LEO®

WARRANTY 24 MONTHS QUALITY

Submersible Sewage Pump With Cutting System

Enjoy a new cutting experience,
More than your expectation

China USA Hungary UAE India Bangladesh Indonesia Thailand

1st LISTED PUMP MANUFACTURER

850 ENGINEERS AND **4000** EMPLOYEES IN TOTAL

GLOBAL AUTHORIZED DISTRIBUTOR OVER **140** COUNTRIES AND REGIONS

SERVED OVER **500** MILLION USERS

MORE THAN **15,000** SALES OUTLETS

OVER **6,000,000** PUMPS PRODUCED YEARLY

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Introduction

We are all aware of the word Eco-friendly, it is a global subject for every human being, involved with too many fields. Though each of us is a single party, we still can do our little actions to contribute our own effort, making a small step further to serve a responsibility to our earth and by that it means keeping it safe and protecting our environment.

Like our living surroundings, community, our city, some large particles in wastewaters, or fibrous matters are often unavoidable and lead to clogging of the pipes, thus cause the unnecessary troubles for our daily life, and lead to the second pollutions to our living space.

LEO WQ-T/QG Submersible Sewage Pump with Cutting System, which is made of castings and equipped with cutting mechanism, is heavy-duty design, used to drain sewage and wastewater from buildings, kitchens, and water treatment facilities of factories and commercial complexes, cutting foreign objects during suction,enable smooth pumping.

LEO WQ-T/QG Submersible Sewage Pump with Cutting System comes in a wide product lineup, covering discharge bore diameters of 50 and 80 mm and motor outputs of 0.75KW to 4KW.

LEO WQ-T/QG Submersible Sewage Pump with Cutting System is available as highly-durable standard, stainless steel welded shaft and high-chromium cutting set as defaut feature. All models can be used in combination with a guide rail fitting device that enables easy installation and maintenance.

Furthermore, durability and wear resistance have been thoroughly considered in its design, so these pumps enable continuous duty over long periods of time.

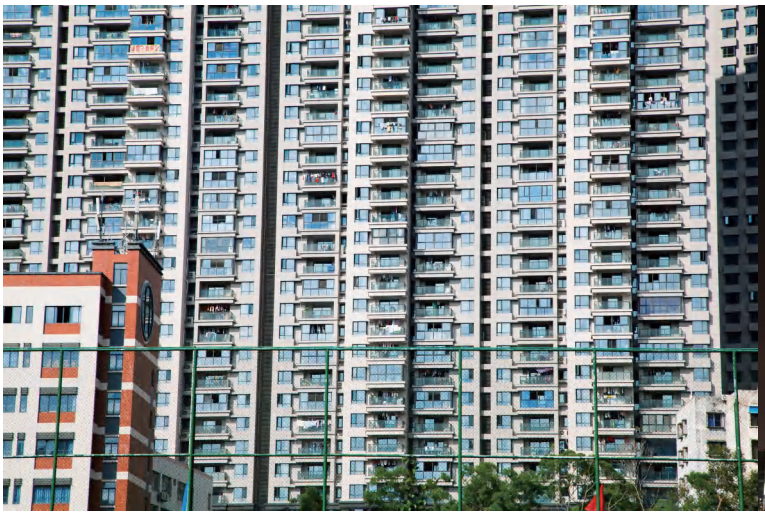
Application

Poultry Farm

Construction site

Wastewater Treatment

Aquaculture



Residential quarters

Industrial plants

Main Characteristic

1.Dual-end mechanical seals with silicon carbide face

Isolated in the oil chamber where a clean, non-corrosive and abrasion-free lubricating environment is maintained.

Compared with the water-cooled outside mechanical seal, it reduces the risk of failure caused by dry-heating and adhering matter.

Rubber parts of the upper and lower fixing rings are made of NBR, which provides higher resistance to heat and chemicals.

Pump body side material: Silicon carbide;
Motor side: Graphite ceramic.

2.Thermal Protector

For pumps≤2.2KW,which is equipped with thermal protector directly cuts the motor circuit if excessive heat builds up.

For 3kw-4kw pumps(three phase),which is equipped with thermal protector directly cuts the motor circuit if overcurrent occurs.

3.Oil Seal

Protect the mechanical seal from abrasive particles.

4.Oil Lifter

Provide lubrication and cooling of the seal faces with 70% of anti-wear hydraulic oil.

Maintaining a stable shaft sealing effect and prolonging the seal life longer.

5.Cutting System

0.75KW ~ 1.1KW: adopt with semi-open cast iron HT200 impeller and high chrome cutting set, with vacuum heat treatment.

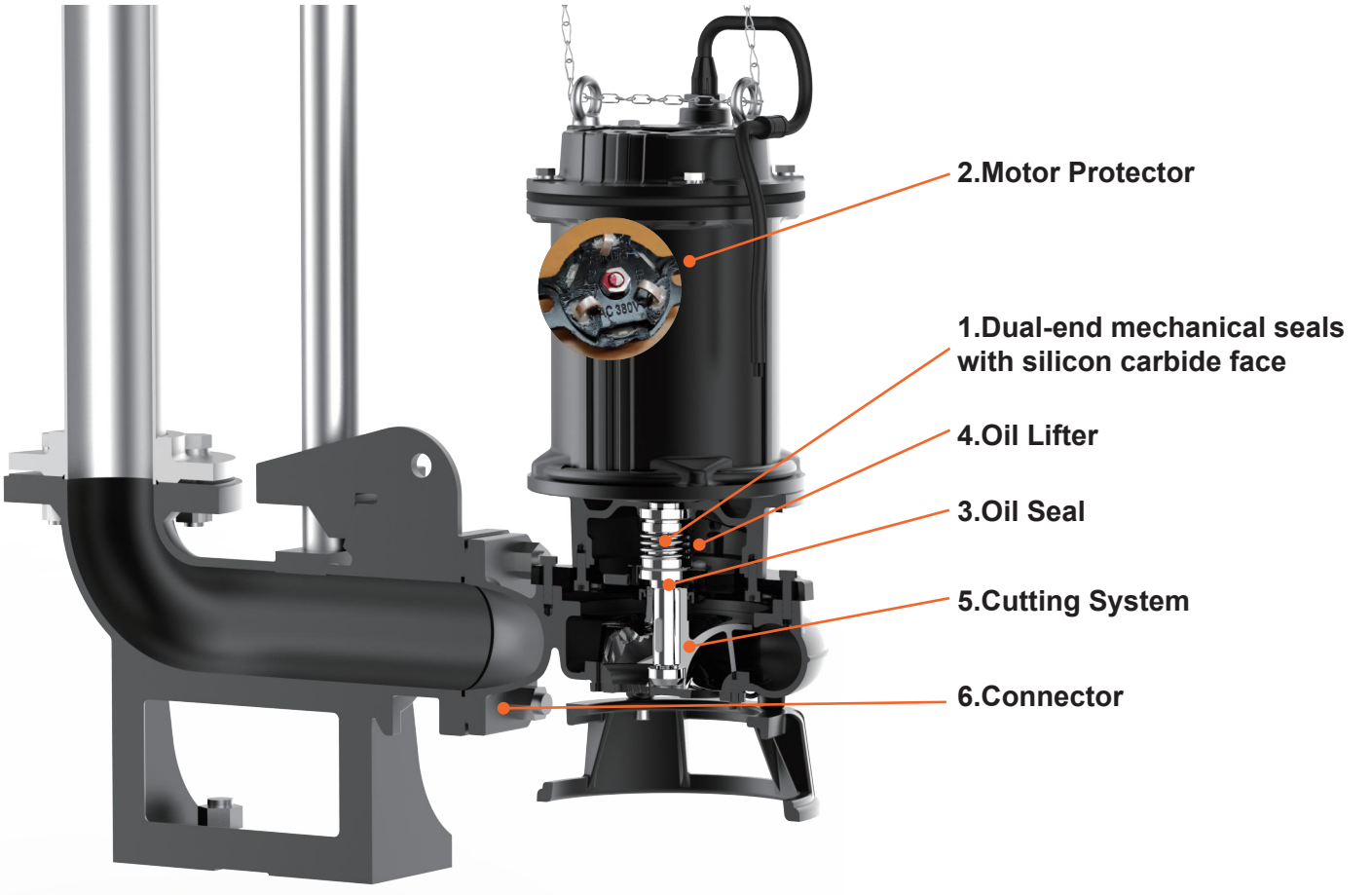
1.5KW ~ 4KW: adopt with propeller design high chrome impeller and high chrome cutting, with vacuum heat. treatment

6.Connector

0.75~1.1KW: thread outlet design, equipped with hose connector; 1.1KW has optional with flange type.

1.5KW~4KW: hose coupling as standard, optional with flange elbow.

Flange models:Optional coupling connection.



Information

Motor

- Copper winding
- Insulation class: F
- Ingress protection: IPX8
- Running mode:S1

Pump

- Liquid density≤1.2×10³kg/m³
- Liquid temperture:0-40ºC
- Liquid PH value:4-10
- Immersion Depth:0-5m
- All electrophoresis casting parts
- Optional float switch for single phase models

Specification

- Current available with :220V/50HZ; 380V/50HZ
- Other specification is under develop stage

Cable Length

- Standard with 10m
- Optional length according to the application demand

	Connector	Cutting set
Models with “M”		
Models without “M”		
	Standard	**Optional**

Cutting

Cutting ability

Fiber

E.g Towels, Gloves,Stockings,ect.

Plastic & Nylon

E.g Garbage/Storage bags,ect.

Pads

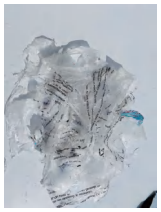
E.G Diapers,Sanitary napkin,ect.

Hair & wipes

E.G Paper,bath Garbage,ect.

For example

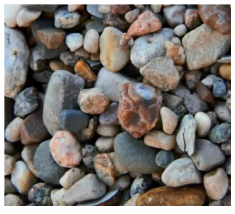
Before **After** **Before** **After**

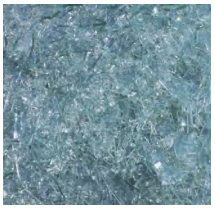


Cutting video

Remark

This product cannot be used to transport liquids containing hard particles, such as sand,gravel, metal shavings, stones, glass, etc.

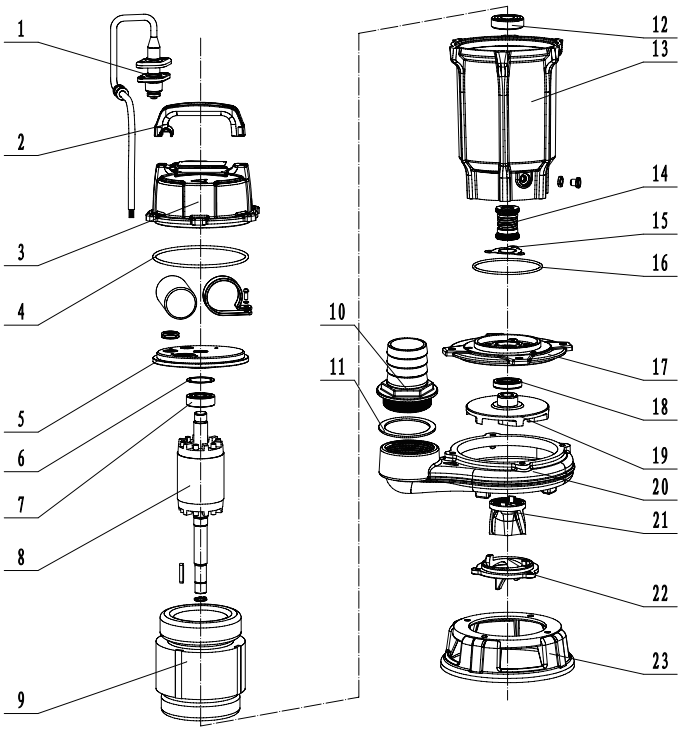




Material Table

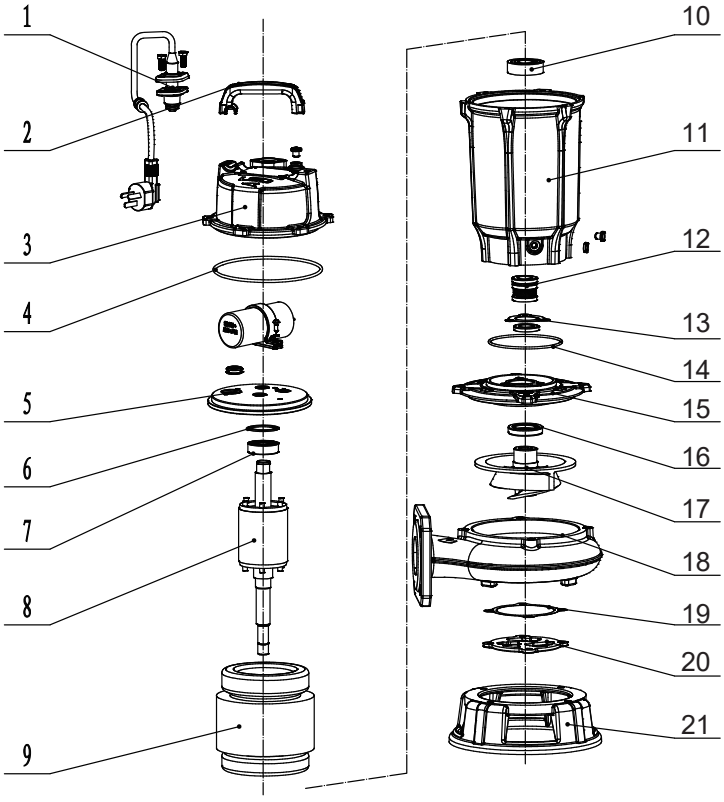
No.	Part	Material
1	Cable	
2	Handle	PP-GF10
3	Top Cover	HT200
4	O-Ring	NBR
5	End Cover	HT200
6	Wave Spring Washer	65Mn
7	Bearing	
8	Rotor	
9	Stator	
10	The water connection	HT200
11	Rubber washer	NBR
12	Bearing	
13	Motor Casing	HT200
14	Mechanical Seal	Q2Q2/B6AV2P1F1F1
15	Pressing plate	SS304
16	O-Ring	NBR
17	Cylinder Head	HT200
18	Oil Seal	
19	Impeller	
20	Pump Body	HT200
21	Cutterhead	9Cr18
22	Cutterhead	9Cr18
23	Base	HT200

Thread Connector
0.75-1.1KW



No.	Part	Material
1	Cable	
2	Handle	PP-GF10
3	Top Cover	HT200
4	O-Ring	NBR
5	End Cover	HT200
6	Wave Spring Washer	65Mn
7	Bearing	
8	Rotor	
9	Stator	
10	Bearing	
11	Motor Casing	HT200
12	Mechanical Seal	Q2Q2/B6AV2P1F1F1
13	Pressing plate	SS304
14	O-Ring	NBR
15	Cylinder Head	HT200
16	Oil Seal	
17	Impeller	
18	Pump Body	HT200
19	Cutterhead	9Cr18
20	Cutterhead	9Cr18
21	Base	HT200

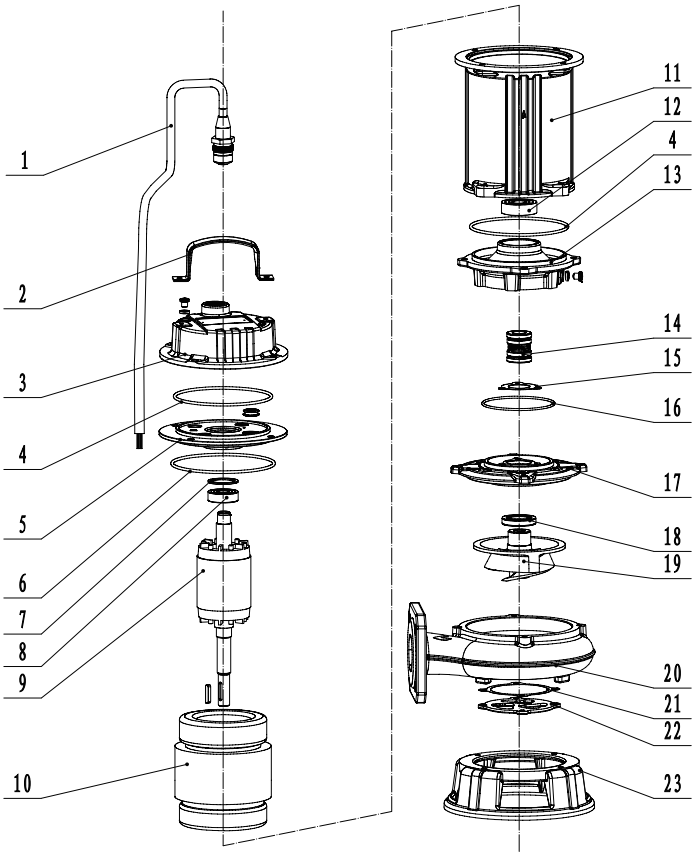
Flange Connector
1.1KW



Material Table

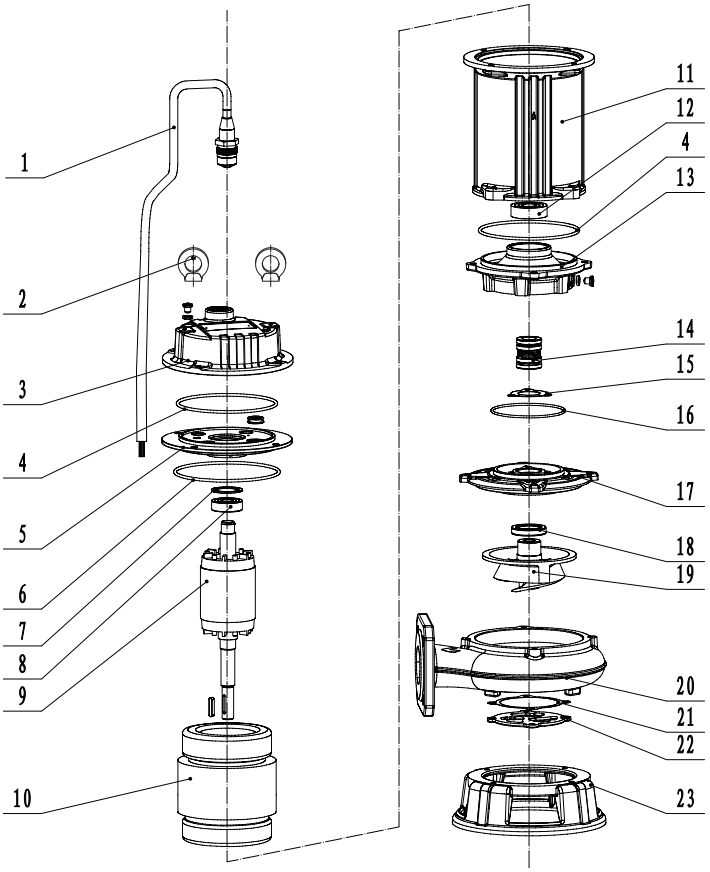
No.	Part	Material
1	Cable	
2	Handle	SS304
3	Top Cover	HT200
4	O-Ring	NBR
5	End Cover	HT200
6	O-Ring	NBR
7	Wave Spring Washer	65Mn
8	Bearing	
9	Rotor	
10	Stator	
11	Motor Casing	HT200
12	Bearing	
13	Oil chamber	HT200
14	Mechanical Seals	Q2Q2/B6AV2P1F1F1
15	Pressing plate	SS304
16	O-Sealing Ring	NBR
17	Cylinder Head	HT200
18	Oil Seal	
19	Impeller	9Cr18
20	Pump Body	HT200
21	Red steel paper pad	
22	Cutterhead	9Cr18
23	Base	HT200

1.5 - 2.2KW



No.	Part	Material
1	Cable	
2	Ring	SS304
3	Top Cover	HT200
4	O-Ring	NBR
5	End Cover	HT200
6	O-Ring	NBR
7	Wave Spring Washer	65Mn
8	Bearing	
9	Rotor	
10	Stator	
11	Motor Casing	HT200
12	Bearing	
13	Oil chamber	HT200
14	Mechanical Seals	Q2Q2/B6AV2P1F1F1
15	Pressing plate	SS304
16	O-Sealing Ring	NBR
17	Cylinder Head	HT200
18	Oil Seal	
19	Impeller	9Cr18
20	Pump Body	HT200
21	Red steel paper pad	
22	Cutterhead	9Cr18
23	Base	HT200

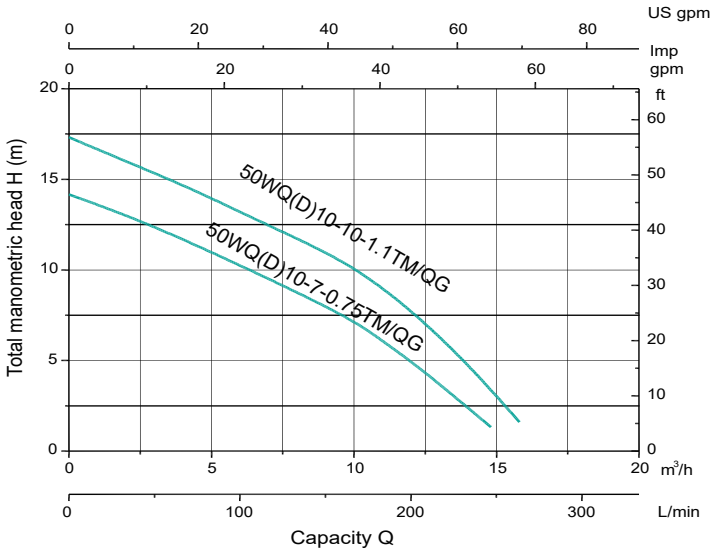
3-4 KW

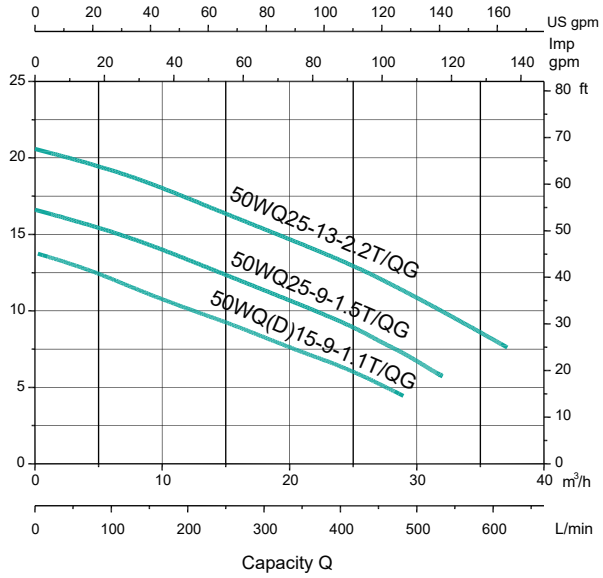


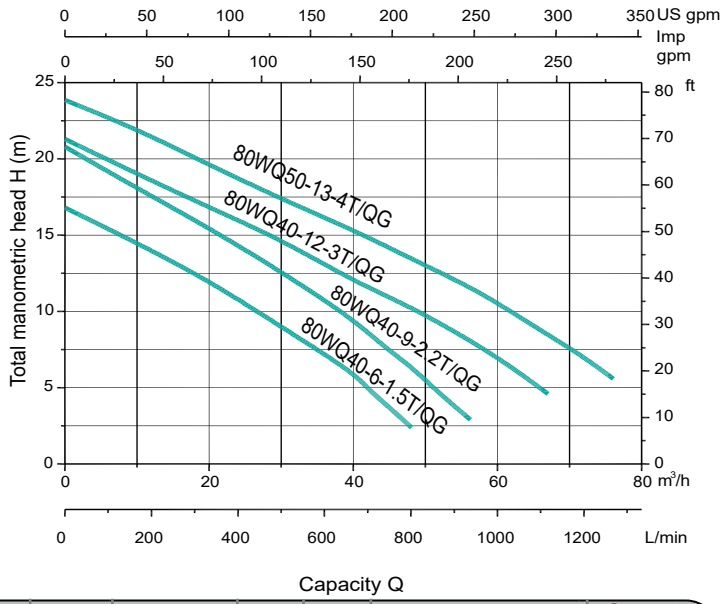
Technical Data

50 WQ D 8-16-1.1 T(M)/QG

- Cutting blade
- Threaded pump body
- Features
- Rated Power (kW)
- Rated Head (m)
- Rated Flow (m^3/h)
- Single Phase (Three phase without D)
- Submersible Sewage Pump
- Outlet Diameter (mm)

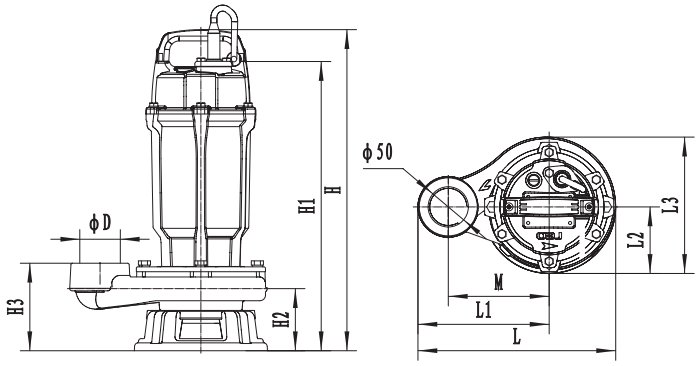




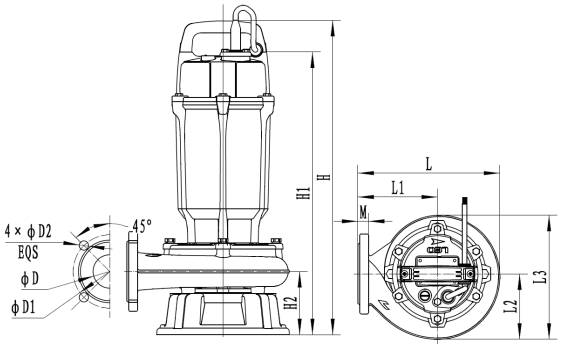


Model	Voltage	Speed	Max.Flow	Max.Head	Power		Outlet	Guide Rial	N.W	G.W	Packing Dimension	Quantity (PCS/20') TEU)
	V	r.p.m	m³/h	m	KW	HP	inch	Fitting	kg	kg	mm	
50WQD10-7-0.75TM/QG	220	2850	14	14	0.75	1	2"	50-50	16.1	19.5	494*269*214	1000
50WQ10-7-0.75TM/QG	380	2850	14	14	0.75	1	2"	50-50	15.4	18.8	494*269*214	1000
50WQD10-10-1.1TM/QG	220	2850	16	17	1.1	1.5	2"	50-50	21.6	25.5	544*269*244	792
50WQ10-10-1.1TM/QG	380	2850	16	17	1.1	1.5	2"	50-50	20.2	24.1	544*269*244	792
50WQD15-9-1.1T/QG	220	2850	28	14	1.1	1.5	2"	50-40	22.5	28.3	544*269*244	792
50WQ15-9-1.1T/QG	380	2850	28	14	1.1	1.5	2"	50-40	21.1	26.8	544*269*244	792
50WQ25-9-1.5T/QG	380	2850	32	16	1.5	2	2"	50-40	25	30.7	544*269*244	792
80WQ40-6-1.5T/QG	380	2850	48	17	1.5	2	3"	80-65	27.6	35.53	604*289*249	675
50WQ25-13-2.2T/QG	380	2850	37	20	2.2	3	2"	50-40	29.3	35.27	604*269*244	675
80WQ40-9-2.2T/QG	380	2850	56	21	2.2	3	3"	80-65	31.9	39.83	604*289*249	675
80WQ40-12-3T/QG	380	2850	68	21	3	4	3"	80-65	43.6	53.52	744*324*289	378
80WQ50-13-4T/QG	380	2850	76	25	4	5.5	3"	80-65	46.2	56.12	744*324*289	378

Dimension

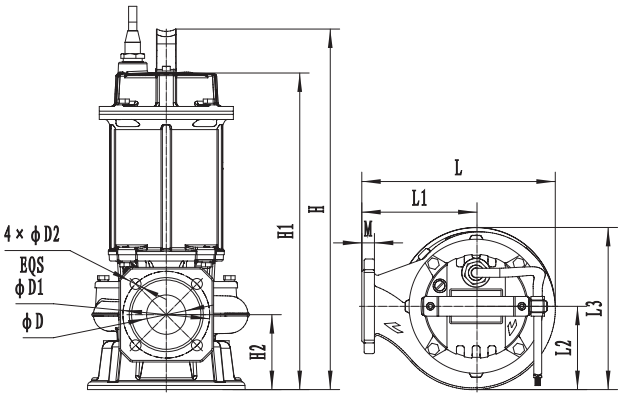


Thread outlet

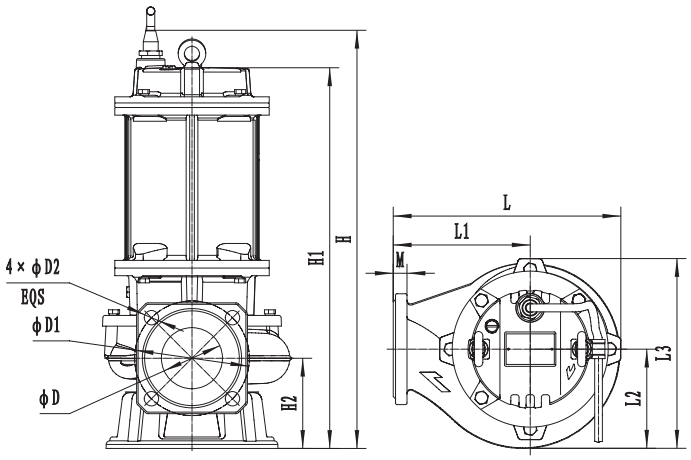


Flange outlet

Model	L	L1	L2	L3	M	H	H1	H2	D	D1	D2
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50WQD10-7-0.75TM/QG	245	163	82.5	169	125	397.5	358	76	50	/	/
50WQ10-7-0.75TM/QG	245	163	82.5	169	125	397.5	358	76	50	/	/
50WQD10-10-1.1TM/QG	268	168	100	200	133	453.5	407.5	90	50	/	/
50WQ10-10-1.1TM/QG	268	168	100	200	133	453.5	407.5	90	50	/	/
50WQD15-9-1.1T/QG	245.5	145	100.5	206	16	470.5	437.5	94.5	50	110	14
50WQ15-9-1.1T/QG	245.5	145	100.5	206	16	470.5	437.5	94.5	50	110	14



1.5 - 2.2 kW



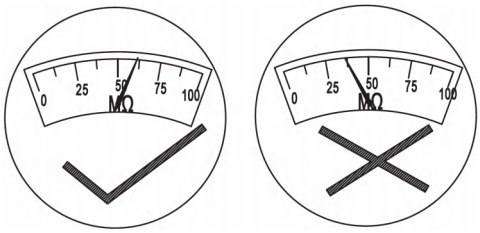
3 - 4 kW

Model	L	L1	L2	L3	M	H	H1	H2	D	D1	D2
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
50WQ25-9-1.5T/QG	245.5	145	106	206	16	457	399.5	94.5	50	110	14
80WQ40-6-1.5T/QG	272.5	160	117	229	18	472.5	415	110	80	150	19
50WQ25-13-2.2T/QG	245.5	145	106	206	16	493	437.5	94.5	50	110	14
80WQ40-9-2.2T/QG	272.5	160	117	229	18	509	453	110	80	150	19
80WQ40-12-3T/QG	298	179	130	248.5	18	544	498.5	118	80	150	19
80WQ50-13-4T/QG	298	179	130	248.5	18	544	498.5	118	80	150	19

Instruction

1, Before installation, the pump should be fully inspected, to check if any damage during transportation and storage, if there is any, please timely seek for professional operations for repair before use

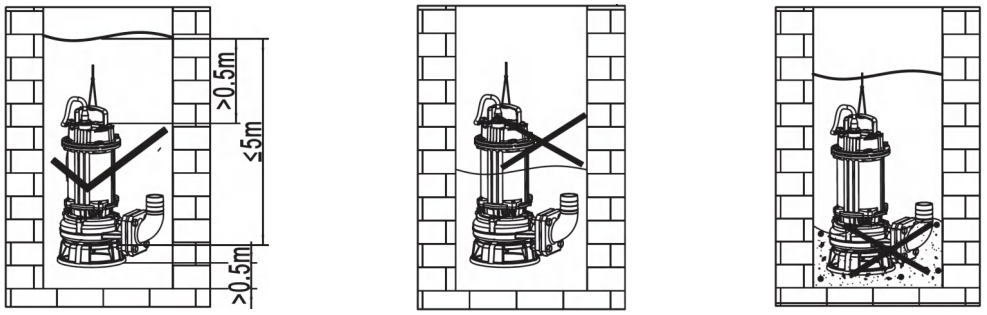
2, Before the operation of the pump, check the insulation resistance, it should meet the corresponding standard requirements, the cold insulation resistance shall not be less than 50 MΩ



3, When wiring, the pump should be correctly installed with leakage protective device; For three phase pump circuit breaker, need to select the right specification according to current or power of the pump

Power	Voltage	Recommend Current
0.75KW	380V	3A
1.1KW	380V	3.5A
1.5KW	380V	5A
2.2KW	380V	8A
3KW	380V	12A
4KW	380V	14A

4, When the pump installs into the water, its depth shall not exceed 5m, diving depth shall not be less than 0.5m. Do not sink the pumps into the mud and do not make the pump work above the surface



5, If the pump using site is far away from the power supply, the cable selection should be done correspondingly, recommendation as below:

Power	Voltage	Cable cross sectional space(mm²)	Cable Length (m)						
			50	100	200	300	500	700	1000
0.75KW	220V		1	1.5	4	4	10	10	10
1.1KW	220V		1.5	2.5	4	6	10	16	25
1.5KW	220V		2.5	2.5	6	10	16	25	25
2.2KW	220V		2.5	4	10	16	25	25	35
0.75KW	380V		0.75	0.75	0.75	1	1.5	2.5	4
1.1KW	380V		0.75	0.75	1	1.5	2.5	4	4
1.5KW	380V		1	1	1	1.5	2.5	4	6
2.2KW	380V		1.5	1.5	1.5	2.5	4	6	10
3KW	380V		1.5	1.5	2.5	4	6	10	10
4KW	380V		2.5	2.5	2.5	4	6	10	16

Installation

Hose

Pipe

Elbow flange

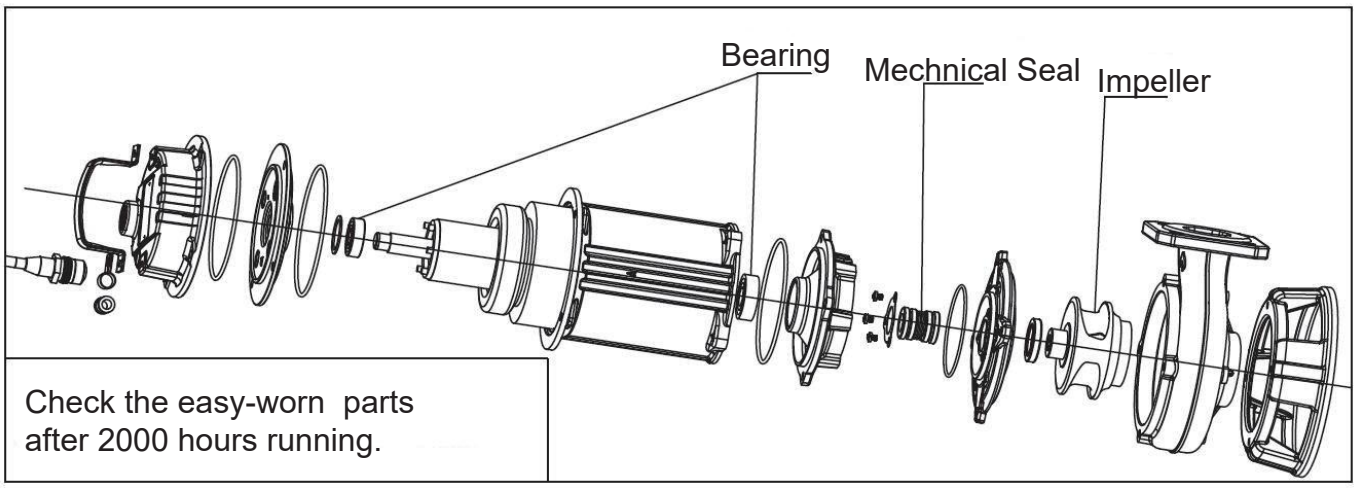
Coupled flange

Maintenance

1,After 2000hours normal operation, the pump should be sent to the qualified maintenance shop or service site for the corresponding parts check.

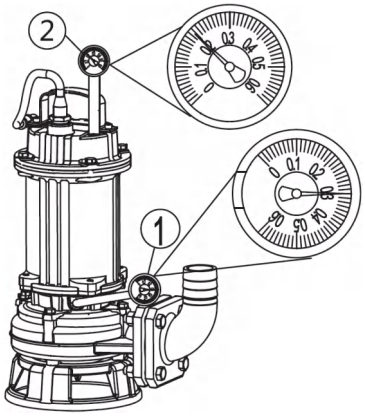
2,Recommend service parts as:

- Pump body
- Cutting set
- Bearing, mechanical seal, impeller



3, After the maintenance, the air pressure test must be carried out on the motor chamber and the seal chamber.

- The test air pressure for motor chamber is 0.2Mpa, and 0.3Mpa air pressure test for oil chamber side.
- Air pressure test need to first air injection on point 1, after the pressure reaches to the fixed pressure, then do the air injection for point 2.
- There should be no leakage within 3 minutes.



4, Tools needed for maintenance

Insulation resistance meter
>50MΩ

Allen wrench
6mm for models ≤ 1.1KW
8mm for models > 1.1KW

Wrench or socket
13mm

Warranty

1,Warranty period for this range is 24 months start from your purchase date.

2,Within the warranty period, you can claim any manufacturer failure to LEO pump authorized shop or distributor where you buy from.LEO will diagnose the problem and decide the solution accordingly.

3,LEO is not liable if a defect is caused by the following factors:

- Any drawing, design or specification supplied by the customer/purchaser
- Modifications undertaken by the customer/purchaser or a third party without the consent of LEO
- The owner's neglect before operation or mis-use of the pump
- Operation on higher/lower voltage than specified, tampering with electrical system, voltage surges as a result of lighting or faulty electrical supply
- Natural disasters, such as fire, flood or earthquake
- Tamper the pump or even damage it by any non-authorized staff
- Inadequate maintenance or faulty repair by others than LEO
- Over-loading
- Use of any unsuitable material
- The effects of chemical or electrolytic action
- Building or assembly work not undertaken by LEO
- Damage caused by transportation

LEO® PUMP
LOVE EACH OTHER

WARRANTY CARD

Shop:

Buyer:

Mobile:

Model :

Serial.No.:

Purchase Date:

LEO®

WARRANTY 24 MONTHS QUALITY

Do more with less, Safeguarding our healthy living enviroment

High pass-through with non-clogging

LEO reserves all the right of products modification without prior notification.