

# The Rigid Pump

## LKHP Centrifugal Pump for High Inlet Pressure

### Application

The LKHP pump is a highly efficient and economical centrifugal pump, specially designed for high inlet pressures, i.e. for use in filtration systems. LKHP meets the requirements of sanitary and gentle product treatment and chemical resistance, and is available in nine sizes, LKHP-10, -15, -20, -25, -35, -40, -45, -50, -60.

### Standard Design

The LKHP pump consists of a special motor, stub shaft, compression coupling, adaptor, back plate, impeller, pump casing and shaft seal.

The LKHP pump is designed for CIP-cleaning with emphasis on large internal roundings and easily cleanable seals.

LKHP is a sanitary pump with a stainless steel shroud for protection of the motor. The complete unit is supported on four adjustable stainless steel legs.

### Shaft Seals

LKHP can be fitted with two types of mechanical seals:

- Single internal seal.
- Flushed seal.

Both seal types have stationary seal ring and rotating seal ring in silicon carbide.

The secondary seal of the flushed seal is a lip seal with a long lifetime.

### Materials

Product wetted steel parts:	Acid-resistant steel 1.4404 (316L).
Other steel parts:	Stainless steel 1.4301 (304).
Product wetted seals:	EPDM rubber.
Finish:	Semi bright.

### Technical Data

Max. inlet pressure:	4000 kPa (40 bar).
Temperature range:	-10°C to +140°C (EPDM).
Water pressure:	Max. 100 kPa (1 bar).
(Flushed seal)	
Water consumption:	Approx. 0.25-0.5 l/min.
(Flushed seal)	
Noise level (at 1 m.):	60 - 80 dB (A).

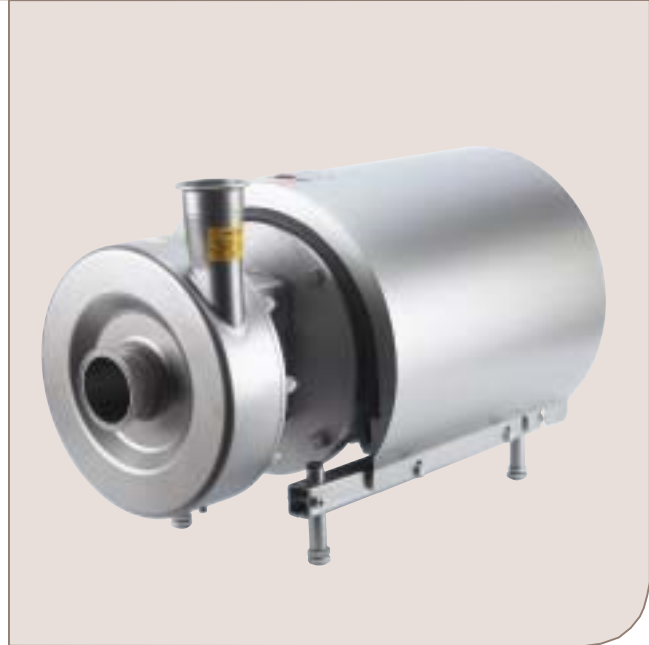


Fig. 1. LKHP.

### Motor

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

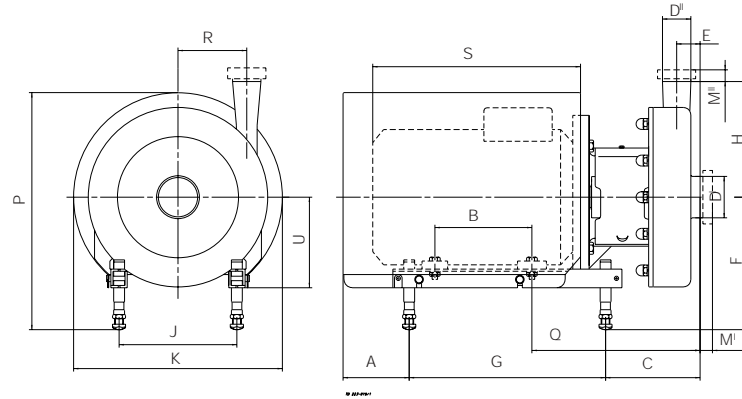
### Voltage and Frequency

3 ~, 50 Hz, 220-240VΔ/380 420VY	≤ 4 kW
3 ~, 60 Hz, 250-280VΔ/440-480VY	≤ 4.6 kW
3 ~, 50 Hz, 380-420VΔ/660-690VY	≥ 5.5 kW
3 ~, 60 Hz, 440-480VΔ	≥ 6.3 kW

### Motor Sizes

50 Hz: 1.5, 2.2, 4.0, 5.5, 7.5, 11.0, 15.0, 18.5, 22.0, 30.0 kW  
 60 Hz: 1.75, 2.5, 4.6, 6.3, 8.6, 12.5, 17.0, 21.0, 25.0, 35.0 kW.

Dimensions (mm)



LKHP-10

Size	Motor		
	1.5 kw	2.2 kw	4 kw
A	109	109	81
B	100	125	140
C	143	143	158
E	29	29	29
F min.	189	189	164
F max.	275	275	297
G	242	242	320
H	142	142	142
J	140	140	190
K	289	289	359
P min.	348	348	359
P max.	433	433	492
Q	226	226	253
R	87	87	87
*S	245	270	312
U	124	124	146
Weight (kg)	43	46	64

LKHP-15

Size	Motor	
	4 kw	5.5kw
A	81	121
B	140	140
C	189	187
E	43	43
F min.	164	184
F max.	297	317
G	320	400
H	166	166
J	190	216
K	359	383
P min.	359	376
P max.	492	509
Q	284	322
R	66	66
*S	312	381
U	146	166
Weight (kg)	70	88

LKHP-20

Size	Motor			
	2.2 kw	4 kw	5.5 kw	7.5 kw
A	109	81	121	121
B	125	140	140	178
C	157	172	170	170
E	35	35	35	35
F min.	189	164	184	184
F max.	275	297	317	317
G	242	320	400	400
H	180	180	180	180
J	140	190	216	216
K	289	359	383	383
P min.	348	359	376	376
P max.	433	492	509	509
Q	239	267	305	305
R	88	888	88	88
*S	270	312	381	381
U	124	146	166	166
Weight (kg)	50	68	86	86

LKHP-25

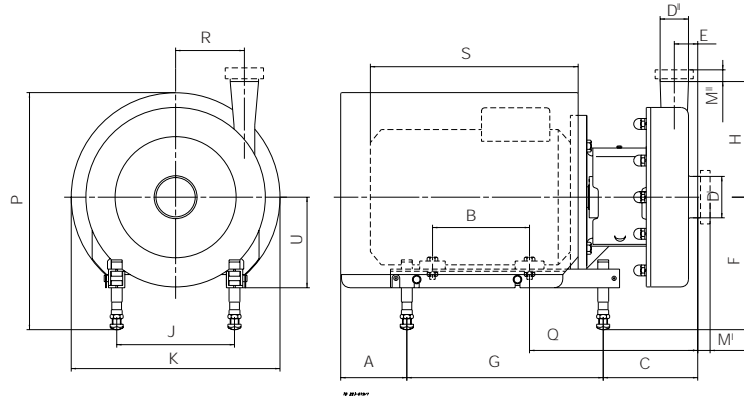
Size	Motor			
	5.5 kw	7.5 kw	11 kw	15 kw
A	121	121	106	106
B	140	178	210	210
C	174	174	204	204
E	38	38	38	38
F min.	184	184	228	228
F max.	317	317	345	345
G	400	400	483	483
H	193	193	193	193
J	216	216	254	254
K	383	383	485	485
P min.	376	376	486	486
P max.	509	509	603	603
Q	309	309	356	356
R	106	106	106	106
*S	381	381	486	486
U	166	166	194	194
Weight (kg)	92	92	136	145

LKHP-35

Size	Motor				
	4 kw	5.5 kw	7.5 kw	11 kw	15 kw
A	81	121	121	106	106
B	140	140	178	210	210
C	160	158	158	188	188
E	28	28	28	28	28
F min.	164	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.	359	376	376	486	486
P max.	492	509	509	603	603
Q	255	293	293	340	340
R	119	119	119	119	119
*S	312	381	381	486	486
U	146	166	166	194	194
Weight (kg)	73	91	91	135	144

Note! \*S for pumps with ABB motors.

Dimensions (mm)



LKHP-40

Size	Motor				
	7.5 kw	11 kw	15 kw	18.5 kw	22 kw
A	121	106	106	106	156
B	178	210	210	254	241
C	169	198	198	198	211
E	33	33	33	33	33
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	304	350	350	350	364
R	126	126	126	126	126
*S	381	486	486	486	576
U	166	194	194	194	214
Weight (kg)	97	141	150	160	187

LKHP-45

Size	Motor				
	4 kw	5.5 kw	7.5 kw	11 kw	15 kw
A	81	121	121	106	106
B	140	140	178	210	210
C	187	185	185	215	215
E	44	44	44	44	44
F min.	164	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.	359	376	376	486	486
P max.	492	509	509	603	603
Q	282	320	320	367	367
R	97	97	97	97	97
*S	312	381	381	486	486
U	146	166	166	194	194
Weight (kg)	77	95	95	139	148

LKHP-50

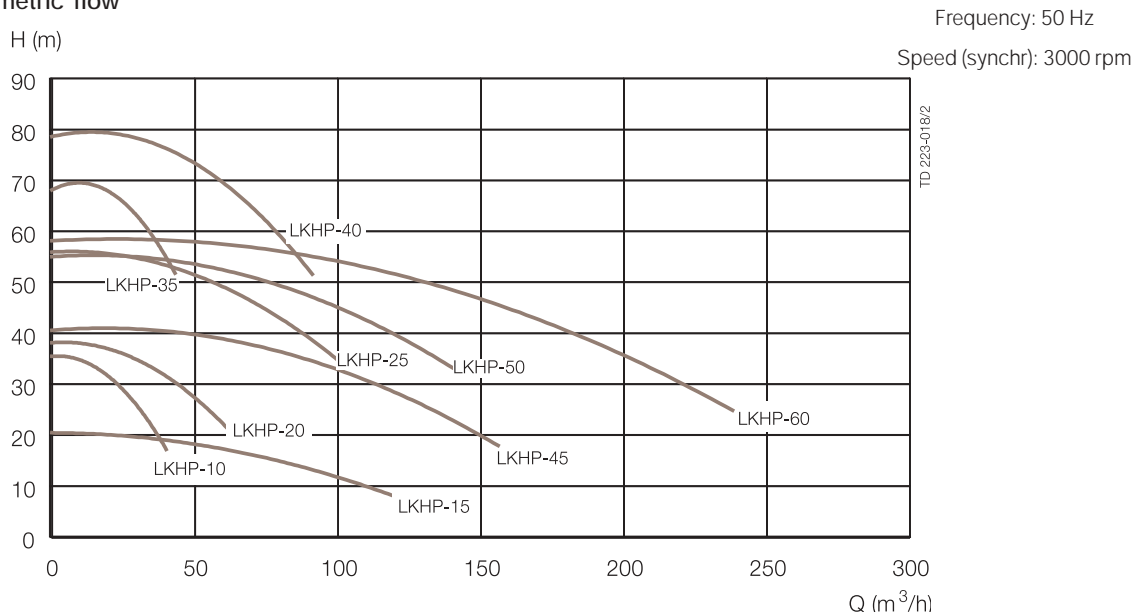
Size	Motor					
	5.5 kw	7.5 kw	11 kw	15 kw	18.5 kw	22 kw
A	121	121	106	106	106	156
B	140	178	210	210	254	241
C	183	183	212	212	212	225
E	41	41	41	41	41	41
F min.	184	184	228	228	228	255
F max.	317	317	345	345	345	365
G	400	400	483	483	483	508
H	205	205	205	205	205	205
J	216	216	254	254	254	279
K	383	383	485	485	485	533
P min.	376	376	486	486	486	537
P max.	509	509	603	603	603	646
Q	318	318	365	365	365	378
R	117	117	117	117	117	117
*S	381	381	486	486	486	576
U	166	166	194	194	194	214
Weight (kg)	101	101	145	154	164	189

LKHP-60

Size	Motor						
	5.5 kw	7.5 kw	11 kw	15 kw	18.5 kw	22 kw	30 kw
A	121	121	106	106	106	156	202
B	140	178	210	210	254	241	305
C	185	185	215	215	215	228	239
E	42	42	42	42	42	42	42
F min.	184	184	228	228	228	255	260
F max.	317	317	345	345	345	365	385
G	400	400	483	483	483	508	534
H	261	261	261	261	261	261	261
J	216	216	254	254	254	279	318
K	383	383	485	485	485	533	608
P min.	376	376	486	486	486	537	593
P max.	509	509	603	603	603	646	718
Q	320	320	367	367	367	380	392
R	102	102	102	102	102	102	102
*S	381	381	486	486	486	576	611
U	166	166	194	194	194	214	220
Weight (kg)	114	114	158	167	177	202	262

Note! \*S for pumps with ABB motors.

Volumetric flow



Connections (mm)

LKHP-10, -20, -35

D <sup>I</sup>	Heavy duty clamp 63.8	Flange acc. to DIN 2635 DN65
D <sup>II</sup>	51.1	DN50
M <sup>I</sup>	29	56
M <sup>II</sup>	29	48

LKHP- 60

D <sup>I</sup>	Heavy duty clamp 101.9	Flange acc. to DIN 2635 DN100
D <sup>II</sup>	101.9	DN100
M <sup>I</sup>	29	65
M <sup>II</sup>	29	65

LKHP- 25

D <sup>I</sup>	Heavy duty clamp 76.5	Flange acc. to DIN 2635 DN80
D <sup>II</sup>	63.8	DN65
M <sup>I</sup>	29	56
M <sup>II</sup>	29	56

Optional Extras

- A) Impeller with reduced diameter.
- B) Impeller screw.
- C) Motor for other voltage and/or frequency.
- D) 1500 rpm. motor.
- E) Motor with increased safety/flare proof motor.
- F) Flushed shaft seal.
- G) Seals in Nitrile (NBR) or Fluorinated rubber (FPM).

LKHP- 15, -45, -50

D <sup>I</sup>	Heavy duty clamp 101.9	Flange acc. to DIN 2635 DN100
D <sup>II</sup>	76.5	DN80
M <sup>I</sup>	29	65
M <sup>II</sup>	29	56

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Single or flushed shaft seal.
- Optional extras.

LKHP- 40

D <sup>I</sup>	Heavy duty clamp 76.5	Flange acc. to DIN 2635 DN80
D <sup>II</sup>	63.8	DN65
M <sup>I</sup>	29	56
M <sup>II</sup>	12	56

Note!

- The curves for LKHP are the same as those for LKH.
- For further details, see also PD65036 and Instruction Manual, IM 70796.