



# When Purity is the Issue

## LKH UltraPureCentrifugal Pump

PD 66322 GB1 2001-09

### Application

The LKH UltraPure pump is a highly efficient and economical centrifugal pump, which meets the requirements of the pharmaceutical industries. It provides gentle product treatment and is chemically resistant. LKH UltraPure is available in five sizes, LKH-10, -20, -25, -35, and -40.

### Standard design

The LKH UltraPure pump consists of a standard motor, stub shaft, mechanical compression coupling, adaptor, back plate, impeller, shaft seal and 45° turned pump casing with standard vertical casing drain.

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

### Shaft seals

The LKH UltraPure pump is equipped with either an external single or a double mechanical shaft seal. Both have stationary seal rings in acid-resistant steel AISI 329 with sealing surface and rotating seal rings in silicon carbide.

### Materials

Product wetted steel parts:	Acid-resistant steel AISI 316L.
Other steel parts:	Stainless steel AISI 304.
Product wetted seals:	FPM.
Finish, product wetted surface:	Bright (Ra 0.5 µm)
Finish, pump casing, external surface:	Bright (Ra 0.8 µm)

### Technical data

Max. inlet pressure:	1000 kPa (10 bar).
Temperature range:	-10°C to +140°C (FPM).
Noise level (at 1 m):	60 - 80 dB (A).

### Double mechanical seal

Water pressure:	Max. 500 kPa (5 bar).
Water consumption:	0.25 - 0.5 l/min.



LKH UltraPure centrifugal pump.

### 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

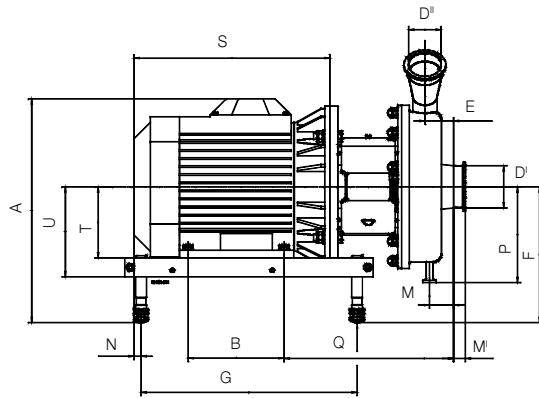
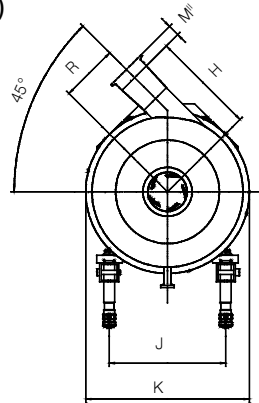
$\left( \begin{array}{l} 3 \sim, 50 \text{ Hz, } 220\text{-}240\text{V } \Delta/380\text{-}420\text{VY} \\ 3 \sim, 60 \text{ Hz, } 250\text{-}280\text{V } \Delta/440\text{-}480\text{VY} \end{array} \right)$	$\leq 4 \text{ kW}$
	$\leq 4.6 \text{ kW}$
$\left( \begin{array}{l} 3 \sim, 50 \text{ Hz, } 380\text{-}420\text{V } \Delta/660\text{-}690\text{VY} \\ 3 \sim, 60 \text{ Hz, } 440\text{-}480\text{V } \Delta \end{array} \right)$	$\geq 5.5 \text{ kW}$
	$\geq 6.3 \text{ kW}$

### 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) - (900067/0)



LKH UltraPure-10

Size	ABB-motor			
	1.5 kW	2.2 kW	3 kW	4 kW
A min.	311	311	321	330
A max.	397	397	431	443
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	247	247	250	250
N	55	55	10	6
P 1/2"	138	138	138	138
P 3/4"	148	148	148	148
P 1"	148	148	148	148
M	23	23	23	23
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
Weight (kg)	29	32	39	48

LKH UltraPure-20

Size	ABB-Motor			
	2.2 kW	3 kW	4 kW	5.5/7.5 kW
A min.	311	321	330	348
A max.	397	431	443	481
B	125	140	140	178
C	145	152	159	157
E	27	27	27	27
F min.	189	185	184	184
F max.	275	295	297	317
G	242	320	320	400
H	180	180	180	180
J	140	160	190	216
*K	256	256	256	300
N	55	10	6	13
P 1/2"	143	143	143	143
P 3/4"	153	153	153	153
P 1"	153	153	153	153
M	23	23	23	23
Q	227	247	254	292
R	88	88	88	88
S	270	299	301	402
T	100	100	112	132
U	125	145	147	167
Weight (kg)	34	41	50	65

LKH UltraPure-25

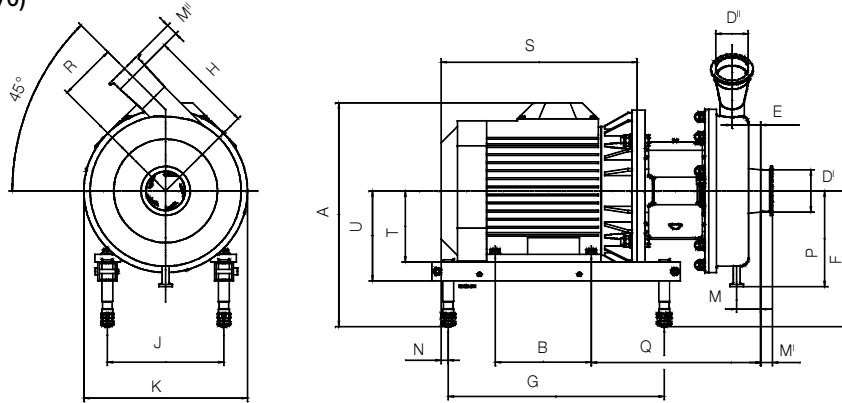
Size	ABB-Motor	
	5.5/7.5 kW	11/15 kW
A min.	348	438
A max.	481	554
B	178	210
C	163	192
E	32	32
F min.	184	228
F max.	317	345
G	400	483
H	193	193
J	216	254
*K	303	303
N	13	55
P 1/2"	168	168
P 3/4"	178	178
P 1"	178	178
M	24	24
Q	298	345
R	106	106
S	402	493
T	132	160
U	167	195
Weight (kg)	69	109/118

LKH UltraPure-35

Size	ABB-Motor		
	4 kW	5.5/7.5 kW	11/15 kW
A min.	330	348	438
A max.	443	481	554
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	303	303	350
N	6	13	55
P 1/2"	168	168	168
P 3/4"	178	178	178
P 1"	178	178	178
M	26	26	26
Q	245	283	330
R	119	119	119
S	301	402	493
T	112	132	160
U	147	167	195
Weight (kg)	54	69	109/118

\*K widest dimension (motorflange or casing)

Dimensions (mm) - (900067/0)



LKH UltraPure-40

Size	ABB-Motor		
	7.5 kW	11/15/18.5 kW	22 kW
A min.	348	438	484
A max.	481	554	589
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	329	350	350
N	13	55	94
P 1/2"	181	181	181
P 3/4"	191	191	191
P 1"	191	191	191
M	24	24	24
Q	293	340	353
R	126	126	126
S	402	493	570
T	132	160	180
U	167	195	215
Weight (kg)	74	112/121/131	156

\*K widest dimension (motorflange or casing)

Connections (mm)

LKH UltraPure-10, -20, -35

D' 63.5	ISO	TC
D' 51	Clamp	Clamp
M	21	29
M'	21	29

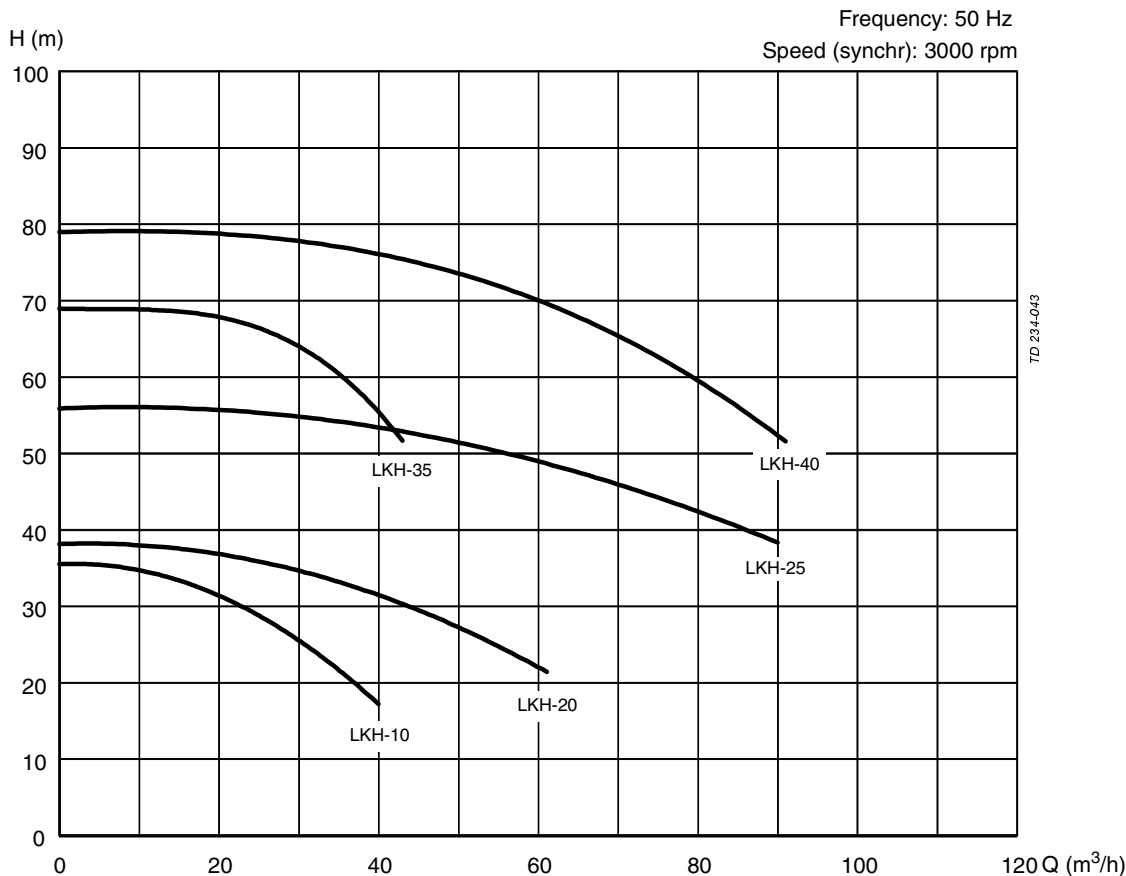
LKH UltraPure-25

D' 76.1	ISO	TC
D' 63.5	Clamp	Clamp
M'	21	29
M'	21	29

LKH UltraPure-40

D' 76.1	ISO	TC
D' 51	Clamp	Clamp
M'	21	29
M'	21	29

## Flow chart



## Options

### Equipment

- 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/explosion proof motor.
- F) Inducer.
- G) Double mechanical shaft seal.
- H) Double mechanical John Crane shaft seal.
- I) Pump with shroud.
- J) Pump without legs.
- K) Material traceability EN 10204.3.1.B.
- L) Product wetted steel parts - ferrite max. 1%.
- M) Surface finish certificate.

### Material grades

- N) Finish, product wetted surface:  
R<sub>a</sub> max. 0.4 mm electropolished.
- O) Product wetted seals of EPDM or FEP.

## Specials

- P) Special flush arrangement (Basic).
- Q) ½" diaphragm valve - air actuated.
- R) Flow meter.

**Note!** Because of the mechanical polishing on internal surfaces, the impeller diameter will be adjusted to meet the desired design point.

## Ordering

Please state the following when ordering:

- Pump size.
- 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 IM 70831.

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The information contained herein is correct at the time of issue, but may be subject to change without prior notice.

## How to contact Alfa Laval

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