Manual Multi-port Valve for Water Treatment Systems

- TM.F56A
- TM.F56B/C
- TM.F56D
- TM.F56E
- TM.F56EC
- TM.F56F
- TM.F52

User manual

Please read this manual in details before using this valve and keep it properly in order to consult in the future.
Dear user, Thank you for using RUNXIN brand manual multi-port valve for water treatment systems. Please read this manual carefully before using, which will contribute to your machine offering perfect services for you normally for a long time.

RUNXIN brand manual multi-port valve is our patent product (Patent Number: ZL02257746.7, ZL02220153.X) which specially allocate in all kinds of water treatment systems. This valve has high hardness and pottery of degree of high level ceramic moving slice inside its body. As relative and moving slice have different blind holes and put through holes respectively, with change of the relative angle during slice rotate one course of circle definitely with it height laminating, it produces three different fluid pass way so as to realize these necessary functions, namely Service, Backwash and Fast Rinse. As the core control part for water treatment systems, this valve changes traditional water treatment systems tedious operation mode of a lot of valves and many pieces of pipelines, integrating various kinds of functions in one which is easier to install and operate.
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 manual valve with water that is unsafe or of unknown quality.

Test water periodically to verify that system is performing satisfactorily.

Do not put the valve near the hot resources or high humidity environment. And do not leave it outside.

Forbidden to use the handle, pipelines, or other connectors as support to carry system.

Handle or wheel is only used for turning left or right. It is forbidden to lift it up and down.

Please use this product under the water temperature between 5°C and 45°C, water pressure between 0.1MPa and 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.

Product Characteristics

More reliable method for opening and closing
It adopts the seal slice with high degree pottery, scuffresistance,corrosion proof for opening and closing, no leakage.

Reasonable fluid design: Filter-Fast Rinse-Backwash-Fast Rinse-Filter.

Small rotation angle for opening and closing. It feels good for operation.

It could be operated with pressure, leak proof.

Range of Application

Water treatment system applied to Industrial, Commercial or Residential, such as:

Household Purify, Soften System.

RO Pre-treatment System.

Boiler Softening Water System.

Swimming Pool Filter Equipment.

Ion Exchange Equipment.
Product Appearance and Accessories

Product Appearance (only for reference, subject to real product)

TM.F56EC

TM.F56A

TM.F56D
**Figures on Decoration Cover and its English Description**

<table>
<thead>
<tr>
<th>ENGLISH</th>
<th>FIGURE</th>
<th>DESCRIPTION</th>
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<td>FILTER</td>
<td><img src="image" alt="Hourglass" /></td>
<td>In Filtration state</td>
</tr>
<tr>
<td>BACKWASH</td>
<td><img src="image" alt="Backwash" /></td>
<td>In Backwash state</td>
</tr>
<tr>
<td>FAST RINSE</td>
<td><img src="image" alt="Rinse" /></td>
<td>In Fast Rinse state</td>
</tr>
</tbody>
</table>

**Product Accessories**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Quantity</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM.F56A</td>
<td>2-1/2 Base Seal Ring (φ 73 × φ 5.3)</td>
<td>1 PC</td>
<td>1&quot; Washer (φ 30 × φ 24 × 3.3)</td>
<td>3 PCS</td>
</tr>
<tr>
<td>TM.F56B/C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TM.F56D</td>
<td>4 Base Seal Ring (φ 104.6 × φ 5.7)</td>
<td>1 PC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TM.F56E</td>
<td>2-1/2 Base Seal Ring (φ 73 × φ 5.3)</td>
<td>1 PC</td>
<td>3/4&quot; Washer or 1/2&quot; Washer (φ 24 × φ 18 × 3) or (φ 18.5 × φ 12 × 2.5)</td>
<td>3 PCS</td>
</tr>
<tr>
<td>TM.F56EC</td>
<td>2-1/2 Base Seal Ring (φ 73 × φ 5.3)</td>
<td>1 PC</td>
<td>3/4&quot; Washer or 1/2&quot; Washer (φ 24 × φ 18 × 3) or (φ 18.5 × φ 12 × 2.5)</td>
<td>3 PCS</td>
</tr>
<tr>
<td>TM.F56F</td>
<td>2-1/2 Base Seal Ring (φ 73 × φ 5.3)</td>
<td>1 PC</td>
<td>1&quot; Washer (φ 30 × φ 24 × 3.3)</td>
<td>3 PCS</td>
</tr>
<tr>
<td>TM.F52</td>
<td>Base Seal Ring (φ 78.5 × φ 73 × 3.4)</td>
<td>1 PC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Product Specifications

Control Mode: Manual  
Working Condition: Suited Pressure ———— 0.1~0.6MPa  
Suited Water Temperature ———— 5~45°C

## Manual Multi-port Valve

<table>
<thead>
<tr>
<th>Model</th>
<th>Inlet/Outlet</th>
<th>Drain Outlet</th>
<th>Base</th>
<th>Riser Pipe</th>
<th>Maximum Water Capacity m/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM.F56A</td>
<td>1” F</td>
<td>1” F</td>
<td>2-1/2” -8NPSM</td>
<td>1.05” OD (26.7mm)</td>
<td>4.5</td>
</tr>
<tr>
<td>TM.F56B</td>
<td>3/4” or 1/2” F</td>
<td>3/4” or 1/2” F</td>
<td>Matching with 10” housing</td>
<td>1.05” OD (26.7mm)</td>
<td>0.5-1</td>
</tr>
<tr>
<td>TM.F56C</td>
<td>3/4” or 1/2” F</td>
<td>3/4” or 1/2” F</td>
<td>Matching with 20” housing</td>
<td>1.05” OD (26.7mm)</td>
<td>0.5-1</td>
</tr>
<tr>
<td>TM.F56D</td>
<td>2” F</td>
<td>1-1/2” F</td>
<td>4” -8UN</td>
<td>1.5” D-GB (50mm)</td>
<td>10</td>
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<tr>
<td>TM.F56E</td>
<td>3/4” or 1/2” F</td>
<td>3/4” or 1/2” F</td>
<td>2-1/2” -8NPSM</td>
<td>1.05” OD (26.7mm)</td>
<td>2</td>
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<tr>
<td>TM.F56EC</td>
<td>3/4” or 1/2” F</td>
<td>3/4” or 1/2” F</td>
<td>2-1/2” -8NPSM</td>
<td>1.05” OD (26.7mm)</td>
<td>2</td>
</tr>
<tr>
<td>TM.F56F</td>
<td>1” F</td>
<td>1” F</td>
<td>2-1/2” -8NPSM</td>
<td>1” D-GB (32mm)</td>
<td>6</td>
</tr>
<tr>
<td>TM.F52</td>
<td>1/2” F</td>
<td>1/2” F</td>
<td>M82×3</td>
<td>Inserting Mode (16.5mm)</td>
<td>0.5-1</td>
</tr>
</tbody>
</table>

Note:
1. M— Male Thread  
2. F— Female Thread  
3. OD— Outer Diameter  
4. 2-1/2” and 4” side-mounted connectors available when you want to operate on the side. 
The TOP and BOTTOM size of 2-1/2” one is 1”, the size of 4” one is 2”.  
5. TM.F56B is matching with 10” housing. The tank whorl sizes have two kinds which are 95 rectangle whorl and 98 hackle whorl.  
6. TM.F56C is matching with 20” housing. The tank whorl sizes have three kinds which are 118 rectangle whorl, 115 hackle whorl and 110 rectangle whorl.
7. The water treatment capacity is related with flow speed, inlet water pressure, filtering materials etc. The parameters showed on the above table is only for reference.

## Installation and Connection

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

Perform installation according to regulated water inlet, water outlet, drain outlet and relative plumbing codes.

1. Installation requirements:
   1) The shorter the distance between filter and drain point, the better;  
   2) Leave a certain space for operating and maintaining devices conveniently.
3) Do not install the valve near hot resources or in direct sunlight, rain and other factors that may result in damage to the product. And don’t leave it outside.
4) Do not install the valve, pipeline etc under circumstances where the temperature may drop below 5°C or above 45°C.
5) Install the valve in a place where water damage is least likely to occur if a leak develops.

2、Installation of pipeline.

In order to maintain conveniently, device is advised installation like drawing as follows:

Instruccion: There are three ball valves being connected to the manual multi-port valve and the inlet and outlet pipe. Valve B is connected to the inlet pipe. Valve C is connected to the outlet pipe.

When changing filter materials or maintaining tank, open valve A, close valve B and C. When using, open valve B and C, close valve A. Valve D is for taking water used to test.

- If making a soldered copper installation, do all sweat soldering before connecting pipes to the valve. Torch heat will damage plastic parts.
- If turning threaded pipe fittings onto plastic fittings, use care not to cross-thread or cause damage to the valve.
- Support inlet and outlet plumbing in some manner (use pipe hangers) to keep the weight off of the valve fittings.

3、Installation of drain hose.

If use following hose as drain pipe, please fix it as the picture two shows.

The valve should be higher than the drain point. And the distance of the drain point shouldn't be too far.

Be sure not connect drain with sewer definitely, and leave a certain space between them avoiding wastewater be absorbing to the water treatment equipment, such as showed in picture two. If wastewater is used for other purpose, please use another container for loading. And also keep a certain space between drain and container.
Failure to install the manul multi-port valve correctly voids the warranty.
Installation of any pipelines and electric equipments should be performed by relative professional.
The minimum inlet pressure is 0.1MPa, maximum inlet pressure is 0.6MPa. If the inlet pressure exceeds 0.6MPa, a pressure reducing valve must be installed before the inlet pipeline.
When installation, do not use drain hose or other connectors as support.
Handle all components of this valve with care. Do not dorp, drag, or turn components upside down. And please use the accessories we supplied.
Forbidden overexerted when installation and connection pipelines to avoid thread broken. And no bearance of all stresses on all ports of the valve.
It is suggested to use PPR pipe, Wave-thread pipe or UPVC pipe, and avoid using Aluminum Plastic pipe.
The connection of all pipelines should be sealed enough, no leakage. Otherwise, flow capacity under some status may not reach expected effect.

Trial Running

1. Installation the multi-port valve on tank and other pipes, close the by-pass valve A (as picture one show, following same as).
2. Opening inlet valve B to 1/4 position slowly, making water flow into the tank. When water stop flowing, open the outlet valve C. Until all the air are out of the pipe, then close the outlet valve. And check whether it is leakage. In case it is, please solve it immediately.
3. Open the inlet valve B completely.
4. Rotate the valve handle to the 'Backwash' position. Let drain water flow out for 3 ~4 minutes.
5. Rotate the valve handle to the 'Fast Rinse' position, Fast Rinse for a certain time.
6. Take out some water for analysis. If the water quality is eligible, then rotate the handle to the 'Service' position to be used.

If the inlet water flow too quickly, materials in tank will be damaged. The sound from drain pipe could be heard when water flow into tank slowly.
The operating time in backwash and fast rinse status could according to suggestions of set equipments suppliers.
Filtration Position

Raw water enter into manual valve from inlet A, through valve body from the top of valve core, and going into tank from top (or riser pipe outside of tank, the same as below). Then, down through filter materials to be filtered water, then through bottom strainer to return to riser pipe, upward to valve body, pass through valve core, and finally flow out from outlet B.

Backwash Position

Raw water enter into manual valve from inlet A, through valve body from the top of valve core, then from the bottom of tank (or riser pipe inside, the same as below), bottom strainer into tank, upward through filter materials, and valve body, valve core, finally flow out from drain C.

Fast Rinse Position

Raw water enter into manual valve from A, through valve body from the top of valve core, and enter into tank from the top. Then, adown through the filter materials, return to riser pipe from bottom strainer, upward to valve body, through valve core, finally flow out from drain C.
Dear Client:

This card is the guarantee creedence of RUNXIN brand Manual Multi-port Valve. It is kept by the client himself. You could get the after-sale 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:
(i) Guarantee repair period expired.
(ii) Damage resulting from using, maintenance, and keeping that are not according to the instruction.
(iii) Damage resulting from repairing not by the appointed maintenance man.
(iv) No purchase credence and effectual invoice.
(v) Content in guarantee credence is unconfirmed with the label on the real good or be altered.
(vi) Damage resulting from force majeure.

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<thead>
<tr>
<th>Product Name</th>
<th>Manual Multi-port Valve for Water Treatment Systems</th>
</tr>
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<tbody>
<tr>
<td>Brand</td>
<td>RUNXIN</td>
</tr>
<tr>
<td>Model</td>
<td>TM.F</td>
</tr>
<tr>
<td>Code Of Valve Body</td>
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<table>
<thead>
<tr>
<th>Guarantee Term</th>
<th>One year Notice: Charge the fee over expiration date</th>
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<table>
<thead>
<tr>
<th>Purchase Company Name</th>
<th>Tel</th>
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<td>Fax</td>
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<table>
<thead>
<tr>
<th>Problem</th>
<th>Date of Repairing</th>
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<table>
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<tr>
<th>Solution</th>
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<table>
<thead>
<tr>
<th>Date of Accomplishment</th>
<th>Signature by Maintenance Man</th>
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