



When Purity is the Issue

LKH UltraPure Centrifugal Pump

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. 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, 45° product discharge, and a vertical casing drain.

The LKH UltraPure pump is designed for CIP and SIP.

Shaft 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 stainless steel AISI 329 with sealing surface and rotating seal rings in silicon carbide.

Materials

Product wetted steel parts:	Stainless steel AISI 316L.
Other steel parts:	Stainless steel AISI 304.
Product wetted seals:	FPM (Fluorelastomer)
Finish, product wetted surface:	Ra 20 μ-inch max
Finish, pump casing, external surface:	Ra 32 μ-inch max

Technical data

Max. inlet pressure:	145 psi (10 bar)
Temperature range	15°F to +285°F (FPM)
Noise level (at 3 ft.):	60 - 80 dB (A).

Double mechanical seal

Water pressure:	Max. 73 psi (5 bar)
Water consumption:	4 - 8 gal/hr



LKH UltraPure centrifugal pump.

Motor

Standard C-faced, foot-mounted motor according to NEMA standard. 3500 RPM or 1750 RPM. Premium efficiency, Class F.

Voltage and Frequency

3 phase, 60 HZ, 230/460V standard.

Other voltages and frequencies available upon request.

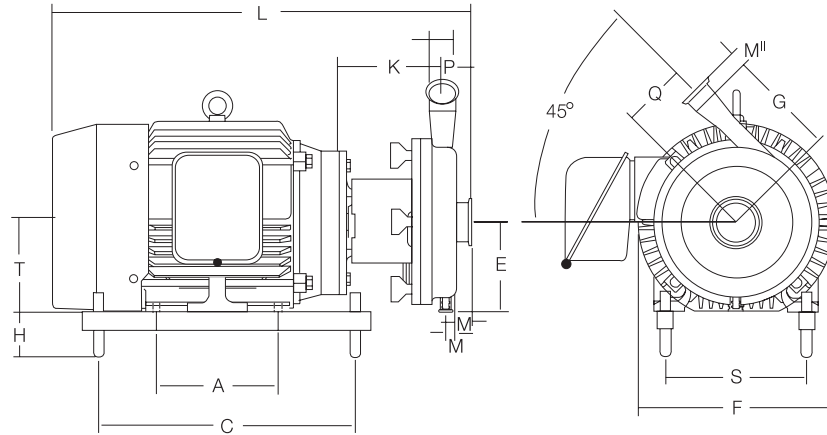
Hp

Horsepower requirements based on flow curves.

Motor sizes

60 Hz: 1 - 1.5 - 2 - 3 - 5 - 7.5 - 10 - 15 - 20 - 25 - 30 Hp.

Dimensions (in)



LKH UltraPure-10*

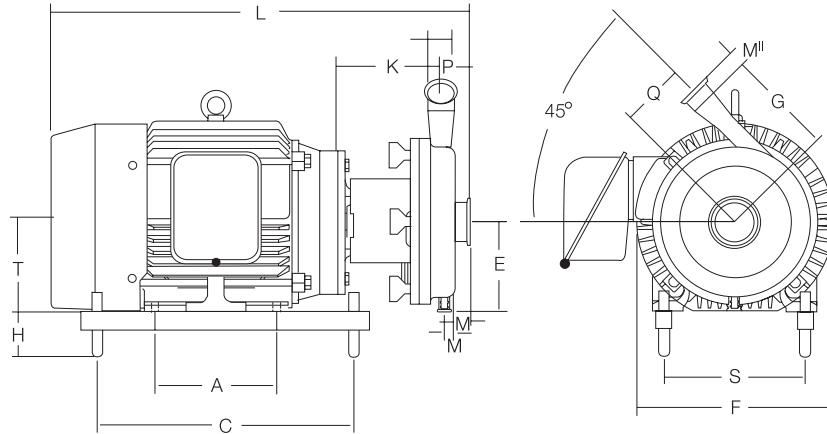
Size	Motor						
	1 Hp 143TC	1.5 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC
A	4.00	4.00	5.00	4.50	5.50	5.50	7.00
C	9.53	9.53	9.53	12.60	12.60	14.17	14.17
E 1/2"	5.43	5.43	5.43	5.43	5.43	5.43	5.43
E 3/4"	5.83	5.83	5.83	5.83	5.83	5.83	5.83
F	9.72	9.72	9.72	9.72	9.72	9.72	9.72
G	5.59	5.59	5.59	5.59	5.59	5.59	5.59
H	3.50	3.50	3.50	3.50	3.50	3.50	3.50
K	5.35	5.35	5.35	5.87	5.87	6.61	6.61
L	16.91	16.91	18.22	19.41	19.96	23.20	24.74
M	0.91	0.91	0.91	0.91	0.91	0.91	0.91
P	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Q	3.43	3.43	3.43	3.43	3.43	3.43	3.43
S	5.51	5.51	5.51	7.48	7.48	8.50	8.50
T	3.50	3.50	3.50	4.50	4.50	5.25	5.25
Approximate weight (lbs.)	81.00	89.00	91.00	111.00	128.00	179.00	204.00

LKH UltraPure-20*

Size	Motor							
	1 Hp 143TC	1.5 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC	15 HP 254TC
A	4.00	4.00	5.00	4.50	5.50	5.50	7.00	8.25
C	9.53	9.53	9.53	12.60	12.60	14.17	14.17	19.02
E 1/2"	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63
E 3/4"	6.02	6.02	6.02	6.02	6.02	6.02	6.02	6.02
G	5.59	5.59	5.59	5.59	5.59	5.59	5.59	7.09
H	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
K	5.35	5.35	5.35	5.87	5.87	6.61	6.61	7.95
L	16.91	16.91	18.22	19.41	19.96	23.20	24.74	28.82
M	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
P	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.06
Q	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.47
S	5.51	5.51	5.51	7.48	7.48	8.50	8.50	10.00
T	3.50	3.50	3.50	4.50	4.50	5.25	5.25	6.25
Weight (lbs.)	81.00	89.00	91.00	111.00	128.00	179.00	204.00	301.00

Note! * = Data for pumps with Sterling brand motors.

Dimensions (in)



LKH UltraPure-25*

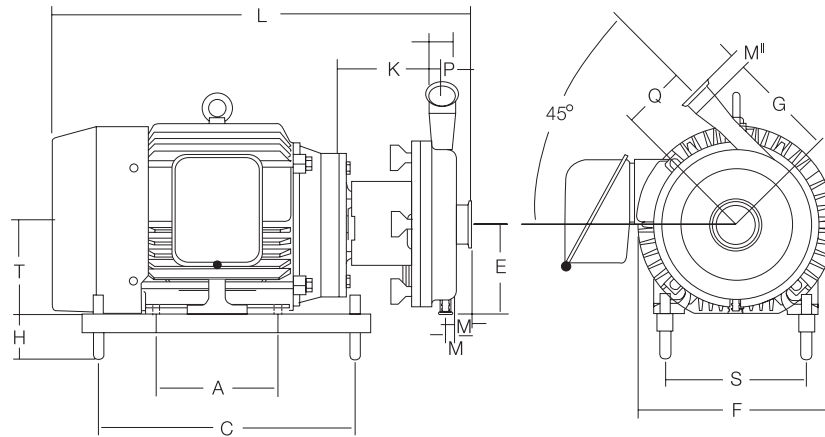
Size	Motor										
	1 Hp 143TC	1.5 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC	15 HP 254TC	20 Hp 256TC	25 Hp 284TSC	30 Hp 286TSC
A	4.00	5.00	5.00	4.50	5.50	5.50	7.00	8.25	10.00	9.50	11.00
C	9.53	9.53	9.53	12.60	12.60	14.17	14.17	19.02	19.02	20.00	20.00
E 1/2"	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61
E 3/4"	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
F	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93
G	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
H	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
K	5.98	5.98	5.98	6.50	6.50	7.24	7.24	8.07	8.07	8.07	8.07
L	17.91	17.91	18.90	19.91	20.96	24.20	25.74	29.16	30.91	32.91	34.41
M	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
P	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28	1.28
Q	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17
S	5.51	5.51	5.51	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
T	3.50	3.50	3.50	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
Approximate weight (lbs.)	95.00	103.00	105.00	125.00	142.00	193.00	218.00	311.00	361.00	442.00	473.00

LKH UltraPure-35*

Size	Motor									
	1 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC	15 HP 254TC	20 Hp 256TC	25 Hp 284TSC	30 Hp 286TSC
A	4.00	5.00	4.50	5.50	5.50	7.00	8.27	10.00	9.49	11.00
C	9.53	9.53	12.60	12.60	14.17	14.17	19.02	19.02	20.00	20.00
E 1/2"	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61
E 3/4"	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
F	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.93
G	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
H	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
K	5.55	5.55	6.06	6.06	6.81	6.81	7.83	7.83	7.83	7.83
L	17.11	18.10	19.10	20.15	23.40	24.94	28.55	30.30	32.30	33.80
M	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
P	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Q	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68
S	5.51	5.51	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
T	3.50	3.50	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
Approximate weight (lbs.)	99.00	101.00	121.00	138.00	189.00	214.00	307.00	357.00	438.00	469.00

Note!* = Data for pumps with Sterling brand motors.

Dimensions (in)

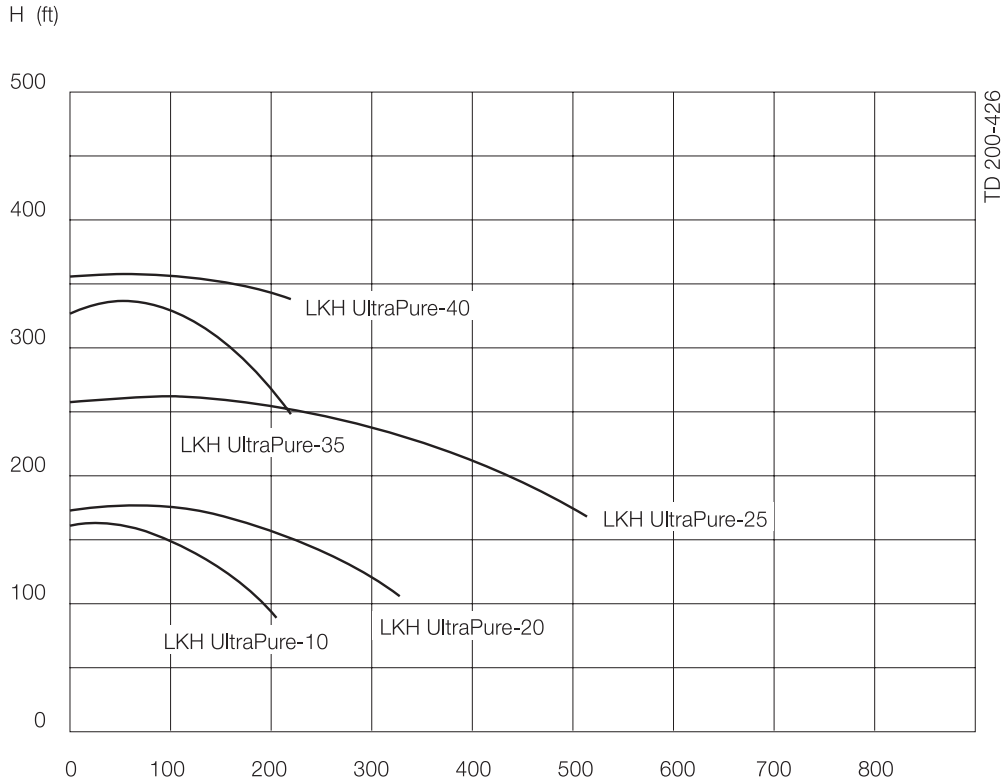


LKH UltraPure-40

Size	Motor									
	1.5 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC	15 HP 254TC	20 Hp 256TC	25 Hp 284TSC	30 Hp 286TSC
A	4.00	5.00	4.50	5.50	5.50	7.00	8.25	10.00	9.50	11.00
C	9.53	9.53	12.60	12.60	14.17	14.17	19.02	19.02	20.00	20.00
E 1/2"	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13	7.13
E 3/4"	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52	7.52
F	12.95	12.95	12.95	12.95	12.95	12.95	12.95	12.95	12.95	12.93
G	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35
H	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
K	5.75	5.75	6.26	6.26	7.01	7.01	8.03	8.03	8.03	8.03
L	17.50	18.49	19.49	22.54	23.79	25.33	28.94	30.69	32.69	34.19
M	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
P	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Q	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96
S	5.51	5.51	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
T	3.50	3.50	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
Approximate weight (lbs.)	108.00	110.00	130.00	147.00	198.00	223.00	316.00	366.00	447.00	478.00

Note! Data for pumps with Sterling brand motors.

Flow chart



Q (GPM)
 Frequency 60 Hz
 Speed 3500 RPM

Options Equipment

- Impeller with reduced diameter.
- Motor for other voltage and/or frequency
- 1800 rpm. motor
- Motor with increased safety/explosion proof motor
- Inducer
- Double mechanical shaft seal
- Pump without legs.
- Material traceability EN 10204.3.1.B. (Mill test reports)
- Product wetted steel parts - ferrite max. <1%
- Surface finish certificate

Material grades

- Finish, product wetted surface: R_a max. 15m-inch electropolished
- Product wetted seals of EPDM or PTFE

Specials

- Special flush arrangement (for Double Mechanical)
- ½" diaphragm valve - air actuated (for Flush Seal Arrangement)
- Flow meter (for Flush Arrangement)

Note!

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

Inlet/Outlet Connections - GC-Clamp (inches)

LKH UltraPure-10, -20, -35

Inlet size	2.50
Outlet size	2.00
MI	1.13
MII	1.13

LKH UltraPure-25, -40

	LKH-UP 25	LKH-UP40
Inlet size	3.00	3.00
Outlet size	2.50	2.00
MI	1.13	1.13
MII	1.13	1.13

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.

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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

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.