



China Patent No.ZL201720650460.8

Multi-functional Flow Control Valve for Water Treatment Systems

56603(Old Model No.: F67N)



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Rev.A.1807

User Manual



Please read this manual in details
before using the valve and keep it properly
in order to consult in the future.

0WRX.466.707

Before the valve put into use, please fill in the below content so as to help us to refer in the future.

Filter System Configuration

Tank Size: Dia. _____ mm, Height _____ mm

Refilled Filter Materials _____ L;

Granularity of Filter Materials _____ mm

Control Valve Model _____; Number _____

Pressure of Inlet Water _____ MPa;

Turbidity of Inlet Water _____ FTU.

Water Source: Ground-water ; Filtered Ground-water ;

Tap Water ; Other _____.

Parameter Set

Parameter	Unit	Factory Default	Actual Value
Time of Day	h:m	Time of Day	
Rinsing Time	h:m	02 : 00	
Continuous Water Time	min	00	
Peak Flow Rate for Close	m ³ /h	00	
Water Treatment Capacity	m ³	10.00	
Flow Rate Unit	/	m ³	
Rinsing Frequency	/	F-00	
Backwash Time	min	2	
Fast Rinse Time	min	3	
Interval Rinsing Days	D	30	
Output Mode	/	b-01	

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Notice

- To ensure normal operation of the valve, please consult with professional installation or repairing personnel before use it.
- If there are any of pipeline engineering and electric works, there must be finished by professional at the time of installation.
- Do not use the control valve with the water that is unsafe or unknown quality.
- Test water periodically to verify that system is performing satisfactorily.
- Do not put the valve near the hot resource, high humidity, corrosive, intense magnetic field or intense vibrations environment. And do not leave it outside.
- Please use this product under the water temperature between 5~50℃ water pressure 0.15~0.6MPa. Failure to use this product under such conditions voids the warranty.
- If the water pressure exceeds 0.6Mpa, a pressure reducing valve must be installed before the water inlet. While, if the water pressure is under 0.15MPa, a booster pump must be installed before the water inlet.
- PPR pipes, corrugated pipes, or UPVC pipes are recommended for pipe installation and aluminum-plastic pipes should be avoided.
- Do not let children touch or play, because carelessness operating may cause the procedure changed.
- When the attached cables or transformer of this product is broken, they must be changed to the one that is from our factory.

1. Product Overview

1.1. Main Application & Applicability

Used for intelligent control in filtering water treatment systems.

Be suitable for Residential filtering system.

1.2. Product Characteristics

☞ Simple structure and reliable sealing

It adopts hermetic head faces with high degree pottery and corrosion resistance for opening and closing. It combines with Service, Close, Backwash, and Fast Rinse.

☞ Manual function

Realize rinsing immediately by pressing “” at any time.

☞ Long outage indicator

If outage overrides 3days, it will always display the time indicator to remind people to reset new time of the day. As show in figure 1-A:

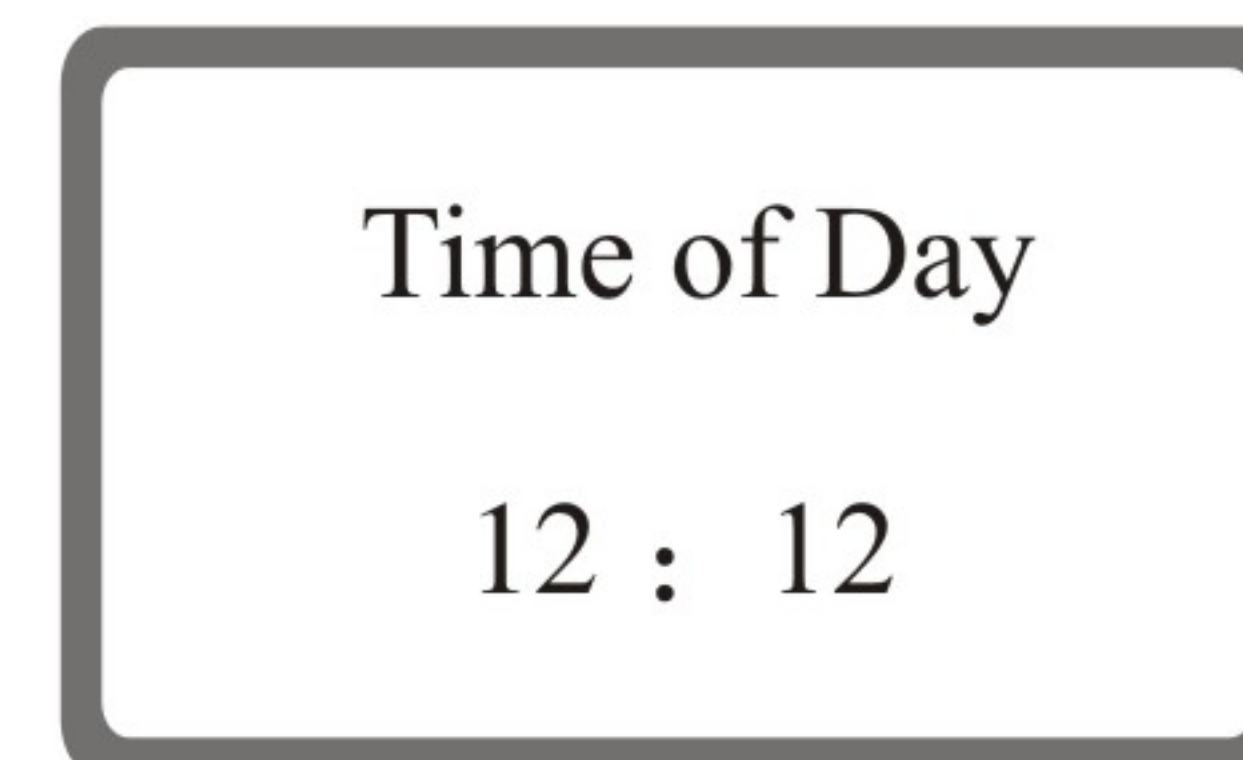


Figure 1-A

☞ LCD Screen Display

It is easier to understand by adopting word to description valve working positions.

Users can choose English or Chinese display interface: reconnect power, press and hold buttons “” and “” for 2 seconds to enter language selection interface.



☞ Leakage protection Function

If the leakage sensor detects there is leakage during service, backwash and fast rinse status, the control valve will turn to close status automatically.

During the service status, if the actual continuous water time is longer than the set value, the control valve will turn to close status automatically. This function is useless if the continuous water time is set 0.

During the service status, if the actual flow rate exceeds the set value, the control valve will turn to close status automatically. This function is useless if the instant flow rate for close is set 0.

☞ Closing Function

During the service status, if the control valve is under unlocked condition, press and hold “” for 5 seconds, it will turn to close status, shut off water to maintain or repair of the subsequent pipeline. Under close status and unlock condition, press and hold “” for 5 seconds, it will turn to service status automatically.



☞ Signal output(provide passive signal to control water pump)

Set the output mode as b-01, refer to the Figure on P15, when the valve is at non-service status, NO is connected with COM; when the valve is at service status, NO is unconnected

with COM.

Set the output mode as b-02, refer to the Figure on P15, when the motor runs, NO is connected with COM; if it is at working status, NO is unconnected with COM.

☞ Buttons lock

No operations to buttons on the controller within 1 minute, button lock indicator lights on which represents buttons are locked. Before operation, press and hold the “” and “” buttons for 5 seconds to unlock. This function can avoid incorrect operation.

☞ WIFI Control Function

Download and install correct APP by scanning QR code. Mobile phone should be matched with control valve. Then users can remotely control and check the control valve by their phone.

☞ Foreground and Background Mode

Foreground mode is suitable for users, it is only used for setting parameters such as time of day, rinsing time, continuous water time and peak flow rate for close etc. Background mode can set regeneration time etc.(Refer to P18 for specific setting methods)

1.3. Service Condition

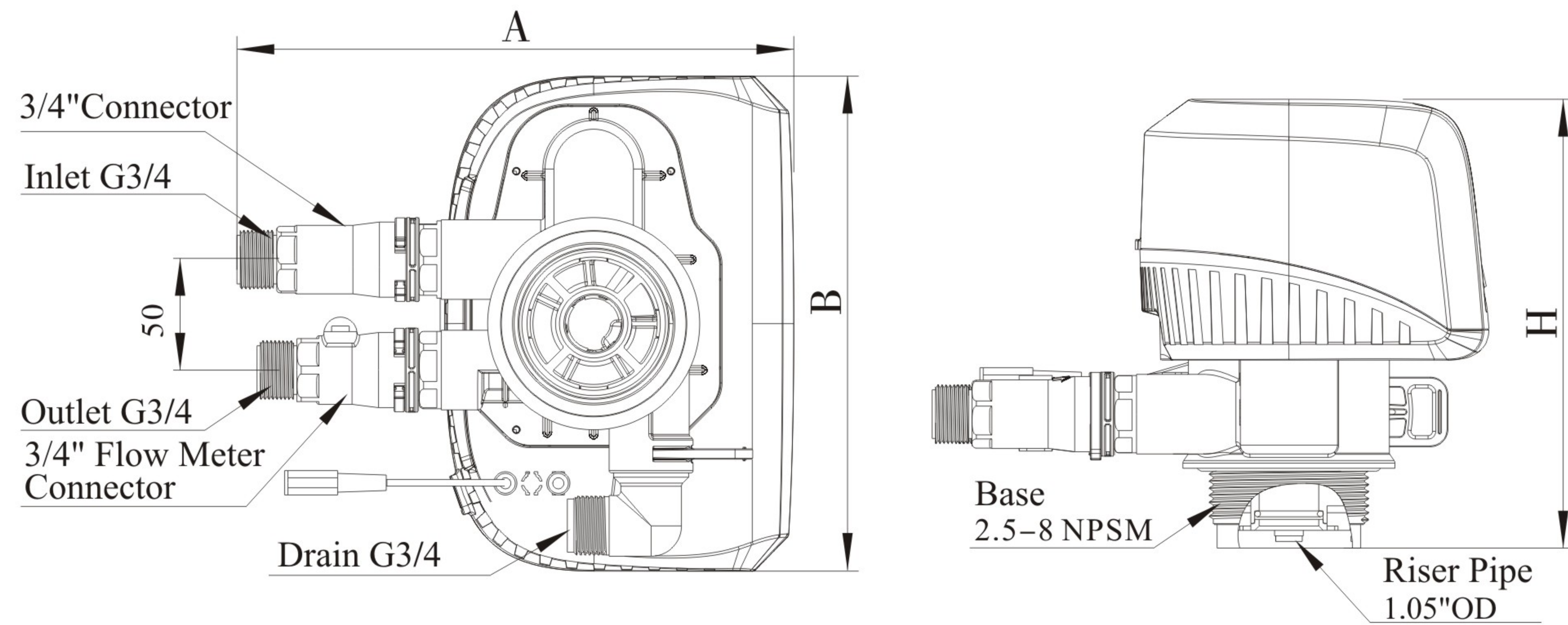
Filter valve should be used under the below conditions:

Item		Requirement
Working conditions	Water pressure	0.15MPa ~ 0.6MPa
	Inlet water temperature	5℃ ~ 50℃
Working environment	Environment temperature	4℃ ~ 50℃
	Relative humidity	≤95% (25℃)
	Electrical facility	AC100 ~ 240V/50 ~ 60Hz
Inlet water quality	Water turbidity	Filter < 20FTU

● When the water turbidity exceeds the conditions, the impurity in the inlet water should be coagulated and precipitated firstly.

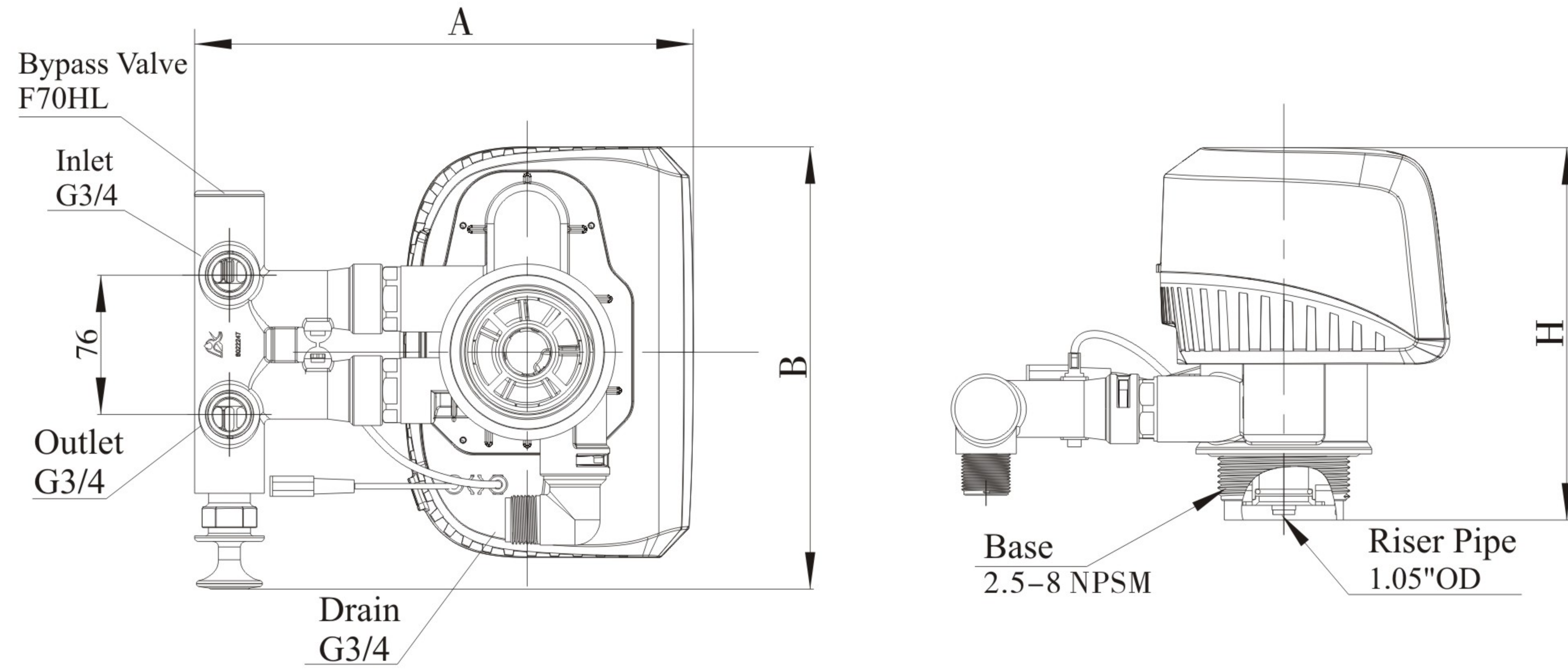
1.4.Product Structure and Technical Parameters

A.Dimension (The appearance is just for reference. It is subjected to the real product.)



F67N with 3/4" Flow Meter

Model	A (mm) max	B (mm) max	H (mm) max	Flow Rate m ³ /h @0.1MPa
F67N with 3/4" Flow Meter	252	224	203	3.0



F67N with F70HL

Model	A (mm) max	B (mm) max	H (mm) max	Flow Rate m ³ /h @0.1MPa
F67N with F70HL	272	241	203	2.5

1.5.Installation(Take F67N with 3/4" flow meter as an example)

A.Installation notice

Before installation, read all those instructions completely. Then obtain all materials and tools needed for installation.

The installation of product, pipes and circuits should be accomplished by professional to ensure the product can operate normally.

Perform installation according to the relative pipeline regulations and the specification of Water Inlet, Water Outlet, and Drain Outlet.

B.Device location

- ①.The control valve should be located closely to drain.
- ②.Ensure the unit is installed in enough space for operating and maintenance.
- ③.The unit should be kept away from the heater, and exposed outdoor. Sunshine or rain will cause the system damage.
- ④.Please avoid installing the system in one acid/alkaline, magnetic or strong vibration circumstance, because above factors will cause the system disorder.
- ⑤.Do not install the filter, drain pipeline in circumstance which temperature may drop below 4℃ or above 50℃.
- ⑥.Install the system in the place where with the minimum loss in case of water leaking.

C.Pipeline connection

①.Install control valve

a.As the Figure1-B shows, select the 26.7mm riser pipe, glue the riser pipe to the bottom strainer and put it into the mineral tank, cut off the exceeding pipe out of tank top opening. Plug the riser tube in case of mineral entering.

b.Fill the mineral to the tank, and the height is accordance with the design code.

c.Remove the tap covering on the central tube and check if the riser tube is on the central of tank.

d.Install the top strainer to the valve and insert

the riser tube into control valve through top strainer and screw tight control valve.

Note:

- The length of riser pipe should be no lower 5mm tank top opening height, and its top end should be rounded to avoid damage of O-ring inside the valve.
- Avoid filling floccules substance together with filter materials fill in the tank. Avoid resin enter resin tank to in case of locking turbine. It will cause the flow rate to display incorrectly.

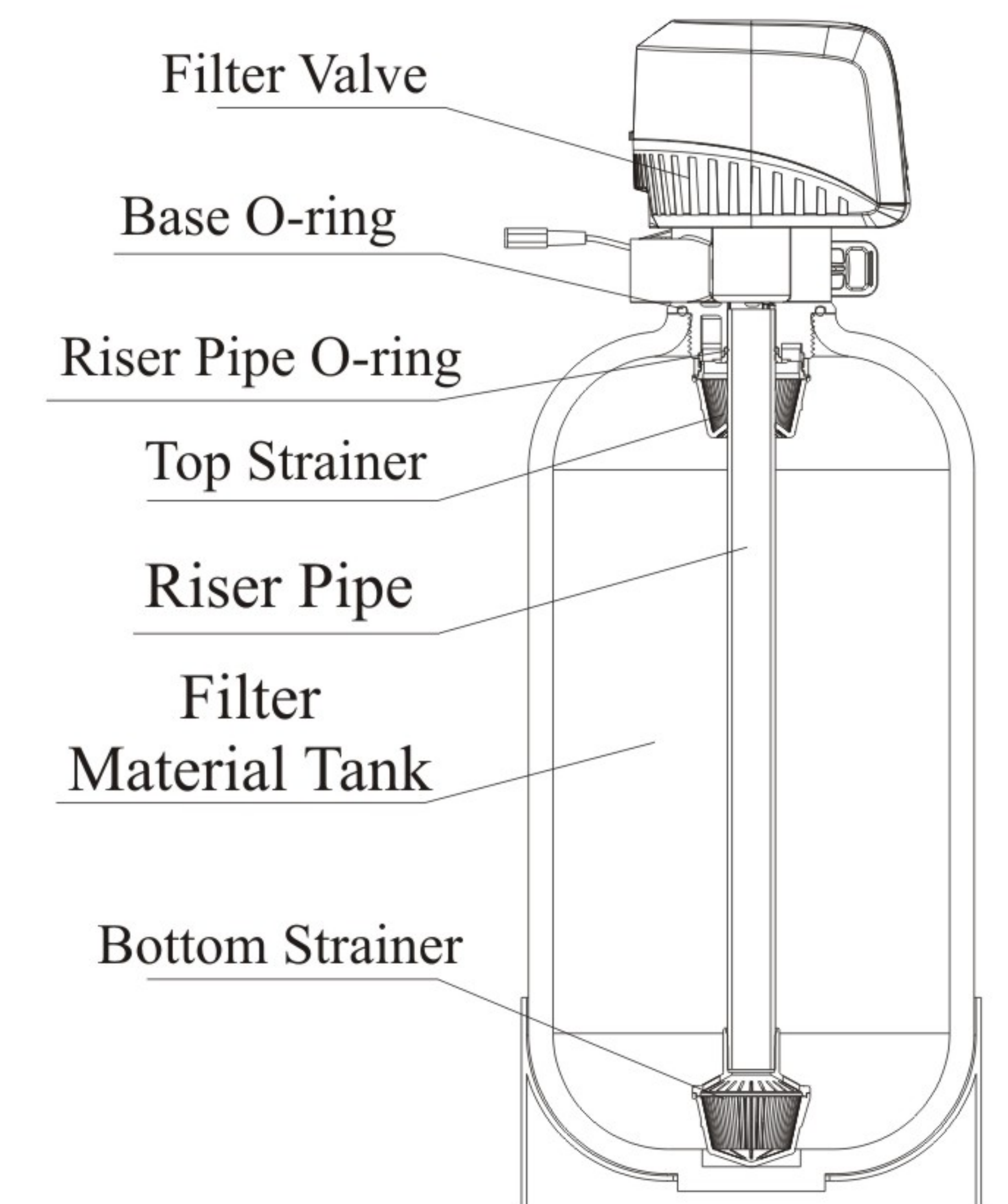


Figure 1-B

● **Avoid O-ring inside control valve falling out while rotating it on the tank**

② **Install animated connector**

As Figure 1-C shows, put the sealing ring in the inlet, and whirl the animated connector into the inlet.

③ **Install flow meter**

As Figure 1-C shows, put the gasket in the outlet and remove the flow meter into the outlet, then insert the probe wire into the flow meter.

④ **Pipeline connection**

a. As the Figure 1-D shows, install a pressure gauge in water inlet.

b. Install valve A, valve B, valve C and valve D in the inlet and outlet pipeline. The valve D is sampling valve.

c. Inlet pipeline should be in parallel with outlet pipeline. Support inlet and outlet pipeline with fixed holder.

Note

● **If making a soldered copper installation, do all sweat soldering before connecting pipes to the valve. Torch heat will damage plastic parts.**

● **When turning threaded pipe fittings onto plastic fitting, use care not to cross thread or broken valve.**

⑤ **Install drain pipeline**

a. As the Figure 1-E shows, insert the flexible drain pipeline into the drain connector, and fix with clamp.

b. Put the gasket into drain connector.

c. Screw the drain connector together with elbow connector.

d. Insert the elbow connector into valve body and fixed with clip.

Note

● **Be sure not connect drain with sewer directly, and leave 15-25mm between them (As the Figure 1-F shows), avoid waste water be absorbing to the water treatment equipment.**

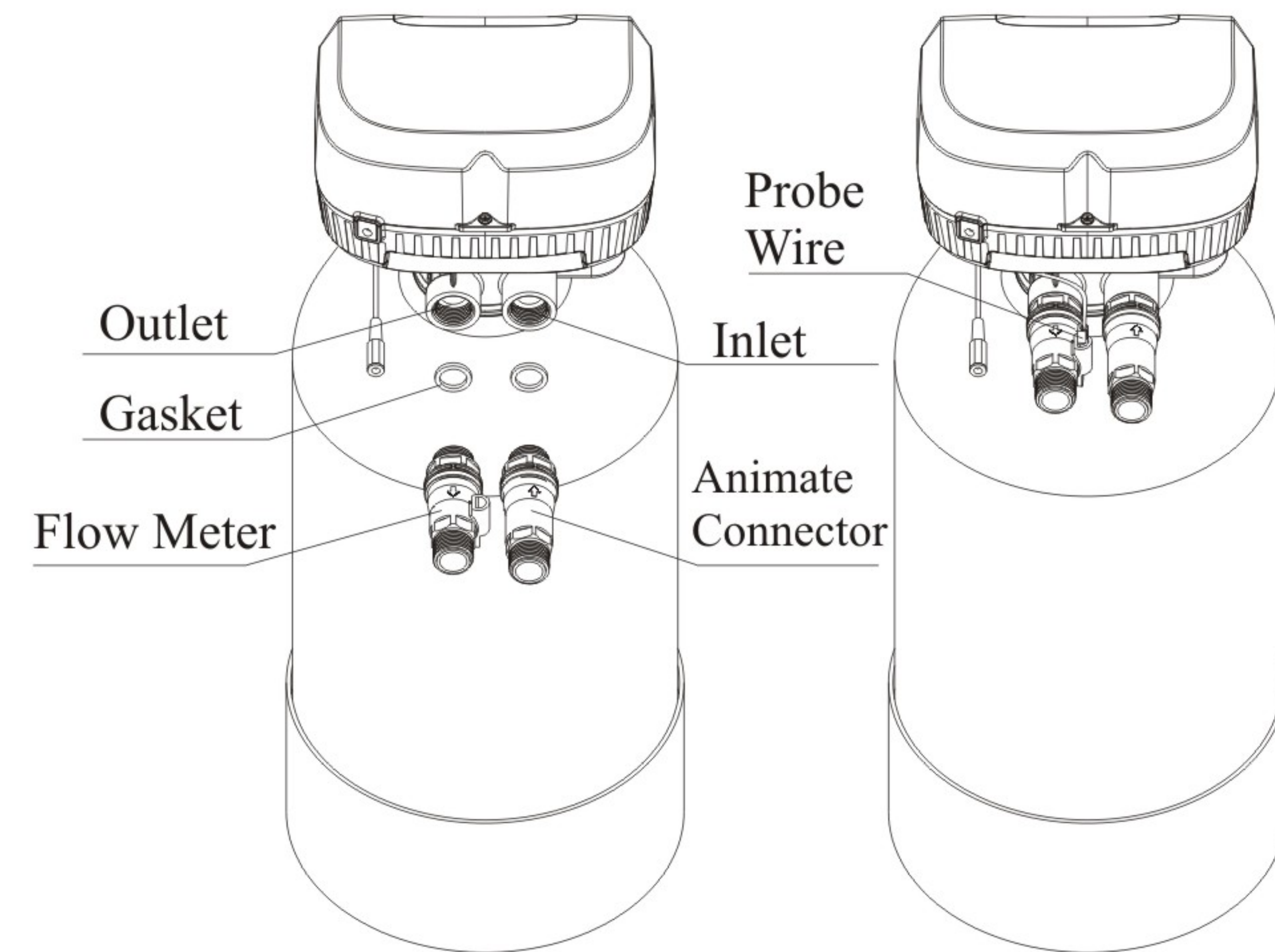


Figure 1-C

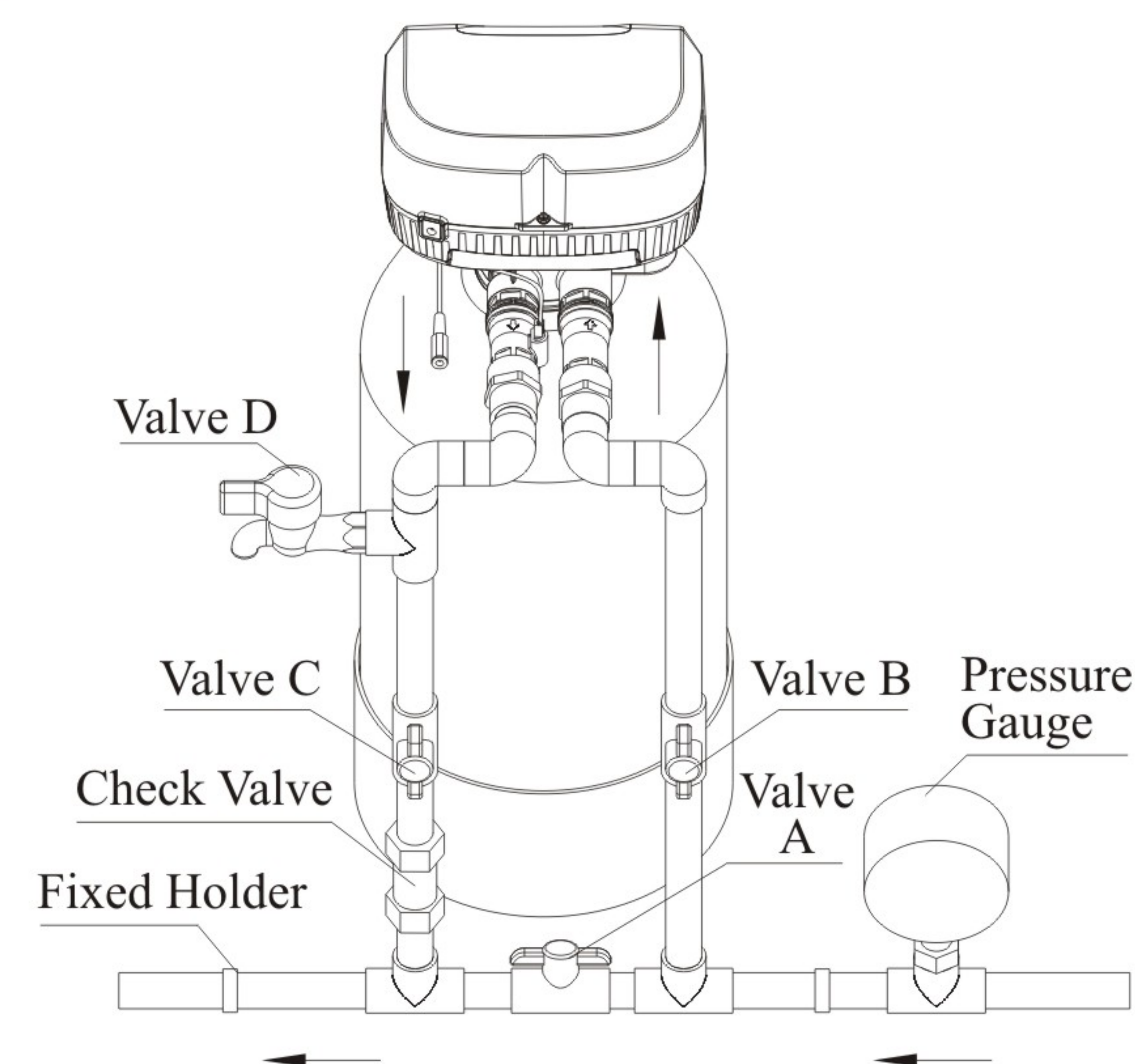


Figure 1-D

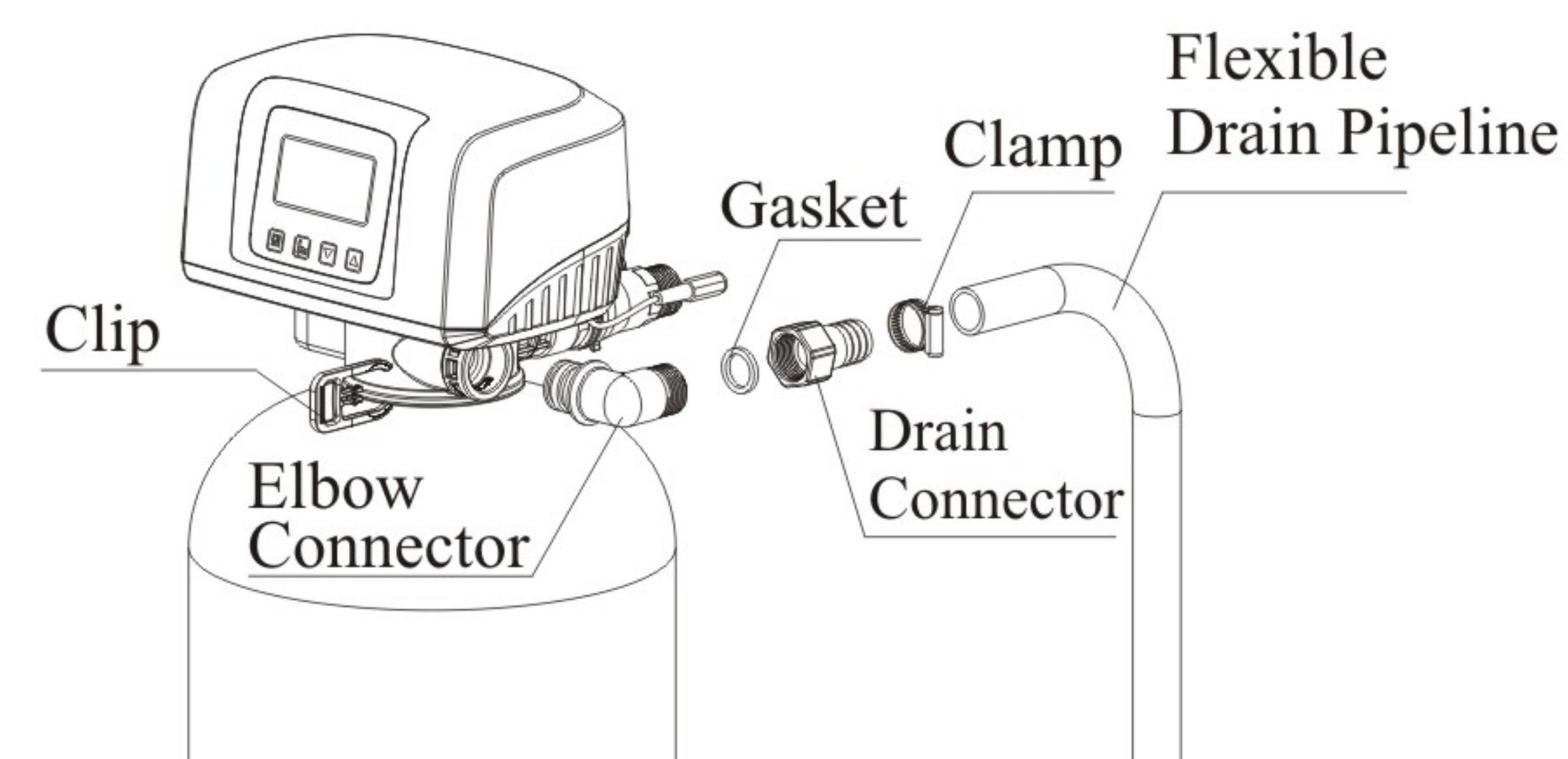


Figure 1-E

⑥ **Install Leakage Sensor**

The installation of leakage sensor can be done by double sticky tape or expanding bolt. The leakage sensor should be located on the ground where is near the control valve and easy to detect leakage.

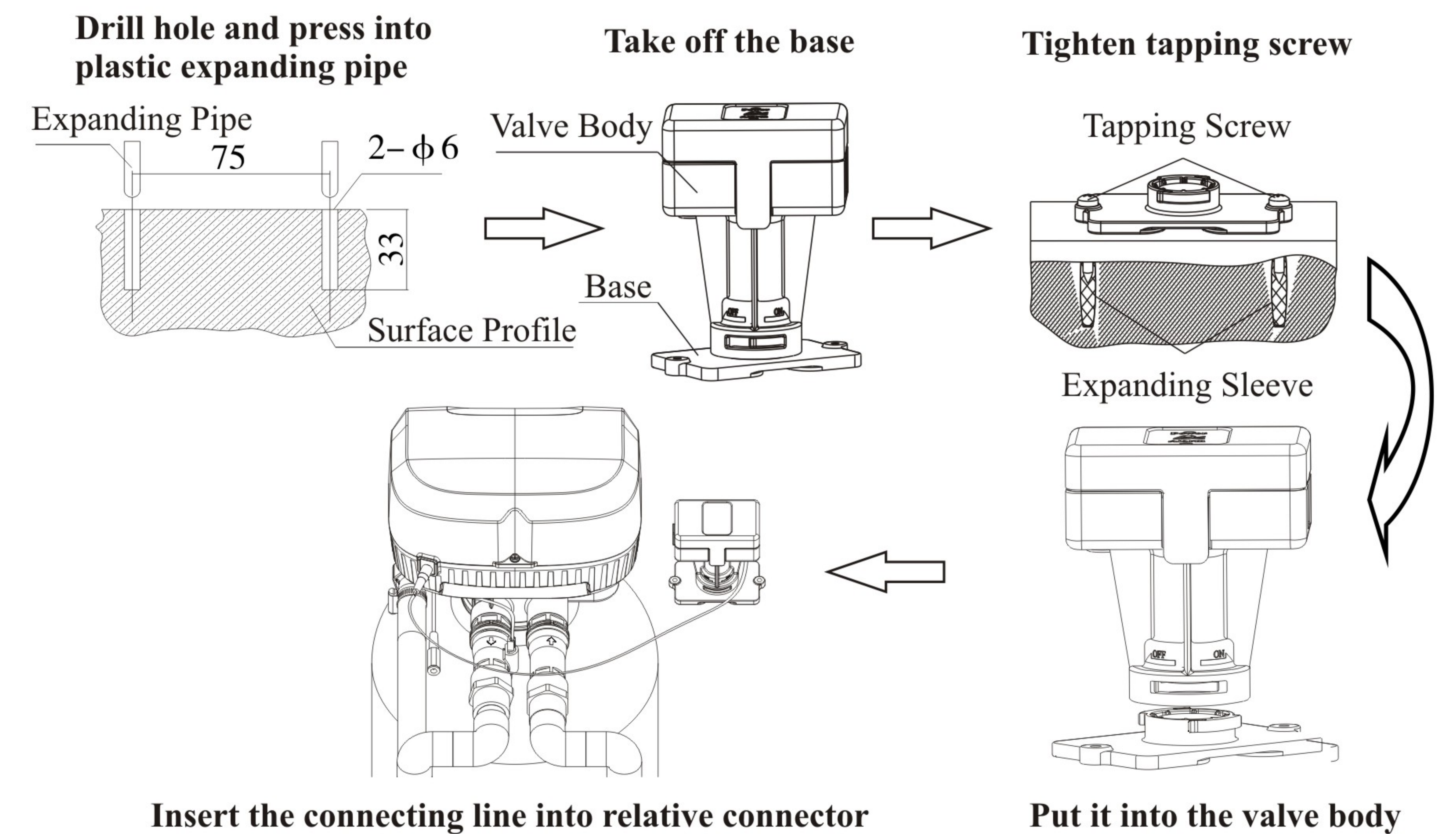
a. **Installation of single point of monitoring (Standard)**

● **Double sticky tape installation**

Tears off the protective layer of the double sticky tape and fix it on the ground.

The sticking position should be dry and clean.

● **Expanding bolt installation**



b. **Installation of multi-points monitoring (Optional)**

The installation of multi-points monitoring refers to the installation of single point of monitoring. Connect the pipeline as follows:

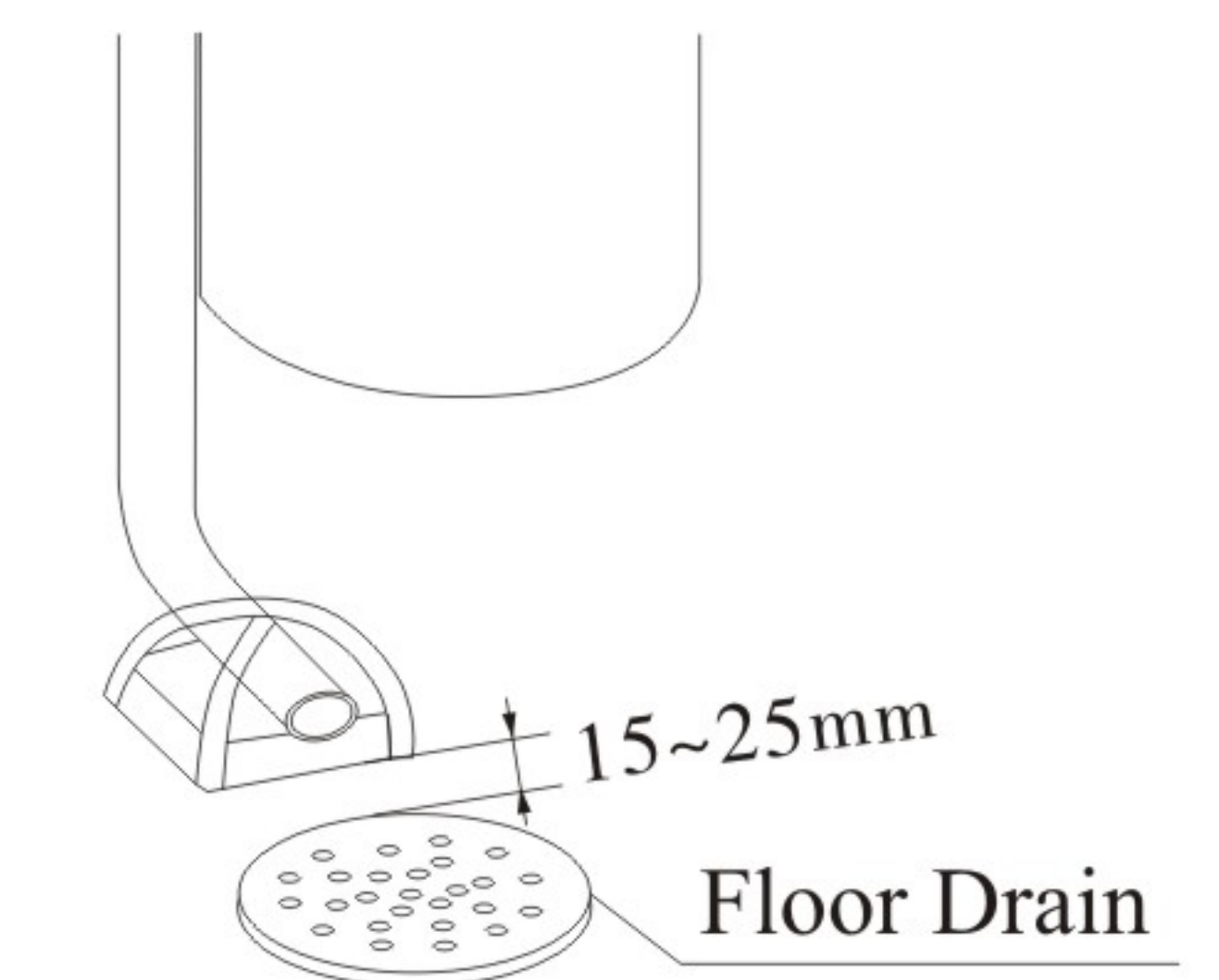
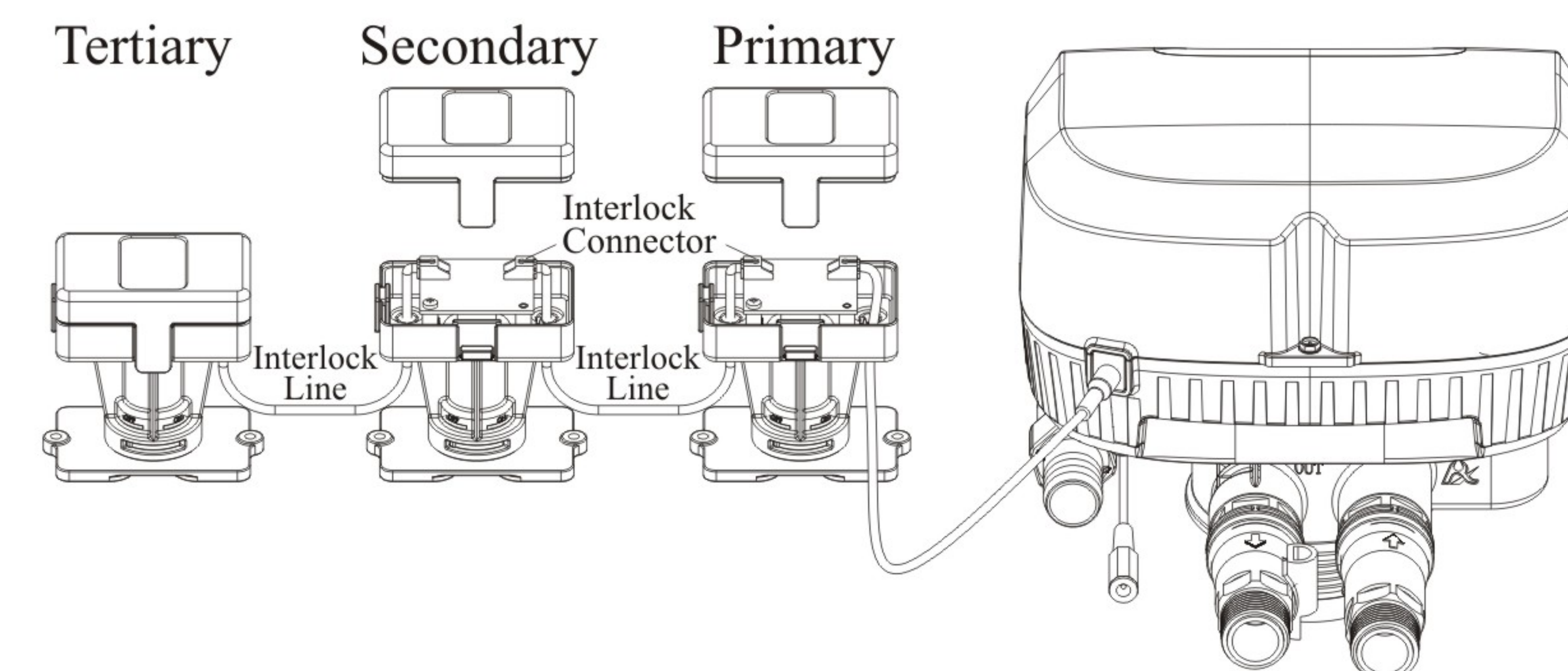
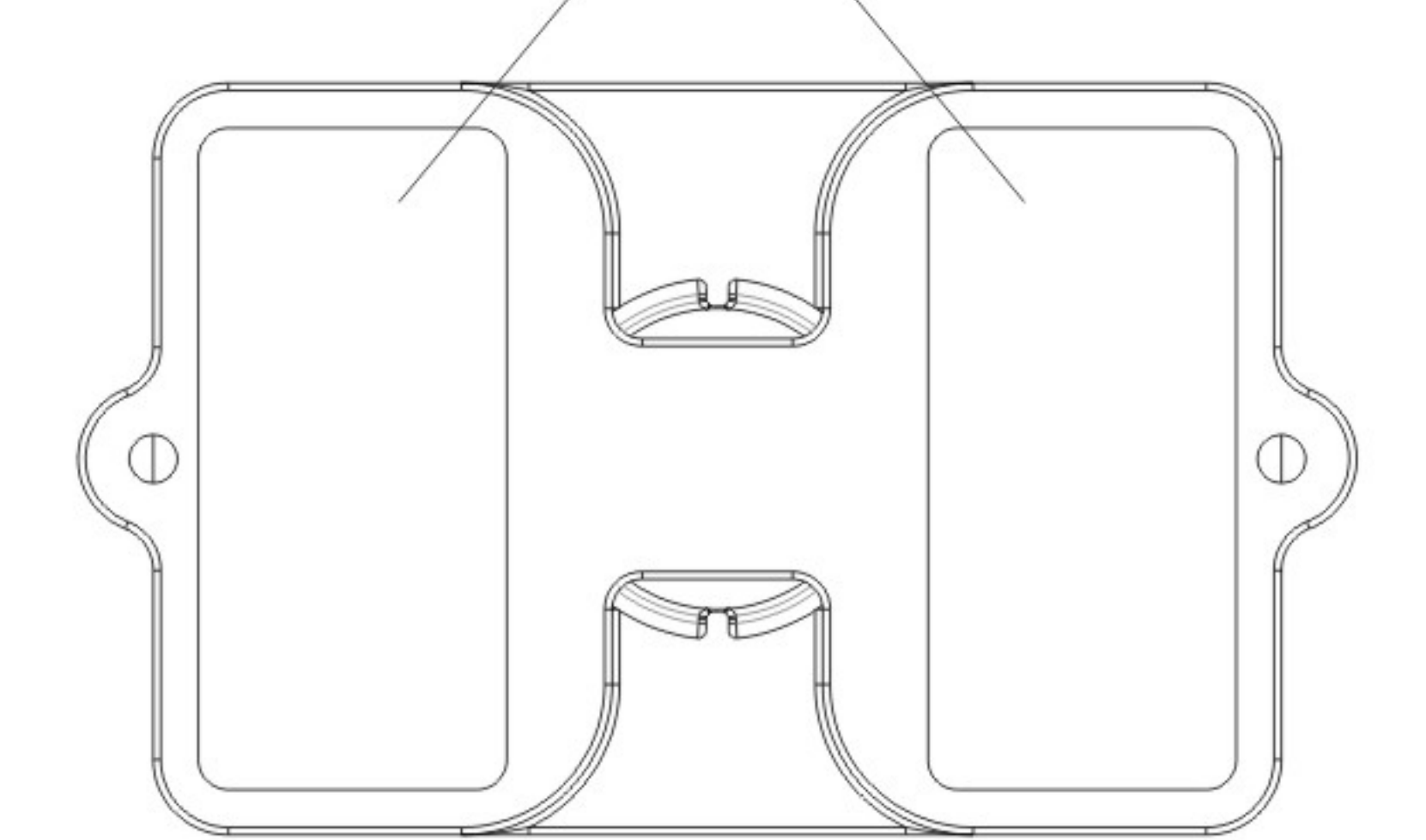



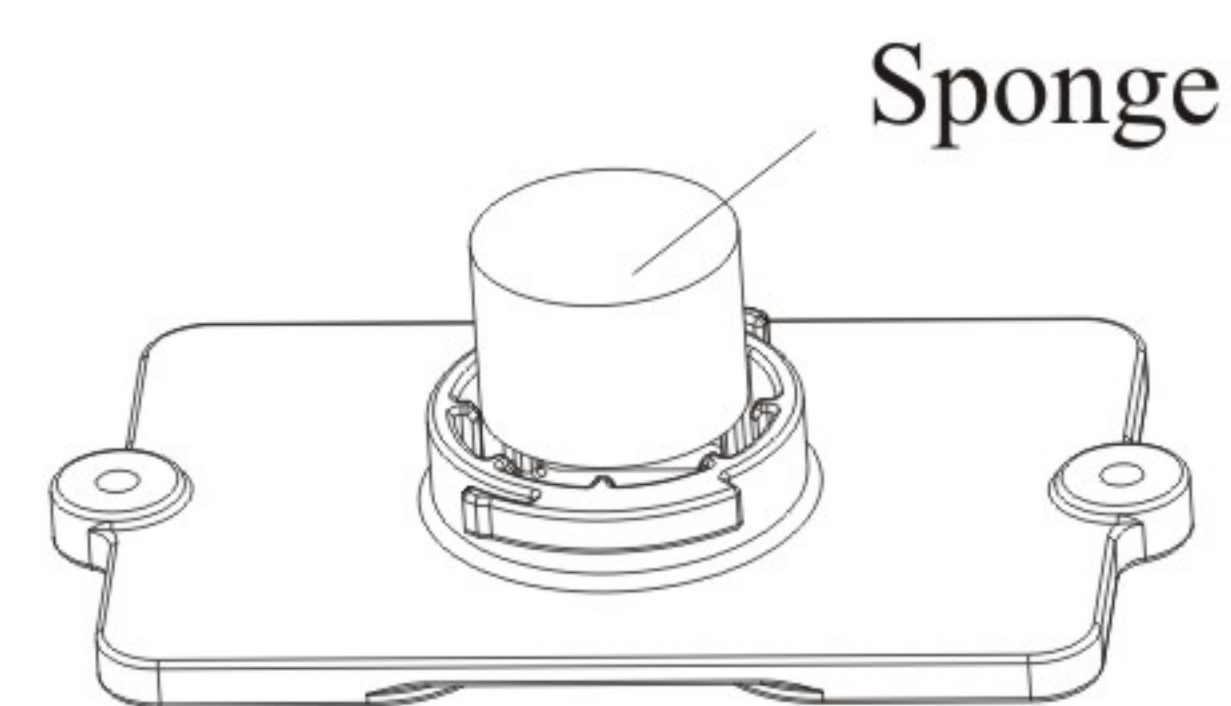
Figure 1-F

Double Sticky Tape



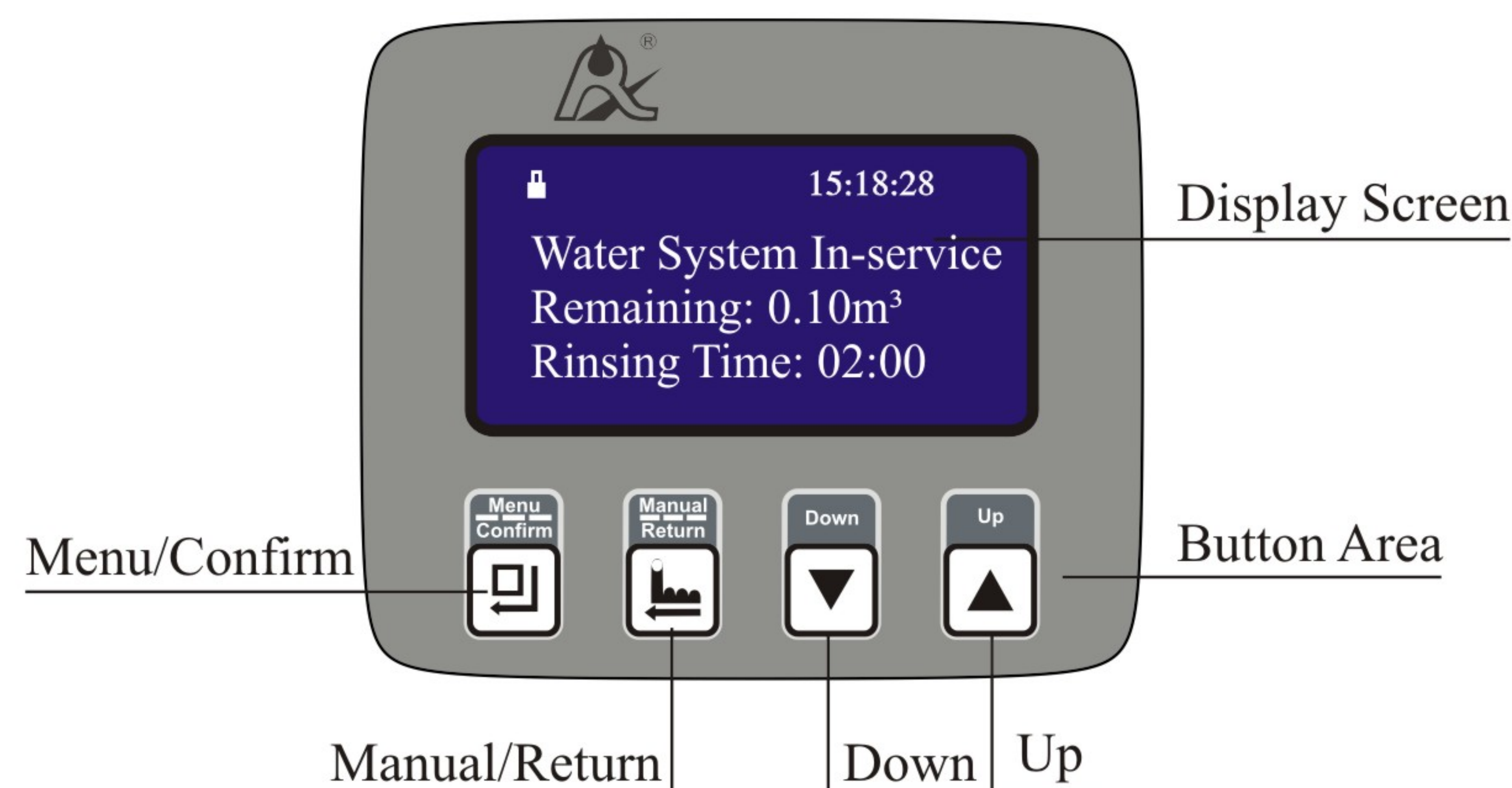
Note

●Control valve will always be closed once the absorbent cotton of leakage sensor absorbs water. It will continue monitoring until change a new cotton and press and hold the button  to reactive the valve.





2.Basic Setting & Usage

2.1.The Function of PC Board



A.  Button lock indicator

●  lights on, which indicates the buttons are locked. At this moment, it is useless to press any single button. (In any status, no operation in one minute,  will light on and lock the buttons)

●Solution: Press and hold both  and  for 5 seconds until the  lights off.




B.  Menu/Confirm Button

●In working condition, press  to enter program display mode.


●In program set mode, press  to enter program set mode and adjust values.

●Press  after all setting are success and return program display mode

C.  Manual/Return Button

●Press  in working conditions, it can proceed to next step. (Example: when the outlet water fails to reach the requirement, you can press  to end the service and start an immediate rinsing. During the process of rinsing, pressing the  button can end one step in advance and proceed to the next step.)



●Press  in program display mode, and it will return in Service.


●Press  while adjusting the value, then it will return program display mode directly without saving value.

D.Down  and  Up

●In program display mode, press  or  to view all values.

●In program set mode, press  or  to adjust values.

●Press and hold both  and  for 5 seconds to lift the Button Lock status.

●At service status, press  for 5 seconds, it will enter close status. (Only execute valid at this status)

●At close status, press  for 5 seconds, it will enter service status.

2.2.Basic Setting & Usage

A.Parameter specification

Item	Parameter Set Range	Factory Default	Remark
Time of Day	00:00 ~ 23:59	Time of Day	
Rinsing Time	00:00 ~ 23:59	02:00	
Continuous Water Time	00~120min. (This function is useless if the continuous time is set 0.)	00	If the actual continuous water time is longer than the set value, the control valve will turn to close status automatically. As shown in Figure 2-F.
Peak Flow Rate for Close	0.00~10.00m ³ /h (This function is useless if the peak flow rate for close is set 0.)	0.00	If the actual flow rate exceeds the set value, the control valve will turn to close status automatically. This function is useless if the instant flow rate for close is set 0. As shown in Figure 2-F.

Note

●The display screen shows model F67N when connected with power.(Take F67N for example)

●After connecting power within 6 seconds, press and hold  and  for 2 seconds to enter into language selection interface.

B.Process display

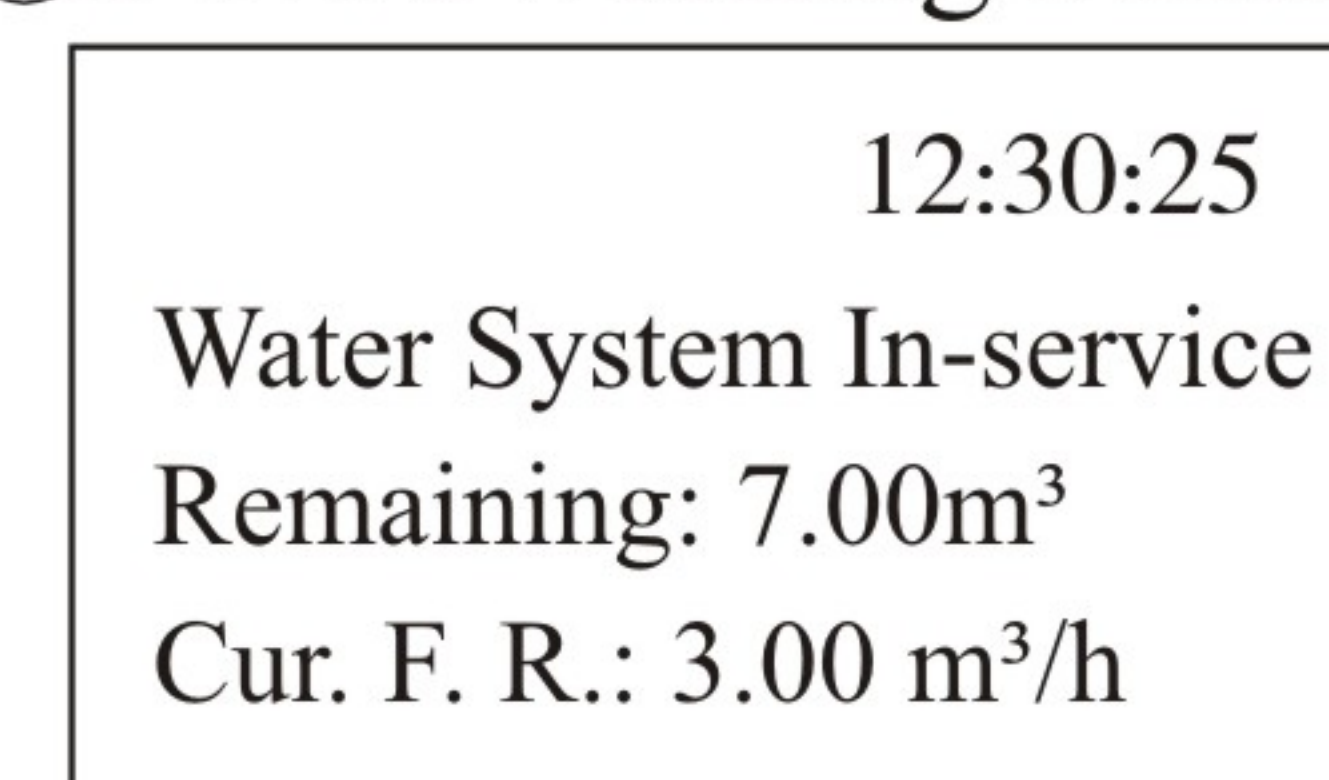
①Usage interface

The display screen shows Figure 2-A for 6 seconds when connected with power, and enter into user usage interface.

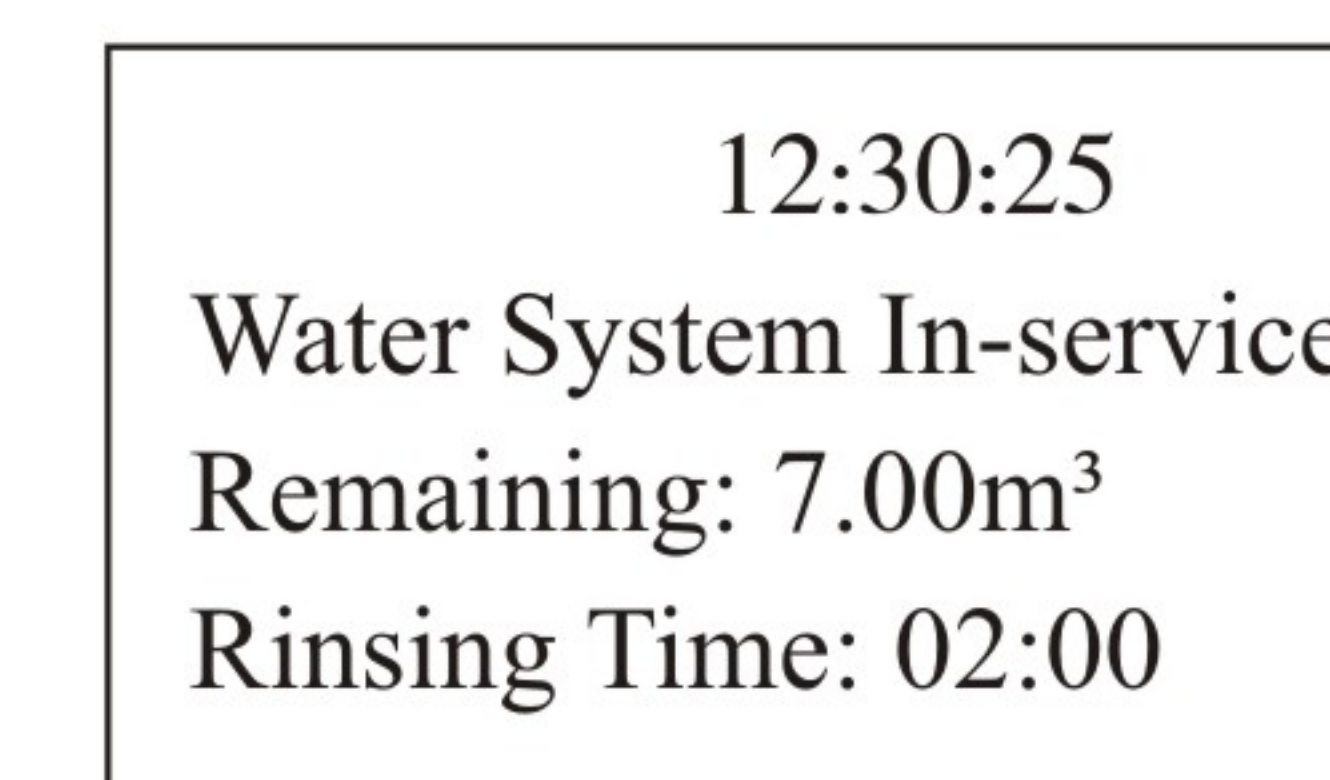


2-A

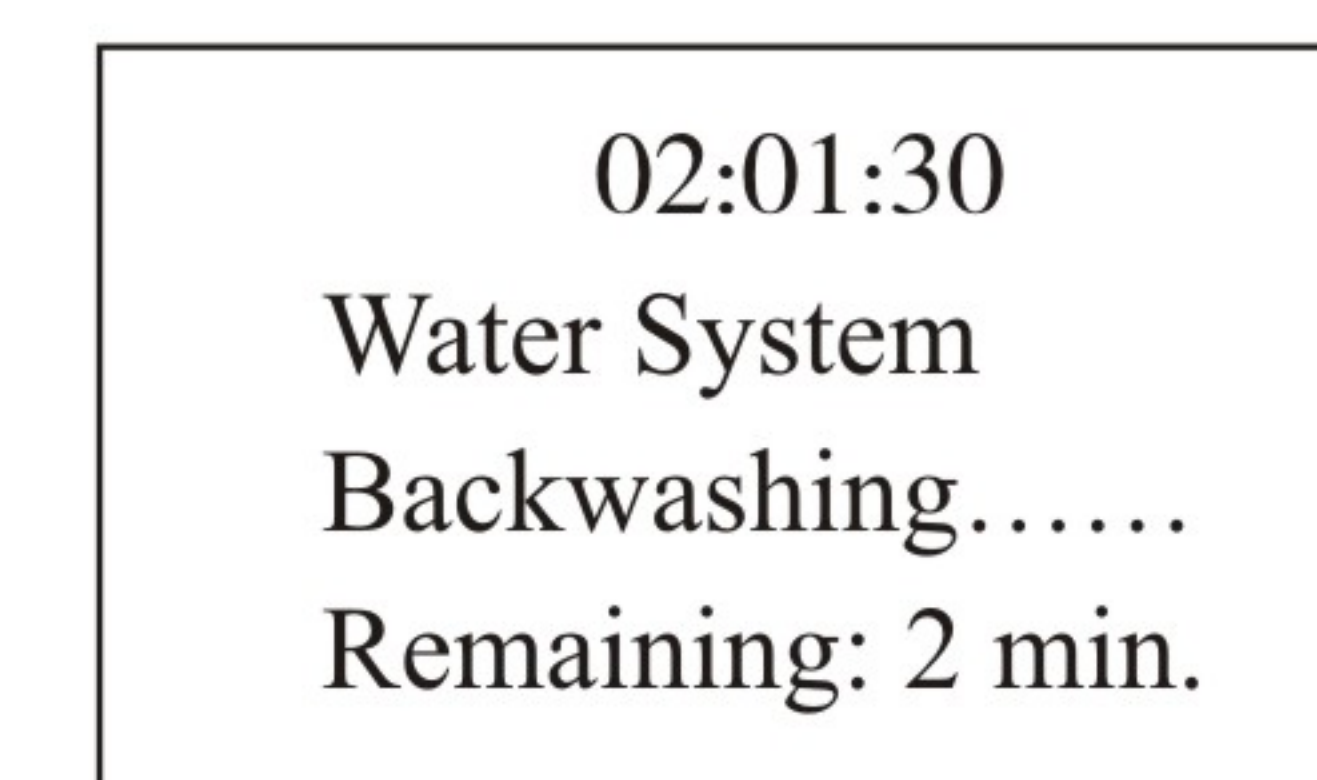
②F67N:Working Status



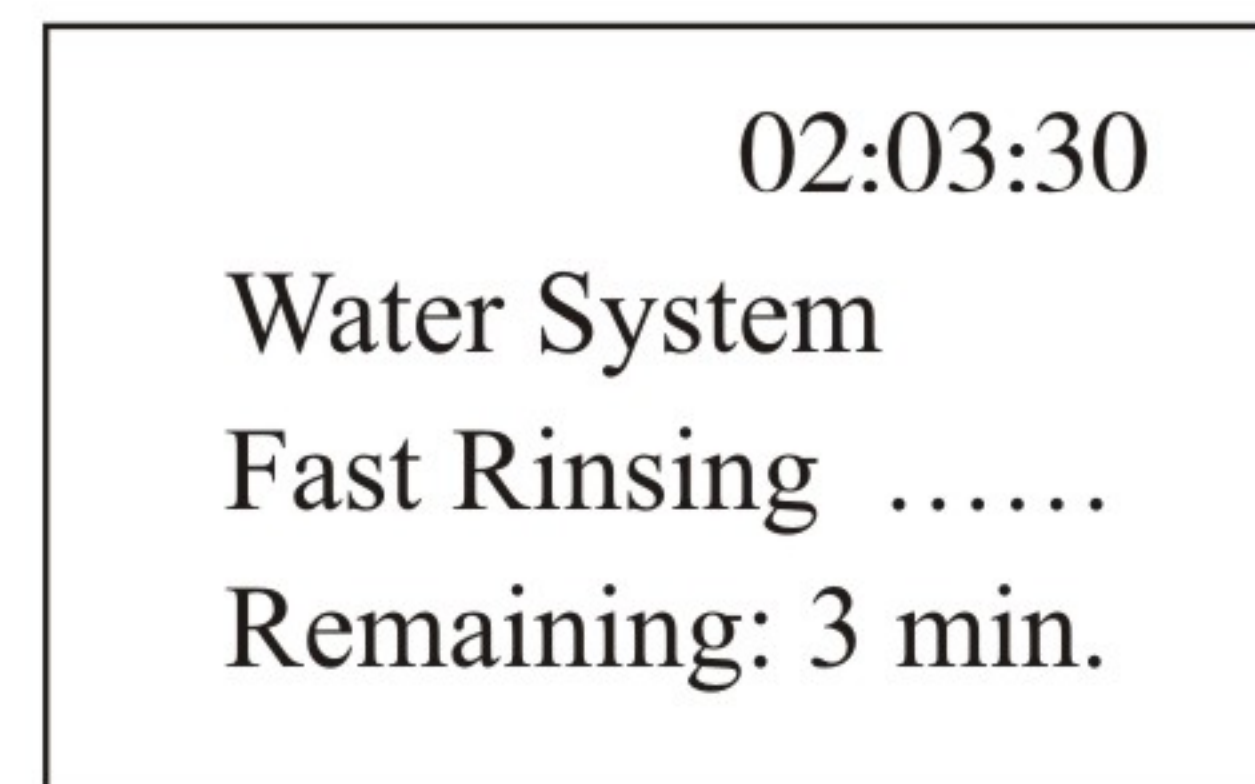
2-B1



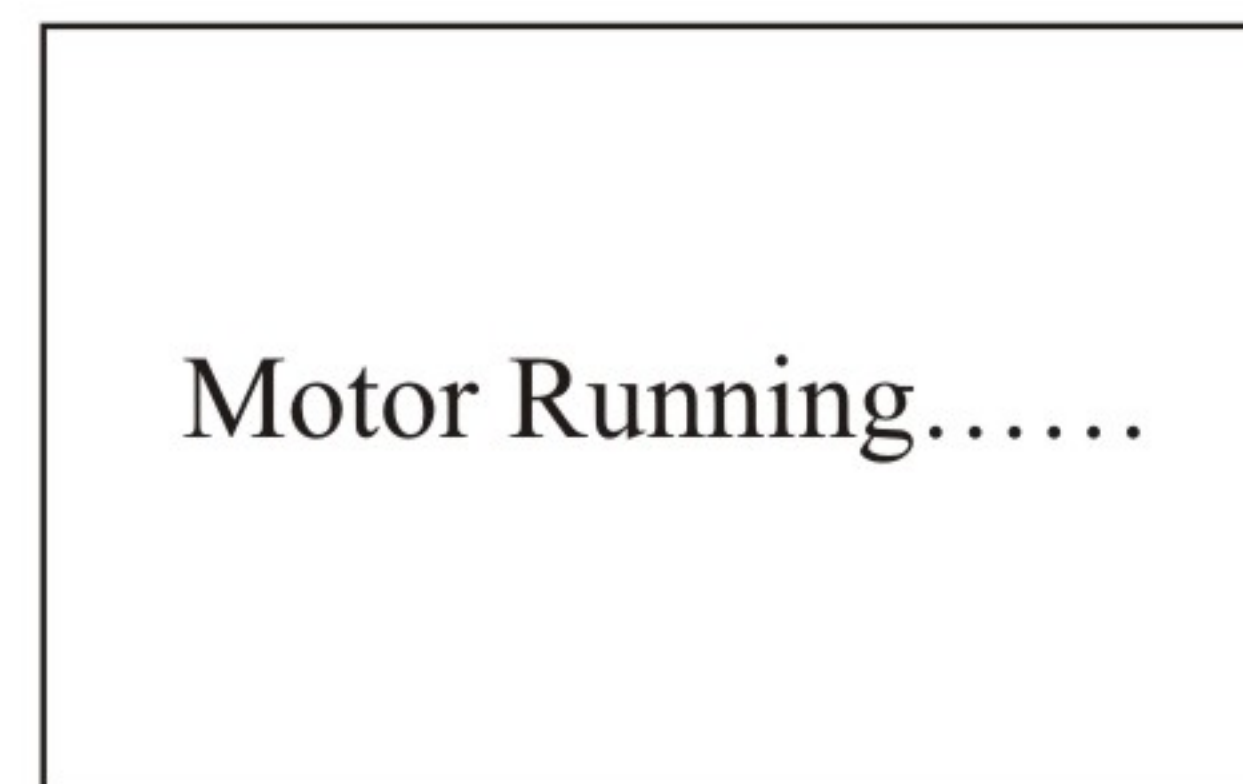
2-B2



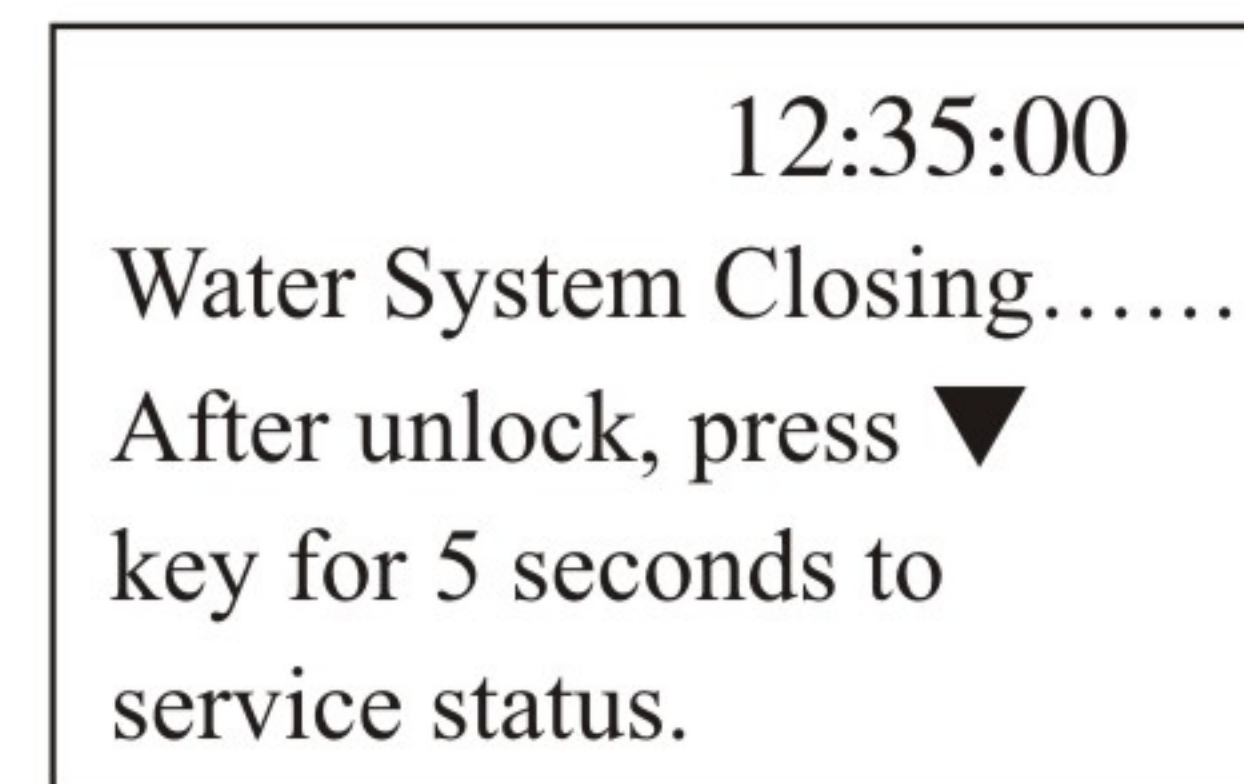
2-C



2-D



2-E



2-F

- The screen show circulatory figure 2-B1 and 2-B2 at the service position.
- The screen shows Figure 2-C at the backwash position.
- The screen shows Figure 2-D at the fast rinse position,.
- When control valve turns from a working position to another, the screen shows Figure 2-E.
- The screen shows as Figure 2-F at the closing position.

F67N Working process: Service → Backwash → Fast Rinse → Service

C. User setting

① Setting items and methods

Items	Process steps	Symbol
Time of Day	<p>🔒 light on, press and hold ▼ and ▲ buttons for 5 seconds until 🔒 light off.</p> <p>1. Press [Enter] to enter “Set Filter Valve Parameter”, as figure 2-G shows. The default selection is Time of Day.</p> <p>2. Press [Enter], the screen shows as figure 2-H. Hour value 12 flash, through ▼ or ▲ to adjust the hour value;</p> <p>3. Press [Enter] again, minute value 30 flash, through ▼ or ▲ to adjust the minute value;</p> <p>4. Press [Enter], and then finish adjustment.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Set Filter Valve Parameter » Set Time of Day Set Rinsing Time Set Cont. Water Time Set Peak F. R. for Close </div> <p style="text-align: center;">2-G</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Set Time of Day 12:30 </div> <p style="text-align: center;">2-H</p>
Rinsing Time	<p>1. Press [Enter] to enter “Set Filter Valve Parameter”, as figure 2-G shows.</p> <p>2. Press ▼, select “Set Rinsing Time”; Then press [Enter], the screen shows as figure 2-I; Hour value 02 flash, through ▼ or ▲ to adjust the hour value;</p> <p>3. Press [Enter], minute value 00 flash, through ▼ or ▲ to adjust the minute value.</p> <p>4. Press [Enter], and then finish adjustment.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Set Rinsing Time 02:00 </div> <p style="text-align: center;">2-I</p>

Continuous Water Time	<p>1. Press [Enter] to enter “Set Filter Valve Parameter”, as figure 2-G shows.</p> <p>2. Press ▼, select “Set Cont. Water Time”; Then press [Enter], the screen shows as figure 2-J; Minute value 00 flash, through ▼ or ▲ to adjust the minute value;</p> <p>3. Press [Enter], and then finish adjustment.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Set Cont. Water Time 00 min. </div> <p style="text-align: center;">2-J</p>
Peak Flow Rate for Close	<p>1. Press [Enter] to enter “Set Filter Valve Parameter”, as figure 2-G shows.</p> <p>2. Press ▼, select “Set Peak F. R. for Close”; Then press [Enter], the screen shows as figure 2-K; peak flow rate for close value 0.00 flash, through ▼ or ▲ to adjust it;</p> <p>3. Press [Enter], and then finish adjustment.</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Set Peak F. R. for Close 0.00 m3/h </div> <p style="text-align: center;">2-K</p>

D. WIFI operation manual



Figure 2-L

- ① Firstly, download and install correct APP by scanning QR code as shown Figure 2-L.
- ② If installation successfully, there is “RUNXIN” APP on cell phone. Then register and login to match the cell phone with control valve.
- ③ Switch to configure interface, as Figure 2-M shows, click ☰, the screen shows as Figure 2-N; Click +, the screen shows as Figure 2-O.

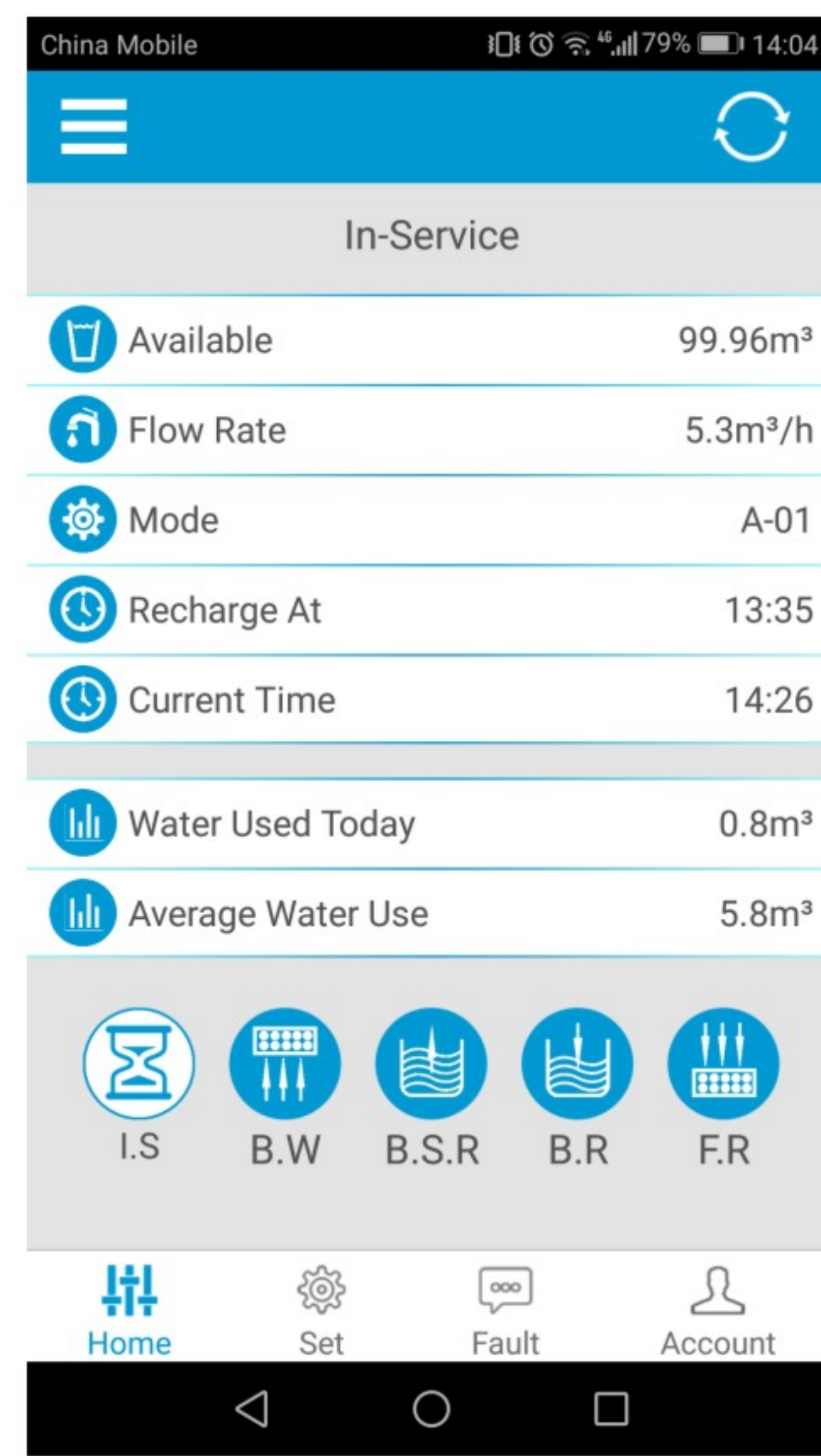


Figure 2-M

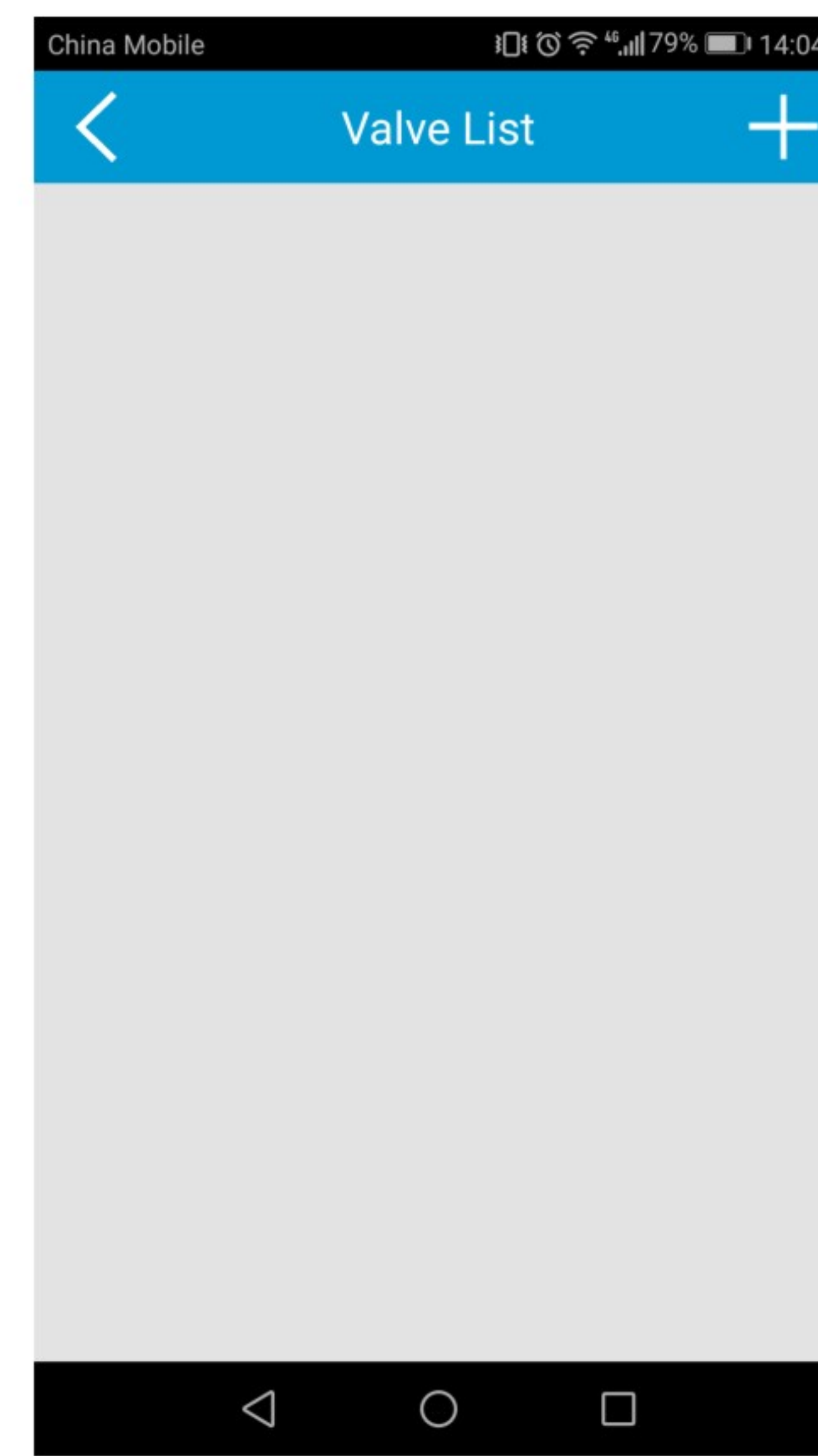


Figure 2-N

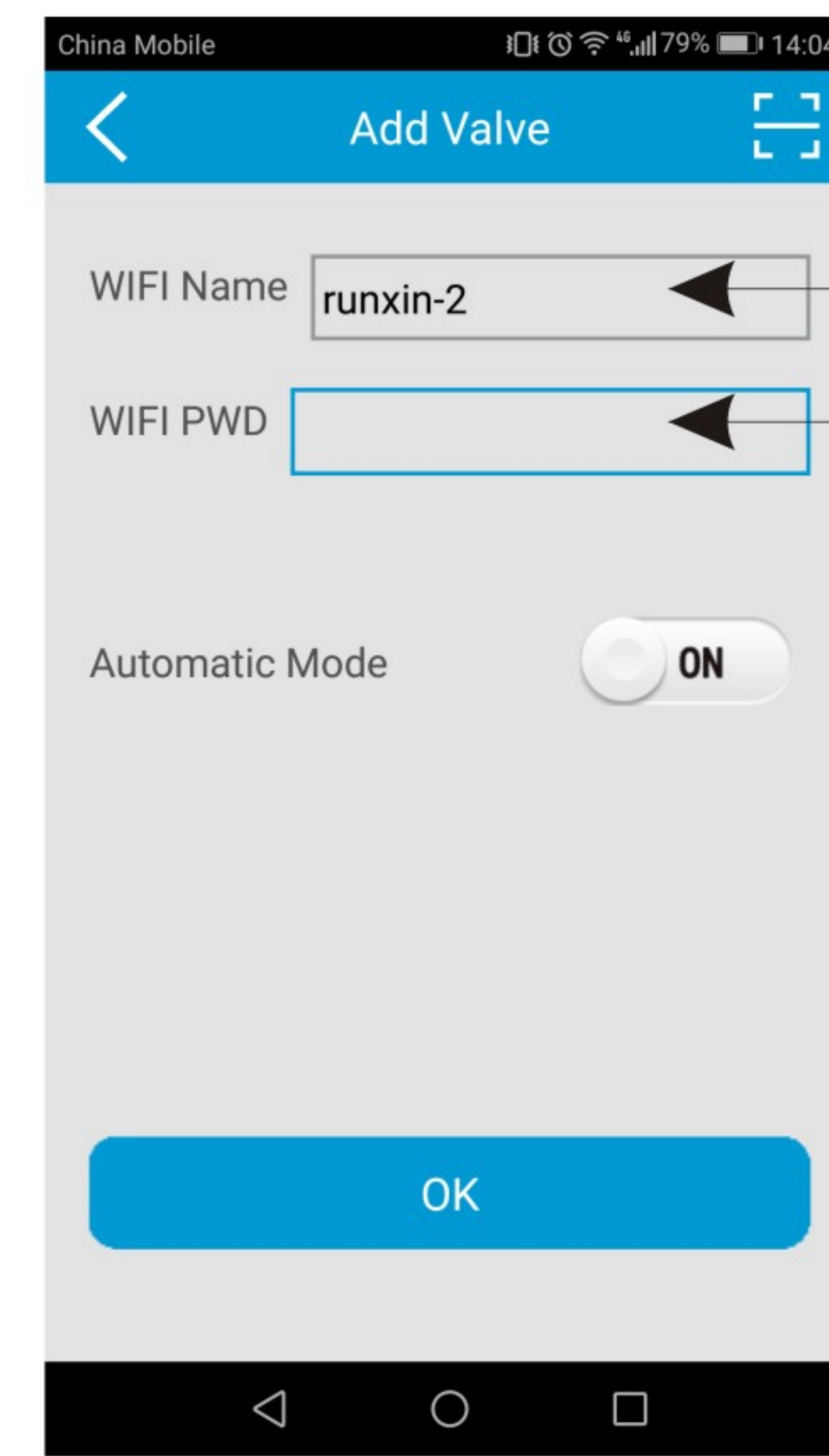



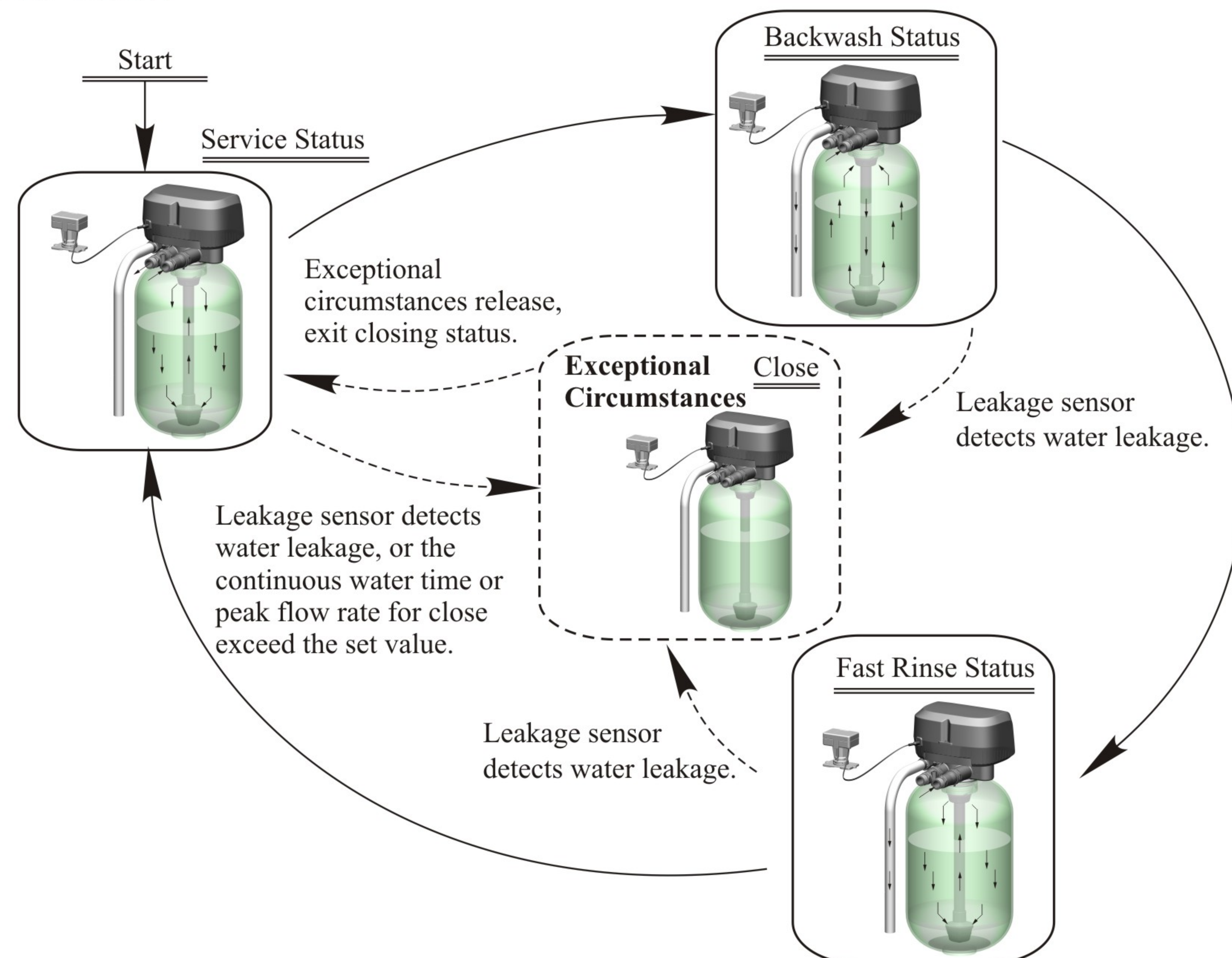
Figure 2-O

WIFI Account
WIFI Password

④As Figure 2-O shows, input the password. After power off, reconnect power and press  on valve until heard a sound of DI, then press OK button in 5 seconds on cell phone. After matching, users can operate valve on cell phone.

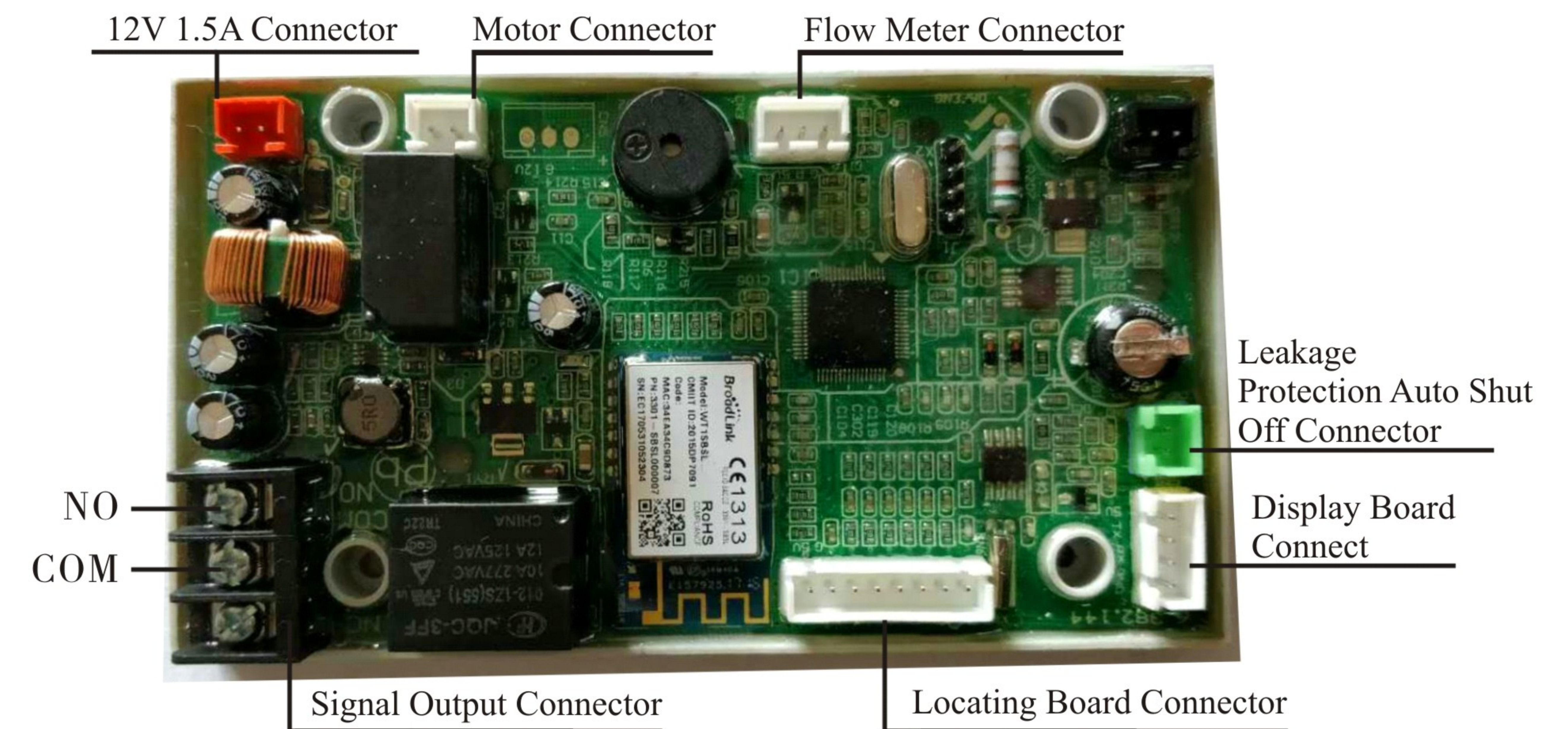
3.Application

3.1.Flow Chart



3.2.The Function and Connection of PC Board

Opening the front cover of control valve, you will see the main control board and connection port as the figure shows below.



3.3.System Configuration and Flow Rate Curve

A.Product Configuration

1) Product configuration with tank, filter materials volume

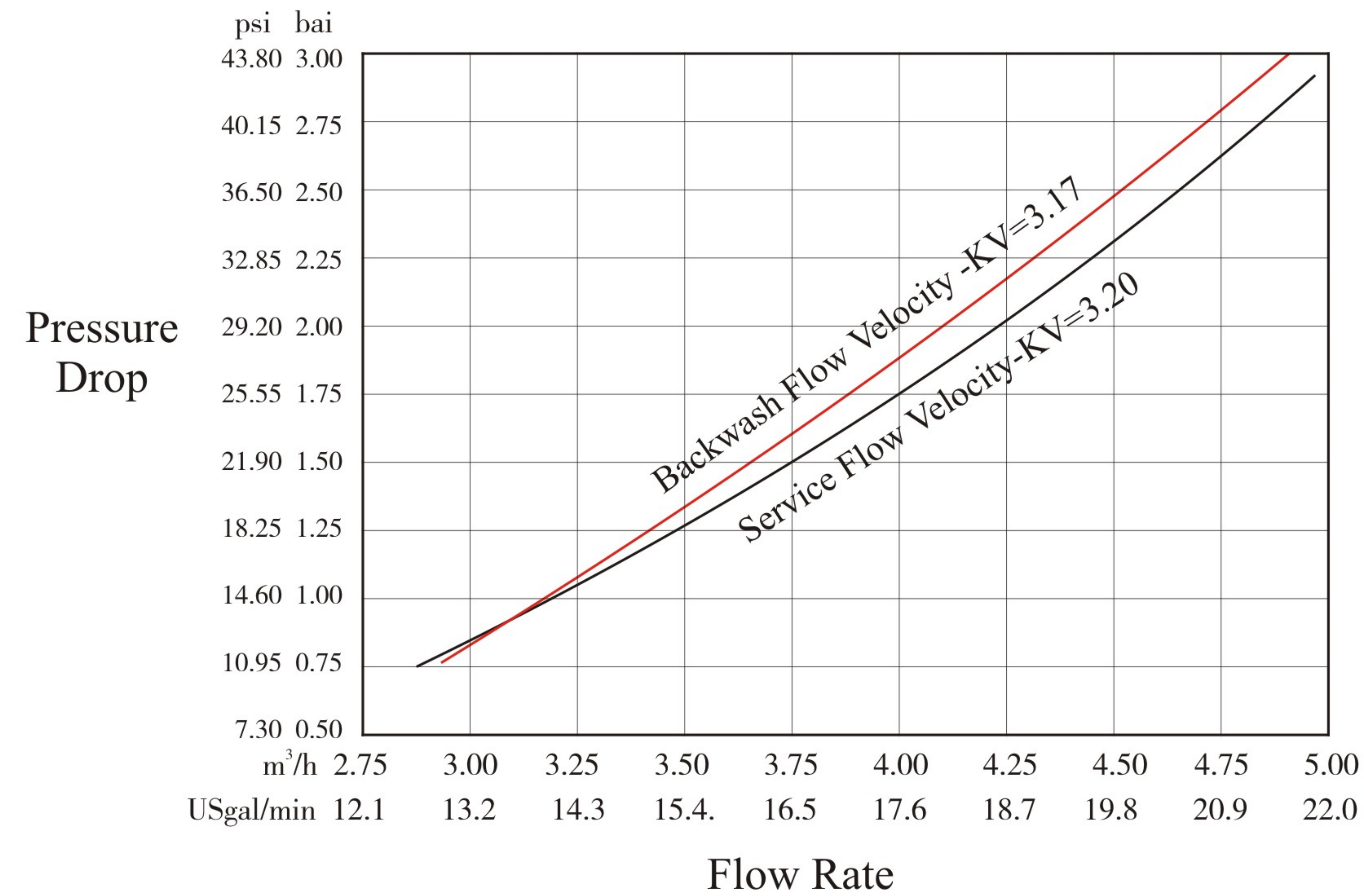
Tank Size	Volume of Filter Material	Carbon Filter		Sand Filter	
		Filtering Flow Rate	Backwash Flow Rate	Filtering Flow Rate	Backwash Flow Rate
mm	L	m ³ /h	m ³ /h	m ³ /h	m ³ /h
φ 180 × 1130	16	0.3	0.9	0.6	1.3
φ 205 × 1300	25	0.4	1.1	0.8	1.7
φ 255 × 1390	40	0.6	1.7	1.2	2.6
φ 300 × 1390	60	0.8	2.5	1.7	3.8
φ 355 × 1650	100	1.2	3.4	2.4	5.2
φ 400 × 1650	120	1.5	4.5	3.1	6.8

Attention: the filtering flow rate of carbon filter is calculated based on the 12m/h operation rate; the backwash flow rate is calculated based on the 10L/(m²*s) backwash intensity; the filtering flow rate of sand filter is calculated based on the 25m/h operation rate; the backwash flow rate is calculated based on the 15L/(m²*s) backwash intensity.

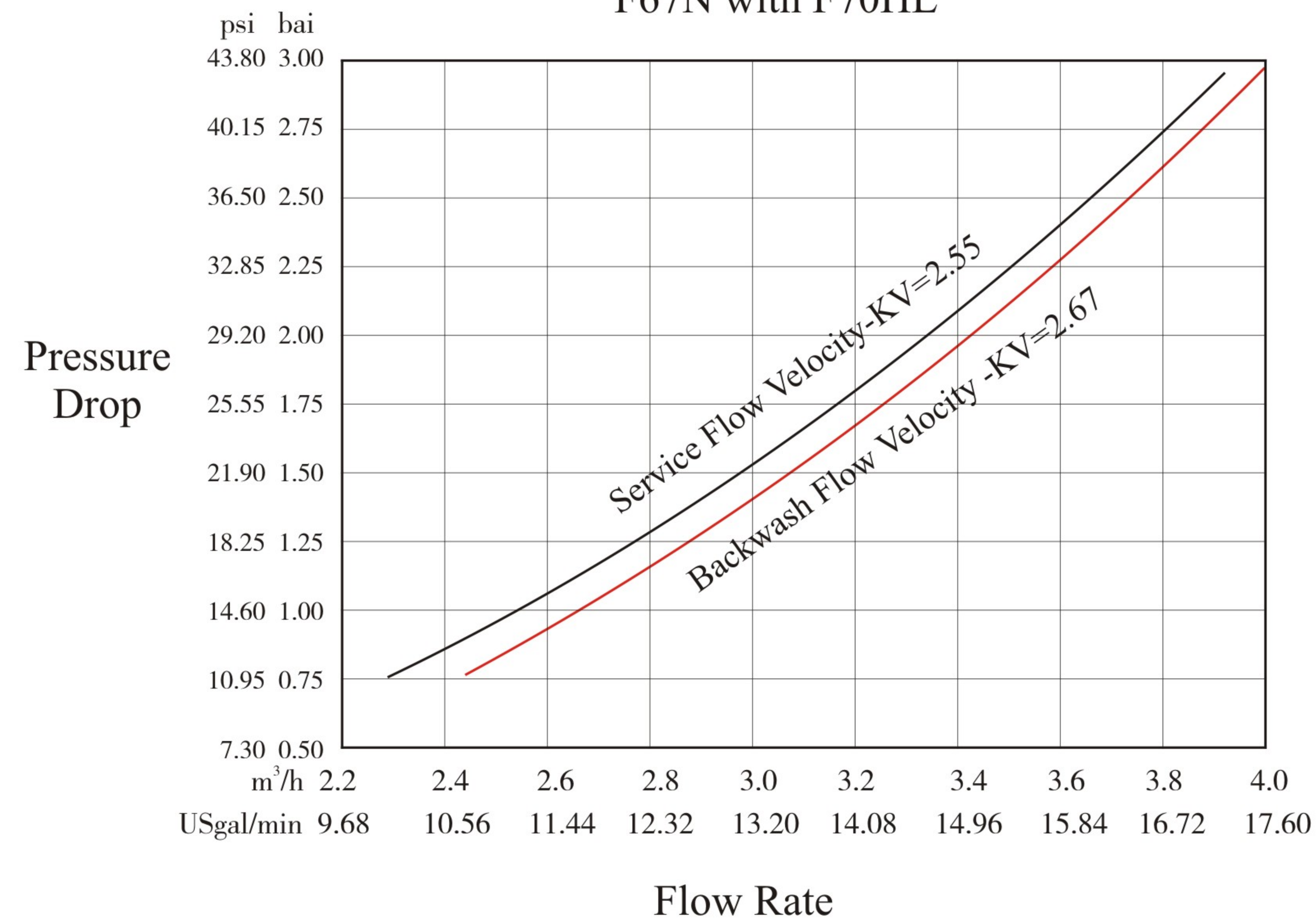
B. Flow Rate Characteristic

1). Pressure-flow rate curve

F67N with 3/4" Flow Meter





F67N with F70HL



3.4. Parameter Enquiry and Setting














































A. Enter Background Mode

When the screen shows 2-A interface within 6 seconds after connecting power, enter background mode by pressing and holding  and  for 2 seconds. The screen shows as Figure 3-A (including 3-A1, 3-A2 and 3-A3)

B. Background Parameter Setting Items

Several items can be set in the background mode, such as mode, valve model, water treatment capacity, flow rate unit, rinsing frequency, backwash time, fast rinse time, interval rinsing days and signal output mode.

» Set Mode- Filter Set Valve Model-F67N Set Water Capacity-10 m ³ Set Flow Rate Unit-m ³ ↓	» Rinsing Frequency-F-00↑ Set Backwash Time-2 min. Set F.R. Time-3 min. Interval Rinsing D. -30 Days↓	» Signal Output Mode-b-01↑	
3-A1	3-A2	3-A3	
Set Mode <input checked="" type="radio"/> Filter <input type="radio"/> Softener	Set Valve Model <input type="radio"/> F67D <input type="radio"/> F71D <input checked="" type="radio"/> F67N	<input type="radio"/> F67N-A	Set Water Capacity 10.00m ³
3-B	3-C1	3-C2	3-D
Set Flow Rate Unit <input type="radio"/> gal <input type="radio"/> L <input checked="" type="radio"/> m ³	Rinsing Frequency F-00	Set Backwash Time 02 min.	Set F.R. Time 03 min.
3-E	3-F	3-G	3-H
Interval Rinsing D. 30 Days	Signal Output Mode <input checked="" type="radio"/> b-01 <input type="radio"/> b-02		
3-I	3-J		

- ① When the screen shows as 3-A1, choose “Set Mode”, press , show as the figure 3-B. Press  and  to choose different mode. Press , it will save value and return to 3-A1; Press , it will return to 3-A1 without saving value.
- ② When the screen shows as 3-A1, choose “Set Valve Model”, press , show as the figure 3-C1. Press  and  to choose different valve model. Press , it will save value and return to 3-A1; Press , it will return to 3-A1 without saving value.
- ③ When the screen shows as 3-A1, choose “Set Water Capacity”, press , show as the figure 3-D. Press  and  to choose different water treatment capacity. Press , it will save value and return to 3-A1; Press , it will return to 3-A1 without saving value.
- ④ When the screen shows as 3-A1, choose “Set Flow Rate Unit”, press , show as the figure 3-E. Press  and  to choose different flow rate unit. Press , it will save value and return to 3-A1; Press , it will return to 3-A1 without saving value.
- ⑤ When the screen shows as 3-A2, choose “Rinsing Frequency”(F-00 means service one time, fast rinse and backwash time; F-01 means service one time, fast rinse and backwash 2 times; And so on.) Press , show as the figure 3-F. Users can press  and  to choose different number. Press , it will save value and return to 3-A2; Press , it will return to 3-A2 without saving value.
- ⑥ When the screen shows as 3-A2, choose “Set Backwash Time”, press , show as the figure 3-G. Press  and  to choose different backwash time. Press , it will save value and return to 3-A2; Press , it will return to 3-A2 without saving value.
- ⑦ When the screen shows as 3-A2, choose “Set F.R. Time”, press , show as the figure 3-H. Press  and  to choose different fast rinse time. Press , it will save value and return to 3-A2; Press , it will return to 3-A2 without saving value.
- ⑧ When the screen shows as 3-A2, choose “Interval Rinsing D.”, press , show as the figure 3-I. Press  and  to choose different interval rinsing days. Press , it will save value and return to 3-A2; Press , it will return to 3-A2 without saving value.
- ⑨ When the screen shows as 3-A3, choose “Signal Output Mode”(refer to P4), press , show as the figure 3-J. Press  and  to choose different signal output mode. Press , it will save value and return to 3-A3; Press , it will return to 3-A3 without saving value.

3.5. Trial running

After installing the multi-functional flow control valve on the tank with the connected pipes, as well as setting up the relevant parameter, please conduct the trial running as follows:





- A. Close the inlet valve B & C, and open the bypass valve A. After cleaning the foreign materials in the pipe, close the bypass valve A. (As Figure 1-D shows)
- B. Press  and go in the Backwash position; slowly open the inlet valve B to 1/4 position, making the water flow into the resin tank; you can hear the sound of air-out from the drain pipeline. After all air is out of pipeline, then open inlet valve B completely and clean the foreign materials in the tank until the outlet water is clean. It will take 8~10 minutes to finish the whole process.
- C. Press , turning the position from Backwash to Fast Rinse; It will take 10~15 minutes to finish the whole process. If the valve is first put into use, it needs backwash and fast rinse for several times to wash remaining filter material until the drain water is clean.
- D. Press , turning the position to service status, and produce water by turning on valve C and turning off valve A. Then turn on sample valve D or other outlet to examine the quality of outlet water, if there is black water, it indicates the system needs backwash and fast rinse again.

Illustration:

In the process of rinsing, the program will be finished automatically in accordance with the setting time; pressing the  button can end one step in advance and proceed to the next step.

Note:

- **If water inflow too fast, the media in tank will be damaged. When water inflow slowly, there is a sound of air emptying from drain pipeline.**
- **After changing the filter materials, please empty air in the materials according to the above Step B.**
- **In the process of trial running, please check the water situation in all position, ensuring there is no filter materials leakage.**
- **The time for Backwash and Fast Rinse position can be set and executed according to the suggestions from the control valve suppliers.**

3.6.Trouble-Shooting

A.Control Valve Fault

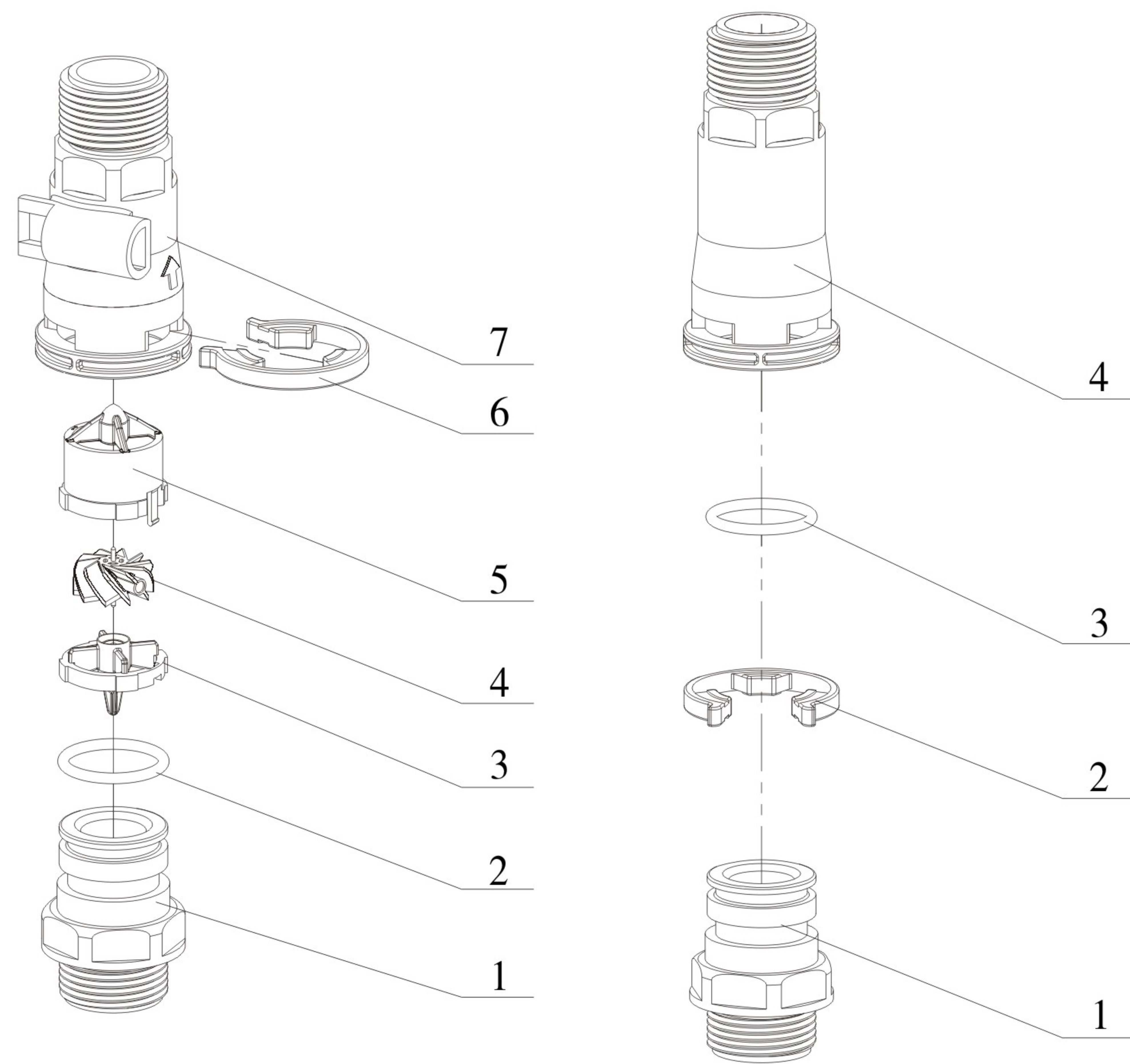
Problem	Cause	Correction
1.Under abnormal condition, it is usually on closing status.	A. The leakage sensor breaks down. B. Under non-leakage circumstances, the absorbent cotton of leakage sensor absorbs water to expand to shut off water.	A. Change the leakage sensor. B. Replace a new sponge.
2. Under abnormal condition, the current flow rate displays 0.	A. Probe wire is not inserted into the flow meter socket or inserted in a wrong place. B. Turbine is not put into flow meter socket. C. Foreign or Filter material plug turbine.	A. Insert the probe wire into flow meter socket. B. Put turbine into flow meter socket. C. Remove foreign or filter material.
3.Filter fails to rinse.	A.Electrical service to unit has been interrupted. B. Rinse time is set incorrect. C. Control valve damaged.	A. Assure permanent electrical service (Check fuse, plug, pull chain or switch). B. Reset the time. C. Check or replace the valve.
4.Filter supply raw water.	A. Riser pipe leak. B. Interval valve leak.	A. Make sure riser pipe and O-ring are not cracked. B. Check or change valve body.
5.Water pressure lost.	A. Iron is in the water supply pipe. B. Iron mass is in the filter.	A. Clean the water supply pipe. B. Clean valve and add filter materials cleaning chemical, increase frequency of rinsing.
6.Loss of filter materials through drain line.	A. Air in the water system. B. The strength of backwash is too high. C. Strainer is broken.	A. Assure that well system is dry and has proper air eliminator control. B. Reduce the strength of backwash. C. Replace the strainer.
7.Control cycle continuously.	A. Locating signal wiring break down. B. Controller damaged. C. Foreign material stuck the driving gear.	A. Check and connect locating signal wiring B. Replace controller. C. Take out foreign material.
8.Drain flows continuously.	A. Internal valve leak. B. Power off when in backwash or fast rinse	A. Check and repair valve body or replace it. B. Turn on bypass valve for water supply, close valve water inlet and restart when electricity supply.

B.Controller Fault

Problem	Cause	Correction
1.WIFI doesn't match well.	A. Install wrong APP. B. Users don't match the valve with cell phone in the right way. C. Wireless router break down.	A. Android users install Android APP; Iphone users install Iphone APP. B. Please refer to instructions for configuration of cell phone and valve. C.Replace the wireless router.
2.Messy code on front panel.	A. Wiring of display board with control board damaged. B. Control board damaged. C. Transformer got wet or damaged. D. Electrical service not stable.	A. Check and replace the wiring. B. Replace control board. C. Check and replace transformer. D. Check and adjust electrical service.
3.No display on front panel	A. Wiring of display board with control board damaged. B. Display board damaged. C. Control board damaged. D. Electricity is interrupted.	A. Check and replace wiring. B. Replace display board. C. Replace control board. D. Check electricity.
4.E1 Flash	A. Wiring of locating board with controller damaged. B. Locating board damaged. C. Mechanical driven damaged. D. Control board damaged. E. Wiring of motor with controller damaged F. Motor damaged.	A. Replace wiring. B. Replace locating board. C. Check and repair mechanical part. D. Replace control board. E. Replace wiring. F. Replace motor
5.E2 Flash	A. Hall component on locating board damaged. B. Wiring of locating board with controller damaged. C. Control board damaged.	A. Replace locating board. B. Replace wiring. C. Replace control board.
6.E3 or E4 Flash	A. Control board damaged.	A. Replace control board.
7.Under abnormal condition, it is usually on closing status.	A. The leakage sensor breaks down. B. Set value of continuous water time is too small. C. Set value of peak flow rate for close is too small.	A. Replace leakage sensor. B. Adjust continuous water time or set it as 0 to close this function. C. Adjust peak flow rate or set it as 0 to close this function.

3.7. Assembly & Parts

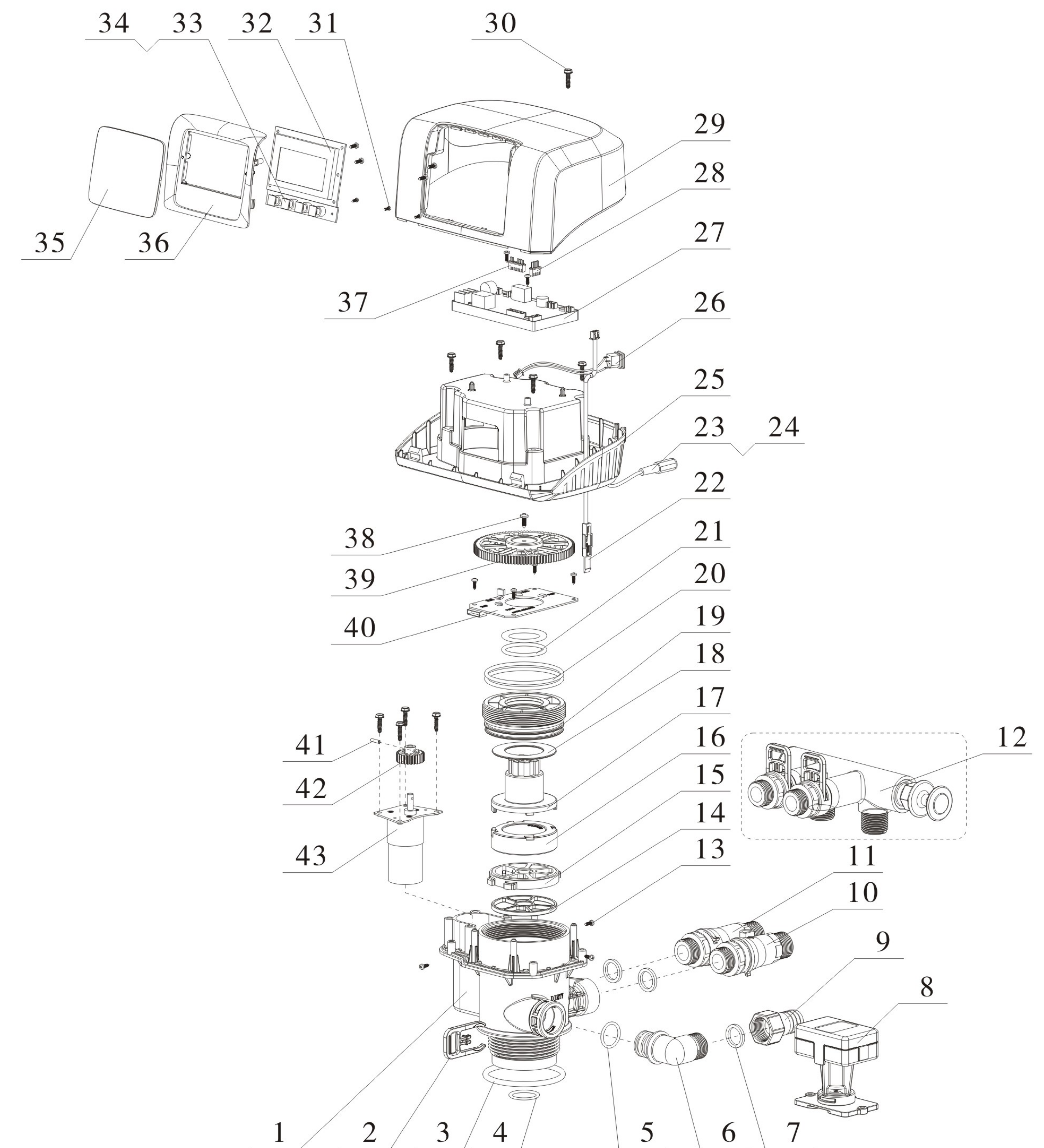
F67N flow meter connector and animated connector components



5447020 Flow Meter			
Item No.	Description	Part No.	Quantity
1	Connector	8458014	1
2	O-ring 21.89x2.62	8378064	1
3	Impeller Supporter	5115023	1
4	Turbine	5436013	1
5	Impeller Supporter	5115024	1
6	Clip	8270005	1
7	Shell	8002006	1

5457003 Animated Connector			
Item No.	Description	Part No.	Quantity
1	Connector	8458014	1
2	Clip	8270005	1
3	O-ring 21.89x2.62	8378064	1
4	Connector	8458039	1

F67N Valve Body Assembly



F67N Valve Body Components

Item No.	Description	Part No.	Quantity	Item No.	Description	Part No.	Quantity
1	Valve Body	5022144	1	24	Cable Clip	8126004	2
2	Clip	8270008	1	25	Bottom Cover	8315122	1
3	O-ringφ73x5.3	8378160	1	26	Wire for Leakage Sensor	5513039	1
4	O-ringφ25.8x2.65	8378175	1	27	Control Board	6382144	1
5	O-ringφ21.89x2.62	8378064	1	28	Wire for Display Board	5512002	1
6	Elbow Connector	8457035	1	29	Dust Cover	8005085	1
7	Seal Ring φ24xφ18x3	8371019	3	30	Screw, Cross ST3.9x16	8909016	9
8	Leakage Sensor	2976255	1	31	Screw, Cross ST2.2x6.5	8909004	3
9	Drain Connector	8458151	1	32	Big Display Board	6381031	1
10*	Flow Meter	5447020	1	33	Button for Display Board	6381032	1
11*	Animated Connector	5457003	1	34	Wire for Display Board	5517016	1
12*	F70HL Bypass Valve	2974116	1	35	Control Panel	5321087	1
13	Screw, Cross ST2.9x9.5	8909008	13	36	Toggle	8109124	1
14	Seal Ring	8370131	1	37	Wire for Locating Board	5511030	1
15	Fixed Disk	8469100	1	38	Screw, Cross ST4x12	8909013	1
16	Moving Disk	8459098	1	39	Big Gear, Driven	5241002	1
17	Shaft	8258004	1	40	Locating Board	6380058	1
18	Anti-friction Washer	8216004	1	41	Pin φ2.5x12	8993003	1
19	Fitting Nut	8092004	1	42	Small Gear, Motor	8241003	1
20	O-ring φ73x3.55	8378128	2	43	Motor	6158073	1
21	O-ringφ 38.7x3.55	8378184	2				
22	Probe Wire	6386014	1				
23	Wire for Power	5513003	1				

Note: Item No.10 and No.11 as a fitting group, and Item No.12 bypass valve are optional, it means each valve only has one of them.


4. Warranty Card

Dear client:

This warranty card is the guarantee proof of RUNXIN brand multi-functional flow control valve. It is kept by client self. You could get the after-sales services from the supplier which is appointed by RUNXIN manufacturer. Please keep it properly. It couldn't be retrieved if lost.

It couldn't be repaired free of charge under the below conditions:

1. Guarantee period expired.(One year)
2. Damage resulting from using, maintenance, and keeping that are not in accordance with the instruction.
3. Damage resulting from repairing not by the appointed maintenance personnel.
4. Content in guarantee proof is unconfirmed with the label on the real good or be altered.
5. Damage resulting from force majeure.

Product Name	 Multi-functional Flow Control Valve for Water Treatment Systems			
Model		Code of Valve Body		
Purchase Company Name		Tel/Cel.		
Problem				
Solution				
Date of Repairing		Date of Accomplishment		Maintenance Man Signature

When product need warranty service, please fill in the below content and sent this card together with the product to the appointed suppliers or Runxin company.

End-user Company Name		Tel/Cel.		
Purchase Company Name		Tel/Cel.		
Model		Code of Valve Body		
Tank size	φ ×	Filter Material	Kg	Water Source: Ground-water <input type="checkbox"/> Tap Water <input type="checkbox"/>
Water Treatment Capacity	m ³	Backwash Time	min	Fast Rinse Time min
Problem Description				