LHR SERIES

FIPL

Vertical Multi-stage Centrifugal Pumps
50 Hz

Lubi
PUMPS•MOTORS
ISO 9001 Company

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LHR VERTICAL MULTI-STAGE CENTRIFUGAL PUMPS

INTRODUCTION

The Lubi **LHR** pumps are non-self priming, vertical, multistage, high head centrifugal pumps.

Motor and pump are close coupled in a convenient and compact design for quick installation in limited space.

These pumps are available from 1.10 to 2.20 kW for single phase as well as three phase power supply.

The pumps have radial suction port in the bottom part and radial discharge port in the top part.

Impellers, Guide Vanes, Bowl Casing & Pump Jackets are Stainless Steel AISI 304. Pump Shaft is Stainless Steel AISI 316.

The pump is fitted with a maintenance-free, mechanical shaft seal.

APPLICATIONS

These pumps are widely used in high head duty conditions. The typical applications are as follow:

- ❒ Ultra-filtration systems
- ❒ Reverse osmosis systems
- ❒ Pressure boosting in domestic, civil and industrial water supply systems
- ❒ Washing and cleaning
- ❒ Hydro-pneumatic systems
- ❒ Sprinkler systems
- ❒ Irrigation.

FEATURES AND BENEFITS

- ❒ State-of-the art compact design
- ❒ Quiet running
- ❒ Robust construction
- ❒ High performance hydraulics
- ❒ Easy to install
- ❒ Reliable operation
- ❒ Supplied with oval flanges
- ❒ Easy serviceability.

OPERATING CONDITIONS

Flow range : 0.5 to 4 m³/h
Head range : Up to 197 metres
Ambient temperature : Max. +50°C
Liquid temperature range: 0°C to +90°C

MOTOR

Motor type : TEFC 2-pole motor
Ratings : 1 phase - 1.10 to 2.20 kW
3 phase - 1.10 to 2.20 kW
Rated speed : 2900 rpm
Enclosure class : IP 55
Insulation class : F
Nominal voltage : 1 phase 230 V
(Tolerance ±10%) 3 phase 415 V
Supply frequency : 50 Hz
Duty / Rating : S1 / Continuous
Direction of rotation : Clockwise as seen from the motor rear end

PUMPED LIQUIDS

LHR pumps are designed for non explosive liquids which are clean and thin without any solid particles. For aggressive liquid please ensure that material of construction is suitable for liquid to be pumped.

If liquids with a viscosity higher than that of water, are to be pumped the power consumption of the pump will increase with increase in viscosity. This will require a larger motor for the pump. Head, discharge and pump efficiency will reduce with increase in viscosity.

When pumping liquids with a density higher than that of water, the power consumption of the pump will increase at a ratio corresponding to increase in density.

SECTIONAL DRAWING & MATERIALS

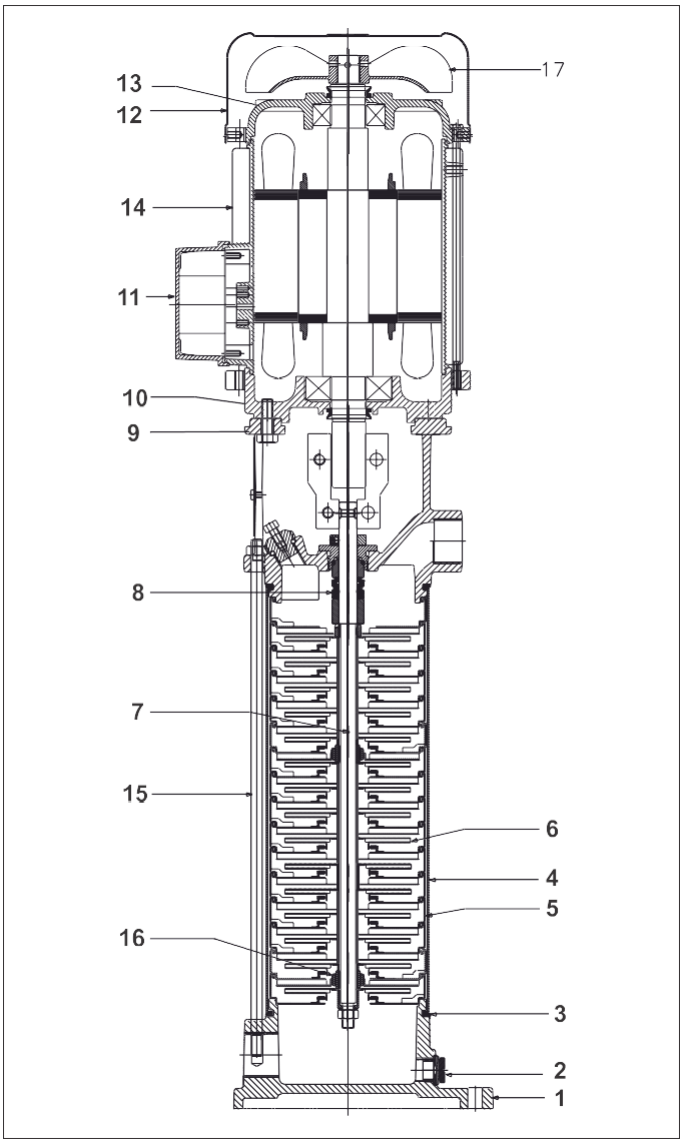
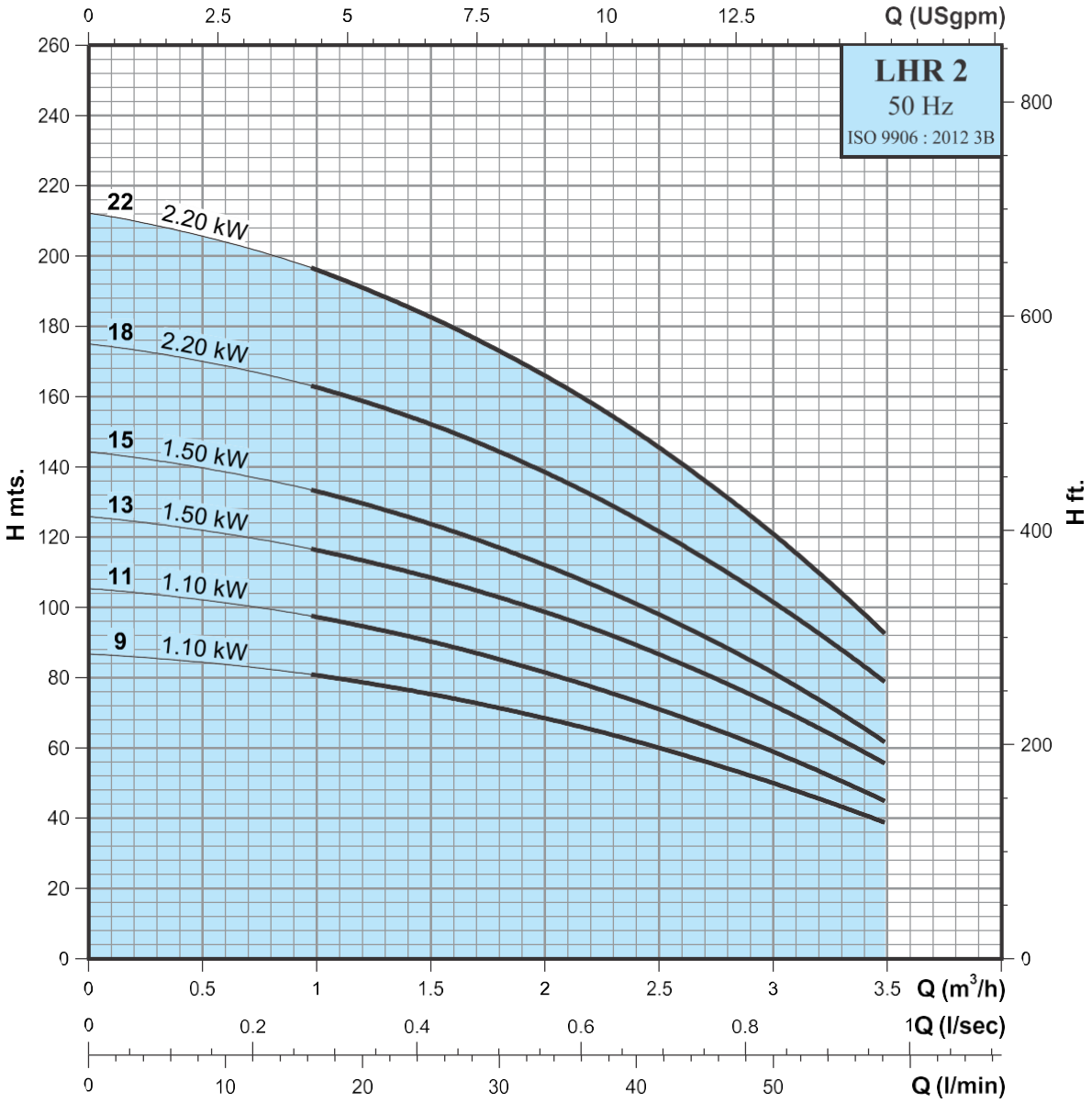


FIG.1 SECTIONAL DRAWING OF LHR PUMP

POS.	COMPONENT	MATERIAL
1	Base	Cast iron
2	Plug	Stainless steel
3	Rubber ring	NBR
4	Jacket body	Stainless steel
5	Chamber	Stainless steel
6	Impeller	Stainless steel
7	Pump Shaft	Stainless steel
8	Shaft seal	Sic/Carbon/AISI 316
9	Pump head	Cast iron
10		Cast iron
11	Terminal box	Polyamide
12	Fan cover	
13	Endshield	Cast iron
14	Stator body	Aluminum
15	Pump fitting stud	Stainless steel
16	Bearing assembly	Ceramic/Tungsten Carbide
17	Motor fan	Polypropylene

PERFORMANCE CURVES



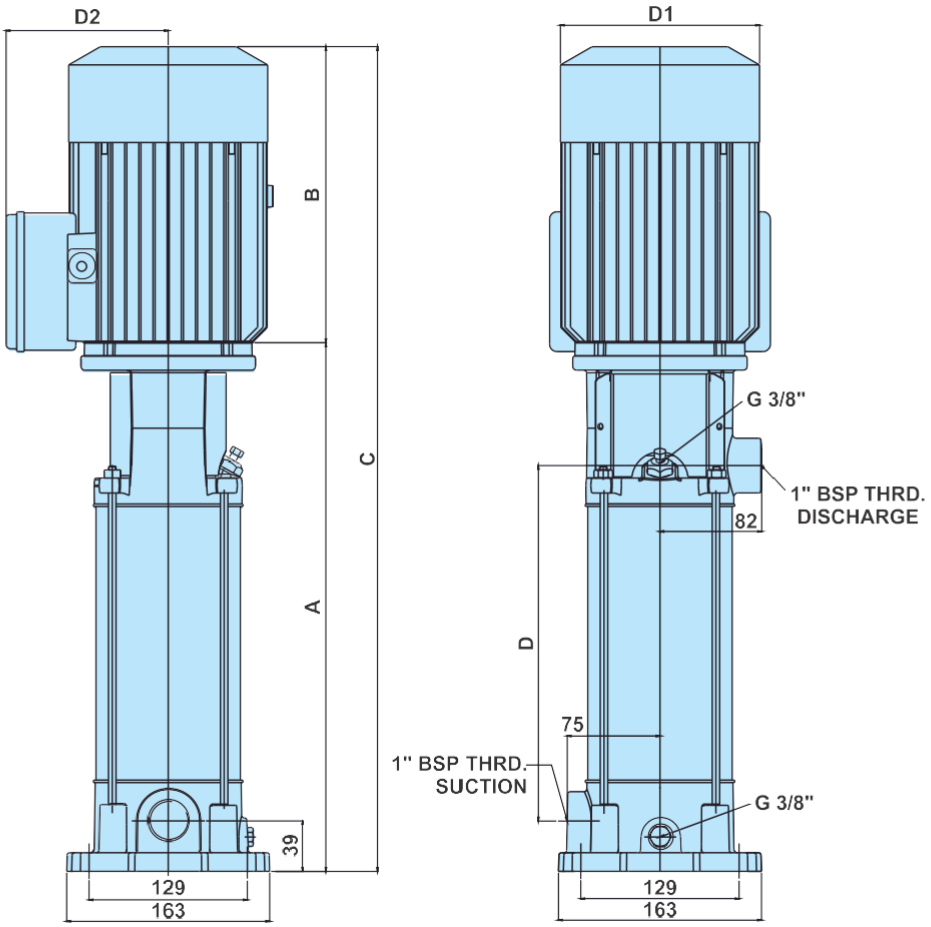
CURVE CONDITIONS:

- Tolerances in accordance with ISO 9906, Annex A.
- The motors used for the measurement are standard motors.
- Test results with clean cold water, without gas content. Measurements have been made with airless water at a temperature of 20°C.
- Head and power values valid for liquids with density ρ = 1,0 kg/dm³ and kinematic viscosity v = max 1 mm²/s (1 cSt).
- The QH curves apply to a rated motor speed of 2900 min⁻¹.

PERFORMANCE DATA

PUMP TYPE		MOTOR POWER		Q m³/h	1.0	1.6	2.3	3.0	3.5
SINGLE PHASE	THREE PHASE	kW	HP	Q l/min	16.7	26.7	38.3	50.0	58.3
LHR 2-9	LHRT 2-9	1.10	1.50		81	74	64	51	39
LHR 2-11	LHRT 2-11	1.10	1.50		98	89	76	60	45
LHR 2-13	LHRT 2-13	1.50	2.00	H	117	107	96	74	56
LHR 2-15	LHRT 2-15	1.50	2.00	m	134	122	105	83	62
LHR 2-18	LHRT 2-18	2.20	3.00		163	150	130	104	79
LHR 2-22	LHRT 2-22	2.20	3.00		197	180	155	123	93

DIMENSIONS & WEIGHT



PUMP TYPE		MOTOR POWER		FRAME SIZE	DIMENSIONS [mm]						GROSS WEIGHT [kg]	GROSS VOLUME [m³]
SINGLE PHASE	THREE PHASE	kW	HP		A	B	C	D	D1	D2		
LHR 2-9	LHRT 2-9	1.10	1.50	80	372	264	636	260	160	113	33.5	0.08
LHR 2-11	LHRT 2-11	1.10	1.50	80	408	264	672	296	160	113	34.0	0.08
LHR 2-13	LHRT 2-13	1.50	2.00	90	459	278	737	332	165	130	35.2	0.09
LHR 2-15	LHRT 2-15	1.50	2.00	90	495	278	773	368	165	130	35.7	0.09
LHR 2-18	LHRT 2-18	2.20	3.00	90	549	278	827	422	165	130	38.4	0.09
LHR 2-22	LHRT 2-22	2.20	3.00	90	621	278	899	494	165	130	39.3	0.09

Note: All dimensions in mm unless otherwise noted.