



The Rigid Pump

Alfa Laval LKHP Filtration Centrifugal Pump for High Inlet Pressure

Application

The LKHPF pump is a highly efficient and economical centrifugal pump, specially designed for high inlet pressures, e.g. for use in filtration systems. The LKHPF pump meets the requirements of sanitary and gentle product treatment and chemical resistance, and is available in nine sizes, LKHPF-10, -20, -25, -35, -40, -45, -50, -60, -70.

Standard Design

The LKHPF pump is designed for CIP-cleaning with an emphasis on large internal radii and easily cleanable seals.

The LKHPF pump is a sanitary pump with a stainless steel shroud for protection of the motor. The complete unit is supported on four adjustable stainless steel legs.

Shaft Seals

The LKHPF pump can be fitted with two types of mechanical seal:

- Single internal seal.
- Flushed seal.

Both seal types have a stationary seal ring and rotating seal ring in silicon carbide.

The secondary seal of the flushed seal is a long lasting lip seal.



TECHNICAL DATA

Materials

Product wetted steel parts: W. 1.4404 (316L).

Other steel parts: Stainless steel.

Product wetted seals: EPDM rubber.

Finish: Standard blasted

Connections for flushed shaft seal:

6 mm tube/Rp 1/8".

Motor Sizes

50 Hz: 1.5 - 75.0 kW.

60 Hz: 1.75 - 86.0 kW.

Motor

Foot-flanged special 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.

Warranty

Extended 3-year warranty on LKHPF 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: 4000 kPa (40 bar).

Water pressure: Max. 100 kPa (1 bar).
(Flushed seal)

Temperature

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

Water consumption

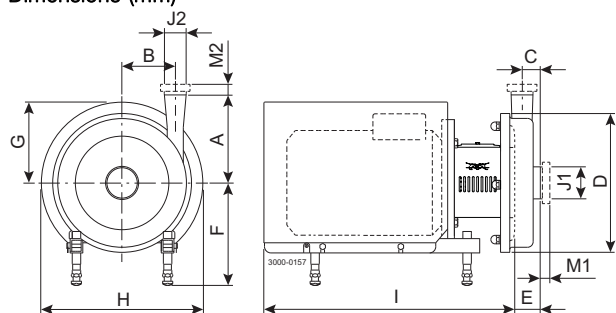
Water consumption: Approx. 0.25-0.5 l/min.
(Flushed seal)

Noise

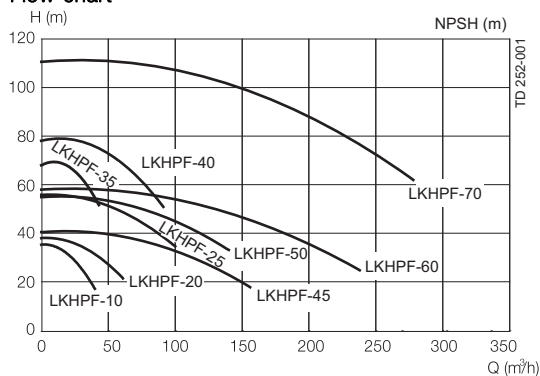
Noise level (at 1 m): 60 - 80 dB (A).



Dimensions (mm)



Flow chart



Frequency: 50 Hz, Speed (Synchr.): 3000 rpm

Pump specific measures

Pump Model	LKHPF-10	LKHPF-20	LKHPF-25	LKHPF-35	LKHPF-40	LKHPF-45	LKHPF-50	LKHPF-60	LKHPF-70
A	142	180	193	193	212	193	205	262	254
B	87	87	106	119	126	97	118	102	147
C	29	43	38	28	34	43	42	42	28
D	247	253	303	303	329	303	329	329	408
E	64	78	82	66	77	93	91	93	93

Motor specific measures

Motor IEC	IEC90	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250
Motor kW	1.5/2.2	4.0	5.5/7.5	11/15/18.5	22	30/37/45	55/75
F(max)*	262	285	304	332	352	372	446
G	157	198	196	262	286	399	410
H	288	359	383	485	533	670	753
I (LKHPF-10 to -60)	434	497	597	791	842	980	-
I (LKHPF-70)	-	-	-	804	855	993	1231

*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	LKHPF-10	LKHPF-20	LKHPF-25	LKHPF-35	LKHPF-40	LKHPF-45	LKHPF-50	LKHPF-60	LKHPF-70
	IEC90-	IEC90-	IEC132-	IEC112-	IEC132-	IEC112-	IEC132-	IEC132-	IEC180-
Motor range (IEC)	IEC112	IEC132	IEC160	IEC160	IEC180	IEC160	IEC180	IEC200	IEC250

Dimensional data are based on 2 pole, ABB motors.

Connections

Pump Model	LKHPF-10 LKHPF-20 LKHPF-35	LKHPF-25	LKHPF-40	LKHPF-45 LKHPF-50 LKHPF-70	LKHPF-60
Clamp (Heavy Duty)	M1	29	29	29	29
	M2	29	29	12	29
Flange EN 1092-1 Type 11	M1	56	56	65	65
	M2	48	56	56	65
J1*		63.5 / 2.5"	76.1 / 3"	76.1 / 3"	101.6 / 4"
J2*		51 / 2"	63.5 / 2.5"	63.5 / 2.5"	76.1 / 3"

* Other dimensions available on request.

Options

- A. Impeller with reduced diameter.
- B. Impeller screw.
- C. Motor for other voltage and/or frequency.
- D. Flushed shaft seal.
- E. Seals in Nitrile (NBR) or Fluorinated rubber (FPM).
- F. Surface roughness, product wetted parts: $R_a \leq 0.8 \mu\text{m}$

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.

Note!

- The curves for LKHPF are identical to those for LKH.
- For further details, see also ESE01950.

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