

# PRODUCT SELECTION REPORT

Model:LVR4-10
Name: Stainless Steel Vertical
Multistage Pump



LEO GROUP PUMP CO.,LTD.



Project Name: Koslan

Personal Name: Koslan Company Name:

Company Address:

Website: www.leopump.com Product Model: LVR4-10

Company Name: LEO GROUP PUMP CO., LTD.

## Product Recommendations

Flow( $m^3/h$ ): 4 Head(m): 81 Power(kW): 2.2

Based on provided information and product parameters, LEO PUMP recommends model: LVR4-10

## Introduction

#### Application

Suitable for transferring liquids of low viscosity, non-inflammable and non-explosive, not containing solid particles or fibers;

Water supply & drainage for high-rise buildings, filtration and transfer at waterworks, pressure boosting in main pipe;

Washing and cleaning systems, boiler feeding, cooling water circulation.water treatment systems, auxiliary system, support equipment; Ultra-filtration systems, reverse-osmosis systems, distillation systems.separators, swimming pools;

Agricultural irrigation: sprinkler irrigation, drip-feed irrigation;

Food & beverage industry;

Fire-fighting system.

#### Operating Conditions

Low viscosity, non-inflammable and non-explosive liquids not containingsolid particles or fibers. The liquids must not chemically attack the pumpmaterials. When pumping liquids with a density or viscosity is higher thanthat of water, a motor with a higher output power rating shall be used.

Liquid temperature: - 20°C~+ 120°C;

Flow ranges: 0.7- 240 m3/h;

Liquid pH value: 4 - 10;

Max.ambient temperature: +40C; Max. operating pressure: 33 bar;

Altitude: up to 1000m.

#### Motor

IE 2 motor (IE 3 motor optional);

Totally enclosed & fan-cooled;

Protection class: IP55;

Standard voltage: 50Hz 1x220V/3x380V

Minimum Inlet Pressure-NPSH

Calculation of the inlet pressure"H"is recommended in these situations;

1/6



The liquid temperature is high;

The flow is significantly higher than the rated flow;

Water is drawn from depths;

Water is drawn through long pipes;

Inlet conditions are poor.

Minimum Inlet Pressure

The following table shows the maximum permissible inlet pressure. However, the current inet pressure + the pressure against a closed valvemust always be lower than the Max. permissible operating pressure. If the maximum permissible operating pressure is exceeded, the bearingin the motor may be damaged and the life of the shaft seal reduced..

## **Product Parameters**

#### Nameplate

Pump flow rate(m³/h):
4 Total manometric head H(m):
81
Pump efficiency(%):
57.5 Speed(rpm):
2900

#### **Technical**

Motor power(kW):2.2Shaft Power(kW):1.54Curve tolerance:ISO 9906 AnnexAMaximum lift(m):100Maximum use flow(m³/h):8Impeller diameter(mm):95

#### Material

Impeller: AISI304 Diffuser: AISI304 Pump shaft: AISI316 Motor base: HT200 Pump cover: AISI304 Coupling: Powder metallurgy Flange: Pump barrel: AISI304 ZG35 Guard plate: AISI304 Water injection plug: AISI304 AISI304 Filling plug: Base: HT200 Mechanical seal: Graphite/Carbide/FKM/AISI304

#### Working conditions

Max. ambient temperature(°C): 40 Max. liquid temperature(°C): 120

Max. Operating Pressure: 25bar

Pumped medium:

Clean, thin, non-corrosive, non-flammable, non-explosive, Not easy vaporization, Liquid without solid particles and fibers. The liquid can not react with the pump material.

#### Installation

Inlet&Outlet Diameter: DN25 Connection standard: Flange connection

#### Motor

Motor phase:	Three phase	Protection class:	IP55
Motor poles:	2	Insulation class:	F
Motor power(kW):	2.2	Frequency(Hz):	50
Rated voltage(V):	380	Rated current(A):	4.58
Efficiency class:	IE2	Power factor:	0.85
Drive end bearing:	6205	Non-drive end bearing:	6205
Efficiency(%):	85.9	Starting current(A):	44



### Weight/Packaging

Gross weight(kg):	47.9	Package size(mm):	890*264*324

## Area Range Parameters

Max Q(m³/h):	8.0	Allowable Minimum (m³/h):	1.5
Allowable Maximum (m³/h):	8.0	Min Value Optimal area (m³/h):	3.5
Max Value Ontimal area (m³/h):	6.5	·	

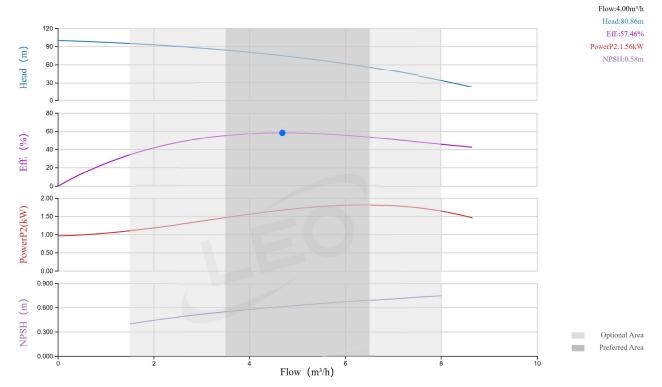








# **Performance Curve**



## **Basic Parameters**

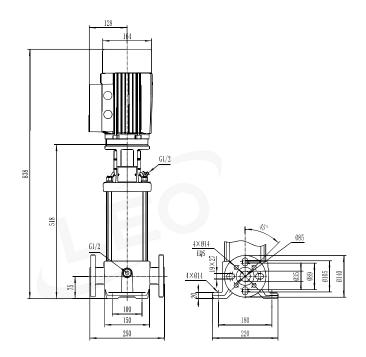
	Pump flow rate(m³/h)	Total manometric head H(m)	Pump efficiency(%)	Shaft power (kW)	NPSHr(m)
Rated Point	4.00	81.00	57.5	1.54	0.58
Work Point	4.00	80.86	57.46	1.56	0.58
Minimum Allowed Point	1.50	95.20	34.30	1.10	0.40
Maximum Allowed Point	8.00	34.36	45.97	1.64	0.75
Optimal Working Area (Small)	3.50	84.45	55.55	1.46	0.55
Optimal Working Area (Large)	6.50	55.93	53.69	1.81	0.69







# Shape & Size

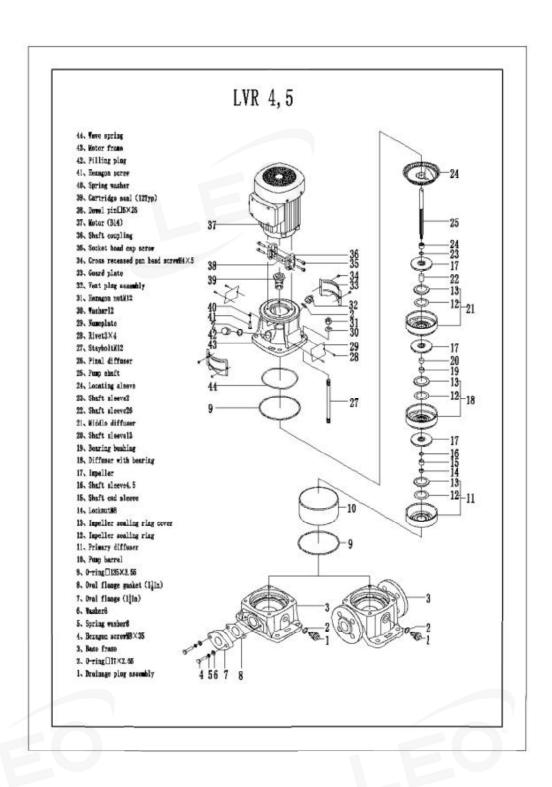








# **Exploded View**





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