

# LR2D SERIES OF LIQUID RING VACUUM PUMPS

 **EDWARDS**



# EDWARDS LR2D SERIES OF LIQUID RING VACUUM PUMPS

The Edwards LR2D series of liquid ring vacuum pumps are ideal for pumping either dry or wet gases, with a high tolerance to liquid carryover. LR2D pumps are available in a variety of configurations which can be selected to suit your pumped process media.

LR2D pumps feature a high efficiency impeller design, advanced compression technology and material of constructions to achieve reliable and efficient vacuum performance from the atmosphere down to 30 mbar(a).



## 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 LR2D pumps to order, the possibilities are endless.



## 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 LR2D could be offered in pre-engineered system including once-through, partial recirculation and total recovery mode. The easy to install accessories from our standard range help you complete the installation for your application.

## 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.

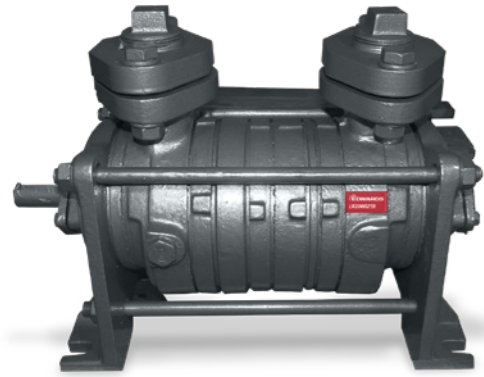
We believe in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the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



## KEY FEATURES

- High efficiency two stage design for high vacuum range
- Reliable for heavy duty applications
- Manufactured to ISO 9001 standards
- Low operating noise level
- Single mechanical seal as standard
- Capable of handling gas mixture and liquid
- Can operate using various seal-fluids

# LR2D0025B



## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	12 (20)	15 (25)
Speed	rpm*	2900	3500
Motor rating power	hp (kW)**	2 (1.4)	2 (1.5)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	1.3 (0.3)	1.5 (0.34)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBa	66	66
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	23 (50)	23 (50)

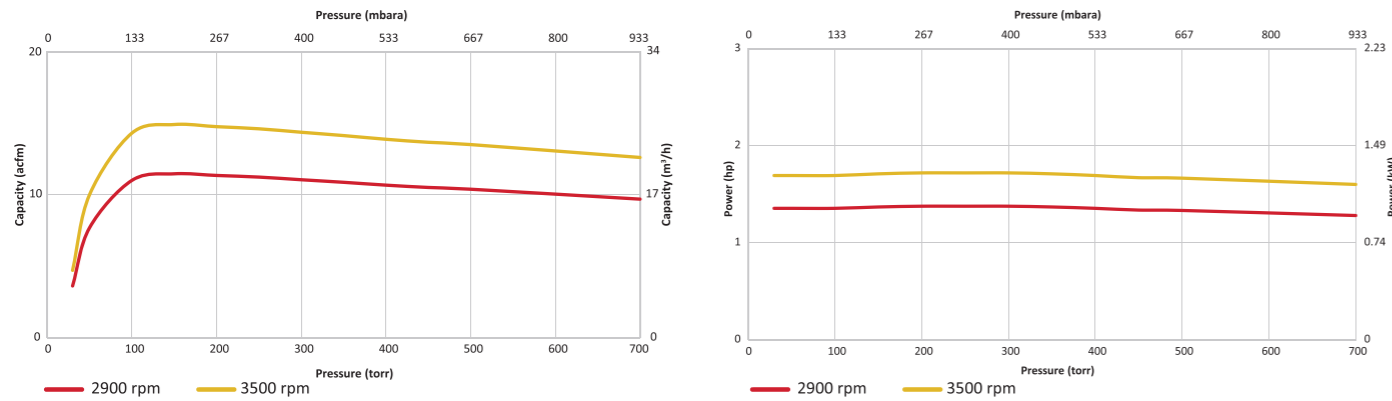
\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
CI-BR	Cast iron	Cast iron	Bronze	420 SS	A*

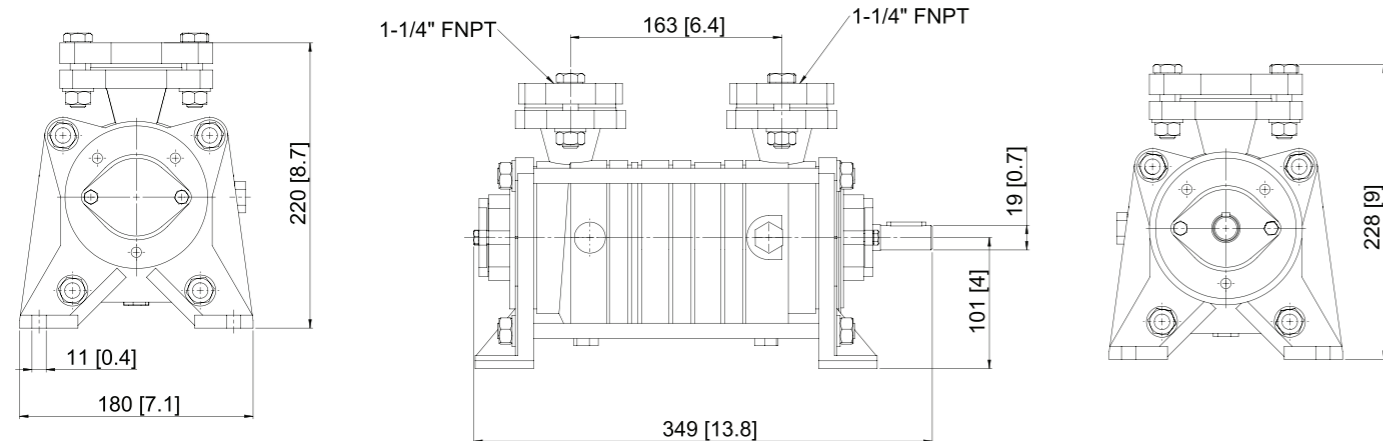
A=Standard mechanical seal with FKM elastomer, \*=other seal materials available upon request

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support

## DIMENSIONS



# LR2D0060B



## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	29 (49)	34 (58)
Speed	rpm*	2900	3500
Motor rating power	hp (kW)**	2 (2.2)	3 (2.2)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	1.5 (0.34)	1.7 (0.38)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBa	66	66
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	25 (55)	25 (55)

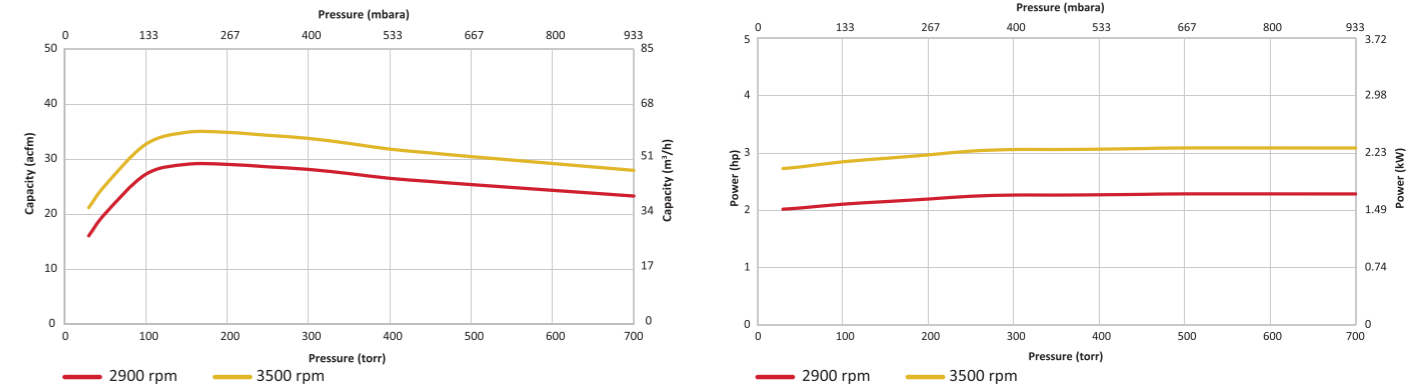
\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
CI-BR	Cast iron	Cast iron	Bronze	420 SS	A*

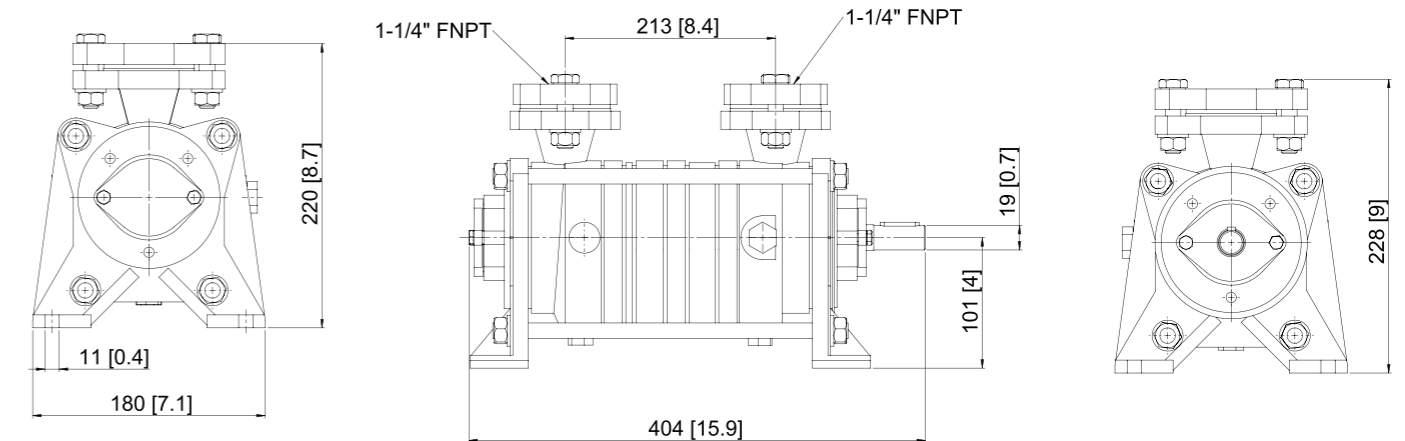
A=Standard mechanical seal with FKM elastomer, \*=other seal materials available upon request

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support.

## DIMENSIONS



# LR2D0130B



## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m <sup>3</sup> /h)	53 (90)	65 (110)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	5 (3.7)	5 (3.7)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m <sup>3</sup> /h)	2.2 (0.4)	2.2 (0.4)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBa	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	87 (192)	87 (192)

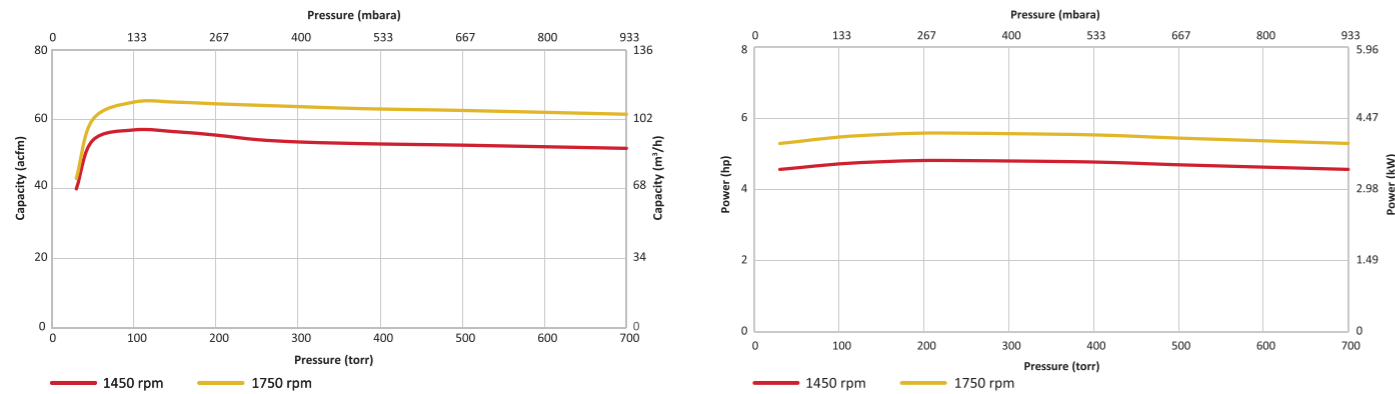
\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

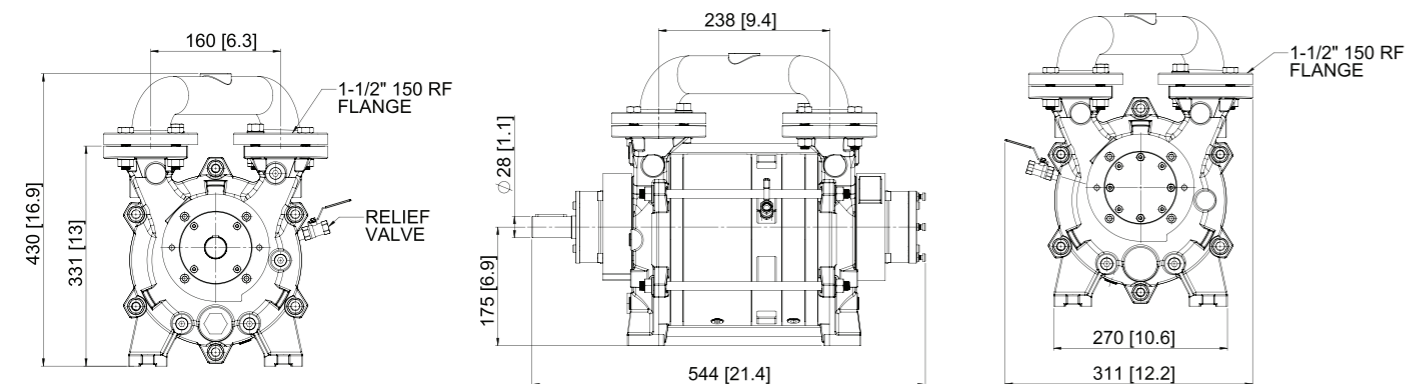
A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support

## DIMENSIONS



# LR2D0170B



## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m <sup>3</sup> /h)	86 (146)	104 (177)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	7.5 (5.5)	7.5 (5.5)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m <sup>3</sup> /h)	3.1 (0.7)	3 (0.6)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBa	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	lbs (kg)	93 (205)	93 (205)

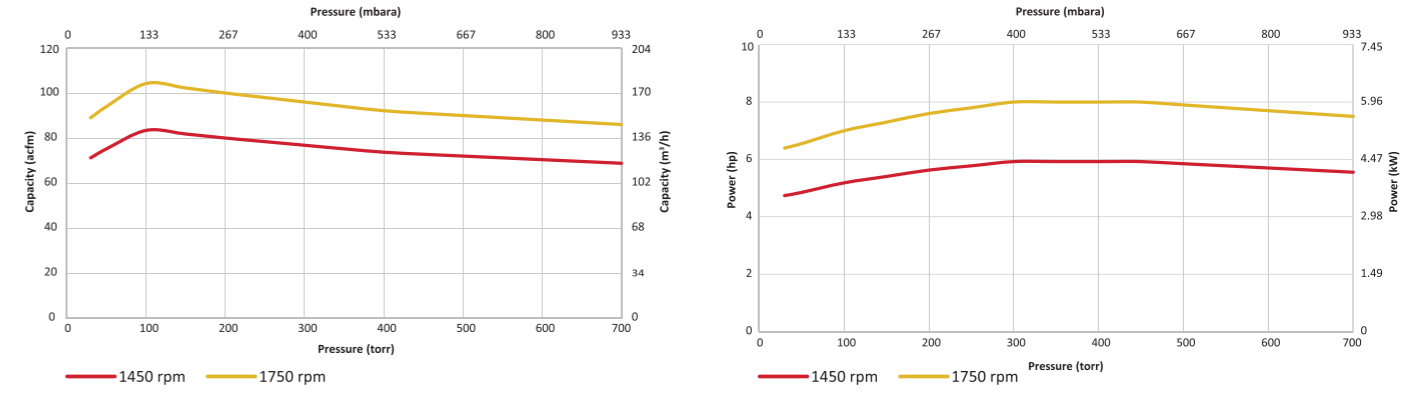
\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

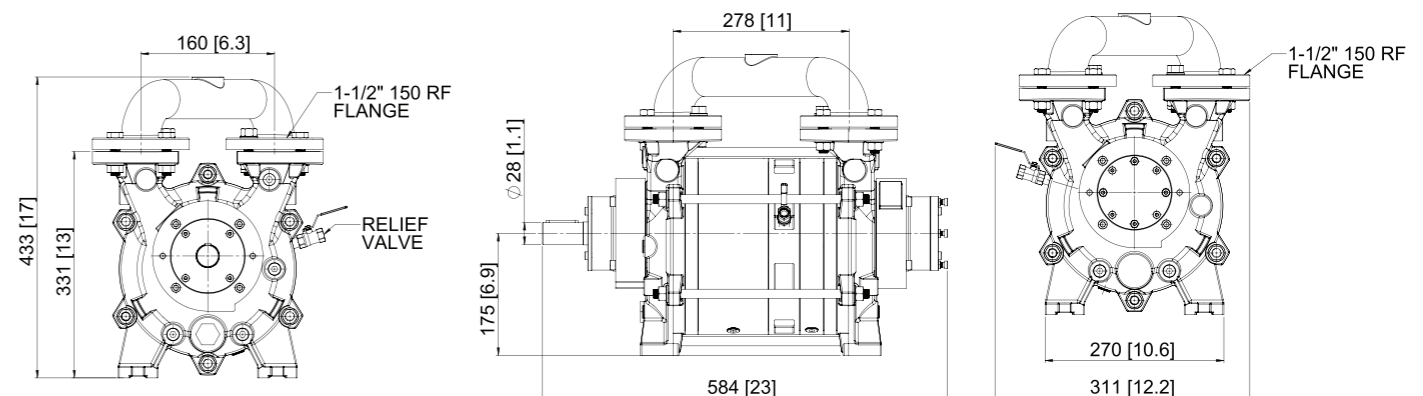
A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support.

## DIMENSIONS



# LR2D0240B

## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	104 (176)	129 (219)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	10 (7.4)	10 (7.4)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	3.5 (0.7)	3.5 (0.7)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBA	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	102 (225)	102 (225)

\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

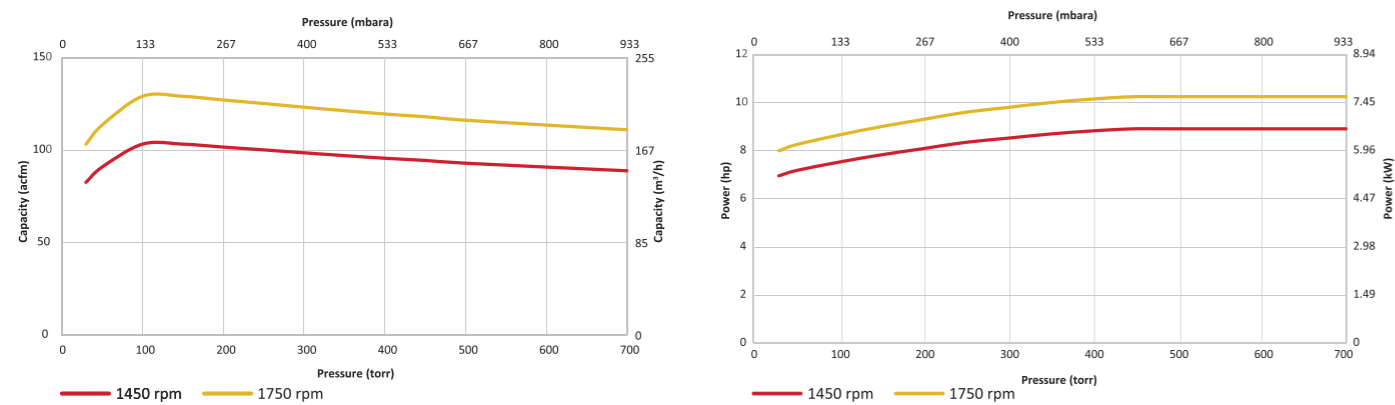
## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request

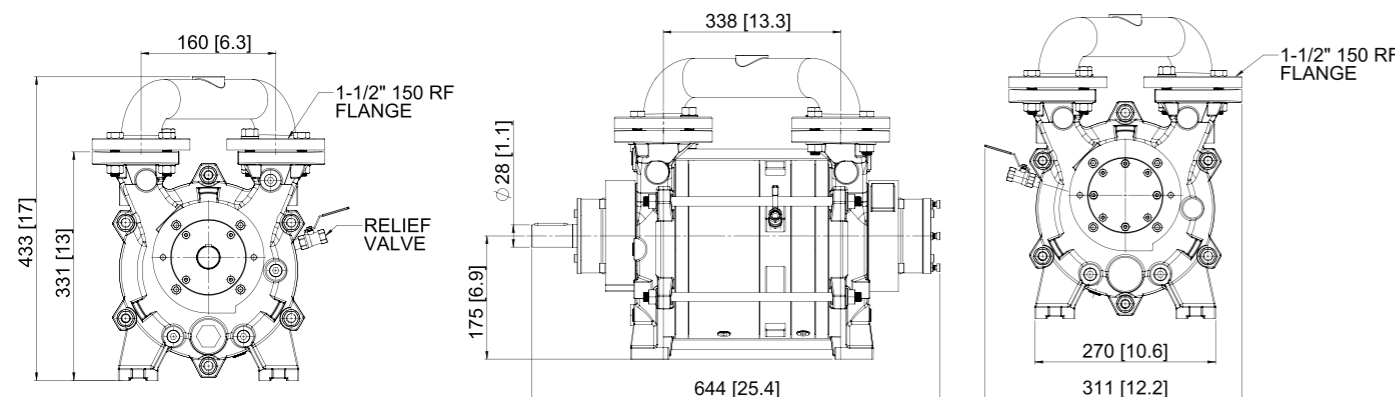


## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support

## DIMENSIONS



## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	135 (229)	168 (285)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	15 (11)	15 (11)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	7.2 (1.6)	8 (1.8)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBA	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	152 (336)	152 (336)

\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

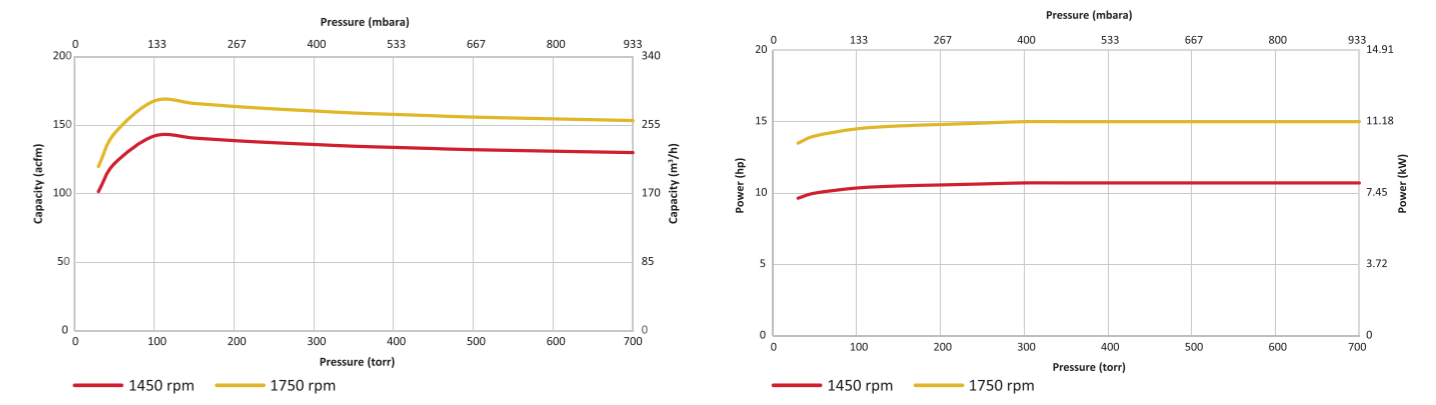
Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request



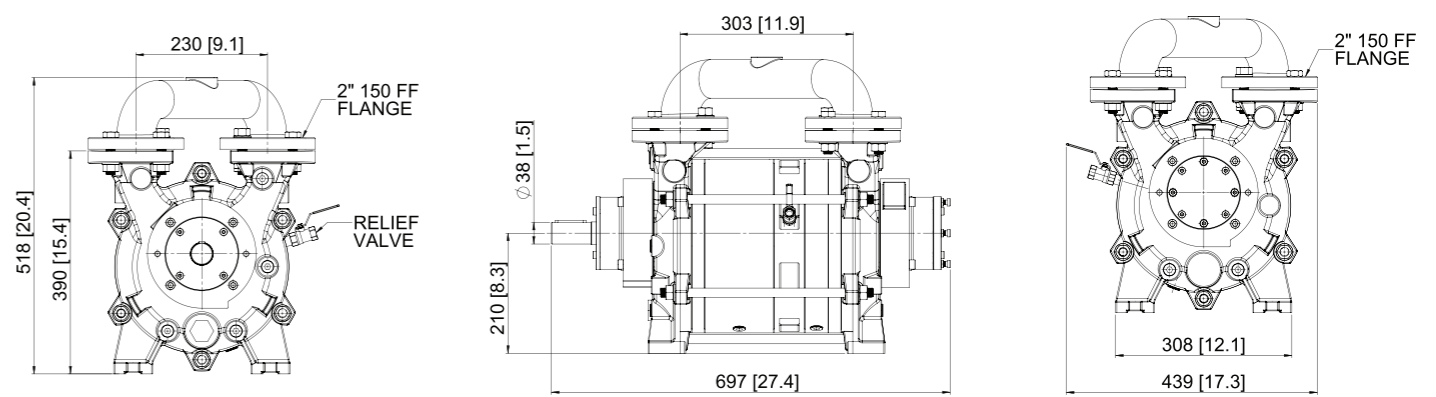
# LR2D0340B

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support.

## DIMENSIONS



# LR2D0430B

## TECHNICAL SPECIFICATIONS



		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	193 (328)	240 (408)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	20 (15)	20 (15)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	8.7 (1.9)	8.9 (2.02)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBa	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	163 (359)	163 (359)

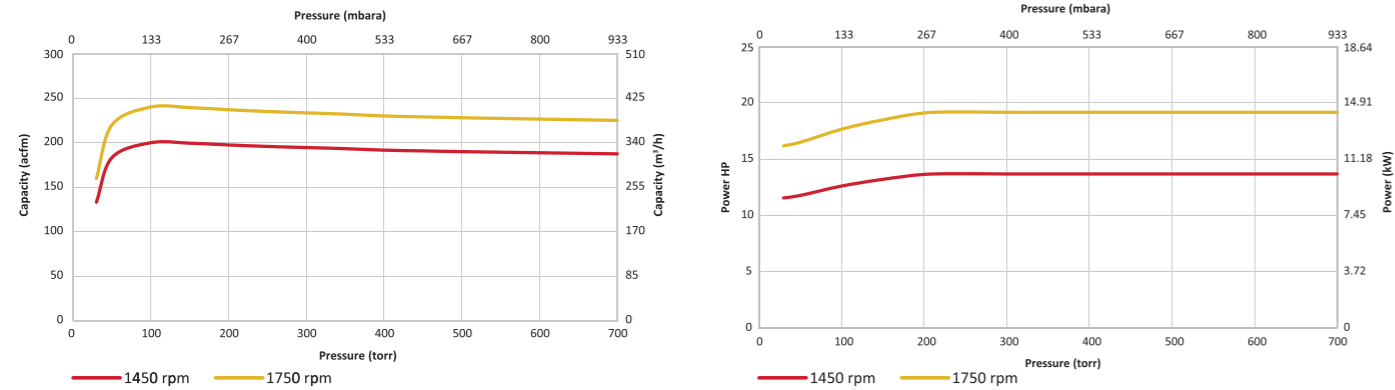
\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

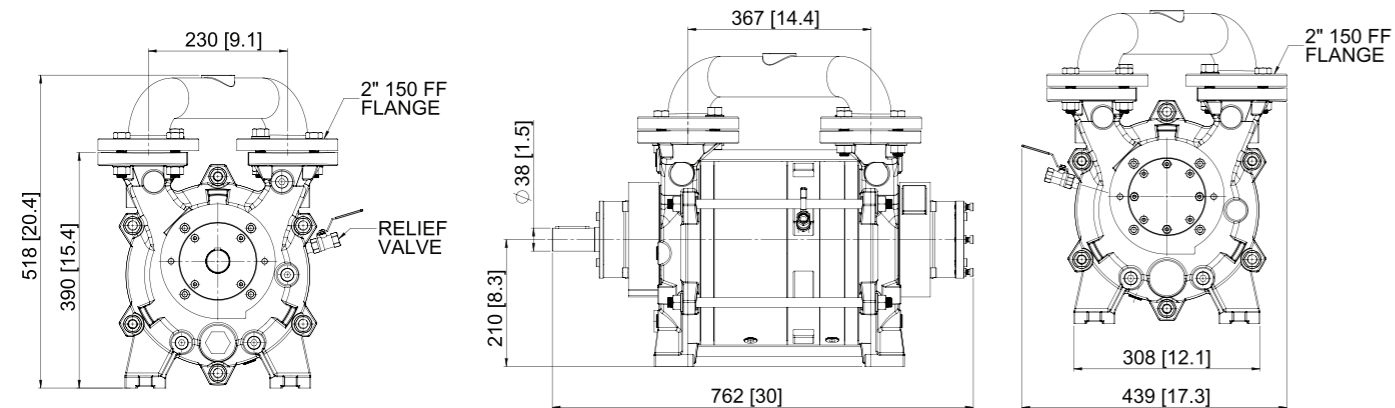
A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support

## DIMENSIONS



# LR2D0510B

## TECHNICAL SPECIFICATIONS



		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	208 (354)	259 (440)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	25 (18.5)	25 (18.5)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	9.5 (2.1)	9.7 (2.2)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBa	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	172 (379)	172 (379)

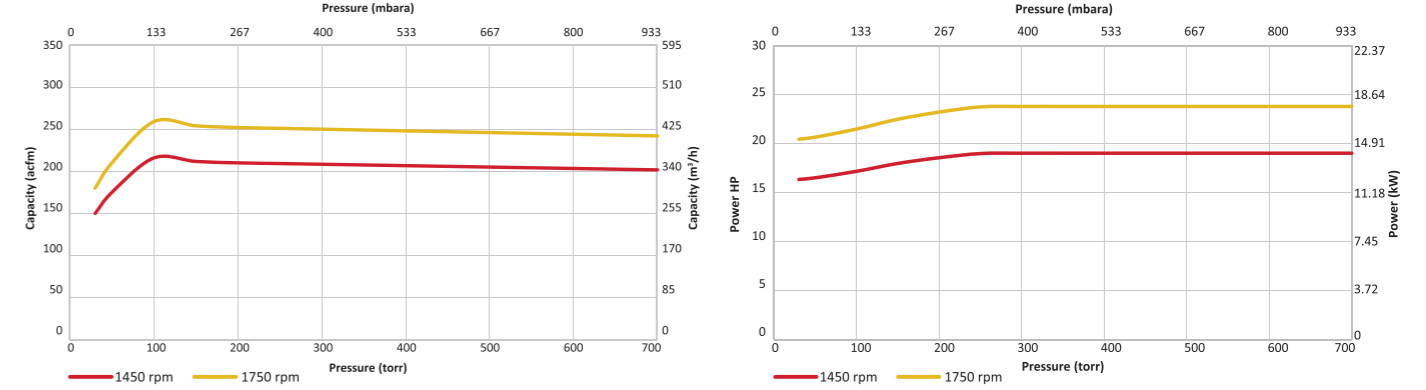
\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

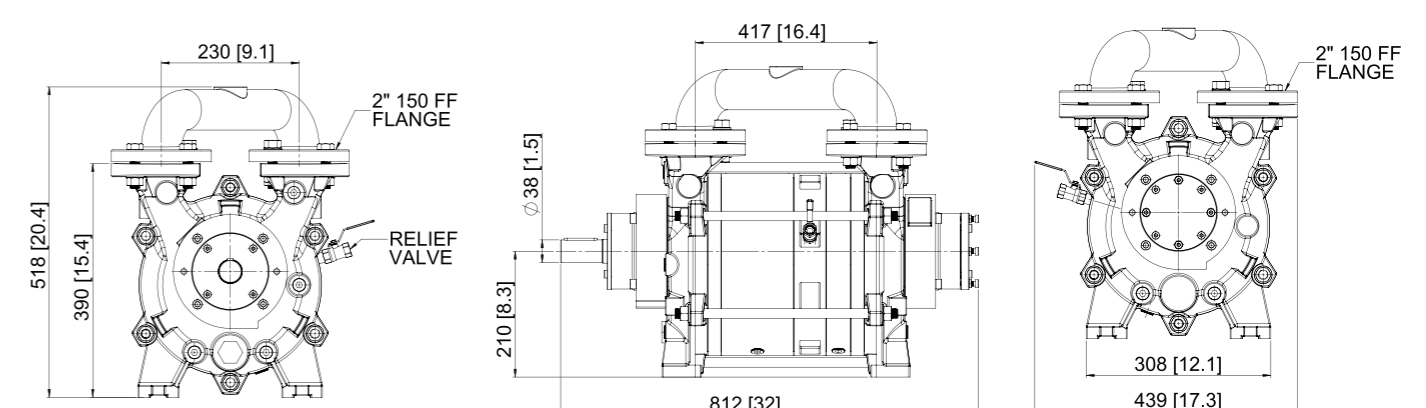
A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request

## PERFORMANCE CURVES



Actual power consumption will vary by application. Contact Edwards for applications support.

## DIMENSIONS



# LR2D0680B

## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	345 (586)	406 (690)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	40 (30)	40 (30)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	11 (2.4)	11 (2.4)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBA	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	224 (495)	224 (495)

\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

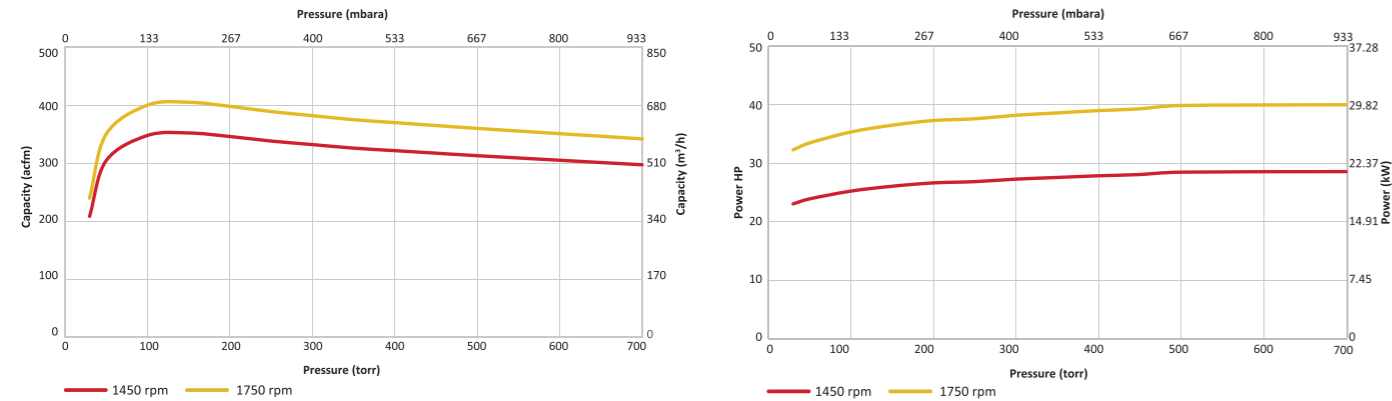
## MATERIALS OF CONSTRUCTION/SEAL CODE

Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

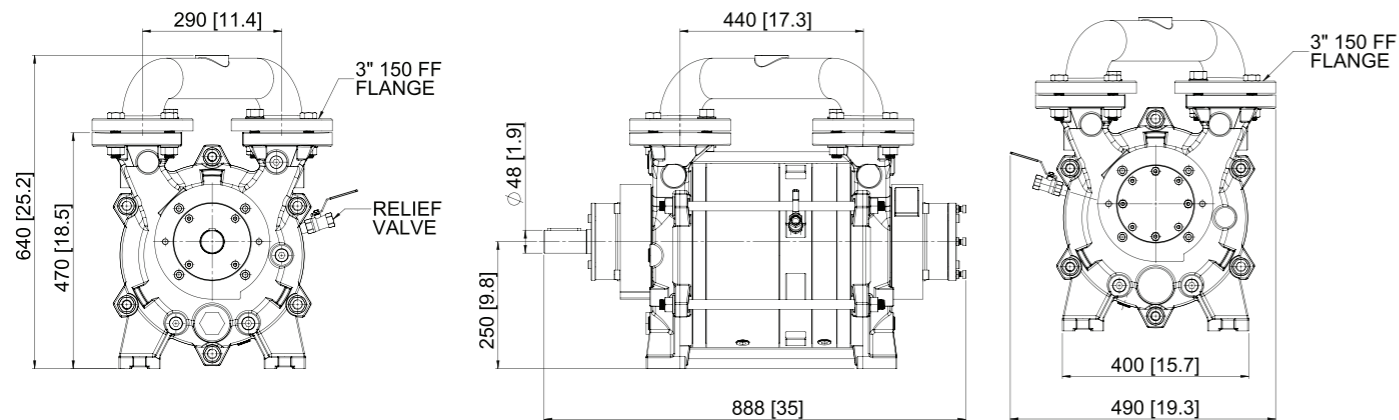
A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request



## PERFORMANCE CURVES



## DIMENSIONS



## TECHNICAL SPECIFICATIONS

		50 Hz	60 Hz
Nominal capacity	ACFM (m³/h)	390 (663)	406 (690)
Speed	rpm*	1450	1750
Motor rating power	hp (kW)**	50 (37)	50 (37)
Ultimate pressure	"HgV (mbara)	29 (30)	29 (30)
Back pressure	bara	1.2	1.2
Service liquid flow	GPM (m³/h)	15.5 (3.5)	15.5 (3.5)
Maximum inlet gas temperature	°C	100°C	100°C
Noise level (3ft)	dBA	85	85
Vibration level	mm/s	4.5	4.5
Dry weight	kg (lbs)	244 (539)	244 (539)

\* Nominal pump rotational speed  
 \*\* Recommended motor power. For increased motor power, contact us.

## MATERIALS OF CONSTRUCTION/SEAL CODE

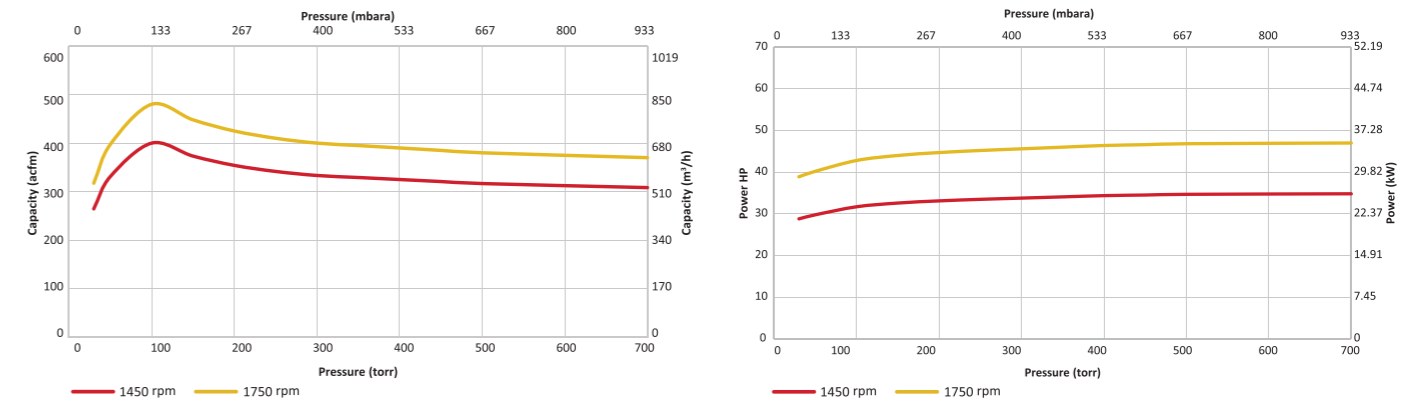
Component	Casing	Portplate	Impeller	Shaft	Seal code
Stainless steel fitted	Cast iron	Cast iron	316 SS	420 SS	A*
Stainless steel full	316 SS	316 SS	316 SS	316 SS	B*

A=Standard mechanical seal with FKM elastomer, B=Standard mechanical seal with PTFE elastomer  
 \*=other seal materials available upon request

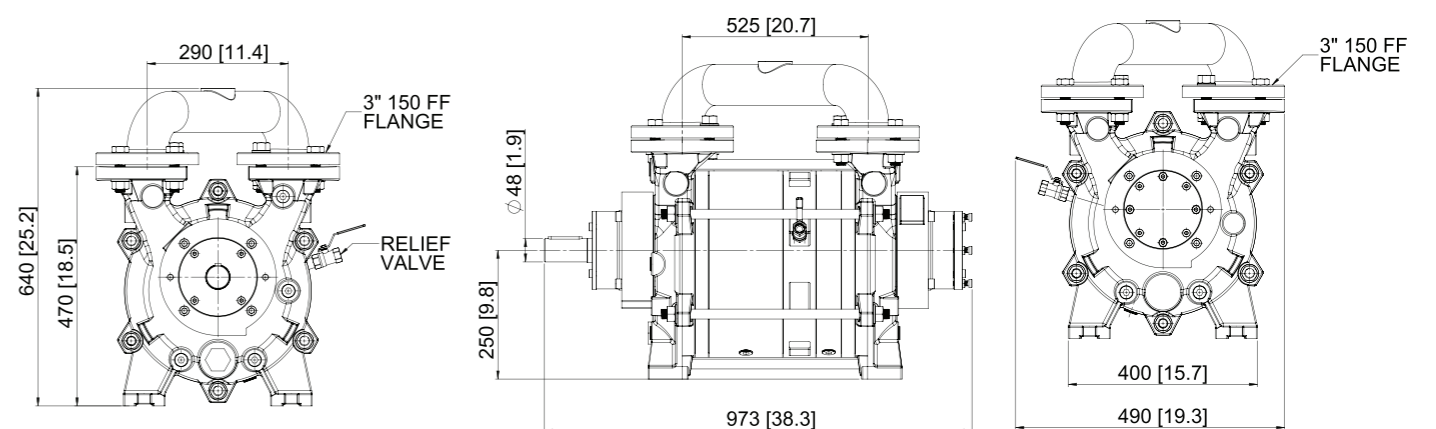


# LR2D0850B

## PERFORMANCE CURVES



## DIMENSIONS



## APPLICATIONS



- Chemical industries
- Oil & Gas
- Petroleum industries
- Power and utilities
- Carbon capture
- Mining
- Paper and Pulp
- General industries



## 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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