



The Premium Pump

Alfa Laval LKH Centrifugal Pump

Applications

The LKH pump is a highly efficient and economical centrifugal pump, which meets the requirements of hygienic and gentle product treatment and chemical resistance.

LKH is available in thirteen sizes, LKH-5, -10, -15, -20, -25, -35, -40, -45, -50, -60, -70, -85 and -90.

Standard design

The LKH pump is designed for CIP with emphasis on large internal radii and cleanable seals. The hygienic version of LKH has a stainless steel shroud for protection of the motor, and the complete unit is supported on four adjustable stainless steel legs.

Shaft seals

The LKH pump is equipped with either an external single or a flushed 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. The secondary seal of the flushed seal is a long lasting lip seal. The pump may also be equipped with a double mechanical shaft seal.



TECHNICAL DATA

Materials

Product wetted steel parts: W. 1.4404 (316L).
 Other steel parts: Stainless steel.
 Finish: Standard blasted
 Product wetted seals: EPDM rubber.

Connections for FSS and DMSS:

6mm tube/Rp 1/8"

Motor sizes

50 Hz: 0.75 - 110 kW.
 60 Hz: 0.9 - 125 kW.

Motor

Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, 4 poles = 1500/1800 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Min/max motor speed:

2 poles: 0,75 - 45 kW 900 - 4000 rpm
 2 poles: 55 - 110 kW 900 - 3600 rpm
 4 poles: 0,75 - 75 kW 900 - 2200 rpm

Warranty

Extended 3-years warranty on LKH 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:
 LKH-5: 600 kPa (6 bar).
 LKH-10 - 70: 1000kPa (10 bar).
 LKH-70: 60Hz 500kPa (5 bar).
 LKH-85 - 90: 500kPa (5 bar).

Temperature

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

Flushed shaft seal:

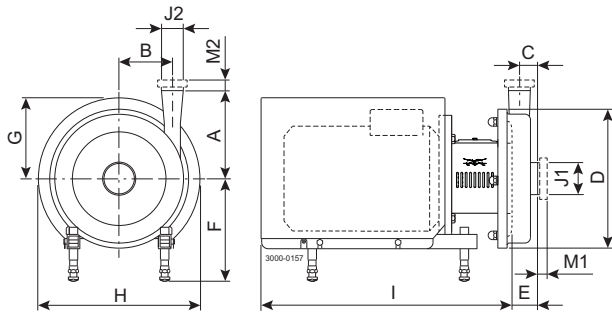
Water pressure inlet: Max. 1 bar.
 Water consumption: 0.25 -0.5 l/min.

Double mechanical shaft seal:

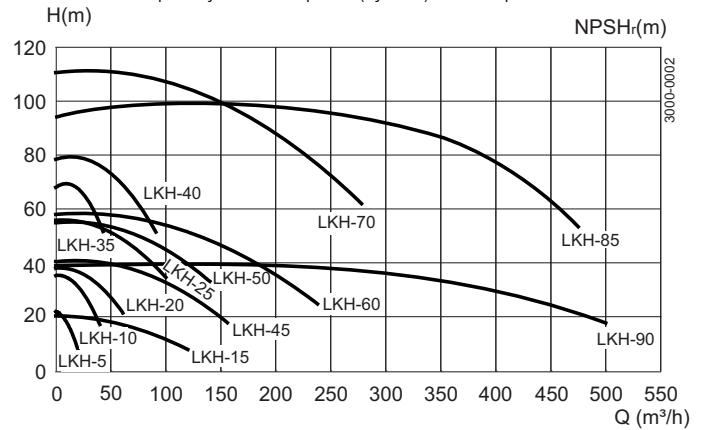
Water pressure inlet, LKH-5 to -60: . . . Max. 500 kPa (5 bar).
 Water pressure inlet, LKH-70 and -90: Max. 300 kPa (3 bar).
 Water consumption: 0.25 -0.5 l/min.



Dimensions mm



Flow chart Frequency: 50 Hz Speed (synchr): 3000 rpm



Pump specific measures

Pump Model	LKH-5	LKH-10	LKH-15	LKH-20	LKH-25	LKH-35	LKH-40	LKH-45	LKH-50	LKH-60	LKH-70	LKH-85	LKH-90
A	158	142	166	180	193	193	212	212	205	261	254	229	310
B	70	87	66	88	106	119	126	126	118	102	147	220	250
C	22	23	43	27	32	23	28	28	35	62	25	65	65
D	189	247	247	253	303	303	329	329	329	329	408	438	504
E	42	51	87	63	69	54	64	64	77	106	76	97	95

Motor specific measures

Motor IEC	IEC80	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250	IEC280
Motor kW	0.75/1.1	1.5/2.2	3.0	4.0	5.5/7.5	11/15/18.5	22	30/37/45	55/75	90/110
F(max)*	262	262	282	285	304	332	352	372	446	496
G	125	157	185	198	196	262	286	399	394	584
H	250	288	325	359	383	485	533	670	738	960
I (LKH-5)	400	441	-	-	-	-	-	-	-	-
I (LKH-10 to -60)	-	434	516	497	597	791	842	980	-	-
I (LKH-70 to -90)	-	-	-	-	-	804	855	993	1051	1271

*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-5	LKH-10	LKH-15	LKH-20	LKH-25	LKH-35	LKH-40	LKH-45	LKH-50	LKH-60	LKH-70	LKH-85	LKH-90
Motor range (IEC)	IEC80-IEC90	IEC90-IEC160	IEC90-IEC160	IEC90-IEC160	IEC90-IEC200	IEC90-IEC180	IEC90-IEC200	IEC100-IEC180	IEC100-IEC200	IEC112-IEC200	IEC160-IEC250	IEC200-IEC280	IEC180-IEC250

From LKH-5 to LKH-85 dimensional data are based on 2 pole, ABB motors.

For LKH-90 dimensional data are based on 4 pole, ABB motors.

Connections

Pump Model		LKH-5	LKH-10 LKH-20 LKH-35	LKH-15 LKH-45 LKH-50 LKH-70	LKH-25	LKH-40	LKH-60	LKH-85 LKH-90
Clamp ISO 2037	M1	21	21	21	21	21	21	-
	M2	21	21	21	21	12	21	-
Union ISO(IDF)	M1	21	21	21	21	21	21	-
	M2	21	21	21	21	21	21	-
Union DIN/ISO	M1	22	25	30	30	30	30	-
	M2	22	22	30	25	27	30	-
Union SMS	M1	20	24	35	24	24	35	-
	M2	20	20	24	24	24	35	-
Union (BS)RJT	M1	27	27	32	27	27	32	-
	M2	27	27	27	27	22	32	-
Union DS	M1	20	24	24	24	24	24	-
	M2	20	20	24	24	21	24	-
Union DIN/DIN	M1	22	25	30	30	30	30	50
	M2	22	22	30	25	27	30	50
Clamp ASME BPE	M1	-	-	-	-	-	-	38
	M2	-	-	-	-	-	-	38
J1*		51 / 2"	63,5 / 2,5"	101,6 / 4"	76,1 / 3"	76,1 / 3"	101,6 / 4"	152,5 / 6"
J2*		38 / 1,5"	51 / 2"	76,1 / 3"	63,5 / 2,5"	63,5 / 2,5"	101,6 / 4"	152,5 / 6"

* Other dimensions available on request.

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Options

- A. Impeller with reduced diameter.
- B. Impeller screw/nut (standard for LKH-70 - LKH-90).
- C. Motor with increased safety/flame proof motor.
- D. Inducer (only LKH-10 to -50).
- E. Flushed shaft seal.
- F. Double mechanical shaft seal.
- G. Surface roughness, product wetted parts: $R_a \leq 0.8 \mu\text{m}$.
- H. Product wetted seals of Nitrile (NBR), Fluorinated rubber (FPM) or FEP.
- I. Rotating seal ring of Silicon Carbide.

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!

For further details, see also ESE00698.

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ESE00263EN 1611

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