

The Premium Pump

LKH Centrifugal Pump

Applications

The LKH pump is a highly efficient and economical centrifugal pump, which meets the requirements of sanitary and gentle product treatment and chemical resistance. LKH is available in twelve sizes, LKH-5, -10, -15, -20, -25, -35, -40, -45, -50, -60, -70 and -80.

Standard design

The LKH pump consists of a standard motor, stub shaft, mechanical compression coupling (LKH-5 with pin bolts), adaptor, back plate, impeller, pump casing and shaft seal. (LKH-5 has clamp connection between pump casing and back plate).

The LKH pump is designed for CIP with emphasis on large internal roundings and cleanable seals.

The sanitary version of LKH has a stainless steel shroud for protection of the motor, and the complete unit is supported on four adjustable stainless steel legs.

Shaft seals

The LKH 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. The 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: LKH-5: 600 kPa (6 bar)
 LKH-10 - 80 (50 Hz): 1000 kPa (10 bar).
 LKH-10 - 80 (60 Hz): 500 kPa (10 bar).

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

Noise level (at 1 m): 60 - 85 dB (A).

Flushed shaft seal (LKH-5 to LKH-80):

Water pressure inlet: max. 1 bar.

Water consumption: 0.25 -0.5 l/min.



LKH-10 with shroud and legs.

Double mechanical shaft seal:

Water pressure inlet, LKH-5 to -60: Max. 500 kPa (5 bar).

Water pressure inlet, LKH-70 and -80: Max. 300 kPa (3 bar).

Water consumption: 0.25 -0.5 l/min.

Connections for FSS and DMSS:

R 1/8" (BSP) external thread.

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.

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 ≥ 6.4 kW

Motor sizes

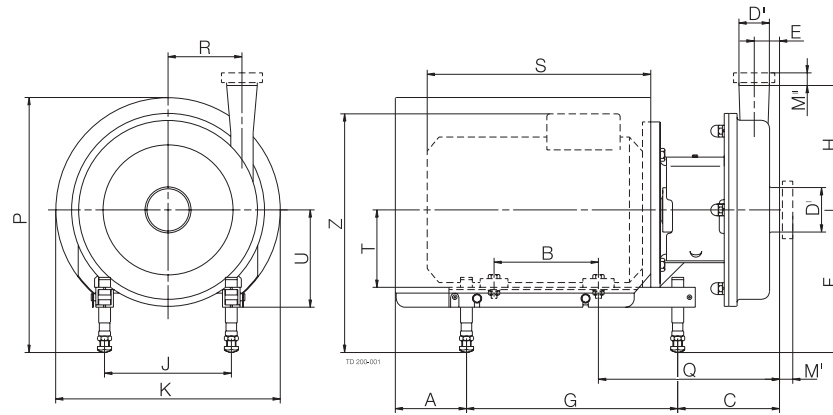
50 Hz: 0.75 - 1.1 - 1.5 - 2.2 - 3 - 4 - 5.5 - 7.5 - 11 - 15 -
 18.5 - 22 - 30 - 37 - 45 - 55 - 75 kW.

60 Hz: 0.9 - 1.3 - 1.75 - 2.5 - 3.5 - 4.6 - 6.4 - 8.6 - 12.5 -
 17 - 21 - 25 - 35 - 43 - 52 - 63 - 86 kW.

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.

Dimensions (mm) (90002/4)



LKH-5

Size	ABB-Motor		
	0.75/1.1 kW	1.5 kW	2.2 kW
A	74	109	109
B	100	100	125
C	125	127	127
E	22	22	22
F min.	183	189	189
F max.	275	275	275
G	242	242	242
H	158	158	158
J	125	140	140
K	251	269	269
P min.	308	323	323
P max.	400	409	409
Q	207	209	209
R	71	71	71
S	232	245	270
T	80	90	90
U	125	125	125
Z min.	295	305	305
Z max.	389	399	399
Weight (kg)	27	30	33

LKH-10

Size	ABB-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
E	23	23	23	23
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	268	268	323	359
P min.	323	323	357	383
P max.	409	409	467	496
Q	215	215	235	242
R	87	87	87	87
S	245	270	299	301
T	90	90	100	112
U	125	125	145	147
Z min.	311	311	321	330
Z max.	397	397	431	443
Weight (kg)	36	39	47	57

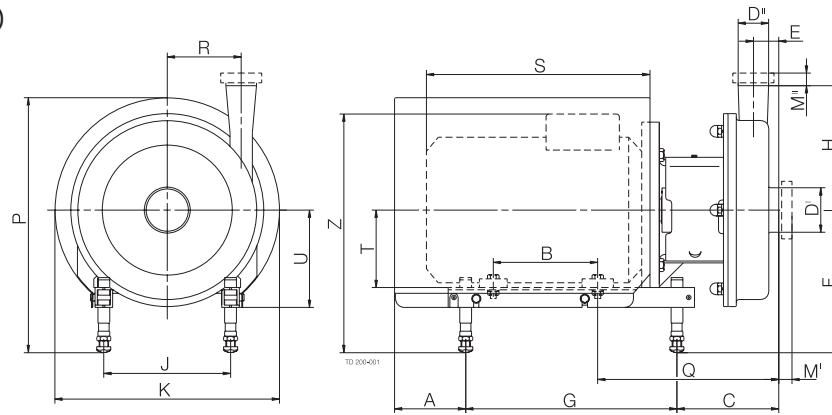
LKH-15

Size	ABB-Motor		
	3 kW	4 kW	5.5 kW
A	78	81	81
B	140	140	178
C	176	183	181
E	43	43	43
F min.	185	184	184
F max.	295	297	317
G	320	320	400
H	166	166	166
J	160	190	216
K	323	359	383
P min.	357	383	380
P max.	467	492	513
Q	271	278	316
R	66	66	66
S	299	301	402
T	100	112	132
U	145	147	167
Z min.	321	330	348
Z max.	431	443	481
Weight (kg)	51	61	79

LKH-20

Size	ABB-Motor				
	1.5 kW	2.2 kW	3 kW	4 kW	5.5/7.5 kW
A	109	109	78	81	81
B	100	125	140	140	178
C	145	145	152	159	157
E	27	27	27	27	27
F min.	189	189	185	184	184
F max.	275	275	295	297	317
G	242	242	320	320	400
H	180	180	180	180	180
J	140	140	160	190	216
K	268	268	323	359	383
P min.	323	323	357	383	380
P max.	409	409	467	496	513
Q	227	227	247	254	292
R	88	88	88	88	88
S	245	270	299	301	402
T	90	90	100	112	132
U	125	125	145	147	167
Z min.	311	311	321	330	348
Z max.	397	397	431	443	481
Weight (kg)	38	41	49	59	77

Dimensions (mm) (900002/4)



LKH-25

Size	ABB-Motor	
	5.5/7.5 kw	11/15 kw
A	81	105
B	178	210
C	163	192
E	32	32
F min.	184	228
F max.	317	345
G	400	483
H	193	193
J	216	254
K	383	485
P min.	380	490
P max.	513	607
Q	298	345
R	106	106
S	402	493
T	132	160
U	167	195
Z min.	348	438
Z max.	481	554
Weight (kg)	81	125/134

LKH-35

Size	ABB-Motor		
	4 kW	5.5/7.5 kW	11/15 kW
A	81	81	105
B	140	178	210
C	150	148	177
E	23	23	23
F min.	184	184	228
F max.	297	317	345
G	320	400	483
H	193	193	193
J	190	216	254
K	359	383	485
P min.	383	380	490
P max.	496	513	607
Q	245	283	330
R	119	119	119
S	301	402	493
T	112	132	160
U	147	167	195
Z min.	330	348	438
Z max.	443	481	554
Weight (kg)	63	81	125/134

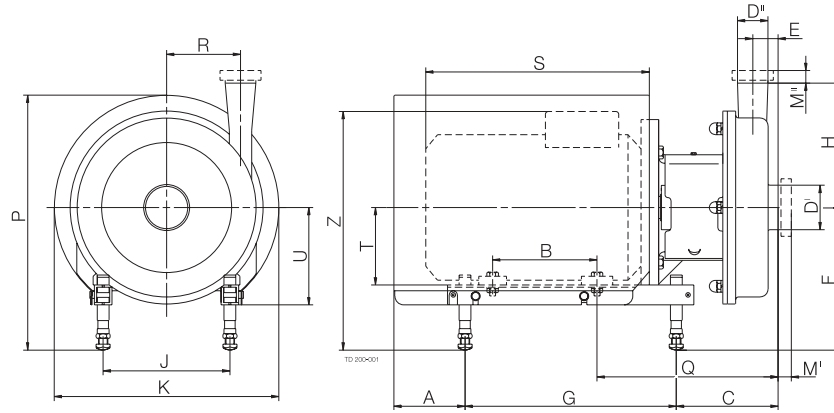
LKH-40

Size	ABB-Motor		
	7.5 kW	11/15/18.5 kW	22 kW
A	81	105	156
B	178	210	241
C	158	187	201
E	28	28	28
F min.	184	228	260
F max.	317	345	365
G	400	483	508
H	212	212	212
J	216	254	279
K	383	485	533
P min.	380	490	546
P max.	513	607	671
Q	293	340	353
R	126	126	126
S	402	493	570
T	132	160	180
U	167	195	215
Z min.	348	438	484
Z max.	481	554	589
Weight (kg)	84	128/137/147	174

LKH-45

Size	ABB-Motor		
	4 kW	5.5/7.5 kW	11/15 kW
A	81	81	105
B	140	178	210
C	179	177	206
E	41	41	41
F min.	184	184	228
F max.	297	317	345
G	320	400	483
H	193	193	193
J	190	216	254
K	359	383	485
P min.	383	380	490
P max.	496	513	607
Q	274	312	359
R	97	97	97
S	301	402	493
T	112	132	160
U	147	167	195
Z min.	330	347	438
Z max.	443	480	555
Weight (kg)	65	83	127/136

Dimensions (mm) (900002/4)



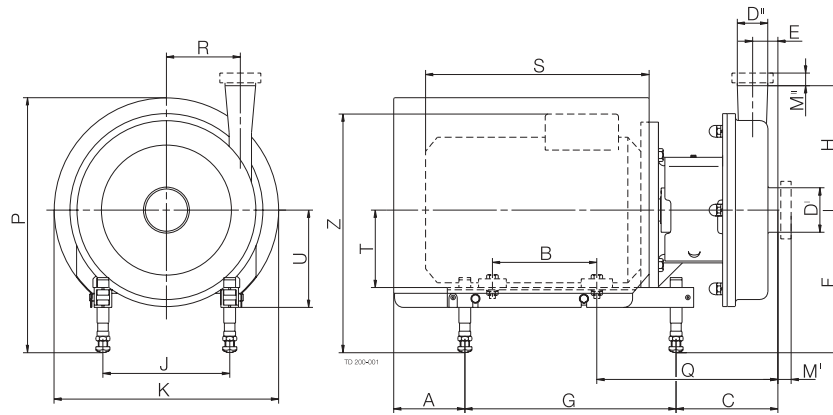
LKH-50

Size	ABB-Motor		
	5.5/7.5 kW	11/15/18.5kW	22 kW
A	81	105	156
B	178	210	241
C	171	200	213
E	35	35	35
F min.	184	228	260
F max.	317	345	365
G	400	483	508
H	205	205	205
J	216	254	279
K	383	485	534
P min.	380	490	546
P max.	513	607	671
Q	306	353	366
R	118	118	118
S	402	493	570
T	132	160	180
U	167	195	215
Z min.	348	438	484
Z max.	481	554	589
Weight (kg)	86	130/139/149	174

LKH-60

Size	ABB-motor			BROOK-motor 30 kW
	5.5/7.5 kW	11/15/18.5kW	22 kW	
A	81	105	156	202
B	178	210	241	305
C DN150	250	279	292	304
C 4"	200	229	242	254
C clamp 6"	240	269	282	294
E DN150	112	112	112	112
E 4"	62	62	62	62
E clamp 6"	102	102	102	102
F min.	184	228	260	260
F max.	317	345	365	385
G	400	483	508	534
H	262	262	262	262
J	216	254	279	318
K	383	485	534	673
P min.	380	490	546	661
P max.	513	607	671	786
Q DN150	385	432	445	457
Q 4"	335	382	395	407
Q clamp 6"	375	422	435	447
R	102	102	102	102
S	402	493	570	700
T	132	160	180	200
U	167	195	215	220
Z min.	348	437	484	585
Z max.	481	554	589	710
Weight (kg)	94	138/147/157	182	327

Dimensions (mm) (900002/4)



LKH-70

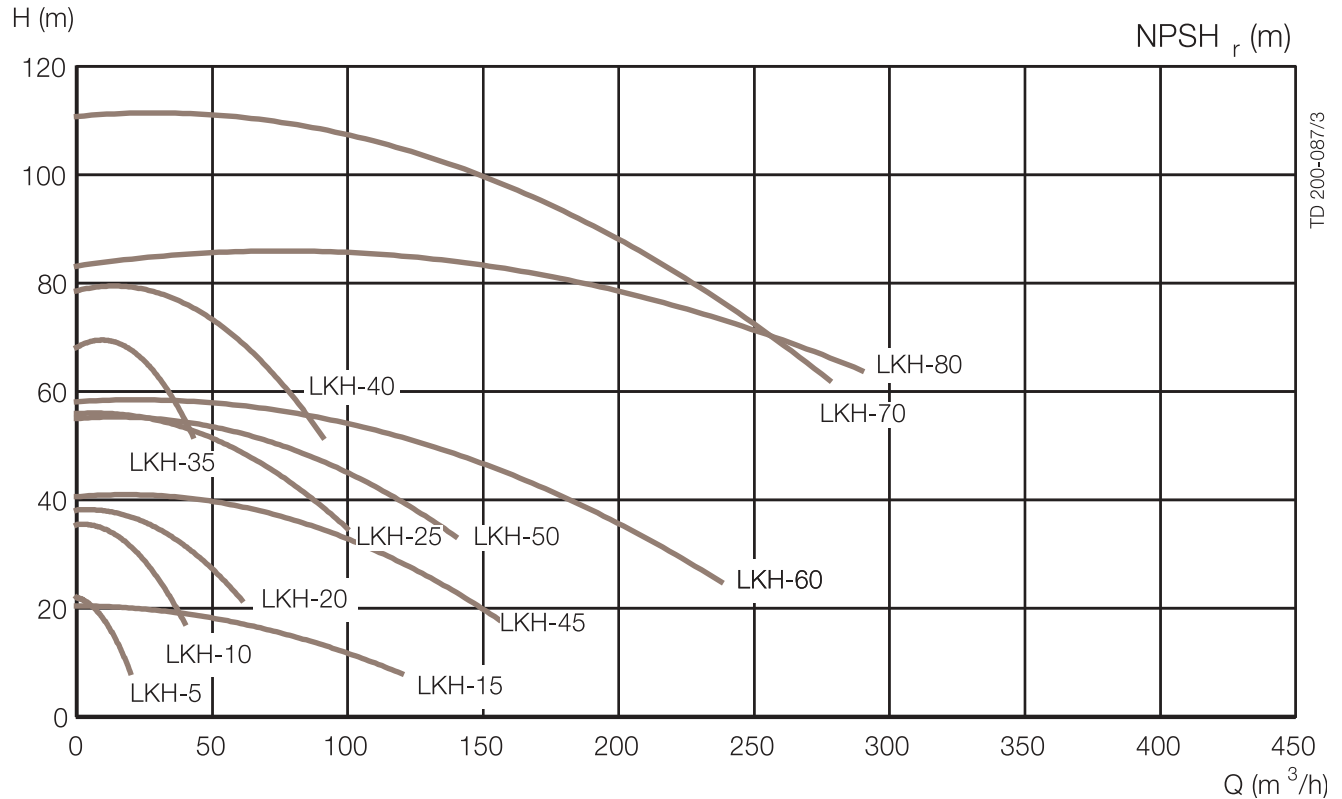
Size	ABB-motor		BROOK-Motor	
	18.5 kW	22 kW	30/37/45 kW	55/75 kW
A	105	156	246	389
B	210	241	305	310/349
C 4"	212	226	238	277
C 6"clamp/DN150	302	316	328	367
E 4"	25	25	25	25
E 6"clamp/DN150	115	115	115	115
F min.	228	260	260	401
F max.	345	365	385	462
G	483	508	534	640
H 3"	254	254	254	254
H 4"/DN100	335	335	335	335
J	254	279	318	406
K	485	534	673	753
P min.	490	546	661	811
P max.	607	671	786	872
Q 4"	365	378	390	471
Q 6"clamp/DN150	455	468	480	561
R	147	147	147	147
S	493	570	700	845/890
T	160	180	200	250
U	195	215	220	
Z min.	437	484	585	746/776
Z max.	554	589	710	807/837
Weight (kg)	207	232	381/381/401	555/570

LKH-80

Size	ABB-motor		BROOK-Motor	
	18.5kw	22 kw	30/37/45 kw	55/75 kw
A	105	156	246	389
B	210	241	305	310/349
C	237	250	262	302
E	43	43	43	43
F min.	228	260	260	401
F max.	345	365	385	462
G	483	508	534	640
H	326	326	326	326
J	254	279	318	406
K	485	534	673	753
P min.	490	546	661	811
P max.	607	671	786	872
Q	390	403	415	496
R	152	152	152	152
S	493	570	700	845/890
T	160	180	200	250
U	195	215	220	
Z min.	437	484	585	746/776
Z max.	554	589	710	807/837
Weight (kg)	218	243	392/392/412	566/581

Flow chart

Frequency: 50 Hz
Speed (synchr): 3000 rpm



Connections (mm) Sanitary version

LKH-5

D ¹ 51	ISO	ISO	DIN	SMS	BS	DS
D ² 38	Clamp	Male	Male	Male	Male	Male
M ¹	21	21	22	20	27	20
M ²	21	21	22	20	27	20

LKH-15, -45, -50, -70

D ¹ 101.6	ISO	ISO	DIN	SMS	BS	DS
D ² 76.1	Clamp	Male	Male	Male	Male	Male
M ¹	21	21	30	35	32	24
M ²	21	21	30	24	27	24

LKH-10, -20, -35

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

LKH-60

D ¹ 101.6	ISO	ISO	DIN	SMS	BS	DS
D ² 101.6	Clamp	Male	Male	Male	Male	Male
M ¹	21	21	30	35	32	24
M ²	21	21	30	35	32	24

LKH-25

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

LKH-60, -70, -80*

D ¹ DN150	DIN	D ¹ 6"	ISO
D ² DN100	Male	D ² 4"	Clamp
M ¹	50	M ¹	38
M ²	30	M ²	16

LKH-40

D ¹ 76.1	ISO	ISO	DIN	SMS	BS	DS
D ² 63.5	Clamp	Male	Male	Male	Male	Male
M ¹	21	21	30	24	27	24
M ²	12	21	27	24	22	21

* LKH-60, -70 are with reducer on D¹

Options

- A) Impeller with reduced diameter.
- B) Impeller screw/nut (standard for LKH-70 and -80).
- C) Motor for other voltage and/or frequency.
- D) 1500 rpm. motor.
- E) Motor with increased safety/flame proof motor.
- F) Inducer (only LKH-10 to -50).
- G) Flushed shaft seal.
- H) Double mechanical shaft seal.
- I) Counter flanges, seal rings and bolts for flanged connections (industrial version).
- J) Wider clearance between impeller and backplate if there is a risk of buliding up a hard layer of product.
Standard clearance is 0.5 mm (1 mm for LKH-70/80) and can be made up to 2.5 mm).
- K) Surface roughness, product wetted parts:
 $R_a \leq 0.8 \mu\text{m}$ and $R_z \leq 0.8 \mu\text{m}$.
- L) Product wetted seals of Nitrile (NBR), Fluorinated rubber (FPM) or FEP.
- M) Rotating seal ring of Silicon Carbide.

Ordering

Please state the following when ordering:

- 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.

Note! For further details, see also PD 65036 and IM 70737.