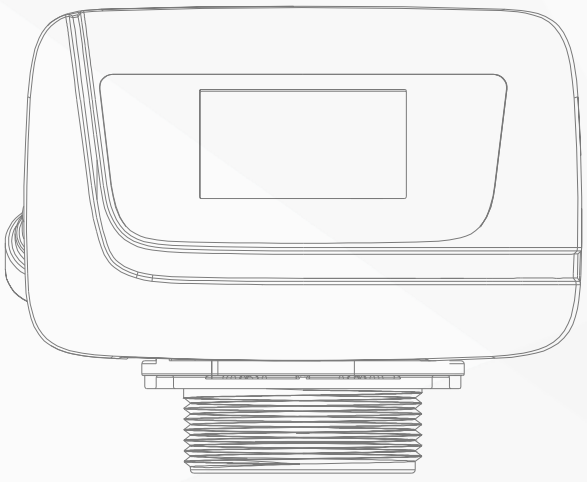
K075/K075P

Service Manual



- Please read the manuals before using the product. Please strictly abide by the instructions. Once the user start to use the product,it is defaulted that the user have already accepted the disclaimer. The manufacturer will not undertake any responsibility if the user operate improperly and cause the damage to the product.

- The manufacturer will not specially inform the user if have any change for the manuals.

CONTENTS

Product Features 01

Operation and Setting 05

User Program Set 07

OEM Program Set 09

Advanced Set 11

Information Query 24

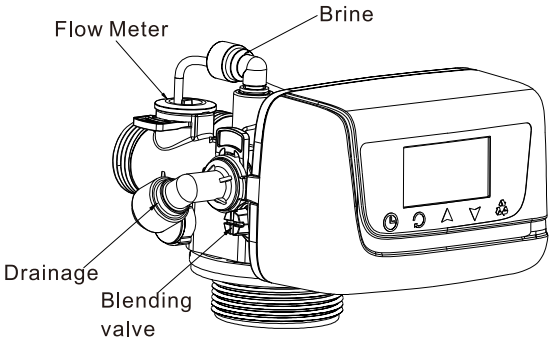
System Reminding and Checking 28

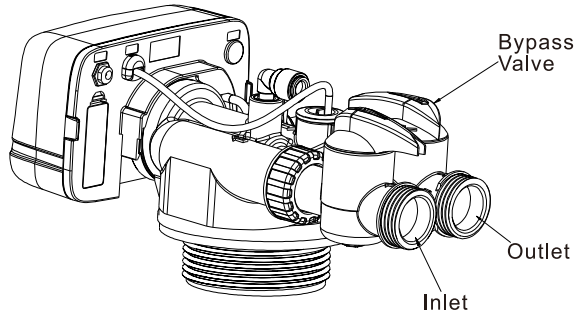
Main Components 32

Performance Curve 35

PRODUCT FEATURES

1. Specifications



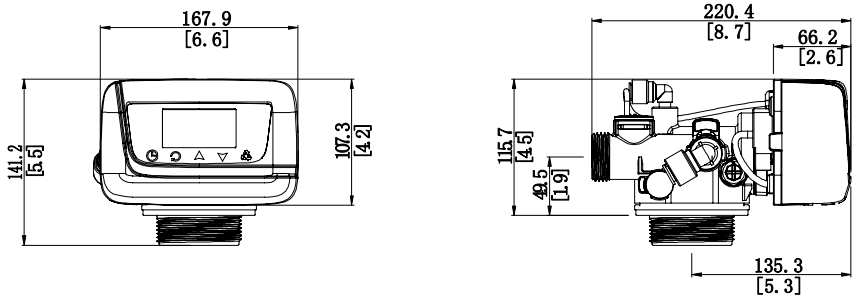


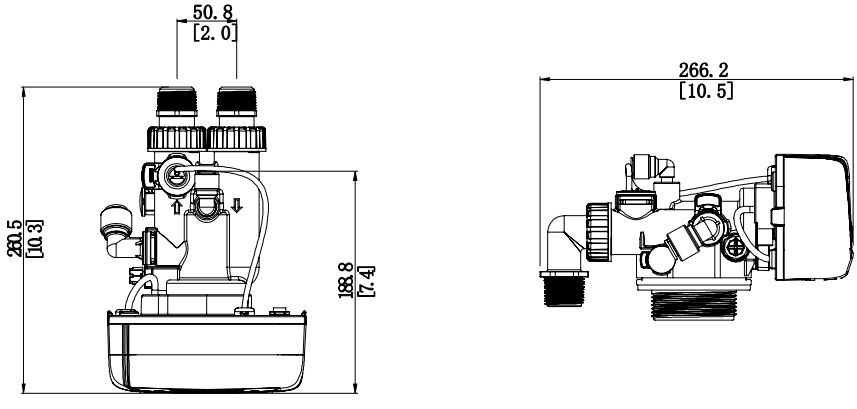
K075&K075P Specifications		
Flow Rate		
	Continuous(15psi drop)	2M³/H (9 gpm)
	Peak(25psi drop)	3.1M³/H (14 gpm)
	Max Backwash(25psi drop)	1.0M³/H (4.5 gpm)
	Service CV	2.7
	Backwash CV	1.0
Regeneration		
	Downflow/Upflow	Downflow
		Upflow
	Cycles	5
Meter		
	Accuracy	±5.0%
	Capacity	0.07－3.1M³/H (0.3－14gpm)
Adaptor & Base Specification		
	Inlet/Outlet	1" or 3/4",NPT or BSPT
	Base	2 1/2"-8NPSM
	Distributor Pilot	3/4" Pipe，26.7mmOD
	Drain Line	3/8" OD Elbow QC
	Brine Line	3/8" OD Elbow QC
Working		
	Power supply	Input:100~240VAC 50/60HZ
		Output:DC12V/0.5A
	Max. VA	6W
	Pressure	1.4-8.0Bar/20-120psi
	Temperature	1℃~ 43℃/33℉~109℉

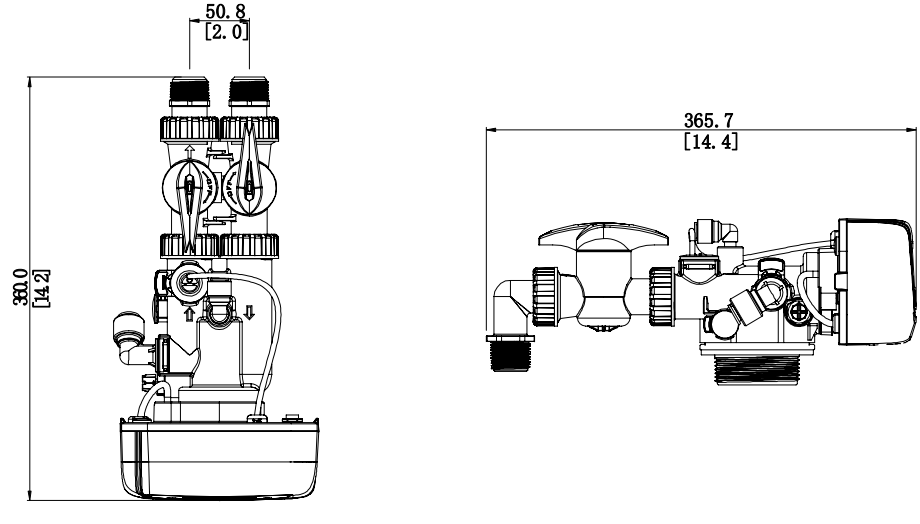
PRODUCT FEATURES

2. Dimensional drawing

The unit of the number in brackets is “inch”,rest is “millimeter”.







PRODUCT FEATURES

3. Introduction for regeneration modes

3.1 Regeneration modes for softener valve

1) SOF1-Time softener mode

- Regeneration initiates at the preset time in every set override days.
- The regeneration mode could be set in Pre-refill.

2) SOF2-Week-Day softener mode

- Regeneration initiates at the preset time in the preset date of the week. At least one day of a week need to be chosen.
- The regeneration mode could be set in Pre-refill.

3) SOF3-Meter-immediate softener mode

- Regeneration initiates immediately when the volume capacity reaches zero.
- If the preset override days zero out firstly while not reach the preset water capacity,the regeneration will initiate at the preset time of the day.
- The volume capacity could be automatically calculated by the controller or manually input.

4) SOF4-Meter-delayed softener mode

- Regeneration initiates at the preset time of the day when the volume capacity reaches zero.
- If the preset override days zero out firstly while not reach the preset water capacity, the regeneration will initiate at the preset time of the day.
- The volume capacity could be automatically calculated by the controller or manually input.
- The regeneration mode can set Pre-refill and Proportional regeneration.

3.2 Filter valve

Filter valve only have backwash and rinse.The valve will initiate the backwash and rinse at the preset time in every set override days.

3.3 Auto cycle sequence

The valve can regenerate in downflow or upflow. It also will adjust the regeneration step accordingly based on the user's setting. Please refers to the below cycle sequence.

Cycle sequence for different valve type

Type / Cycle	Softener				Backwash Filter
	Down flow		Up Flow		
	Post Refill	Pre fill	Post Refill	Pre fill	——
1	Backwash	Refill/Dissolve	Brine draw	Refill/Dissolve	Backwash
2	Brine draw	Backwash	Backwash	Brine draw	Rinse
3	Rinse	Brine draw	Rinse	Backwash	——
4	Refill	Rinse	Refill	Rinse	——

PRODUCT FEATURES

4. Power-off

4.1 Without backup battery

1) When the power is off in the service position, the control valve will keep in the same position when the power restored.

2) If the power-off happens in any regeneration cycles, once the power restored, the control valve will automatically look for and stop in the position where power-off happens. Then it will continue to complete the regeneration steps.

3) If the power-off occurs when the control valve is moving from one position to the other, once the power restored it will look for and stop in the target position where power-off occurs. Then it will continue to complete the regeneration steps.

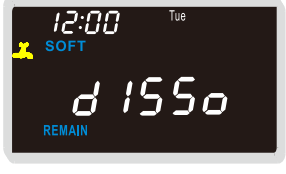
4.2 With backup battery

If the valve has backup battery, the valve will continue to complete the current regeneration and drive the valve to the service position when the power is off. The valve can work normally when the power restores.

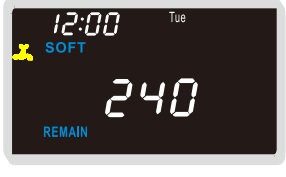
5. Intelligent control

5.1 Pre-refill

Soft water refill before the regeneration. Pre-refill can keep the brine tank dry to prevent bacteria from growing in the brine tank. The salt dissolving will be shown as below.



Alternating



5.2 Optional Proportional Regeneration

The control valve will only regenerate the exhausted resin according to the water usage.This can keep the resin fully effective. At the same time,salt and water can be saved.

5.3 Holiday mode

When holiday mode is set, the resin will be regenerated at fixed period to keep the resin effective. The holiday mode will automatically be turned off when the water usage reach set water volume.

6. Optional Blending valve

The water hardness can be adjusted by blending valve.

7. Optional bypass valve

Customized bypass can be chosen if need.

OPERATION AND SETTING

1. Buttons

User program set

Enter

1. Confirm and save the current setting
2. Basic information query

Up

increase or cycle

Down

Decrease or cycle

Cycle

1. Return to the previous setting
2. Press and hold for 5 seconds,initiate regeneration immediately
3. In service position,press to initiate a queued regeneration

Press and hold for 3 seconds simultaneously

Enter the OEM setting

Press and hold for 3 seconds simultaneously

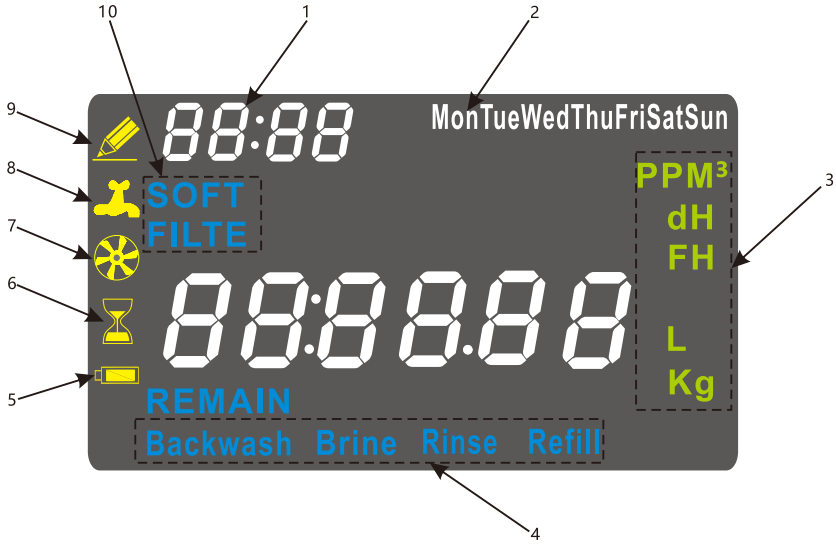
Enter advanced set for softener valve or set for filter valve

Press and hold for 3 seconds simultaneously

Query the historic datas

OPERATION AND SETTING

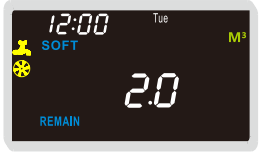
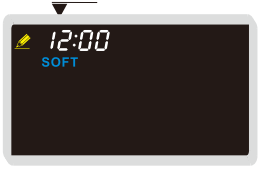
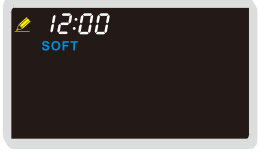
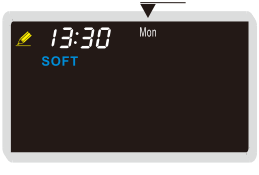
2. Screen Display



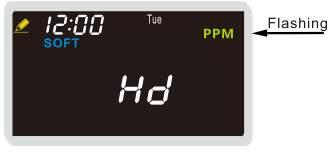
1. Current time.
2. Week information.
3. Unit.
   M³/L - flowrate; PPM,dH,FH - Hardness unit,dH - German hardness
   FH - French hardness, Kgm³ - total resin exchange capacity .
4. Cycle step.
   When it's flashing,it means the control valve is moving to the current cycle step.
5. Battery.
   The backup battery has been installed. When it's falshing,it means the battery power is low.
6. Queue regeneration.
   When it is flashing, the control valve is under queued regeneration.
7. Flow meter.
   When it is flashing, the water flow is passing the flow meter.
8. In service.
   When it's flashing,it means the control valve is moving to the service position.
9. Edit.
   When control valve in data setting.
10. Valve type.
    SOFT - Softener valve, FILTE - Filter valve.

OPERATION AND SETTING

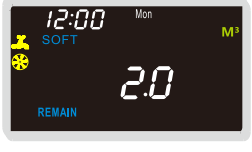
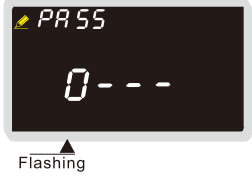
3. User Program Set

Display	Default	Range	Description
	N/A	N/A	1.In service position, press for 3 seconds to enter user program set.
Flashing 	12	00-23	2.Set hour Press or to edit, then press to save.
Flashing 	00	00-59	3.Set minute Press or to edit, then press to save.
Flashing 	Mon	Mon-Sun	4.Set week day Press or to edit, then press to save.
 Flashing	04	1-99	5.Set Override day Press or to edit, then press to save.
 Flashing	02:00	0:00-23:59	6.Set regeneration time Press or to edit, then press to save .

OPERATION AND SETTING

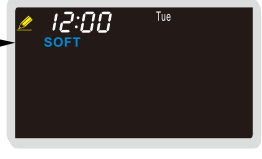
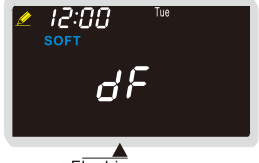
Display	Default	Range	Description
	PPM	PPM dH FH	7.Set hardness unit Press ▲ or ▼ to edit, then press ↻ to save. The treated water capacity is automatically calculated. Then the display will only be shown for SOF3 or SOF4.
	300(PPM) 20(dH) 30(FH)	1～2500 1～150 1～250	8.Set the hardness number of the inlet. Press ▲ or ▼ to edit, then press ↻ to save. The treated water capacity is automatically calculated. Then the display will only be shown for SOF3 or SOF4.
	0	0-the hardness number of inlet	9.Set the hardness number of the outlet. Press ▲ or ▼ to edit, then press ↻ to save and return to service position. The treated water capacity is automatically calculated. Then the display will only be shown for SOF3 or SOF4.

4.Set password

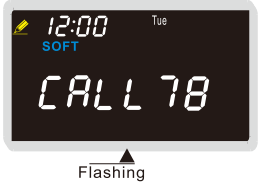
	N/A	N/A	In service position, press ▲ for 3 seconds to enter. Original password: 0000.
	0000	0000-9999	Press ▲ or ▼ to revise the password, then press ↻ to save.

OPERATION AND SETTING

5. OEM Program set

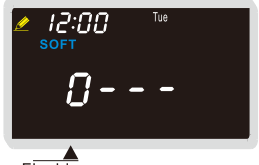
Display	Default	Range	Description
	N/A	N/A	1.Enter Simultaneously press + and hold for 3 seconds to enter. Press to input password.
 Flashing	0000	0000-9999	2.Input password Press or to edit, then press to confirm one by one. Original password: 0000. Only when the password is input correctly the program can go to step 4.If not,it will go to step 3.
	N/A	N/A	3.Password Wrong Error alarm for one second, then return to service position
Flashing 	SOFT	SOFT FILTE	4.Set valve type Press or to edit, then press to save.
 Flashing	dF	dF UF	5.Display Down flow or up flow as ordered This screen not editable. It is not shown for filter valve.
 Flashing	067	000-150	6.Set the distance for low salt sensor(cm) Press or to edit. Press to save. The function is only applied to K075P valve.

OPERATION AND SETTING

Display	Default	Range	Description
 Flashing	78	0,26,52,78	7.Set maintenance time(week) Press ▲ or ▼ to edit. Press ↻ to save and return to service position. When the valve reach the set weeks for maintenance, it should be operated by the professional person. "0" indicates to turn off this function. ※Please check detailed information on **page 28 Feature 2.**

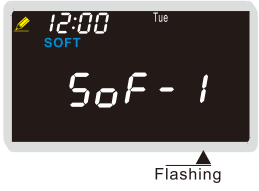
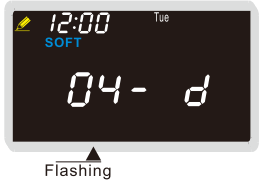
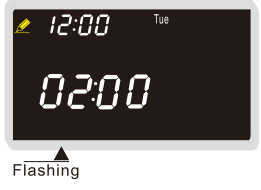
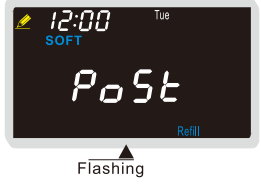
OPERATION AND SETTING

6. OEM Softener valve set

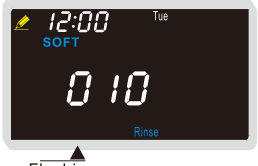
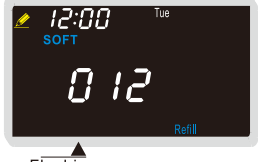
Display	Default	Range	Description
	N/A	N/A	1.Enter Simultaneously press + and hold for 3 seconds to enter.Press to to input password.
 Flashing	0000	0000-9999	2.Input password ※ It is same as OEM program setting.
 Flashing	SOF4	SOF1 SOF2 SOF3 SOF4	3.Set softener valve mode Press or to edit, then press to save. ※Please check detailed information for SOF1,SOF2, SOF3,SOF4 on **page 03, Feature 1.**

OPERATION AND SETTING

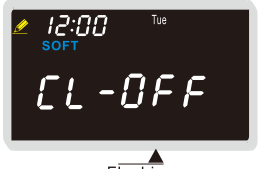
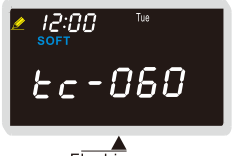
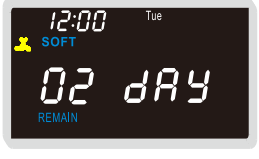
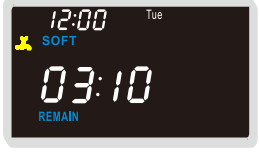
6.1 SOF-1

Display	Default	Range	Description
	N/A	N/A	1.Enter SOF-1
	04	1-99	2.Set Override day Press ▲ or ▼ to edit, then press ↻ to save. It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	02:00	0:00-23:59	3.Set regeneration time Press ▲ or ▼ to edit, then press ↻ to save . It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	PoSt	PoSt PrE	4.Set Pre-refill or Post-refill Press ▲ or ▼ to edit, then press ↻ to save.
	2	2-9	4.1.Set salt-dissolving time (Pre-refill) Press ▲ or ▼ to edit, then press ↻ to save.
	15	0-999min	5.Set Backwash time Press ▲ or ▼ to edit, then press ↻ to save.

OPERATION AND SETTING

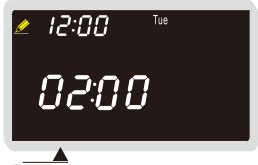
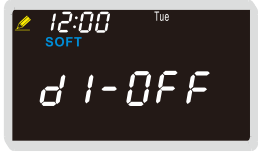
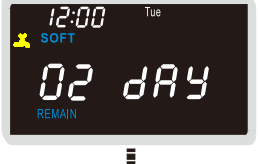
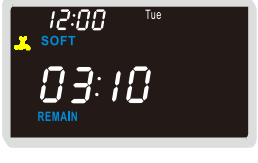
Display	Default	Range	Description
Flashing	60	0-999min	6.Set Brine time Press ▲ or ▼ to edit, then press ↻ to save.
 Flashing	10	0-999min	7.Set Rinse time Press ▲ or ▼ to edit, then press ↻ to save.
Flashing	N	N Y	8.Set Auto-refill Press ▲ or ▼ to edit, then press ↻ to save. If choose “N”,it means refill time is manually input.”Y”indicate the refill time is automatically calculated by the controller. Then go to step 8.1.
 Flashing	12	0-999min	9.Set refill time (If choose"N" in step 8) Press ▲ or ▼ to edit, then press ↻ to save. Then return to service position.
Flashing	160	0-999	8.1.Set salt consuming per liter resin If choose "Y". Press ▲ or ▼ to edit, then press ↻ to save.
Flashing	015	0-999	8.2.Set total resin amount (L) Press ▲ or ▼ to edit, then press ↻ to save.
Flashing	0.25	0.125 0.25 0.5	8.3.Set BLFC (gpm) Press ▲ or ▼ to edit, then press ↻ to save.

OPERATION AND SETTING

Display	Default	Range	Description
	N/A	0-999	8.4.Display the Auto refill time This data is calculated by the control valve and it is not editable.Press to save.
 Flashing	OFF	OFF ON	10.Set chlorine producer Press or to edit, then press to save. OFF - the chlorine producer turn off . ON - the chlorine producer turn on. The function is only applied to K075P valve.
 Flashing	1min	1- max brine draw time	10.1.Set chlorine producing time If choose "ON". Press or to edit,press to save and return to the service position. It will not be shown if set chlorine producer to be off.
 	N/A	N/A	11.Display for SOF-1 When the override days reaches 0 days, display panel will show the time to regenerate for the next time.

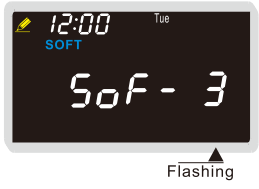
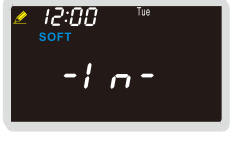
OPERATION AND SETTING

6.2 SOF-2

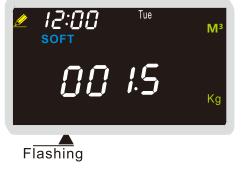
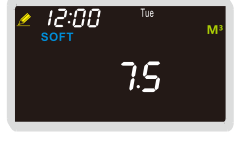
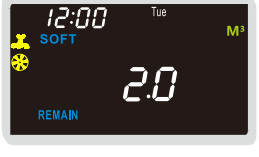
Display	Default	Range	Description
Flashing	N/A	N/A	1.Entre SOF-2
 Flashing	02:00	0:00-23:59	2.Set regeneration time Press ▲ or ▼ to edit, then press ↻ to save. It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	d1--OFF d2--OFF d3--OFF d4--OFF d5--OFF d6--ON d7--OFF	d1-d7 ON-OFF	3.Set week day Press ▲ or ▼ to edit, then press ↻ to save. d1~d7 indicates from Monday - Sunday accordingly. There are ON and OFF for choice.
Flashing	PoSt	PoSt PrE	4.Set Pre-refill or Post-refill Press ▲ or ▼ to edit, then press ↻ to save.
The next step same as SOF-1			
	N/A	N/A	5.Display for SOF-2 When the set days reaches 0 day, the display panel will show the time to regenerate for the next time.
			

OPERATION AND SETTING

6.3 SOF-3

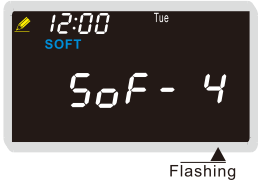
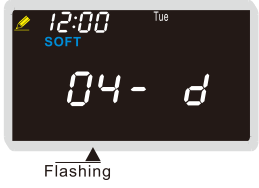
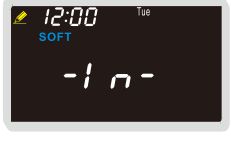
Display	Default	Range	Description
	N/A	N/A	1.Enter SOF-3
	04	0-99	2.Set Override day Press ▲ or ▼ to edit, then press ↻ to save. If set 0 day,the valve only can be initated into regeneration by volume capacity. It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	02:00	0:00-23:59	3.Set regeneration time Press ▲ or ▼ to edit, then press ↻ to save. It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	N	N Y	4.Set treated water capacity Press ▲ or ▼ to edit, then press ↻ to save. N-manually input the treated water capacity. Y-automatically calculate the treated water capacity by controller.
	2.0	0.1-99.9	5.Manual input the treated water capacity Press ▲ or ▼ to edit, then press ↻ to save.
	PPM	PPM dH FH	4.1.Set hardness unit If choose“Y”. Press ▲ or ▼ to edit, then press ↻ to save. It is relevant to user program set on page 8. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	N/A	N/A	4.2.Set inlet hardness,press ↻ to enter.

OPERATION AND SETTING

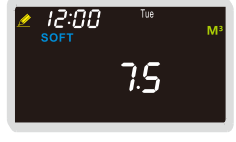
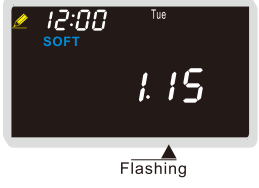
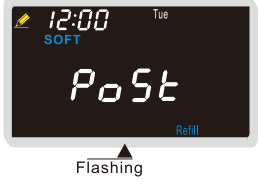
Display	Default	Range	Description
	200(PPM) 20(dH) 30(FH)	1-2500 1-150 1-250	4.3.Set the hardness number of the inlet. Press ▲ or ▼ to edit, then press ↻ to save. It is relevant to user program set on page 8. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	N/A	N/A	4.4.Set outlet hardness,press ↻ to enter.
	0	0-the hardness number of inlet	4.5.Set the hardness number of the outlet. Press ▲ or ▼ to edit, then press ↻ to save. "0" indicates to turn off blending valve. It is relevant to user program set on page 8. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	1.5 (Kgm³) 80 (dHm³) 160(FHm³)	0.1-100 1-6000 1-6000	4.6.Set total resin exchange capacity Press ▲ or ▼ to edit, then press ↻ to save.
	N/A	N/A	4.7.Automatically calculate the treated water capacity which is not editable.
 The next step same as SOF-1	15	0-999min	6.Set Backwash time Press ▲ or ▼ to edit, then press ↻ to save.
	N/A	N/A	7.Display for SOF-3

OPERATION AND SETTING

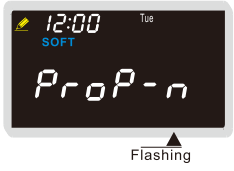
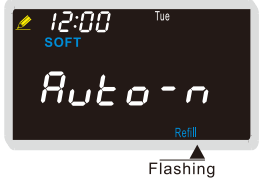
6.4 SOF-4

Display	Default	Range	Description
	N/A	N/A	1.Enter SOF-4
	04	0-99	2.Set Override day Press ▲ or ▼ to edit, then press ↻ to save. If set 0 day,the valve only can be initated into regeneration by volume capacity. ⓘ It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	02:00	0:00-23:59	3.Set regeneration time Press ▲ or ▼ to edit, then press ↻ to save. ⓘ It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	N	N Y	4.Set treated water capacity N-manual input the treated water capacity. Y-controller auto calculate the treated water capacity. Press ▲ or ▼ to edit, then press ↻ to save.
	2.0	0.1-99.9	5.Manual input the treated water capacity press ▲ or ▼ to edit, then press ↻ to save.
	PPM	PPM dH FH	4.1.Set hardness unit If choose“Y”. press ▲ or ▼ to edit, then press ↻ to save. ⓘ It is relevant to user program set on page 8. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	N/A	N/A	4.2.Set inlet hardness,press ↻ to enter.

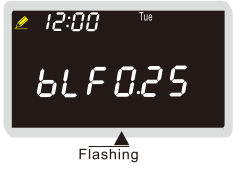
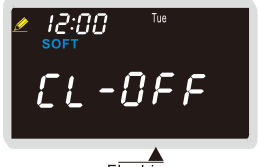
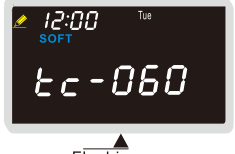
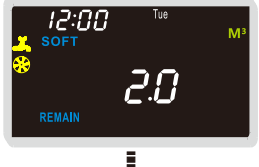
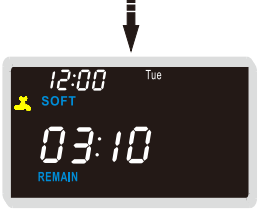
OPERATION AND SETTING

Display	Default	Range	Description
	200(PPM) 20(dH) 30(FH)	1-2500 1-150 1-250	4.3.Set the hardness number of the inlet. Press ▲ or ▼ to edit, then press ↻ to save. It is relevant to user program set on page 8. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	N/A	N/A	4.4.Set outlet hardness,press ↻ to enter.
	0	0-the hardness number of inlet	4.5.Set the hardness number of the outlet. Press ▲ or ▼ to edit, then press ↻ to save. "0" indicates to turn off blending valve. It is relevant to user program set on page 8. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
	1.5 (Kgm³) 80 (dHm³) 160(FHm³)	0.1-100 1-6000 1-6000	4.6.Set total resin exchange capacity Press ▲ or ▼ to edit, then press ↻ to save.
	N/A	N/A	4.7.Display the auto-calculated value This screen is not editable.
	1.15	1.00-1.50	6.Set Reserved Safety Factor Press ▲ or ▼ to edit, then press ↻ to save. Water reserved capacity = Daily average water consuming x Safety factor.
	PoSt	PoSt PrE	7.Set Pre-refill or Post-refill Press ▲ or ▼ to edit, then press ↻ to save. Pre refill should be chosen for proportional regeneration.

OPERATION AND SETTING

Display	Default	Range	Description
	2	2-9	7.1.Set salt-dissolving time (Pre-refill) Press ▲ or ▼ to edit, then press ↻ to save.
	N	N Y	7.2.Set Proportional regeneration. Press ▲ or ▼ to edit, then press ↻ to save. Y - Proportional regeneration turn on. N - Proportional regeneration turn off. **If choose"Y",when finish the set for step 8, the program will jump to 9.1 setting.** When it is proportion regeneration,refill time is decided by the actual water usage. ※Please check detailed information on **Page 04 Feature 5.2.**
	N/A	0-999min	8.Set time for each regeneration step Press ▲ or ▼ to edit, then press ↻ to confirm one by one. **The cycle step :Backwash,Brine,and Rinse same as SOF-1.**
	N	N Y	9.Set Auto-refill Press ▲ or ▼ to edit, then press ↻ to save. If choose "N",refill time is input manually,"Y"indicates the refill time automatically calculated by control valve. If proportion regeneration is turned on, it is defaulted refill time is calculated automatically. Then go to step 9.1.
	12	0-999min	10.Set refill time (When choose"N") Press ▲ or ▼ to edit, then press ↻ to save. Then return to service position.
	160	0-999	9.1.Set salt consuming per liter resin If choose "Y". Press ▲ or ▼ to edit, then press ↻ to save.
	015	0-999	9.2.Set total resin amount (L) Press ▲ or ▼ to edit, then press ↻ to save.

OPERATION AND SETTING

Display	Default	Range	Description
 Flashing	0.25	0.125 0.25 0.5	9.3.Set BLFC (gpm) Press ▲ or ▼ to edit, then press ↻ to save.
	N/A	0-999	9.4.Display the Auto refill time This data is calculated by the control valve,and it is not editable.Press ↻ to return to service position.
 Flashing	OFF	OFF ON	11.Set chlorine producer Press ▲ or ▼ to edit, then press ↻ to save. OFF - the chlorine producer turn off . ON - the chlorine producer turn on. ⓘ The function is only applied to K075P valve.
 Flashing	1min	1- max brine draw time	11.1.Set chlorine producing time If choose "ON", press ▲ or ▼ to edit,press ↻ to save and return to the service position. It will not be shown if set chlorine producer to be off.
 	N/A	N/A	12.Display for SOF-4 When the override days reaches 0 day, the display panel will show the time to regenerate for the next time.

OPERATION AND SETTING

7. OEM Filter valve set

Display	Default	Range	Description
	N/A	N/A	1.Enter Simultaneously press + and hold for 3 seconds to enter.Press to input password.
 Flashing	0000	0000-9999	2.Input password It is same as OEM program set.
 Flashing	04	1-99	3.Set Override day Press or to edit, then press to save. It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
 Flashing	02:00	0:00-23:59	4.Set Regeneration time Press or to edit, then press to save. It is relevant to user program set on page 7. There is no need to set again.If the setting numbers are modified here for any reason, same change will be made in user program set.
 Flashing	15min	0-999min	5.Set Backwash time Press or to edit, then press to save.
 Flashing	10	0-999min	6.Set Rinse time Press or to edit, then press to save and return to service position.

OPERATION AND SETTING

Display	Default	Range	Description
	N/A	N/A	7.Display for filter valve When the override days reaches 0 day, the display panel will show the time to regenerate for the next time.

OPERATION AND SETTING

8. Query Information

8.1 Query basic information

In service position, press for 3 seconds to enter and query. Then press to check the next item.

Check the valve regeneration mode

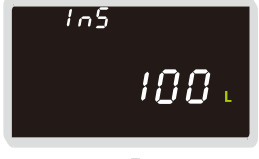
Check the valve with downflow or upflow

Check the remaining days for maintanence

Return to service position

8.2 Query Historic data

In service position, press for 3 seconds to enter and query. Then press to check the next item.



Current flow(L/min).

Peak flow(L/min).

OPERATION AND SETTING

Total flow after installation.

Total using time after installation.

Total regeneration times after installation.

Total time interval between the last 2 regeneration.

Time from the last regeneration.

Remaining days to the next maintenance.
Press and hold for 10 seconds reset maintenance time.

Return to service position

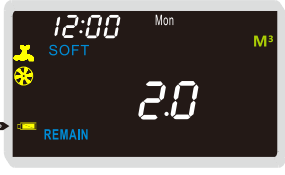
OPERATION AND SETTING

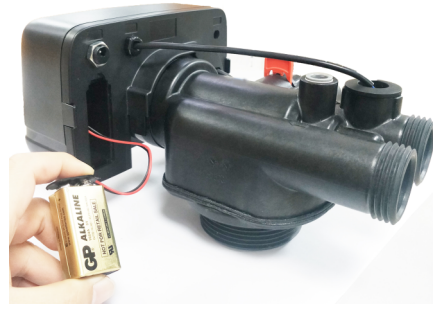
9. Backup battery(Only apply to K075P valve)

Please open the battery cover and connect the battery with the connectors after configuration.

Battery mode 6LR619V is applied to the backup battery.

Battery icon

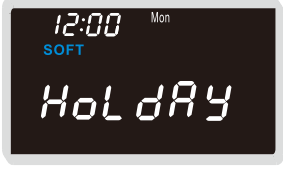




For extending the battery lifetime,we kindly suggest that you should connect the battery after the control valve is all well set.

10.Holiday mode

Holiday mode is only available for SOF3 & SOF4. In service position, press ▼ for three seconds to turn on holiday mode. Press ▼ for three seconds to cancel it.



1) Holiday mode turn-on:In service position, press ▼ for three seconds to turn on holiday mode. Total water usage < 18L, Current flow < 6L/min,treat the day as the 1st day,then enter into holiday mode cycle.

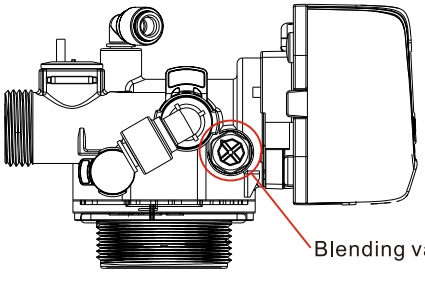
2) Holiday mode cycle:Initiate full regeneration for the first time on the fifth day.Only back wash and rapid rinse for each four days after the first regeneration.

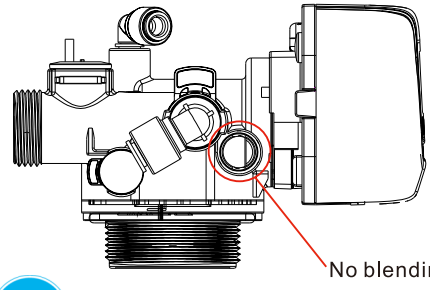
3) Holiday mode automatically turn-off:Total water usage ≥18L or Current flow ≥6L/min.

11.Blending valve

Blending valve is optional. The valve body is different with blending valve and without it. Please check the below pictures.

Blending valve is defaulted to be off. If need to adjust the water hardness, please open blending valve and it is only can be done by the professional person. The water hardness should be re-tested.

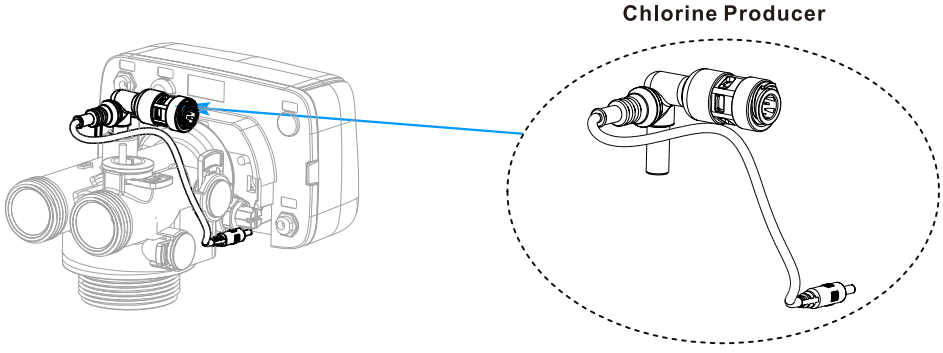




OPERATION AND SETTING

12.Optional chlorine producer(Only apply to K075P valve)

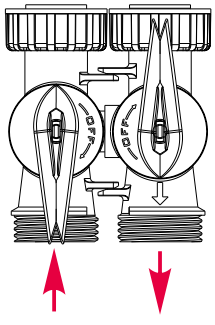
Chlorine producer will work in brine draw. Chlorine gas can sterilize the resin and keep it effective.



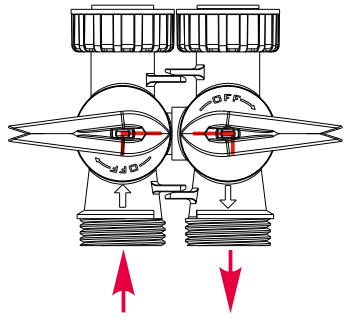
13.Bypass valve

Rotate the handles to adjust the bypass position.

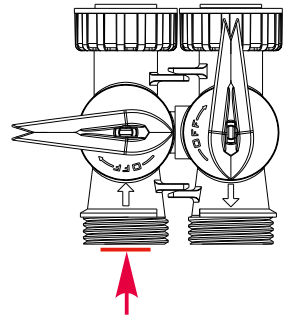
Service position



Bypass position



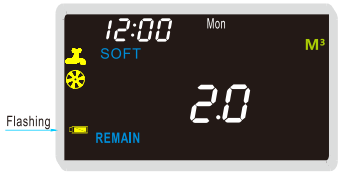
Shut-off position



REMINDING AND CHECKING

1. Backup battery

Backup battery will keep the CPU and flow meter working as normal.



Battery power

When the battery power is low ,the icon" " is flashing to remind the user to replace the battery.

Power supply on /off

If the valve without battery and power supply off happen during the regeneration,the valve will keep in the current position.The valve will continue to regenerate after calibration when the power supply on.No need to calibrate if the valve is in service position.

If the valve with battery, the valve will remind the user in sound and words. The screen will power off in 5 seconds. However, the buzzer will keep alarm. The user can cancel the buzzer to press .

2. Maintanence reminding

When it is time for maintenance,the display will automatically remind the user to call for maintanence.

Press cancel the alarming and return to service position.

3. Reminder for low salt

When lack of salt, the screen will show as following:

1)The screen will alternately show service position and reminding information. The buzzer will alarm in the period of 19:30~22:30 to remind the user to add the salt on time.

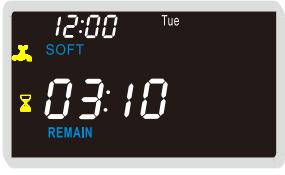
2)The user can short press to cancel the buzzer alarm manually.But salt adding reminding can't be removed.

3)Salt adding reminding won't disappear until the salt is added to be higher than the reserved level.

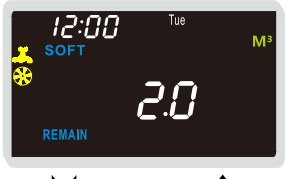
REMINDING AND CHECKING

4. Queued regeneration

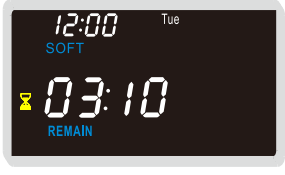
In service position, press initiate a queued regeneration, then the icon "⌛" will flash.The control valve will regenerate at the preset regeneration time of today. Press again to cancel the queued regeneration.



Display for SOF1,SOF2,SOF4.



Alternating



For SOF3, remain water capacity and remain time alternating display until whichever zeros first.

5. Manual initiate a regeneration

In service position, press and hold for 5 seconds, the control valve will initiate an immediate regeneration. Press again will switch to the next cycle step.

6. System errors automatically detect and remind

The control valve will automatically display and alarm any detected system errors. The detailed information is as follows.

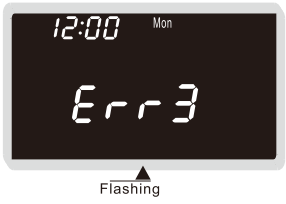
Flashing

a. Can not locate service position

Flashing

b. Optical sensor does not have the signal

REMINDING AND CHECKING



c. Electric motor stalled or locked

d. Wrong service position

7. Reset

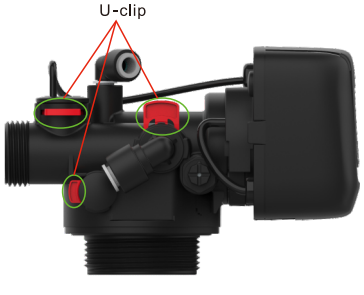
If any Error alarming occurs on the screen,simultaneously press ▲ + ✿ and hold for 3 seconds to reset,if success the error alarm will disappear and it will return to the position where the error occurs.Otherswise call the professional person for more help.

8. Restore factory settings

When the valve is power-off, press ◷ and power on the valve. The display will show as picture.

Release ◷, the parameters of the valve will be restored back to defaulted setting.

9. Special reminder



1.As the picture, three U clips can't be pulled out by the user to avoid water leakage caused by improper installation.

2.When assemble the valve on the tank, the most appropriate torque is no more than 35N.M. Need to control by the professional installer.

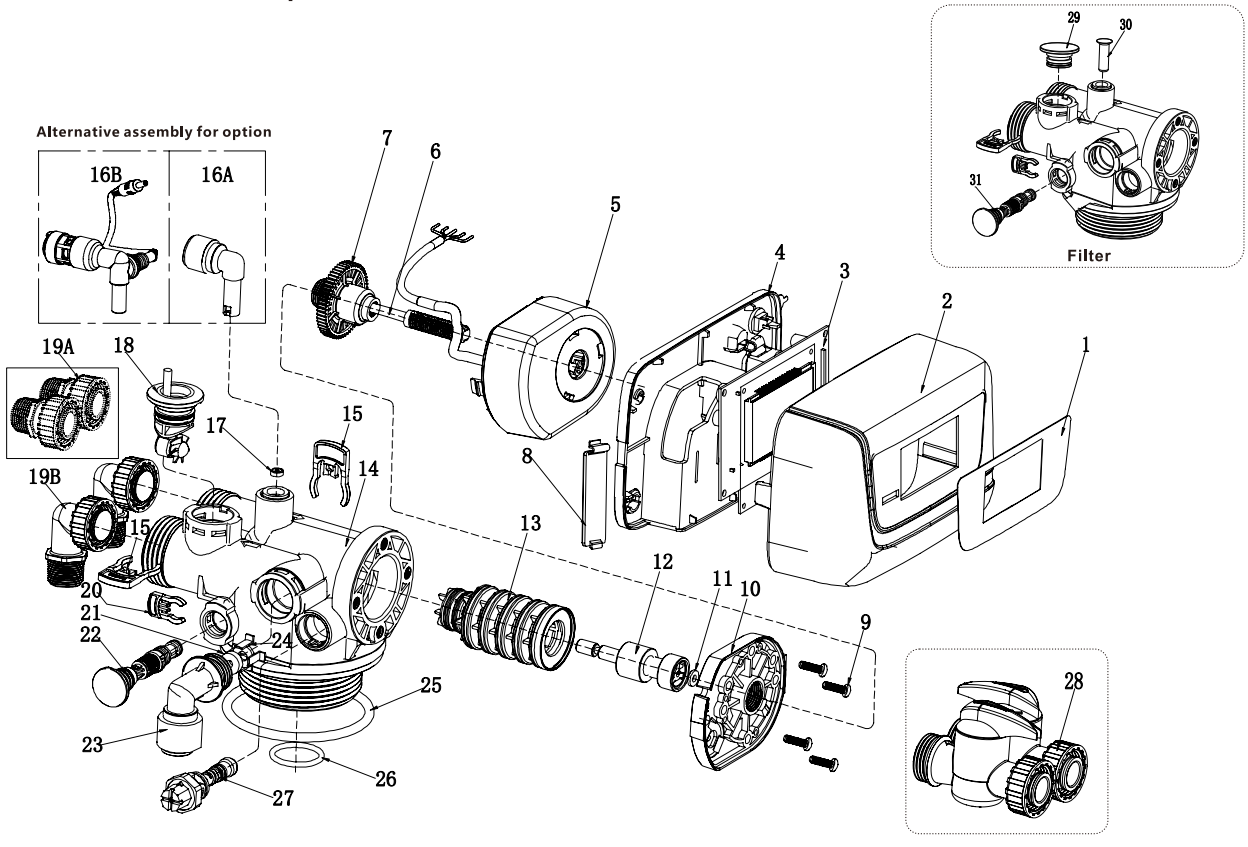
REMINDING AND CHECKING

10.Common Failures

Common Failures	Reason analysis	Solutions
The controller fails to regenerate automatically	1 Disconnected meter cable.	Reconnect the meter cable.
	2 Transformer damaged.	Replace the transformer.
	3 Electronic controller or sensor damaged.	Replace or repair.
The treated water hardness is higher than setting	1 Bypass valve is not in service position.	Adjust the bypass valve to service position.
	2 The inlet and outlet water pipe are installed in reverse.	Install the water inlet and water outlet pipe correctly.
	3 The raw water hardness is higher than setting.	Reset the inlet hardness.
	4 Resin is polluted and invalid.	Contact with the agency and change the resin.
	5 Brine concentration or quantity.	Keep brine tank full of salt at all times. Clean it yearly. If using a salt grid plate, insure refill water is over it .
Softener fails to brine draw	1 Plugged drain line or BLFC.	Clean drain line and flow control.
	2 Injector plugged.	Clean injector, replace injector screen
	3 No water in the brine tank.	Check for restriction in BLFC. Ensure Safety float is not stuck
Salty taste for treated water	1 Low pressure for inlet water.	Install booster pump to increase pressure of inlet water
	2 Drainage pipeline is blocked.	Clean up the jams.
Continuous flow to drain	1 Internal control leak.	Call dealer. Clean valve, rebuild unit.
	2 Piston jammed in brine.	

MAIN COMPONENTS

- **Control valve components**



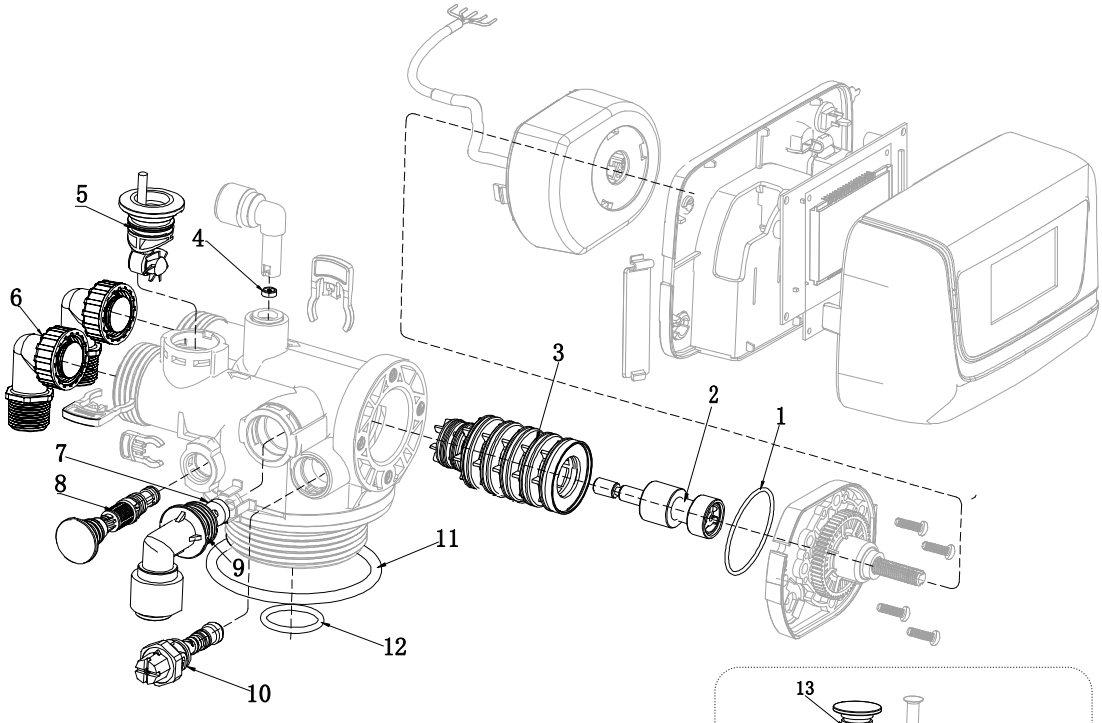
Item	Part No	Description	Quantity
1	1260641	Front Label	1
2	1260617	Front Cover	1
3	1607260	PCB Assembly	1
4	1260616	Bracket	1
5	F3021	Driver Assembly	1
6	Z9013	Screw Stem Assembly	1
7	X0001	Gear Assembly	1
8	1260103	Battery Box Cover	1
9	1002066	Screw	4
10	F3025	End Plug Assembly	1
11	1256233	Washer	1
12	N4008	Piston Assembly(UF)	1
	N4009	Piston Assembly(DF)	1
13	N4007	Seals/Spacer Assembly(UF)	1
	N4014	Seals/Spacer Assembly(dF)	1
14	※	Valve Body Assembly	1
15	1360205	U-clip	2
16 A	N4010	Elbow connector for brine line	1
16 B	N2016	Elbow connector with chlorine producer for brine line	1
17	※	B.L.F.C Button	1

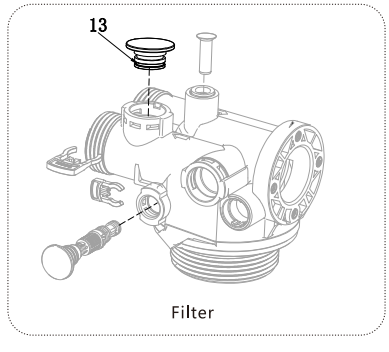
Item	Part No	Description	Quantity
18	N4013	Flow Meter Assembly	1
19	※	Straight or Elbow QC Assembly	2
20	1260611	U-clip	1
21	※	D.L.F.C Button	1
22	※	Injector Assembly	1
23	N3043	3/8" Elbow QC	1
24	1360204	D.L.F.C. Button Retainer	1
25	1001007	O-ring	1
26	1001102	O-ring	1
27	N4011	Blending Valve Assembly	1
28	D1003	Bypass Valve Assembly	1
29	W1026	Plug Assembly	1
30	1256141	Plug	1
31	N4015	Injector Plug Assembly	1

※For more options

MAIN COMPONENTS

- **Maintainanence components**





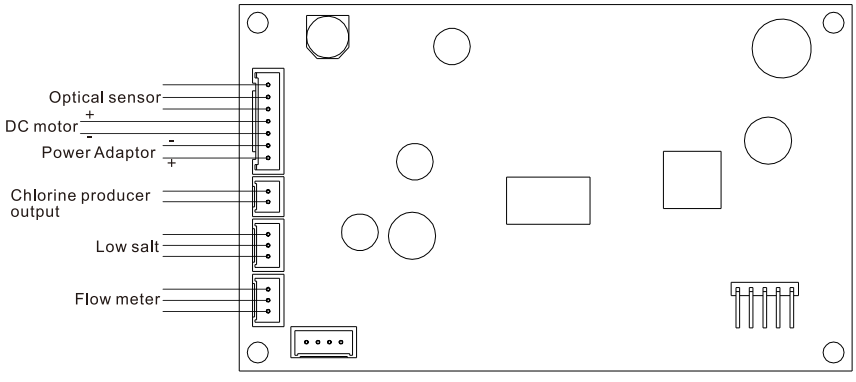
Filter

Item	Part No	Description	Quantity
1	1001072	O Ring For End Plug Assembly	1
2	N4008	Piston Assembly(UF)	1
	N4009	Piston Assembly(DF)	1
3	N4007	Seals/Spacer Assembly	1
4	※	B.L.F.C Button	1
5	1001165	O Ring For Flow Meter	1
6	1001013	O Ring For QC Assembly	1
7	※	D.L.F.C Button	1
8	※	Injector Assembly	1
9	1001056	O Ring For Elbow QC	1
10	1001147	O Ring For Blending Valve	1
11	1001007	O Ring For Valve Base	1
12	1001102	O Ring For Distributor Pilot	1
13	1001056	O Ring For Plug	1

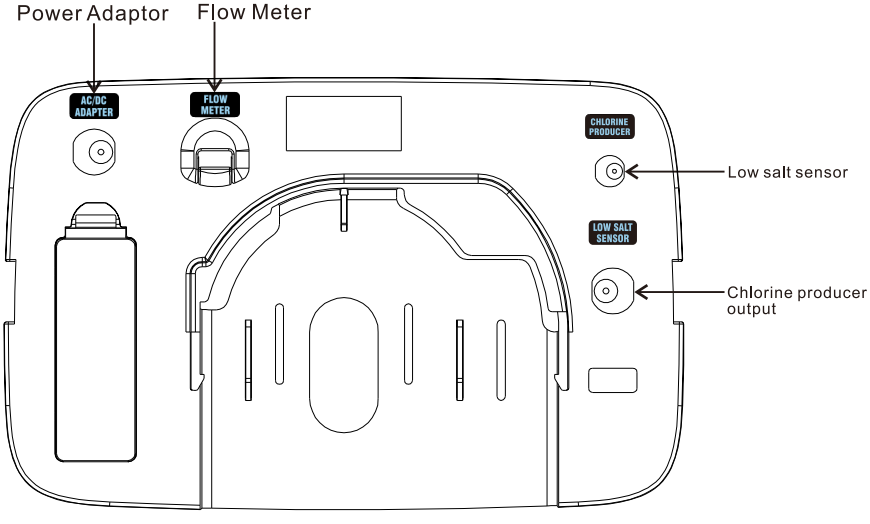
※For more options

MAIN COMPONENTS

- **PCB Wiring**

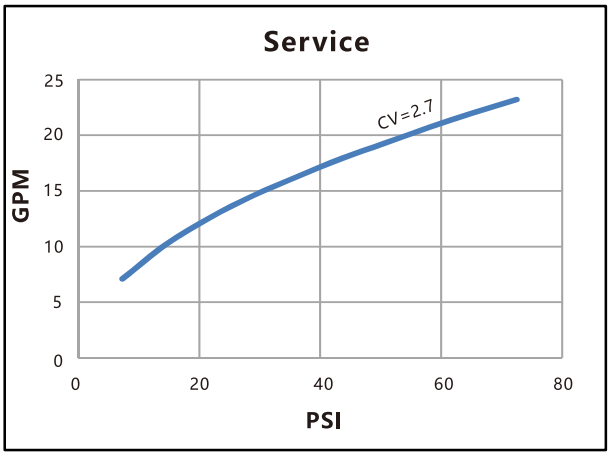


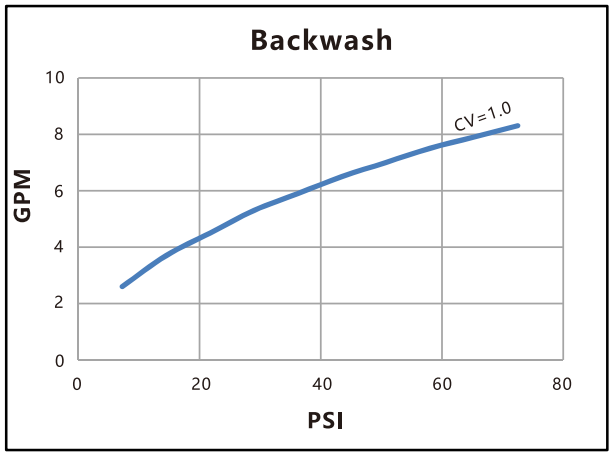
- **Quick access to different connectors on bottom bracket**

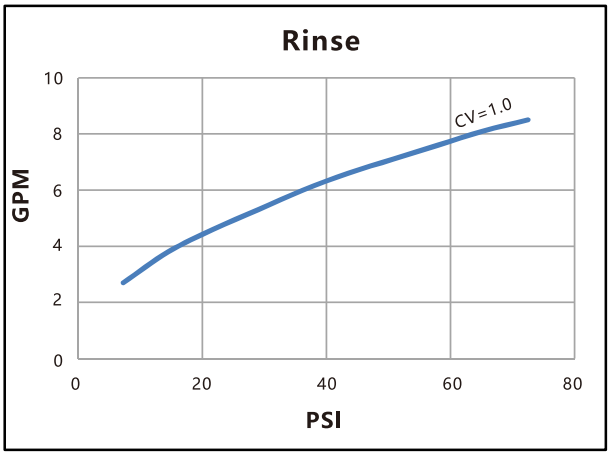


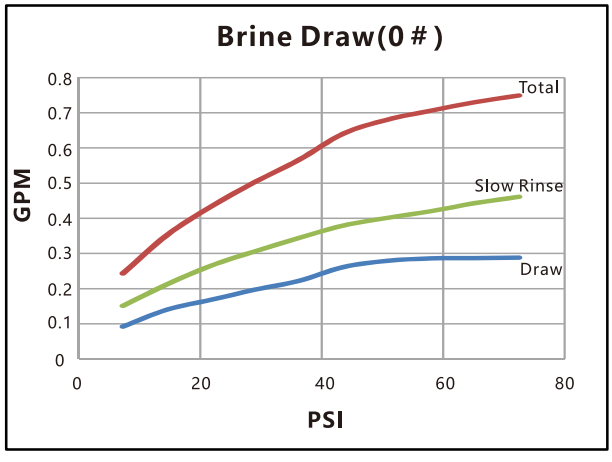
Chlorine producer and Low salt sensor only apply to K075P valve

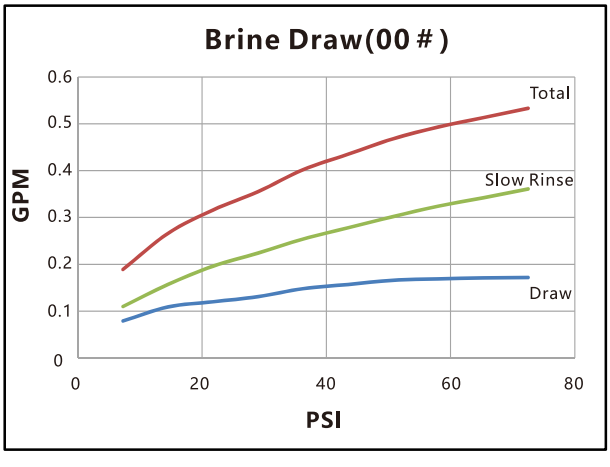
PERFORMANCE CURVE

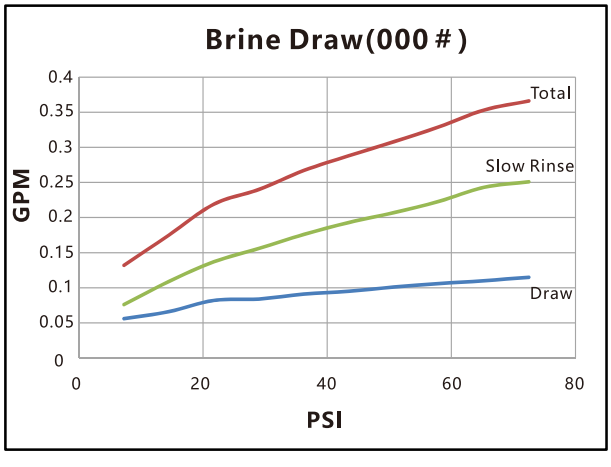
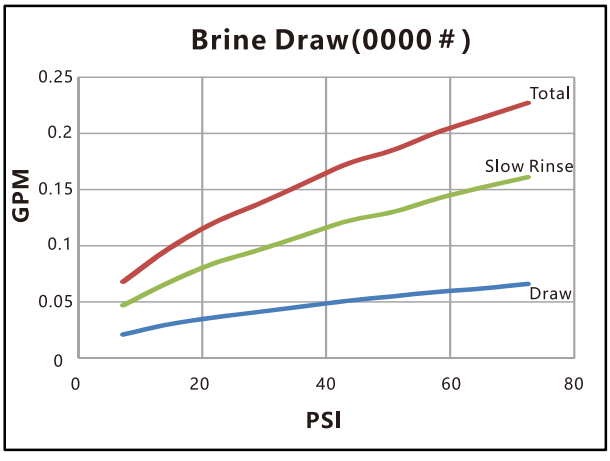
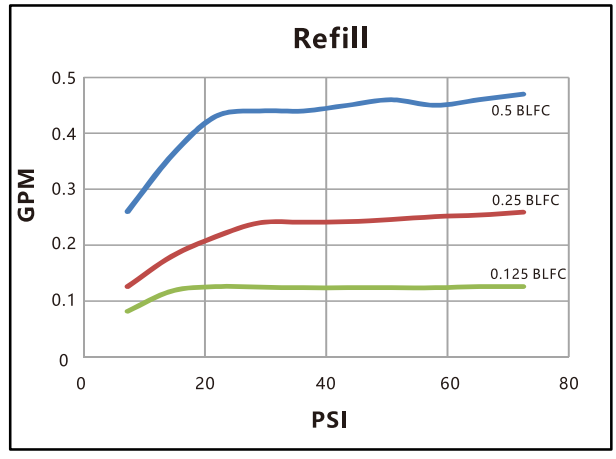












PERFORMANCE CURVE