



When Purity is the Issue

LKHU - Ultra Pure Centrifugal Pump

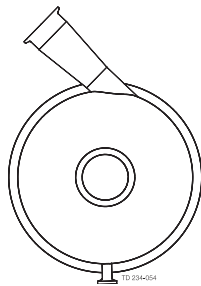
Application

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

Standard design

The LKHU 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.

As standard the LKHU UltraPure is delivered with a 45° outlet (counterclockwise). Material traceability EN 10204.3.1.B. (Mill test reports).



45° outlet

The LKHU UltraPure pump is designed for CIP and SIP.

Shaft seals

Shaft seals The LKHU 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 and 329L.
Other steel parts:Stainless steel AISI 304.
Product wetted seals:USP Class VI EPDM
Finish, product wetted surface:20Ra/EP
Finish, pump casing, external surface: . . .32Ra

Technical data

Max. inlet pressure:145 psi (10 bar)
Temperature range15°F to +285°F (FPM)
Noise level (at 3 ft.):60 - 80 dB (A).

Double mechanical seal

Water pressure (dynamic):Max. 73 psi (5 bar)
Water consumption:4 - 8 usgph



LKHU 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.

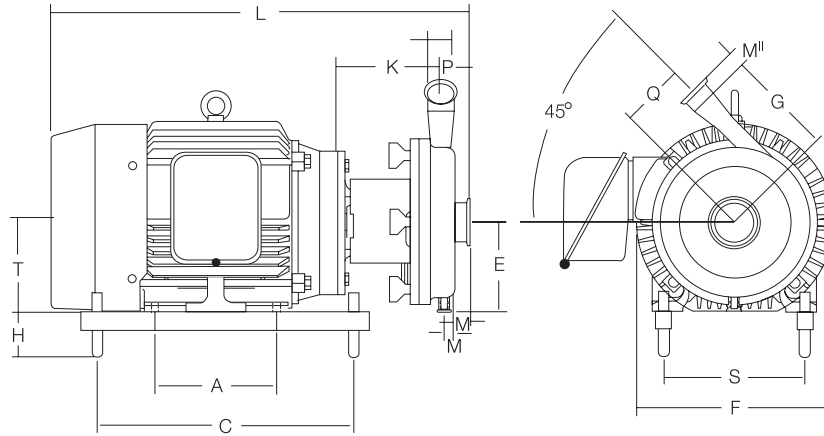
Hp

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)



LKHU UltraPure-10*

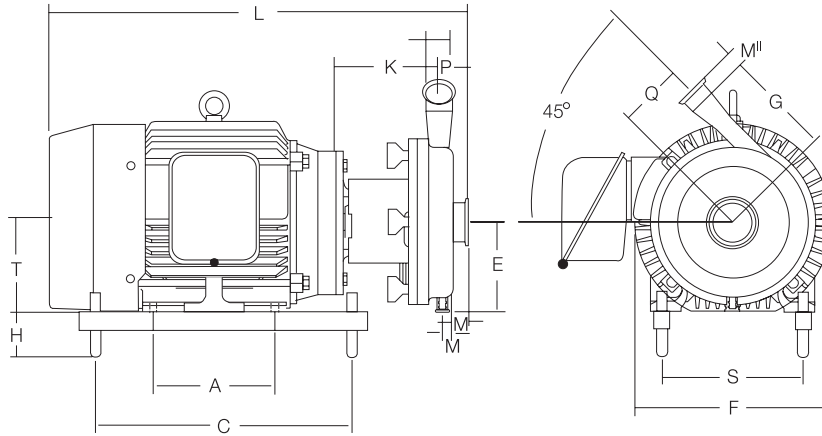
Size	Motor						
	1 Hp 143TC	1.5 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC
A	4.00	4.00	5.00	4.50	5.50	5.50	7.00
C	9.53	9.53	9.53	12.60	12.60	14.17	14.17
E 1/2"	5.43	5.43	5.43	5.43	5.43	5.43	5.43
E 3/4"	5.83	5.83	5.83	5.83	5.83	5.83	5.83
F	9.72	9.72	9.72	9.72	9.72	9.72	9.72
G	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

LKHU 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)



LKHU UltraPure-25*

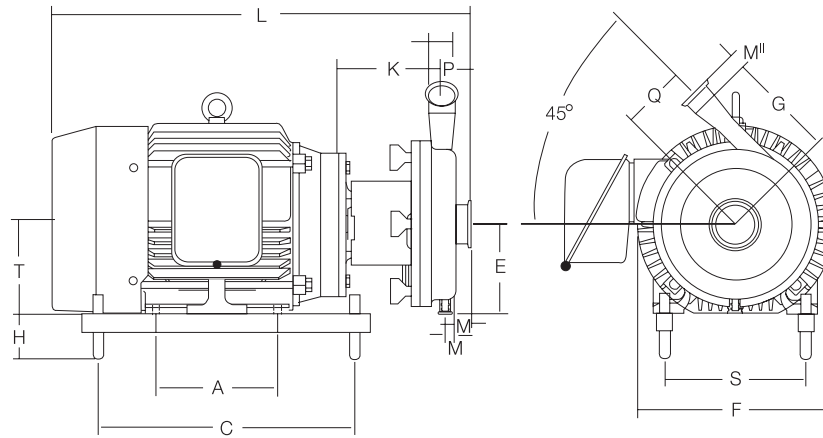
Size	Motor										
	1 Hp 143TC	1.5 Hp 143TC	2 Hp 145TC	3 Hp 182TC	5 Hp 184TC	7.5 Hp 213TC	10 Hp 215TC	15 HP 254TC	20 Hp 256TC	25 Hp 284TSC	30 Hp 286TSC
A	4.00	5.00	5.00	4.50	5.50	5.50	7.00	8.25	10.00	9.50	11.00
C	9.53	9.53	9.53	12.60	12.60	14.17	14.17	19.02	19.02	20.00	20.00
E 1/2"	6.61	6.61	6.61	6.61	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

LKHU 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)

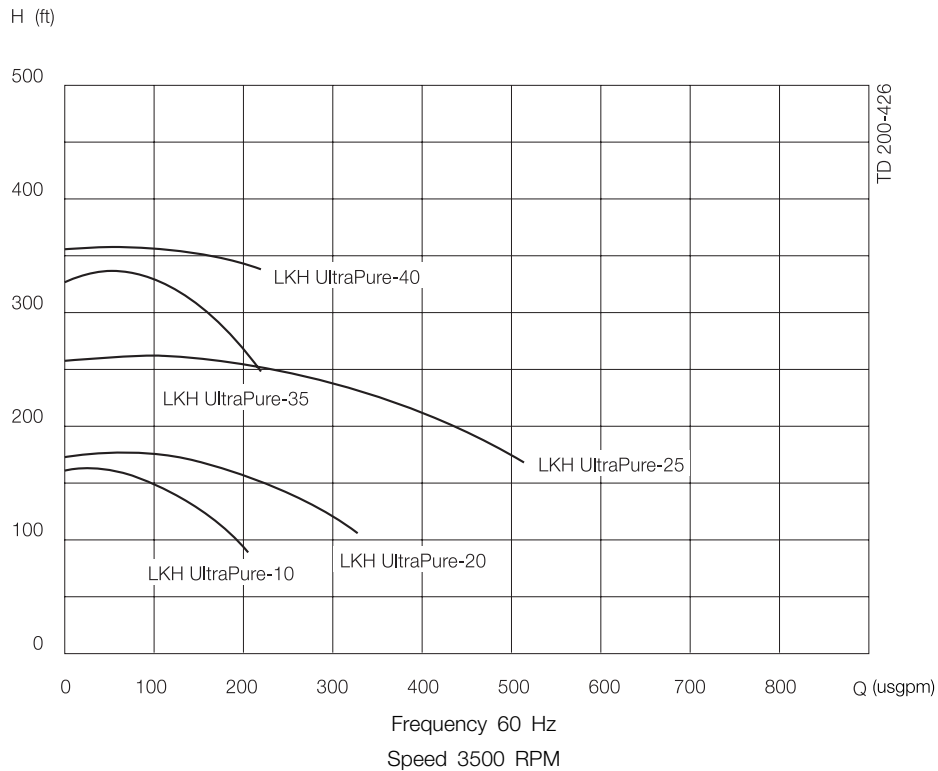


LKHU UltraPure-40

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.

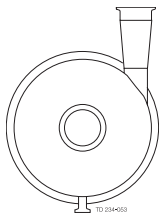
Flow chart



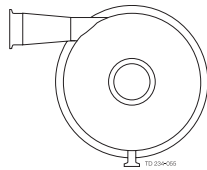
Options Equipment

diameter will be adjusted to meet the desired design point.

- 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.
- 0° outlet, see drawing below.
- 90° outlet (counterclockwise), see drawing below.
- Product wetted steel parts - ferrite max. <1%
- Surface finish certificate



0° outlet



90° outlet

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)
- 1/2" diaphragm valve - air actuated (for Flush Seal Arrangement)
- Flow meter (for Flush Arrangement)

Note!

Because of the mechanical polishing on internal surfaces, the impeller

Inlet/Outlet Connections - GC-Clamp (inches)

LKHU UltraPure-10, -20, -35

Inlet size	2.50
Outlet size	2.00
MI	1.13
MII	1.13

LKHU 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.

 Authorized to carry the 3A symbol