

Alfa Laval LKH Centrifugal Pumps

Introduction

The Alfa Laval LKH Centrifugal Pump is a premium pump for use in hygienic applications. To increase process productivity, it is distinguished by high efficiency, gentle product treatment, chemical resistance, and a wide range of flow rates, pressures and options.

Precision-engineered, the LKH pump delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Application

Designed for Cleaning-in-Place (CIP), the Alfa Laval LKH is ideal for hygienic applications within the dairy, food, beverage and personal care industries that require gentle product treatment and reliable operation.

The LKH pump is available in 13 sizes to handle capacities up to 500 m³ /hour and differential pressures up to 11 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified, effective CIP cleanability.
- Wide performance envelope: reduce need for parallel and serial pump installations and ensure pump operating with high efficiency.
- Maximized uptime and reduced maintenance costs: robust mechanical design and ease of maintenance with modular front-loading seals.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKH pump is equipped with a single mechanical shaft seal but is also available with a single flushed or a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

TECHNICAL DATA

Materials

Product wetted steel parts	W. 1.4404 (316L)
Other steel parts	Stainless steel
Inside surface finish	Standard blasted
Product wetted elastomers	EPDM
Rotary seal face	Carbon
Stationary seal face:	Silicon Carbide

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.

Motor sizes

50Hz	0.75 - 110 kW
60Hz	0.75 - 110 kW

Min/max motor speed

2 poles: 0.75 - 45 kW	900 - 4000
2 poles: 55 - 110 kW	900 - 3600
4 poles: 0.75 - 75 kW	900 - 2200

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

Max inlet pressure

LKH-5	600 kPa (6 bar)
LKH-10 - 70	1000 kPa (10 bar)
LKH-70, 60Hz	500 kPa (5 bar)
LKH-85 - 90	500 kPa (5 bar)

Temperature

Temperature range	-10° C to +140° C (EPDM)
Flush media	Max 70° C
Flush housing sterilization (pump not in operation)	Max 125° C

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 to -90: Max. 300 kPa (3 bar)
- Water consumption: 0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal

Pump Model Connection Type

LKH-5 - 70, LKH-90: 1/8" G

LKH-85: Ø6 tube

Note! For further details, see also ESE00698.

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200006086-1-EN-GB

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