

**Superior Performance**  
**Unbeatable Pricing**  
**Pride in Workmanship**  
**Energy Efficient**  
**Rugged Construction**



**SD/LD/SL/HD/HL/SE/SG/SN/SAS**

Mechanical Seal Pump

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Manual



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## 1. Introduction

### •Model

Self-priming chemical pump with recycling system SD Series

Coupling series chemical pump SL Series

Self-priming chemical pump without recycling system LD Series

SD.SL.LD – 40 02 2 N B L -- C C H

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)

<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>(5)</u>
<b>Model</b>	<b>In/Outlet</b>	<b>Power</b>	<b>Pole</b>	<b>Elastomer</b>
SD.SL.LD	40-1.5 "	11-1Ø1/2HP	03-3Ø3HP	2-2P N-NBR
(FRPP)	50-2"	13-3Ø1/2HP	05-3Ø5HP	4-4P E-EPDM
SDP.SLP	75-3"	01-3Ø1HP	07-3Ø(7.5HP)	V-VITON
(CFRPP)		02-3Ø2HP	10-3Ø10HP	
SDK.SLK - PVDF				
SDC.SLC - CPVC				
<u>(6)</u>	<u>(7)</u>	<u>(8)</u>	<u>(9)</u>	

<b>B-No check Lid</b>	<b>L-Low Head</b>	<b>Seal Combination</b>	<b>Frequency</b>
A-With check lid	H-High Head	CCH,SCH	5-50Hz
		SSH	6-60Hz

### •Feature

1. Special self-cooling teflon bellow seal, combine with various seal materials , Prevents the attack of most chemical and solution contains particles.
2. Excellent self-priming performance up to 20 ft. Optional check valve prevents the fluid from flowing back.
3. Residual cycling-return liquid cools the seal and prevents it from overheating while running dry.
4. Corrosion and high temperature resistance.

### •Application

1. SUPER pumps can be used in a wide variety of industrial applications, such as food, chemical industry, Electro-plating, leather dyeing, waste and pollution control.
2. Wide material selection ensures high performance of corrosion resistance.



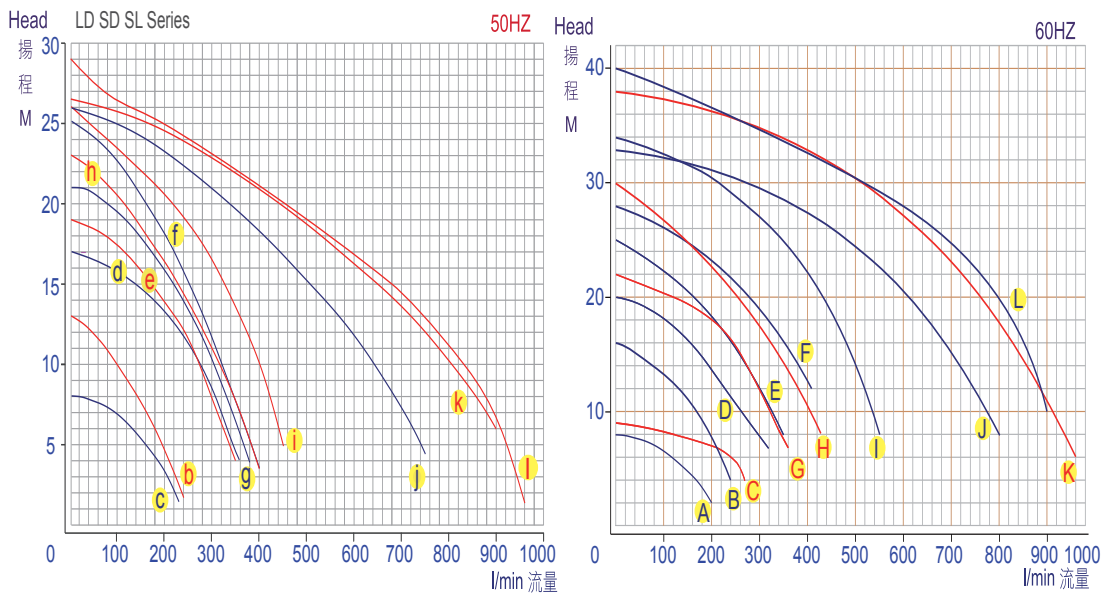
## •SD / LD / SL Specification

50HZ/60HZ

Testing Fluid: Water (SG1.0)

Model	In/Outlet mm	Power			50HZ			60HZ			Weight Kg
		Phase	HP	Phase	Curve	Max. Head M	Max. Flow L/min	Curve	Max. Head M	Max. Flow L/min	
SD / LD 40011L	40x40	1	1/2	4				A	8	200	24 / 30
SD / LD 40013L	40x40	3	1/2	4				A	8	200	24 / 30
SD / LD 40012H	40x40	3	1	2	b	13	240	B	16	240	25 / 31
SD / LD 40014L	40x40	3	1	4	c	8	230	C	9	270	25 / 31
SD / LD / SL 40022L	40x40	3	2	2	d	17	360	D	20	320	27 / 39 / 75
SD / LD / SL 40022H	40x40	3	2	2	e	19	350	E	25	350	27 / 39 / 75
SD / LD / SL 40032H	40x40	3	3	2	f	25	400	F	28	410	31 / 43 / 80
SD / LD / SL 50032L	50x50	3	3	2	g	21	380	G	22	360	31 / 43 / 80
SD / LD / SL 50032H	50x50	3	3	2	h	23	400	H	30	430	31 / 43 / 80
SD / LD / SL 50052H	50x50	3	5	2	i	26	450	I	34	550	42 / 55 / 83
SD / LD / SL 75052H	75x75	3	5	2	j	26	750	J	33	800	43 / 56 / 84
SD / SL 75072H	75x75	3	7.5	2	k	26.5	900	K	38	960	52 / 56 / 120
SL 75102H	75x75	3	10	2	l	28	960	L	40	1000	125

## •SD / LD / SL Performance Curves





•Model

**HD - 40 02 4 V B L - SSH - 6 N**  
**(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)**

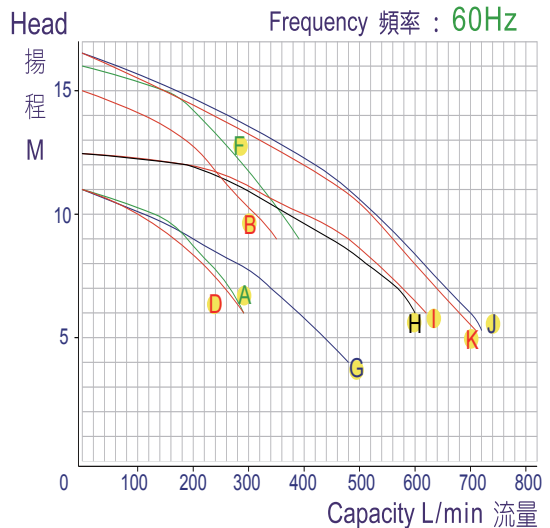
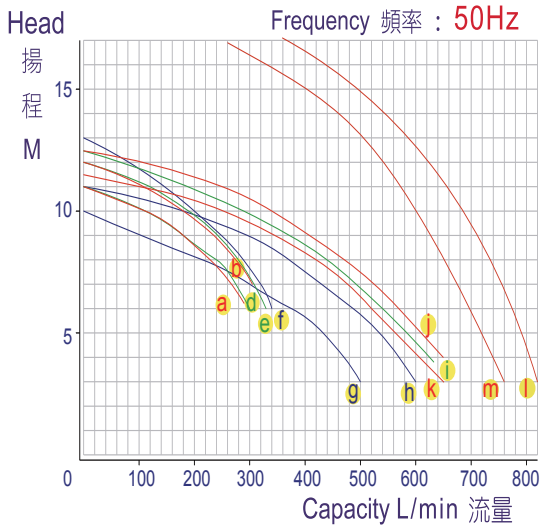
- (1) TYPE -HD
- (2) In-Outlet  
40-1.5", 50-2", 65-2.5"  
75-3"
- (3) Power (HP)  
1-1HP, 2-2HP, 3-3HP  
5-5HP, 7.5-7.5HP
- (4) Pole  
4-4P, 2-2P
- (5) Elastomer  
V - VITON  
N - NBR  
E - EPDM
- (6) B-No Check Lid  
L - Low head  
H - High head
- (8) Seal Combination  
CCH, SCH,SSH
- (9) Frequency  
5-50HZ, 6-60HZ
- (10) N-Normal  
S-Special

•HD Specification  
50HZ/60HZ

Testing Fluid: Water (SG1.0)

Model	In/Outlet (mm)		Power			50HZ			60HZ			Weight kg
	In	Out	Phase	HP	POLE	Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
40014	40	40	3ø	1	4	a	11	320	A	11	340	30
40024	40	40	3ø	2	4	b	12	360	B	15	400	39
50014	50	50	3ø	1	4	d	11	330	D	11	340	30
50024	50	50	3ø	2	4	e	12	360	B	15	400	39
50034	50	50	3ø	3	4	f	13	380	F	16	440	43
65014	65	65	3ø	1	4	g	10	520	G	11	500	31
65024	65	65	3ø	2	4	h	11	620	H	12.5	650	40
65034	65	65	3ø	3	4	k	11.5	680	K	16.5	740	43
75024	75	75	3ø	2	4	i	12.5	660	I	12.5	680	40
75034	75	75	3ø	3	4	j	11.5	700	J	16.5	760	44
65052	65	65	3ø	5	2	m	26	760				
75072	75	75	3ø	7.5	2	l	30	820				

•HD Performance Curves



## •Model

**SE - 25 SK - 1/2 6 N F - C C H**  
**(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)**

- |  |                                      |  |
|--|--------------------------------------|--|
| (1) TYPE -SE   | (5) Frequency                        | (8) Fixed-seal   |
| (2) In-Outlet<br>25-1" 40-1.5"                       | 5-50HZ, 6-60HZ                       | C - Ceramic  |
| (3) Specific Gravity<br>SK - 1.1                     | (6) Elastomer                        | S - SSIC   |
| (4) Power (HP)<br>1/2-1/2HP 3/4-3/4HP<br>1-1HP 2-2HP | V - VITON<br>N - NBR<br>E - EPDM     | (9) Rotational-seal<br>C - Carbon<br>S - SSIC          |
|  | (7) Material<br>F - FRPP<br>K - PVDF | (10) Bellows Spring<br>H - Hastelloy - C<br>S - SUS316 |

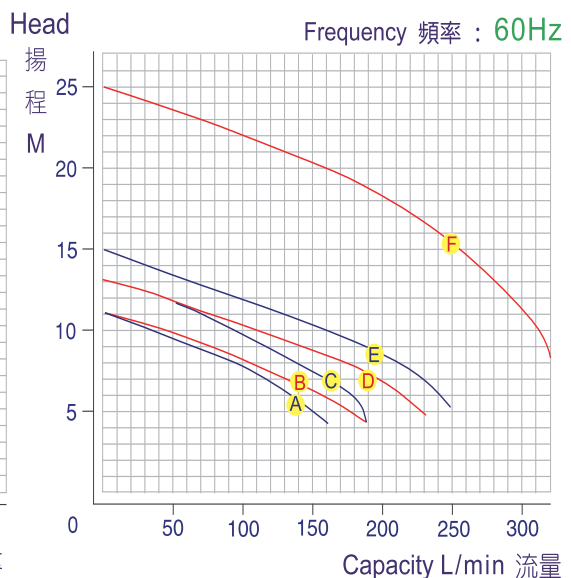
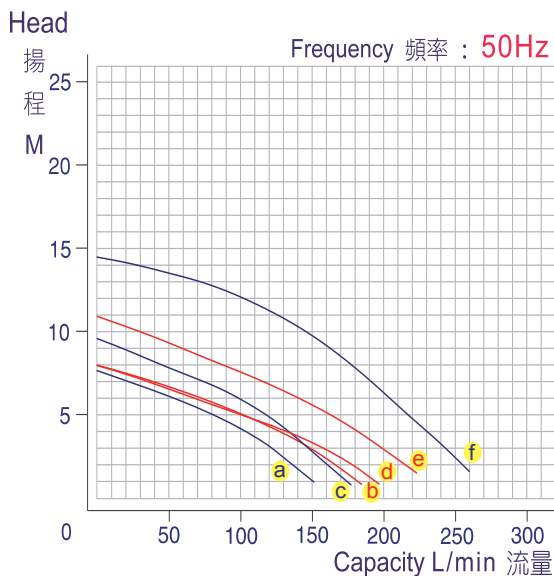
## •SE Specification

Testing Fluid: Water (SG1.0)

50HZ/60HZ

Model	In/Outlet (mm)		Power			50HZ			60HZ			Weight kg
	In	Out	Phase	HP	kW	Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
25SK-1/2	25	25	3 $\phi$	1/2	0.4	a	7.5	155	A	11	160	19
40SK-1/2	40	40	3 $\phi$	1/2	0.4	b	8	185	B	11	190	19
25SK-3/4	25	25	3 $\phi$	3/4	0.6	c	9.5	175	C	13	190	20
40SK-3/4	40	40	3 $\phi$	3/4	0.6	d	8	195	D	13	230	20
40SK-1	40	40	3 $\phi$	1	0.75	e	11	225	E	15	250	21
40SK-2	40	40	3 $\phi$	2	1.5	f	14.5	260	F	25	320	29

## •SE Performance Curves



## •MODEL AND STYLE

<b>SG</b>	-	<b>40</b>	<b>02</b>	-	<b>2</b>	<b>N</b>	<b>H</b>	-	<b>C</b>	<b>C</b>	<b>H</b>	<b>5</b>	<b>N</b>
(1)		(2)	(3)		(4)	(5)	(6)		(7)	(8)	(9)	(10)	(11)
(1) TYPE		SG-FRPP	SGK-PVDF		(4) Pole 2-2P					(8) Rotational-seal			
		SGK-PVDF			(5) Elastomer					C- Carbon			
(2) In-Outlet		40-1.5"	50-2"			N-NBR	E-EPDM			(9) Bellows Spring			
		100-4"	125-5"		(6) H - High head	V-VITON				H-Hastelloy-C			
(3) Power (HP)		01-1HP	02-2HP	03-3HP	(7) Fixed-seal					(10) Frequency			
		05-5HP	07-7.5HP	10-10HP	C - Ceramic					5-50HZ	6-60HZ		
		15-15HP			S - SSIC					(11) Model			
										N-Standard			
										T-Titanium			

## •SG Specification

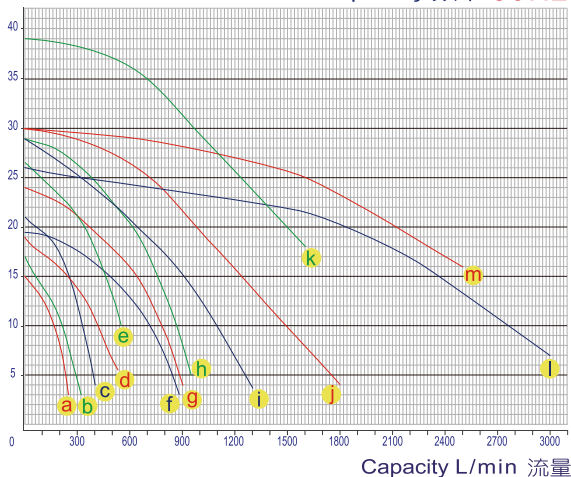
Weight / Performance Is For Reference Only Actual Product May Vary

Test Fluid : Water Sp Gravity 1 0

型式	口徑 (mm)		馬力		50HZ			60HZ			重量 kg (參考值)
	入口	出口	相數	HP	曲線	全揚程M	全流量L/min	曲線	全揚程M	全流量L/min	
40012	40	40	3ø	1	a	15	250	A	15	240	21
40022	40	40	3ø	2	b	17	320	B	22	330	30
40032	40	40	3ø	3	c	22	400	C	26	430	33
50032	50	50	3ø	3	d	19	530	D	28	460	34
50052	50	50	3ø	5	e	26.5	550	E	35	560	47
75052	75	75	3ø	5	f	19.5	880	F	30	850	49
75072	75	75	3ø	7-1/2	g	24	900	G	33	980	73
75102	75	75	3ø	10	h	29	950	H	35	1100	80
100102	100	100	3ø	10	i	29	1300	I	32	1500	81
100152	100	100	3ø	15	j	30	1800	J	41	1750	110
100152H	100	100	3ø	15	k	39	1600	K			
125152	125	125	3ø	15	l	26	3000	L	30	2000	112
125202	125	125	3ø	20	m	30	2500	M			

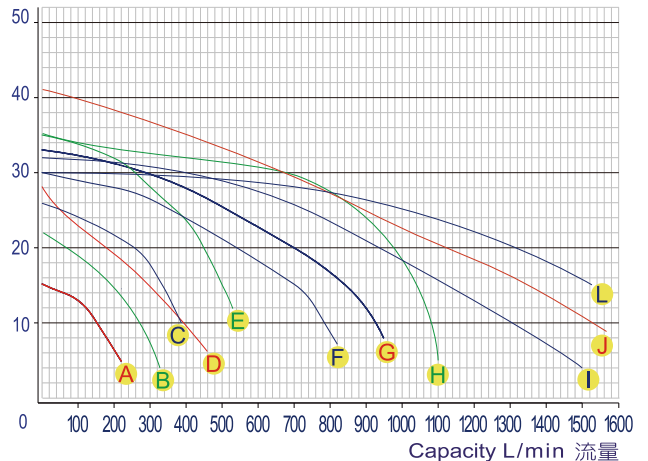
揚程M  
Head

Frequency 頻率: 50Hz



揚程M  
Head

Frequency 頻率: 60Hz



**HL - 75 10 2 - V B H - SSH 5 N**  
**(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)**

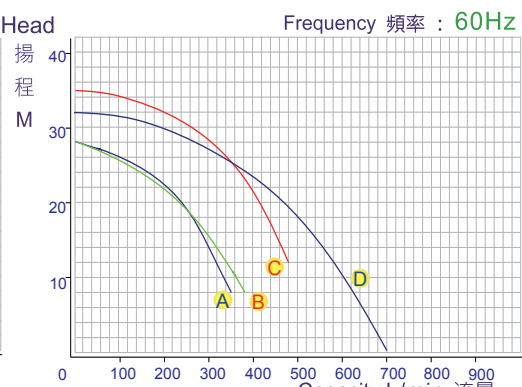
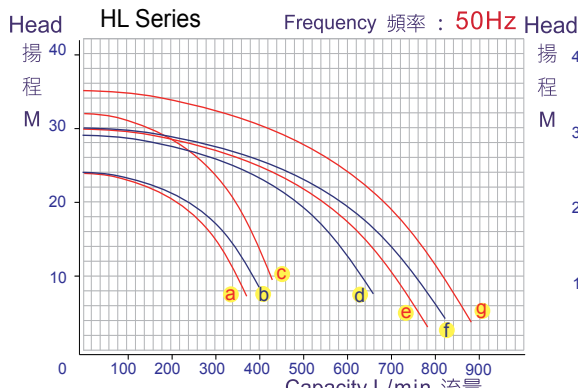
- |  |                                   |                                 |
|--|-----------------------------------|---------------------------------|
| (1) TYPE -HD   | (5) Elastomer                     | (8) Seal Combination            |
| (2) In-Outlet<br>40-1.5", 50-2", 65-2.5"<br>75-3"    | V - VITON                         | CCH, SCH, SSH                   |
| (3) Power (HP)<br>3-3HP, 5-5HP<br>7.5-7.5HP, 10-10HP | N - NBR                           | (9) Frequency<br>5-50HZ, 6-60HZ |
| (4) Pole<br>2-2P                                     | E - EPDM                          | (10) N-Normal<br>S-Special      |
|  | (6) B-No Check Lid                |                                 |
|  | (7) L - Low head<br>H - High head |                                 |

## •HL Specification

Testing Fluid: Water (SG1.0)

50HZ/60HZ

Model	In/Outlet	Power			50HZ			60HZ			Weight kg
		Phase	HP	KW	Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
40032	1-1/2"	3	2	3	a	24	370	A	28	350	82
50032	2"	3	2	3	b	24	400	B	28	380	82
50052	2"	3	2	5	c	32	430	C	35	480	85
65052	2-1/2"	3	2	5	d	26	760	D	32	700	86
65072	2-1/2"	3	2	7-1/2	e	30	780				
75072	3"	3	2	7-1/2	f	30	820				
75102	3"	3	2	10	g	35	880				





# SUPER PUMPS

**SN** - **40** **02** **2** - **N** **H** - **C** **C** **H** - **5** **T**  
**(1)** **(2)** **(3)** **(4)** **(5)** **(6)** **(7)** **(8)** **(9)** **(10)** **(11)**

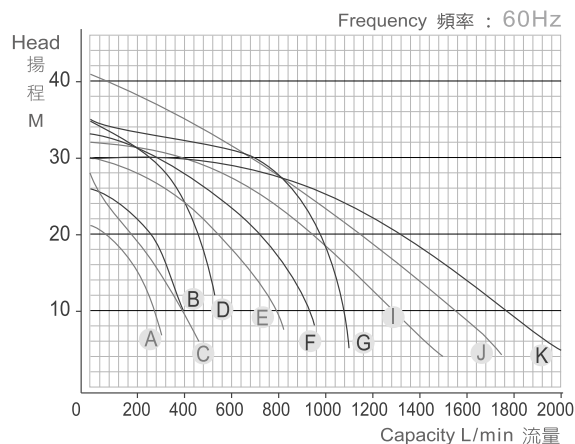
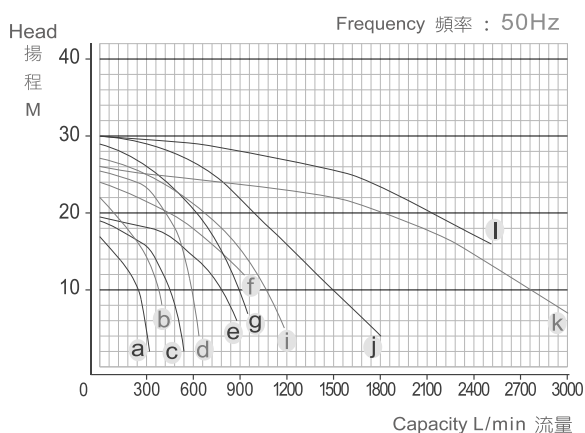
- |   |   |   |
|---|---|---|
| (1) TYPE<br>SN - FRPP<br>SNK - PVDF                                       | (4) Pole 2 : 2P                                   | (8) Rotational-seal<br>C-Carbon<br>S-SSIC         |
| (2) In-Outlet<br>40-1.5", 50-2", 75-3"<br>100-4", 125-5"                  | (5) Elastomer<br>N - NBR<br>E - EPDM<br>V - VITON | (9) Bellows Spring<br>H - Hastelloy-C<br>S-SUS316 |
| (3) Power (HP)<br>02-2HP, 03-3HP, 05-5HP<br>07-7.5HP, 10-10HP,<br>15-15HP | (6) L - Low head<br>H - High head                 | (10) Frequency<br>5 - 50HZ 6 - 60HZ               |
|   | (7) Fixed-seal<br>C - Ceramic<br>S - SSIC         | (11) Model<br>N-Standard<br>T-Titanium            |

## •SN Specification

Weight / Performance Is For Reference Only Actual Product May Vary

Test Fluid : Water Sp Gravity 1.0

規格	進出口徑 (mm)	馬力		50Hz			60Hz			重量 kg
		HP	曲線	全揚程 M	全流量 L/min	曲線	全揚程 M	全流量 L/min		
40022	40x40	2	a	17	320	A	21	300	70	
40032	40x40	3	b	22	400	B	26	430	76	
50032	50x50	3	c	19	530	C	28	460	80	
50052	50x50	5	d	25.5	635	D	35	560	93	
75052	75x75	5	e	19.5	880	E	30	850	96	
75072	75x75	7-1/2	f	24	930	F	33	980	112	
75102	75x75	10	g	29	950	G	35	1100	122	
100102	100x100	10	i	27.5	1180	I	32	1500	125	
100152	100x100	15	j	30	1800	J	41	1750	153	
125152	125x125	15	k	26	3000	K	30	2000	155	
125202	125x125	20	l	30	2500	L				



**SAS - 40 2 H - T 6 N - 5 2**  
**(1) (2) (3) (4) (5) (6) (7) (8) (9)**

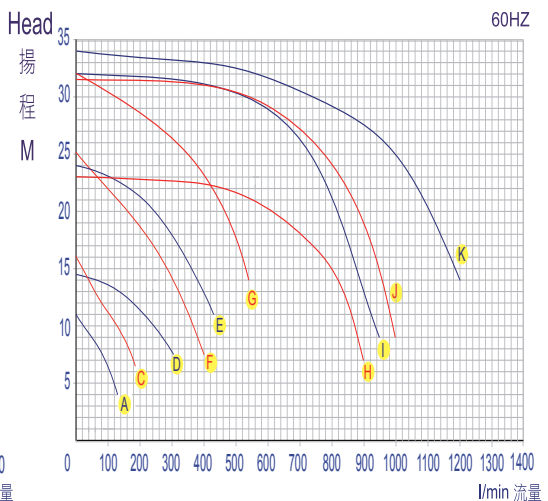
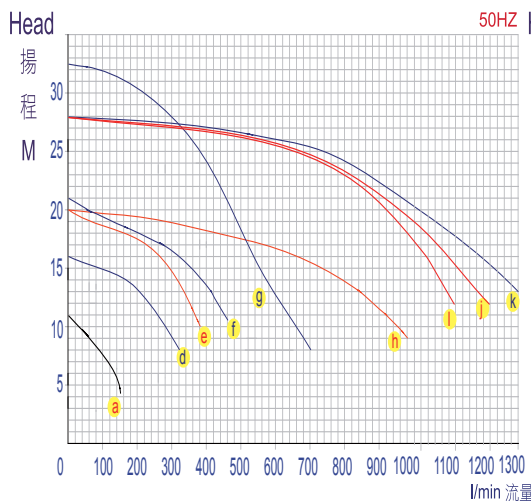
- |  |   |  |
|--|---|--|
| (1) TYPE -SAS  | (4) H-High head                                       | (7) Elastomer                                |
| (2) In-Outlet<br>25-1", 40-1.5", 50-2"<br>65-2.5", 75-3"                       | (5) Seal<br>T-Teflon Bellows Ssic<br>C-Ceramin+Carbon | N - NBR<br>E - EPDM<br>V - VITON<br>T-Teflon |
| (3) Power (HP)<br>1/2-1/2HP, 1-1HP, 2-2HP<br>3-3HP, 5-5HP,<br>7-7.5HP, 10-10HP | (6) Material<br>6-SUS316                              | (8) Frequency<br>50-50HZ<br>60-60HZ          |
|  |   | (9) Pole<br>2-2P<br>4-4P                     |

## •SAS Specification

50HZ/60HZ

Testing Fluid: Water (SG1.0)

Model	In/Outlet	Power HP	Pole	50HZ			60HZ			Weight kg
				Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
25-1/2H	1"	1/2	2P	a	12	145	A	11	130	19
25-1H	1"	1	2P	c	15	220	C	18	185	26
40-1H	1-1/2"	1	2P	d	16	320	D	14	305	26
40-2H	1-1/2"	2	2P	e	20	380	E	24	430	30
50-3H	2"	3	2P	f	21	460	F	25	400	45
50-5H	2"	5	2P	g	32	700	G	32	540	50
65-5H	2-1/2"	5	2P	h	20	980	H	23	900	55
65-7H	2-1/2"	7-1/2	2P	i	28	1100	I	32	950	66
75-7H	3"	7-1/2	2P	j	28	1200	J	31.5	1000	68
75-10H	3"	10	2P	k	28	1300	K	34	1400	75



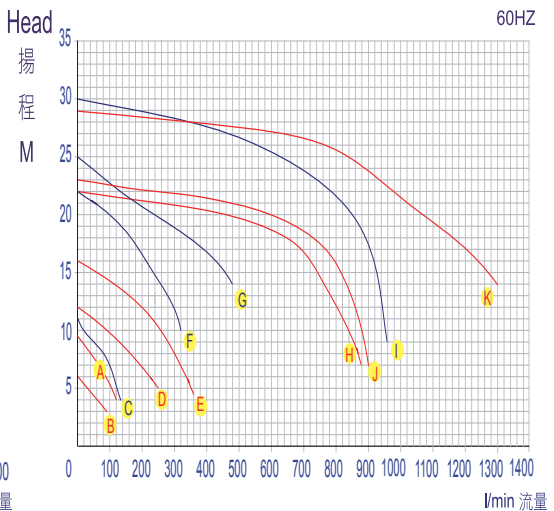
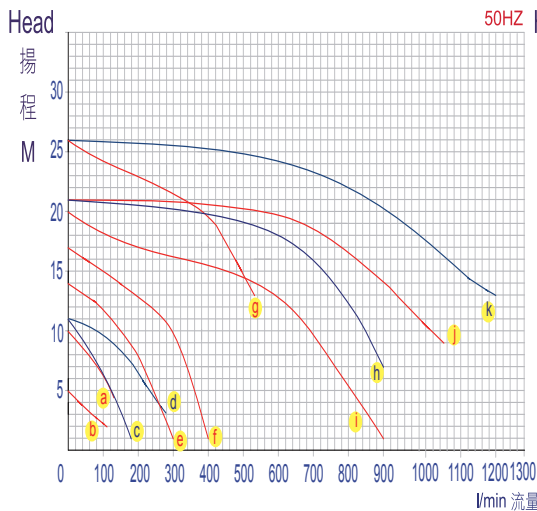
**SAS - 40 2 L - T 6 N - 5 2**  
**(1) (2) (3) (4) (5) (6) (7) (8) (9)**

- |  |   |  |
|--|---|--|
| (1) TYPE -SAS  | (4) L-Low head  | (7) Elastomer                                |
| (2) In-Outlet<br>25-1", 40-1.5", 50-2"<br>65-2.5", 75-3"                       | (5) Seal<br>T-Teflon Bellows Ssic<br>C-Ceramin+Carbon | N - NBR<br>E - EPDM<br>V - VITON<br>T-Teflon |
| (3) Power (HP)<br>1/2-1/2HP, 1-1HP, 2-2HP<br>3-3HP, 5-5HP,<br>7-7.5HP, 10-10HP | (6) Material<br>6-SUS316                              | (8) Frequency<br>50-50HZ<br>60-60HZ          |
|  |   | (9) Pole<br>2-2P<br>4-4P                     |

## •SAS Specification

Testing Fluid: Water (SG1.0)

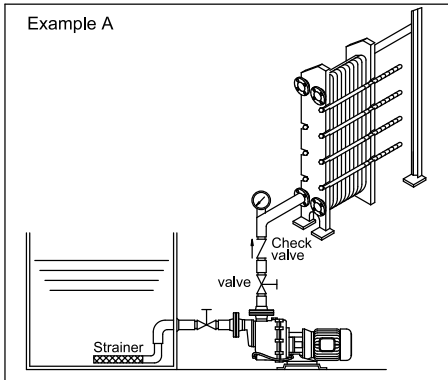
Model	In/Outlet	Power HP	Pole	50HZ			60HZ			Weight kg
				Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
25-1/2L	1"	1/2	4P	b	5	110	B	6	90	19
25-1L	1"	1	2P	c	11	180	C	11	130	26
40-1L	1-1/2"	1	2P	d	11	300	D	11	250	26
40-2L	1-1/2"	2	2P	e	14	300	E	16	360	30
50-3L	2"	3	2P	f	17	400	F	22	320	45
50-5L	2"	5	2P	g	26	530	G	25	480	50
65-5L	2-1/2"	5	2P	h	21	900	H	22	880	55
65-7L	2-1/2"	7-1/2	2P	i	20	900	I	30	960	66
75-7L	3"	7-1/2	2P	j	21	1050	J	23	900	68
75-10L	3"	10	2P	k	26	1200	K	34	1400	75



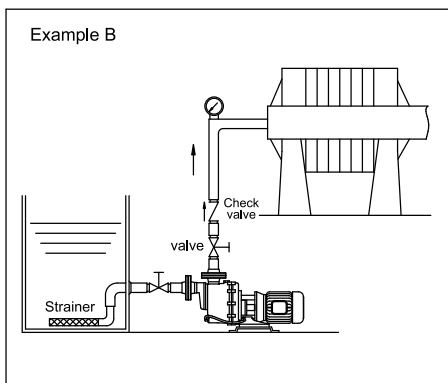
## 2. Installation

1. Place the machine in a horizontal position and on a sturdy-resting place. Keep the pump level and install valves on the inlet and outlet of the pump for easy maintenance.
2. If the pump must be installed outdoors, it is essential to provide adequate covering, especially if the pump is equipped with an electrical switch.
3. Sunlight will weaken PVC pipes. Please install it with ample protection from direct sunlight.
4. Choose heat resistant pipes if the temperature of the solution is above 60°C.
5. Before connecting tubing to the pump, the tubes should be washed to remove any extraneous matter there may be such as welding pellets, cut-off from gaskets, etc.
6. Make sure that the tubes are perfectly sealed and that the air is not infiltrating the pump by any means.
7. If metallic pipes are used, make sure that a vibration absorbing is connected to the pump to avoid damage to the pipeline or the pump.
8. If the elevation of the outlet pipe reaches beyond that of the pump, please install a check valve near the pump to prevent damage from back-pressure.
9. Install a foot valve to protect the pump from sucking in impurities.
10. Do not exert any extraneous forces on the pipe such as twisting or bending. After installation is complete, please look over the pipes to make sure that none of the pipes is warped due to excessive force.
11. Make sure that the pump and pipeline are sturdy and well leveled after installation.
12. Make sure that the power, voltage, and frequency are suitable for the motor before wiring, and install a circuit breaker.
13. Put a protective cover over the pump when it is used for pumping dangerous liquid.
14. Make sure that the pump is filled with fluid, and all the valves are opened before starting the motor.
15. Please make sure that the inlet connecting flange is equal in diameter with the inlet flange, and the outlet-connecting flange is the same size as the outlet flange. When mounting the pipes onto the pump, we suggest applying 8~9Nm of torque on 12mm bolts for the inlet and applying 8~9Nm on 12mm bolts for the outlet. Please also note that the inlet connecting flange should be equal in diameter with the inlet flange and the outlet-connecting flange should be the same size as the outlet flange.
16. The pump is marked with 230 VAC, 50 Hz, however it could be used with higher voltage, as in industrial power supply. The wire connection diagram could be found in the connection box on the motor.
17. Use an electromagnetic switch. It will automatically cut-off the power supplies if the motor is overloaded.

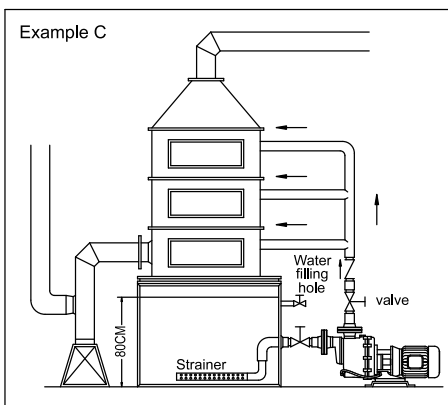
## ▪ Examples



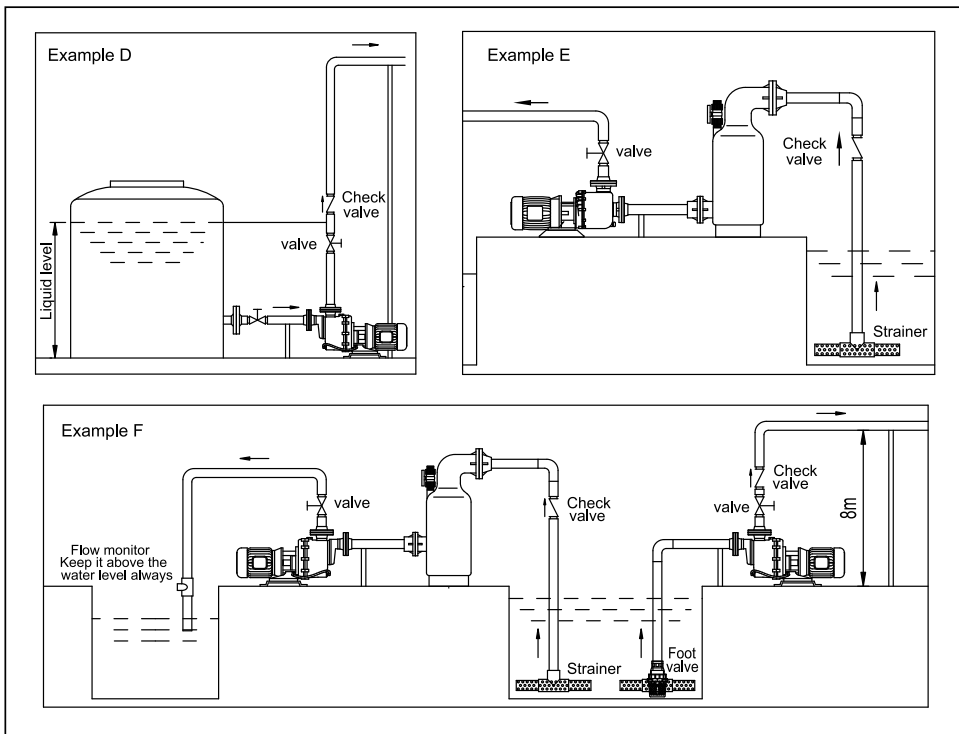
- When applied to heat-exchange, install a pressure gauge at the outlet to ensure no blockage in the pipeline.
- A strainer should be installed at the inlet to prevent solids from being sucked in.
- Install valves at the inlet and the outlet for easy maintenance.
- Strainer mesh should be dia. 5~7mm and total mesh area is 5 times the pipe area or more.



- For monitoring the flow and possible blockage, install a pressure gauge at the outlet.
- Install a dry-run control system to prevent damage to the pump.
- Remove trash blocked in the pump periodically.
- Clean the strainer mesh periodically.
- Strainer mesh should be dia. 5~7mm and total mesh area is 5 times the pipe area or more.
- Install valves at the inlet and the outlet for easy maintenance.



- When applied to scrubber, water tank should be large enough and over 80cm in depth of water.
- Lower the pump head as much as possible and enlarge the total mesh area of strainer.
- The strainer should be easy to disassemble for cleaning. The Strainer mesh should be dia. 5~7mm.
- Keeping the water sufficient all the time to prevent from dry running.
- Install a dry-run control system to prevent damage to the pump.
- Install a motor shield to protect the motor for outdoors application.



- When applied to tank, install a valve at the inlet for easy maintenance.
- Monitoring the level in the tank to prevent from dry running.
- For SD pump, check valve (part no. 14) without check lid is recommended.
- Install Check valve if the discharge pipeline is over 8M high.
- Fix the pipeline.
- Install a motor shield to protect the motor for outdoors application.
- 
- A strainer should be installed at the inlet to prevent solids from being sucked in.
- Keep the level over the strainer for 30cm or more to prevent air from being sucked in.
- Install Check valve if the discharge pipeline is over 8M high.
- Install a dry-run control system to prevent damage to the pump.
- Install valve at the outlet and the outlet for easy maintenance.
- Self-priming tank is recommended for pumps with 3" in/outlet.

### **3. Operation**

#### **•Before Operating**

1. Please note the following operating factors before using the pump: fluid series, concentration, temperature, specific gravity, solid particles and/or deposits, capacity, head, voltage, and cycle.
2. Check the electrical connections and make sure that the motor rotates in the direction shown on the fan cover of the motor.
3. Check the inlet and outlet flanges. Make sure flanges are securely fastened with gaskets in place.
4. Check fluid flow direction. The rotation of the impeller is determined by the polarity of the power source. Rotation direction can be seen from the cooling fan located at the top of the motor.
5. Make sure there is no leakage from the pump.
6. Be sure the pump is full of solution before running.

#### **•Operation Instruction**

1. Make sure the inlet and outlet valves are open and the fluid is to the proper level.
2. The service personnel must wear proper protection such as gloves, mask, glasses, overall, and anything else necessary to protect the skin from coming in contact with the liquid being pumped.
3. Make sure all the safety devices are in working order. For example, all the valves, the fluid levels controller, the circuit breaker and the on-off switch.
4. If the flow is too low, stop the pump and check the inlet and outlet valve.

### **4. Maintenance and Repair**

#### **•Cautions**

1. Make sure the power is off.
2. Drain out the chemical solvent inside the pump and close the inlet and outlet valves.
3. The service personnel must wear proper protection such as gloves, mask, glasses, overall, and anything else necessary to protect the skin from coming in contact with the liquid being pumped.

#### **•Maintenance and Repair**

1. Make sure that foreign objects do not block the inlet valve.
2. Motor and pump should be carefully connected to make sure that they are on a straight line.
3. The check cover must be securely fastened onto the rear cover. When fastening the rear cover, make sure it is centered on the frame.
4. Turn the impeller-fastening bolt clockwise to fix the impeller. The gap between the impeller and check cover should be about 1 to 1.5 mm. If the gap is too narrow, it will cause the check cover and impeller to wear out.
5. Make sure that the O-ring is in position when the main body is secured to the rear cover.

## 5. Trouble shooting

<b>Trouble</b>	<b>Possible Cause</b>	<b>Remedy</b>
Motor doesn't No power. Check the power supply. work.	Motor burnout.	Recoil the motor
	No power.	Check the power supply.
	Electromagnetic switch turns off the pump.	Checking whether motor is overloaded; If the switch is not working correctly,
Self-priming is too slow.	Outlet is blocked.	Check outlet pipe.
	Water level in pump is not high enough.	Fill pump up with liquid.
	It is sucking air.	Make sure there is no infiltration of air through the inlet, and that the water level is high enough.
There is not enough Pressure in the outlet.	It is sucking air.	Check the inlet pipe.
	Inlet is blocked.	Clean the inlet.
	Impeller blade is worn.	Install a new impeller.
	Direction of motor operation is wrong.	Change the contact lines of the motor.
	Seal leaks.	Use a new seal.
Pump leaks due to dry running.	Water level controller is incorrectly installed.	Adjust water level controller.
	There is no liquid in the inlet.	Replace damaged parts with new ones.
	The pump is left running after outlet is blocked.	
	Inlet pipe leaks.	
Water-level is not high enough and pump can't self-prime.		
Loud sounds and excess vibrations.	Motor shaft is loosened.	Fasten the shaft.
	Bearing is damaged.	Replace bearing.
Seal leaks.	Seal damaged.	Replace the seal.
	Seal packing damaged.	Check whether the material is suitable for the liquid.
Water at the inlet but no pressure at the outlet.	Inlet blocked.	Remove sludge.
	Air is being sucked in.	Make sure there isn't any leakage.
Crack on the pump body.	Material not proper for the solution.	Choose proper material.
	Inlet pipe is not fastened.	Fasten the inlet pipe and replace damaged pipe with new one.
	Long-term dry running makes the solution very hot, and the pump exploded.	Replace damaged parts with new ones and operate properly.
Motor is too hot.	The motor is about to overload.	Check whether the power is too high for the motor, reduce the diameter of Impeller or increase the power of motor.
	The voltage is not steady, Sometimes too high, sometimes too low.	Use a power stabilizer or surge protector to protect the motor.



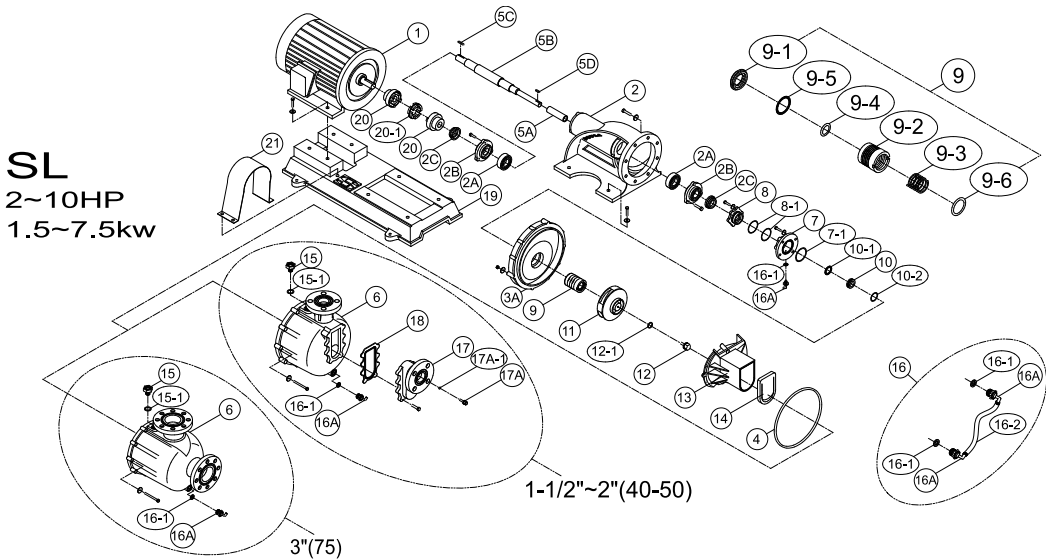
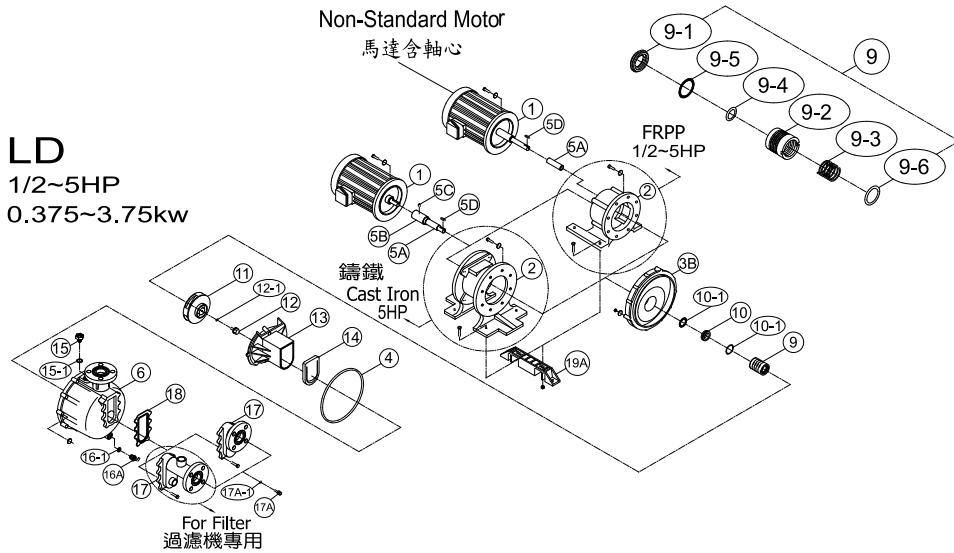


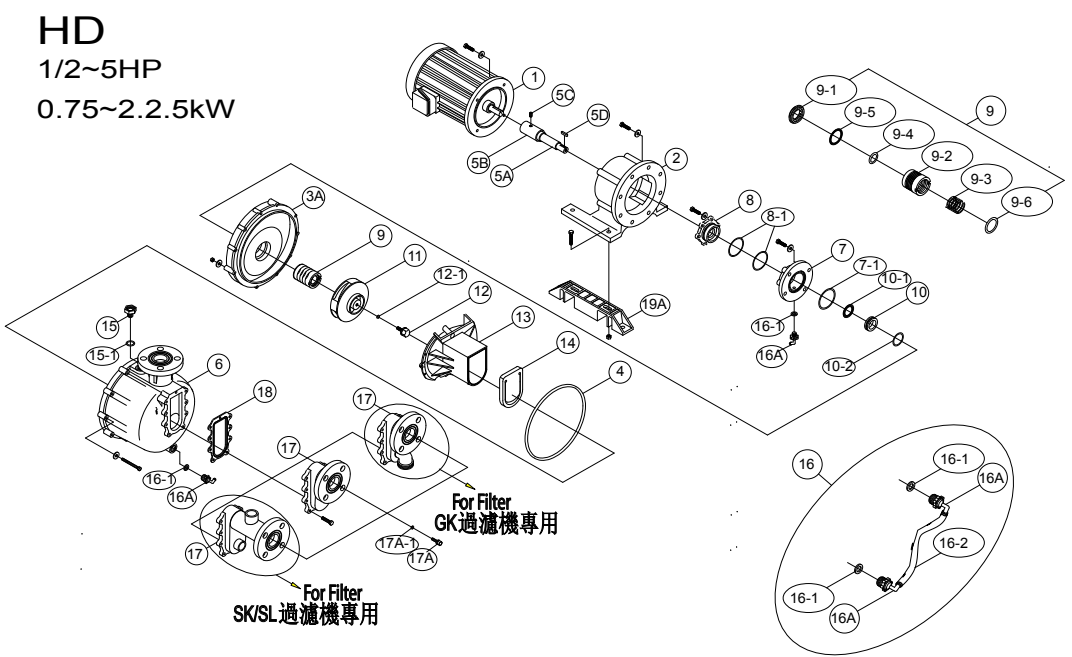
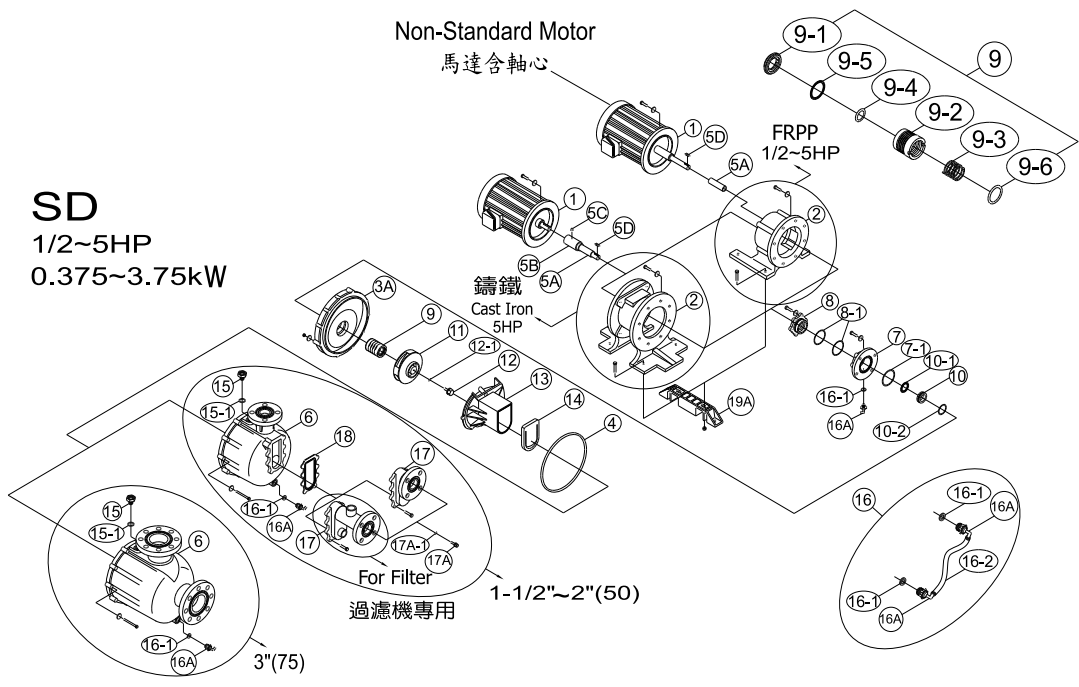
## **6. Warning**

1. Different chemical solutions mixed together will cause reaction and even heat to damage the pump. Don't pump different chemical solutions with the same pump.
2. Chemicals may cause serious injury. Keep away from dangerous area.
3. Before operating, please check the discharge and suction line and valves first. Make sure valves are all in correct position, then start. During operation, check discharge usually.
4. Incorrect operation, for example, valves closed, incompatible material and dry running may cause dangerous. Especially dry running, it will cause heat as well as vapor, even some chemical decomposes hydrogen and explode.
5. Start the pump and check the discharge from the outlet. If it is too low, unplug the pump immediately, and check the pipeline if there is any block..
6. The pump can be equipped with explosive-proof and pressure-proof motor. Please consult our engineers.
7. If chemical vapor may attack the motor, corrosion resistance coating of motor is necessary.
8. Any misuse of this equipment such as modifying parts, pumping incompatible chemicals and fluids, using worn or damaged parts is not recommended. Following the safety instructions.
9. Before repair, read this manual carefully to realize every parts and operating schedule.
10. When the pumping system contains dangerous fluids, wear protective gloves, glasses etc. while working on or around this equipment..



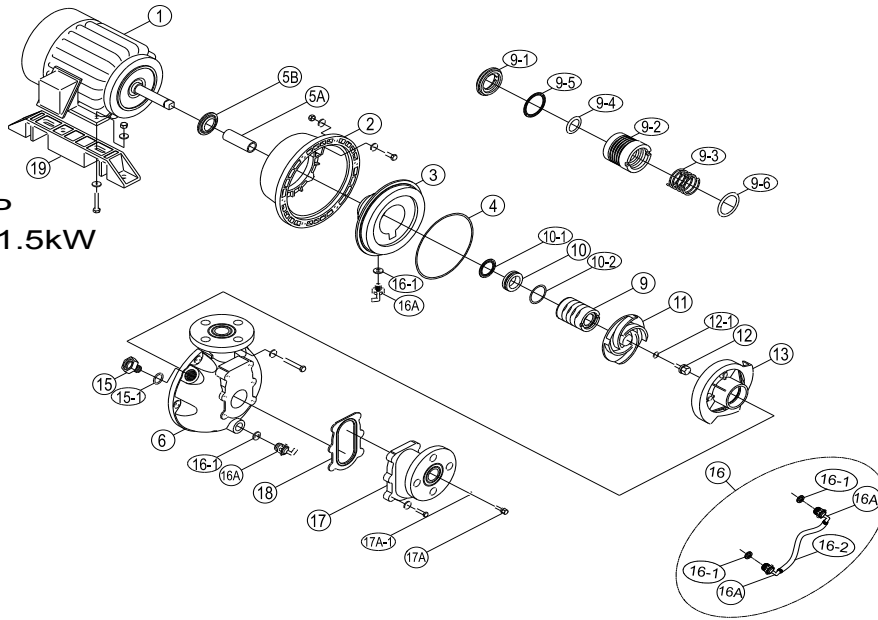
7. Appemdix





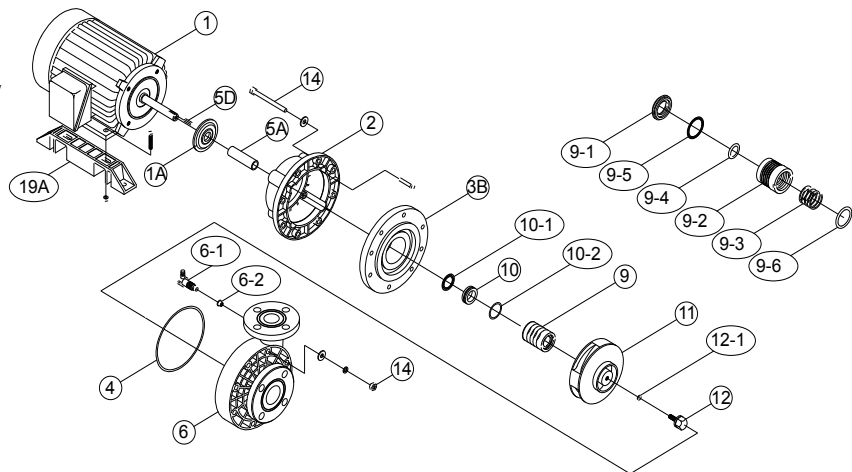
## SE

1/2~2HP  
0.4kW~1.5kW



## SG

1~15HP  
0.75~11kW

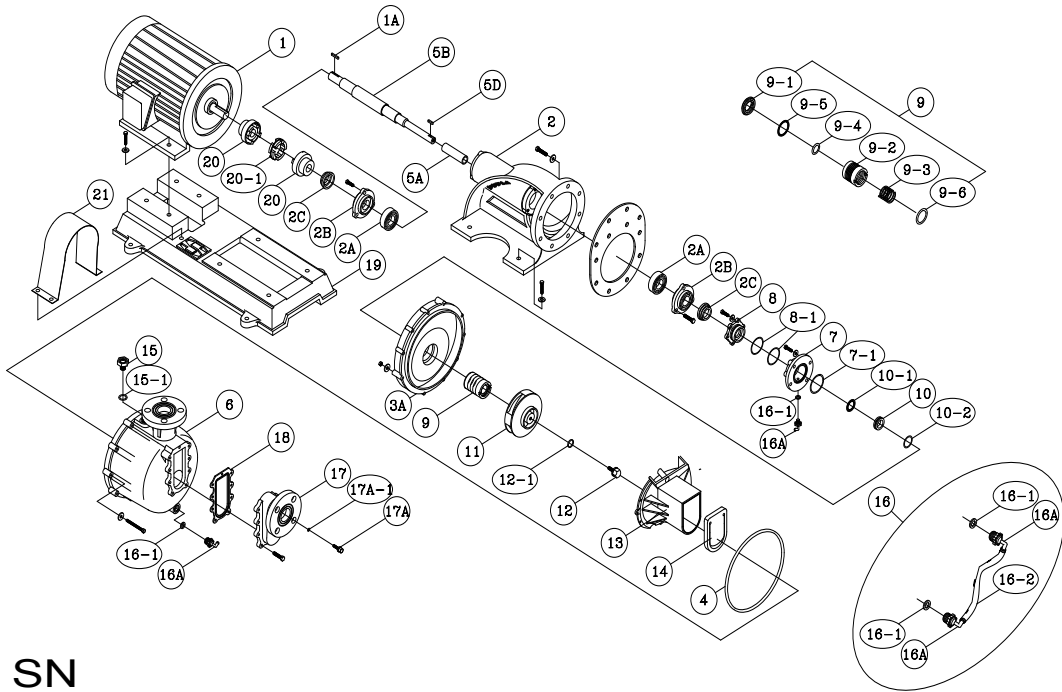


# SUPER

## HL

3~10HP

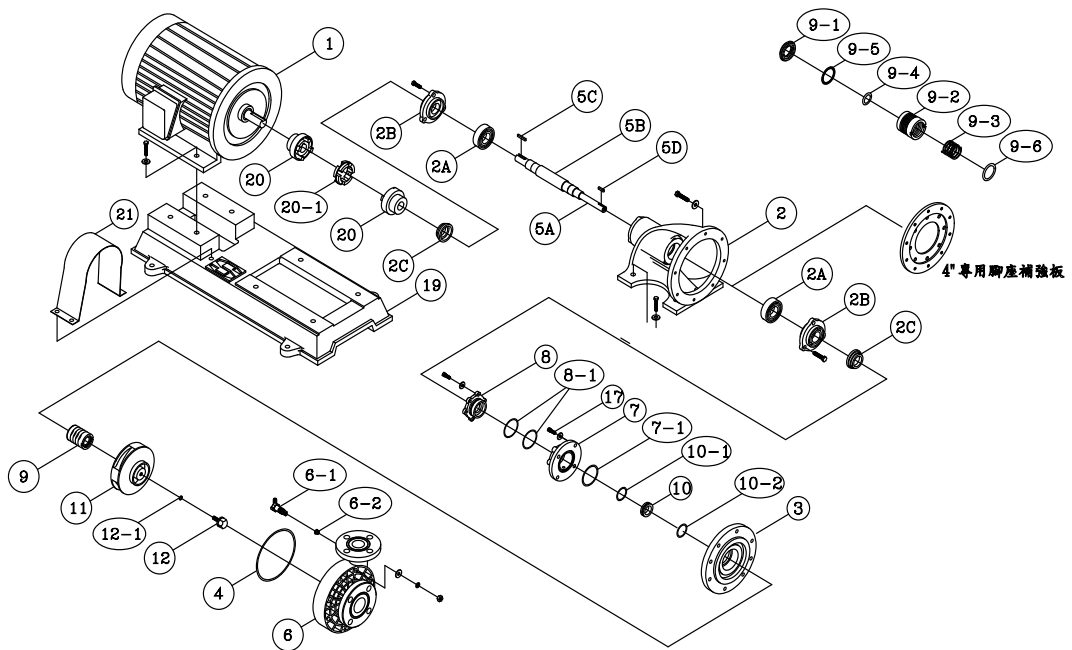
2.2~7.5kW



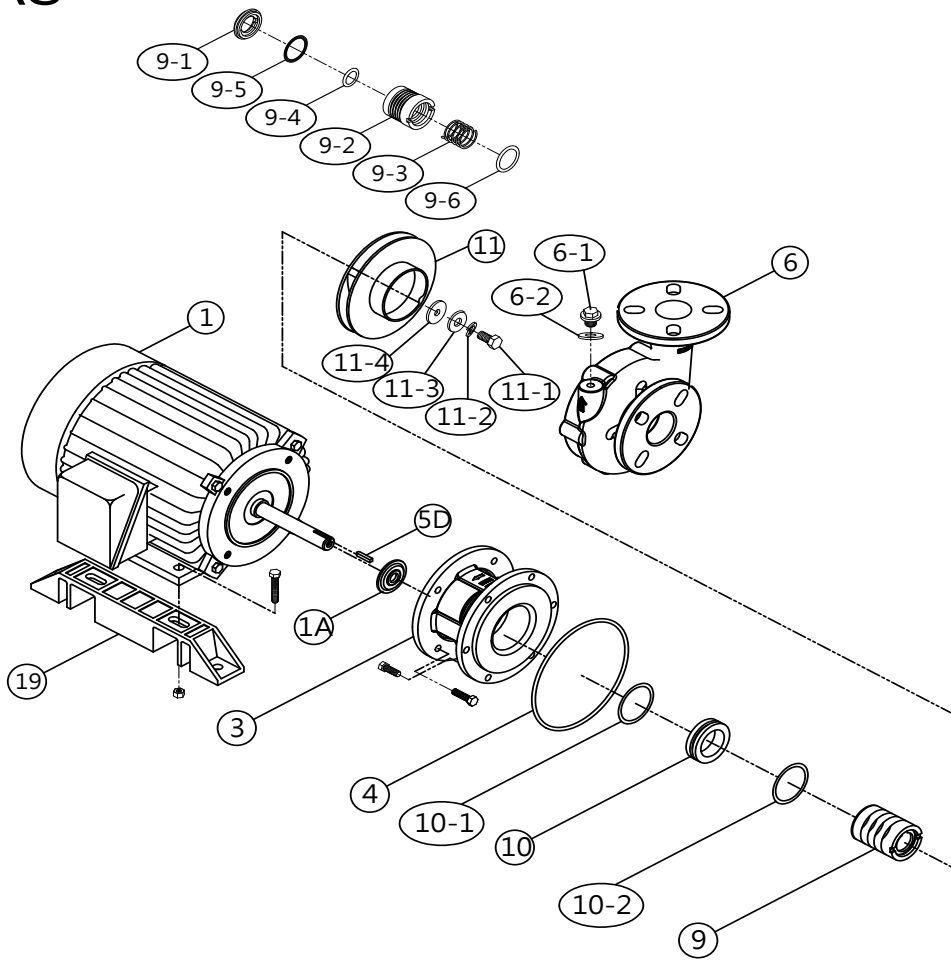
## SN

1~10HP

0.75~7.5kW



SAS



• SD / LD / SL / HD / HL / SN Parts list

1	2			2A	2B	2C	3A	3B	4	
馬達 Motor  FC	腳座 Frame SL SD/LD SD/LD  FC FRPP FC 3.75kW			腳座軸承 Frame Bearing  STEEL	軸承防塵蓋 Bearing Dust Shield  FC	軸承防水套 Bearing Liquid Shield  PP	後封蓋 Rear cover  FRPP / CFRPP CPVC / PVDF	LD型一體成型後封蓋 Combined Rear cover  FRPP	後蓋O環 Rear Cover O-ring  NBR / EPT / VITON	
5A	5B	5C	5D	6	7	7-1	8	8-1		
軸套 Shaft Sleeve  TEFLON	軸心 Shaft SL SD  SUS	軸心固定螺絲 Shaft Screw  SUS	葉輪鍵 Impeller Pin  SUS	主體前蓋 Front Cover 1-1/2"-2" 3"  FRPP / CFRPP CPVC / PVDF	軸封護罩 Seal Cover  FRPP / CFRPP CPVC / PVDF	軸封護罩O環 Seal Cover O-ring  NBR / EPT / VITON	固定環座 Fixed-seal Socket  PPS / FRPP / CFRPP CPVC / PVDF	固定環座O環 Fixed-seal socket O-ring  NBR / EPT / VITON (每台2條)		
9	9-1	9-2	9-3	9-4	9-5	9-6	10	10-1	10-2	
前軸封 Bellows-seal combination 	轉動環 Rotational-seal  CARBON / SSIC	伸縮環 Bellows  TEFLON	彈簧 Bellows Spring  HASTELLOY-C / SUS316	伸縮環前O環 Bellows Front O-ring  NBR / EPT / VITON	伸縮環墊片 Bellows Packing  NBR / EPT / VITON TEFLON	伸縮環後O環 Bellows Rear O-ring  NBR / EPT / VITON	固定環 Fixed-seal  CERAMIC / SSIC	固定環後O環 Fixed-Seal Rear O-ring  NBR / EPT / VITON	固定環O環 Fixed-Seal O-ring  NBR / EPT / VITON	
11	12	12-1	13	14	15	15-1	16	16-1	16-2	
葉輪 Impeller  FRPP / CFRPP CPVC / PVDF	葉輪螺絲 Impeller Screw  FRPP / CFRPP CPVC / PVDF	葉輪螺絲O環 Impeller Screw O-ring  NBR / EPT / VITON	中封蓋 Check Cover  FRPP / CFRPP CPVC / PVDF	單向閥 Check Valve (有舌) (無舌)  NBR / EPT / VITON TEFLON	注水蓋 Water Filling Cap  FRPP / CFRPP CPVC / PVDF	注水蓋O環 Water Filling Cap O-ring  NBR / EPT / VITON	循環管含接頭 Recycle Hose  TEFLON	循環接頭墊片 Recycle Joint Packing  NBR / EPT / VITON	鐵氟龍管 Teflon Hose  TEFLON	
16A	16B	17	17A	17A-1	18	19	19A	20	20-1	21
循環接頭 Recycle Joint  PVDF	塞頭 Plug  FRPP	自吸筒 Self-Priming Cover  FRPP / CFRPP CPVC / PVDF	自吸筒螺絲 Self-Priming Cover Screw  PVDF / SUS	自吸筒螺絲O環 Cover Screw O-ring  NBR / EPT / VITON	自吸筒墊片 Self-Priming Cover Packing  NBR / EPT / VITON TEFLON	SL底座 Base for SL  FC	SD/SE腳架 Base for SD/SL  FRPP	連軸器 Coupling  FC	連軸器橡膠 Coupling Elastomer  NBR	連軸器護罩 Coupling Shield  SUS

SE / SG / SAS Parts list

1	1A	2	2A	2B	2C	3	3B	
馬達 Motor  FC	軸心甩圈 Oil-Seal  NBR	接合座 Connected Seat  FRPP	腳座軸承 Frame Bearing  STEEL	軸承防塵蓋 Bearing Dust Shield  FC	軸承防水套 Bearing Liquid Shield  PP	後封蓋 Rear cover  FRPP / PVDF / SUS	後封蓋 Rear cover  FRPP / CPVC / PVDF	
4	5A	5B	6	6-1	6-2	9	9-1	9-2
後蓋O環 Rear Cover O-ring  NBR / EPT / VITON	軸套 Shaft Sleeve  TEFLON	軸心 Shaft  SUS	主體前蓋 Front Cover  FRPP / PVDF / SUS	前蓋排氣閥 注水孔帽  PVDF	前蓋排氣閥墊片  VITON	前軸封 Bellows-seal combination  TEFLON	轉動環 Rotational -seal  CARBON / SSIC	伸縮環 Bellows  TEFLON
9-3	9-4	9-5	9-6	10	10-1	10-2	11	
彈簧 Bellows Spring  SUS / HC	伸縮環前O環 Bellows Front O-ring  NBR / EPT / VITON	伸縮環墊片 Bellows Packing  NBR / EPT / TEFLON / VITON	伸縮環後O環 Bellows Rear O-ring  NBR / EPT / VITON	固定環 Fixed-seal  CERAMIC / SSIC	固定環後O環 Fixed-Seal Rear O-ring  NBR / EPT / VITON	固定環O環 Fixed-Seal O-ring  NBR / EPT / VITON	葉輪 Impeller  FRPP / PVDF / SUS	
12	12-1	13	15	15-1	16	16-1	16-2	16A
葉輪固定螺絲 Impeller Screw  FRPP / PVDF	葉輪螺絲O環 Impeller Screw O-ring  NBR / EPT / VITON	中封蓋 Check Cover  FRPP / PVDF	注水蓋 Water Filling Cap  FRPP / PVDF	注水蓋O環 Water Filling Cap O-ring  NBR / EPT / VITON	循環管 含接頭 Recycle Hose  TEFLON	循環接頭墊片 Recycle Joint Packing  NBR / EPT / VITON	鐵氟龍管 Teflon Hose  TEFLON	循環接頭 Recycle Joint  PVDF
17	17A	17A-1	18	19	19A	20	20-1	21
自吸筒 Self-Priming Cover  FRPP / PVDF	自吸筒螺絲 Self-Priming Cover Screw  PVDF	自吸筒螺絲 O環 Cover Screw O-ring  NBR / EPT / VITON	自吸筒墊片 Self-Priming Cover Packing  NBR / EPT / VITON	SL底座 Base for SL  FC	SD/SE/AS 腳架 Base for SD/SL  FRPP	連軸器 Coupling  FC	連軸器橡膠 Coupling Elastomer  NBR	連軸器護罩 Coupling Shield  SUS



## 8. Data Card

Date:

Company Name					
Address					
Unit / Dept.			TEL:		
Name					
Request a Catalog (    )    Staff to Negotiate (    )    Field Trials (    )					
Other (    )					
Industry Category					
1. <input type="checkbox"/> Metal Products Factory		6. <input type="checkbox"/> Aluminum Anodizing Plant		11. <input type="checkbox"/> Dyed plant	
2. <input type="checkbox"/> Metal Processing Plating		7. <input type="checkbox"/> Electronic PC Board Manufacturer		12. <input type="checkbox"/> Pharmaceutical Factory	
3. <input type="checkbox"/> OEM Chemical Plating Plant		8. <input type="checkbox"/> Semiconductor Manufacturing		13. <input type="checkbox"/> Other	
4. <input type="checkbox"/> Coating Equipment Factory		9. <input type="checkbox"/> Electronic Parts Factory			
5. <input type="checkbox"/> OEM Coating Plant		10. <input type="checkbox"/> Tanneries			
Consulted Model					
Chemical Solution	Name				
	Temperature		Viscosity	Approximately    CPS	
	Impurity	Y (    ) N (    )	PH		
Operating Condition	Capacity	Approximately (    ) L/min		Head (    ) M	
	Running time	Hour Per Day			
Environment	Installation Site	Indoor (    )    Outdoor (    )			
	Usage	Portable (    )    Fixed (    )    Other (    )			
	Liquid Temp.	°C    To    °C			
Use Condition	Pump Inlet	Liquid Level Above or Below The Pump Inlet    Above(    )    Below(    )			
	Pipe Diameter				
	Phase	Single Phase (    )    Three Phase (    )			
	Other				



## Quality Guarantee

Model:

Serial No.:

All the SUPER GIANT products have passed strict quality control and fulfill the filtration standard stated in our catalogue. They will run in excellent condition under proper operation and good maintenance.

1. Please store this guarantee properly and show it when necessary.
2. Super Giant Enterprise company will charge for repair under the following conditions.
  - The damage is caused by non-permitted repair, or improper maintenance or operation.
  - The product is broken by natural disasters such as earth quake or fire.
3. The consumable parts and accessories are not covered in the guarantee.
4. guarantee period: 1 year after delivery

Should you have any question, please contact our dealer or Super Giant Enterprise directly.

Address: No.7 Lane 404 Chung Cheng South Road, Yen Hang, Yung Kang, Tainan,  
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**While placing your order...**

**Please kindly provide us the following information.**

- 1. Chemical: Name/Concentration/Temperature/  
Specific Gravity/Viscosity**
- 2. Capacity needed: \_\_\_\_\_ L/min**
- 3. Head needed: \_\_\_\_\_ M**
- 4. Power: Voltage/Frequency**

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