

# 06 Rotary Lobe Pumps

HYGIENIC



## 55 Series Ultra Hygienic Positive Displacement Pump



### FOR ULTRA HYGIENIC MARKETS

The ultimate hygienic rotary positive displacement pump designed without compromise to fulfill even the most critical customer demands in clean-ability, sterilize-ability and bacterial tightness. This 316L stainless steel design uses bi-wing or five-lobe rotor designs specifically utilized to achieve the very lowest shear rate and product degradation characteristics.

### DESIGN FEATURES

Ultimate hygienic standards: Tested and approved to the EHEDG (European Hygienic Equipment Design Group), CIP, SIP and bacterial tightness protocols. Full compliance with 3A sanitary standards 18-03 and 02-10, and utilizes materials that meet the requirements of the FDA title 21, section 177.1550.

Cleaner by design: external rotor retention along with gasket-type joints in place of O-rings reduce the number of potential product entrapment areas. In addition, the shaft seals are pulled forward fully in the product zone, all of which adds up to the ultimate in clean-ability every time.

Low product shearing: The bi-wing and five-lobe rotor designs ensure high volumetric efficiency on low viscosity products, resulting in low shear rates and low product damage.

Rugged design: This pump design utilizes extremely large shaft diameters mounted in high specification taper roller bearings. These give maximum shaft stiffness to ensure no galling, thus maintaining the pump's CIP and SIP capabilities.

### SPECIFICATIONS

MAX SPEED	Model 55210 and 55320 - 1500 RPM Model 55420 - 1000 RPM
MAX PRESSURE	Model 55210 - 203 psi (14 bar) Model 55320 and 55420 - 290 (20 bar)
ELASTOMERS	USP Class VI, EPDM, FKM and PTFE product contact joints all in compounds conforming to the FDA CFR title 21 section 177.1550.
CONNECTIONS	US and European standards including tri-clamp. All pumps available in two different sizes.
LIQUID TEMPERATURE RANGE	-22°F (-30°C) to 284°F (140°C)
SEAL	Front-loaded, single mechanical face-type seals of hygienic design. Materials include carbon and silicon carbide.  Low-pressure flushed seals utilize the same single mechanical seal with an additional housing. A low,pressure flush liquid washes away crystallizing products or liquids which "skin over".  Double mechanical seals utilize all the components from single seals. Used for hazardous, toxic, highly abrasive or sterile products.
VISCOSITY	1-1 million
CERTIFICATIONS	3.1B material certification package. 3A variants with nitrile or EPDM elastomers and port options - tri-clamp, IDF, 3A, DIN11851

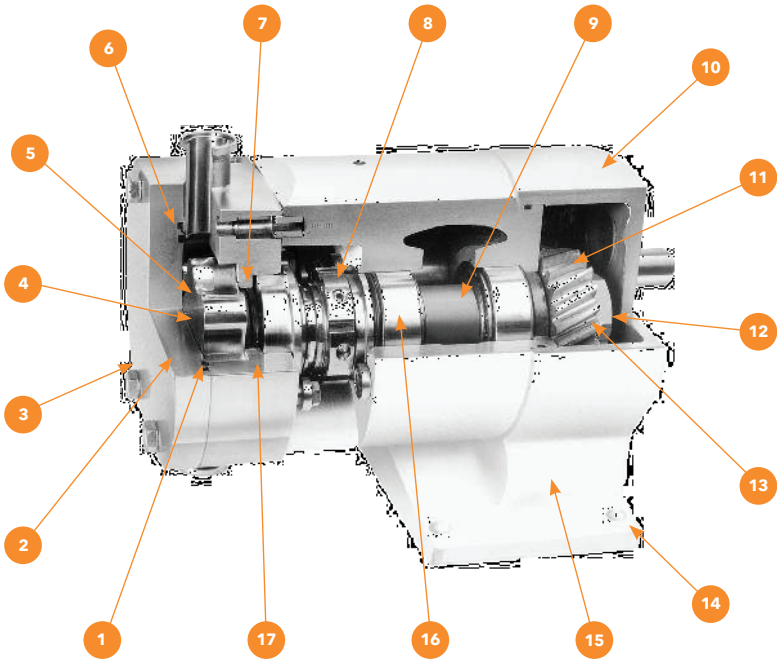
### OTHER OPTIONS

Aseptic barrier end cover joints to maintain sterility of product during long cycle times. Electro-polish or high-polish internal surfaces to 0.5µm Ra (20 micro-inc Ra) for minimized cell damage and maximized clean-ability.

### MODELS

MODEL #	DISPLACEMENT	MAX FLOW RATE	PORTS	DIMENSIONS	WEIGHT
55210	0.26 GPR (1 LPR)	4.2 GPM (16 LPM)	1/2" (13mm)	5-1/4" high x 7-1/2" long x 4-1/2" wide (135mm x 191mm x 114mm)	18lb (8kg)
55320	0.77 GPR (2.9 LPR)	11.6 GPM (44 LPM)	3/4" (19mm)	6-1/2" high x 10-1/2" long x 5-3/4" wide (168mm x 264mm x 145mm)	42lb (19kg)
55420	1.77 GPR (6.7 LPR)	17.7 GPM (67 LPM)	1" (25mm)	7-1/2" high x 11-3/4" long x 6.5" wide (191mm x 302mm x 168mm)	57lb (26kg)

### CONSTRUCTION DETAILS



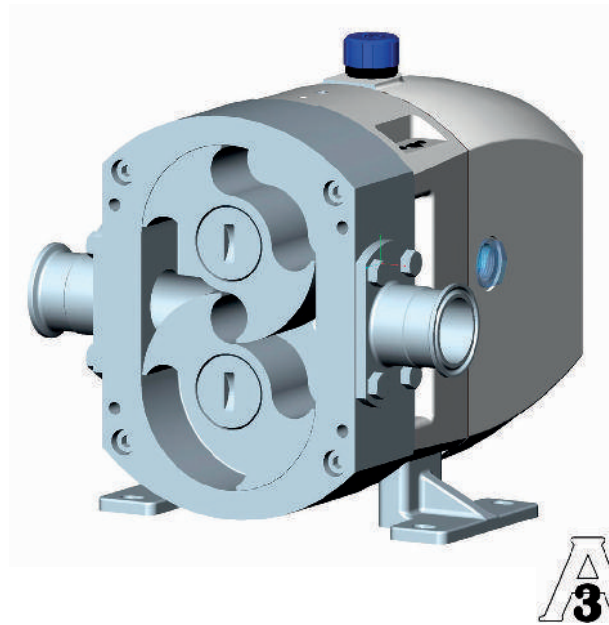
1. Specially modified rotor bores link all areas to port bore to ensure full draining of product
2. Low carbon, stainless steel grade 316L, only 0.03% maximum carbon content, 60% less than conventional pumps
3. High-surface finish fully meets US #A requirements with 240 grit polish and electro-polish options
4. Single key rotor drive is proven to be superior to involute spline. Used in conjunction with high-tech polymer support spigot to eliminate fretting
5. Unique rotor design with improved profile and extended screwed stub shaft to eliminate crevices
6. Gasket-type joints - all pump head components have been specially developed to totally eliminate the crevices associated with traditional O-rings
7. Ultra clean seals have been specially developed to be crevice-free, self-draining and front-loading
8. External rotor retainers eliminate all internal crevices associated with conventional bolts and nuts
9. High strength shafts made from a stainless steel with 230% greater tensile strength than conventional pump shafts
10. Smooth contoured externals with generous drain angle of not less than 2-1/2" and no major crevices
11. Extra wide helical greats up to 8-% wider than normally used. Precision ground to ensure minimal backlash and smooth operation.
12. Single key great drive gives precise positioning of gear and will not slip as some torque brushes can
13. Oil lubricated gears gives optimum lubricant film between meshing gear teeth
14. Multi-position mounting of foot/gear housing with only 4 screws to allow easy change from vertical to horizontal port position
15. Robust bearing carrier manufactured in caustic and solvent resistant, epoxy-coated cast iron
16. Oversize bearings up to 60% greater life than normally achieved. No maintenance required and no contamination from gear lubricant
17. US FDA approved materials in contact with the product throughout

# 06 Rotary Lobe Pumps

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## HP & UL Series



With a proven 50 year heritage in Lobe Pump manufacturing, Jabsco branded lobe pumps are taking the next step in flexibility and value with the Hy-Line+ (HP Series) and Ultra-Line (UL Series).

Combined strengths and experience in one key platform. Jabsco lobe pumps offer high flow, high pressure capabilities from a positive displacement non contacting rotary lobe pump package incorporating a choice of scimitar or tri-lobe rotors . With applications in industry, food, beverage and bio-pharmaceutical processing sectors, Jabsco lobe pumps can be found decanting, transferring, filling, spraying, dosing a wide range of fluids in many varied environments (including ATEX designated zones).

Modular procurement brings flexibility. Modularity is a key feature to both the Hy-Line+ and Ultra-line series. With today's market being driven by lead time, flexibility will allow our supply chain to reduce this factor. The HP and UL series lobe pumps are offered in three key modules; Vertical and horizontal foot kits, port kits and the pump module. The pumps stand on stainless steel feet, redesigned for greater stability and improved durability.

### FEATURES

- Epoxy-coated bearing housing and gear cover; available in stainless steel
- Pump module, feet and port kits sold separately. 1 pump, 96 possible variants, for sizes 4 – 6
- Hopper inlet option
- Nitrile, FKM and PTFE wetted elastomers to FDA, 3A and EN1935:2004; EPDM to USP Class VI
- Front loading seals and rotors as standard across the range
- HP series end cover supports relief valves and end covers
- 304 stainless steel feet as standard on sizes 4 – 7
- Tri-lobe and scimitar rotor options on one pump platform

### APPLICATIONS

- Industrial
- Food and beverage
- Bio-pharmaceutical processing
- Decanting
- Transfer
- Filling
- Spraying

### SPECIFICATIONS

PUMP	High-flow, high-pressure, positive displacement, non-contacting rotary lobe
POWER SOURCE	Shaft coupled, electric motor drive (not provided)
WETTED PARTS	316L with epoxy-coated aluminum gear cover
SEAL*	C/SS, SiC/SiC, single or double with flush; 304 stainless steel mounting feet with nitrile, FKM, EPDM, or PTFE elastomer joints

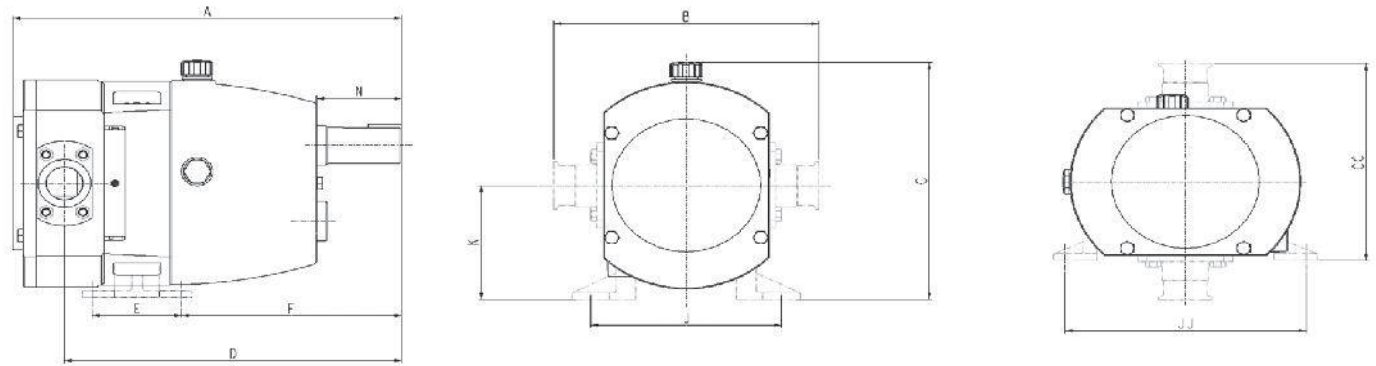
\* Additional seal information and configurations available. Please contact us if you do not see what you are looking for

### MODELS

PUMP SIZE	MAX SPEED	MAX PRESSURE	MAX FLOW	WEIGHT
32	1500 RPM	217 psi (15 bar)	93 GPM (350 LPM)	22lb (10kg)
34	1500 RPM	116 psi (8 bar)	211 GPM (800 LPM)	27lb (12kg)
42	1000 RPM	217 psi (15 bar)	325 GPM (1,230 LPM)	40lb (18kg)
44	1000 RPM	116 psi (8 bar)	539 GPM (2,040 LPM)	44lb (20kg)
52	1000 RPM	217 psi (15 bar)	700 GPM (2,650 LPM)	70lb (32kg)
54	1000 RPM	116 psi (8 bar)	1,202 GPM (4,550 LPM)	77lb (35kg)
62	720 RPM	217 psi (15 bar)	1,690 GPM (6,400 LPM)	134lb (61kg)
64	720 RPM	116 psi (8 bar)	2,509 GPM (9,500 LPM)	143lb (65kg)
72	680 RPM	217 psi (15 bar)	3,249 GPM (12,300 LPM)	275lb (125kg)
74	600 RPM	116 psi (8 bar)	5,415 GPM (20,500 LPM)	319lb (145kg)
76	600 RPM	72 psi (5 bar)	7,951 GPM (30,100 LPM)	363lb (165kg)

### DIMENSIONS

Unless otherwise stated, dimensions are in inches and (mm).



PUMP SIZE	A	B*	C	CC	D	E	F	J	JJ	K	N
32	8.4" (213mm)	7.6" (192mm*)	7.3" (184mm)	7.6" (192mm)	7.2" (183mm)	1.6" (40mm)	4.1" (105mm)	4.3" (110mm)	4.3" (110mm)	3.8" (96mm)	1.4" (36mm)
34	9" (229mm)	7.6" (192mm)	7.3" (184mm)	7.6" (192mm)	7.4" (188mm)	1.6" (40mm)	4.1" (105mm)	4.3" (110mm)	4.3" (110mm)	3.8" (96mm)	1.4" (36mm)
42	10.8" (274mm)	8.8" (223mm)	8.3" (212mm)	7.2" (183mm)	9.1" (231mm)	2.8" (72mm)	5.6" (142mm)	5.9" (150mm)	7.9" (200mm)	3.9" (99mm)	1.7" (42mm)
44	11.4" (290mm)	8.8" (223mm)	8.3" (212mm)	7.2" (183mm)	9.5" (241mm)	2.8" (72mm)	5.6" (142mm)	5.9" (150mm)	7.9" (200mm)	3.9" (99mm)	1.7" (42mm)
52	14.5" (368mm)	9.8" (249mm)	9.8" (250mm)	8.2" (208mm)	12.6" (319mm)	3.3" (84mm)	8.2" (208mm)	7" (178mm)	9" (229mm)	4.7" (120mm)	3.1" (79mm)
54	15.6" (396mm)	10.2" (259mm)	9.8" (250mm)	8.4" (213mm)	13.3" (338mm)	3.3" (84mm)	8.2" (208mm)	7" (178mm)	9" (229mm)	4.7" (120mm)	3.1" (79mm)
62	17" (433mm)	11.3" (288mm)	13" (329mm)	9.8" (249mm)	14.6" (370mm)	4.8" (122mm)	8.8" (224mm)	7.9" (200mm)	11.6" (294mm)	6.9" (174mm)	3.1" (79mm)
64	18.2" (462mm)	11.9" (302mm)	13" (329mm)	10.1" (256mm)	14.9" (379mm)	4.8" (122mm)	8.2" (208mm)	7.9" (200mm)	11.6" (294mm)	6.9" (174mm)	3.1" (79mm)
72	19.3" (489mm)	15" (380mm)	15" (381mm)	12.8" (324mm)	16.3" (414mm)	8.3" (210mm)	7" (178mm)	11.3" (288mm)	13.5" (342mm)	7.3" (186mm)	3.5" (89mm)
74	20.8" (529mm)	15" (380mm)	15" (381mm)	12.8" (324mm)	17.3" (439mm)	8.3" (210mm)	7" (178mm)	11.3" (288mm)	13.5" (342mm)	7.3" (186mm)	3.5" (89mm)
76	22.7" (576mm)	16.2" (411mm)	15" (381mm)	13.4" (340mm)	18" (456mm)	8.3" (210mm)	7" (178mm)	11.3" (288mm)	13.5" (342mm)	7.3" (186mm)	3.5" (89mm)

\* Size 3 has welded ports.  
1" (25mm) tri-clamp = 6.9" (175mm)  
1" (25mm) DIN11851 = 7.9" (201mm)  
1-1/2" (38mm) BSP = 7.9" (201mm)