

# Alfa Laval LKH Prime Centrifugal Pump

## The Premium Self-Priming Pump

### Applications

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

### Standard design

Based on the LKH, the LKH Prime is designed to be cleaned in place. The LKH Prime 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 has an impeller which can be trimmed for any application.

### Shaft seals

The LKH Prime 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 carbon as standard.



### TECHNICAL DATA

#### Standard materials

Product wetted steel parts: . . . . . W. 1.4404 (316L).  
 Other steel parts: . . . . . Stainless steel.  
 Inside surface finish: . . . . . Standard blasted.  
 Product wetted elastomers: . . . . . EPDM.

#### 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).

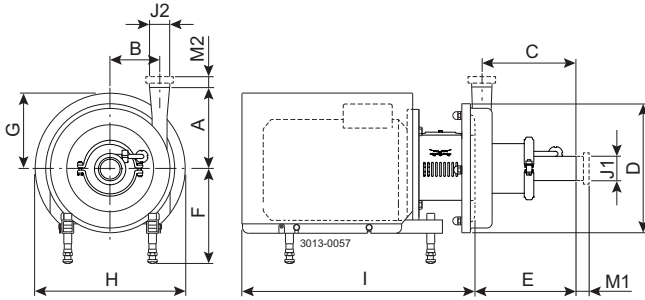
#### Temperature

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 20	LKH Prime 40
A	187	259
B	92	126
C	248	271
D	253	329
E	280	301

## Motor specific measures

Motor							
IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200
Motor							
kW	1.5/2.2	3.0	4.0	5.5/7.5	11-18.kw	22	30/37/45
F(max)*	262	282	285	304	332	352	372
G	157	185	198	196	262	286	399
H	288	325	359	383	485	533	670
I	434	516	497	597	791	842	980

\*Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

## Motor overview

Pump Model	LKH Prime 20	LKH Prime 40
Motor range (IEC)	IEC90-IEC160	IEC132-IEC200

Dimensional data are based on 2 pole, ABB motors.

## Connections

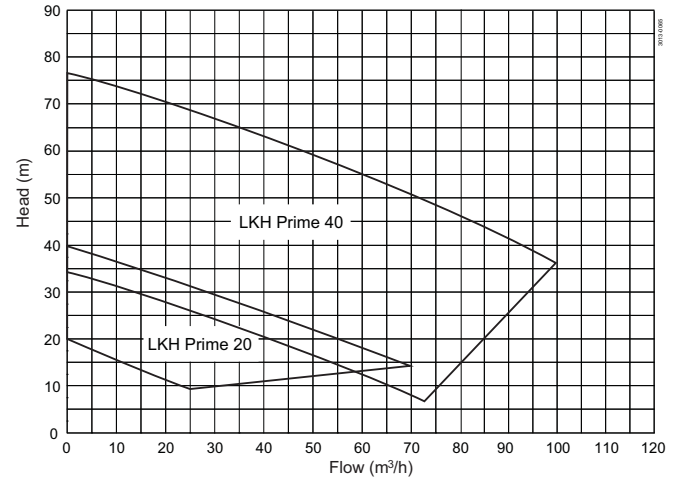
Pump Model	LKH Prime 20	LKH Prime 40
Clamp ISO 2037	M1	21
	M2	12
Union ISO(IDF)	M1	21
	M2	21
Union DIN/ISO	M1	25
	M2	27
Union SMS	M1	24
	M2	24
Union (BS)RJT	M1	27
	M2	22
Union DS	M1	24
	M2	21
Union DIN/DIN	M1	25
	M2	27
J1*	63.5 / 2.5"	76.1 / 3"
J2*	51 / 2"	63.5 / 2.5"

\* Other dimensions available on request.

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## Flow chart

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



## Options

- A. Impeller with reduced diameter.
- B. Motor with increased safety/flare proof motor.
- C. Double mechanical shaft seal.
- D. Product wetted surface finish  $Ra \leq 0.8 \mu m$ .
- E. Product wetted elastomers of Nitrile (NBR) or Fluorinated rubber (FPM).
- F. Rotating seal ring of Silicon Carbide.
- G. 1/2" tri clamp drain connections (two connections)

## 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](http://www.alfalaval.com) to access the information direct.



**CSI**

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