

The Right Connection®



# Positive Displacement Pumps

dixonvalve.com Customer Service 800.789.1718

# Dixon<sup>®</sup> / JEC Positive Displacement Pumps

## Features

- The Cleanest of Clean pumps are 100% CIPable
- · A small compact, lightweight design equals less pump and more performance
- · Gently handle low-to-high viscosity fluids

## Applications

- Food processing:
  - E.g., sauces, salad dressing, soup, oil, meat, dough, chocolate, candy
- Dairy:
- E.g., milk, cheese, ice cream, yogurt, butter
- Beverage:
- E.g., juice, water, liquor, specialty drinks
- Pharmaceutical:
- E.g., aseptic, metering, R&D, sterile environments
- Personal care:
- E.g., moisturizer, cosmetics, toothpaste, shampoo
- Industrial:
- E.g., paint, resin, ink, chemicals, detergents



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## **In-House Application Engineering Services**

- Pump sizing and selection
- Troubleshooting support
- CAD drawings and 3D models

## In-House Base Mount and Cart Packages

- Custom-engineered packages
- Assembled in the USA
- · Many options available

## Stock

- Large inventory of pumps and parts
- All stock items can ship within 24 hours
- Most assemblies ship within 2 weeks



Take advantage of all these services by calling Dixon Sanitary's Engineering Department or email: sanitarysales@dixonvalve.com

# **RZL-Series Rotary Lobe Pumps**

Pumps can be fitted with a variety of features and options to ensure the best performance for your specific application.



## Universal Mounting

Pumps can be mounted with the shaft at the top or bottom, and the inlet and outlet can be vertical or horizontal.

## **Stainless Steel Gear Box**

The standard stainless steel gear box with a single oil reservoir made from precision casting provides paint-free and rust-free long-lasting durability.

#### **Helical Timing Gears**

Using helical timing gears, the rotors are driven with less vibration to increase pump efficiency and seal life, even when operating at high speed and high discharge pressure.

#### **Front Loading Seal**

Seals that load from the front offer faster maintenance, simpler cleaning, and reduced down time. All seal options are designed for speedy and straightforward retrofitting.





## Ease of Shimming

Stainless steel shims located between the gear box and the casing make it easier to adjust the rotor clearnace without disassembling the entire gear box.

## **Bi-Wing Rotors**

By having a longer seal path, a low-slip Bi-wing rotor continues to maintain efficiency even with lowviscosity products. Many other rotor options are available. 316L Stainless steel Standard 316L stainless steel is used in all product contact areas, and the 25 Ra finish meets EHEDG and 3A specifications.

## **100% CIPable** To obtain optimal CIP efficiency, the dead-end space between areas should be minimized.

## **RZL-Series Rotary Lobe Pumps**

## Specifications

- Connections:
- Clamp (standard), others available upon request
- All wetter parts are 316L stainless steel
- Front-loading seal options:
- Single (standard) and double mechanical seals, TC vs TC (standard)
- Triple lip seal
- Flush options available on all seal types
- Elastomers:
  - EPDM (standard), nitrile rubber, and FKM
  - Rotors:
    - Bi-Wing (standard)
    - Single-Wing
    - Bi-Lobe
    - Tri-Lobe
  - Multi-Lobe
  - Heli-Lobe
  - Hot clearance for temperatures above 248°F (120°C)
  - Viscosity range: 0 1,000,000 cP

Part #	Gal / Rev	PSI	Port Size
RZL105	0.005	300	1"
RZL110	0.01	300	1"
RZL115	0.03	175	1-1/2"
RZL120	0.06	115	2"
RZL220	0.11	175	2"
RZL225	0.16	115	2-1/2"
RZL330	0.27	175	3"
RZL340	0.38	115	4"
RZL440	0.60	175	4"
RZL450	0.88	115	5"

## **Self-Contained Flushing System**



#### Features

- · No additional piping needed
- Easy maintenance
- Available for all RZL-Series pumps with either glass or acrylic chambers



## **RZL-Series Rotary Lobes**







heli-lobe



bi-lobe



tri-lobe



single-wing

## Maximum Speed (RPM)

Part #	Bi-Wing	Heli-Lobe <sup>1</sup>	Bi-Lobe	Tri-Lobe	Single-Wing	Multi-Lobe
RZL 105	N/A	N/A	N/A	N/A	N/A	800
RZL 110	800	N/A	N/A	N/A	N/A	800
RZL 115	800	800	800	800	100	800
RZL 120	800	800	800	800	100	800
RZL 220	700	700	700	700	100	N/A
RZL 225	700	700	700	700	100	N/A
RZL 330	600	600	600	600	100	N/A
RZL 340	600	600	600	600	100	N/A
RZL 440	500	500	500	500	100	N/A
RZL 450	500	500	500	500	100	N/A

<sup>1</sup> Pulsation free heli-lobe rotors give the pump increased capacity.

## **RZL-Series Rotary Lobe Pump Options**



**Thermal Jacket Pumps** 

Designed for products that require temperature control such as sugars, chocolate, corn syrup, and brewer's yeast, with easy attachment to pump front cover and/or casing.



## Rectangular Inlet Enlarged rectangular inlet allows highly viscous products such as semi-solid pastes or mixtures containing semi-solid pieces to be pumped.



## **Ultra Clean Pumps**

Fully self-draining pump head and external rotor fixing can eliminate any contamination and internal crevices. Excellent for sterile pharmaceuticals, ultra-hygienic food processing, and aseptic manufacturing. Available in all sizes.



#### **Pressure Relief Valve**

The pressure relief valve protects the system from pressure peaks or restrictions in the discharge, providing a pressure relief valve loop from discharge to the suction areas up to **145 PSI**.



#### AccuLAB

Specially designed for superior metering accuracy with multi-lobe rotors or spur gear rotors, which allow minimum pulsation, precise volumetric dosing, and packaging, for lab and pilot plants or manufacturing applications, as well as general fluid transfer.



**High Pressure Pumps** 

High pressure pumps have a front bearing cover to support shafts on front and back position. The well-balanced shaft design can handle pressures up to **360 PSI** without shaft deflection.

## **RZW-120 Series Rotary Lobe Pump - The Wine Pump**



#### Applications

- Must and lees
- Transfer
- Bottling

#### Size

· 2" clamp

#### **Specifications**

- 316L stainless steel
- EPDM rubber heli-lobe rotors
- White epoxy-painted cast iron gear box
- · Elastomers:
- EPDM (standard) and FKM
- Flow and pressure data:
- Maximum flow: 35 GPM
- Maximum working pressure: 58 PSI
- Seal options:
  - Single mechanical seal (standard), TC vs TC
  - Double mechanical seal
  - Triple-lip seal with ceramic-coated sleeve

## **Optional Pump Cart**

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- For portable applications, the pump can be mounted on a cart with flat free wheels or casters
- A Nord adjustable-speed gear motor is standard
- Complete range of variable-frequency drive (VFD) options available



## **RZL-115 Series Frac Pump**



#### Size

• Port size: 1-1/2" NPT

#### Features

- Single mechanical front-loading seal: TC vs TC
- Bi-wing rotors
- Connections: NPT

## Specifications

- Materials of construction:
  - All wetted parts are 316L stainless steel
  - Elastomers: FKM or EPDM
  - Seal rings: tungsten carbide
- Maximum differential pressure: 174 PSI
- Temperature range: **14°F** to **247°F** (-10°C to **119°C**)

Part #	Gal / Rev	Mounting
RZL 115-FRAC2-A	0.03	SAE A
RZL 115-FRAC2-B	0.03	SAE B



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NOTE: Because of the health hazards associated with contamination and lead content in drinking water systems, Dixon couplings, unless otherwise specifically approved, are not recommended for potable water service and should not be used in applications where drinking water will contact the wetted surfaces of the coupling.

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