

# 1. Product introduction

## Introduction

Grundfos LM and LP pumps are single-stage, close coupled, in-line pumps designed for reliability and performance.



TM04 9719 5010

Fig. 1 Grundfos LM, LP

## Applications

Grundfos LM and LP pumps are suitable for booster, circulation, transfer and water supply applications in:

- Boiler/hydronic heating
- chilled water
- air conditioning systems
- cooling towers
- washdown systems
- other industrial systems.

## Features and benefits

- Maintenance-free with a low starting torque and a high operating efficiency.
- Direct-coupled to standard NEMA C-face motors for easy installation.
- High quality 431stainless steel pump shaft.
- Stainless steel impeller.

High grade stainless steel pump shaft, neck ring, and impeller are designed for years of maintenance-free operation.

Corrosion-resistant carbon/tungsten carbide shaft seal faces provide reliable performance in open or closed systems.

Optional types of shaft seals are available for various liquid, temperature, and pressure requirements.

## Pump

LM, LP in-line pumps are vertical, single-stage centrifugal pumps of the non-self-priming type fitted with standard motors and mechanical shaft seals.

Pumps with the same nominal flow rates have the same nominal port diameters (inches) and port to port length, irrespective of head and speed.

## Motor stool

The motor stool forms the connection between pump housing and motor and is equipped with a manual air vent for the venting of pump housing and shaft seal chamber.

The motor side flange of the motor stool is according to NEMA.

## Pump housing

Pumps feature in-line, spiral-shaped cast iron pump housing with flange dimensions to ANSI. The dimensions of the suction and discharge ports are identical.

Both pump flanges have pressure gauge tapings. A drain plug is fitted in the bottom of the pump housing.

Base plates for the LM and LP pumps are available on request.

## Impeller

The LM and LP impellers are made of stainless steel with double curved blades and smooth surfaces to ensure a hydraulically correct shape of the impeller.

The impellers are machined to attain high accuracy of dimensions and to ensure good balance.

When seen from the motor fan the direction of rotation is as follows:

LM, LP: Counter-clockwise.

## Motor

Baldor TEFC motors in NEMA C-face frame sizes are standard. ODP and special duty classes are optional.

Motors are rated:



The motor must be connected to a motor starter in accordance with local regulations.

## Shaft seals

The pumps are fitted as standard with a single, unbalanced carbon/tungsten carbide rubber bellows shaft seal in either a 16 mm or 22 mm diameter size with EPDM elastomer (BUBE).

Optional shaft seals are also available:

- Unbalanced carbon/tungsten carbide rubber bellows shaft seal in either a 16 mm or a 22 mm diameter size with FKM elastomer (BUBV).
- Unbalanced tungsten carbide/tungsten carbide O-ring shaft seal in either a 16 mm or 22 mm diameter size with EPDM elastomer (AUUE).
- And for glycol/water mixtures: unbalanced reduced-face tungsten carbide/tungsten carbide, O-ring shaft seal in either a 16 mm or 22 mm diameter size with both EPDM and FKM elastomers (RUUE/V).

The circulation of liquid in the duct of the air vent screw ensures lubrication and cooling of the shaft seal.

## Identification

### Type key LM, LP

Example	2.5	L	M	5	/	4.6	U	-	G	-	A	-	B	B	U	E
Pipe connection size																
Pump range																
M = 4-pole motor P = 2-pole motor																
Nominal impeller diameter [inches]																
Actual impeller diameter [inches]																
Pump version																
U: NEMA version																
Connection type																
G: ANSI connection																
Material																
A: Basic version																
Shaft seal																
A: O-ring seal with fixed driver																
B: Rubber bellows seal																
R: O-ring seal, type A, with reduced seal faces																
B: Carbon																
U: Tungsten Carbide																
E: EPDM																
V: FKM																