



Submersible Solid Handling Pumps

Model SL

These voltex type (2-pole motor) submersible pumps are higher efficiency, higher head which feature low life-cycle costs and easy maintenance.

Applications:

- Sewage Lift Stations
- Treated Sewage System
- Waste Water Transfer
- Dewatering
- General Industrial Service



ISO 9001 Certificate



新法機械有限公司

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EIM ELECTRIC CO.,LTD.

With over 50 years of proven experience in the design and the difficult applications of heavy duty submersible pumps handling sewage, solids, sludge and slurries, EIM has been providing pumping solutions which permit customers to continuously improve pumping system reliability and cost efficient performance. The SL series pumps with vortex impeller have proven successful operation in the toughest applications handling large solids and stringy material.

General Description

	Standard	Option
Pump	Free Standing Models	Guide Rail System
Discharge Diameter	50 and 80 mm	
Flow and TDH	See performance curves on the back page.	
Impeller	Vortex impeller	
Max. Solids Size	46 mm sphere	
Max. Submergence	20 m	
Liquid Temperature	-10°C to 40°C	High temperature designs up to 80°C
Materials		
Impeller/Pump Casing /Suction Cover	Cast Iron	
Hardware	304 Stainless Steel	
Motor		
Configuration	Flange mounted, air-filled submersible vertical AC motor	
Synchronous Speed	3000RPM (50Hz)/3600RPM (60Hz)	
Insulation Class / SF	F / 1.15	Insulation Class H
Voltages / Phase / Hertz	200, 380, 400 Volts / 3 ϕ / 50 Hz 220, 380, 440 Volts / 3 ϕ / 60 Hz	Special voltages in the range of 200-600 Volts
Thermal Protection Device	Bimetallic over current switch	
Cable Length	10 m	Extra length cable
Materials		
Motor Housing	Cast Iron	
Motor Shaft	403 Stainless Steel	
Shaft Seals	Double shaft seals [Outer seal (process side)] Silicon Carbide faces (both rotating and stationary faces) [Inner seal (motor side)] Carbon against Ceramic faces	Silicon Carbide faces (both rotating and stationary faces) inner and outer seals and VITON seal elastomers
Bearings	Deep groove ball bearings	
O-Rings	Nitrile Butadiene Rubber (NBR)	VITON O-Rings

Available Models

Discharge Diameter (mm)	Model No.		BHP		Solid Handling mm
	Free Standing	Guide Rail System	KW	HP	
					50
80	SL-82E	SL-82BH	1.5	2	42
	SL-83E	SL-83BH	2.2	3	42
	SL-85E	SL-85BH	3.7	5	42
	SL-88E	SL-88BH	5.5	7.5	46
	SL-810E	SL-810BH	7.5	10	46

Features

① CABLE

Extra hard usage, water-resistant vinyl cable is used for electric cable.

② CABLE ENTRY

Strain relief rubber bushing integrated with cable sheath at the entry point is tightly compressed to the motor housing cover. In addition, each cable strand at the entry point is formed into a solid conductor for a true non-wicking cable entry. This double sealing system completely prevents water from entering into the motor housing.

③ LIFTING DEVICE

Lifting eye-bolts of 304 stainless steel are of adequate strength to lift the entire pump assembly.

④ MOTOR

An air-filled, induction motor with specially treated class F (155°C) nonhygroscopic insulation and rated with 1.15 service factor is used as standard. The motor housing of heavy duty cast iron is sealed using O-rings.

⑤ SHAFT

The high quality, one-piece, oversized shaft made of 403 stainless steel is designed so as to lengthen bearing and seal life reducing shaft deflection and vibration.

⑥ BEARINGS

Both main and support bearings packed with lithium grease for high temperature usage consist of oversized deep groove ball bearings, countering both radial and axial forces.

⑦ SHAFT SEAL

Double mechanical seal system for maximum resistance to corrosion, abrasion and thermal shock prevents water from penetrating into the oil chamber and the motor housing. The outer seal (process side) uses Silicon Carbide faces (both rotating and stationary faces). Carbon against ceramic faces are used for the inner seal (motor side). In addition, to prevent dust, sand, mud, sludge, slurry, etc. from entering into the seal area, the dust seal is mounted on the outside of the shaft seal, facing to process liquid.

⑧ OIL CHAMBER

Oil in the oil chamber lubricates and cools the shaft seals and functions as a buffer to prevent water penetration into the motor.

⑨ PUMP CASING

Owing to the specially designed pump casing with large opening at motor side, motor unit and wet end are easily separated for fast access to impeller and shaft seals. This results in true savings, greatly reducing maintenance and downtime costs.

⑩ IMPELLER

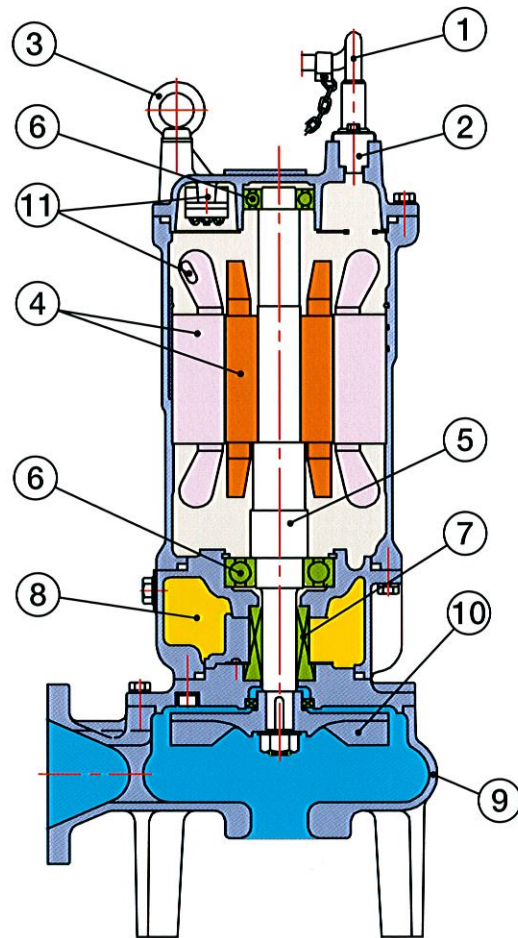
Vortex impeller is possible to handle raw sewage containing large solids and stringy material along with high pump efficiency.

⑪ THERMAL PROTECTOR

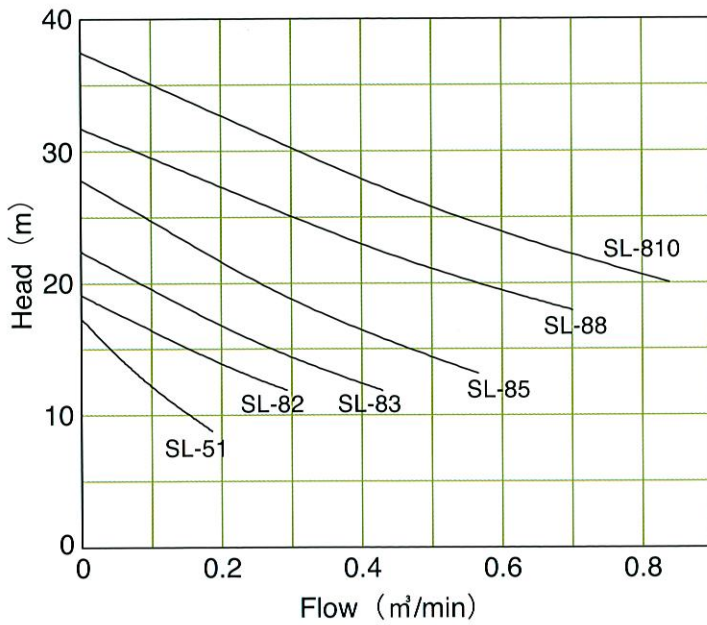
To protect over heating, bimetallic over current switch is built in the motor housing cover.

⑫ HARDWARE

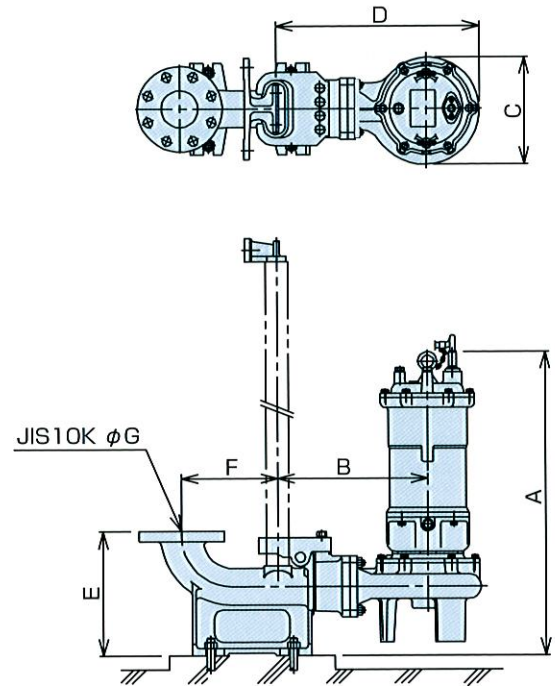
All the external hardware are made of heavy duty 304 stainless steel.



Pump Performance Curves



Dimensions



(All dimensions in mm)

Discharge Diameter	Model	A	B		C		D		E	F	G	w't (kg)	
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz				Pump	Discharge Elbow
50	SL-51B1	460	216		190		310		210	125	50	30	13
80	SL-82BH	660	327		235		445		270	209	80	60	25
	SL-83BH	660	327		235		445					65	
	SL-85BH	660	327		235		445					70	
	SL-88BH	835	367		305		520					130	
	SL-810BH	835	367		305		520					140	

SAFETY PRECAUTIONS



- Before operating our pumps, read the operation manual carefully.
- All the pictures shown in this catalog have been taken after removing all the safety devices legally required, to make the products easier to see.
- Pump and pump installations drawings are only for explanatory and descriptive purposes.

• The designs or specifications of the models in this catalog are subject to change without prior notice due to continual improvement.



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