



## 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. 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: . . . . . AISI 316L and 329L with material traceability 3.1 acc. to EN 10204 (Mill test reports).  
 Other steel parts: . . . . . Stainless steel.  
 Inside surface finish: . . . . . EP Ra ≤ 20 µin.  
 Product wetted elastomers: . . . . . EPDM - USP Class VI.

##### Connections for double mechanical shaft seal

1/8" NPT

##### Motor

Standard C-faced, foot mounted motor according to NEMA standard. 3500 RPM. Premium efficiency, Class F. Note different frame sizes.

##### Min/Max speed

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

#### OPERATING DATA

##### Pressure

Max inlet pressure: . . . . . 72.5 PSI (5 bar).


##### Temperature

Temperature range: . . . . . 14°F to 284°F (EPDM).

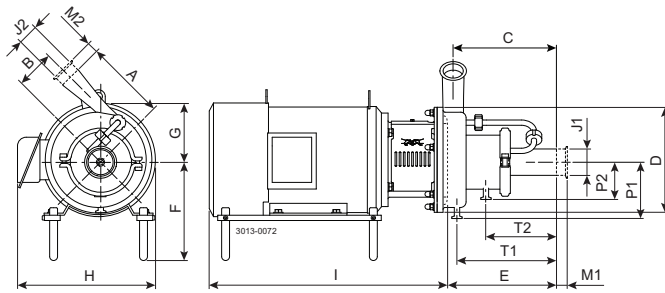
##### Double mechanical shaft seal

Water pressure inlet: . . . . . Max. 72.5 PSI (5 bar).  
 Water consumption: . . . . . 4-8 US gph.



 Authorized to carry the 3A symbol

## Dimensions



## Pump specific measures

Pump Model	LKH Prime UltraPure 20
A	7.362
B	3.622
C	9.764
D	9.961
E	11.024
P1	4.764
P2	3.268
T1	9.409
T2	6.692

## Motor specific measures

Motor	182TC	184TC	213TC	215TC	254TC	256TC
Motor HP	3.0	5.0	7.5	10.0	15.0	20.0
F(max)*	9.094	9.094	9.843	9.843	10.866	10.866
G	4.488	4.488	5.394	5.394	6.772	6.772
H	11.102	11.102	13.071	13.071	17.795	17.795
I	17.992	18.150	21.024	21.024	26.063	27.835

## Motor overview

Pump Model	LKH Prime UltraPure 20
Motor range	182TC-256TC

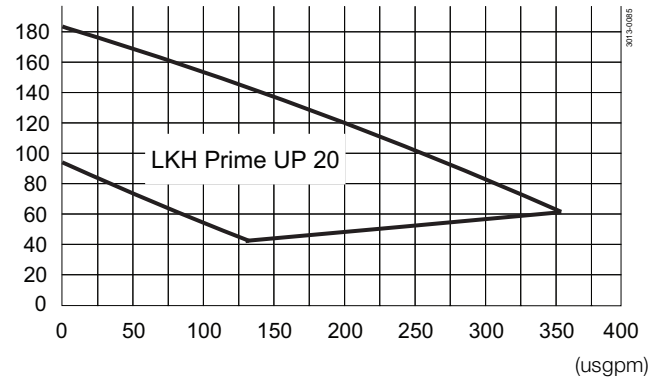
Dimensional data are based on 2 pole, Sterling motors.

## Connections

Pump Model	LKH Prime UltraPure 20	
TRI-Clamp	M1	1.13"
	M2	1.13"
J1 (Inlet)		2.50"
J2 (outlet)		2.00"

## Flow chart

Frequency: 60Hz - Speed (synchr): 3600 rpm  
H (ft)



## Options

- A. Impeller with reduced diameter.
- B. Motor with increased safety/flare proof motor.
- C. Double mechanical shaft seal.
- D. Product wetted surface finish EP Ra ≤ 15 μin.
- E. Product wetted elastomers of Fluorinated rubber (FPM).
- F. No drain
- G. 0° outlet position

## 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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