



# The Premium Self-Priming Pump

## Alfa Laval LKH Prime

### 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

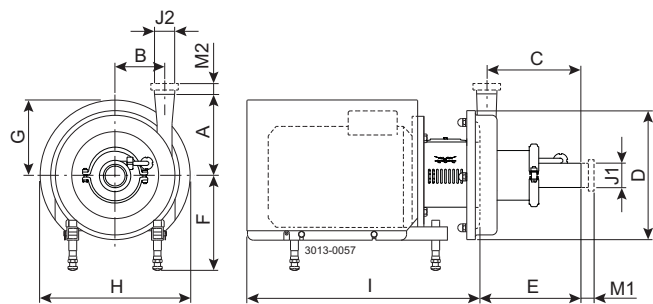
Temperature range: . . . . . -10°C to +140°C (EPDM).

#### 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
A	187
B	92
C	248
D	253
E	280

Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160
Motor kW	1.5/2.2	3.0	4.0	5.5/7.5	11
F (max)*	262	282	285	304	332
G	157	185	198	196	262
H	288	325	359	383	485
I	434	516	497	597	791

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

Motor overview

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

Connections

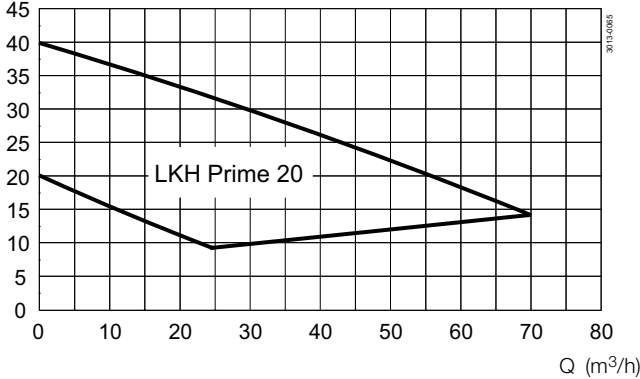
Pump Model	LKH Prime 20
Clamp ISO 2037	M1 21 M2 21
Union ISO (IDF)	M1 21 M2 21
Union DIN/ISO	M1 25 M2 22
Union SMS	M1 24 M2 20
Union BS (RJT)	M1 27 M2 27
Union DS	M1 24 M2 20
Union DIN/DIN	M1 25 M2 22
J1*	63.5 / 2.5"
J2*	51 / 2"

\* Other dimensions available on request.

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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/flame 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.

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**How to contact Alfa Laval**

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