

## The Premium Pump for Air and Gas Applications

### 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 self-priming pump may also be equipped with a double mechanical shaft seal.

#### Materials

Product wetted steel parts: Acid-resistant steel 1.4404 (316L).

Other steel parts: Stainless steel 1.4301 (304).

Finish: Semi bright.

Product wetted seals: EPDM rubber.

#### Technical data

Max. inlet pressure: 1000 kPa (10 bar).

Temperature range: -10°C to +100°C.

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

#### Flushed seal:

Water pressure: Normally atmospheric (max. 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).



LKHSP.

**Note!** If this pressure is higher than 80 kPa, the LKC-2 special valve will not work intentionally as the spring will not open the ball in the valve.

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

#### 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.

#### Voltage and frequency

3 ~, 50 Hz, 220-240V Δ/380-420VY	≤ 4 kW
3 ~, 60 Hz, 250-280V Δ/440-480VY	≤ 4.6 kW

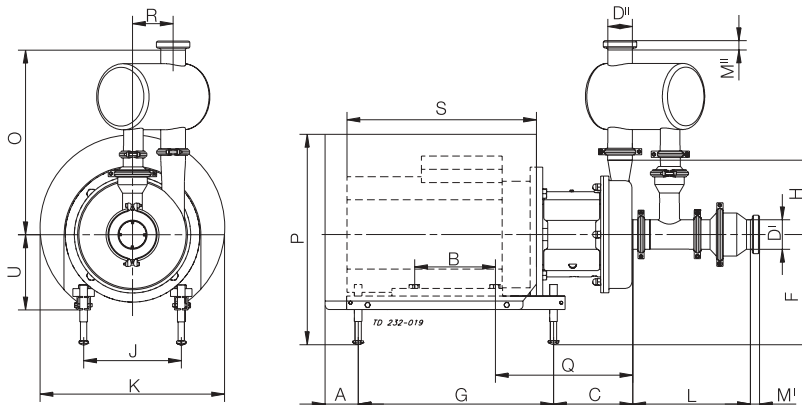
3 ~, 50 Hz, 380-420V Δ/660-690VY	≥ 5.5 kW
3 ~, 60 Hz, 440-480V Δ	≥ 6.3 kW

#### Motor sizes

50 Hz: 1.5, 2.2, 3, 4, 5.5, 7.5, 11, 15, 18.5, 22 kW.

60 Hz: 1.75, 2.5, 3.5, 4.6, 6.3, 8.6, 12.5, 17, 21, 25 kW.

Dimensions (mm)



LKHSP-10

Size	Motor			
	1.5 kw	2.2 kw	3 kw	4 kw
A	109	109	78	81
B	100	125	140	140
C	132	132	140	147
F min.	189	189	185	184
F max.	275	275	295	297
G	242	242	320	320
H	142	142	142	142
J	140	140	160	190
K	289	289	323	359
P min.	348	348	353	378
P max.	433	433	463	492
Q	214	214	235	242
R	87	87	87	87
*S	245	270	298	301
U	125	125	145	147
Weight (kg)	50	53	61	71

LKHSP-20

Size	Motor				
	2.2 kw	3 kw	4 kw	5.5 kw	7.5 kw
A	109	78	81	76	76
B	125	140	140	140	178
C	144	153	159	157	157
F min.	189	185	184	184	184
F max.	275	295	297	317	317
G	242	320	320	400	400
H	180	180	180	180	180
J	140	160	190	216	216
K	289	323	359	383	383
P min.	348	353	378	376	376
P max.	433	463	492	509	509
Q	226	248	254	292	292
R	88	88	88	88	88
*S	270	298	301	367	367
U	125	145	147	167	167
Weight (kg)	55	63	73	91	91

LKHSP-25

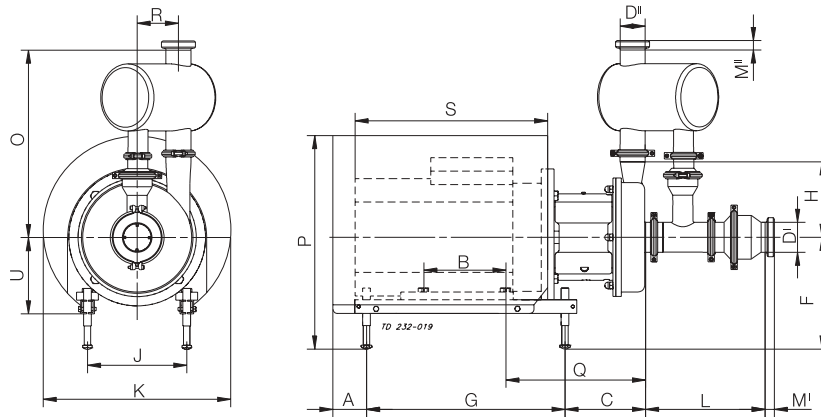
Size	Motor			
	5.5 kw	7.5 kw	11 kw	15 kw
A	76	76	106	106
B	140	178	210	210
C	163	163	192	192
F min.	184	184	228	228
F max.	317	317	345	345
G	400	400	483	483
H	193	193	193	193
J	216	216	254	254
K	383	383	485	485
P min.	376	376	486	486
P max.	509	509	603	603
Q	298	298	345	345
R	106	106	106	106
*S	367	367	493	493
U	167	167	195	195
Weight (kg)	95	95	139	148

LKHSP-35

Size	Motor				
	4 kw	5.5 kw	7.5 kw	11 kw	15 kw
A	81	76	76	106	106
B	140	140	178	210	210
C	149	147	147	177	177
F min.	184	184	184	228	228
F max.	297	317	317	345	345
G	320	400	400	483	483
H	193	193	193	193	193
J	190	216	216	254	254
K	359	383	383	485	485
P min.	378	376	376	486	486
P max.	492	509	509	603	603
Q	244	282	282	330	330
R	119	119	119	119	119
*S	304	367	367	493	493
U	147	167	167	195	195
Weight (kg)	77	95	95	139	148

Note! \*S for pumps with ABB motors.

Dimensions (mm)



LKHSP-40

Size	Motor				
	7.5 kw	11 kw	15 kw	18.5 kw	22 kw
A	76	106	106	106	156
B	178	210	210	254	241
C	158	187	187	187	201
F min.	184	228	228	228	255
F max.	317	345	345	345	365
G	400	483	483	483	508
H	212	212	212	212	212
J	216	254	254	254	279
K	383	485	485	485	533
P min.	376	486	486	486	537
P max.	509	603	603	603	646
Q	293	340	340	340	354
R	126	126	126	126	126
*S	367	493	493	493	570
U	167	195	195	195	215
Weight (kg)	98	142	151	161	188

Dimensions L and O, LKHSP-10, -20, -25, -35, -40

Size	All motor sizes				
	LKHSP -10	LKHSP -20	LKHSP -25	LKHSP -35	LKHSP -40
L	286	286	306	286	306
O	426	464	477	477	487

Note! \*S for pumps with ABB motors.

Connections (mm)

LKHSP-10, -20, -35

D <sup>1</sup> 63.5	ISO	ISO	DIN	SMS	BS	DS
D <sup>2</sup> 51	Clamp	Male	Male	Male	Male	Male
M <sup>1</sup>	21	21	25	24	27	24
M <sup>2</sup>	21	21	22	20	27	20

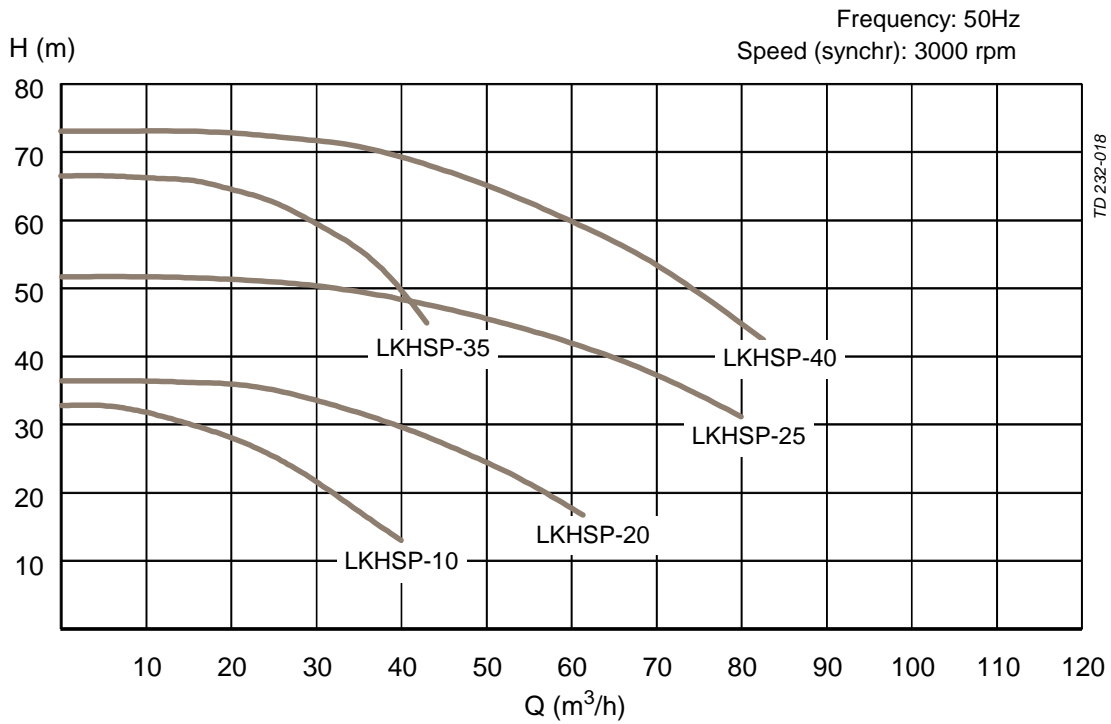
LKHSP-25

D <sup>1</sup> 76.1	ISO	ISO	DIN	SMS	BS	DS
D <sup>2</sup> 63.5	Clamp	Male	Male	Male	Male	Male
M <sup>1</sup>	21	21	30	24	27	24
M <sup>2</sup>	21	21	25	24	27	24

LKHSP-40

D <sup>1</sup> 76,1	ISO	ISO	DIN	SMS	BS	DS
D <sup>2</sup> 63,5	Clamp	Male	Male	Male	Male	Male
M <sup>1</sup>	21	21	30	24	27	24
M <sup>2</sup>	12	21	27	24	17	21

Volumetric flow



**Ordering**

Please see the LKHSP options pages in Ordering Leaflet.

- Note!** - The self-priming pump can only be supplied in sanitary versions.  
 - For further details, see also PD 65036, PD 65328, IM 70818 and IM 70737.