



LR and LLR Horizontal, Axially Split, General Industry Pumps

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▶ ***LR Pump***

▶ ***LLR Pump***



LR and LLR Horizontal, Axially Split, General Industry Pumps



- The single stage LR and the two stage LLR heavy-duty between bearing pumps provide a broad range of hydraulic coverage at low total cost of ownership.

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LR and LLR Overview

- Rugged, axial split, between bearing design
- Hydraulically balanced
- Single / double volute casing
- Standard case wear rings
- Low NPSH enclosed impellers
- High efficiency
- Ease of maintenance



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LR and LLR Overview

● Markets served

- General industry
- Water (and marine)
- Process
- Chemical
- Mining
- Steel
- Pulp and paper
- Food and beverage
- Agriculture
- Petroleum
- Building trades
- Utilities



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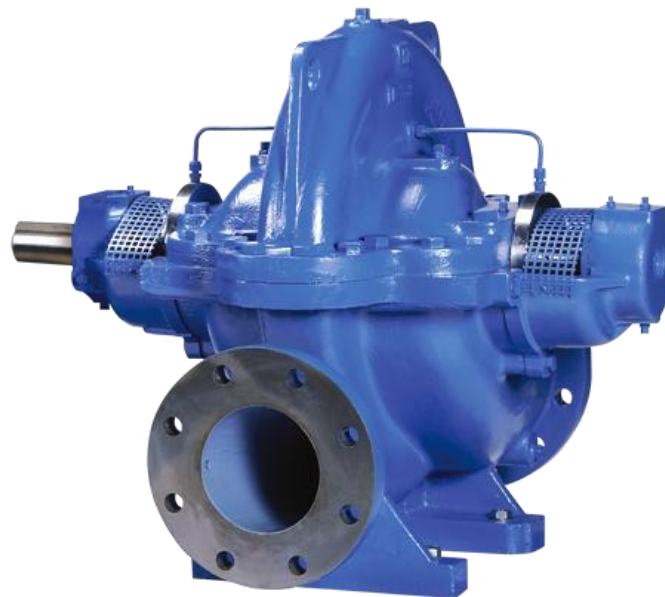
LR Axially Split, Single Stage Pump

● Operating parameters

- Standard flows to 2000 m³/h (8800 US gpm)
- Heads to 170 m (560 ft)
- Pressures to 21 bar (300 psi)
- Temperatures from -30°C (-20°F) to 150°C (300°F)

● 29 sizes available

● For higher flows see LNN pump range



	50 Hz	60 Hz
Flow	1700 m ³ /h	2000 m ³ /h
	(7485 US gpm)	(8800 US gpm)
Head	100 m	143 m
	(328 ft)	(470 ft)

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LR Axially Split, Single Stage Pump

- Double volute casing on larger sizes
- Separate bearing brackets
- Close tolerance casing rings
- Convertible stuffing box
- High efficiency, low NPSHr impellers
- Impellers and sleeves keyed to shaft
- Sleeve nuts external to liquid

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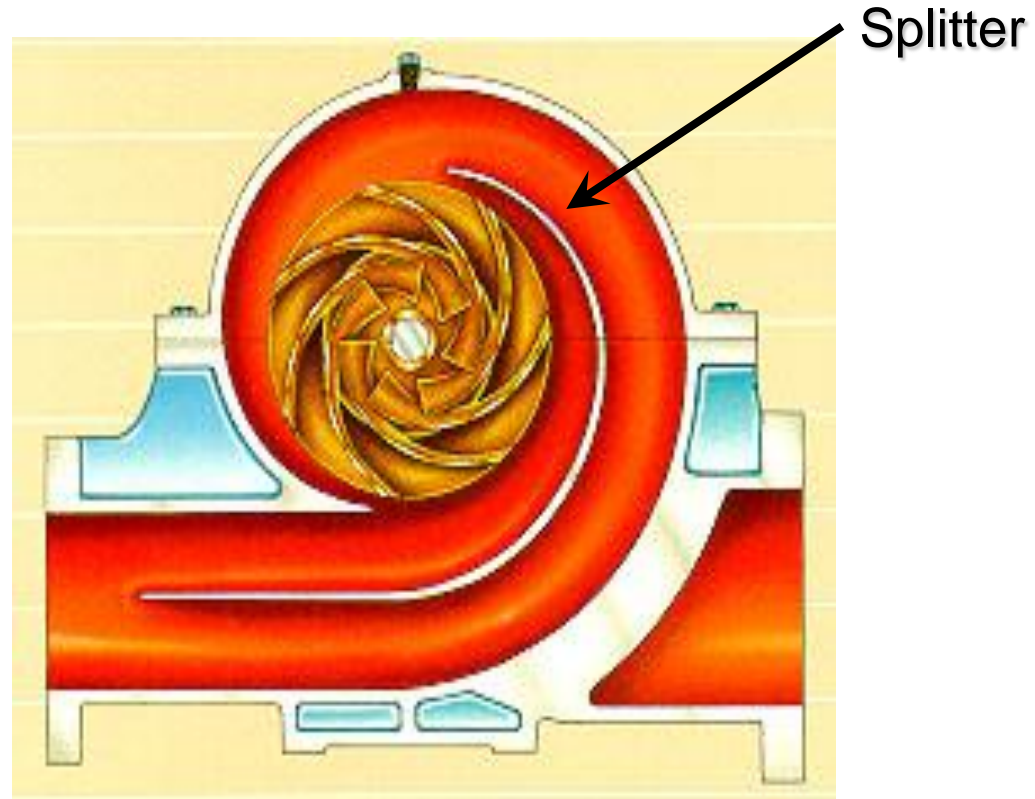
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LR Axially Split, Single Stage Pump

- Double volute casing (reduces bearing loads)



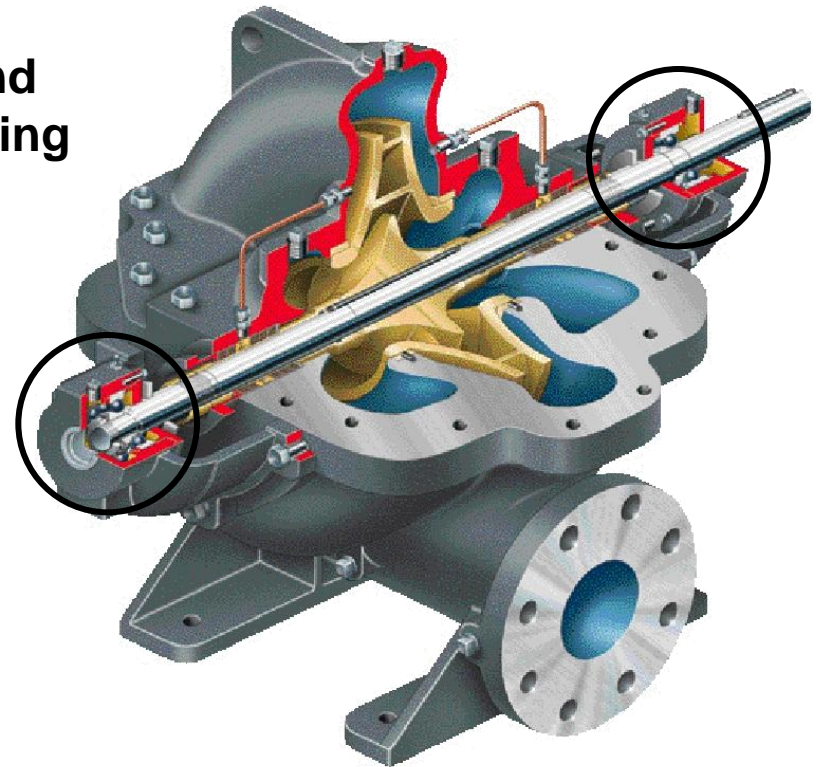
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LR Axially Split, Single Stage Pump

- **Separate bearing brackets**

- Allow access to bearings, sleeves and seals without removing the top casing
- Doweled to casing
- Oil or grease lubrication



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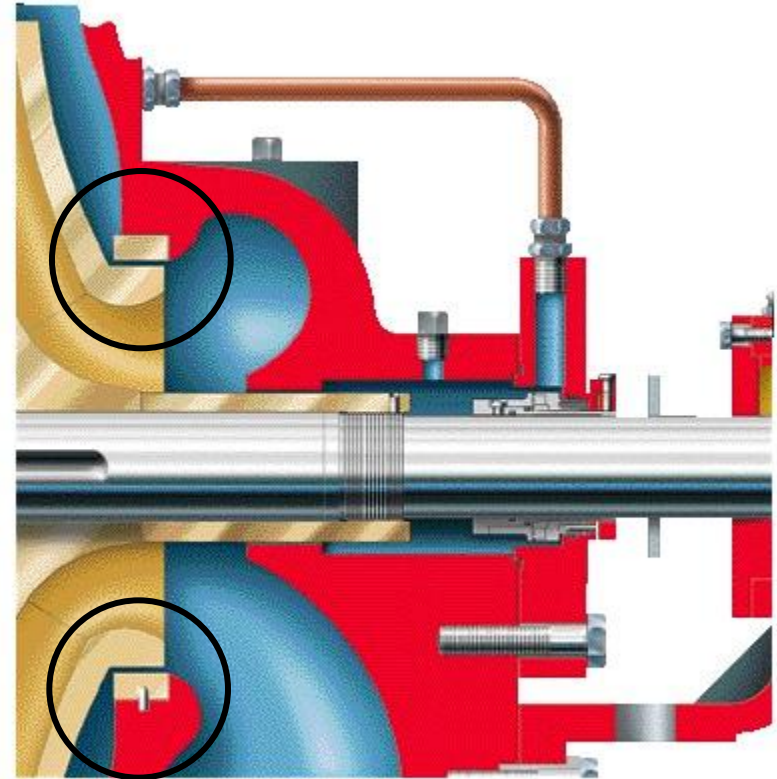
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LR Axially Split, Single Stage Pump

- **Close tolerance casing rings**
 - High efficiency operation
 - Renewable
 - Secured with Monel* pins



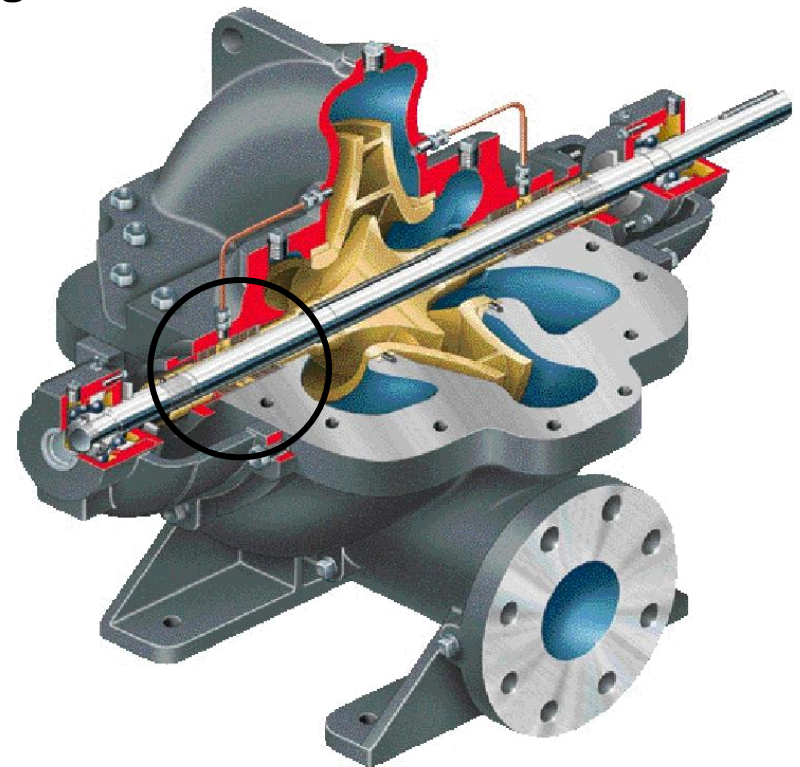
*Monel is a registered trademark of International Nickel Co., Inc.

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LR Axially Split, Single Stage Pump

- **Convertible stuffing box**
 - Available with packing or mechanical seals
 - Fits most industry standard seals
 - Many cartridge seals available

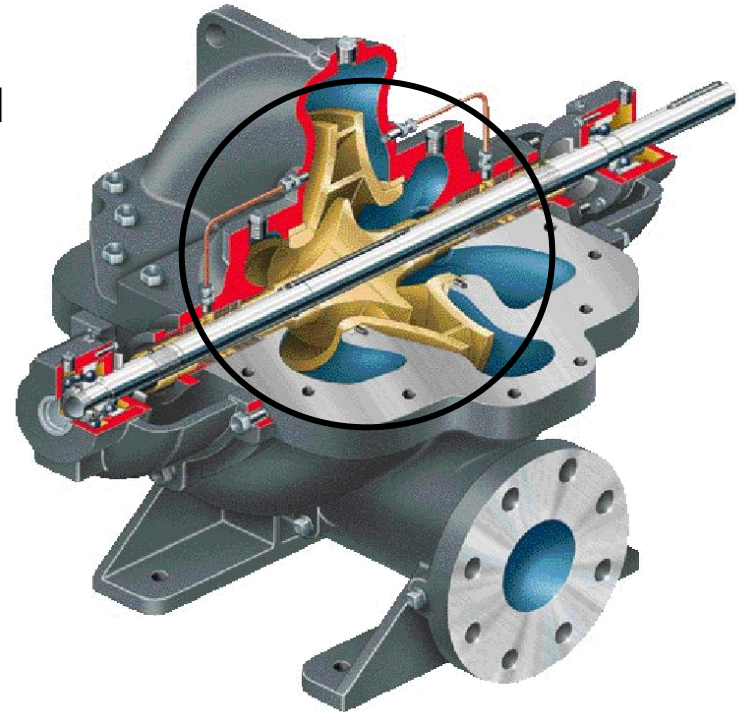


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LR Axially Split, Single Stage Pump

- High efficiency, low NPSHr impellers
 - Double suction, enclosed type
 - Precision cast
 - Hydraulically balanced
 - Keyed to shaft
 - Axially positioned by shaft sleeves and locked by external sleeve nuts



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LR Options

- Oil lubrication
- 300 # ductile iron ANSI flanges
- Double ended shafts
- Bearing isolators (Inpro, Crane, Flowserve)
- Numerous materials of construction

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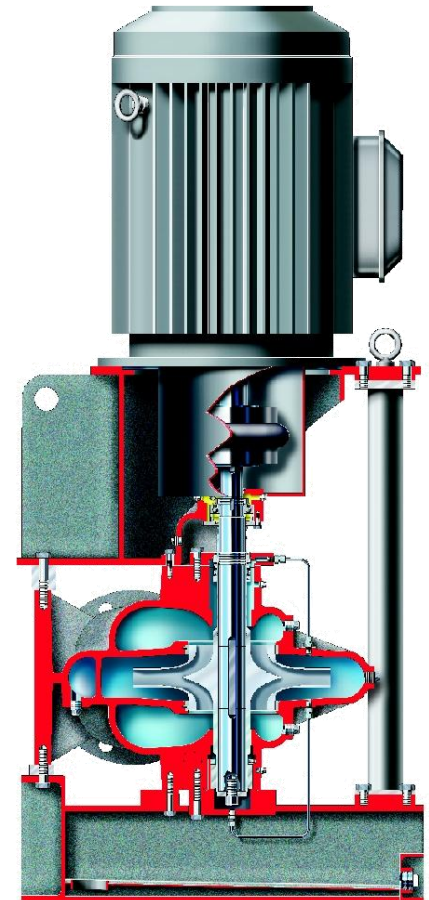
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LR Options

- **LRV vertical shaft configuration**
 - Small footprint reduces floor space requirement
 - Parts interchangeable with LR
- **Operating parameters same as LR except heads to 137 m (450 ft)**
- **20 sizes available**

	50 Hz	60 Hz
Flow	1700 m ³ /h	2000 m ³ /h
	(7485 US gpm)	(8800 US gpm)
Head	100 m	143 m
	(328 ft)	(470 ft)



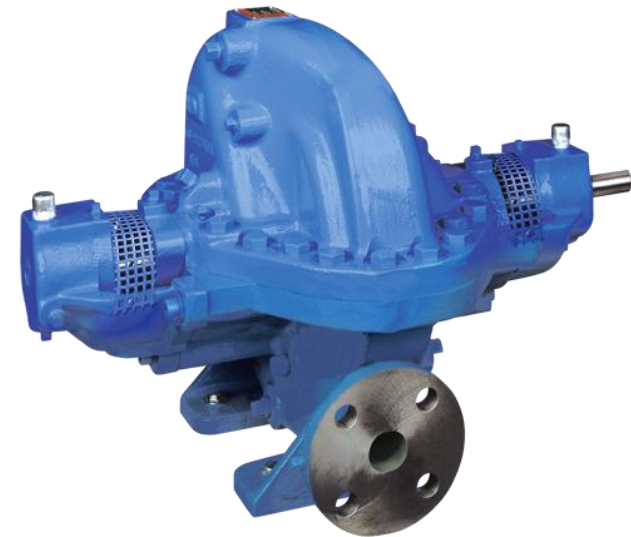
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LLR Axially Split, Two Stage Pump

- **Operating parameters**

- Standard flows to 295 m³/h (1300 US gpm)
- Heads to 290 m (950 ft)
- Pressures to 31 bar (450 psi)
- Temperatures from -30°C (-20°F) to 150°C (300°F)



- **Six sizes available**

	50 Hz	60 Hz
Flow	1700 m ³ /h	2000 m ³ /h
	(7485 US gpm)	(8800 US gpm)
Head	100 m	143 m
	(328 ft)	(470 ft)

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LLR Axially Split, Two Stage Pump

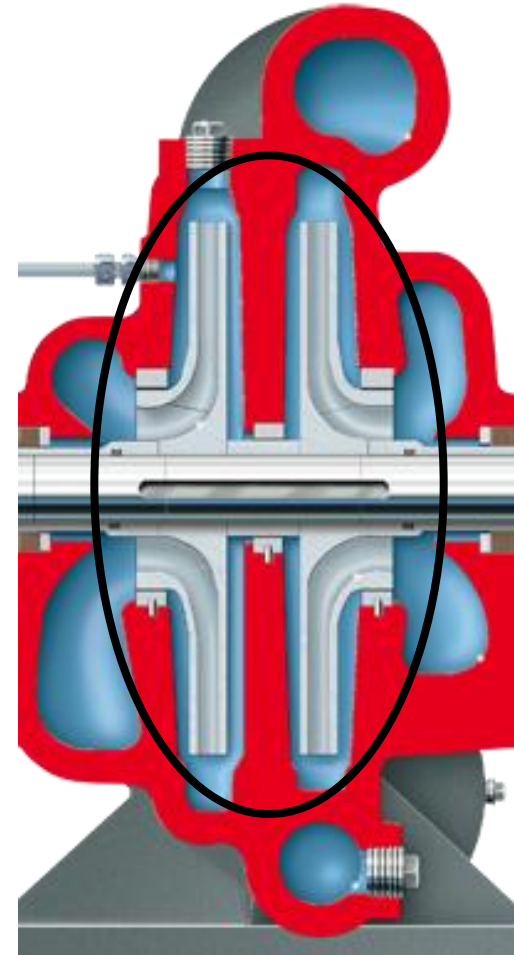
- **Back-to-back impellers**
- **Double volute design**
- **Close clearance inter-stage bushing**
- **Convertible stuffing boxes**
- **Back-to-back mounted duplex angular contact thrust bearings**
- **Low NPSH impellers**

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LLR Axially Split, Two Stage Pump

- **Back-to-back impellers**
 - High head capability
 - Hydraulically balanced
 - Prolong bearing life



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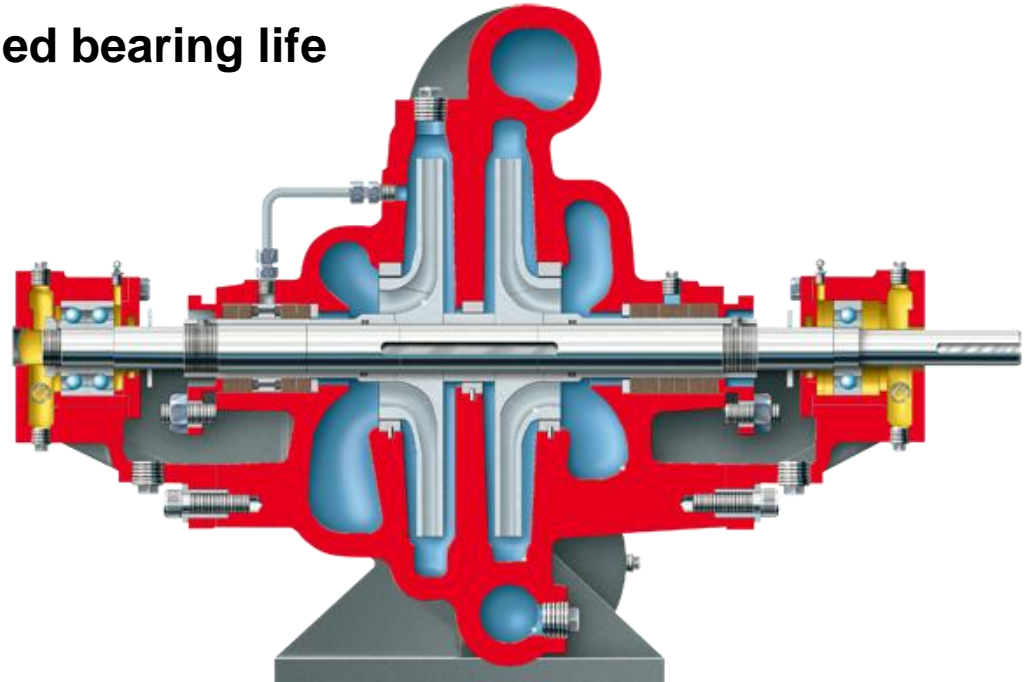
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LLR Axially Split, Two Stage Pump

- **Double volute design**
 - 180° spaced volutes
 - Reduced shaft deflection
 - Prolonged bearing life



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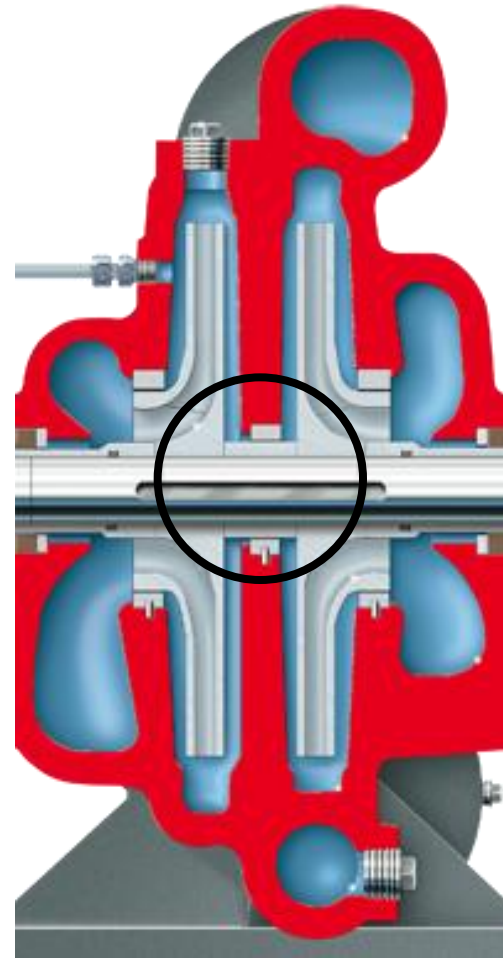
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LLR Axially Split, Two Stage Pump

- **Close clearance inter-stage bushing**
 - Minimizes interstage leaking
 - Maximizes efficiency



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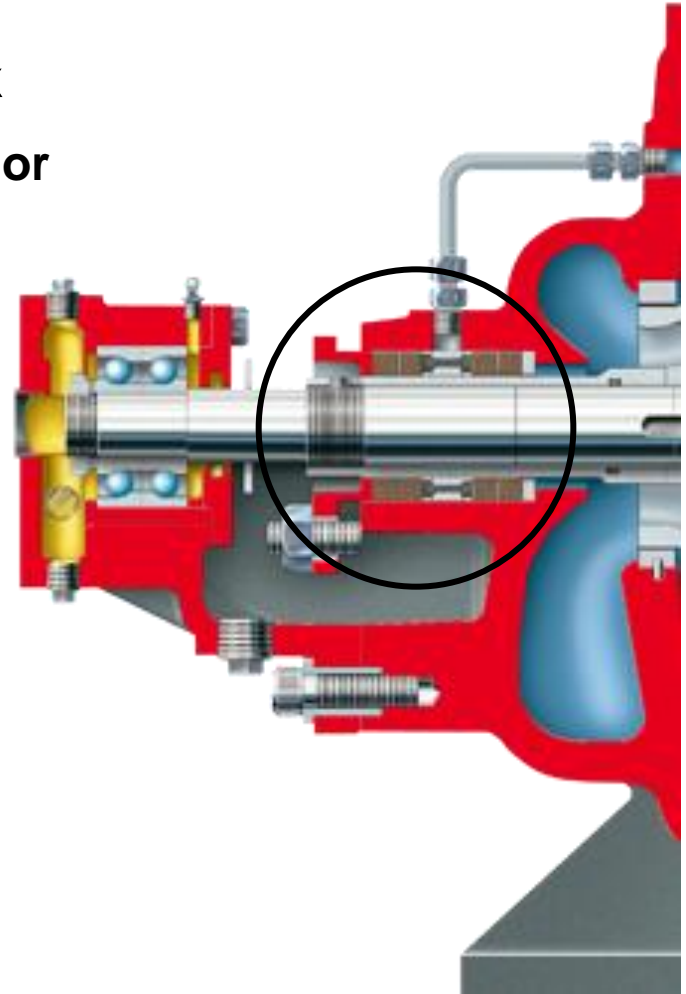
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LLR Axially Split, Two Stage Pump

- **Convertible stuffing box**
 - Available with packing or mechanical seals
 - Fits most industry standard seals
 - Many cartridge seals available



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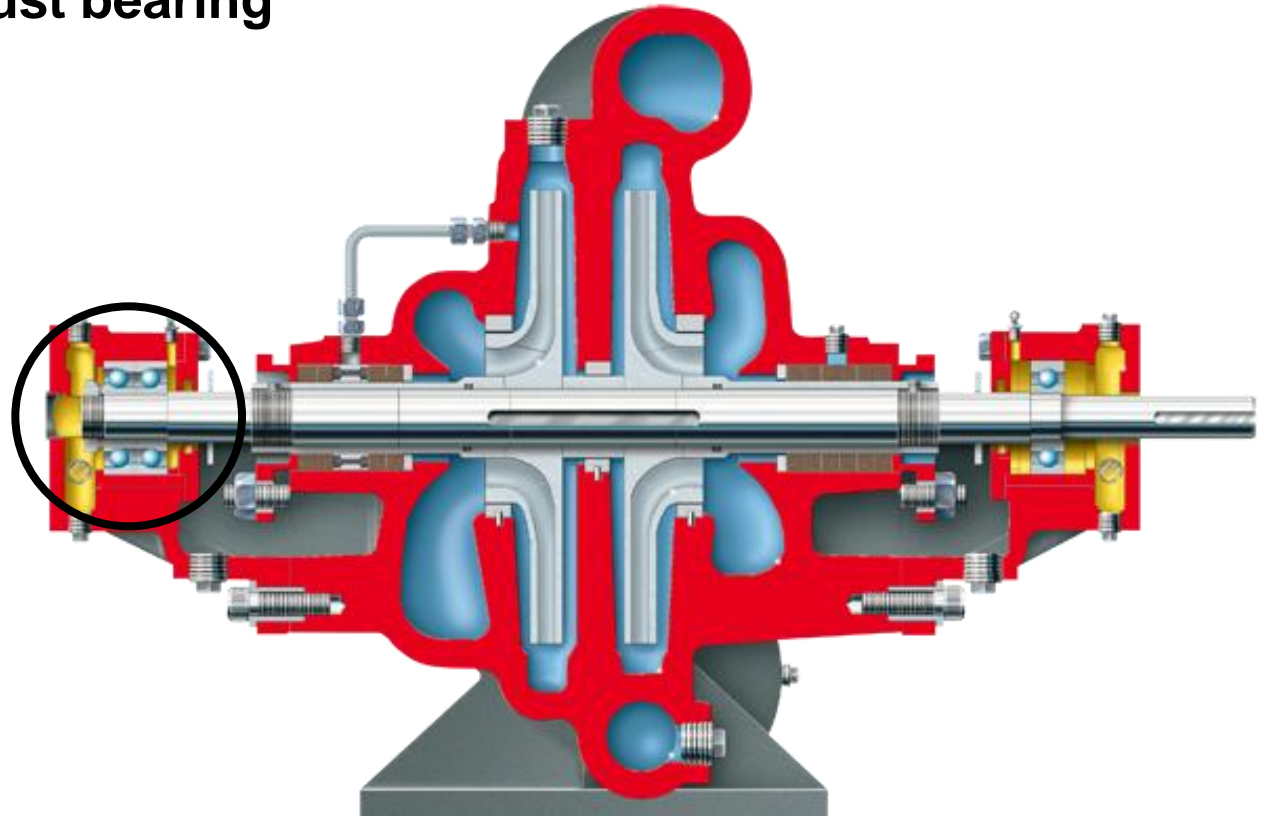
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LLR Axially Split, Two Stage Pump

- Double row thrust bearing



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LLR Options

- **Multiple mechanical seal options**
- **Oil lubrication**
- **Impeller rings**
- **Double ended shafts**
- **Numerous materials of construction**
- **Bypass orifice**

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Experience In Motion

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