



# The Premium Pump for Air and Gas Applications

## Alfa Laval LKHSP Self-priming Centrifugal Pump

### Application

The LKHSP self-priming centrifugal pump is specially designed for pumping liquids containing air or gas without losing its pumping ability. The pump is for use in food, chemical, pharmaceutical and similar industries.

The LKHSP self-priming pump can be used for emptying tanks, as CIP return pump and similar applications where there is a risk of air or gas mixing with the liquid in the suction line.

The pump is self-priming and is capable of creating a vacuum of 0.6 bar, depending of the pump size.

### Standard design

The LKHSP pump consists of a tank, a NO non-return valve, a NC non-return valve, a tee and a standard LKH pump.

The self-priming pump is available in sizes LKHSP-10, LKHSP- 20, LKHSP-25, LKHSP-35 and LKHSP-40.

### Shaft seals

The LKHSP self-priming pump is equipped with either an external single or a flushed shaft seal. Both have stationary seal rings in acid-resistant 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. LKHSP selfpriming 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.

#### Motor

Standard 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 sizes

50 Hz: . . . . . 1.5 - 22 kW.

60 Hz: . . . . . 1.75 - 25 kW.



### OPERATING DATA

#### Pressure

Max. inlet pressure: . . . . . 10 bar

#### Temperature

Temperature range: . . . . . -10 °C to 100 °C.

#### Noise level

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

#### Flushed seal:

Water pressure: . . . . . Normally atmospheric (100 kPa 1 bar).

Water consumption: . . . . . 0.25 -0.5 l/min.

#### Double mechanical seal:

Water pressure: . . . . . 1000 kPa (10 bar).

Water consumption: . . . . . 0.25 -0.5 l/min.

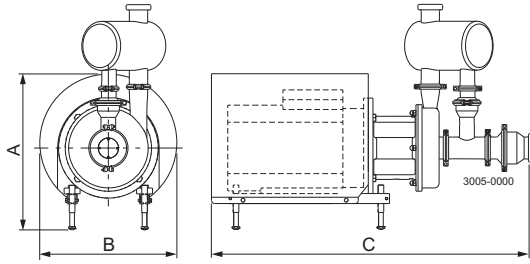
Max. static pressure at the

outlet: . . . . . 80 kPa (0.8 bar).

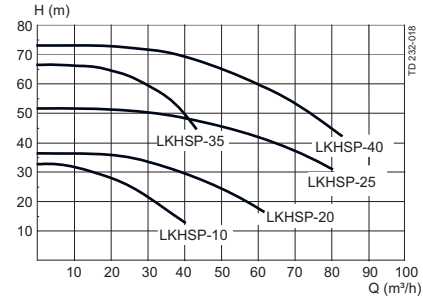
**Note!** If the static back pressure is higher than 0.8 bar, the LKC-2 special valve will not work as intended as the spring will not open the ball in the valve.

Frequency control is not possible. The system cannot work at lower rpm.

**Dimensions (mm)**



**Flow chart**



Frequency: 50 Hz, speed (synchr.): 3000 rpm

LKHSP-10					LKHSP-20			
Motor kW	1.5	2.2	3	4	2.2	3	4	5.5/7.5
A min.	346	346	357	383	346	357	383	380
A max.	432	432	467	496	432	467	496	513
B	288	288	323	359	288	323	359	383
C	739	739	824	834	782	836	846	924

LKHSP-25		LKHSP-35			LKHSP-40			
Motor kW	5.5/7.5	11/15	4	5.5/7.5	11/15	7.5	11/15/18.5	22
A min.	380	490	383	380	490	380	490	546
A max.	513	607	496	513	607	513	607	671
B	383	485	359	383	485	383	485	533
C	950	1131	837	915	1116	945	840	905

**Ordering**

Please see the LKHSP options pages in Ordering Leaflet.

**Notel**

- The self-priming pump can only be supplied in sanitary versions.
- For further details, see also IM 70818 and IM 70737.

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**How to contact Alfa Laval**

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