

PERFORMANCE CURVES

LR1C500EX



DIMENSIONS



All dimensions are in mm.

The performances as shown are based on operating conditions with saturated air at 20 °C, the service water at 15 °C, and exhaust pressure at the standard atmospheric pressure of 1,013.25 mbar. The performance tolerance is ±10%.

APPLICATIONS



- Chemical industries
- Oil and gas
- Petroleum industries
- Cement and allied products
- General manufacturing
- Metalwork industries
- Mining
- Paper and pulp
- Plastic and compound
- Power and energy
- Textile industry



SERVICE AND SUPPORT

To ensure your pump maintains optimal performance and reliability, we offer a wide range of service solutions, tailored to meet your needs. From Field Service intervention to Managed Maintenance agreements, we will take care of your pump to ensure that it continues to deliver clean, consistent, efficient performance, with lower running cost and optimum total cost of ownership for its entire operating life.

Selecting original spare parts, maintenance kits and grease, means that every critical part performs as it was intended. Form, fit and function are guaranteed. Our services engineers only fit 100% genuine parts to ensure you receive the best result from each and every service.

Contact your local Edwards sales office to discuss your specific requirements.





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