

PRODUCT SELECTION REPORT

Model:LVR4-20

Name:Stainless Steel Vertical
Multistage Pump



LEO GROUP PUMP CO.,LTD.

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Project Name: Koslan

Personal Name: Koslan

Company Address:

Company Name:

Website: www.leopump.com

Company Name:

Product Model: LVR4-20

LEO GROUP PUMP CO., LTD.

Product Recommendations

Flow(m³/h): 4 Head(m): 161 Power(kW): 4

Based on provided information and product parameters, LEO PUMP recommends model:
LVR4-20

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 containing solid particles or fibers. The liquids must not chemically attack the pump materials. When pumping liquids with a density or viscosity is higher than that 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: +40°C;

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;

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 inlet pressure + the pressure against a closed valve must always be lower than the Max. permissible operating pressure. If the maximum permissible operating pressure is exceeded, the bearing in the motor may be damaged and the life of the shaft seal reduced.

Product Parameters

Nameplate

Pump flow rate(m ³ /h):	4	Total manometric head H(m):	161
Pump efficiency(%):	57.5	Speed(rpm):	2900

Technical

Motor power(kW):	4	Shaft Power(kW):	3.05
Curve tolerance:	ISO 9906 AnnexA	Maximum lift(m):	203
Maximum use flow(m ³ /h):	8	Impeller diameter(mm):	95

Material

Impeller:	AISI304	Diffuser:	AISI304
Pump shaft:	AISI316	Motor base:	HT200
Pump cover:	AISI304	Coupling:	Powder metallurgy
Pump barrel:	AISI304	Flange:	ZG35
Guard plate:	AISI304	Water injection plug:	AISI304
Filling plug:	AISI304	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
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Motor

Motor phase:	Three phase	Protection class:	IP55
Motor poles:	2	Insulation class:	F
Motor power(kW) :	4	Frequency(Hz):	50
Rated voltage(V):	380	Rated current(A):	7.84
Efficiency class:	IE2	Power factor:	0.88
Drive end bearing:	6206	Non-drive end bearing:	6206
Efficiency(%):	88.1	Starting current(A):	80

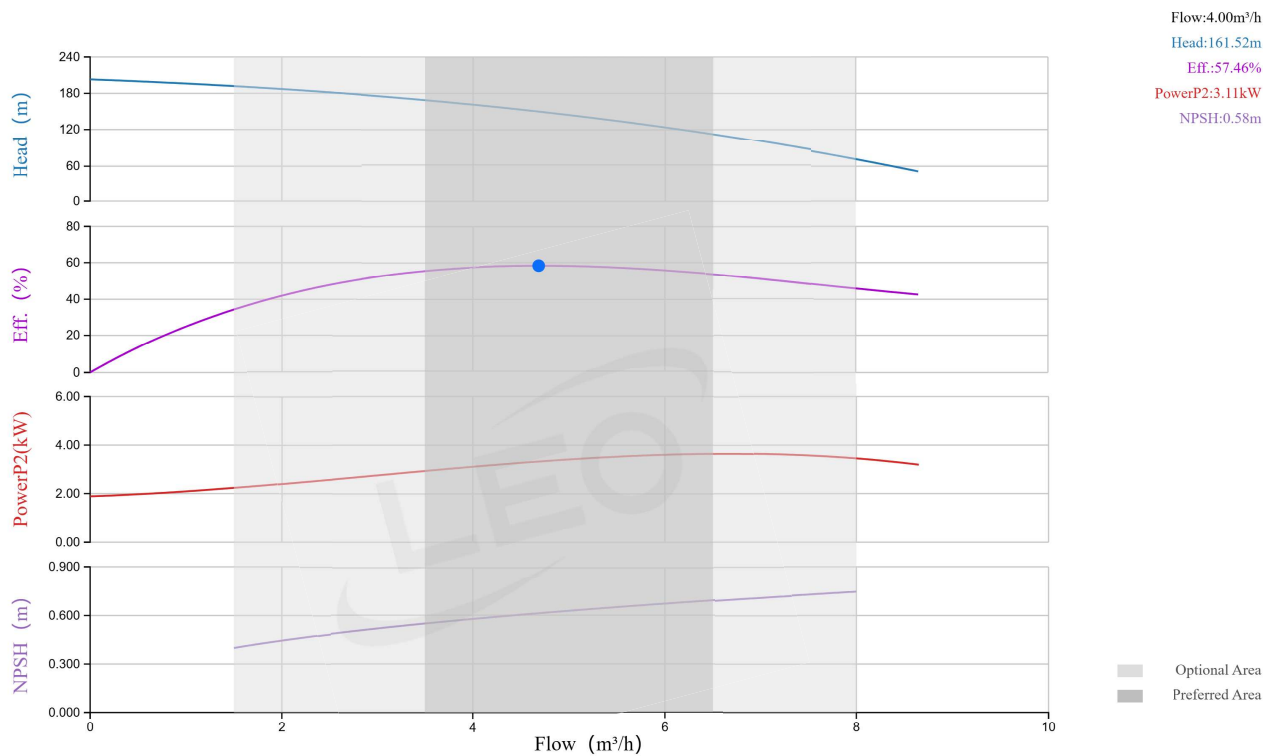
Weight/Packaging

Gross weight(kg):	76.5	Package size(mm):	1186*309*339
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Area Range Parameters

Max Q(m ³ /h):	8.0	Allowable Minimum (m ³ /h):	1.5
Allowable Maximum (m ³ /h):	8.0	Min Value Optimal area (m ³ /h):	3.5
Max Value Optimal area (m ³ /h):	6.5		

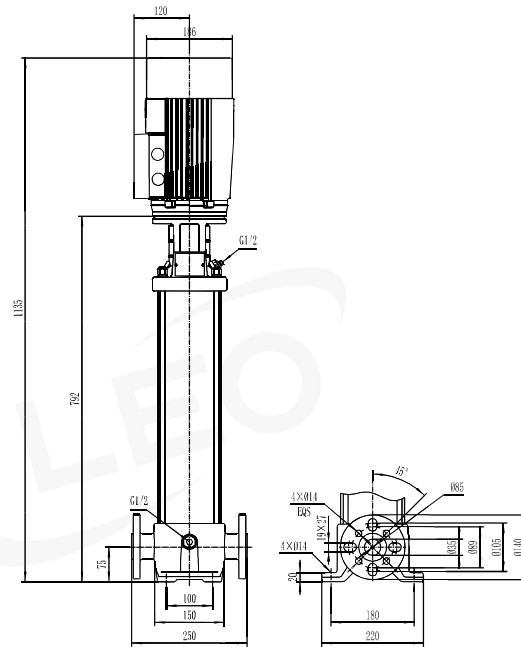
Performance Curve



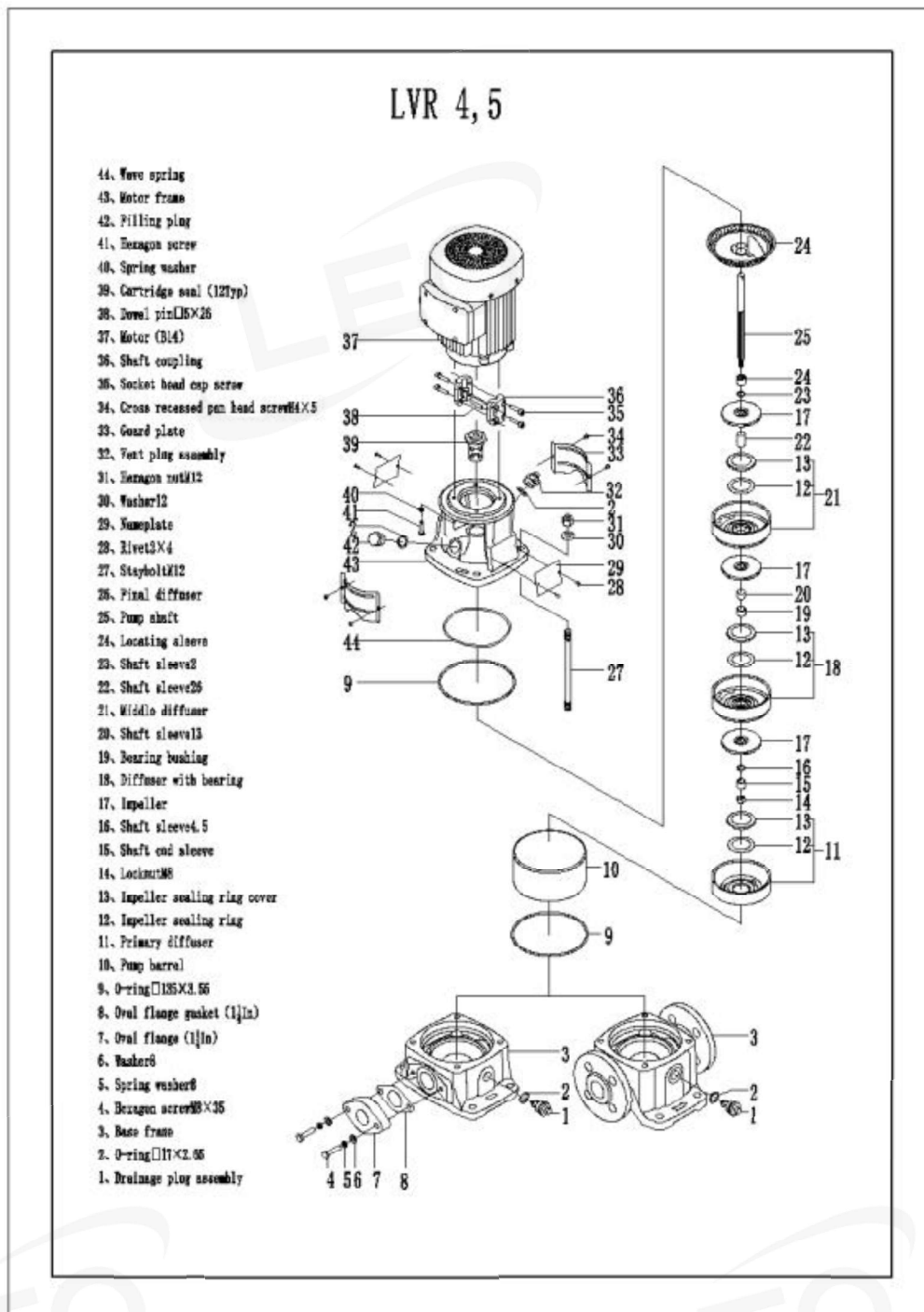
Basic Parameters

	Pump flow rate(m³/h)	Total manometric head H(m)	Pump efficiency(%)	Shaft power (kW)	NPSHr(m)
Rated Point	4.00	161.00	57.5	3.05	0.58
Work Point	4.00	161.52	57.46	3.11	0.58
Minimum Allowed Point	1.50	191.89	34.30	2.23	0.40
Maximum Allowed Point	8.00	71.82	45.97	3.45	0.75
Optimal Working Area (Small)	3.50	168.94	55.55	2.94	0.55
Optimal Working Area (Large)	6.50	112.30	53.69	3.64	0.69

Shape & Size



Exploded View





LEO PUMP GROUP CO.,LTD.

📍 Headquarter Address:
No.505,23rd Street,Qiantang District,Hangzhou,Zhejiang,310020, P.R.China

Base Address:
No.1,3rd Street,East Industry Center, Wenling,Zhejiang,317511,P.R.China
No.9 Jiuhua Road,Jiuhua Eco-Tec Development Area,Yuhu District,Xiangtan,Hunan,411202,P.R.China
No.19 Changshun Road,Changcheng Street,Lushunkou District,Dalian,Liaoning,116049,P.R.China

🌐 www.leopump.com ✉ export@leopump.com

☎ +86-576-8998 6556 📠 +86-576-8998 9898



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