

# Series W-FCBV-20T (DN15-DN32)

## FCU Electric Valve

7

FCU Electric Valve

### ◆ Application

W-FCBV series electric ball valves are mainly used in HVAC water system. It can control the flow of the cold and hot media accurately according to actual needs. The temperature will not change dramatically so that the room temperature can be real-time and accurately controlled.

### ◆ Features

- Good dust-proof and water-proof (IP65)
- Good thermal insulation between the media and the actuator
- Easy installation and disassembly of the actuator
- The actuator can be installed after the installation of equipment and pipelines to enhance the installation efficiency
- The eccentric actuator allows the valve installed close to the wall
- The ball valve can be open / close by ordinary tools without installing the actuator
- High close pressure difference to avoid internal leakage
- Direct flow of media to avoid choking
- Soft start to avoid water hammer
- When the valve opening is in place, the motor does not bear any force to ensure longest motor life

### ◆ Operating Principles

The control valve is driven by a bidirectional motor. The motor is connected to the thermostat. The thermostat keeps sampling and processing the on-site data, sending out control signals, operating or stopping the electric valve motor, controlling the opening and closing of ball valve, controlling cold and hot water entering the fan coil unit and providing air-conditioning or heating for the room. When the room temperature reaches to the set value of thermostat, the thermostat will turn off the electric ball valve to ensure the room temperature is always within the temperature range set by the thermostat.



### ◆ Technical Specification

<b>Dimensions:</b>	DN15-DN32
<b>Working Temperature:</b>	1~95 C
<b>Working Pressure:</b>	PN20
<b>Close Pressure Difference:</b>	10Bar
<b>Working Fluid:</b>	Water / 60% Ethylene Glycol
<b>Connection:</b>	Threaded connection
<b>Connection Standard:</b>	Standard British flat thread BSPP (internal thread)
<b>Control Characteristic:</b>	On / off Control
<b>IP Grade:</b>	IP65
<b>Working Voltage:</b>	AC220V 50/60Hz
<b>Power:</b>	6W
<b>Actuating Time:</b>	12s~18s
<b>Torque:</b>	3Nm
<b>Stroke:</b>	90degree angle stroke
<b>Materials:</b>	
- Valve Body:	Forging Brass
- Valve Ball:	Stainless Steel
- Valve Stem:	Brass
- Teflon seat:	Polytetrafluoroethylene
- Seal:	Three ethylene propylene rubber
- Motor:	Reversible synchronous hysteresis motor

### ◆ Technical Parameters

#### Product Type:

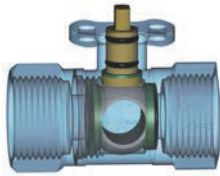
Type	Structure	Size Inch ( mm )	orifice	Kv
W-FCBV215-20T	Two-way Valve	DN15 (1/2" )	φ 14	4.62
W-FCBV220-20T		DN20 (3/4" )	φ 14	7.50
W-FCBV225-20T		DN25 (1" )	φ 14	8.50
W-FCBV232-20T		DN32 (1 1/4" )	φ 22	25.97
W-FCBV3A15-20T	Three-way side-out Valve	DN15 (1/2" )	φ 14	4.62
W-FCBV3A20-20T		DN20 (3/4" )	φ 14	7.50
W-FCBV3A25-20T		DN25 (1" )	φ 14	8.50
W-FCBV3A32-20T		DN32 (1 1/4" )	φ 22	25.97
W-FCBV3B15-20T	Three-way bottom-out valve	DN15 (1/2" )	φ 14	4.62
W-FCBV3B20-20T		DN20 (3/4" )	φ 14	7.50
W-FCBV3B25-20T		DN25 (1" )	φ 14	8.50

### Nomenclature:

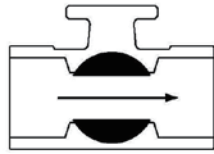
W	WATTS	W-	FCBV	3A	15-	20	T
FCU	FCU Ball Valve						
Category	2: Two-way Valve; 3A: Three-way side-out Valve; 3B: Three-way bottom-out valve						
Dimensions	DN15-DN32						
Working Pressure:	PN20						
Valve Body:	Forging Brass						

◆ Installation

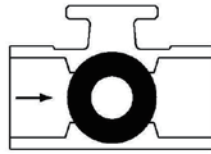
Valve body diagram



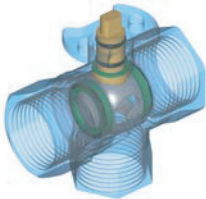
Two-way Valve



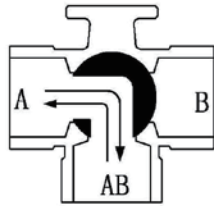
On



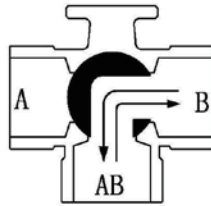
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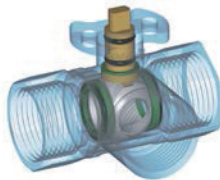
Three-way side-out Valve



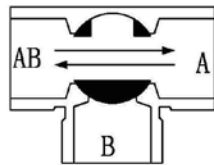
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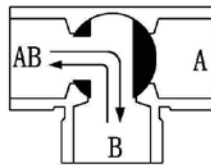
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Three-way bottom-out valve

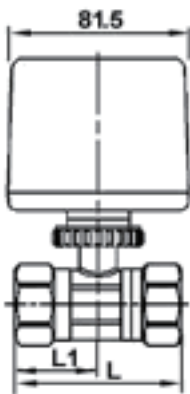


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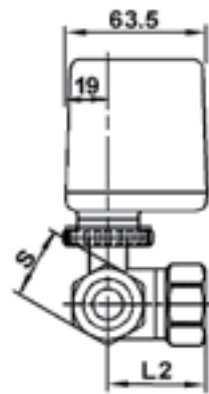


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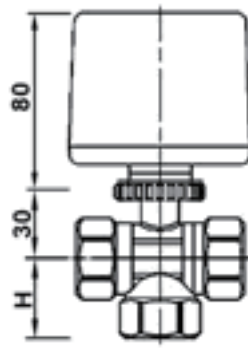
Dimension



Two-way Valve

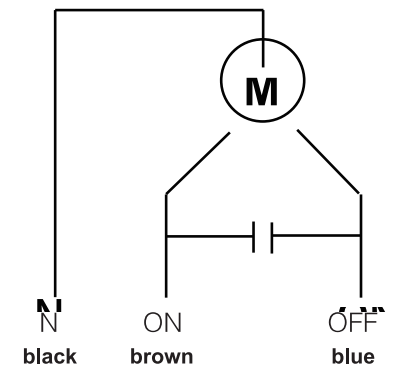


Three-way side-out Valve



Three-way bottom-out valve

Wiring



Size inch (mm)	Dimension (mm)				
	L	L1	L2	H	S
1/2" (DN15)	67	33.5	39	34	27
3/4" (DN20)	66	33	39	36	32.5
1" (DN25)	88	44	48	40	40
1 1/4" (DN32)	100	50	60	—	48

◆ Installation and Application

- Please refer to the structural diagram of the valve body to determine the media flow direction
- Please check the power supply matches the required of the electric actuator before energizing to avoid damaging the motor.
- Thermostat and actuator can only be controlled one-to-one.