

**I Application**

The HLR pump is a lobe rotor pump designed in compliance with the EHEDG specifications for plants and processes that comply with the strictest hygienic requirements. Due to the low working speed, the pump is characterised by a gentle pumping and low shear of the product causing less damage possible. It is an ideal pump for the transfer of all types of liquids (from 1 to 1.000.000 cP) and liquids with solid particles (curd, biologic cultivations, etc.). The pump is adequate for the food-processing, cosmetic and pharmaceutical industries.

**I Operating principle**

The HLR pump basically consists of two lobe rotors which rotate inside the casing without touching each other. As the rotors rotate, the space between the lobes and the casing is successively filled with the product which is driven to the discharge nozzle displacing a fixed amount of product. The pumped product forms a continuous stream due to the adjusted tolerances of the lobes and the pump casing thus ensuring an efficient pumping.

**I Design and features**

- Vertical support.
- Bare-shaft construction.
- Self-drainable pump.
- Tri-lobe rotors.
- Hygienic design of the attachment of the lobes.
- Sanitary mechanical seal, internal assembly.
- The seal is disassembled from the frontal part without disassembling the casing of the pump.
- Gaskets with deformation limiters prevent any dead leg.
- Easy cleaning and maintenance.
- Standard connection: clamp.
- Pump certified according to the EHEDG standards.

**I Materials**

Investment casting casing and lobes	AISI 316L
ball bearing support	GG-25
Gaskets	EPDM according to FDA 177.2600
Mechanical seal	SiC/C/EPDM
Internal surface finish	Ra ≤ 0,8µm
External surface finish	bright polish



## I Options

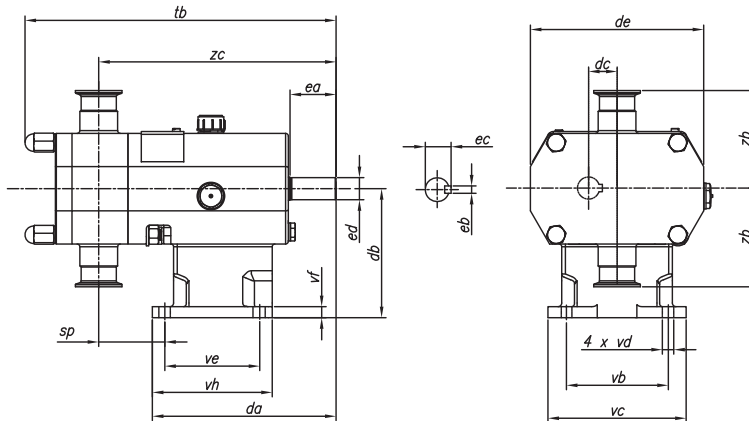
- Mechanical seal: SiC/SiC, TuC/SiC.
- Flushed or balanced mechanical seal.
- Gaskets: FPM or FFPM.
- Bi-wing lobes.
- Relief valve or external by-pass.
- Heating jacket.
- $Ra \leq 0,5 \mu\text{m}$  surface finish for pharmaceutical applications.
- Horizontal assembly (no EHEDG certificate).
- Various types of drives and protections (gear motor with frequency converter, etc.).
- Assembly on a 304 stainless steel baseplate on silent-blocks, sanitary design.
- Trolley and control panel.
- Connections: Clamp DIN32676, DIN 11864-1, DIN 11864-2, etc.
- Material certificates (3.1), roughness certificate.
- The pump can be ATEX certified.



## I Technical specifications

Max. flow	115 m <sup>3</sup> /h	507 US GPM
Max. differential head	12 bar	174 PSI
Max. working pressure	16 bar	232 PSI
Max. working temperature	-10 °C to +120 °C (EPDM)	14 °F to 248 °F
	+140 °C (SIP, max. 30 min)	284 °F
Mx. speed	950 rpm	

## I General dimensions



HLR	DN	da	db	dc	de	ea	eb	ec	ed	sp	tb	vb	vc	vd	ve	vf	vh	zb	zc
0-20	¾"	160	80	20	115	30	5	16,2	14	73	271	102	118	9	50	9	65	67,5	227
0-25	1"									77	280							76,5	230
1-25	1"	165	112	25	160	40	6	21,6	19	69	289	115	135	9	85	10	105	94,5	222
1-40	1 ½"									75	301							228	
2-40	1 ½"	200	140	31	190	50	8	27	24	71	338	125	150	11	105	12	130	106	258
2-50	2"									77	350							264	
3-50	2"	280	190	46,5	250	80	10	41,4	38	86	428	170	210	13	130	14	170	133,5	342
3-80	3"									99	450							355	
4-100	4"	433	225	60	333	110	16	58,9	55	77,8	617	256	346	18	280	9	320	161,5	491
4-150	6"									104	666							168	517

