

Superior Performance
Unbeatable Pricing
Pride in Workmanship
Energy Efficient
Rugged Construction



FKH

High Pressure Filter made from single-piece injected barrel



—Before beginning operation, read this manual carefully!—

*Thank you for purchasing this SUPER product. Please read this manual carefully in order to ensure that you use the appliance safely and correctly.

*Be sure to keep this manual in a place where it will be easily available for reference.

OPERATION MANUAL

INDEX

1. Introduction	
• Model and Style	2
2. Cautions in Installation	3
3. Warnings in Operation	4
4. Operation	5
5. Maintenance and Repair	5
6. Construction and Parts Table	6
7. Trouble Shooting	7
8. Filter Maintenance Record	8
9. FAQ	9
10. Information Data	10
11. Quality Guarantee	11

1. INTRODUCTION

● *Model and Style*

FKH --- 2008 F B J N - 65 D
(1) (2) (3) (4) (5) (6) (7) (8)

(1) FKH – Type

(2) Cartridge: 1004: 10” x 4pcs ; 1008 : 10” x 8pcs ; 2004 : 20” x 4 pcs ;
2006: 20” x 6 pcs; 2008: 20” x 8 pcs; 2010 : 20” x 10 pcs;
2018: 20” x 18 pcs; 3008 : 30” x 8 pcs, 3018 : 30” x 18 pcs

(3) In/Outlet Fitting: F – Flange U - Union

(4) B – Cartridge nut (no activated carbon set) ; C – Cartridge plate fixture

(5) J – JIS fitting, D – DIN fitting, A – ANSI fitting

(6) N-NBR, V-VITON, E-EPDM

(7) In/Outlet: 65 – 65 x 65mm ; 50 – 50 x 50mm ; 40 – 40 x 40mm ; 25 – 25 x 25mm
6A – 65 x 50mm; 5A – 50 x 40mm

(8) FRPP Bracket: A, B, C, D

FKH --- 7161 F U J N - 65 D
(1) (2) (3) (4) (5) (6) (7) (8)

(1) FKH – Type

(2) Cartridge: 4161: 4 φ x 16” bag ; 4251 : 4 φ x 25”bag ; 7161 : 7 φ x 16”bag ;
7251: 7 φ x 25” bag ; 7321: 7 φ x 32”bag; 8161 : 8 φ x 16”bag;
8251: 8 φ x 25” bag

(3) In/Outlet Fitting: F – Flange U - Union

(5) U : Bag

(7) J – JIS fitting, D – DIN fitting, A – ANSI fitting

(8) N-NBR, V-VITON, E-EPDM

(7) In/Outlet: 65 – 65 x 65mm ; 50 – 50 x 50mm ; 40 – 40 x 40mm ; 25 – 25 x 25mm
6A – 65 x 50mm; 5A – 50 x 40mm

(8) FRPP Bracket: A, B, C, D

2. CAUTIONS IN INSTALLATION

1. Fix the pipeline to keep it from vibrating or moving.
2. Make sure that the pipe connections are sealed and air is not entering the system.
3. If the filter must be installed outdoors, it is essential to provide adequate covering.
4. Choose heat resistant pipes if the temperature of the solution is higher than 60°C.
5. Before connecting tubing to the pump attachments, the tubes should be washed to remove any extraneous matter there may be such as welding pellets, cut-off from gaskets, etc.
6. Set a foot-valve at the end of inlet pipe. 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 inlet and outlet are lower than the liquid level of the tank, install valves on the inlet and outlet pipe to prevent siphoning.
9. 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. Please also make sure that all the nuts and bolts are adequately tightened, including the wing nut on the top cover.

Warning: Under-tightening and over-tightening may result in flawed performance and even safety hazards. Under-tightening may lead to the development of leaks, while over-tightening may strip or break the bolt. Please have someone experienced in the installation of this type of equipment to set up the system.

3. WARNINGS IN OPERATION

1. Place the machine in a horizontal position and on a sturdy-resting place. Fix the piping stability to avoid the damage.
2. Before repair, read this manual carefully to realize every parts and operating schedule.
3. Different chemical solutions mixed together will cause reaction and even heat to damage the machine. Don't apply different chemical solutions with the same machine. If needed, Contact with our technician.
4. 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.
5. Most of the electronic-plating liquids contain hydrogen. It is released during electrolysis, and it will remain in the barrel. If the filter hasn't been used in a long time, pressure will build inside the barrel and may cause an explosion. Gaseous chemical element should be let out through the air drain valve. If the filter is not to be used for a long time, the air drain valve should be kept open to prevent a build-up of volatile fumes.
6. The flow rate should be checked periodically that to make sure it is normal. Clean the medium on a schedule. When the pump dry-runs for a long time, the liquid in the pump will be very hot and vaporize. Pressure inside the barrel will build up and can potentially explode. Never forget to double-check the inlet to make sure it is open before operating. Dry running will damage the pump and filter.
7. 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.
8. Don't place the filter outdoors. The sunlight will weaken the barrel material.
9. The working pressure should not be higher than 3 kg/cm^2 and the liquid temperature should be lower than 70°C .

4. OPERATION

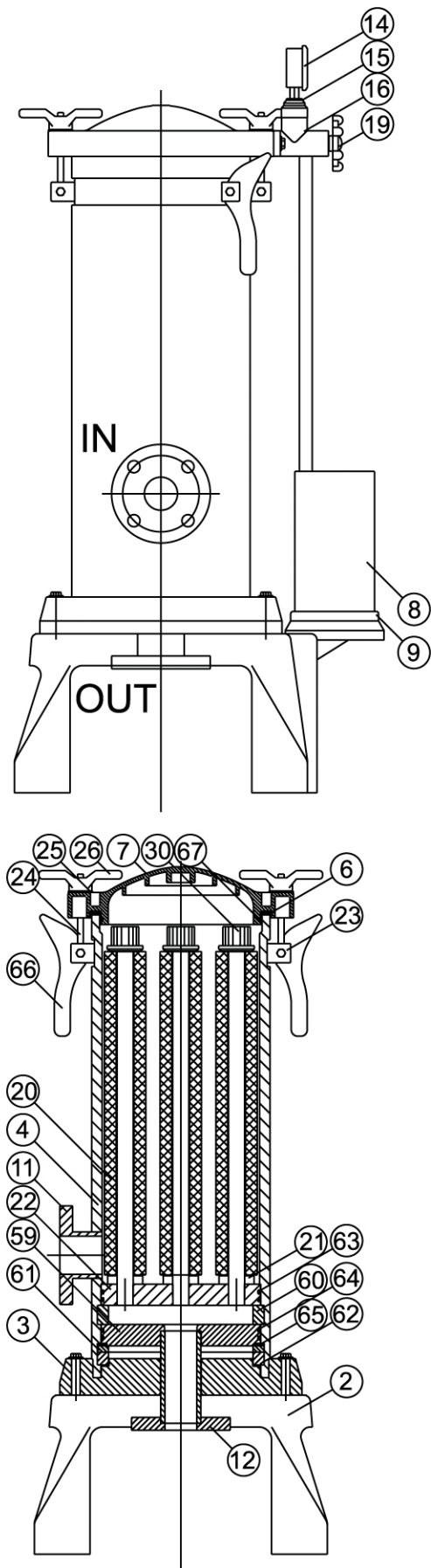
1. Before operating, please make sure all pipes are well assembled, and secure the in-outlet pipes to the tanks to avoid vibration.
2. Make sure the cartridge settled in place in the tank and secured according to the instruction.
3. Make sure the Cover handle are well-assembled, turn the cover handle clockwise to close, counterclockwise to open.
4. Before starting the motor, please check the power supply and make sure it satisfies the voltage requirement for the motor.
5. Before starting the pump, please check the gauge seat of the pressure gauge. It should be full of clean water or oil, then close the gauge tightly to assure its precision.
6. Make sure the in-outlet pipes are installed properly. For example, the in-outlet valves should be open, there should be no flaws in installation, the liquid level should be normal, and there should be no apparent damages on the pipes.
7. When the working environment or liquid is harmful to humans, please wear protective clothing, mask, shoes and any other necessary protective devices.
8. Make sure the running direction of the motor is correct. No fluid will come out of the outlet if it is running in the wrong direction. Switching the phase will correct the problem.
9. Take the necessary precautions. For example, make sure that the valves, the level of liquid in the tank and the circuit breaker are all within their normal limits.
10. Shut down to replace cartridge when the pressure read goes up to "cleaning" or the flow drops obviously. If the cartridge get blocked, shut down the pump to clean or replace the cartridge before re-start.

5.MAINTENANCE AND REPAIR

1. Be 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.
4. The height between the tank and the filter must not differ. If it does, it will cause siphoning.

Parts List

Parts No	Description	Material
2	FRP base	FRP
3	Barrel base	FRPP
4	Barrel	PP
6	Cover packing	NBR/VITON
7	Cover	FRPP
8	Tube	PP
9	Tube base	FRPP
11	Pump inlet	FRPP
12	Outlet	FRPP
14	Pressure gauge	
15	Gauge seat	FRPP
16	Air release valve	FRPP
19	Valve handle & shaft	FRPP
20	Cartridge	PP
21	Cartridge bottom packing	PVC/PP
22	Cartridge seat	FRPP
23	SUS Clasp(excluding screw)	SUS304
24	Cover screw	SUS304
25	Cover washer	SUS304
26	Cover handle	FRPP
30	Cartridge nut	FRPP/PVDF
59	partition board	FRPP
60	Cartridge seat C-clamp	
61	partition board C-clamp (thin)	FRPP
62	partition board C-clamp (thick)	FRPP
63	Cartridge seat O-ring	NBR/VITON
64	partition board O-ring	NBR/VITON
65	partition board packing	NBR/VITON
66	lever	
67	Cover o-ring	NBR/VITON



7. TROUBLE SHOOTING

Trouble	Possible Cause	Remedy
Imperfect filtration.	Cartridge plate fixture and handle are not fully secured or tamis bags are not in place.	Examine if the parts are positioned correctly and lock by the plate fixture tightly.
	There are impurities remaining in the barrel.	Clean the barrel with some clean water when cleaning filter.
No liquid appears from the outlet and the pressure is very high during operation.	Filter medium and outlet pipe are blocked.(For example, valves are not open.)	Clean the medium or examine outlet pipe. Open in-outlet valves.
The filter medium is cleaned. There is little outpouring of liquid and the pressure is high.	Filter medium's tubes are blocked; impurities can't be removed.	Replace the whole filter cartridges with new ones.
No liquid appears in outlet and no pressure indications.	No liquid appears inside of chamber.	Check and repair the pump.
	Inlet valves are not open.	Check the inlet pipe.
	Air is sucked in the inlet pipe or the pipe is blocked.	Open inlet valves.
There is little outpouring and air is mixed in.	The pump sucks in air.	Check the inlet pipeline for leaks.
	The liquid tank's pipe is too close to the filter's inlet pipe or the inlet pipe has become loose.	1. Keep the tank's pipe farther from inlet pipe. 2. Check & fix the pipe constantly to avoid air being sucked in.
Pressure gauge doesn't work.	Pressure gauge & gauge seat is not well sealed.	Take off the gauge, wrap up with tape seal and re-install.
	The gauge is damaged. The gauge seal is damaged. The inside part of gauge seat seal is not filled with liquid.	Replace the gauge with new one. Replace the gauge seal with new one. Take the gauge apart and add some clean water.
The pressure gauge is not accurate.	The inside part of gauge seat seal is not filled with liquid.	Take the gauge apart and add some clean water.
	Deformed seal.	Replace the seal.
	The gauge is damaged.	Replace the gauge.
A little leakage from filter's cover.	Cover O-ring is not clean.	Wash the O-ring neat.
	Impurity on the surface of barrel.	Clean the surface of barrel.
	The O-ring is damaged or the rubber material got hard	Replace the O-ring with a new one.
Low flow rate from the outlet, but there isn't any problems with the medium.	Motor rotating the wrong direction. Pump impeller is stuck.	1. Correct the contact line of motor. 2. Clean out the impurities.

Filter Maintenance Record

Series No. : _____ Date: ____ / ____ / ____ ~ ____ / ____ / ____

Week	Morning				Afternoon				Before Cleaning	After Cleaning	Surface Cleaning	Sign	
	H	M	Cap.	Presu. (Kg)	Air Drain	H	M	Cap.	Presu. (Kg)	Air Drain			Pressure (Kg)
Mon.													
Tue.													
Wed.													
Thu.													
Fri.													
Sat.													
Sun.													

Series No. : _____ Date: ____ / ____ / ____ ~ ____ / ____ / ____

Week	Morning				Afternoon				Before Cleaning	After Cleaning	Surface Cleaning	Sign	
	H	M	Cap.	Presu. (Kg)	Air Drain	H	M	Cap.	Presu. (Kg)	Air Drain			Pressure (Kg)
Mon.													
Tue.													
Wed.													
Thu.													
Fri.													
Sat.													
Sun.													

Series No. : _____ Date: ____ / ____ / ____ ~ ____ / ____ / ____

Week	Morning				Afternoon				Before Cleaning	After Cleaning	Surface Cleaning	Sign	
	H	M	Cap.	Presu. (Kg)	Air Drain	H	M	Cap.	Presu. (Kg)	Air Drain			Pressure (Kg)
Mon.													
Tue.													
Wed.													
Thu.													
Fri.													
Sat.													
Sun.													

Remark:

1. For Cap., please fill in "High" "Mid." "Low".
2. For Air Drain, please fill in "Much" "Little".

FAQ

1. How to check capacity of outlet?

Answer: Generally the outlet is inside the tank. It is difficult to check the capacity. Settle a 3-direction joint above the liquid to check the liquid injection. For example, the original outlet piping is 2", and the additional injection outlet should be 3/4". We can check the capacity by the liquid runs through the additional outlet.

2. Why the pressure gets high?

Answer: High pressure means serious block and it is necessary to clean or replace the cartridge. While replacing new or cleared cartridge, the pressure shown should be lower than 0.3 kg. It is normal if the pressure gets high generally.

3. Why the pressure gets high soon?

Answer: Most of capillary on the cartridge is blocked and can not be cleaned. Replace a new one.

4. Why the cartridge replacing frequently?

Answer: It needs higher pressure to get the liquid runs through the low quality cartridge. For high quality cartridge, outer capillary is bigger than inner capillary, but for low quality cartridge, it is the same and once the outer capillary is blocked, the pressure will get high and cause replacing the cartridge frequently.

5. Why do we need to drain the air?

Answer: The hydrogen stay in the barrel may cause exploding and it is necessary to drain out. Some other air may gets into the barrel through the inlet, the joint, the crack of piping or the air mixer. Clean the air drain valve frequently.

Information Sheet

Date: _____

Company Name:	
Address:	
Name of Contact Person:	
Phone & Fax Nos.:	

Business Series

<input type="checkbox"/> 1. Metalwork manufacturing	<input type="checkbox"/> 6. Anodized aluminum processing	<input type="checkbox"/> 11. Dye
<input type="checkbox"/> 2. Metalwork finish plating	<input type="checkbox"/> 7. PC circuit board	<input type="checkbox"/> 12. Pharmaceutical manufacture
<input type="checkbox"/> 3. Other plating service	<input type="checkbox"/> 8. Semiconductor	<input type="checkbox"/> 13. Others
<input type="checkbox"/> 4. Surface treatment equipment	<input type="checkbox"/> 9. Electronic component finishing	
<input type="checkbox"/> 5. Surface treatment service	<input type="checkbox"/> 10. Leather processing	

Mode of interest:

Power source: _____ 60Hz _____ 50Hz _____ 1-phase _____ 3-phase _____ V		
Composition of solution: _____	Solution Temperature: _____ °C	Viscosity: _____ cP
Specific gravity: _____	Concentration: _____	pH: _____
Particles Present? ___ YES ___ NO ___ Unknown If Yes, Particle Size: ___ % by Volume: _____		
Particle Hardness: _____		
Operating duration: _____ hours/day	Head: _____ m	
Flow rate temperature: _____ °C	Place: ___ indoor ___ outdoor	
Piping diameter: _____ A		
Piping length: _____ m	Discharge side _____ m	

System Sketch



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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

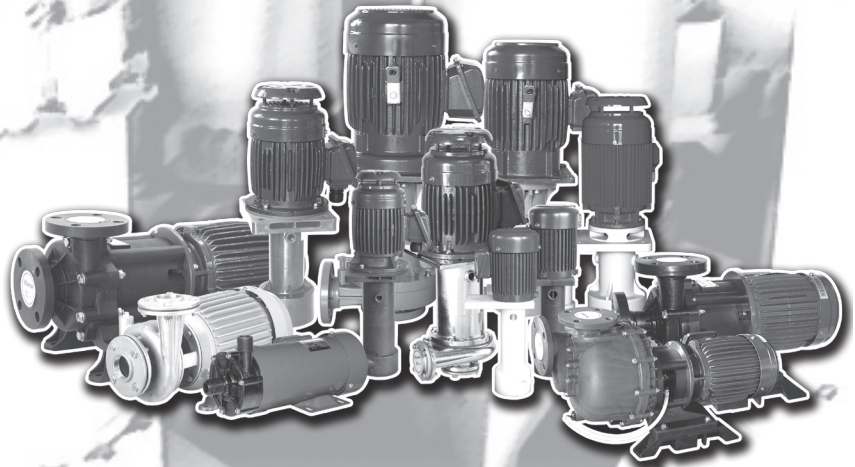
If you have any question, please contact our dealer or Super Giant Enterprise directly.

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Tel: 06-2534546,2541601~3

Fax: 06-2534226,2420509





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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