



## The Premium Self-Priming Pump for Higher Purity

### Alfa Laval LKH Prime UltraPure

#### 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 ≤ 0.8 µm.

Product wetted elastomers: . . . . . EPDM - USP Class VI.

##### 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).

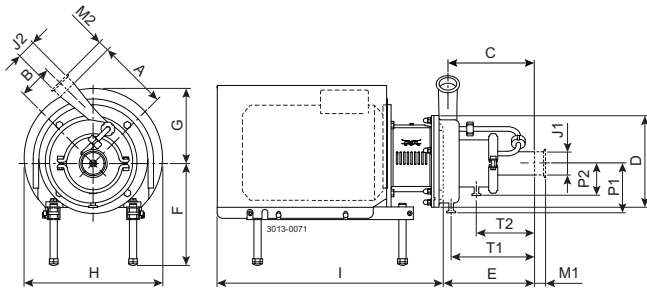
##### Double mechanical shaft seal

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
J1*		63,5 / 2,5"
J2*		51 / 2"

\* Other dimensions available on request.

## Drain diameter

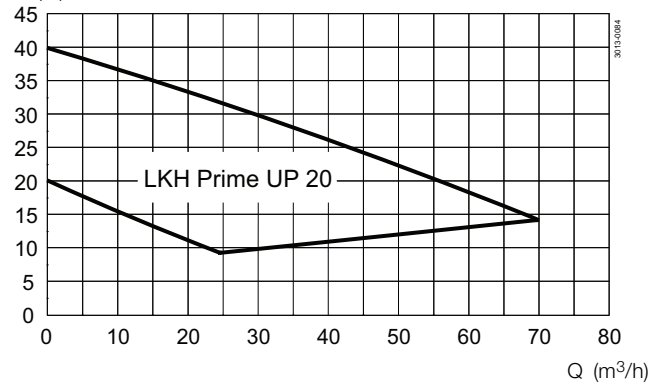
	TC Clamp
1/2"	12.7

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## Flow chart

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

H (m)



## Options

- A. Impeller with reduced diameter.
- B. Motor with increased safety/flare proof motor.
- C. Double mechanical shaft seal.
- D. Product wetted surface finish mechanically polished to  $Ra \leq 0.5 \mu m$ .
- E. Product wetted surface finish mechanically polished and afterwards electropolished to  $Ra \leq 0.4 \mu m$ .
- F. Product wetted elastomers of Fluorinated rubber (FPM).
- G. No drain
- H. 0° outlet position
- I. Hydrostatic testing with certificate.

## Standard documentation package:

- 3.1 certificate according to EN10204.
- FDA certificate of conformity for product wetted elastomers.
- USP Class VI certificate of conformity, EPDM only.
- Pump performance test certificate.

## 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.

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**How to contact Alfa Laval**

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