

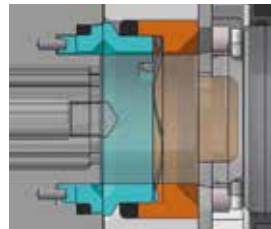
# Rotary lobe pumps

Premiumlobe Hygienic Design

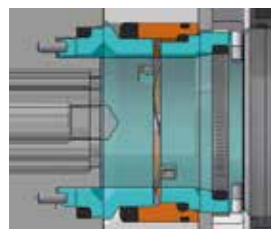


# The Premiumlobe pump

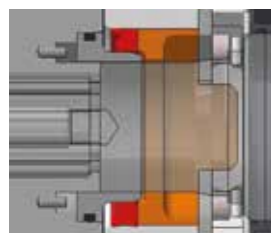
Hightech made in Germany.



Single mechanical seal



Double mechanical seal



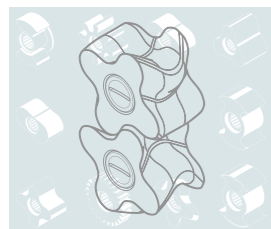
HPU-FDA Lippendichtung



90° port position



Hygienic pressure relief valves



New: Curved rotors

The conclusive concept for hygienic and non-hygienic applications – made in Germany – offers non-contacting pumping action in all operating situations.

The result: no product contamination at all from abraded material while offering the maximum working life, an ideal precondition for use in demanding processes. The use of 1.4404 or 1.4435 stainless steel, seals that conform to FDA standards in the area that is in contact with the product, and stainless steel gearbox covers are all standard. The modular structure of the shaft seals and the gearbox ensure non-stop availability and a wide variety of configuration options for individual customization to meet the toughest requirements. CIP/SIP cleaning processes can be performed without any restrictions. Further performance details: Capacities up to 163 m<sup>3</sup>/h, differential pressures of up to 80 bar, depending on the model, and able to handle temperatures of up to 150°C, depending on the configuration.

### Perfect Engineering:

We have done everything possible to ensure maximum functionality and performance. This ensures contact-free running under all operating conditions. The extremely robust design of the shafts and the gearbox minimize deflection of the shafts with the lowest possible thermal expansion. The direct arrangement of the bearings and shaft guides ensure the most precise possible positioning and concentricity of the rotors.

The extremely short shaft overhang makes exceptionally high differential pressures possible, especially in the case of the sx and sxx models. The shafts that are completely isolated from the product are made of a material with a very low degree of thermal expansion. The seating of the synchronization gears on the shafts ensures that there is no play, thus assuring maximum durability even under extreme loads. The synchronization can easily be set by a timing device.

### Materials, surfaces and lubricants:

We use 1.4404, 1.4435, 1.4539, 1.4462 stainless steel and Hastelloy for all parts that are in contact with the product, with a surface roughness of Ra = 0.8 µm (inside) and Ra = 1.2 µm (outside). A surface finish of up to Ra ≤ 0.4 µm can be produced, with and without electro-polishing, according to the wishes of the customer. "Cold" welding processes are used to preserve the properties of the material and to reduce any thermal deformation. Lubricants conforming to NSF-H1 are standard.

### Connections:

All the types of connectors that are currently standard can be produced. The usual ones are DIN 11851 milk pipe and Triclam DIN 32676. Connectors in compliance with DIN 11864 and DIN EN 1092-1 can likewise be provided. The diameters can be either DIN or inch-based.

### A number of configuration options:

- Heating and cooling channels and pockets
- Hygienic pressure relief valves, spring-load or compressed air-loaded
- Heatable pressure relief valves
- Profiled static seals for thorough cleaning without leaving any residues
- Gear rotors
- Drainage connectors at the front cover for full drainage when the pump connection is installed horizontally
- Individual adjustment of the pump feet to suit the specified dimensions



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### 1 CIP/SIP

Thorough cleaning without leaving any residues when the pump connection is installed horizontally or vertically. Can be drained fully due to the bevelling of the pump housing. (SDF = Self-Draining Features). If the pump connection is installed horizontally then an additional drainage connector is required at the pump housing cover.

### 2

Torsion-free bearing and gearbox construction for perfect guiding of the pump shafts. The gears are located without any play and have an adjusting mechanism for maximum precision of synchronization.

### 3

Duplex shafts with an extremely short shaft overhang for maximum stiffness and the best possible temperature behaviour, especially during CIP/SIP.

### 4

Quattrolobe rotors for quiet running and better performance. Ideal for CIP processes and applications involving a higher rpm. Optionally available made of non-galling alloy.

### 5

Biwing rotor, very suitable for pumping solids as well. Optionally available made of non-galling alloy.

### 6

Mechanical seals built into the rotor – a prerequisite for maximum hygiene and pump performance, plus uncritical behaviour at all temperatures. On-line ease of maintenance.

Our products are EC 1935/2004, EC 2023/2006 and EU 10/2011 compliant.





Type	Displacement	Displacement	Max. differential pressure	Max. differential pressure	Max. rpm	Nominal size	Connection width	Weight	Weight	T <sub>OP</sub>	T <sub>OP</sub>	Q <sub>OP</sub>
Unit	[l/rev.]	[USgal/rev.]	[bar]	[psi]	[l/min]	[DN]	[Zoll]	[kg]	[lbs]	[85...90 °C]	[120...130 °C]	@ 2bar [m³/h]
L55sxx	0,010	0,003	15	218	1400	DN15	1/2	10,5	23	yes	yes	--
L55sx	0,030	0,008	15	218	1400	DN15	1/2	10,0	22	yes	yes	1,4
L55s	0,039	0,010	15	218	1400	DN15	1/2	10,5	23	yes	yes	2,1
L55i	0,056	0,015	15	218	1400	DN25	1	11,0	24	yes	yes	3,1
L55ii	0,076	0,020	15	218	1400	DN40	1 1/2	11,5	25	yes	yes	4,4
L55i	0,094	0,025	9	131	1400	DN40	1 1/2	12,0	26	yes	yes	5,9
L63i	0,120	0,032	15	218	1400	DN40	1 1/2	17,0	37	yes	yes	7,0
L63i	0,180	0,047	15	218	1400	DN50	2	19,0	42	yes	yes	10,5
L85sxx	0,100	0,026	80	1160	1100	DN15	1 1/2	38,0	84	yes	yes	3,8
L85sx	0,169	0,045	30	435	1100	DN32	1 1/4	33,0	73	yes	yes	7,5
L85s	0,210	0,055	20	290	1100	DN40	1 1/2	35,0	77	yes	yes	10,5
L85i	0,280	0,074	15	218	1100	DN50	2	38,0	84	yes	yes	14,4
L85i	0,350	0,092	15	218	1100	DN65	2 1/2	40,0	88	yes	yes	18,0
L115sxx	0,300	0,079	80	1160	950	DN32	1 1/4	100	220	yes	yes	11,3
L115sx	0,400	0,106	30	435	950	DN40	1 1/2	90,0	198	yes	yes	15,8
L115s	0,550	0,145	20	290	950	DN50	2	95,0	209	yes	yes	24,3
L115si	0,750	0,198	20	290	950	DN65	1 1/2	98,0	216	yes	yes	31,5
L115i	0,950	0,251	15	218	950	DN80	3	101	223	yes	yes	43,0
L115i	1,230	0,325	15	218	950	DN100	4	110	243	yes	yes	56,7
L160sxx	1,030	0,272	80	1160	800	DN32	1 1/4	245	540	yes	yes	40,0
L160sx	1,290	0,340	50	725	800	DN50	2	255	562	yes	yes	50,8
L160s	1,600	0,422	30	435	800	DN80	3	245	540	yes	yes	65,2
L160i	2,400	0,633	20	290	800	DN100	4	270	595	yes	yes	108,0
L160i	3,410	0,900	15	218	800	DN150	6	320	705	yes	yes	148,4

All operating limits and all listed performance data are valid at contactless pumping action of the components. Contact us for professional consulting.



Feldmühlenweg 6-10 | D-49593 Bersenbrück  
 Fon +49 (0) 54 39 - 80 921-0 | Fax +49 (0) 54 39 - 80 921-20  
 info@pump-products.de | www.pump-products.de

