



Alfa Laval LKH Prime UltraPure

The Premium Self-Priming Pump for Higher Purity

Applications

The LKH Prime UltraPure is a highly efficient self-priming pump, which meets the requirements of pharmaceutical industries. The ability to evacuate air from the suction pipe combined with a low noise level and high pumping efficiency makes the LKH Prime UltraPure ideal for tank emptying and CIP return applications. With verified effective CIP cleanability, LKH Prime UltraPure can be used as a product pump as well.

Standard design

Based on the LKH UltraPure, the LKH Prime UltraPure is designed to be cleaned in place. The LKH Prime UltraPure has a stainless steel shroud for protection of the motor, and the complete unit is supported on four adjustable stainless steel legs. Unlike conventional self-priming pumps the LKH Prime UltraPure has an impeller which can be trimmed for application.

Shaft seals

The LKH Prime UltraPure is equipped with either an external single or a double mechanical shaft seal. Both have stationary seal rings made from stainless steel AISI 329 with sealing surface in silicon carbide and rotating seal rings in silicon carbide as standard.



TECHNICAL DATA

Standard materials

Product wetted steel parts: W. 1.4404 (316L) with material traceability 3.1 acc. to EN 10204.
Other steel parts: Stainless steel.
Inside surface finish: $Ra \leq 0.5 \mu m$.
Product wetted elastomers: EPDM- USP Class VI, 121°C Chapter 88, and Chapter 87.

Connections for double mechanical shaft seal
1/8" BSP.

Motor

Foot-flanged motor with a fixed angular contact bearing according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole sealed with labyrinth plug), insulation class F.

Min/Max speed

Air evacuation: 2800 - 3600 rpm.
Pumping product (no air): 900 - 3600 rpm.

Warranty

Extended 3-years warranty on LKH Prime pumps. The warranty covers all non-wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Pressure

Max inlet pressure: 500 kPa (5 bar).

Temperature

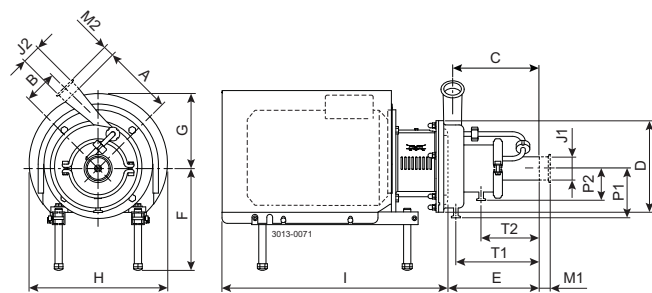
Temperature range: -10°C to +140°C (EPDM).

Double mechanical shaft seal

Water pressure inlet: Max. 500 kPa (5 bar).
Water consumption: 0.25 - 0.5 l/min.



Dimensions



Pump specific measures

Pump Model	LKH Prime UltraPure 20
A	187
B	88
C	248
D	253
E	280
P1	123
P2	83
T1	239
T2	170

Motor specific measures

IEC	IEC90	IEC100	IEC112	IEC132	IEC160
kW	1.5/2.2	3.0	4.0	5.5/7.5	11/15/18.5
F(max)*	316	336	339	358	386
G	126	137	136	164	208
H	200	250	250	300	351
I	386	454	453	547	642

*Possible to reduce dimension F by min. 59 mm for all pump models.

Connections

Pump Model	LKH Prime UltraPure 20
Clamp ISO 1127	M1 36 M2 36
Clamp ASME BPE	M1 29 M2 29
Clamp ISO 2037	M1 21 M2 21
Clamp DIN 32676	M1 64 M2 21
Flange Asept. A for DIN	M1 64 M2 47
Flange Asept. A for ASME	M1 56 M2 47
Union Asept. A for DIN	M1 100 M2 48
Union Asept. A for ASME	M1 60 M2 48
J1*	63.5 / 2.5"
J2*	51 / 2"

* Other dimensions available on request.

Drain diameter

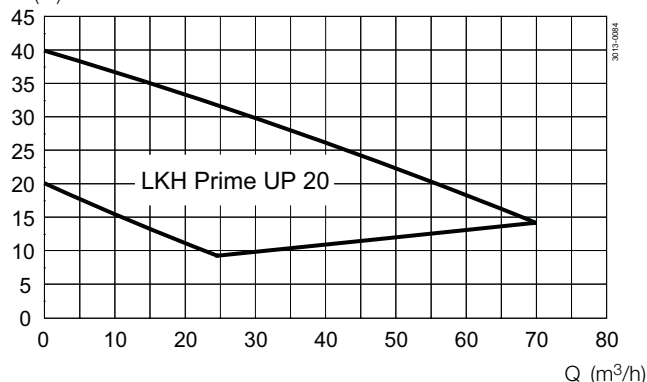
TC	Clamp
1/2"	12.7

ESE03197/1

Flow chart

Frequency: 50Hz - Speed (synchr): 3000 rpm

H (m)



Options

- A. Impeller with reduced diameter.
- B. Motor for other voltage and/or frequency.
- C. Motor with increased safety/flame proof motor.
- D. Double mechanical shaft seal.
- E. Adjustable pads.
- F. No drain.
- G. Product wetted surface finish mechanically polished to $Ra \leq 0.8 \mu m$.
- H. Product wetted surface finish electropolished to $Ra \leq 0.4 \mu m$.
- I. Passivated surface.
- J. Product wetted elastomers FPM or FEP to USP Class VI, 121°C Chapter 88, and Chapter 87.
- K. Hydrostatic testing with certificate.
- L. Surface finish measurement with certificate.
- M. 0° outlet.

Q-doc

Standard documentation package:

- Declaration of compliance with Regulation (EC) No.: 1935/2004
- Declaration of compliance to EN 10204 type 3.1 (MTR)
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts)
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers)
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) declaration
- Declaration of surface finish compliance
- Declaration of passivation and electro polishing (if specified)
- 3.1 certification in accordance to EN10204
- Pump performance test certificate

Optional documentation:

- Hydrostatic test certificate
- Surface measurement report

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Alfa Laval reserves the right to change specifications without prior notification.

How to contact Alfa Laval

Contact details for all countries
are continually updated on our website.
Please visit www.alfalaval.com to
access the information direct.