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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 3A 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. 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: Mech Ra ≤ 32.
Product wetted elastomers: EPDM.

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).

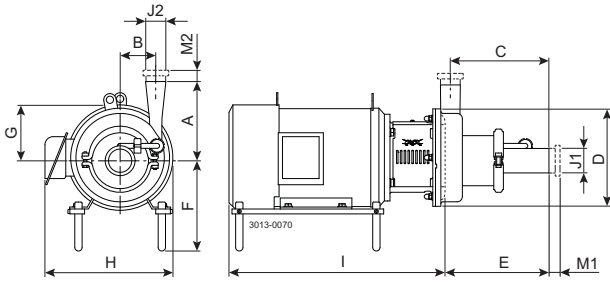
Double mechanical shaft seal

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

Water consumption: 4-8 US gph.



Dimensions (inch)



Pump specific measures

Pump Model	LKH Prime 10	LKH Prime 20	LKH Prime 40
A	6.85	7.36	10.20
B	3.35	3.62	4.96
C	8.74	9.76	10.67
D	9.72	9.96	12.95
E	9.64	11.02	11.85

Motor specific measures

Motor TC/TSC	182TC	184TC	213TC	215TC	254TC	256TC	284TSC	286TSC	324TSC	326TSC	364TSC
Motor HP	3.0	5.0	7.5	10.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0
F(max)*	9.09	9.09	9.84	9.84	10.87	10.87	11.61	11.61	12.60	12.60	13.62
G	4.49	4.49	5.39	5.39	6.77	6.77	7.68	7.68	8.43	8.50	9.33
H	11.10	11.10	13.07	13.07	17.80	17.80	20.94	20.94	23.35	23.35	26.81
I	17.99	18.15	21.02	21.02	26.06	27.83	28.58	30.04	33.07	34.65	34.45

Motor overview

Pump Model	LKH Prime 10	LKH Prime 20	LKH Prime 40
Motor range (TC/TSC)	182TC-215TC	182TC-256TC	254TC-286TSC

Dimensional data are based on 2 pole, Sterling motors.

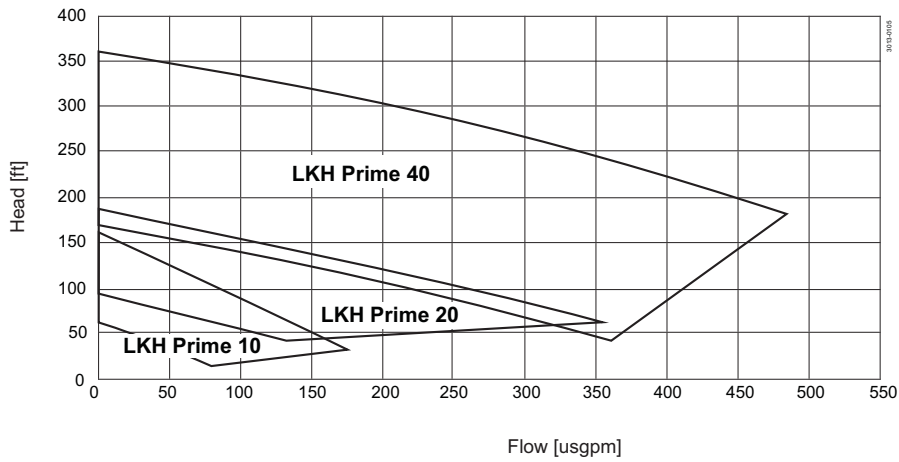
Connections

Pump Model	LKH Prime 10	LKH Prime 20	LKH Prime 40
TRI-Clamp	M1	1.13	1.13
	M2	1.13	1.13
J1*	2.00"	2.50"	3.00"
J2*	2.00"	2.00"	2.50"

* Other dimensions available on request.

Flow chart

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



Options

- A. Impeller with reduced diameter.
- B. Motor enclosures: washdown, TEFC, explosion proof, inverter duty and others upon request.
- C. Double mechanical shaft seal.
- D. Product wetted surface finish $Ra \leq 20$.
- E. Product wetted elastomers of Nitrile (NBR) or Fluorinated rubber (FPM).
- F. Rotating seal ring of Silicon Carbide.
- G. 1/2" or 3/4" 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.us to access the information direct.