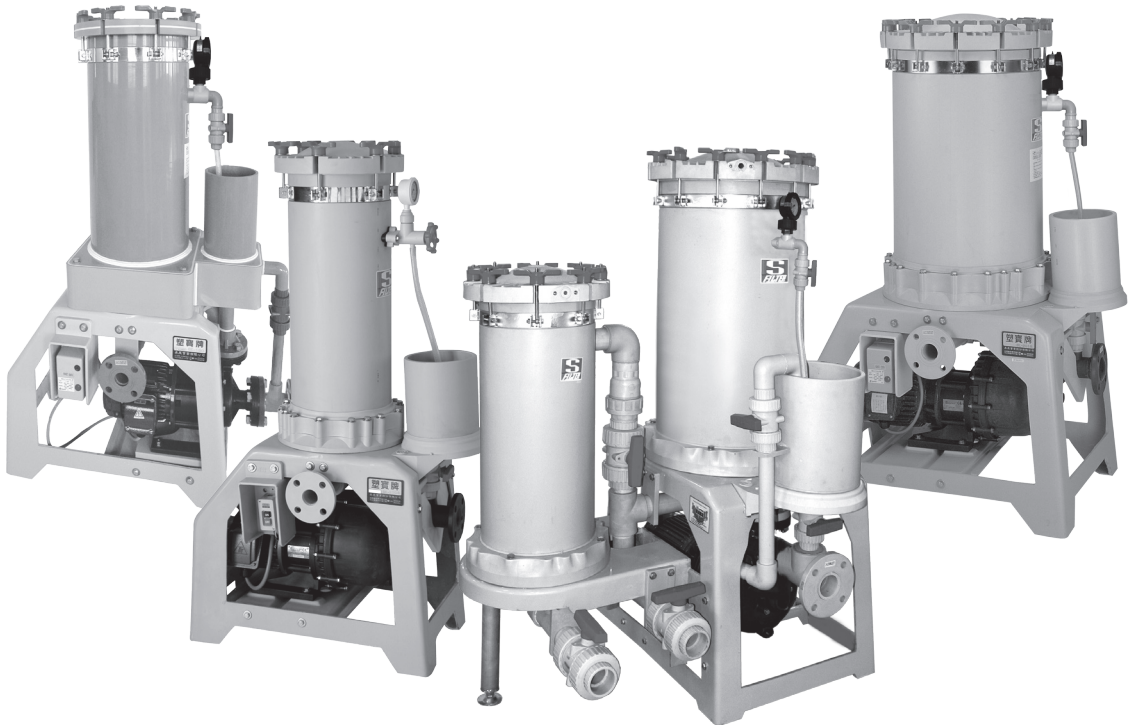


Superior Performance
Unbeatable Pricing
Pride in Workmanship
Energy Efficient
Rugged Construction



SK/SL/GKD/SKH/GK/CL Chemical Filter

OPERATION MANUAL



Please Read This Manual Carefully Before Operating.

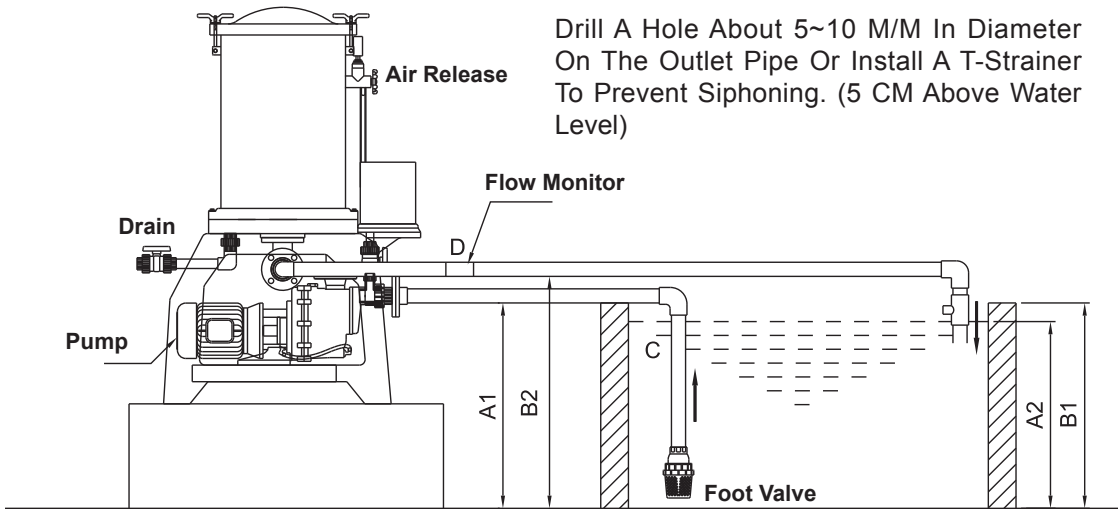
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1. Installation Precautions

1. Make Sure The Pipeline Are Fully Secure And Sealed.
2. Pipeline With Lots Of Bends Please Install A Water/Solution Inlet Pipe
3. If The Filter Must Be Installed Outdoors, It Is Essential To Provide Adequate Covering.
4. Base On The Chemical And Solution Temperature Please Select The Most Suitable Pipe Material. (Ex: PP Is Use For Solution Exceeding 60°C)
5. Before Connecting Any Pipeline To The Pump, Pipe Should Be Washed To Remove Any Extraneous Matter There May Be Such As Welding Pellets, Cut-Offs From Gaskets, Etc.
6. Secure The Inlet Pipe To Keep It From Moving Or Bending If Using Soft Pipes. (We Recommend Stiff Pipes Inside The Tank.)
7. Place The Machine In An Upright Position And On A Sturdy Resting Place.
8. When The Pump In/Outlet Are Lower Than The Liquid Level Of The Tank, Install Valves On The In/Outlet Pipe To Prevent Siphoning.
9. Please Make Sure The In/Outlet Connection Flange Are Equal In Diameter With In/Outlet Flange. Please Make Sure All The Bolts And Nuts Are Adequately Tightened, Including The Wing Nuts On Top Cover.
10. The Wire Connection Diagram Could Be Found In The Connection ox On The Motor For Various Voltages.
11. Use A Electromagnetic Switch. It Will Automatically Cut-Off The Power Supply If The Motor Overloads. When Installing A Fuse Or A Motor Protection Device, Choose The One Which Allows Current Higher Than Rated.
(Please Refer To The Current Rating And Voltage On The Marking To Motor By 10 ~ 20 %.)

• Example



Installation Method

1. Set The Filter Pump High (A1) And Chemical Solution/Water Level (A2) $A1=A2$
2. Chemical Solution/Water Outlet (B2) ,Chemical Solution/Water Holding Tank (B2) $B1=B2$.
3. Please Install A Flow Monitor (D) On The OutLet
4. Pump Inlet (C) Should Be Installed With A Foot-Valve Or Strainer. Please Make Sure That There Is No Leakage From The Inlet Pipe.
5. If There Are Bubbles Flowing In Flow Monitor (D) During Normal Operation, Please Examine If Air Is Being Sucked In Somewhere Along The Inlet Pipe.
6. When The Pump Inlet And Outlet Are Lower Than The Liquid Level Of Tank, Install A Chck Valves On The Inlet And Outlet Pipe To Prevent Siphoning.
7. Install Check Valve on In/Outlet If The Pump Is Located Under The Chemical Solution/Water Tank, For Easy Cleaning & Maintenance Purpose

2. Instructions (Please Read The Instructions Carefully)

1. Make Sure The Pipeline Are Fully Secure And Sealed.
2. Fill The Pump With Water (Pg. 18 Figure 1), Open Air Release Valve (19) & Water Injection Valve(10),Fill Tube (8) With Water,Open Tube Valve (10) Let Water Fill Up The Pump, Or Open Cover (7), Fill The Filter Barrel With Water. Make Sure The Inlet Is Filled With Water To Prevent Pump From Dry-Running.
3. Check The Voltage and Motor Junction Box For Any Miswire Before Starting The Motor.
4. Before Starting The Motor Close Tube Valve (10) Then Let Air Water Escape from Air Release Valve(19),To Tube (8)
5. Before Turning The Power On Check the In/Outlet Are Connect Correctly. Example:Sign of Damage on Pipeline,In/Outlet Valve Are Open & ETC.
6. After Above Procedure.Turn On The Pump,Make Sure The Pump Is Turning At the Right Direction.If Not, There Won't Be Water Coming Out From The Outlet.Simply Switch It the Direction From Motor Junction Box.
7. Make Sure Tube Valve(10) Is Close,And Tube (8) is Empty.Prevent Air From Entering The Pump And Cause Cavitation or Dry-Running.
8. Check The Pressure Gauge (15) Before Operating The Filter And Make Sure There Is Oil Inside The Gauge.
9. While Working In A Hostile Enviroment: Wear Protective Clothing (Gloves Boots & Etc.)
10. Check All The Safty/Protection Switch:For Example: Holding Tank Liquid Level, Power Protection Switch And Etc.

- GKD Features

- (1) Activated Carbon Can Be Added Into the First Chamber to Filter Out The Particles Contain in the solution, Second Chamber Will Filter Out All The Organic Matter.

- (2) Second Chamber's Filter Can Be Replace While First Chamber Is Still Operating.

- (3) Various Filtration Methods Are Available For Chamber One
(Paper, Cartridge Plate Fixture, Strainer Plate Fixture &Star Cloth Bag)

- GKD Operation

- (1) Please Read Page 10~12 For Guidance

- (2) Valve(F)(G)Should Be Fully Open While Operating.Rest Should Be Fully Closed. (Check Valve Function & Specification on Pg.4)

- (3) Valve(E)Should Be Fully Open,When First Chamber Is The Only Operating Chamber. Rest Should Be Closed.
(Check Valve Function & Specification on Pg.4)

- GKD Filter Replacement

- (1) Before Replacing The Filter,Air Release Valve (I) Should Be Open and Solution Should Be Fully Drained.

- (2) Please Read Page 15 before Removing the Cartridge.

- (3) First Remove Top Cover,Then Remove C Clamp,Pull The Cartridge Vertically.The Stanchion Nut can Be Remove By Turning Counter-Clockwise. Filter Media Can Be Access After Above Procedure.

- (4) After Replacing The Filter Reverse The Procedure On Step 3 Before Operating.

3. Maintenance and Repair

- Precautions

1. Turn The Power To OFF Position & Disconnect The Power
2. Drain AllThe Fluid From The Filter And Close The In/Outlet.
3. Service personnel Must Wear Protective Clothing.(Gloves Boots Goggle & Etc.)
4. Make Sure The Pump Is Not Siphoning From The Tank.

- *Filter Part

Judging By Visual- Check The Capacity Of Liquid Flowing Out From The Filter.
If The Discharge Is Very Low, Take Apart The Filter Material For Cleaning.

Filter Maintenance

1. Put The Cartridges And Tamis Bags Into 5% HCl Solution. Soak Them For 3-5 Hours, And Then Clean Them With Water.
*(Please Do Not Scrub The Cartridge and Tamis bags)

2. Rinse The Filter Medium With Clean Water.

- *3. Filter Maintenance Card (Pg.24)For Routine Filter Maintenance and Request.

- * Do Not Exceed 80% of Its Pressure Range. Barrel Are Design To Withstand Maximum of 3kg of Pressure.

Judging On Cartridge Replacement

Put The Cleaned Cartridge Into The Filter And Start The Filter.If The Pressure Increases Quickly,It Means That The Cartridges Are Seriously Blocked.It Has Become Ineffective, And Must Be Replaced.

Maintenance Of Cartridge Nut Type Filter Medium

Refer To Figure 1 Of The Appendix. Page 18 :

1. Turn The Cover Handles (26) Clockwise To Close, Counter Clockwise To Open.
2. Before Opening The Cover (7), Drain The Air Out By Opening Air Release Valve(19).
3. Open The Cover. Each Cartridge Is Enclosed By A Tamis Bag (29).
4. Untie The Tamis Bag. There Is One Nut(30) Inside. Turn The Nut Counterclockwise To Loosen It.
5. Take The Nut (30) Off The Filter And Pick Up The Tamis Bags (29). Clean Or Replace Them. Perform These Steps In Reverse To Reassemble The Filter.

Maintenance Of Cartridge Fixture Type Filter Medium

Refer To Figure 2 Of The Appendix. Page 18:

1. Turn The Cover Handles (26) Clockwise To Close, Counter Clockwise To Open.
2. Before Opening The Cover (7), Drain The Air Out By Opening Air Release Valve(19).
3. There Is One Nut(32) Inside. Turn It Counterclockwise To Loosen It.
4. Take The Stanchion Fastening Screw (32) Off The Filter, Pick Up The Fixture Plate (33).
5. The Medium Can Be Removed Easily, And Then The Tamis Bag (29) Can Be Untied.
6. Remove The Top Washer (35), Tamis Bag (29) And Spring (34) On Top Of Cartridge(20). Clean Or Replace The Tamis Bags (29) And Cartridges (20), Assemble The Medium In The Reversed Steps, Lock The Stanchion Fastening Screw (32) And Cover (7). The Filter Should Now Be Able To Function.

Maintenance Of Bag Type Filter Medium

Refer To Figure On This Page

1. Turn Clockwise To Secure, Counter Clockwise To Release the Bag.
2. Replace Or Clean The Bag With Clean Water
3. Perform These Steps In Reverse To Reassemble



Maintenance Of Star Cloth Bag Type Filter Medium

Refer To Figure 3 Of The Appendix. Page 19 :

1. Turn The Cover Handles (26) Clockwise To Close, Counter Clockwise To Open.
2. Before Opening The Cover (7), Drain The Air Out By Opening Air Release Valve(19).
3. Open The Cover. There Is One Nut(32) Inside. Turn The Nut Counterclockwise To Loosen It.
4. Filter Can Be Remove By Lifting The Filter Handle(43) Upward
5. Put The Cartridges And Tamis Bags Into 5% HCl Solution. Soak Them For 3-5 Hours, And Then Clean Them With Water.
*** (Please Do Not Scrub The Cartridge and Tamis bags) * * *
6. Rinse The Filter Chamber With Water, Drain The Water By Using Drain Valve (27)
7. Close Drain Valve(27) After Rinse. Assemble The Medium In The Reversed Steps, Lock The Stanchion Fastening Screw (32) And Cover (7). The Filter Should Now Be Able To Function.
8. For Star Cloth Bag, Diatomite Can Be Use To Increase Filtration.

Maintenance Of Paper Filter Type Filter Medium

Refer To Figure 4 Of The Appendix. Page 19:

1. Turn The Cover Handles (26) Clockwise To Close, Counter Clockwise To Open.
2. Before Opening The Cover (7), Drain The Air Out By Opening Air Release Valve(19).
3. Rinse The Filter Chamber With Water, Drain The Water By Using Drain Valve (27)
4. Turn The Filter Handle (47)&(48) Counter Clockwise To Loosen It. Rinse The Filter Medium With Clean Water.
5. Assemble The Medium In The Reversed Steps
6. Before Starting The Filter, Make Sure In/Outlet Valve Are Open And , Close The Drain Valve .

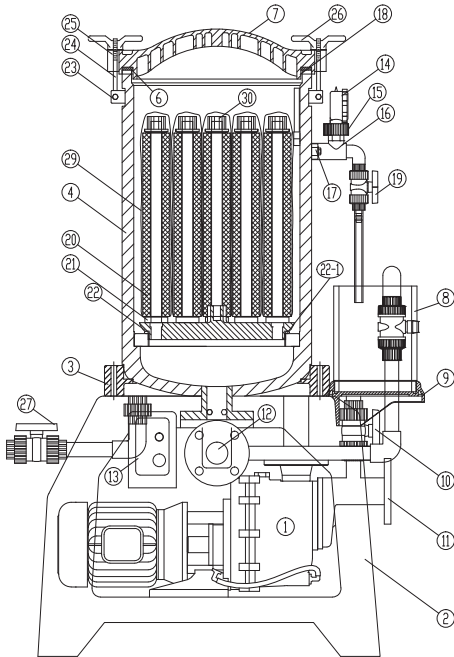
4. Troubleshooting

Failure scenarios	Cause Of Failure	Approach
Insufficient Filtrations	<ul style="list-style-type: none"> • Filter Bag Is Not Installed Properly. • Filter Bag Or Cartridge Is Clogged. 	<ul style="list-style-type: none"> • Make Sure Parts Are Installed Properly. • Clean The Debris Or Residues That Might Cause The Clog.
No Flow From Outlet, High Pressure	<ul style="list-style-type: none"> • Clogged Pipeline / Filter Or Valve Is Closed 	<ul style="list-style-type: none"> • Clean The Pipeline/Filter • Open The Valve
Cleaned Filter With High Pressure	<ul style="list-style-type: none"> • Cartridges / Filter Bag Are Seriously Blocked. It Has Become Ineffective 	<ul style="list-style-type: none"> • Cartridge / Filter Must Be Replaced.
No Flow From Outlet, No Pressure	<ul style="list-style-type: none"> • Jammed Pump Impeller • Pump Failure • Clogged Inlet • Closed Inlet Valve 	<ul style="list-style-type: none"> • Clean/Free The Impeller • Repair or New Pump • Check The Inlet • Open Inlet Valve
Bubbles From Outlet	<ul style="list-style-type: none"> • Air Been Inhaled Into The Pump 	Check For Leaking
	<ul style="list-style-type: none"> • Loose Pipeline, Or In-Tank Air Line Is Too Close To The Inlet 	<ul style="list-style-type: none"> • Move The In-Tank Air Line • Secure Or Reseal Inlet Pipeline
Pump Leaking	<ul style="list-style-type: none"> • Damaged Seal • Damaged Pump Parts 	<ul style="list-style-type: none"> • Replace Damaged Part
Burnt Motor	<ul style="list-style-type: none"> • Jammed Impeller 	<ul style="list-style-type: none"> • Clean Impeller and Add Strainer
	<ul style="list-style-type: none"> • Single-Phase Operation 	<ul style="list-style-type: none"> • Install Overload Shut-Off Switch • Check Power Switch
Pressure Gauge Does Not Move	<ul style="list-style-type: none"> • Bad Pressure Gauge Seat Seal • Damaged Pressure Gauge 	<ul style="list-style-type: none"> • Reseal And Reinstall Pressure Gauge • New Pressure Gauge
Inaccurate Pressure Gauge	<ul style="list-style-type: none"> • Gauge Is Leaking Fluid • Damaged Diaphragm • Defected Pressure Gauge 	<ul style="list-style-type: none"> • Refill Gauge With Water • New Diaphragm • New Pressure Gauge
Filter Top Cover Is Leaking	<ul style="list-style-type: none"> • Debris Build Up On Cover Packing • Damaged Cover or Cover O-Ring 	<ul style="list-style-type: none"> • Clean The O-Ring & Cover Packing • New Cover/ O-Ring
Low Flow And No Sign Of Filter Clogging	<ul style="list-style-type: none"> • Pump Is Spinning At The Wrong Direction. 	<ul style="list-style-type: none"> • Correct The Spinning Direction
	<ul style="list-style-type: none"> • Clogged/Stucked Impeller • Clogged/Blocked Foot Valve/ Strainer 	<ul style="list-style-type: none"> • Remove/Clean The Impeller • Remove/Clean Foot Valve/ Strainer

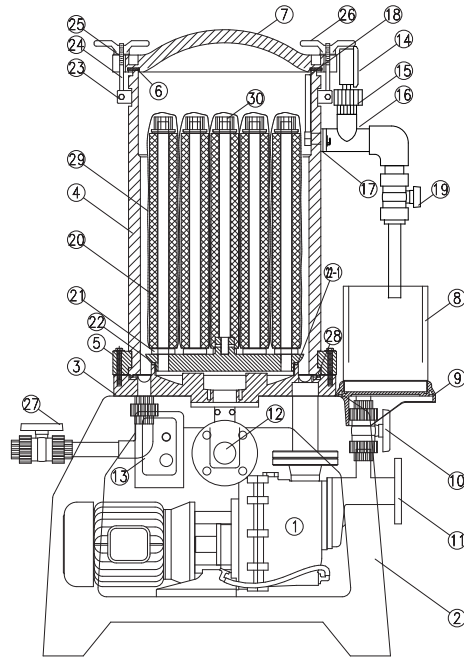
5. Appendix

• Type B

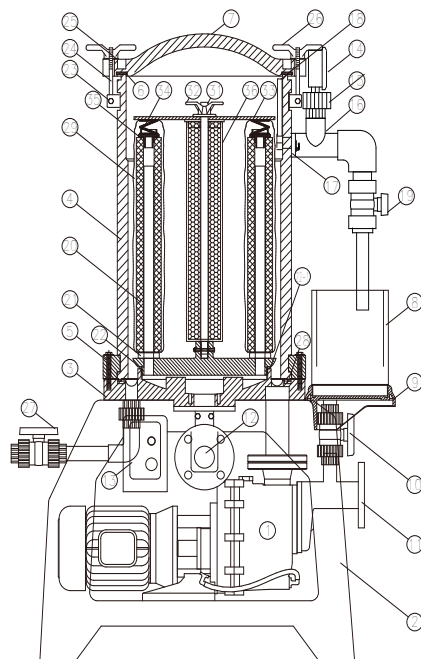
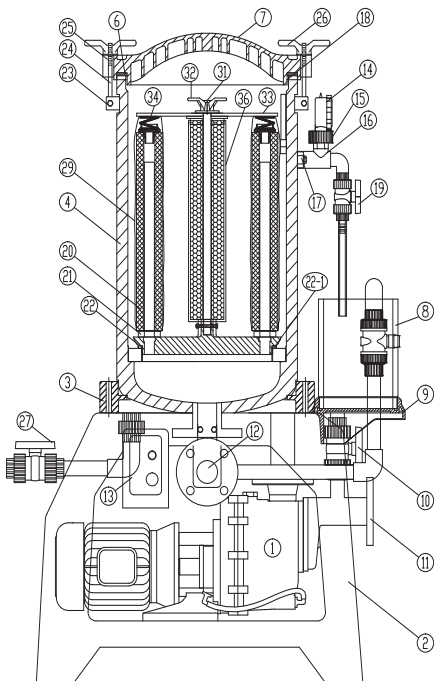
New Construction



Old Construction

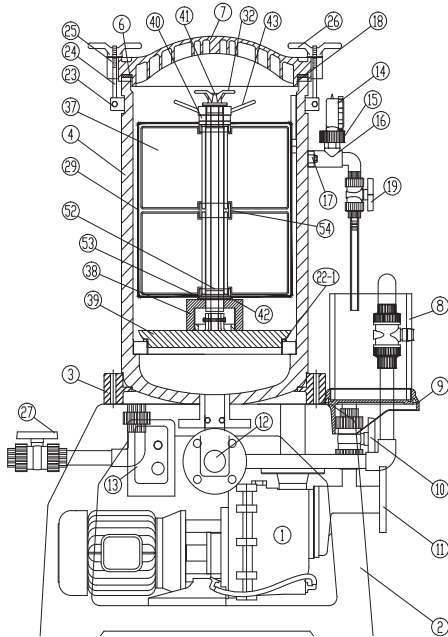


• Type C

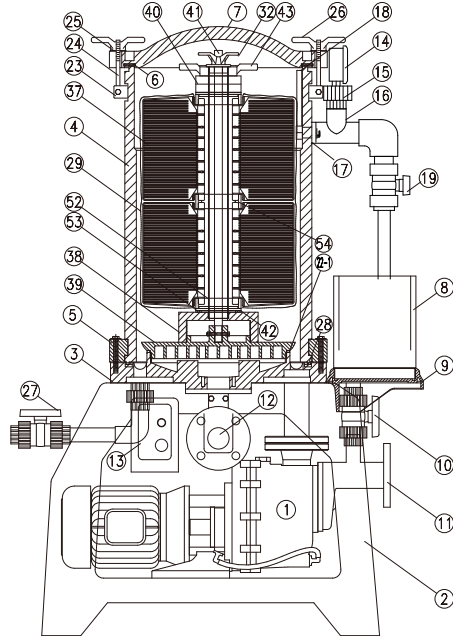


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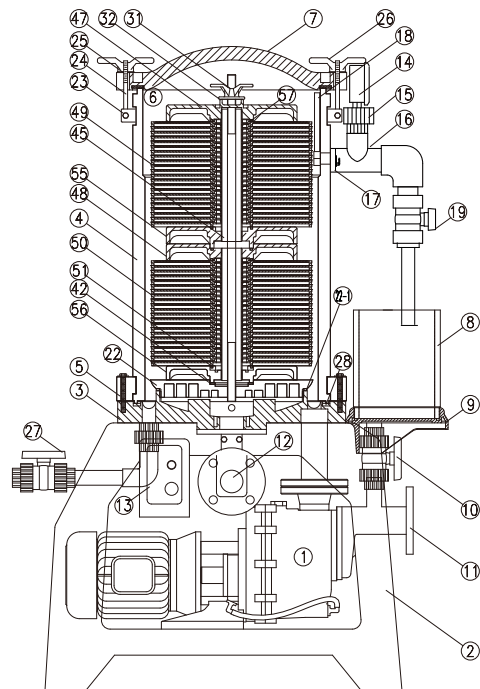
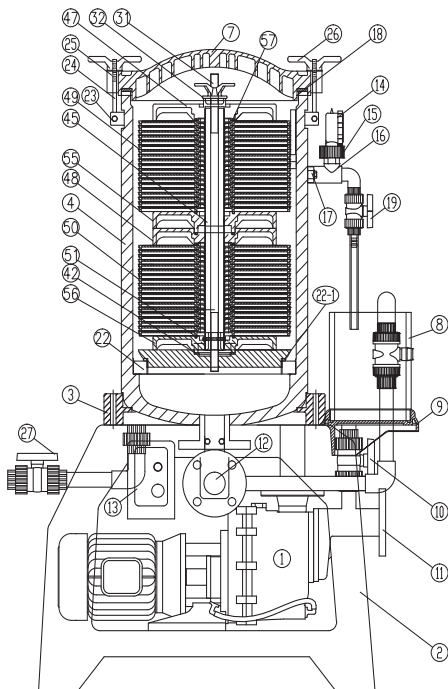
New Construction



Old Construction

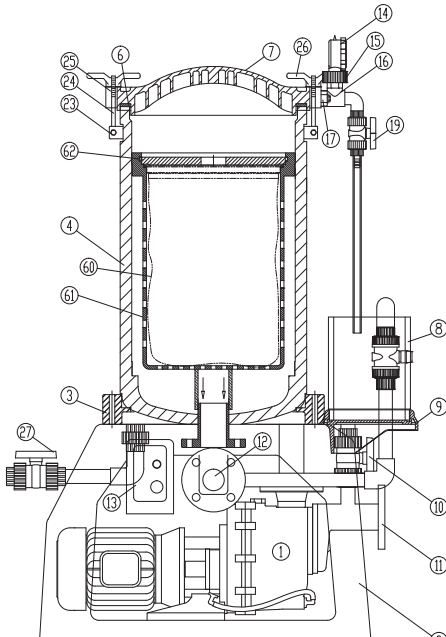


• Type P

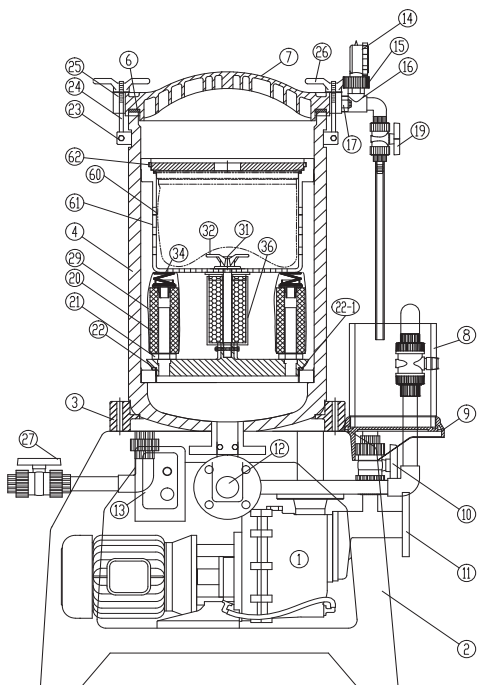


•Type U

New Construction



• Type D



• Part Reference Chart

Part No.	Description	Material	Part No.	Description	Material
1	Pump		29	Cartridge Bag	PP
2	Base	FRP	29	Star Cloth Bag	PP / PO
3	Barrel Base	FRPP	30	Cartridge Nut	FRPP / PVDF
4	Barrel	PP	31	Stanchion	SUS316
5	* C-Clasp	FRPP	32	Stanchion Nut	SUS316
6	Cover Packing	NBR / EPT / VITON	33	Cartridge Plate	FRPP
7	Cover	FRPP	34	Cartridge Spring	SUS316 / PVC
8	Tube	PP	35	Cartridge Top Packing	FRPP / PVDF
9	Tube Base	FRPP	36	Activated Carbon Cage	FRPP
10	Tube Valve	PP	37	Start Frame	FRPP
11	Tee inlet with valve	FRPP	38	Solution Collector	FRPP
12	Outlet	FRPP	39	Star Seat	FRPP
13	Power Switch with case	FRPP	39-1	Star O-Ring	NBR / EPT / VITON
14	Pressure Gauge		40	Filter Frame Nut	FRPP
15	Pressure Gauge Seat	FRPP	41	Star Stanchion	SUS316
15-1	Pressure Gauge Diaphragm	NBR / EPT / VITON	42	Filter Medium Bottom Packing	NBR / EPT / VITON
16	Air Release Joint	FRPP	43	Star Fasten Handle	FRPP
17	Air Release Joint Seat with Gasket	FRPP	45	Paper Center Tube	PP
18	Air Release Pipe	FRPP	47	Upper Disk set Cover	FRPP
19	Air Release Valve	FRPP	48	Lower Disk set Cover	FRPP
19-1	* Air Release Handle Spacer Packing	NBR / EPT / VITON	49	Disk (20 pcs / set)	FRPP
20	Cartridge	PP	50	Paper (100 pcs / box)	PP
21	Cartridge Bottom Packing	PVC / PP	51	Disk bottom O-Ring	NBR / EPT / VITON
22	Cartridge Seat	FRPP	52	Star Frame small Hoop	PP
22-1	Cartridge Seat O-Ring	NBR / EPT / VITON	53	Star Frame Hoop Nut	PP
23	SUS Clamp (excluding screw)	SUS304	54	Star Frame big Hoop	PP
24	Cover Screw	SUS304	55	Upper Disk set Base	FRPP
25	Cover Washer	SUS304	56	Lower Disk set Base	FRPP
26	Cover Handle	FRPP	57	Disk Top O-Ring	NBR / EPT / VITON
27	Drain Valve	PP	60	Bag	PP
28	Barrel Base O-Ring	NBR / EPT / VITON	61	Basket	PP
			62	Bag Fasten Handle	PP

* is for old construction.

6. Note.

1. Place The Machine In An Upright Position And On A Sturdy Resting Place. Make Sure The PipeLine Are Fully Secure.
2. Read This Manual Carefully Before Operating.
3. Do Not Apply Different Chemical Solutions With The Same Machine. If Needed, Contact Our Technician.
4. Most Of The Electroplating Solution Contain Hydrogen. Released During Electrolysis, If The Filter Hasn't Been Used In Some Time, Pressure Will Build Up Inside The Barrel And May Cause An Explosion.
5. The Flow Rate Should Be Checked Periodically Make Sure It Is Normal.Clean The Medium On Schedule To Prevent Clogging. When The Pump Dry-Runs For A Long Time,The Liquid In The Pump Will Become Very Hot And Vaporize. Pressure Will Build Up Inside The Barrel And Can Potentially Explode.Make Sure In/Outlet Are Open.
6. Please Operate The Filter Only During Working Hours. Unplug The Machine When It Is Not Operating. To Prevent The Filter From Dry-Running, Never Have The Machine On Without An Operator.
7. Avoid Placing The Filter Outdoors. The Sunlight Will Weaken The Barrel Material.
8. The Working Pressure Should Not Exceed 1.5 Kg/Cm2 And The Liquid Temperature Should Not Exceed 70°C .
9. Regular Maintenance (Maintenance Card Page 24)



Filter Maintenance Card

Site No: _____

Date: / / To / /

Week	Morning (AM)				Afternoon (PM)				Before	After	Appearance	Signature
	Time	Flow	Pressure (Kg)	Air Released	Time	Flow	Pressure (Kg)	Air Released	Pressure (Kg)	Pressure (Kg)		
Mon												
Tue												
Wed												
Thur												
Fri												
Sat												
Sun												

Site No : _____

Date: / / To / /

Week	Morning (AM)				Afternoon (PM)				Before	After	Appearance	Signature
	Time	Flow	Pressure (Kg)	Air Released	Time	Flow	Pressure (Kg)	Air Released	Pressure (Kg)	Pressure (Kg)		
Mon												
Tue												
Wed												
Thur												
Fri												
Sat												
Sun												

Site No : _____

Date: / / To / /

Week	Morning (AM)				Afternoon (PM)				Before	After	Appearance	Signature
	Time	Flow	Pressure (Kg)	Air Released	Time	Flow	Pressure (Kg)	Air Released	Pressure (Kg)	Pressure (Kg)		
一												
二												
三												
四												
五												
六												
日												

- *Note :
1. Flow Condition: "High" "Mid" & "Low".
 2. Air Released: "Yes" Or "No"
 3. Appearance: "Cleaned" Or "Uncleaned"
 4. In Order To Maintain The Equipment Operator Must Fill The Card Truthfully.
 5. Have The Supervisor/ Manager Sign This Card Every Monday.

Signature

Product Warranty

ModelNumber:

Serial Number:

Thank You For Choosing SUPER.SUPER's Product Have Passed Strict Quality Control And Fulfill The Filtration Standard Under Proper Operation And Good Maintenance.

Please Store This Warranty Properly And Show It When Necessary.

1.SUPER Warrants The Included Hardware Product Against Defects And Malfunctions.

- Warranty Period: 1 Year From Original Purchase Date.

2.SUPER Does Not Warrant Under The Following Conditions.

- The Damage Is Caused By Non-Permitted Repair, Improper Maintenance Or Operation.
- Damage that Is Caused By Natural Disasters. (Ex: Fire, Earthquake & Etc.)
- Normal Wear And Tear Parts And Accessories Are Not Covered In The Warranty.

For Any Question Or Help 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.

Website: <http://superpump.tw> <http://superpump.cn>

E-mail: super@superpump.tw

Telephone:(06)2534546

Fax:(06)2534226

Super Giant EnterpriseCO.,LTD.

Dealer Or Place Of Business

Date: Year Month Day

Date: Year Month Day



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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