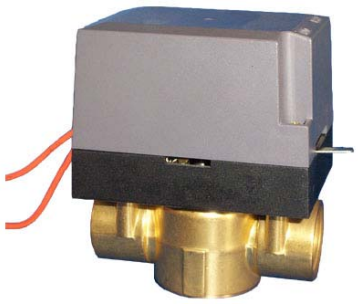
Technovator

TVI-FD SERIES
MOTORIZED VALVE

DESCRIPTION

FD series motorized valves are used to control the opening or closing for the pipe in the chilled / hot water system so to control the room temperature. The valve is driven by hysteresis synchronous motor with spring return. The valve is normal-closed.

When the thermostat is working, it will provide an opening signal, and the motorized valve will be turned on to open. Then the chilled / hot water will enter into the coil and supply the cold / hot to the room. When the room temperature rises up to the set point, the thermostat will make the valve power off. At the same time the valve will be closed by return spring and the water to the coil will be shut off. The room temperature will be kept in the setting range all the time through the opening and closing of the valve.



FD series motorized valve has two types: normal-closed 2-way and diverting 3-way. It has three sizes: 1/2", 3/4" and 1". There are six kinds of specifications classified by the access type and the fluid characteristic. There are also different pipe connection for customers' selection: Please refer to below.

FD series motorized valve's plate and cover is used hard ABS plastic. It is used ball to control the flow. It has high differential pressure, low noise and reliable characteristics. It is designed to withstand high temperature condition in many concealed fan coil applications.

FD series motorized valve can be detachable. The detachable valve actuator and valve body is connected with supporting axis and matching button. So the valve actuator can be installed after the valve body's installation, convenient for job site installation and wiring.

DIMENSIONS

	DIMENSION (mm)				
	C	D	E	F	G
1/2" 2-Way	108	66	66	80	90
1/2" 3-Way	118	66	66	80	90
3/4" 2-Way	108	66	66	89	90
3/4" 3-Way	120	66	66	89	90
1" 2-Way	110	66	66	93	90
1" 3-Way	132	66	66	93	90

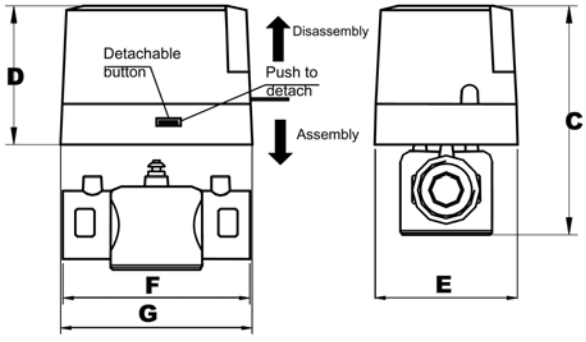


Fig 1

SPECIFICATIONS AND DATA

MODEL	TYPE	Kv	SIZE	CLOSING-OFF PRESSURE	MEDIUM	FLUID TEMP.	WORKING TEMP.	ELEC. RATING
TVI-FD-215(X)	Normal-closed 2-Way	3.2	1/2"	0.20MPa	Chilled / hot water	2~94℃	<40℃	24V, 110V, 120V, 220V/230V± 10% 50-60HZ
TVI-FD-220(X)		3.2	3/4"	0.20MPa				
TVI-FD-225(X)		6.8	1"	0.08MPa				
TVI-FD-315(X)	Diverting 3-Way	3.2	1/2"	0.20MPa				
TVI-FD-320(X)		4.6	3/4"	0.15MPa				
TVI-FD-325(X)		5.7	1"	0.10MPa				

- Standard 220 Vac /230 Vac voltage, 24 Vac, 110 Vac
- Please specify when ordering
- Standard connection : BSP, other type connection

NPT(N), Sweat(S), Inverted Flare(F) etc, please revert to us when ordering.

INSTALLATION AND OPERATION INSTRUCTION

1. Installation of detachable valve actuator and body: Move the manual operating lever slowly and hold in the retaining notch as Fig. 1. Insert the quadrate axis of the valve body into the quadrate hole of the valve actuator (be assure another axis not withstand the valve actuator), then rotate the valve actuator or body so that another axis can be inserted into the matching hole. After click sound is heard, the installation is finished. If disassembly, push the detachable button with hand, and pull the valve actuator at the same time, then it can be detached.

2. Normal-closed 2-way and diverting 3-way valves are installed as Fig. 2 and 3. For high building, pressure –reducing valve should be installed on branch pipe at ground floor.

3. Note: When the valve is mounted on horizontal pipe, the angle must be positioned less than 85° (see Fig. 4).

4. When the valve is mounted on vertical pipe, it must be prevented from dripping.

5. Manual operating lever: Move the manual operating lever slowly and hold in the retaining notch, and then the valve is in normal-opened position. When the valve is first powered on, the lever goes back to the automatic position again.

6. When install normal-closed 2-way valve, the flow direction is from end “B” to “A”, for normal-open valve, it is from end “A” to “B”. In both situations, the valve closing direction is opposite.

7. When install diverting 3-way valve, end “B” is supply to the coil, end “A” is by-pass, there is no mark for inlet, end “A” and “B” is marked on the bottom of the valve.

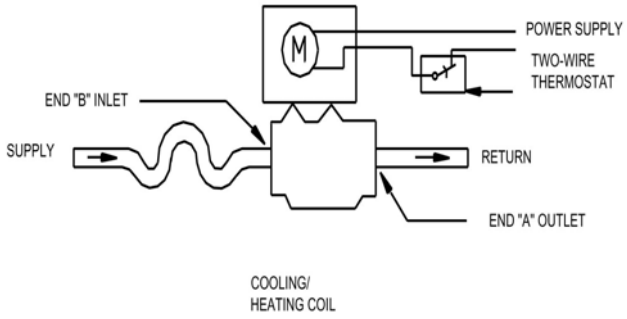


Fig. 2 Two-way valve

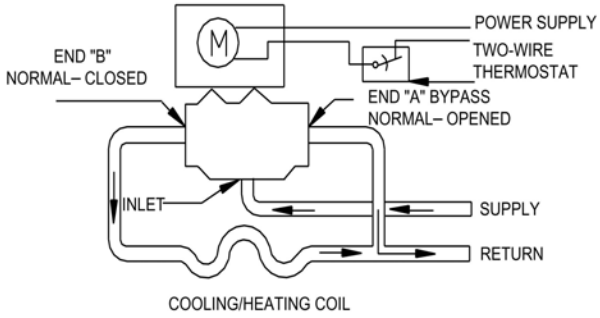


Fig. 3 Three-way valve

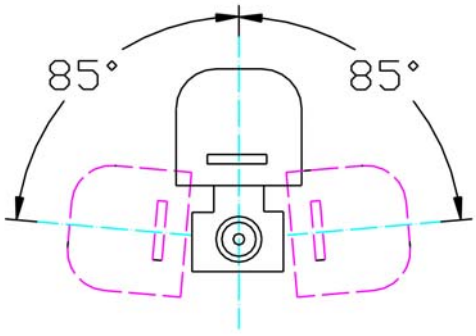


Fig. 4

When the valve is with auxiliary micro switch, the wiring diagram is as the following: Upon Request.