

Rotary Lobe Pumps 07

Hygienic Pumps



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HYGIENIC PUMPS

JABSCO

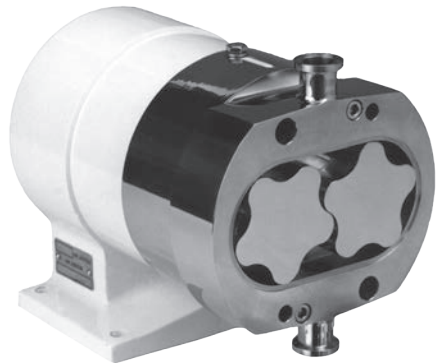
JABSCO

Ultima/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 cleanability, sterilize ability and bacterial tightness. This 316L stainless steel design uses bi-wing or 5-lobe rotor designs specifically utilized to achieve the very lowest shear rate and product degradation characteristics. The Ultima pump is an extension of Xylem Jabsco's world renowned 55 series pump, which was the first pump of its kind and a virtual industry standard in the Bio-pharm arena.



DESIGN FEATURES

ULTIMATE HYGIENIC STANDARDS

Tested and approved to the EHEDG (European Hygienic Equipment Design Group), CIP, SIP and Bacterial Tightness protocols. Full conformance to 3A Sanitary Standards 18-03 and 02-10 and utilizing materials which meet the requirements of the FDA title 21, section 177.1550.

CLEANER BY DESIGN

External rotor retention together with gasket type joints in place of O-rings reduce the number of potential product entrapment areas. In addition to this, the shaft seals are pulled forward fully in the product zone, all of which adds up to the ultimate in cleanability every time!

LOW PRODUCT SHEARING

The bi-wing and 5 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.

CONNECTIONS

US and European standards including tri-clamp. All pumps available with 2 different sizes.

ELASTOMERS

USP Class VI, EPDM, Viton and PTFE product contact joints all in compounds conforming to the FDA CFR title 21 section 177.1550.

OTHER OPTIONS

Aseptic barrier end cover joints to maintain sterility of product during long cycle times.

Electropolish or high polish internal surfaces to 0.5µm Ra (20 micro-inc Ra) for minimized cell damage and maximized cleanability.

OPTIONS

SEALS

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 utilizing all the components from single seals. Used for hazardous, toxic, highly abrasive or sterile products.

CERTIFICATION

3.1B Material Certification package.

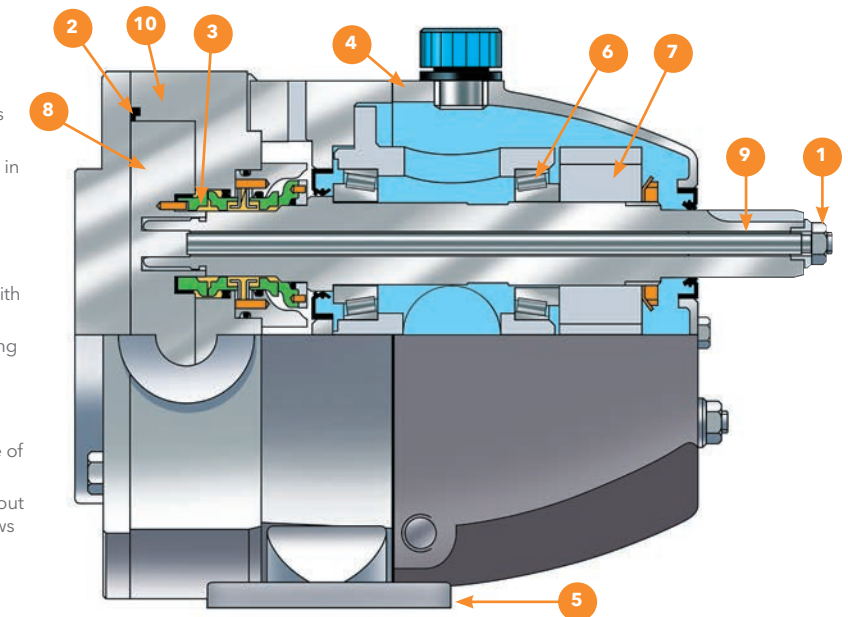
3A Variants with nitrile or EPDM elastomers and port options - tri-clamp, IDF, 3A, DIN11851

ULTIMA/55 SERIES ULTRA HYGIENIC POSITIVE DISPLACEMENT PUMP

PUMP MODEL	55 SERIES			ULTIMA						
	55210	55320	55420	LU42	LU44	LU52	LU54	LU62	LU64	
PORT SIZE	(INCH)	½	¾	1	1 or 1½	1½ or 2	1½ or 2	2 or 3	2, 2½ or 3	3 or 4
	(MM)	12.5	19	25	25 or 38	38 or 50	38 or 50	50 or 76	63 or 76	76 or 100
DISPLACEMENT	(US GAL)	0.26	0.77	1.77	3.25	5.39	7.00	12.02	16.90	25.10
	(LITER)	1	2.9	6.7	12.3	20.4	26.5	45.5	64	95
MAX FLOW (PER MIN)	(US GAL)	4.2	11.6	17.7	32.5	53.9	70.0	120.2	121.8	180.7
	(LITER)	16	44	67	123	204	254	437	461	684
MAX PRESSURE	(PSI)	203	290	290	217	116	217	116	217	116
	(BAR)	14	20	20	15	8	15	8	15	8
MAX SPEED (RPM)		1500	1500	1000	1000	1000	1000	1000	720	720
SIZE LXBXH	(INCH)	7.5x4.5 x5.25	10.5x5.75 x6.5	11.75x6.5 x7.5	10.75x8.75 x7.75	11.75x8.75 x7.75	15.25x9.75 x8.25	16.25x10.25 x8.25	18.25x13 x9.75	19.25x13 x10
	(MM)	191x114 x135	264x145 x168	302x168 x191	285x223 x182	301x223 x182	386x249 x208	414x259 x213	463x328 x249	492x328 x254
BARESHAFT WEIGHT	(LBS)	18	42	57	51	55	84	90	154	165
	(KG)	8	19	26	23	25	38	41	70	75
TEMP	(°C)	-30 to 140								
	(°F)	-22 to 284								
VISCOSITY (CP)		1 to 1 million								

CONSTRUCTION DETAILS

- External rotor retainers prevent build up of stagnant product, by removing the need for end cover recesses and O-ring crevices entirely.
- Gasket type joints eliminate the uncertainty of O-rings in terms of cleanability.
- Front mounted shaft seals allow for easy replacement and full accessibility of CIP liquids.
- Rugged, stainless steel bearing pedestal and housing allow for maximum hygiene (epoxy coated cast iron with stainless steel option on 55 series).
- Removable feet allow quick change for pump mounting in the ideal orientation.
- High specification taper roller bearings give over one million hours life on a typical duty.
- Precision cut gears yield high load capability and ease of maintenance or replacement.
- Fully interchangeable bi-wing rotors can be fitted without the need to re-time thus reducing downtime and allows pump to cope with a higher level of abuse and larger solids.
- Heavy duty shafts for maximum rigidity and minimum galling due to low deflections.
- Low carbon 316L pump head with welded ports for reduced carbide precipitation, increased corrosion resistance and minimal carbon 'pull-out'.



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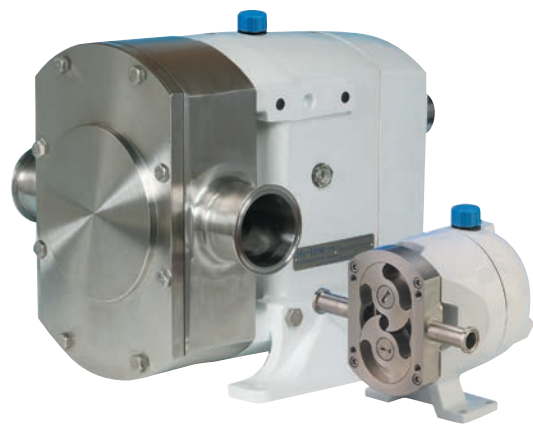
JABSCO

Hy-Line Super Hygienic Positive Displacement Pump



FOR HYGIENIC MARKETS

Jabsco's latest rotary positive displacement pump incorporates the very latest in hygienic design concepts in order to fulfill the ever increasing customer demands for improved cleanability, hygiene and sterilizability. This 316 Stainless Steel design uses a bi-wing rotor, which encompasses the very best features of tri-lobe rotor pumps and circumferential piston pumps. The pump is built upon Xylem Jabsco's 40 year experience of producing and supplying their Flexible Impeller and 24 Series rotary lobe pumps to the world's most demanding markets.



DESIGN FEATURES

MOST STRINGENT HYGIENIC STANDARDS

Flush rotor fixing screws are sealed to prevent product ingress. Contoured rotor case internals for full drainability during SIP and shaft seals set up front where the pumping action is! Fully conforming to 3A 02-10 Hygienic Standards and utilizing materials which meet FDA requirements. Versions are available that have been tested and approved to the EHEDG (European Hygienic Equipment Design Group), CIP and SIP protocols and USDA, 3A certification.

LOW MAINTENANCE COSTS

Front loaded single shaft seals are fully accessible from the front of the pump without disturbing the process pipework. Simple bearing assemblies easily pre-set using automotive technology. Bi-wing rotors require no timing adjustments. Even the pump casing is removable, a feature not normally associated with other bi-wing rotor pumps.

HIGH VOLUMETRIC EFFICIENCY

The bi-wing rotors incorporate the low viscosity efficiency associated with circumferential piston pumps with the viscous product handling capability of tri-quad and bi-lobe rotor pumps at an affordable price.

RUGGED DESIGN

Hy-Line design utilizes extremely large shaft diameters mounted in high specification taper roller bearings, fitted into an extremely rigid central pillar made from a high grade alloy. This is all enclosed in an oil filled housing made from the same alloy. These, together with wide tipped rotor wings, which adds another dimension to security, avoid premature pump failure due to overpressure or other abuse.

CERTIFICATION

3.1B Material Certification package.

3A Variants with Nitrile or EPDM elastomers and port options - Tri-clamp, IDF, 3A, DIN11851

CONNECTIONS

All US and European standards including DIN, SMS, RJT, IDF, Tri-Clamp & BSP. Most pumps available with 2 different sizes, all fully interchangeable. (Not on 3 & 7 size)

ELASTOMERS

Nitrile, Viton, EPDM and PTFE product contact joints available in compounds conforming to 3A Sanitary Standard 18-03 and FDA title 21 section 177.2600.

OTHER OPTIONS

Pump Head temperature control jackets
Integral pressure relief valve
Enlarged suction port for viscous products
All stainless steel bearing pedestal and cover
Low carbon 316L pump head
Tanker pump version for direct hydraulic drive

OPTIONS

SEALS

Front loaded single mechanical face type seals of hygienic design. Materials include carbon, stainless steel 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 utilizing all the components from single seals. Used for hazardous, toxic, highly abrasive or sterile products.

Front loaded single O-Ring seals - a low cost seal option used primarily for self lubricating products and products which contain little or no abrasives.

Front loaded double O-Ring seals - suitable for pressurized grease or flushing with a suitable liquid to enable low cost sealing of high sugar confectionery and bakery products.

Multiple PTFE lip seal - complete with controlled release food grade grease injection system, the ideal sealing system for chocolate & other products sensitive to water flush.

JABSCO

HY-LINE

PUMP MODEL	LH32	LH34	LH42	LH44	LH52	LH54	LH62	LH64	LH72	LH74	LH76	
PORT SIZE (MM)	19 or 25	25 or 38	25 or 38	38 or 50	38 or 50	50 or 76	63 or 76	76 or 100	76 or 100	100 or 152	127 or 152	
	(INCH)	¾ or 1	1 or 1½	1 or 1½	1½ or 2	1½ or 2	2 or 3	2, 2 ½ or 3	3 or 4	3 or 4	4 or 6	5 or 6
DISPLACEMENT (LITRE) (100 REVS)	3.5	7	12.3	20.4	26.5	45.5	64	95	123	205	301.5	
	(US GAL)	0.92	1.85	3.25	5.39	7.00	12.02	16.90	25.10	32.50	54.15	79.65
MAX FLOW (PER MIN)	(LITRE)	52	105	123	204	265	455	461	684	836	1230	1809
	(US GAL)	13.7	27.7	32.5	53.9	70.0	120.2	121.8	180.7	220.8	324.9	477.9
MAX PRESSURE (BAR)	15	8	15	8	15	8	15	8	15	8	5	
	(PSI)	217	116	217	116	217	116	217	116	217	116	72
MAX SPEED (RPM)	1500	1500	1000	1000	1000	1000	720	720	680	600	600	
SIZE LXBXH (MM)	213 x192 x166	229 x192 x166	274 x223 x196	290 x223 x196	386 x249 x208	414 x259 x213	460 x270 x311	464 x302 x311	486 x380 x363	526 x386 x363	573 x412 x363	
	(INCH)	8.25 x7.5 x6.5	9 x7.5 x6.5	10.75 x8.75 x7.75	11.5 x8.75 x7.75	15.25 x9.75 x8.25	16.25 x10.25 x8.25	18.25 x10.75 x12.25	18.25 x11.75 x12.25	19.25 x15 x14.25	20.75 x15.25 x14.25	22.5 x16.25 x14.25
BARESHAFT WEIGHT (KG)	8	10	18	20	32	35	61	65	125	145	165	
	(LBS)	18	22	40	44	70	77	134	143	275	319	363
TEMP (°C)	-30 to 140											
	-22 to 284											
VISCOSITY (CP)	1 to 1 million											

CONSTRUCTION DETAILS

1. Flush fitting, sealed rotor retaining screws avoid build up of stagnant product as no end cover recesses are required and no product can get into the rotor drive.
2. Front mounted shaft seals for easy replacement and full accessibility of CIP liquids.
3. Rugged, high grade alloy bearing pedestal and housing for low weight and high strength, completely encased in epoxy coating.
4. Detachable ports for maximum flexibility in connection type and size. (Not on 3 & 7 size).
5. Removable feet allow quick change for pump mounting in the ideal orientation. (Not on 3 & 7 size).
6. High specification taper roller bearings give over one million hours life on a typical duty.
7. Precision cut spur gears for high load capability and ease of maintenance.
8. Fully interchangeable bi-wing rotors can be fitted without the need to re-time thus reducing downtime and allows pump to cope with a higher level of abuse.
9. Heavy duty shafts for high pressure capability.

