

Series W-ECBV-25P (DN15-DN50)

Electric Control Ball Valve

◆ Application

Series W-ECBV electric control ball valve is widely used to regulate the flow in center air-conditioning, heating, water treatment and industry processing systems. It is driven by the Series W-A12 rotary actuator. After receiving a standard regulation signal or a floating point signal, the actuator rotates the ball in the valve body to the designated opening position.

◆ Features

- Accurate equal percentage flow control characteristic achieved by its unique coned water inlet
- Concise structure of flow passage largely avoids blockage
- High flow capacity and low resistance loss
- No leakage by using double shaft seal
- Super silence design achieves quiet operation
- High shutoff pressure and high working pressure
- Equipped with manual lever and opening degree indicator

◆ Operating Principles

Series W-ECBV electric control ball valve is driven by the Series W-A12 rotary actuator. After receiving a standard regulation signal (0-10V or 4-20mA) or a floating point signal, the actuator rotates the ball in the valve body to the designated opening position. Because the flow area between the valve ball and the valve seat is increased / decreased by this rotation, the flow through the valve is regulated correspondingly. This is the valve's auto-control process.

◆ Technical Specification

- Dimensions:** DN15-DN50
Working Temperature: 2~94°C
Working Pressure: PN25
Fluid Medium: Water, ≤ 50% Glycol Solution
Connection: Threaded Connection
Connection Standard: GB/T 7307-2001
Shutoff Pressure: 600KPa
Control Characteristic: Equal Percentage
Leak Rate: Control Path ≤ 0.01% Kvs
 Three-way Bypass ≤ 0.5% Kvs
Adjustment: Rotary Motion 90°
- Material:**
- Valve Body: Stainless Steel 304
 - Valve Seat: PTFE
 - Valve Ball: Stainless Steel 304
 - Valve Shaft: Stainless Steel 304
 - Sealing: NBR

◆ Technical Parameters

Product Type:

Type	Function	Size	Kvs	Actuator
W-ECBV2015A-25P	Two-way	DN15	4.0	Series W-A12A
W-ECBV2020A-25P	Two-way	DN20	6.3	
W-ECBV2025A-25P	Two-way	DN25	10.0	
W-ECBV2032B-25P	Two-way	DN32	16.0	Series W-A12B
W-ECBV2040B-25P	Two-way	DN40	25.0	
W-ECBV2050B-25P	Two-way	DN50	40.0	

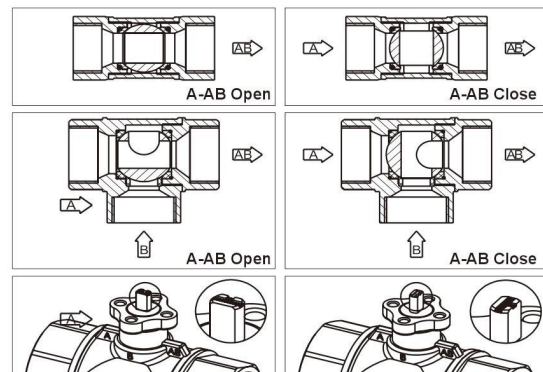


Type	Function	Size	Kvs	Actuator
W-ECBV3015A-25P	Three-way	DN15	4.0	Series W-A12A
W-ECBV3020A-25P	Three-way	DN20	6.3	
W-ECBV3025A-25P	Three-way	DN25	10.0	
W-ECBV3032B-25P	Three-way	DN32	16.0	Series W-A12B
W-ECBV3040B-25P	Three-way	DN40	25.0	
W-ECBV3050B-25P	Three-way	DN50	40.0	

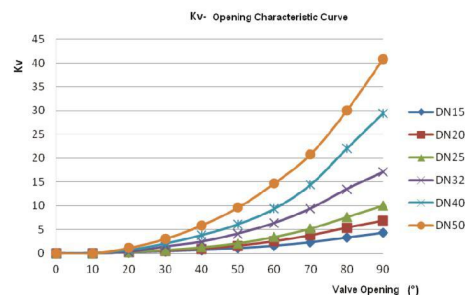
*The above Kvs values of different sized three-way valves indicate the valve's Kvs when the flow goes through the valve from A to AB. If the flow goes through the three-way valve from B to AB, the valve's Kvs is 70% of the Kvs value in the above table.

Coding Rules:

W	WATTS	W	E	C	B	V	2	0	1	5	A-	2	5	P
ECBV	Electric Control Ball Valve													
Category														
2: Two-way	3: Three-way													
Size														
015-DN15	020-DN20													
025-DN25	032-DN32													
040-DN40	050-DN50													
Actuator Torque														
A: 4 Nm	B: 5 Nm													
Pressure Class	PN25													
Body Material	Stainless Steel													



Kv - Opening Characteristic Curve:



◆ Installation

It is suggested to install the electronic control valve in the return pipe to relieve the impact of thermal stress. Three-way valve can be applied to both diverting and mixing systems. Please note that the 'T' groove on the top of the valve stem indicates the same position as the 'T' hole in the ball.

The figures below show the relationship between the 'T' groove on the valve's stem and the flow direction.

Please install the valve in the direction indicated by the arrow on the valve body. The valve can be installed horizontally (Fig.1) and vertically (Fig.2), but it should not be installed downwards. The connection of the valve body and valve's actuator is clearly illustrated in the instruction manual of the valve's actuator.

T-shaped Groove	
Flow Direction	
Status	A-AB Block A-AB Open

System Condition	Mixing		Diverting	
T-shaped Groove				
Flow Direction				
Status	B-AB Open	A-AB Open	AB-B Open	AB-A Open

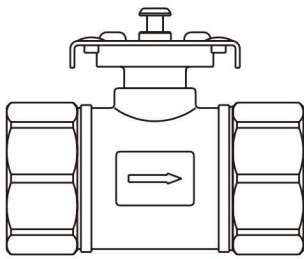


Figure 1

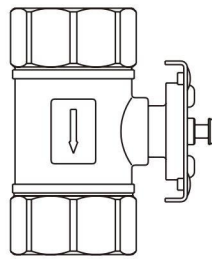


Figure 2

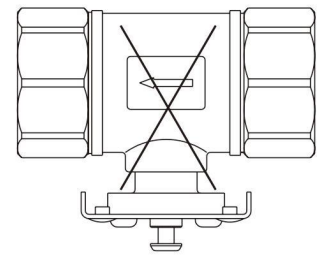
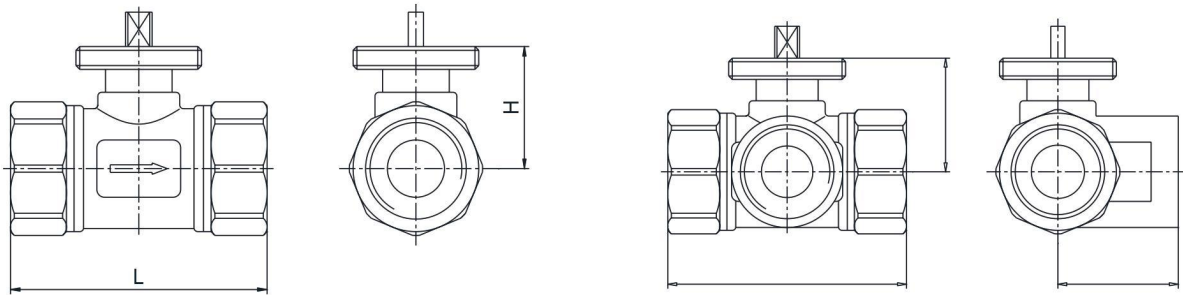


Figure 3

Installation Direction:



Size (mm)	Thread (G)	Dimension Parameters (mm)				Maximum Fitting Size (mm)
		L		H	M	
		Two-way	Three-way			
DN15	1/2"	68	68	32	33	13
DN20	3/4"	68	68	32	34	13
DN25	1"	82	84	37	43	17
DN32	1 1/4"	98	104	48	50	19
DN40	1 1/2"	105	111	48	50	19
DN50	2"	122	143	52	61	29