

Superior Performance
Unbeatable Pricing
Pride in Workmanship
Energy Efficient
Rugged Construction



SP/SPT/TD/STD/SV/SWP

Vertical Pump Operation Manual



Please Read This Manual Carefully Before Using The Machine.

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1. INTRODUCTION

- Model & Descriptions

$\frac{TD}{(1)} - \frac{50}{(2)} \frac{SK}{(3)} \frac{5}{(4)} \frac{6}{(5)} \frac{V}{(6)} \frac{F}{(7)}$

- (1) Style : SP, SPT, SV, SWP, SWD, TD, STD, TDD, STDD
- (2) Inlet-Outlet Pipe Diameter : 20mm, 25mm, 40mm, 50mm, 65mm
- (3) Specific Gravity of Liquid : SK - 1.1 SP - 1.4
- (4) Horse Power : 1/8HP, 1/6HP, 1/4HP, 1/3HP, 1/2HP, 1HP, 2HP, 3HP, 5HP, 7.5HP, 10HP
- (5) Frequency : 5 - 50HZ 6 - 60HZ
- (6) Rubber Material : V - VITON E - EPDM N - NBR
- (7) Pump Material : F - FRPP P - CFRPP C - CPVC
K - PVDF S - SUS316

• FEATURES

1. Made From Highly Chemical-Resistant FRPP, CFRPP, CPVC, PVDF And SUS, Excellent In Resisting Heat And Corrosion From Chemical Solvents.
2. The Impellers Are Specially Designed To Ensure High Efficiency And High Performance.
3. The Seal-Less Design Eliminates Friction When The Pumps Are Working, Dry Running Or Chemical Solution With Particles Will Not Cause Any Pump Malfunction.
4. All Major Components In Our Pumps Are Injection Molded To Ensure Precise Performance.
5. The Motor, Which Are Protected By Dual Layer Of Epoxy Coating, Resist Corrosion From Chemical Vapors.

• APPLICATIONS

1. Combine With Filters To Transport & Circulate Various Plating Solvents.
2. Work With High-Temperature Liquids With Particles (Exp. Chemical Copper, Gold Plating Liquid, Non-Electrolytic Nickel Plating Solvents, Etc.) Under Certain Limitations.
3. Work As Circulation Pumps For P.C.Boards Manufacture, Chemical Waste-Water Treatment, Scrubber Tower
4. Transferring, Circulating, And Stirring All Kinds Of Chemical Liquids In Various Chemical Reacting Tanks And Mixing Tanks.
5. Work As Heat Exchange Pumps And Transferring Pumps For Chemical Filtration.



• SPECIFICATION

SP

Type	Model	S.G.	In/Outlet mm	Power			50Hz			60Hz			Weight Kg
				Phase	HP	Pole	Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
SP	20SK-1/8	1.1	1"X3/4"	1Φ	1/8	2	a	4	28	A	5	38	6
SP	20SK-1/6	1.1	1"X3/4"	1Φ	1/6	2	b	4	32	B	5	60	6
SP	20SK-1/4	1.1	1"X3/4"	1Φ,3Φ	1/4	2	c	6	70	C	8	85	14
SP	25SK-1/3	1.1	1"X1"	1Φ,3Φ	1/3	2	d	6.5	80	D	9	100	15
SP	25SK-1/2	1.1	1-1/2"X1"	1Φ,3Φ	1/2	2	e	13	160	E	13	165	19
SP	40SK-1	1.1	2"X1-1/2"	1Φ,3Φ	1	2	f	12	280	F	15	350	20
SP	40SK-2	1.1	2"X1-1/2"	3Φ	2	2	g	14	320	G	19	400	24
SP	20SP-1/6	1.4	1"X3/4"	1Φ	1/6	2	a	4	28	H	4	32	6
SP	25SP-1/3	1.4	1"X1"	1Φ,3Φ	1/3	2	c	6	70	C	8	85	15
SP	25SP-1	1.4	1-1/2"X1"	1Φ,3Φ	1	2	i	11	200	I	12	185	20
SP	40SP-1	1.4	2"X1-1/2"	1Φ,3Φ	1	2	j	10	230	J	11	230	19
SP	40SP-2	1.4	2"X1-1/2"	3Φ	2	2	k	11	250	K	15	280	20

SPT

Type	Model	S.G.	In/Outlet mm	Power			50Hz			60Hz			Weight Kg
				Phase	HP	Pole	Curve	Max.Head M	Max.Flow L/min	Curve	Max.Head M	Max.Flow L/min	
SPT	40SK-2	1.1	2"X1-1/2"	3Φ	2	2	a	20	270	A	24	280	40
SPT	40SK-3	1.1	2"X1-1/2"	3Φ	3	2	b	22	350	B	28	325	43
SPT	40SK-5	1.1	2"X1-1/2"	3Φ	5	2	c	24	360	C	31	400	60
SPT	50SK-3	1.1	2"X2"	3Φ	3	2	d	20	400	D	24	390	44
SPT	50SK-5	1.1	2"X2"	3Φ	5	2	e	22	420	E	26	420	61
SPT	40SP-2	1.4	2"X1-1/2"	3Φ	2	2	f	13	200	F	20	290	40
SPT	40SP-3	1.4	2"X1-1/2"	3Φ	3	2	g	21	310	G	23	320	43
SPT	40SP-5	1.4	2"X1-1/2"	3Φ	5	2	h	23	370	H	23	430	60
SPT	50SP-3	1.4	2"X2"	3Φ	3	2	i	18	330	I	22	350	44
SPT	50SP-5	1.4	2"X2"	3Φ	5	2	j	20	400	J	29	480	61

TD&STD

Type	Model	S.G.	In/Outlet mm	Power			50Hz			60Hz			Weight Kg
				Phase	HP	Pole	Curve	Max.ead M	Max.Flow L/min	Curve	Max.ead M	Max.Flow L/min	
TD	40SK-1	1.1	2"X1-1/2"	3Φ	1	2	a	14	280	A	13	250	29
TD	40SK-2	1.1	2"X1-1/2"	3Φ	2	2	b	18	400	B	22	320	38
TD	40SK-3	1.1	2"X1-1/2"	3Φ	3	2	c	22	450	C	26	420	41
TD	50SK-3	1.1	2-1/2"X2"	3Φ	3	2	d	21	530	D	23	520	41
TD/STD	50SK-5	1.1	2-1/2"X2"	3Φ	5	2	e	31	580	E	36	560	55
TD/STD	65SK-5	1.1	3"X2-1/2"	3Φ	5	2	f	29	550	F	29	700	55
TD/STD	65SK-7.5	1.1	3"X2-1/2"	3Φ	7.5	2	g	34	730	G	37	960	95
TD/STD	65SK-10	1.1	3"X2-1/2"	3Φ	10	2	h	37	760	H	39.5	1100	106
TD	100SK-10	1.1	4"X4"	3Φ	10	2	i	25	1235	I	31	1200	101.7
TD	100SK-15	1.1	4"X4"	3Φ	15	2				J	43	1700	113.7
TD	40SP-3	1.4	2"X1-1/2"	3Φ	3	2	k	22	400	K	23	340	41
TD	50SP-3	1.4	2-1/2"X2"	3Φ	3	2	l	19	500	L	19	400	41
TD/STD	50SP-5	1.4	2-1/2"X2"	3Φ	5	2	m	28	560	M	32	500	55
TD/STD	65SP-5	1.4	3"X2-1/2"	3Φ	5	2	n	27	520	N	25	600	55
TD/STD	65SP-7.5	1.4	3"X2-1/2"	3Φ	7.5	2	o	31	720	O	35	750	95
TD/STD	65SP-10	1.4	3"X2-1/2"	3Φ	10	2	p	33	750	P	38	850	106

SV

Type	Model	S.G.	In/Outlet mm	Power			50Hz			60Hz			Weight Kg
				Phase	HP	Pole	Curve	Max.Head M	Max.Flow L/min	Curve	Max.ead M	Max.Flow L/min	
SV	25SK-1/2	1.1	1"X1"	1Φ,3Φ	1/2	2	a	13	95	A	12.5	105	26
※SV	40SK-1	1.1	1-1/2"X1-1/2"	1Φ,3Φ	1	2	b	10	310	B	10	300	29
※SV	40SK-2	1.1	1-1/2"X1-1/2"	3Φ	2	2	c	14.5	350	C	17.5	350	32
SV	50SK-3	1.1	2"X2"	3Φ	3	2	d	19.5	540	D	20.5	540	56
SV	50SK-5	1.1	2"X2"	3Φ	5	2	e	22	600	E	31	580	72
SV	65SK-7.5	1.1	3"X2-1/2"	3Φ	7.5	2	f	22	860	F	28	800	116
SV	65SK-10	1.1	3"X2-1/2"	3Φ	10	2	f	22	860	G	31	1050	122
SV	40SP-1	1.4	1-1/2"X1-1/2"	1Φ,3Φ	1	2	h	9	280	H	8	260	29
SV	40SP-2	1.4	1-1/2"X1-1/2"	3Φ	2	2	i	14.5	340	I	15	325	32
SV	50SP-3	1.4	2"X2"	3Φ	3	2	j	17	500	J	17	500	54
SV	50SP-5	1.4	2"X2"	3Φ	5	2	k	22	600	K	23	540	72
SV	65SP-7.5	1.4	3"X2-1/2"	3Φ	7.5	2	l	20	760	L	28	800	116
SV	65SP-10	1.4	3"X2-1/2"	3Φ	10	2	m	22	920	M	31	850	122
※SVT	40SK-1	1.1	1-1/2"X1-1/2"	1Φ,3Φ	1	2	b	10	310	B	10	300	29
※SVT	40SK-2	1.1	1-1/2"X1-1/2"	3Φ	2	2	c	14.5	350	C	17.5	350	32

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2. USING THE PUMP SAFELY

- **HOW TO USE THIS MANUAL**

This Manual Is Intended To Help The Operator To Handle The Product Safely And Correctly. In Support Of This Aim, Important Safety-Related Instructions Are Classified As Explained Below. Be Sure To Follow Them At All Times.

- **GENERAL SAFETY**

ALWAYS Wear Safety Glasses When Using Power Tools To Repair This Equipment.

When Working On Or Around The System Contains Dangerous Fluids Wear Protective Gear Such As Gloves, Glasses Etc.

ALWAYS Shut Off The Power Supply And Disconnect It From The Pump Before Maintenance Or Repair.

DO NOT Put Your Face Or Body Near The Pump When The Pump Is Operating.

Drain All Solution From Inlet And Outlet Before Disconnecting The Pump.

DO NOT Pump Incompatible Fluids Through The Pump. Consult Your Distributor Or Factory For Compatibility Of Fluids With Pump's Material.

Before Starting The Pump, Make Sure That The Discharge Point Of The Piping System Is Clear And Safe.

3. EQUIPMENT MISUSE HARZARD

- **GENERAL SAFETY**

Any Misuse Of This Equipment Such As Modifying Parts, Pumping Incompatible Chemicals And Fluids, Using Worn Or Damaged Parts Is Not Recommended. Any Of This Circumstance Could Result In Injury , Fire, Explosion Or Property Damage.

- **TEMPERATURE LIMITS**

Do Not Exceed The Recommended Operating Temperatures Of The Pump, Or May Result In Pump Failure .

- **SUPER VERTICAL PUMPS**

The Material Of Super Pumps Can Operate Within The Following Limits:

CPVC/FRPP/CFRPP : 0°C~75°C

PVDF : 20°C~90°C

SUS : 0°C~80°C

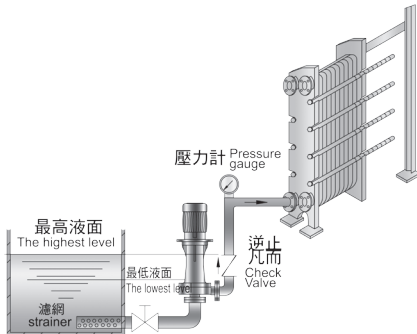
4. INSTALLATION

• INSTALL INSTRUCTION

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 Exceed 60°C.
5. Before Connecting Tubing To The Pump, Tubes Should Be Washed To Remove Any Extraneous Matter There May Be Such As Welding Pellets, Cut-Off From Gaskets, Etc.
6. Make Sure The Tubes Are Perfectly Sealed And Air Will Not Infiltrating The Pump By Any Means.
7. If Metallic Pipes Are Used, Make Sure To Install a vibration Absorber To The Pump To Avoid Damage To The Pipeline Or The Pump.
8. Install Check Valve On The Outlet To Prevent Back Pressure Damage.
9. Install A Foot Valve To Stop Impurities From Entering Pump.
10. Do Not Exert Any Extraneous Forces On The Pipe. After Installation Is Complete, Please Make Sure The Pipe Is Not Warped Due To Excessive Force.
11. Make Sure The Pump And Pipeline Are Sturdy And Well Leveled
12. Make Sure The Power, Voltage, And Frequency Are Suitable For The Motor, And Install A Circuit Breaker Before Wiring.
13. Install A Protective Cover Over The Pump When It Is Used For Pumping Dangerous Liquid.
14. Make Sure The Pump Is Filled With Fluid, And All Valves Are Opened Before Starting The Motor.
15. Please Make Sure The In/Outlet Flange Is Equal In Diameter With The In/Outlet Connecting Flange. When Mounting The Pipes Onto The Pump, We Suggest Applying 8~9Nm Of Torque On 12mm Bolts For The In/Outlet.
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

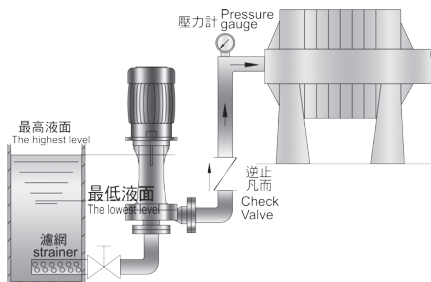
A With Heat Exchanger.



EXAMPLE A

1. When Pump Is Used For Heat-Exchange, Install A Pressure Gauge On Outlet To Make Sure There Is No Blockage In The Pipeline.
2. Filter Mesh Should Be Installed On Inlet To Prevent Debris Being Sucked In.
3. Install A Valve On the in/Outlet For Easy Maintenance.
4. Please Install A Check Valve To Prevent Excessive Back-Pressure.

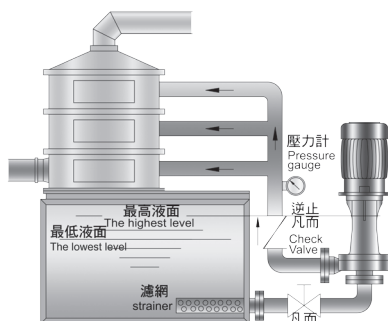
B With Frame Plate Filter.



EXAMPLE B

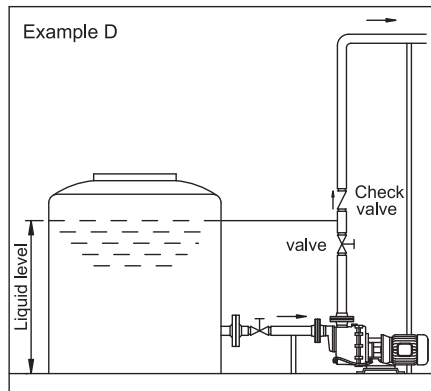
1. In Order To Monitor Flow And Pressure Build-Up, Please Install A Pressure Gauge On The Outlet.
2. Please Install A Control System To Prevent Damage To The Pump.
3. Please Clean Particles Out Of The Pump On Schedule.
4. SL Series, Double-Seal Pumps Are Recommended for This Type Of Operation.

C With Screbber.



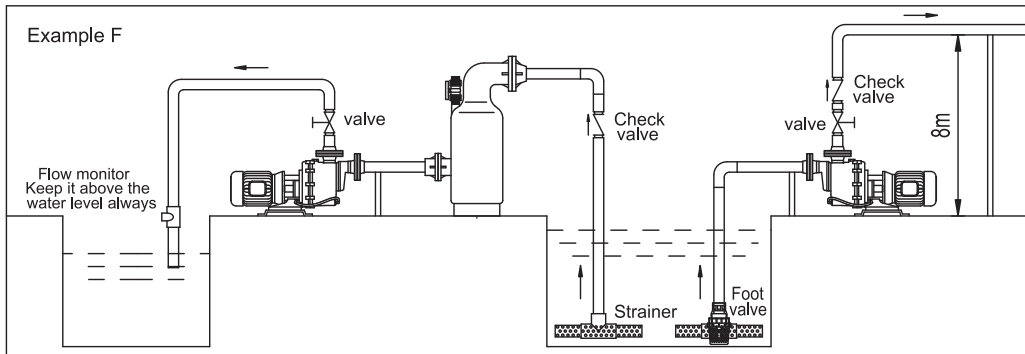
EXAMPLE C

1. If The Pump Is Used In A Waste Gas Treatment Tower, Recommend A Large Tank With Water Level Above 80cm.
2. In Order To Avoid Foreign Particles From Blocking Up The Inlet, Lower The Inlet And Install A Strainer. (5mm. Diameter)
3. Strainer Should Easily Detach For Cleaning. The Diameter Of The Holes Should Be About 3-5mm.
4. To Avoid Running Out Of Fluid, Please Make Sure That The Fluid Supply System Functions Well.
5. To Prevent Dry-Running, Please Install A Protector.
6. Motor Shield Is Reconmmand For Outdoor Or Harsh Enviroment
7. Please Install A Valve On The Inlet When The Height Of Circulation Is Above 5m.



EXAMPLE D

1. Please Install A Valve On The Inlet To Ensure A Safe Transportation Of The Tanks.
2. Monitor The level Of The Liquid In The Tank To Avoid Dry Running.
3. Install A Valve On The Inlet When The Height Of Circulation Exceed 5m.
4. Please Secure The Inlet And Outlet Pipes.
5. Motor Shield Is Reconmmand For Outdoor Or Harsh Enviroment.



EXAMPLE E

1. To Prevent The Inlet From Sucking Extraneous Particles, Please Install A Foot Valve Or Strainer.
2. To Prevent The Inlet From Sucking Air, Please Keep The Water Level At Least 30 Cm Above The Inlet Strainer.
3. A Check Valve Must Be Installed If The Height Is Over 5m.
4. To Avoid Dry Running, Please Install A Dry-Run Protector.
5. Please Secure The Inlet And Outlet Pipes.
6. Single-Direction Valves May Be Used, With Proper Material.
7. An Outlet Valve Must Be Installed To Ensure Safety During Repairs.



5. OPERATION

• BEFORE OPERATING

1. Please Note The Following Operating Factors Before Using The Pump: Fluid, Concentration, Temperature, Specific Gravity, Viscosity, Capacity, Particles, 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. Make sure In/Outlet 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 Back Of The Motor.
5. Make Sure There Is No Leakage From The Pump.
6. Be Sure The Pump Is full Of Fluid Before Starting It.

• OPERATING INSTRUCTION

1. Make Sure The In/Outlet Valves Are Open And The Fluid Is At 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. All The Valves, Fluid Levels Controller, The Circuit Breaker And On-Off Switch.
4. If The Flow Is Too Low, Stop The Pump And Check The In/Outlet Valve.

6. MAINTENANCE AND REPAIR

• CAUTIONS

1. Make Sure The Power Is Off.
2. Drain Out The Chemical Solvent Inside The Pump And Close The In/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 No Foreign Objects Block The Inlet Valve.
2. Motor And Pump Should Be Carefully Connected Make Sure They All Line Up Straight.
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.



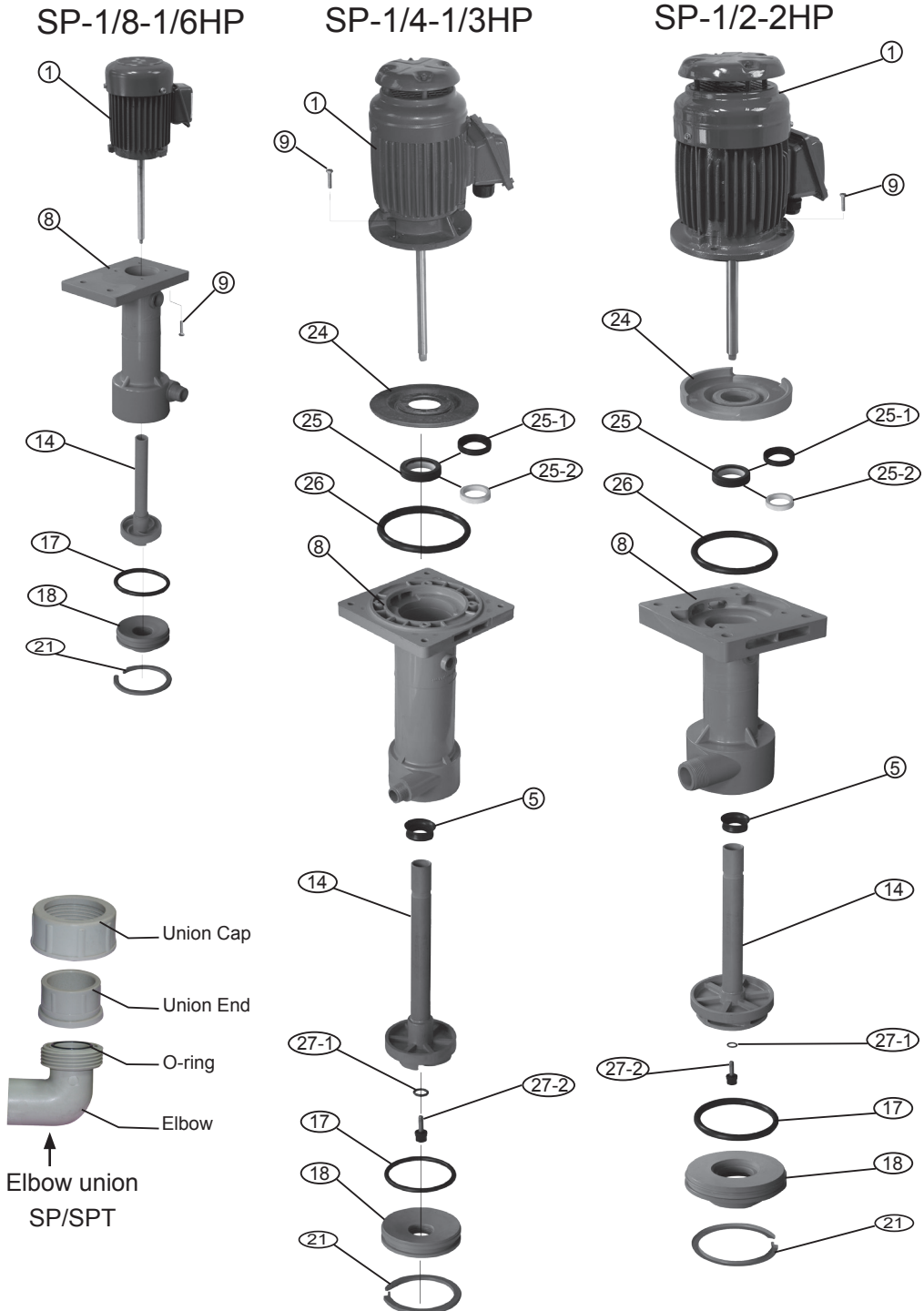
7. TROUBLESHOOTING

Trouble	Possible Cause	Remedy
Motor Doesn't Work.	Motor Burn Out.	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, Please Replace It.
Self-Priming Is Too Slow.	Outlet Is Blocked.	Check Outlet Pipe.
	Water Level In Pump Is Not High Enough.	Fill Pump Up With Liquid.
	Air Been Draw Into The Pump.	Make Sure There Is No Infiltration Of Air Through Inlet, And Water Level Is High Enough.
There Is Not Enough Pressure In The Outlet.	Air Been Draw Into The Pump	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. Replace Damaged Parts With New Ones.
	There Is No Liquid In The Inlet.	
	The Pump Is Left Running After Outlet Is Blocked.	
	Inlet Pipe Leaks.	
Loud Sounds And Excess Vibrations.	Water-Level Is Not High Enough And Pump Can't Self-Prime.	
	Motor Shaft Is Loosened.	Fasten The Shaft.
Seal Leaks.	Bearing Is Damaged.	Replace Bearing.
	Seal Damaged.	Replace The Seal.
Water At The Inlet But No Pressure At The Outlet.	Seal Packing Damaged.	Check Whether The Material Is Suitable For The Liquid.
	Inlet Blocked.	Remove Sludge.
Crack On The Pump Body.	Air Been Draw Into The Pump	Make Sure There Isn't Any Leakage.
	Material Not Suitable For The Chemical Solution.	Choose Proper Material.
	Inlet Pipe Is Not Fastened.	Fasten The Inlet Pipe And Replace Damaged Pipe With New One.
Motor Is Too Hot.	Long-Term Dry Running Makes The Solution Very Hot, And The Pump Expanded And Damage	Replace Damaged Parts With New Ones And Operate Properly.
	The Motor Is About To/ Or 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, Too High, Or Too Low.	Use A Power Stabilizer Or Surge Protector To Protect The Motor.



8、PARTS LIST

SP
Single impeller \ Single vapor seal \



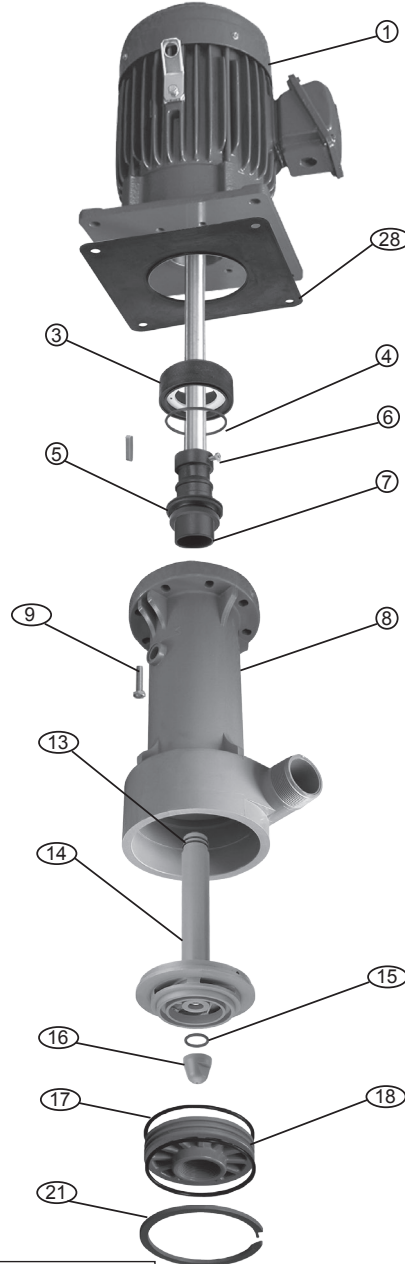
SPT

Single impeller、單葉輪、Single vapor seal、單軸封

SP/SPT零件代號

SPT-2-5HP

No.	Description 品名	Material 材質
1	Motor 馬達	FC
2	Shaft Pin 軸心鍵	SUS
3	Dry Seal Cover SPT軸封蓋	FRPP/陶瓷
4	Dry Seal Cover O-ring SPT軸封蓋O環	NBR/EPDM /VITON
5	Dry Seal 乾式軸封	NBR/VITON
6	Shaft Sleeve Screw 軸套止付螺絲	SUS
7	Shaft Sleeve 軸套	FRPP
8	Body 主體	FRPP/CFRPP CPVC/PVDF
9	Body Bolt 主體螺栓	SUS/Titanium
13	Impeller O-ring 葉輪管O環	NBR/EPDM /VITON
14	Impeller 葉輪	FRPP/CFRPP CPVC/PVDF
15	Impeller Nut O-ring 葉輪鎖帽O環	NBR/EPDM /VITON
16	Impeller Nut 葉輪鎖帽	FRPP/CFRPP CPVC/PVDF
17	Front Cover O-ring 前蓋O環	NBR/VITON /EPDM
18	Front Cover 前蓋	FRPP/CFRPP CPVC/PVDF
21	C-clip C扣環	FRPP/CFRPP CPVC/PVDF
24	Dry Seal Cover 軸封蓋	FRPP/CPVC
25	Ceramic Stationary Ring 陶瓷環組	Ceramic/NBR
25-1	Ceramic Gasket 陶瓷橡膠環	NBR/EPDM
25-2	Ceramic 陶瓷	Ceramic
26	Dry Seal Cover O-ring SP軸封蓋O環	NBR/VITON
27-1	Impeller Screw O-ring 葉輪螺絲O環	NBR/VITON
27-2	Impeller Screw 葉輪固定螺絲	PVDF
28	Motor Flange Packing 馬達前托橡膠襯墊	NBR



part 17 O環
雙O環可增加前蓋與主體的磨擦力，使前蓋不會從主體中脫落。
2 O-rings secure the front cover tightly and never fall off.

part 21 C扣
可方便裝卸，同時可以加強對前蓋支撐。
Easy to mount and unmount, secure the front cover.

SV(316#) / SVT(鈦金屬-Titanium metal)

Double impellers、雙葉輪、Single vapor seal、單軸封

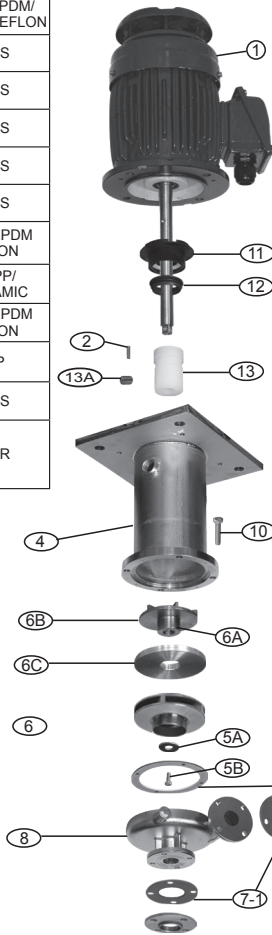
No.	Description 品名	Material 材質
1	Motor 馬達	FC
2	Shaft Pin 軸心鍵	SUS
4	Body主體	SUS
5	Spacer Ring 間隔環	SUS
5A	Impeller Washer 葉輪固定墊片	SUS
5C	Impeller Nut 葉輪螺帽	SUS
5B	Impeller Screw 葉輪螺絲	SUS
6	Impeller 葉輪本體	SUS
6A	Rear Impeller Screw 背葉止付螺絲	SUS
6B	Rear Impeller 背葉體	SUS
6C	Partition 隔板	SUS
7	Flange 出入口法蘭	SUS
7-1	Flange Gasket 法蘭墊片	NBR/EPDM/VITON/TEFLON
7-2	Flange Screw 法蘭螺絲	SUS
7-3	Flange Nut 法蘭螺帽	SUS
8	Front Cover 前蓋體	SUS
9	Body Screw 主體固定螺絲	SUS
10	Front Cover Screw 前蓋螺絲	SUS
10-1	Body Gasket 主體墊片/O環	NBR/EPDM/VITON
11	Dry Seal Cover 軸封蓋	FRPP/CERAMIC
12	Dry Seal 乾式軸封	NBR/EPDM/VITON
13	Shaft Sleeve 軸套	PP
13A	Shaft Sleeve Screw 軸套止付螺絲	SUS
28	Motor Front Cover Gasket 馬達前托橡膠襯墊	NBR



所有本公司三相電源的泵浦都有軸心鍵，當電源接反的時候，葉輪不會掉落，排除了可能對葉輪，罩殼及乾式軸封的損壞。

All 3 phase pumps from Super have a keyed impeller shaft that eliminates the possibility of damage to the impeller, housing or vapor seal if the power is reversed. The impeller will not fall off.

1/2~2HP



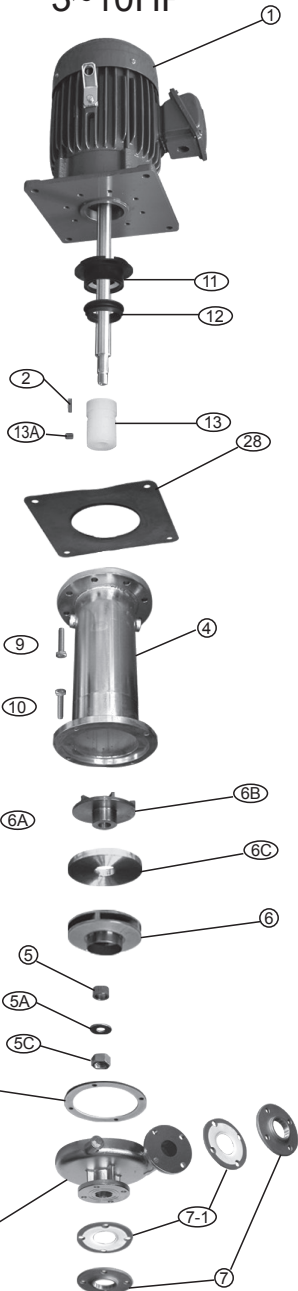
10-1,7-1 墊片
採用橡膠外襯Teflon墊片，使耐腐蝕性，耐高溫性得到顯著提高。
Viton covered with teflon functions better in anti-corrosion and anti-heat.

8前蓋體
精密鑄造的泵殼
Finely casted casing

6B背葉特點：
背葉輪設計，榮獲多國專利，可隔離氣體經由背葉進入打出小氣泡，而對藥水的損壞，提高負壓力，在使用中防止液體往上升而造成溢流。
拋棄傳統的設計模式，使背葉的反向阻力得到顯著的提升，同時減少工作液體與空氣接觸面積，減少空氣溶解量，避免泵浦帶入空氣。
Patented rear impeller eliminates the bubble to enter the tank and derstroy the solution.
Increased pressure from the rear impeller will stop the overflow in running.
Break-through design increased the pressure from the rear impeller obviously as well as stop the bubble to mix with the fluid.

6C後蓋
在背葉與葉輪間形成水壓，增加空氣進入工作液體的難度，同時可提高液體上升的阻力。
Functions as forming full fluid in the chamber to stop bubble to enter the fluid.

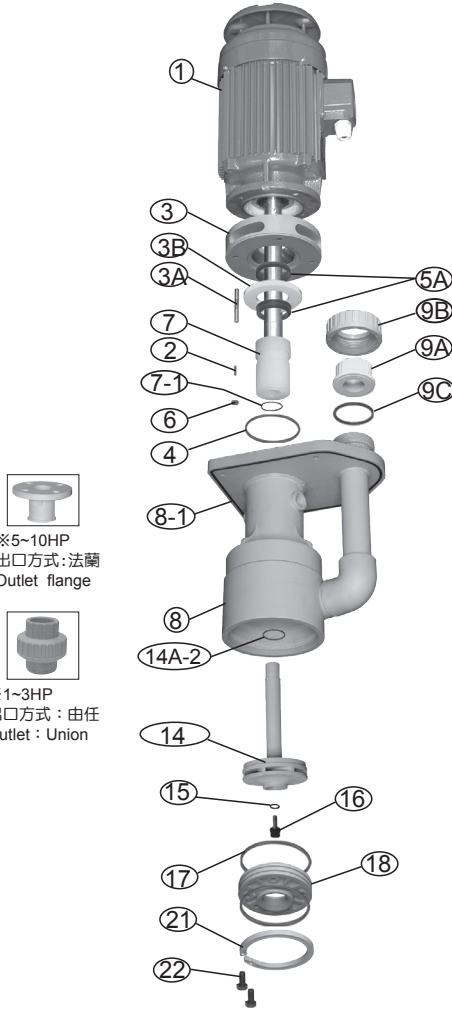
3~10HP



SWP

Single impeller 單葉輪
Double vapor seals 雙軸封

No.	Description 品名	Material 材質
1	Motor 馬達	FC/AL
2	Shaft Pin 軸心鍵	SUS
3	Ventilator 接合座	FRPP
3A	Bolt 接合座固定螺絲	SUS
3B	Ceramic 陶瓷	CERAMIC
4	Ceramic O-ring 陶瓷O環	NBR/VITON /EPDM
5A	Dry Seal 乾式軸封	EPDM/VITON
6	Shaft Sleeve Screw 軸套止付螺絲	SUS
7	Shaft Sleeve 軸套	PP
7-1	Shaft Sleeve O-ring 軸套O環	NBR/VITON /EPDM
8	Body 主體	FRPP
8-1	Body O-ring 主體固定板O環	NBR/EPDM
9A	Union End 由任外特普	PP/PVC
9B	Union Cap 由任鎖帽	PP/PVC
9C	Union O-ring 由任O環	NBR/VITON /EPDM
10	Partition 隔板	FRPP
10-2	Fixed 固定板	PP
10-3	Plate screw 隔板固定螺絲	FRPP
14	Impeller 葉輪體	FRPP
14A	Rear Impeller 背葉輪	FRPP
14A-1	Rear Impeller O-ring1 背葉輪O環1	NBR/VITON /EPDM
14A-2	Rear Impeller O-ring2 背葉輪O環2	NBR/VITON /EPDM
15	Impeller Nut O-ring 葉輪鎖帽O環	NBR/VITON /EPDM
16	Impeller Nut 葉輪固定螺絲	PVDF/ FRPP
17	Front Cover O-ring 前蓋O環	NBR/VITON /EPDM
18	Front Cover 前蓋	FRPP
21	Front Cover C-clip 前蓋C扣環	FRPP
21A	Partition C-clip 隔板C扣環	FRPP
22	C-clip Nut C扣固定螺絲	FRPP



※5~10HP
出口方式：法蘭
Outlet flange

※1~3HP
出口方式：由任
Outlet : Union

15 3~10HP
16

Part3 接合座
在其四周的排氣孔，可以直視檢測到馬達轉速的方向，同時可保護馬達，避免可能溢流出的藥水腐蝕，並排出有害的氣體
Being able to check the rotating direction through the holes.
They also functions to drain out the overflow fluid and vapor.

防止酸氣逸出，基座板與泵中肚結合一體，設計有基座板O環，防止液體中的酸氣逸出，減少空氣中的汙染。

Part8 & 8-1

No Acid Vapor Escape.

Mounting plate and main body are combined together. And the mounting plate O-ring stops the acid vapor to escape and pollute the ambient environment.

採用一體射出成型，可以提高強度，可避免因焊接不良產生的洩漏
接合的那個部份可配合客戶需求來選由任式或法蘭式

One piece molding injection body is strong and will not leak due to welding.
Union or flange is available for connection.

Part14及Part14A葉輪雙葉輪設計押扣接合為一體雙葉輪，14A葉輪在隔離泵在運轉中氣體進入葉輪而產生氣泡，防止藥水的氯化分解
2 parts joint to be the impeller and eliminates the bubble to enter the fluid.

TD

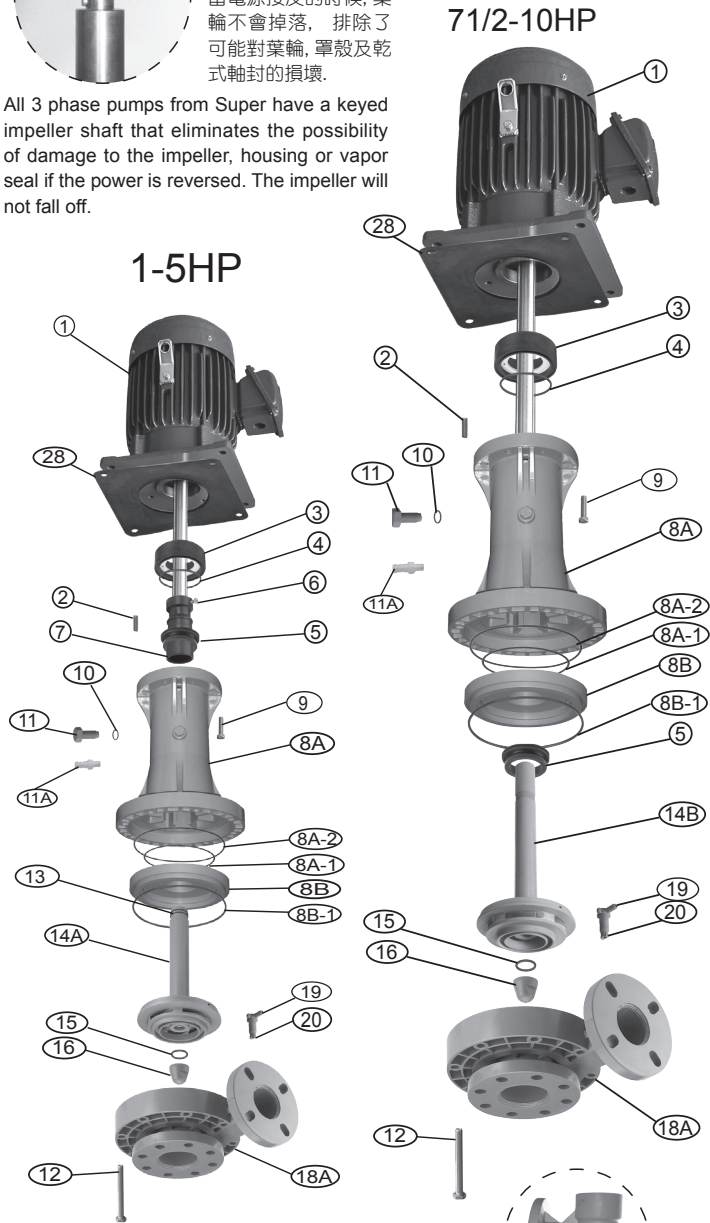
Single impeller、單葉輪、Single vapor seal、單軸封

No.	Description 品名	Material 材質
1	Motor 馬達	FC
2	Shaft Pin 軸心鍵	SUS
3	Dry Seal Cover 軸封蓋	FRPP
4	Dry Seal Cover O-ring 軸封蓋O環	NBR/VITON /EPDM
5	Dry Seal 乾式軸封	NBR/VITON /EPDM
6	Shaft Sleeve Screw 軸套止付螺絲	SUS
7	Shaft Sleeve 軸套	FRPP
8A	Body 組合式主體	FRPP/CFRPP /CPVC/PVDF
8A-1	Replaceable Cover O-ring-2 主體後蓋O環	NBR/VITON /EPDM
8A-2	Replaceable Cover O-ring-1 主體後蓋O環	NBR/VITON /EPDM
8B	Replaceable Cover 主體後蓋	FRPP/CFRPP /CPVC/PVDF
8B-1	Front Cover O-ring 前蓋O環	NBR/VITON /EPDM
9	Body Bolt 主體固定螺絲	SUS/Titanium
10	Release Screw O-ring 排放螺絲O環	NBR/VITON /EPDM
11	Release Screw 排放螺絲	FRPP/CFRPP CPVC/PVDF
11A	Overflow Joint 溢流接頭	PP/PVC
12	Front Cover Bolt 前蓋螺栓	SUS/Titanium
13	Impeller O-ring 葉輪O環	NBR/VITON /EPDM
14A	Impeller 葉輪	FRPP/CFRPP CPVC/PVDF
14B	Impeller 葉輪	FRPP/CFRPP CPVC/PVDF
15	Impeller Nut O-ring 葉輪鎖帽O環	NBR/VITON /EPDM
16	Impeller Nut 葉輪鎖帽	FRPP/CFRPP CPVC/PVDF
18A	Front Cover 前蓋	FRPP/CFRPP CPVC/PVDF
19	Air Release Valve 排氣閥	FRPP/CFRPP CPVC/PVDF
20	Air Release Valve Packing 排氣閥墊片	NBR/VITON TEFLON
28	Motor Flange Packing 馬達前托橡膠襯墊	NBR
29	Outlet Elbow 出口逆止彎頭	PP / PVC



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All 3 phase pumps from Super have a keyed impeller shaft that eliminates the possibility of damage to the impeller, housing or vapor seal if the power is reversed. The impeller will not fall off.



Part8A 主體
採用一體射出成型，可以提高強度
Strong one piece construction
Part8B 可換後蓋
可更換不同規格後蓋和葉輪而得到更高輸出功率
Various replaceable covers and impellers are available for different performance.

Part 11A 溢流接頭
將停機時溢流導回藥水槽
Lead the overflow to the tank while shutting down the pump.

出口逆止彎頭
出口逆止閥獨創設計防止溢流。
Outlet Elbow
Outlet union prevent overflow.

STD

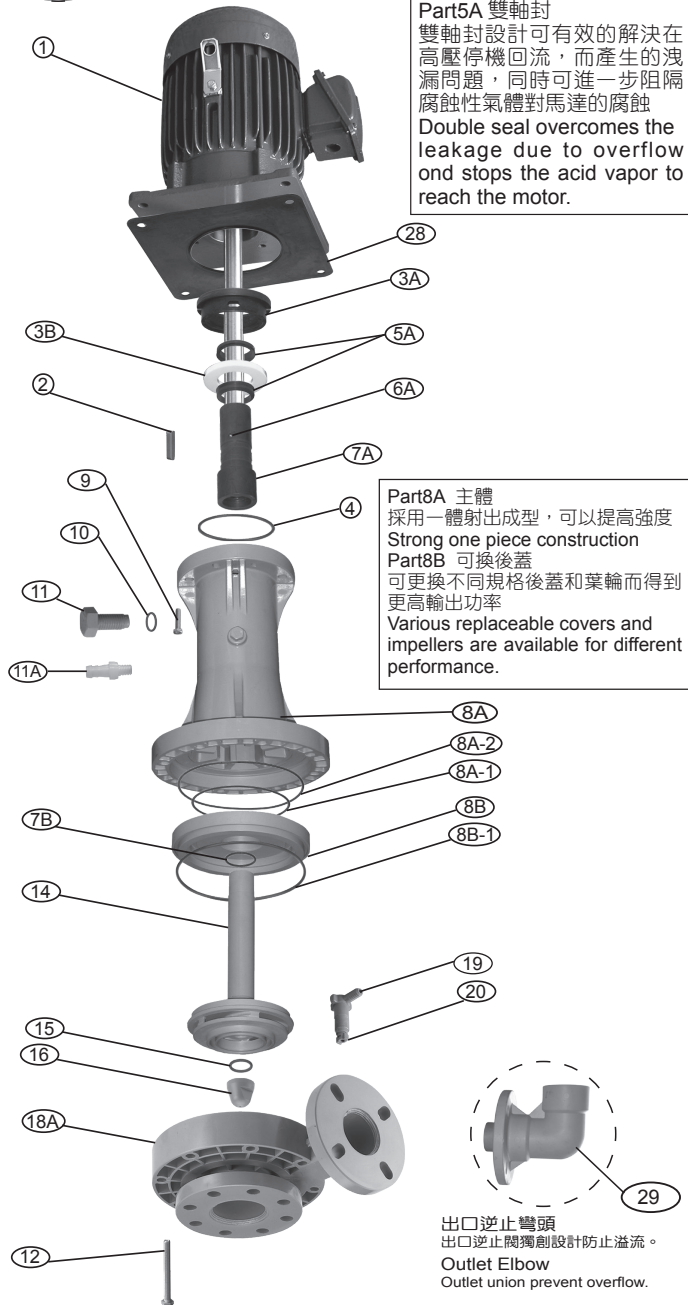
Single impeller、單葉輪、Double vapor seals、雙軸封

No.	Description 品名	Material 材質
1	Motor 馬達	FC
2	Shaft Pin 軸心鍵	SUS
3A	Dry Seal Cover 軸封蓋	FRPP
3B	Ceramic 陶瓷	Ceramic
4	Dry Seal Cover O-ring 軸封蓋O環	NBR/VITON /EPDM
5A	Dry Seal 乾式軸封	NBR/VITON /EPDM
6A	Shaft Sleeve Screw 軸套止付螺絲	SUS
7A	Shaft Sleeve 軸套	FRPP
7B	Shaft Sleeve O-ring 軸套O環	NBR/VITON
8A	Body 組合式主體	FRPP/CFRPP /CPVC/PVDF
8A-1	Replaceable Cover O-ring-2 主體後蓋O環-2	NBR/VITON /EPDM
8A-2	Replaceable Cover O-ring-1 主體後蓋O環-1	NBR/VITON /EPDM
8B	Replaceable Cover 主體後蓋	FRPP/CFRPP /CPVC/PVDF
8B-1	Front Cover O-ring 前蓋O環	NBR/VITON
9	Body Bolt 主體固定螺絲	SUS/Titanium
10	Release Screw O-ring 排放螺絲O環	NBR/VITON
11	Release Screw 排放螺絲	FRPP/CFRPP CPVC/PVDF
11A	Overflow Joint 溢流接頭	PP/PVC
12	Front Cover Bolt 前蓋螺柱	SUS/Titanium
13	Impeller O-ring 葉輪O環	NBR/VITON
14	Impeller 葉輪	FRPP/CFRPP CPVC/PVDF
15	Impeller Nut O-ring 葉輪鎖帽O環	NBR/VITON
16	Impeller Nut 葉輪鎖帽	FRPP/CFRPP CPVC/PVDF
18A	Front Cover 前蓋	FRPP/CFRPP CPVC/PVDF
19	Air Release Valve 排氣閥	FRPP/CFRPP/ CPVC/PVDF
20	Air Release Valve Packing 排氣閥墊片	NBR/VITON/ TEFLON
28	Motor Flange Packing 馬達前托碟膠織墊	NBR
29	Outlet Elbow 出口逆止彎頭	PP / PVC



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Part5A 雙軸封
雙軸封設計可有效的解決在高壓停機回流，而產生的洩漏問題，同時可進一步阻隔腐蝕性氣體對馬達的腐蝕
Double seal overcomes the leakage due to overflow and stops the acid vapor to reach the motor.

Part8A 主體
採用一體射出成型，可以提高強度
Strong one piece construction
Part8B 可換後蓋
可更換不同規格後蓋和葉輪而得到更高輸出功率
Various replaceable covers and impellers are available for different performance.

Part 11A 溢流接頭
將停機時溢流導回藥水槽
Lead the overflow to the tank while shutting down the pump.

出口逆止彎頭
出口逆止閥獨創設計防止溢流。
Outlet Elbow
Outlet union prevent overflow.

9. 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..

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

If 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, Taiwan, R.O.C.

Tel: 06-2534546

Fax: 06-2534226

Date: / /



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

訂購時請提供下列資料:

1. 藥液條件: 名稱/溫度/濃度/比重/黏度

2. 需求流量: _____ L/min

3. 需求揚程: _____ M

4. 馬達: 電壓/頻率

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