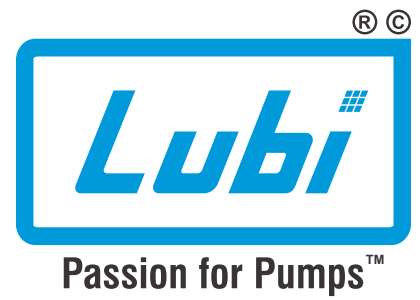


LBS SERIES

Single-stage bare shaft end-suction pumps
according to ISO 2858
60 Hz



INTRODUCTION

The Lubi **LBS** series are single-stage bare shaft end-suction pumps according to ISO 2858. Our range also includes several model of pumps which have been developed with duty condition which are not covered in ISO 2858.

APPLICATIONS

- Water supply.
- Pressure boosting for high rise buildings, hotels industry etc.
- Industrial washing & cleaning systems.
- Fire protection systems.
- Cooling & Air Conditioning systems.
- Boiler feed and condensate transfer system.
- Irrigation systems for fields including sprinkler & drip irrigation systems.

FEATURES AND BENEFITS

- The pumps are non-self priming, horizontal, single-stage, end-suction pumps with axial suction port & radial discharge ports.
- Standard flanges for suction and discharge ports will be ANSI 125 and ANSI 250 as per ASME B16.1. PN 16 as per DIN standard EN 1092-2 and PN 25 as per DIN standard EN 1092-2 are available on request.
- Performance and dimensions comply to ISO 2858.
- These pumps are long coupled pumps with TEFC squirrel cage induction motors with main dimensions complying to NEMA standards MG 1-2006.
- These pumps are available with gland packing as well as mechanical shaft seal.
- The pump impellers are dynamically balanced to grade 6.3 of ISO 1940.
- These pumps and motors are available with fabricated steel base frame according to EN 23661.
- These pumps are available with high efficiency motors complying to meet or exceed the efficiency requirements of the US Energy Policy Act of 1992 (EPA) and Natural Resources Canada Standards (NRCAN).
- The efficiency will meet or exceed full load efficiency of TEFC motors as per Table 12-11 of NEMA standards MG 1-2006.
- They can also be supplied with NEMA premium efficiency TEFC motors as per Table 12-12 of NEMA standards MG 1-2006 on request.
- These pumps feature the back pull-out design. The user can remove the motor, bearing bracket & impeller for servicing without disturbing the volute casing and the suction & delivery pipes.
- We can also supply pumps with IEC standard motors.

OPERATING CONDITIONS

Flow range : 35 to 3350 USgpm
 Head range : 12 to 470 feet
 Ambient temperature: Max. +104°F for High efficiency motors,
 Max. +140°F for Premium efficiency motors.
 Liquid temperature : +32°F to +194°F (with Carbon/Ceramic/NBR/S.S.304 seal)
 range : +32°F to +194°F (with Sic/Sic/Viton/S.S.316 seal)
 : +32°F to +284°F (with Carbon/Sic/Viton/S.S.316 seal)

MOTOR

Motor type : TEFC squirrel cage induction motor
 Ratings : 1 to 300 HP
 Rated speed : 3450, 1750, 1150 rpm
 Enclosure class : IP 55
 Insulation class : F
 Nominal voltages : 3 phase 230 V, 460 V
 (Tolerance ±10%)
 Supply frequency : 60 Hz
 Duty / Rating : S1 / Continuous
 Direction of rotation : Clockwise as seen from the motor rear end

PUMPED LIQUIDS

LBS 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 large 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.

VOLUTE CASING

The volute casing of the pumps are designed to be robust in construction to take the undue stresses offered by the pipe work. They have an axial suction port and radial discharge port. Standard flanges are ANSI 125 and ANSI 250 as per ASME B16.1. PN 16 as per DIN standard EN 1092-2 and PN 25 as per DIN standard EN 1092-2 are available on request. The volute casing are provided with a priming & drain hole closed by plugs.

MOTOR ADAPTOR & BACK COVER

Motor adaptors are robust in construction and are provided with an air vent screw in the shaft seal chamber.

SHAFT & BEARING BRACKET

The bearing bracket is provided with 2 properly sized antifriction ball bearings which are permanently lubricated for life. The bearing bracket is made of cast iron of high tensile strength. The shaft are available in carbon steel as well as stainless steel. A shaft sleeve of stainless steel is provided in the stuffing box to protect the shaft from wear and corrosion. All pumps are provided with one of four shaft, shaft seal and bearing brackets. As shaft and bearings are strong and properly sized the pump can be driven by a belt drive or diesel engine without any problem. A water thrower is provided on the shaft to prevent liquid from entering the bearing bracket and damaging the bearing.

COUPLING

All pumps can be provided with two types of couplings.

- Standard coupling
- Spacer coupling

The use of spacer coupling is helpful since pumps fitted with them can be serviced without dismantling the motor from the base frame & also without removing the pipe work or volute casing. Realignment of pump and motor is also not necessary after servicing.

IMPELLER

The impellers are closed impellers with extra smooth surface finish and machined completely from outside to ensure high efficiency. They are dynamically balanced to grade 6.3 of ISO 1940. All impellers can be trimmed to adopt them for the duty point requested by the customer. Suggested trimmed impeller diameter as shown on the performance curves in data booklet are theoretical. Performance may vary from what is shown on the performance curve.

BASE FRAME

Pump and motor are mounted on a common steel base frame in accordance with EN 23661.

TEST PRESSURE

All impellers are hydrostatic tested for leakage as per the following test pressure using water containing corrosion inhibitor at room temperature.

PRESSURE RATING	OPERATING PRESSURE	TEST PRESSURE
ANSI 125	125 psi	188 psi
ANSI 250	250 psi	375 psi
PN 16	16 bar	24 bar
PN 25	25 bar	37.5 bar

MOTORS

The motors are squirrel cage induction motors, Totally Enclosed Fan Cooled with main dimensions to NEMA standards MG 1-2006.

The standard motors supplied with the pumps are all as per high efficiency NEMA standards. Premium efficiency motors can be available on request.

All motors are available with cast iron construction.

COUNTER FLANGES

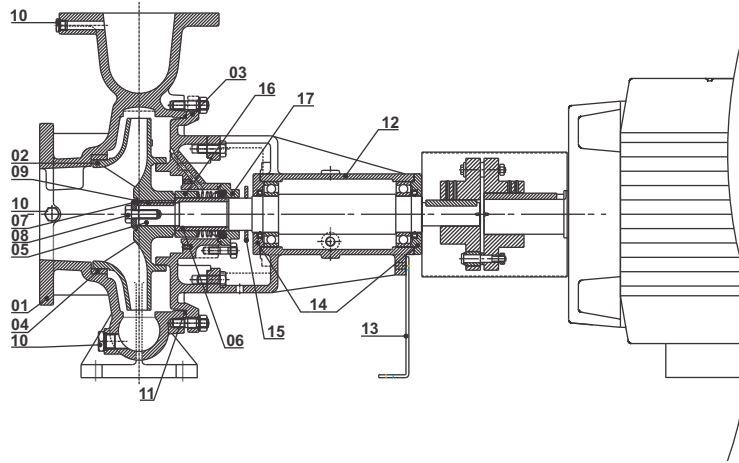
Cast iron pumps (version-A,B,C,D): For threaded connection, flanges are made of cast iron. For welding connection, flanges are made of carbon steel.

CF-8 & Bronze pumps (version-E,F): For threaded connection, flanges are made of CF-8. For welding connection, flanges are made of stainless steel AISI 304.

CF-8M pumps (version-G): For threaded connection, flanges are made of CF-8M. For welding connection, flanges are made of stainless steel AISI 316.

A set consist of one counter flange, one gasket of rubber material and the requisite number of bolts and nuts.

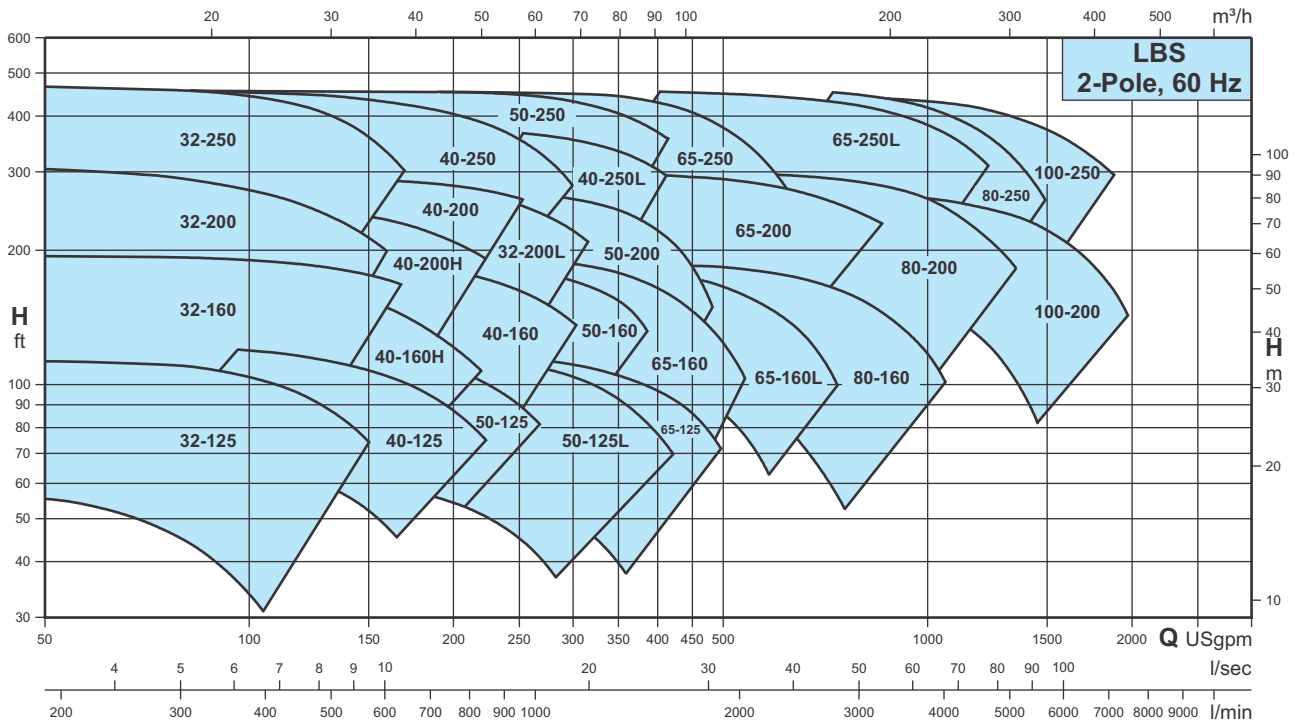
SECTIONAL DRAWING & MATERIALS



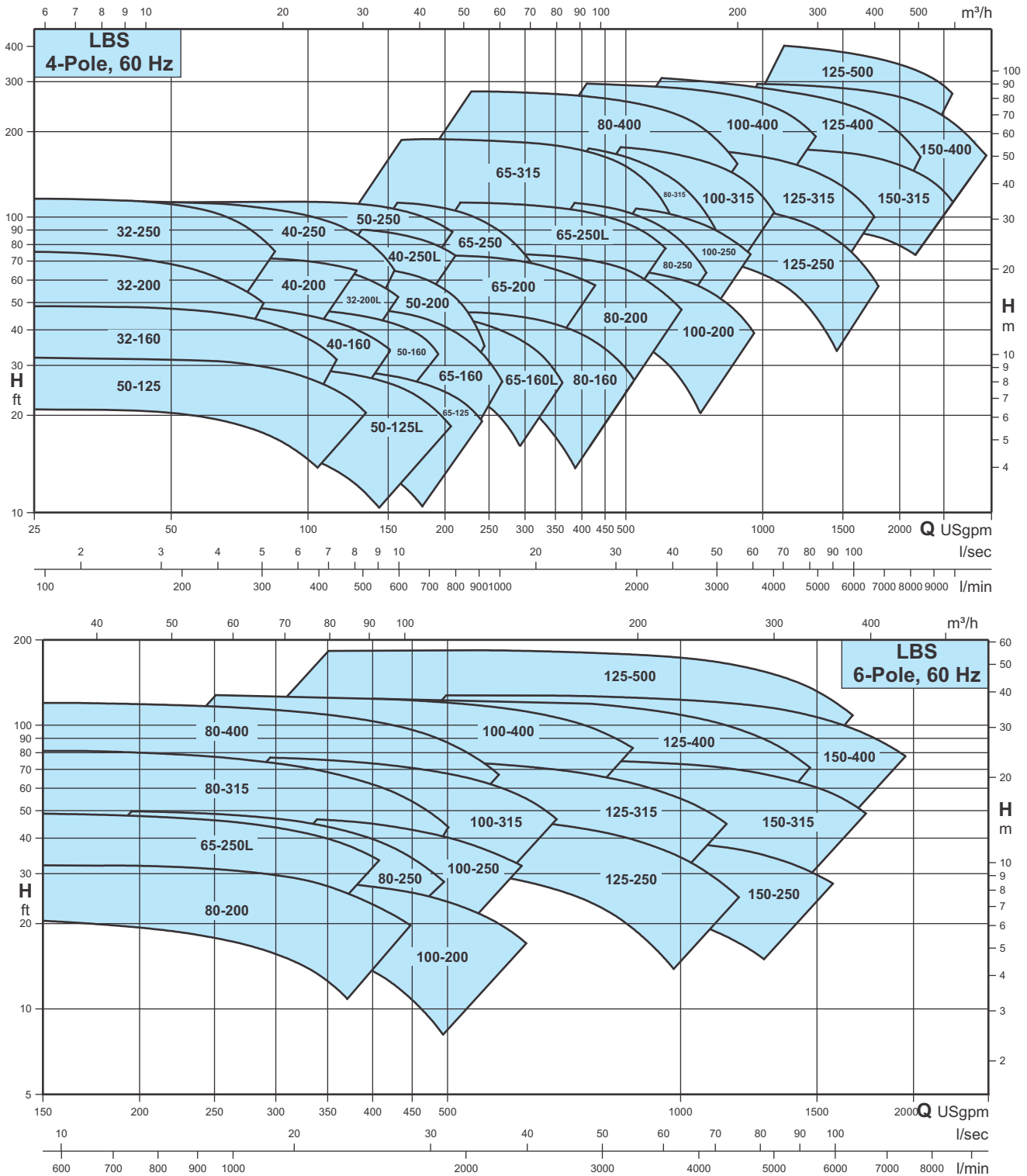
POS.	COMPONENT	A-VERSION	B-VERSION	C-VERSION	D-VERSION	E-VERSION	F-VERSION	G-VERSION
1	Volute casing	Cast iron	Cast iron	Cast iron	Cast iron	Bronze	CF-8	CF-8M
2	Impeller	Cast iron	Bronze	CF-8	CF-8M	Bronze	CF-8	CF-8M
3	Back cover	Cast iron	Cast iron	Cast iron	Cast iron	Bronze	CF-8	CF-8M
5	Shaft	Carbon Steel	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316	S.S. AISI 304	S.S. AISI 304	S.S. AISI 316
6	Shaft sleeve	S.S. AISI 410	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316	Bronze	S.S. AISI 304	S.S. AISI 316
7	Impeller washer	S.S. AISI 410	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316	Bronze	S.S. AISI 304	S.S. AISI 316
8	Impeller lock pin	S.S. AISI 410	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316
9	Impeller key	S.S. AISI 410	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316
10	Plugs	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Bronze	S.S. AISI 304	S.S. AISI 316
11	O-ring	NBR	NBR	NBR	NBR	Viton	Viton	Viton
12	Bearing bracket	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron
13	Foot	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel	Carbon steel
14	Bearing cover	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron
15	Water thrower	NBR	NBR	NBR	NBR	NBR	NBR	NBR
16	Spacer	S.S. AISI 410	S.S. AISI 410	S.S. AISI 304	S.S. AISI 316	S.S. AISI 304	S.S. AISI 304	S.S. AISI 316
17	Gland follower	Cast iron	Cast iron	Cast iron	Cast iron	Bronze	CF-8	CF-8M
4	Wear ring*	Cast iron	Bronze	S.S. AISI 304	S.S. AISI 316	Bronze	CF-8	CF-8M

Note: * Wear ring is available on request only.

PERFORMANCE RANGE



PERFORMANCE RANGE



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ISO 9001



ISO 14001