

The premium ex Pump

LKHex Centrifugal Pump

Applications

The LKHex pump is a highly efficient and economical centrifugal pump, which meets the requirements of the ATEX directive 94/9 IEC group II, categories 2 and 3. LKHex is available in nine sizes, LKHex-10, -15, -20, -25, -35, -40, -45, -50, -60.

The LKHex performance data are equal to the performance of the LKH pump.

Standard design

The LKHex pump consists of motor, stub shaft, mechanical compression coupling, adaptor, back plate, impeller, pump casing and shaft seal.

The LKHex 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 a double mechanical shaft seal. The seal ring is in acid-resistant steel AISI 329 with sealing surface in silicon carbide and rotating seal rings in carbon or silicon carbide.

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, NBR, FPM and FEP.

Technical data

Max. inlet pressure: .. LKH-10 - 60 (50 Hz): 1000 kPa (10 bar).

LKH-10 - 60 (60 Hz): 1000 kPa (10 bar).

Product temperature: -10°C to +80°C (EPDM).

Ambient temperature: -10°C to +30°C

Double mechanical shaft seal (DMS):

Water pressure inlet, LKH-10 to -60: .. Max. 500 kPa (5 bar).

Water consumption: 0.25 -0.5 l/min.

Connections for DMS:

R 1/8" (BSP) external thread.



LKHex-10 with shroud and legs.

Motor

Foot-flanged ATEX approved motor according to the IEC metric standard, 2 poles = 3000/3600 rpm. at 50/60 Hz.

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

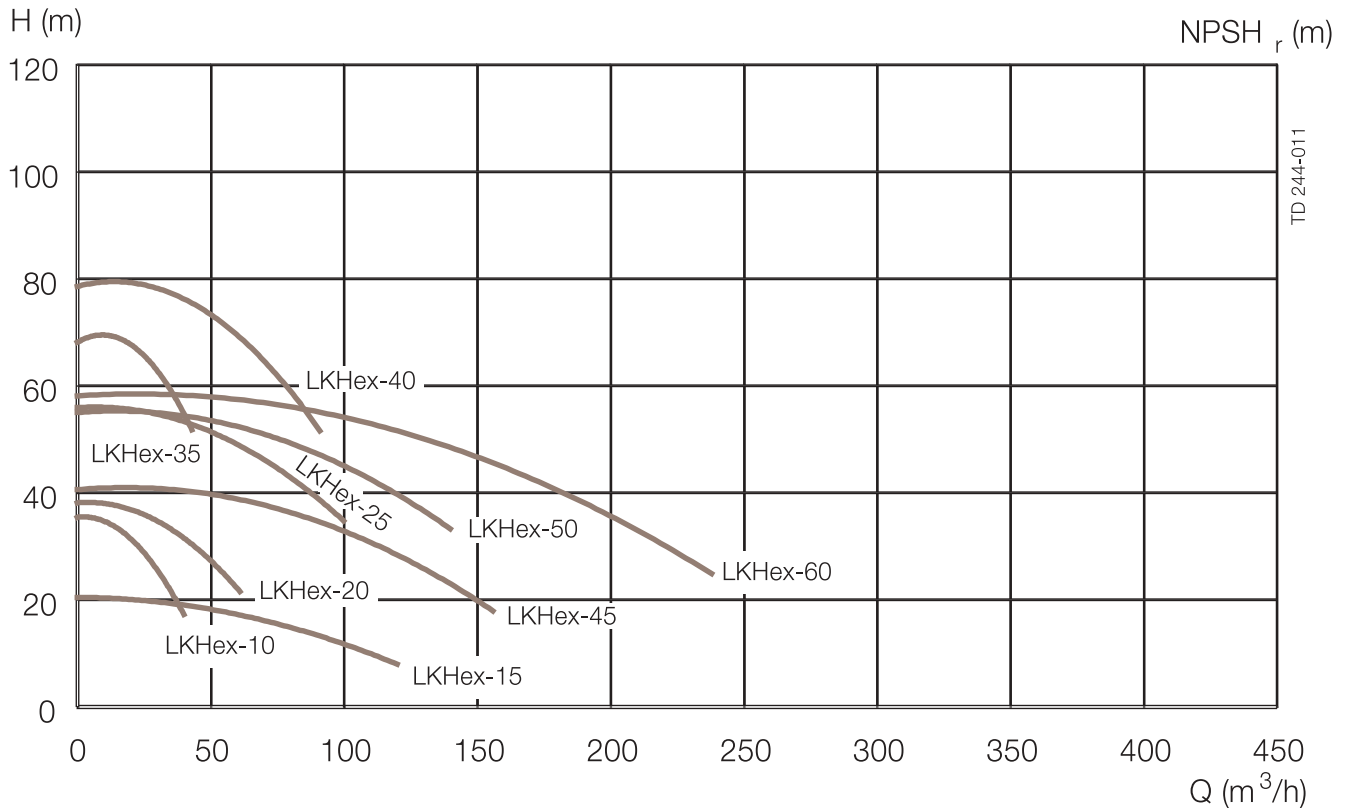
50 Hz: 1.5 - 2.2 - 3 - 4 - 5.5 - 7.5 - 11 - 15 - 18.5 kW.

60 Hz: 1.75 - 2.5 - 3.5 - 4.6 - 6.4 - 8.6 - 12.5 - 17 - 21 - 25 kW.

Dimensions

Note that the most dimensions depend on motor supplier and motor size. Non-dependent dimensions are equal to the dimensions for LKH.

LKHex Max. curves 50 Hz 3000 rpm



Connections (mm) Sanitary version

LKHex-10, -20, -35

D ⁱ 63.5	ISO	ISO	DIN	SMS	BS	DS
D ⁱ 51	Clamp	Male	Male	Male	Male	Male
M ^f	21	21	25	24	27	24
M ^m	21	21	22	20	27	20

LKHex-15, -45, -50

D ⁱ 101.6	ISO	ISO	DIN	SMS	BS	DS
D ⁱ 76.1	Clamp	Male	Male	Male	Male	Male
M ^f	21	21	30	35	32	24
M ^m	21	21	30	24	27	24

LKHex-25

D ⁱ 76.1	ISO	ISO	DIN	SMS	BS	DS
D ⁱ 63.5	Clamp	Male	Male	Male	Male	Male
M ^f	21	21	30	24	27	24
M ^m	21	21	25	24	27	24

LKHex-60

D ⁱ 101.6	ISO	ISO	DIN	SMS	BS	DS
D ⁱ 101.6	Clamp	Male	Male	Male	Male	Male
M ^f	21	21	30	35	32	24
M ^m	21	21	30	35	32	24

LKHex-40

D ⁱ 76.1	ISO	ISO	DIN	SMS	BS	DS
D ⁱ 63.5	Clamp	Male	Male	Male	Male	Male
M ^f	21	21	30	24	27	24
M ^m	12	21	27	24	22	21

LKHex-60

D ⁱ DN150	DIN	D ⁱ 6"	ISO
D ⁱ DN100	Male	D ⁱ 4"	Clamp
M ^f	50	M ^f	38
M ^m	30	M ^m	16

Options

- A) Impeller with reduced diameter.
- B) Motor for other voltage and/or frequency.
- C) 1500 rpm. motor.
- D) Counter flanges, seal rings and bolts for flanged connections (industrial version).
- E) Wider clearance between impeller and backplate if there is a risk of building up a hard layer of product.
Standard clearance is 0.5 mm and can be made up to 2.5 mm).
- F) Surface roughness, product wetted parts:
 $R_a \leq 0.8$ mm.
- G) Product wetted seals of Nitrile (NBR), Fluorinated rubber (FPM) or FEP.
- H) Rotating seal ring of Silicon Carbide.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure, ambient and media temperature.
- Atmosphere ignition temperature.
- Group and category (gas explosion or dust protection)¹⁾.
- Density and viscosity of the product.
- With or without shroud.
- Shaft seal material.

¹⁾ **Gas explosion or dust protection**

Group 2 Category 2 Gas (zone 1) Motor enclosure EEX d IIB T4 EEX d(e) IIB T4	II 2 G c
Group 2 Category 2 Dust (zone 21) Motor enclosure EEX T135°C IP 65	II 2 D c
Group 2 Category 3 Gas (zone 2) Motor enclosure EEX e II T3	II 3 G c
Group 2 Category 3 Dust (zone 22) Motor enclosure EEX T135°C IP55	II 3 Dc

Note! For further details, see also PD 65036 and IM 70969.