



# The Compact Pump

## Alfa Laval LKH-110 and LKH-120/P Multi-Stage Centrifugal Pump

### Application

LKH-110 and -120/P are highly efficient and economical multistage centrifugal pumps, which meet the requirements of sanitary and gentle product treatment and chemical resistance. Both the LKH-110 and the LKH-120/P are available in 3 sizes, LKH-112, -113, -114 and LKH-122/P, -123/P, -124/P respectively, for 2, 3 and 4 stages.

### Standard design

The pumps are designed for CIP with emphasis on large internal roundings and cleanable seals. The sanitary versions of LKH-110 and -120/P have stainless steel shrouds for protection of the motor, and the complete unit is supported on four adjustable stainless steel legs.

### Shaft seals

The pumps can be fitted with two types of mechanical seals:

- Single internal seal.
- Flushed seal.
- Sic/C material combination, outlet pressure up to 20 bar
- Sic/Sic material combination, outlet pressure up to 40 bar

Both seal types have stationary seal rings of silicon carbide and rotating seal rings of carbon or 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) and Duplex steel

Other steel parts: . . . . . Stainless steel.

Product wetted seals: . . . . . EPDM.

Other O-rings: . . . . . EPDM.

Finish: . . . . . Standard blasted

#### Connctions for FSS:

6mm tube/Rp 1/8"

#### Motor

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

#### Motor type, LKH-110:

- Standard motor with a fixed ball bearing on drive side.

#### Motor types, LKH-110/P and LKH-120/P:

- Special motor with special bearings.

#### Motor sizes, LKH-110

50 Hz: . . . . . 2.2 - 18.5 kW.

60 Hz: . . . . . 4.6 - 21 kW.

#### Motor sizes, LKH-120/P

50 Hz: . . . . . 30 - 45 kW.

60 Hz: . . . . . 35 - 87 kW.

### OPERATING DATA

#### Technical data

##### Max. outlet pressure, LKH-110/P, LKH-120/P:

- Limited by the strength of the pump casing: 4000 kPa (40 bar) temperature < 40°C.
- Limited by the strength of the pump casing: 2000 kPa (20 bar) temperature > 40°C.

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

Water pressure: . . . . . Normally atmospheric, max. 1 bar (flushed seal).

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

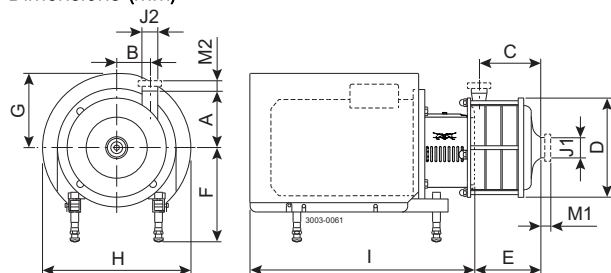
Noise level (at 1 m): . . . . . 60-80 dB (A).

#### Versions

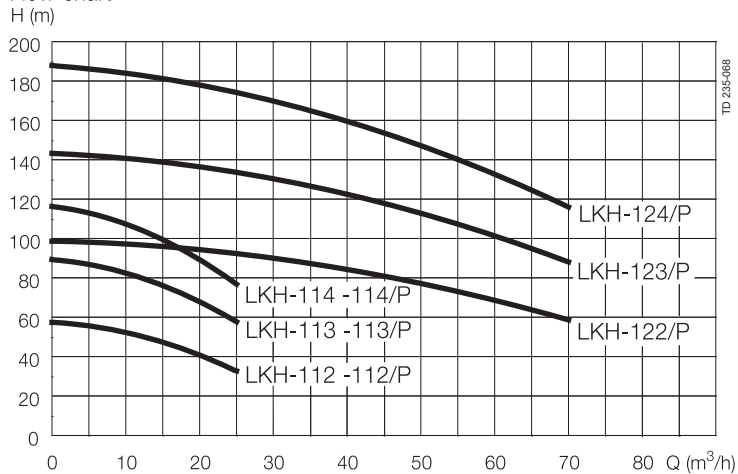
	LKH-110	LKH-110/P	LKH-120/P
Inlet pressure	<10 bar	>10 bar	-
Motor	Standard	Special	Special
Back Plate	Standard	Reinforced	Standard
Shaft seal	C/SIC or SIC/SIC	SIC/SIC	SIC/SIC or SIC/C



## Dimensions (mm)



## Flow chart



## Pump specific measures

Pump Model	LKH-112	LKH-113	LKH-114	LKH-122	LKH-123	LKH-124
A	140	140	140	265	265	265
B	86	86	86	112	112	112
C	76	76	76	85	142	200
D	256	256	256	335	335	335
E	108	142	184	112	168	226

## Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250
Motor kW	2.2	3.0	4.0	5.5/7.5	11/15/18.5	22	30/37/45	55/75
F(max)*	262	282	285	304	332	352	372	446
G	157	185	198	196	262	286	399	410
H	288	325	359	383	485	533	670	753
I	434	516	497	597	791	842	980	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	LKH-112	LKH-113	LKH-114	LKH-122	LKH-123	LKH-124
Motor range (IEC)	IEC90-IEC132	IEC112-IEC160	IEC132-IEC160	IEC200	IEC200-IEC250	IEC200-IEC250

Dimensional data are based on 2 pole, ABB motors.

## Connections

## Notes

For further details, see also instruction manual.

Pump Model	LKH-112	LKH-113	LKH-114	LKH-122	LKH-123	LKH-124
Heavy duty clamp	M1	29	29	29	29	29
	M2	29	29	29	29	29
Flange acc. To EN1092	M1	-	-	56	56	56
	M2	-	-	56	56	56
J1*		51 / 2"	51 / 2"	76,5 / 3"	76,5 / 3"	76,5 / 3"
J2*		38 / 1,5"	38 / 1,5"	63,8 / 2,5"	63,8 / 2,5"	63,8 / 2,5"

\* Other dimensions available on request.

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## Options

- A. Special motor for inlet pressure higher than 10 bar (only LKH- 110).
- B. Motor for other voltage and/or frequency (only LKH-110).
- C. Motor with increased safety/flame proof motor.
- D. Flushed shaft seal.
- E. Impeller with reduced diameter.
- F. Counter flanges, seal rings and bolts for flanged connections (industrial version).
- G. Product wetted seals of Nitrile (NBR), or Fluorinated rubber (FPM).
- H. Rotating seal ring of Silicon Carbide.

## Ordering

Please state the following when ordering:

- If the inlet pressure is higher than 10 bar it is necessary to order a special version with a modified motor and a stronger backplate.

Use the following designation:

- LKH-110: Inlet pressure (0-10 bar)
- LKH-110/P: Inlet pressure > 10 bar
- Pump size.
- Version, sanitary or industrial.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

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