



# The Premium Evaporator Pump

## LKH Evap Centrifugal Pump

### Applications

The LKH Evap pump is a highly efficient and economical centrifugal pump, which meets the requirements of sanitary and gentle product treatment and chemical resistance. LKH Evap is specially designed for use in the evaporation industry covering applications as liquid concentration and powder processing solutions as well as dewatering plant and equipment for the international dairy, food and beverage, ethanol, starch, pharmaceutical, chemical, alcohol and brewery industries.

LKH Evap is available in eleven sizes, LKH Evap-10, -15, -20, -25, -35, -40, -45, -50, -60, -70 and -75.

### Standard design

The LKH Evap pump is designed for CIP with emphasis on large internal radii and cleanable seals for use in the Evaporator industry and can be delivered with Clear Flow Impeller as an option. The Clear Flow Impeller is to be used in applications where there is a risk of building up a hard layer of product between impeller and backplate.

### Shaft seals

The LKH Evap pump is equipped with either an external single or a flushed shaft seal. Both have stationary seal rings in stainless 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.

### TECHNICAL DATA

#### Materials

Product wetted steel parts: . . . . . Acid-resistant steel AISI 316L and AISI 329.  
 Other steel parts: . . . . . Stainless steel AISI 304.  
 Finish: . . . . . Polished  $\leq 32Ra$ . and 3A approved.  
 Product wetted elastomers, std: . . . . . EPDM rubber.  
 Optional: . . . . . NBR, FPM, FEP.:  
 Single seal SSS/Flushed shaft seal  
 FSS: . . . . . SiC/C or SiC/SiC.  
 Double seal DMSS: . . . . . SiC/C or SiC/SiC.

#### Voltage and frequency

3 phase, 60 HZ, 230/460V standard. Other voltages and frequencies available upon request.

#### Connections for FSS and DMSS:

1/4 tube/Rp 1/8

#### Motor

Standard C-faced, foot mounted motor according to NEMA standard. 3500 RPM or 1750 RPM. efficiency, Class F. Note different frame sizes. LKH Evap-75 only low speed (1750 RPM).



### OPERATING DATA

#### Pressure

Max. inlet pressure (dynamic)  
 LKH Evap-10 to -60 . . . . . 145 PSI  
 LKH Evap-70 to -75 . . . . . 72.5 PSI

#### Temperature

Temperature range . . . . . 14°F to +284°F (EPDM)

#### Noise level

Noise level (at 3.3 ft.): . . . . . 60 - 85 dB (A).

#### Flushed shaft seal:

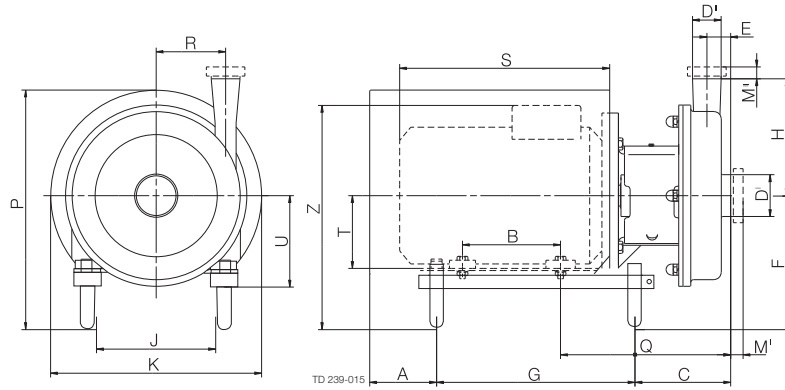
Water pressure inlet: . . . . . Max. 14.5 PSI.  
 Water consumption: . . . . . 4-8 usgph

#### Double mechanical shaft seal:

Water pressure inlet:  
 LKH Evap-5 to -60: . . . . . Max. 72.5 PSI.  
 LKH Evap-70 to -75: . . . . . Max. 43.5 PSI.

Water consumption: . . . . . 4-8 usgph

Dimensions (inch)



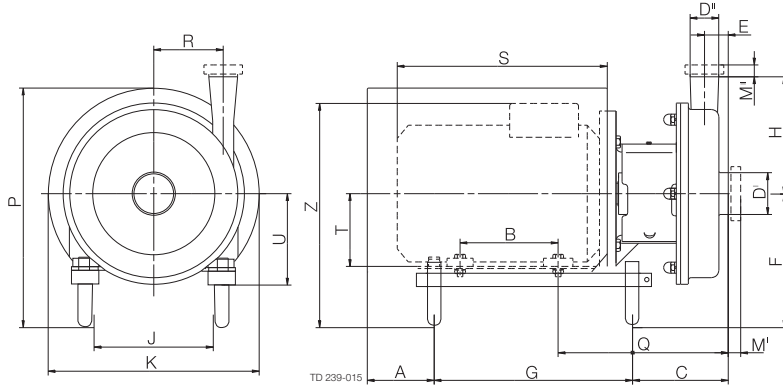
LKH Evap-10 (Sanitary)

Size	Motor-Sterling							
	1Hp	1.5HP	2Hp	3Hp	5Hp	7.5Hp	10Hp	15Hp
B	5.00	5.00	5.00	5.50	5.50	5.50	5.50	8.25
C	6.04	6.04	6.04	7.28	7.28	8.81	8.81	6.78
E	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.06
F	6.18	6.18	6.18	7.18	7.18	7.93	7.93	8.93
G	9.38	9.38	9.38	12.50	12.50	14.00	14.00	14.50
H	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79
J	5.51	5.51	5.51	7.48	7.48	8.50	8.50	10.00
Q	9.42	9.42	9.42	10.78	10.78	12.31	12.31	10.15
R	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43
S	10.32	10.32	11.46	12.75	13.34	14.03	15.25	19.40
T	3.50	3.50	3.50	4.50	4.50	5.25	5.25	6.25
U	4.00	4.00	4.00	5.00	5.00	5.75	5.75	6.75
Z	9.68	9.68	9.68	11.40	11.40	13.31	13.31	15.33
K	10.39	10.39	10.39	11.32	11.32	13.02	13.02	17.30
L	16.86	16.86	18.00	20.53	21.12	23.56	24.78	18.73
Weight (lbs)	81.00	89.00	91.00	111.00	128.00	179.00	204.00	

LKH Evap-15 (Sanitary)

Size	Motor-Sterling					
	2Hp	3Hp	5Hp	7.5Hp	10Hp	15Hp
B	5.00	5.50	5.50	5.50	5.50	8.25
C	7.17	8.66	8.66	10.20	10.20	12.72
E	1.69	1.69	1.69	1.69	1.69	1.69
F	6.18	7.18	7.18	7.93	7.93	8.93
G	9.38	12.50	12.50	14.00	14.00	14.50
H	6.54	6.54	6.54	6.54	6.54	6.54
J	5.51	7.48	7.48	8.50	8.50	10.00
Q	10.55	12.17	12.17	13.70	13.70	14.96
R	2.60	2.60	2.60	2.60	2.60	2.60
S	11.46	12.75	13.34	14.03	15.25	19.40
T	3.50	4.50	4.50	5.25	5.25	6.25
U	4.00	5.00	5.00	5.75	5.75	6.75
Z	9.68	11.40	11.40	13.31	13.31	15.33
K	10.39	11.54	11.54	13.00	13.00	17.30
L	19.13	21.93	22.52	24.96	26.18	29.96
Weight (lbs)	98.00	118.00	135.00	186.00	211.00	304.00

Dimensions (inch)



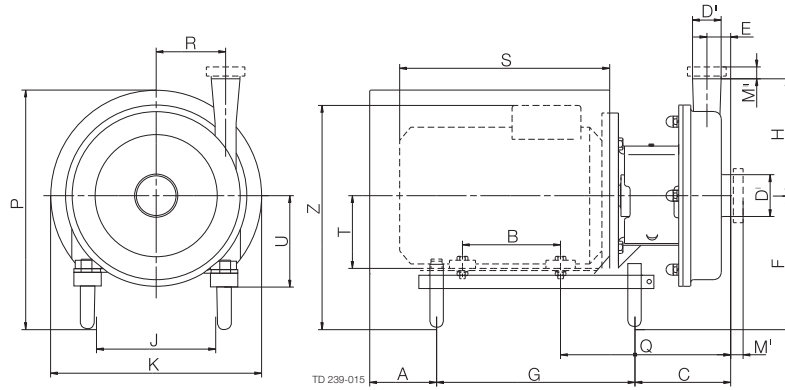
LKH Evap-20 (Sanitary)

Size	Motor-Sterling						
	2Hp	3Hp	5Hp	7.5Hp	10Hp	15Hp	20Hp
B	5.00	5.50	5.50	5.50	5.50	8.25	8.25
C	6.52	7.75	7.75	9.28	9.28	11.78	11.78
E	1.06	1.06	1.06	1.06	1.06	1.06	1.06
F	6.18	7.18	7.18	7.93	7.93	8.93	8.93
G	9.38	12.50	12.50	14.00	14.00	14.50	14.50
H	7.09	7.09	7.09	7.09	7.09	7.09	7.09
J	5.51	7.48	7.48	8.50	8.50	10.00	10.00
Q	9.90	11.25	11.25	12.78	12.78	14.03	14.03
R	3.46	3.46	3.46	3.46	3.46	3.46	3.46
S	11.46	12.75	13.34	14.03	15.25	19.40	21.10
T	3.50	4.50	4.50	5.25	5.25	6.25	6.25
U	4.00	5.00	5.00	5.75	5.75	6.75	6.75
Z	9.68	11.40	11.40	13.31	13.31	15.33	15.33
K	10.51	11.44	11.44	13.02	13.02	17.30	17.30
L	18.48	21.00	21.59	24.03	25.25	29.03	30.73
Weight (lbs)	95.00	115.00	132.00	183.00	208.00	301.00	

LKH Evap-25 (Sanitary)

Size	Motor-Sterling								
	2Hp	3Hp	5Hp	7.5Hp	10Hp	15Hp	20Hp	25Hp	30Hp
B	5.00	5.50	5.50	5.50	5.50	8.25	8.25	10.00	10.00
C	6.46	7.96	7.96	9.49	9.49	12.00	12.00	12.46	12.46
E	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
F	6.18	7.18	7.18	7.93	7.93	8.93	8.93	9.68	9.68
G	9.38	12.50	12.50	14.00	14.00	14.50	14.50	15.51	15.51
H	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
J	5.51	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
Q	9.83	11.47	11.47	12.99	12.99	14.24	14.24	14.70	14.70
R	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17
S	11.46	12.75	13.34	14.03	15.25	19.40	21.10	22.28	23.78
T	3.50	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
U	4.00	5.00	5.00	5.75	5.75	6.75	6.75	7.50	7.50
Z	9.68	11.40	11.40	13.31	13.31	15.33	15.33	17.51	17.51
K	10.39	12.42	12.42	13.61	13.61	17.30	17.30	21.24	21.24
L	18.41	21.22	21.81	24.25	25.47	29.25	30.95	32.13	33.63
Weight (lbs)	125.00	142.00	193.00	218.00	311.00	361.00	442.00	473.00	

Dimensions (inch)



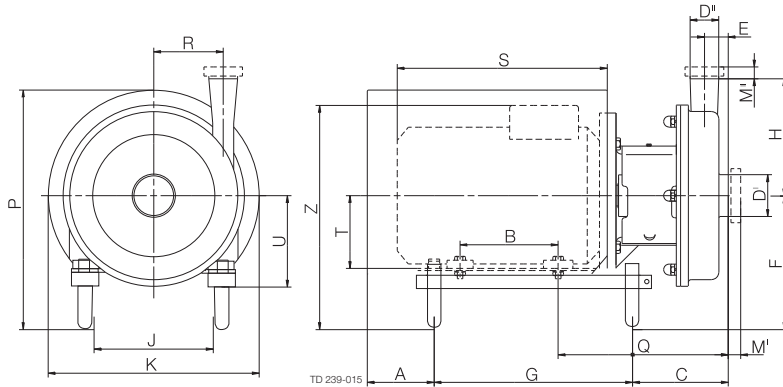
LKH Evap-35 (Sanitary)

Size	Motor-Sterling							
	3Hp	5Hp	7.5Hp	10Hp	15Hp	20Hp	25Hp	30Hp
B	5.50	5.50	5.50	5.50	8.25	8.25	10.00	10.00
C	7.37	7.37	8.90	8.90	11.41	11.41	11.87	11.87
E	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
F	7.18	7.18	7.93	7.93	8.93	8.93	9.68	9.68
G	12.50	12.50	14.00	14.00	14.50	14.50	15.51	15.51
H	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
J	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
Q	10.88	10.88	12.41	12.41	13.65	13.65	14.11	14.11
R	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69
S	12.75	13.34	14.03	15.25	19.40	21.10	22.28	23.78
T	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
U	5.00	5.00	5.75	5.75	6.75	6.75	7.50	7.50
Z	11.40	11.40	13.31	13.31	15.33	15.33	17.51	17.51
K	12.42	12.42	13.60	13.60	17.30	17.30	21.24	21.24
L	20.63	21.22	23.66	24.88	28.66	30.36	31.54	33.04
Weight (lbs)	121.00	138.00	189.00	214.00	307.00	357.00	438.00	469.00

LKH Evap-40 (Sanitary)

Size	Motor-Sterling							
	3Hp	5Hp	7.5Hp	10Hp	15Hp	20Hp	25Hp	30Hp
B	5.50	5.50	5.50	5.50	8.25	8.25	10.00	10.00
C	7.79	7.79	9.32	9.32	11.82	11.82	12.28	12.28
E	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
F	7.18	7.18	7.93	7.93	8.93	8.93	9.68	9.68
G	12.50	12.50	14.00	14.00	14.50	14.50	15.51	15.51
H	8.35	8.35	8.35	8.35	8.35	8.35	8.35	8.35
J	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
Q	11.29	11.29	12.82	12.82	14.07	14.07	14.53	14.53
R	4.96	4.96	4.96	4.96	4.96	4.96	4.96	4.96
S	12.75	13.34	14.03	15.25	19.40	21.10	22.28	23.78
T	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
U	5.00	5.00	5.75	5.75	6.75	6.75	7.50	7.50
Z	11.40	11.40	13.31	13.31	15.33	15.33	17.51	17.51
K	12.95	12.95	14.12	14.12	17.30	17.30	21.24	21.24
L	21.04	21.63	24.07	25.29	29.07	30.77	31.95	33.45
Weight (lbs)	130.00	147.00	198.00	223.00	316.00	366.00	447.00	487.0

Dimensions (inch)



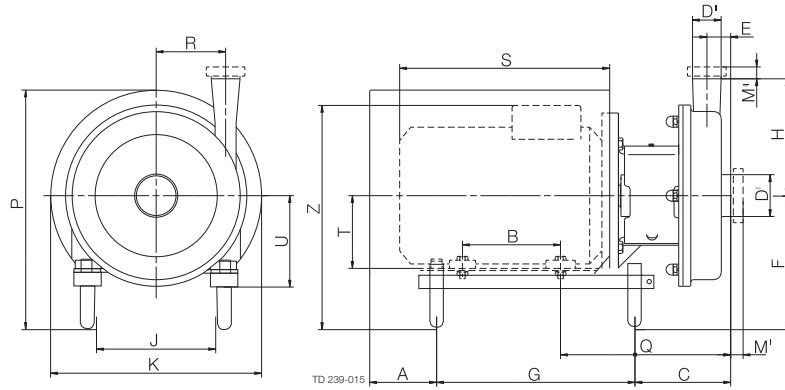
LKH Evap-45 (Sanitary)

Size	Motor-Sterling							
	3Hp	5Hp	7.5Hp	10Hp	15Hp	20Hp	25Hp	30Hp
B	5.50	5.50	5.50	5.50	8.25	8.25	10.00	10.00
C	8.52	8.52	10.05	10.05	12.55	12.55	13.01	13.01
E	1.59	1.59	1.59	1.59	1.59	1.59	1.59	1.59
F	7.18	7.18	7.93	7.93	8.93	8.93	9.68	9.68
G	12.50	12.50	14.00	14.00	14.50	14.50	15.51	15.51
H	7.60	7.60	7.60	7.60	7.60	7.60	7.60	7.60
J	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00
Q	12.02	12.02	13.55	13.55	14.49	14.49	15.25	15.25
R	3.88	3.88	3.88	3.88	3.88	3.88	3.88	3.88
S	12.75	13.34	14.03	15.25	19.40	21.10	22.28	23.78
T	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00
U	5.00	5.00	5.75	5.75	6.75	6.75	7.50	7.50
Z	11.40	11.40	13.31	13.31	15.33	15.33	17.51	17.51
K	12.42	12.42	13.60	13.60	17.30	17.30	21.24	21.24
L	21.77	22.36	24.80	26.02	29.80	31.50	32.68	34.18
Weight (lbs)	127.00	144.00	195.00	220.00	313.00	363.00	444.00	475.00

LKH Evap-50 (Sanitary)

Size	Motor-Sterling								
	3Hp	5Hp	7.5Hp	10Hp	15Hp	20Hp	25Hp	30Hp	40Hp
B	5.50	5.50	5.50	5.50	8.25	8.25	10.00	10.00	10.50
C	8.29	8.29	9.82	9.82	12.32	12.32	12.78	12.78	9.09
E	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
F	7.18	7.18	7.93	7.93	8.93	8.93	9.68	9.68	11.23
G	12.50	12.50	14.00	14.00	14.50	14.50	15.51	15.51	21.00
H	8.07	8.07	8.07	8.07	8.07	8.07	8.07	8.07	8.07
J	7.48	7.48	8.50	8.50	10.00	10.00	11.00	11.00	12.50
Q	11.79	11.79	13.32	13.32	14.57	14.57	15.03	15.03	15.10
R	4.65	4.65	4.65	4.65	4.65	4.65	4.65	4.65	4.65
S	12.75	13.34	14.03	15.25	19.40	21.10	22.28	23.78	24.57
T	4.50	4.50	5.25	5.25	6.25	6.25	7.00	7.00	8.00
U	5.00	5.00	5.75	5.75	6.75	6.75	7.50	7.50	8.79
Z	11.40	11.40	13.31	13.31	15.33	15.33	17.51	17.51	19.89
K	12.95	12.95	14.12	14.12	17.30	17.30	21.24	21.24	23.03
L	21.54	22.13	24.57	25.79	29.57	31.27	32.45	33.95	34.42
Weight (lbs)	130.00	147.00	198.00	223.00	316.00	366.00	447.00	487.00	

Dimensions (inch)



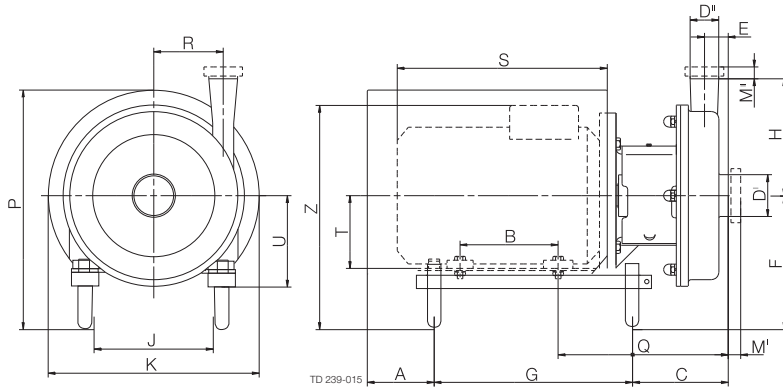
LKH Evap-60 (Sanitary)

Size	Motor-Sterling							
	7.5Hp	10Hp	15Hp	20Hp	25Hp	30Hp	40Hp	50Hp
B	5.50	5.50	8.25	8.25	10.00	10.00	10.50	10.50
C	10.96	10.96	13.47	13.47	13.93	13.95	10.55	10.55
E	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
F	7.93	7.93	8.93	8.93	9.68	9.68	11.23	11.23
G	14.00	14.00	14.50	14.50	15.51	15.51	21.00	21.00
H	10.29	10.29	10.29	10.29	10.29	10.29	10.29	10.29
J	8.50	8.50	10.00	10.00	11.00	11.00	12.50	12.50
Q	14.46	14.46	15.71	15.71	16.17	16.17	16.57	16.57
R	3.95	3.95	3.95	3.95	3.95	3.95	3.95	3.95
S	14.03	15.25	19.40	21.10	22.28	23.78	24.57	24.07
T	5.25	5.25	6.25	6.25	7.00	7.00	8.00	8.00
U	5.75	5.75	6.75	6.75	7.50	7.50	8.79	8.79
Z	13.31	13.31	15.33	15.33	17.51	17.51	19.89	19.89
K	14.12	14.12	17.30	17.30	21.24	21.24	23.03	23.03
L	24.24	25.46	30.72	32.42	33.60	35.10	35.89	35.39
Weight (lbs)	209.00	228.00	321.00	371.00	452.00	483.00		

LKH Evap-70 (Sanitary)

Size	Motor-Sterling								
	15Hp	20Hp	25Hp	30Hp	40Hp	50Hp	60Hp	75Hp	100Hp
B	8.25	10.00	9.50	11.00	10.50	12.00	11.25	12.25	13.75
C	11.87	11.87	12.38	12.38	12.13	12.13	12.13	12.13	12.87
E	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
F	7.88	7.88	8.63	8.63	12.92	12.92	13.92	13.92	14.92
G	14.50	14.50	15.50	15.50	21.00	21.00	21.00	21.00	21.00
H	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
J	10.00	10.00	11.00	11.00	12.50	12.50	14.00	14.00	16.00
Q	14.13	14.13	14.62	14.62	15.13	15.13	15.75	15.75	16.50
R	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79	5.79
S	19.4	21.1	22.27	23.77	24.45	26.07	26.67	27.65	33.87
T	6.25	6.25	7.00	7.00	8.00	8.00	9.00	9.00	10.00
U	6.88	6.88	7.63	7.63	8.79	8.79	9.79	9.79	10.79
Z	14.14	14.14	16.6	16.6	20.67	20.67	23.17	23.17	24.53
K	18.53	18.53	19.91	19.91	21.03	21.03	22.03	22.03	24.03
L	29.28	30.98	32.14	33.64	34.34	35.95	36.54	37.52	43.75
Weight (lbs)	402	452	533	563	668	728	897	922	1122

Dimensions (inch)



LKH Evap-75 (Sanitary)

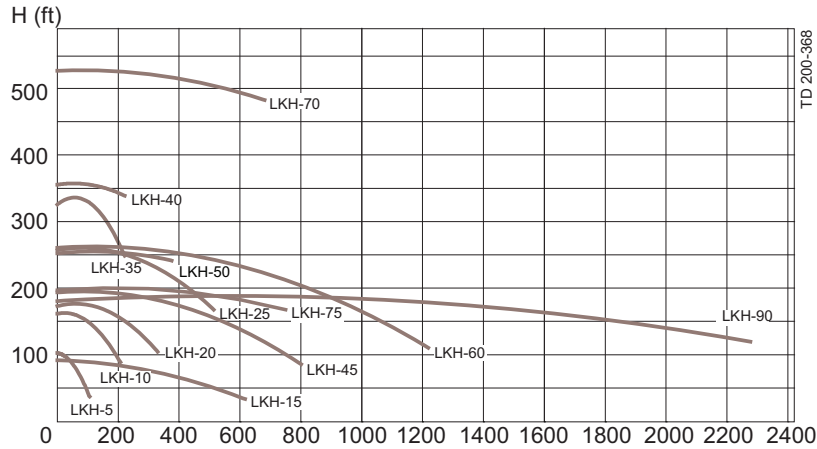
Size	Motor-Sterling					
	15Hp	20Hp	25Hp	30Hp	40Hp	50Hp
B	8.25	10.00	9.50	11.00	10.50	12.00
C	10.96	12.71	11.71	13.21	9.94	9.94
E	2.42	2.42	2.42	2.42	2.42	2.42
F	7.88	7.88	8.63	8.63	12.92	12.92
G	14.50	14.50	15.50	15.50	21.00	21.00
H	14.40	14.40	14.40	14.40	14.40	14.40
J	10.00	10.00	11.00	11.00	12.50	12.50
Q	14.96	14.96	15.46	15.46	15.96	16.59
R	9.84	9.84	9.84	9.84	9.84	9.84
S	19.4	21.1	22.27	23.77	24.45	26.07
T	6.25	6.25	7.00	7.00	8.00	8.00
U	6.88	6.88	7.63	7.63	8.79	8.79
Z	14.14	14.14	16.6	16.6	20.67	20.67
K	20.01	20.01	22.61	22.61	23.58	23.58
L	30.11	31.81	32.98	34.48	35.17	37.41
Weight (lbs)	411	461	542	572	677	737

Inlet/outlet Connections - Tri-Clamp (inches)

	LKH Evap-10, -20, -35	LKH Evap-25	LKH Evap-40	LKH Evap-15, -45, -50, -70	LKH Evap-15, -45, -50	LKH Evap-60, - 70	LKH Evap-60
DI	2.50	3.00	3.00	4.00	3.00	4.00	3.00
DII	2.00	2.50	2.00	3.00	3.00	4.00	4.00
MI	1.13	1.13	1.13	1.13	1.13+3.19	1.13	1.13+3.19
MII	1.13	1.13	1.13	1.13	1.13	1.13	1.13

Refer to dimensional drawings

## Volumetric Flow



### Options

- A. Impeller with reduced diameter.
- B. Motor for other voltage and/or frequency.
- C. Motor enclosures: washdown, TEFC, explosion proof, inverter duty and others upon request.
- D. Inducer (only LKH Evap 10 to -50).
- E. Flushed shaft seal.
- F. Double mechanical shaft seal.
- G. Counter connections.
- H. Clear Flow Impeller. Special designed impeller for applications where there is a risk of building up a hard layer of product between impeller and backplate.
- I. Surface roughness, product wetted parts:  $R_a \leq 32 \mu\text{in}$ .
- J. Product wetted seals of Nitrile (NBR), Fluorinated rubber (FPM) or FEP.
- K. Rotating seal ring of Silicon Carbide.

### Ordering

Please state the following when ordering:

- Pump size.
- Version, sanitary or industrial.
- Connections.
- Seal and Elastomer Type
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

### Notel

For further details, see also instruction manual.

Alfa Laval reserves the right to change specifications without prior notification. ALFA LAVAL is a trademark registered and owned by Alfa Laval Corporate AB.

ESE01863ENUS 1505

© Alfa Laval

### How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.us](http://www.alfalaval.us) to access the information direct.

