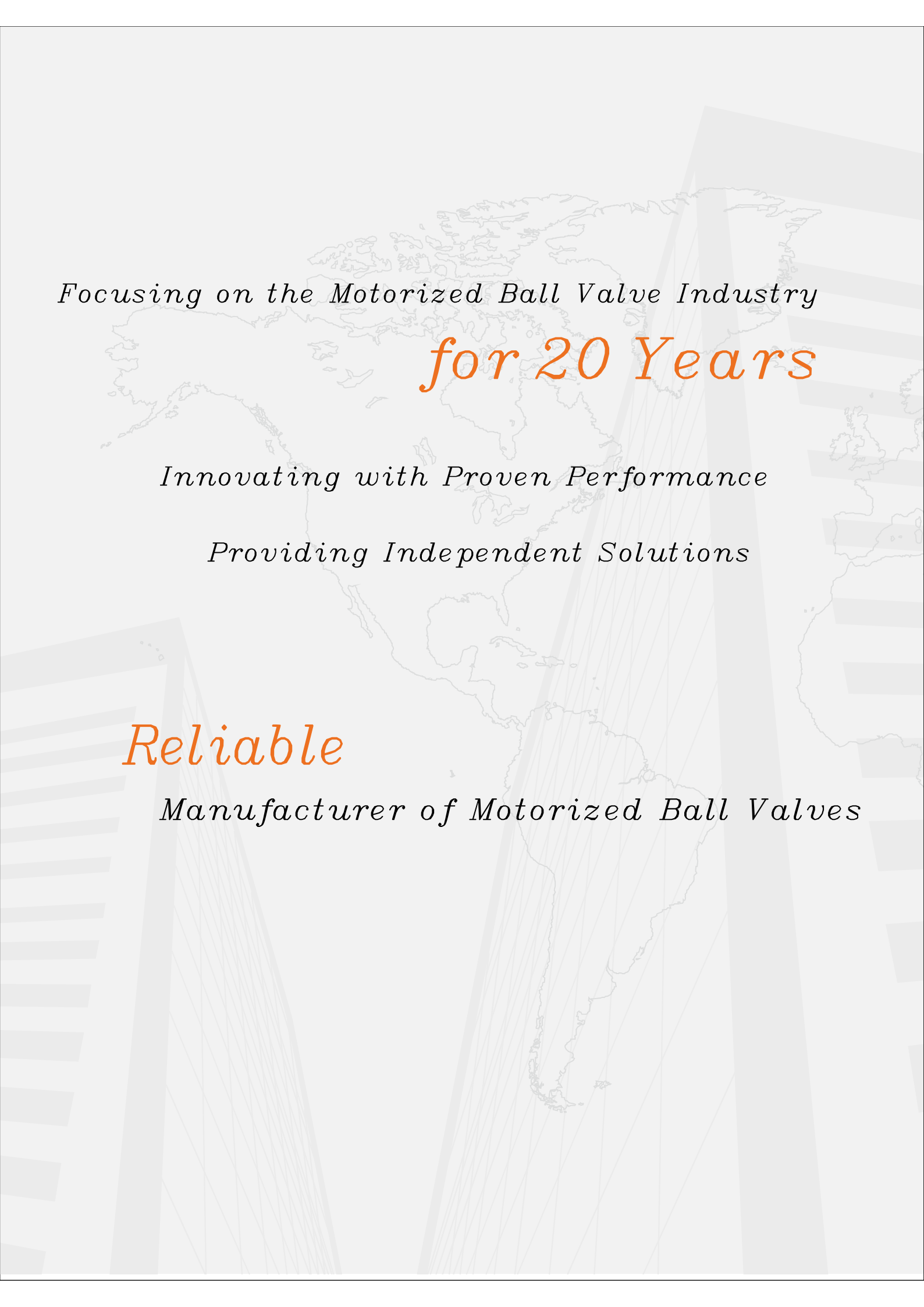




WINNER BALL VALVES CO., LTD.



WinVall



Focusing on the Motorized Ball Valve Industry

for 20 Years

Innovating with Proven Performance

Providing Independent Solutions

Reliable

Manufacturer of Motorized Ball Valves

Win – Win the trust of customers

with quality and performance.

V – very reliable, efficient and dedicated.

All – Keeping improving in ALL aspects not only in product innovation but also in customer satisfaction.

Main products

- Selection Guide
- EVO 22 Motorized Ball Valve with manual
- Mini Motorized Ball Valve
- AC Motorized Ball Valve
- Capacitor-Return Motorized Ball Valve
- DC Motorized Ball Valve
- 4N.m Control Ball Valve
- 10N.m AC Control Ball Valve
- 5N.m DC Control Ball Valve
- Capacitor-Return Control Ball Valve
- Fast Running Control Ball Valve
- 6/10N.m AC/DC Control Ball Valve
- Spring Return Valve
- 4,6,10N.m Air Damper Actuator
- 16,25,40N.m Air Damper Actuator

CE
RoHS

Selection Guide

The motorized ball valve is an electromechanical integrated device that relies on the rotation of the motor to pull the ball valve body to rotate. It is divided into two parts: the actuator and the valve body.

Motorized ball valves are generally installed in pipelines with fluids under different working conditions. When we select motorized ball valves, we must first make sure the relevant parameters of the valve body according to the pipeline working conditions, and then choose according to the relevant parameters of the pipeline control system and the valve body. And determine the relevant parameters of the actuator.

(1) Several elements of valve body selection

1. Pipeline pressure

All ball valve bodies of our company meet the requirements of systems with pipeline pressure not less than PN20, 200Bar, and 290Psi.

2. Valve body sizes

Commonly used threaded ball valves have calibers ranging from 1/2" to 2".

The diameter of flanged ball valve ranges from 1/2" ~4".

3. Valve body structure type

Our standard used ball valve types are: 2-way and 3-way.

4. Selection of valve body material

Generally, the selection of valve body material should consider several factors such as pipeline medium, medium temperature, operating conditions, and regulatory requirements.

- For drinking water, food equipment, medical equipment, please choose stainless steel valve body, our regular rust steel ball valve is 304, according to customer needs, or special corrosive liquids, please consult our sales. We can customize SS316, SS316L or other.

- For central air conditioning, heating, water treatment, agricultural irrigation, animal husbandry equipment, industrial equipment (oil cooling system, water cooling system, and industrial water system), fuel cell water cooling system, Hpb59-1 brass can be used.

- For seawater or corrosive liquids, you can also choose UPVC ball valves.

5. Temperature tolerance range

Normal temperature range is 2°C-90°C. We have started to upgrade the ball valve to the temperature range of -10°C~110°C.

If you have special temperature request like -10°C-120°C, please tell us before ordering.

6. The flow characteristics of the valve body

The flow characteristics of ball valves are divided into two types, the first types is the quick-open switch-type flow characteristics. The second types is equal percentage or linear regulation flow characteristics.

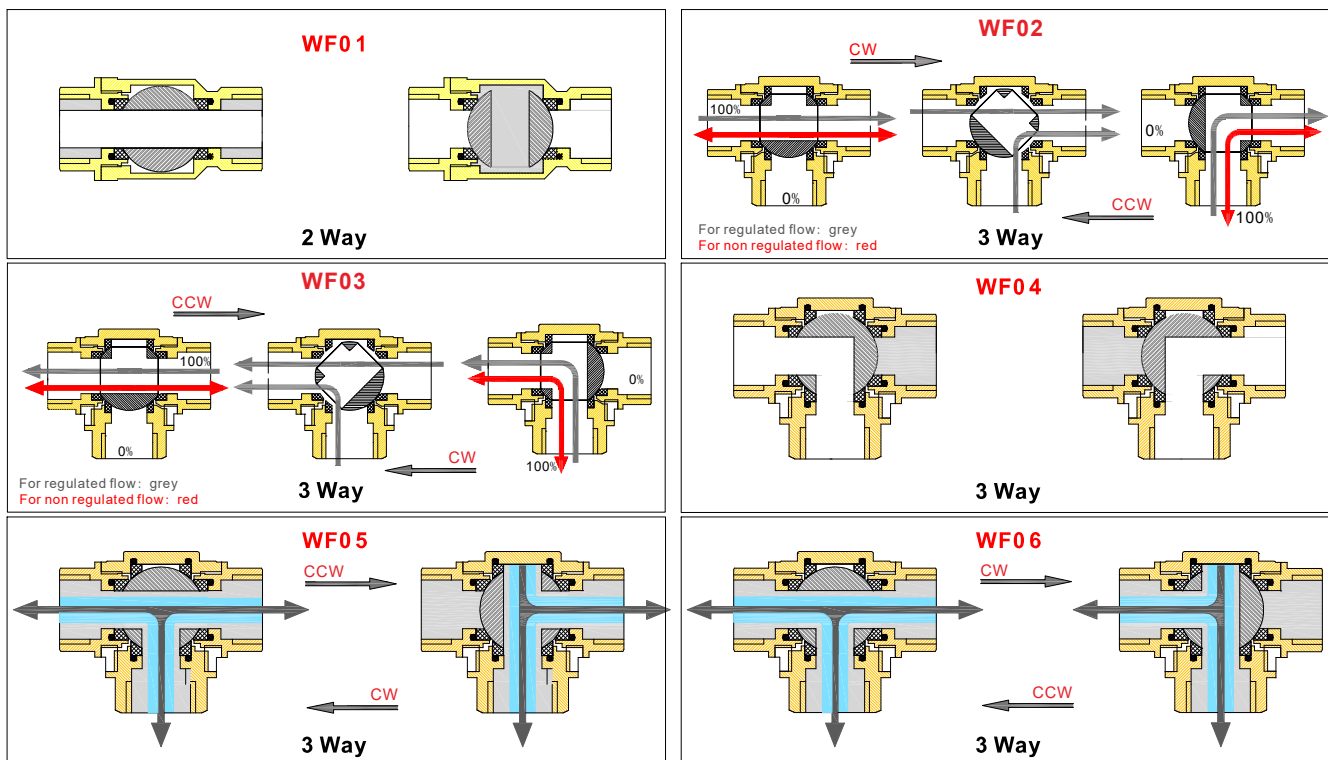
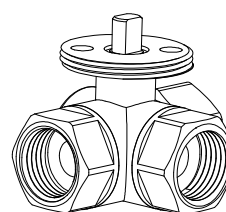
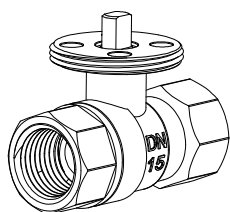
- If the valve body is only used to cut off or connect the fluid, or change the direction of medium flow, you can use the on-off type flow control valve body.

- If you need to adjust the flow, you can use an adjustable flow control valve body.

- If you need a ball valve with linear flow characteristics, equal percentage flow characteristics, or other special liquid or gas flow requirements, please inform us of your needs, and we can choose and customize for you.

7. Flow direction selection

Please choose the flow direction you need. Normally, WF01, WF02 and WF03 is in common use.



Remarks:

- (1) For on-off pipelines or switching pipelines, the inlet and outlet can be determined based on the actual situation on site.
- (2) For pipelines that adjust the flow rate or mix cold and hot water, installation can only be based on the inlet and outlet determined by the valve body.

(2) The selection elements of the actuator

Power supply voltage and control method are indispensable conditions when selecting an actuator.

1. Power supply voltage

- 230VAC, 110VAC, 24VAC,
- 24VAC/DC,
- 24VDC, 12VDC, 3VDC, 9~28VAC/DC

2. Control method

- On-Off control: The actuator will only stop in the fully open position and fully closed position.
- Floating-point switch type: Under the action of the external control circuit, the actuator will stop in the fully open position and fully closed position, and other positions in the middle.

• Proportional type:

Input signal: 0-10VDC, 4-20mA; Output signal: 0-10VDC

• Remote communication control:

We can provide MODBUS, mBUS protocol electric ball valve customization service.

3. Running time

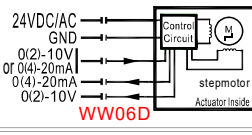
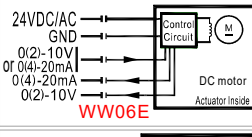
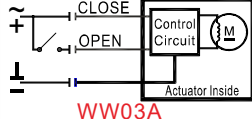
Different types and different series of actuators have different running times. If you don't mind or don't know the meaning of this parameter, please ignore it.

If you have requirements for the running time, please tell our sales staff about the running time requirements. Our sales staff will provide you with professional help.

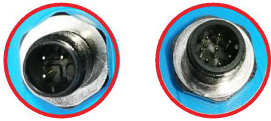
EVO 22 Motorized Ball Valve

- Manual function by screwdriver
- Display of switch angle position.
- IP67
- Environment temperature: -10~80 °C
- Small Size and Big Torque
- Installation is very convenient and reliable
- Can be installed both horizontally and vertically.
- Low energy consumption, limit protection, current limiting protection.
- Constant-current control

24VAC/DC Actuator




Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-2224S35	Proportion	24VAC/DC (19-30V)	Power in operation: 5W Power in rest position: 2W 4N.m Running time: 35s	Actuator shell: ABS	
WRA-2224S8			Power in operation: 4W Power in rest position: 2W 4N.m Running time: 6-12s	Actuator base: PC	
WRA-22W02A	On/Off		Power in operation: 2W Power in rest position: 1W 4N.m Running time: 6-12s	Actuator revolving shaft: POM	

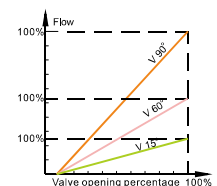
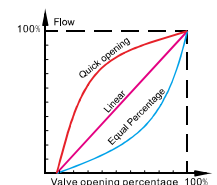
24VAC/DC Actuator Option : Other function

Function	Illustration
-P3, -P8 Aviation socket: M12*1 Threaded connection: 8 Pin, -P8; 3Pin, -P3.	



Matching Valve

			
Valve Type	W8BV. . . Series	W8BV...M Series	WSBV. . . Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT
Sealing Material	Stem: FKM+NBR with 3 O-ring Ball: PTFE+FKM with double O-ring		
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc
Temperature	-10~100°C		
Admissible Pressure	2.0MPa		
Flow Characteristics	Equal Percentage/Quick opening	Quick opening flow characteristics	



- If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.
- *W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.

AC Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-2220APRO	On/Off	90-250VAC	Power: 2W 4N.m Running time: 6-12s Current limiting protection Limit protection	Actuator shell: ABS	
WRA-2220A		230VAC	Power: 5W 4N.m Running time: 43S/50Hz 36S/60Hz	Actuator base: PC	
WRA-2202A		24VAC		Actuator revolving shaft: POM	
WRA-2220	3-point	230VAC	Constant current running AC synchronous motor Limit protection	Actuator revolving shaft: POM	
WRA-2202		24VAC			

DC Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-2203A	On/Off or 3-point	3VDC	3.0N.m, 2W, Running time: 6-10s	Actuator shell: ABS	
WRA-2212A		12VDC	3.0N.m, 2W, Running time: 6-10s	Actuator base: PC	
WRA-2224A		24VDC	3.0N.m, 2W, Running time: 6-10s	Actuator revolving shaft: POM	

AC and DC Actuator Option : Other function

	-P3, -P5, -P8	-DK
Function	Aviation socket: M12*1 Threaded connection: 8 Pin, 5 Pin, 3Pin	Dry Contacts: Full Open feedback and Full Close feedback.
Illustration		



Matching Valve

Valve Type	W8BV... Series	W8BV...M Series	WSBV... Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT
Sealing Material	Stem: FKM+NBR with 3 O-ring Ball: PTFE+FKM with double O-ring		
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc
Temperature	-10~100°C		
Admissible Pressure	2.0MPa		
Flow Characteristics	Equal Percentage/Quick opening	Quick opening flow characteristics	

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*W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.

Capacitor-Return

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-2220C	On/Off	90-250VAC	Power: 2W 2.5N.m Running time: 6-12s	Actuator shell: ABS Actuator base: PC	
WRA-2224C	On/Off	9-28VAC/DC	Constant-current control Limit protection IP67	Actuator revolving shaft: POM	

AC and DC Actuator Option : Other function

	-P3
Function	Aviation socket: M12*1 Threaded connection: 3Pin
Illustration	



Matching Valve



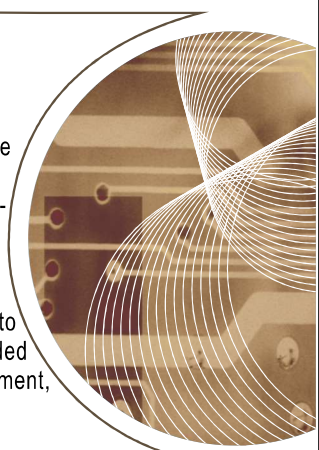
Valve Type	W8BV. . . Series	W8BV...M Series	WSBV. . . Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT
Sealing Material	Stem: FKM+NBR with 3 O-ring Ball: PTFE+FKM with double O-ring		
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc
Temperature	-10~100°C		
Admissible Pressure	2.0MPa		
Flow Characteristics	Equal Percentage/Quick opening	Quick opening flow characteristics	

- If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.
- *W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.

Mini Motorized Ball Valves

This series of mini motorized ball valves consists of WRA-53...series actuators and W6BV...2 way forged brass ball valves. The actuator adopts to unique control mode, using AC motor as the power source and matching metal gear retarding mechanism, large torque within 19Sec rotating time. When the valve is opening or closed, the motor will automatically turn off with low consumption. According to the different control way, the actuator could be divided into single wire and double wires controlling type.

Valve bodies have excellent capacity of water stoppage, large water flow rate, no dirt block inside, and unique seal structure to make sure less leakage and avoid internal leakage of valve. It is easy to install our valves together with actuators via a threaded copper connector. This series of mini motorized ball valves can be widely used for solar system, HVAC system, heating equipment, beer brewing industry, water treatment system and agricultural irrigation etc.



Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-5320	3-point	230VAC±15%	Power consumption: 7W Running time: 19S/50Hz, 16S/60Hz Ambient temperature: -10°C ~ 80°C Ambient humidity: 0~90%RH Protect rank: Ip54 Output torque: 3.5N.m	Actuator shell: PC+GF10	<p>WW02A</p>
WRA-5302		24VAC±15%		Actuator base: PC+GF10	
WRA-5320A	On/Off	230VAC±15%		Actuator revolving shaft: POM & PC+GF10	<p>WW01A</p>
WRA-5302A		24VAC±15%			

Matching Valve



Valve Type	W6BV2... Series
Material	Brass (Hpb59-1)
Type	2 way
Size	1/2", 3/4", 1", 1-1/4", 1-1/2"
Thread Type	BSP
Sealing Material	Stem: FKM+NBR with 3 O-ring Ball: PTFE+FKM with double O-ring
Media	Cool/heat water, 50% glycol, air, Oil
Temperature	2~90°C
Admissible Pressure	1.6MPa
Flow Characteristics	Quick opening flow characteristics

* If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

** Valve body model description, W6BV2... Is followed by 2 digits, respectively 15, 20, 25, 32, 40, representing 1/2", 3/4", 1", 1-1/4", 1-1/2" equal caliber. The penultimate number 2 or 3 represents 2-way and 3-way. For other series of ball valve body models, the last three numbers have the same meaning.

AC Motorized Ball Valve

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-6320	3-point	230VAC±15%	Power consumption: 7W Running time: 16S/50Hz, 12S/60Hz Ambient temperature: -10°C~ 80°C Ambient humidity: 0~90%RH Protect rank: IP54 / IP55 Output torque: 3.5N.m	Actuator shell: PC+GF10 Actuator base: PC+GF10 Actuator revolving shaft: POM & PC+GF10	
WRA-6310		110VAC±15%			
WRA-6302		24VAC±15%			
WRA-6320A	On/Off	230VAC±15%			
WRA-6310A		110VAC±15%			
WRA-6302A		24VAC±15%			



Actuator Option : Other function

	-L	-P5,-P8	-DK	-K2
Function	LED Indicators: LED Light indicators for power, full open and full close.	Aviation socket: M12*1 Threaded connection 8 Pin, -P8; 5 Pin, -P5.	Dry Contacts: Full open feedback and Full Close feedback.	Wet Contacts: Full Open feedback and Full Close feedback.
Illustration				

Matching Valve

	W8BV... Series	W8BV...M Series	WSBV... Series	WUPBV... Series
Valve Type	W8BV... Series	W8BV...M Series	WSBV... Series	WUPBV... Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring			EPDM, FKM with O-ring
	Ball: PTFE+FKM with double O-ring			PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	sea water, water, acid, Solvent
Temperature	-10~100°C			-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening		Quick opening flow characteristics	

If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

AC Motorized Ball Valve

Actuator <10S

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-6220	3-point	230VAC±15%	Running time: 10S/50Hz; 8S/60Hz Output torque: 2.5N.m	Actuator shell: PC+GF10	
WRA-6202		24VAC±15%			
WRA-6120	3-point	230VAC±15%	Running time: 8S/50Hz; 7S/60Hz Output torque: 2N.m	Actuator base: PC+GF10	
WRA-6102		24VAC±15%			
WRA-6220A	On/Off	230VAC±15%	Running time: 10S/50Hz; 8S/60Hz Output torque: 2.5N.m	Actuator revolving shaft: POM & PC+GF10	
WRA-6202A		24VAC±15%			
WRA-6120A	On/Off	230VAC±15%	Running time: 8S/50Hz; 7S/60Hz Output torque: 2N.m	POM & PC+GF10	
WRA-6102A		24VAC±15%			



Actuator Option : Other function

	-L	-P5,-P8	-DK	-K2
Function	LED Indicators: LED Light indicators for power, full open and full close.	Aviation socket: M12*1 Threaded connection 8 Pin, -P8; 5 Pin, -P5.	Dry Contacts: Full open feedback and Full Close feedback.	Wet Contacts: Full Open feedback and Full Close feedback.
Illustration				

Matching Valve

Valve Type	W8BV... Series	W8BV...M Series	WSBV... Series	WUPBV... Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring			EPDM, FKM with O-ring
	Ball: PTFE+FKM with double O-ring			PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	sea water, water, acid, Solvent
Temperature	-10~100°C			-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening		Quick opening flow characteristics	

● If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

Capacitor-Return Motorized Ball Valve

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-6320C	Capacitor Return	90-240VAC	Power consumption: 3W Running time: 5~30s Ambient temperature: -10°C~80°C Ambient humidity: 0~90%RH Protect rank: IP54/55 Output torque: 2.0N.m	Actuator shell: PC+GF10 Actuator base: PC+GF10 Actuator revolving shaft: POM & PC+GF10	
WRA-6302C		9-28VAC/DC			

Actuator Option : Other function

	-L	-P3, -P5
Function	LED Indicators: LED Light indicators for power, full open.	Aviation socket: M12*1 Threaded connection: 3 Pin, -P3; 5 Pin, -P5.
Illustration		



Matching Valve

Valve Type	W8BV. . . Series	W8BV...M Series	WSBV. . . Series	WUPBV. . . Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring			EPDM, FKM with O-ring
	Ball: PTFE+FKM with double O-ring			PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	sea water, water, acid, Solvent
Temperature	-10~100°C			-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening	Quick opening flow characteristics		

If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

DC Motorized Ball Valves

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA-4203	3-point	3VDC	Power consumption: 3W Running time: 5-12s	Actuator shell: PC+GF10	
WRA-4212		12VDC			
WRA-4224		24VDC			
WRA-4203A	On/Off	3VDC	Ambient temperature: -10°C~ 80°C	Actuator base: PC+GF10	
WRA-4212A		12VDC			
WRA-4224A		24VDC			
WRA-4224D	On/Off	9-24VDC	Ambient humidity: 0~90%RH Protect rank: IP54/ IP55 Output torque: 2.0N.m	Actuator revolving shaft: POM & PC+GF10	



Actuator Option : Other function

	-L	-P5,-P8	-DK	-K2
Function	LED Indicators: LED Light indicators for power, full open and full close.	Aviation socket: M12*1 Threaded connection 8 Pin, -P8; 5 Pin, -P5.	Dry Contacts: Full Open feedback and Full Close feedback.	Wet Contacts: Full Open feedback and Full Close feedback.
Illustration				

Matching Valve

Valve Type	W8BV. . . Series	W8BV...M Series	WSBV. . . Series	WUPBV. . . Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	Female BSP/NPT	Male BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring			EPDM, FKM with O-ring
	Ball: PTFE+FKM with double O-ring			PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	sea water, water, acid, Solvent
Temperature	-10~100°C			-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening		Quick opening flow characteristics	

4N.m Control Ball Valves

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WVA4-104	3-piont	90-240VAC	Running time: 50S-90S	Actuator shell: PC	<p>WW05</p>
WVA4-204		24VAC/DC	Ambient temperature: -10°C~ 60°C	Actuator base: PC	
WVA4-304	0-10VDC	24VAC/DC	Ambient humidity: 0~90%RH	Actuator revolving shaft: Aluminum alloy	<p>WW06A</p>
WVA4-304-12		12VAC/DC	Protect rank: IP54	Gear material: Metal and POM	
			Output torque: 4.0N.m		

Actuator Option : Other function

	-K	-R
Function	Dry Contacts: Full Open feedback or Full Close feedback.	10K resistance feedback: Feedback different resistance values from full closed to full open.
Illustration	<p>WW12</p>	<p>WW13</p>

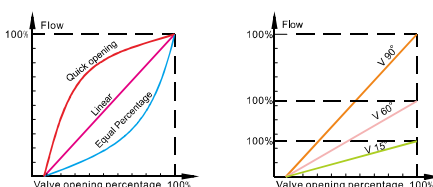


Matching Valve

Valve Type	WCBS... Series	W8BV... Series	W8BV...M Series	WSBV... Series	WSBV...-11	WUPBV... Series
Material	Hbp59-1	Hbp59-1	Hbp59-1	304/316/316L	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way	2 way
Size	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"	1/2", 3/4", 1"
Thread Type	BSP	BSP/NPT	BSP	BSP/NPT	DIN11851	Bonding
Flow	Modified Linear	Equal Percentage or Quick opening	Quick opening	Full bore quick opening	Quick opening flow characteristics	
Sealing Material	Stem: FKM+NBR with 3 O-ring					EPDM,FKM with o-ring
	Ball: PTFE+FKM with double O-ring					PTFE
Media	Cool/heat water, 50% glycol, air, Oil			Cool/heat water, 50% glycol, air, Oil, acid, Solvent		sea water, water, acid, Solvent
Temperature	2~90°C	-10~100°C				-10~60°C
Admissible Pressure	2.0MPa					1.6MPa

* If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

* *W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.



4N.m Control Ball Valves

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WVA4-104	3-piont	90-240VAC	Running time: 50S-90S	Actuator shell: PC	<p>WW05</p>
WVA4-204		24VAC/DC	Ambient temperature: -10°C~ 60°C	Actuator base: PC	
WVA4-304	0-10VDC	24VAC/DC	Ambient humidity: 0~90%RH	Actuator revolving shaft: Aluminum alloy	<p>WW06A</p>
WVA4-304-12		12VAC/DC	Protect rank: IP54	Gear material: Metal and POM	
			Output torque: 4.0N.m		

Actuator Option : Other function

	-K	-R
Function	Dry Contacts: Full Open feedback or Full Close feedback.	10K resistance feedback: Feedback different resistance values from full closed to full open.
Illustration	<p>WW12</p>	<p>WW13</p>

Matching Valve



Valve Type	WCBS. . . Series
Material	Hbp59-1
Type	6 way
Size	3/4"
Thread Type	BSP
Sealing Material	Stem: FKM+NBR with O-ring Ball: PTFE+FKM with double O-ring
Media	Cool/heat water, 50% glycol, air, Oil
Temperature	2~90°C
Admissible Pressure	2.0MPa

* If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

**W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.

10N.m AC Control Ball Valve

Actuator

Model	Control Type	Power Supply	On/off Time	Torque	Parameter	Material	Wiring Diagram
WRA3-104	3-point	230VAC±15%	16s/50Hz, 12s/60Hz	4N.m	Running time: 45s/50Hz, 38s/60Hz Ambient temperature: -10°C~60°C Ambient humidity: 0~95%RH Protect rank: IP65	Actuator shell: PC+ABS Actuator base: PC+ABS Actuator revolving shaft: POM & SS304 Gear material: Metal and POM	
WRA3-110		230VAC±15%	45s/50Hz, 38s/60Hz	10N.m			
WRA3-11010		110VAC±15%	45s/50Hz, 38s/60Hz	10N.m			
WRA3-210		24VAC±15%	45s/50Hz, 38s/60Hz	10N.m			
WRA3-104A	On/Off	230VAC±15%	16s/50Hz, 12s/60Hz	4N.m	Ambient humidity: 0~95%RH Protect rank: IP65	Actuator revolving shaft: POM & SS304 Gear material: Metal and POM	
WRA3-110A		230VAC±15%	45s/50Hz, 38s/60Hz	10N.m			
WRA3-11010A		110VAC±15%	45s/50Hz, 38s/60Hz	10N.m			
WRA3-210A		24VAC±15%	45s/50Hz, 38s/60Hz	10N.m			

Note: The model number with "K" stand for the actuator with microswitch dry contact feedback function.

Actuator Option : Other function

	-DK	-K2
Function	Dry Contacts: Full Open feedback and Full Close feedback.	Wet Contacts: Full Open feedback and Full Close feedback.
Illustration		



Matching Valve

Valve Type	W8BV. . . Series	WCBS. . . Series	WSBV. . . Series	WUPBV. . . Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"			
Thread Type	Female BSP/NPT	BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring			EPDM, FKM with O-ring
	Ball: PTFE+FKM with double O-ring			PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc	Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	-10~100°C	sea water, water, acid, Solvent
Temperature	-10~100°C	2~90°C	-10~100°C	-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening	Modified Linear	Full bore quick opening	Quick opening

If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

5N.m DC Control Ball Valve

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA3-305D	On/Off	3VDC	Running time: 10-30S Ambient temperature: -10°C~60°C Ambient humidity: 0~95%RH Protect rank: IP65 Output torque: 5.0N.m	Actuator shell: PC+ABS Actuator base: PC+ABS Actuator revolving shaft: POM & SS304 Gear material: Metal and POM	
WRA3-205D		12VDC			
WRA3-105D		24VDC			
WRA3-405D	On/Off	9-24VDC			

Actuator Option : Other function

	-DK	-K2
Function	Dry Contacts: Full Open feedback and Full Close feedback.	Wet Contacts: Full Open feedback and Full Close feedback.
Illustration		



Matching Valve



Valve Type	W8BV. . . Series	WCBS. . . Series	WSBV. . . Series	WUPBV. . . Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"			
Thread Type	Female BSP/NPT	BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring Ball: PTFE+FKM with double O-ring			EPDM, FKM with O-ring PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc		Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	sea water, water, acid, Solvent
Temperature	-10~100°C	2~90°C	-10~100°C	-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening	Modified Linear	Full bore quick opening	Quick opening

If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

Capacitor-Return Control Ball Valve

Actuator

Model	Control Type	Power Supply	On/off Time	Torque	Parameter	Material	Wiring Diagram
WRA3-110C	On/Off	90-240VAC	10-35s	5N.m	Running time: 10-30S Ambient temperature: -10°C~ 60°C Ambient humidity: 0~90%RH Protect rank: IP65 Output torque: 5.0N.m	Actuator shell: PC+ABS Actuator base: PC+ABS Actuator revolving shaft: POM & SS304 Gear material: Metal and POM	
WRA3-210C		10-30VAC/DC					

Note: The model number with "K" stand for the actuator with microswitch dry contact feedback function.

Actuator Option : Other function

	-DK	-K2
Function	Dry Contacts: Full Open feedback and Full Close.	Wet Contacts: Full Open feedback and Full Close.
Illustration		



Matching Valve

Valve Type	W8BV... Series	WCBS... Series	WSBV... Series	WUPBV... Series
Material	Brass(Hpb59-1)	Brass(Hpb59-1)	304/316/316L	UPVC
Type	2 way / 3 way	2 way / 3 way	2 way / 3 way	2 way
Size	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"			
Thread Type	Female BSP/NPT	BSP	BSP/NPT	Bonding
Sealing Material	Stem: FKM+NBR with 3 O-ring			EPDM, FKM with O-ring
	Ball: PTFE+FKM with double O-ring			PTFE
Media	Cold/hot water, 50% glycol, air, oil, etc	Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	Cold water/hot water, 50% glycol, air, oil, weak acid and alkali, solvent, etc	sea water, water, acid, Solvent
Temperature	-10~100°C	2~90°C	-10~100°C	-10~60°C
Admissible Pressure	2.0MPa			1.6MPa
Flow Characteristics	Equal Percentage/Quick opening	Modified Linear	Full bore quick opening	Quick opening

If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.

Fast Running Control Ball Valve

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WRA3-302S	0-10V	24VAC/DC	Running time: WRA3-302S: 8S WRA3-306S: 20S Ambient temperature: -10°C~ 60°C Ambient humidity: 0~90%RH Protect rank: IP65 Output torque: WRA3-302S type: 4.0N.m WRA3-306S type: 8.0N.m	Actuator shell: PC+ABS Actuator base: PC+ABS Actuator revolving shaft: POM & SS304 Gear material: Metal and POM	
WRA3-306S					

Features

- Working voltage: 24±10%VAC/DC
- Stepper motor drive
- Adjustable resistance is the internal detector, which can detect the running position during the whole operational process. Closed loop control mode. Control accuracy is 3%.
- Position limitation protection and overload protection.

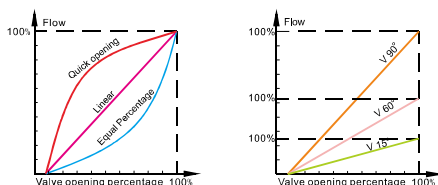


Matching Valve



Valve Type	W8BV... Series	WCBS... Series	WSBV... Series
Material	Hbp59-1		304/316/316L
Type	2 way / 3 way		2 way / 3 way
Size	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"		1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
Thread Type	BSP		BSP/NPT*
Flow	Modified Linear		Full bore quick opening & Modified Linear
Sealing Material	Stem: FKM+NBR with double o-ring		
	Ball :PTFE+FKM with double o-ring		
Media	Cool/heat water, 50% glycol, air, Oil		Cool/heat water, 50% glycol, air, Oil, acid , Solvent
Temperature	2~90℃		-10~100℃
Admissible Pressure	2.0MPa		

- * If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.
- * W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.



6/10N.m Control Ball Valves

Actuator

Model	Control Type	Power Supply	Parameter	Material	Wiring Diagram
WVA4-106	3-point	90-240VAC	Running time: 60-120S Ambient temperature: -10°C~ 60°C Ambient humidity: 0~65%RH Protect rank: IP54 Output torque: 4-...06 Type: 6N.m 4-...10 Type: 10N.m	Actuator shell: PC Actuator base: PC Actuator revolving shaft: Aluminum alloy Gear material: Metal and POM	<p>WW05</p>
WVA4-110					
WVA4-206		0-10V			24VAC/DC
WVA4-210					

Actuator Option : Other function

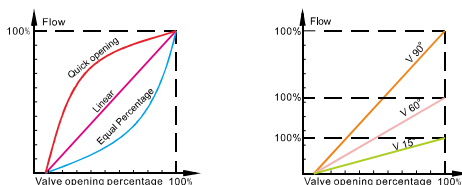
	-K	-R
Function	Dry Contacts: Full Open feedback or Full Close feedback.	10K resistance feedback : Feedback different resistance values from full closed to full open.
Illustration	<p>WW12</p>	<p>WW13</p>



Matching Valve

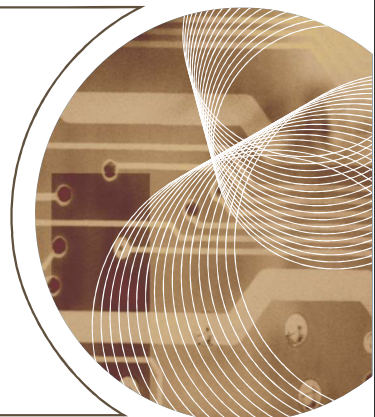
Valve Type	W8BV... Series	WCBS... Series	WSBV... Series
Material	Hpb59-1		304/316/316L
Type	2 way / 3 way		2 way / 3 way
Size	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"		1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
Thread Type	BSP		BSP/NPT*
Flow	Modified Linear		Full bore quick opening & Modified Linear
Sealing Material	Stem: FKM+NBR with double o-ring Ball :PTFE+FKM with double o-ring		
Media	Cool/heat water, 50% glycol, air, Oil		Cool/heat water, 50% glycol, air, Oil, acid , Solvent
Temperature	2~90°C		-10~100°C
Admissible Pressure	2.0MPa		

- * If you are not sure which model suits your system/equipment, please kindly contact our sales for professional suggestions.
- * W8BV...series has three types of valve bodies with different flow characteristics: linear flow characteristic, equal percentage flow characteristic and quick opening flow characteristic.



Spring return valves

SW-B. . . /H series Spring return valves consist of stainless actuators and forged brass valve bodies with additional spring return function. The series of valves are widely used for the control of the ends such like fan coil units, cooling/ heating system, HVAC system, solar system etc. Using the thermostat to control the motor of the spring return valve, and make on/off through speed-down machine and reset the spring to carry out the break/on of the hot/cold water in the pipe. It's easy for users to instal actuators onto valve bodies with pop-off connecting type.



Material

Part	Material
Valve Body	Forged Bass
Actuator Shell	Aluminum
Actuator Base	Stainless Steel



Model Code

Valve model	Type	DN	Size	Medium	Temperature	Admissible pressure	Closing pressure	Time(sec)	
SW-B152 /H	2 way	DN15	1/2"	Cool/hot water 50% glycol	5-90°C	1.6MPa	1400KPa	Fission valve: Open time 14~18s Close time 5~7s	
SW-B202 /H		DN20	3/4"						
SW-B252 /H		DN25	1"						
SW-B153 /H	3 way	DN15	1/2"						Form-fitting valve: Open time 8~12s Close time 3~5s
SW-B203 /H		DN20	3/4"						
SW-B253 /H		DN25	1"						

Dimension

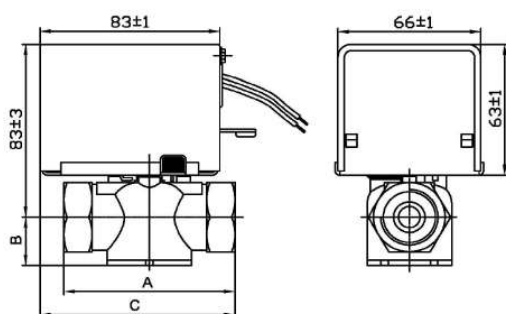


Figure 1, 2-way

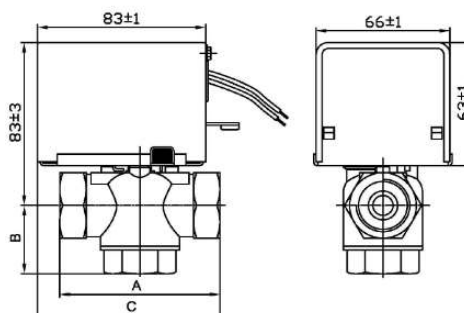
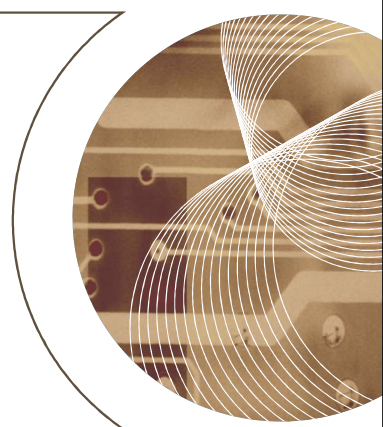


Figure 2, 3-way

4, 6, 10N.m Air Damper

The actuator is suitable for circular spindle with $\square 10-18\text{mm}$, or square spindle size 6-12mm, length > 40mm, and the rotation direction can be reversed by pushing the CCW/CW switch side of the case. To change the input/output signal valve, open the case, and find the JP plug on the PCB. The control signal valve can be changed by connecting the plug. Torque could be 4, 6 or 10 N.m.



Technical data

Model code	AK200 - D04	AK24 - A/D04
Output torque	4N.m	6N.m 10N.m
Power supply	AK200 - D... AC230V	Ak24 - A/D... AC/DC24V
Run time	30...150s	30...120s
Operating power	12VA,3W	5VA,3W
Standstill power	12VA,3W	5VA,3W
Output angle	90° (95° Max)	
ON/OFF control signal	2 wires control	
Modulating control signal 1	DC0(2)...10V (100k ohm)	
Modulating control signal 2	DC0(4)...20mA (500 ohm)	
Modulating feedback signal	DC0(2)...10V	
Protection rank	Ip54	
Ambient conditions	-10...+55°C 0...90% RH	
Noise max	40dB(A)	
Weight	600...900g	



Model code description

AK 24 - A 04

The actuator code

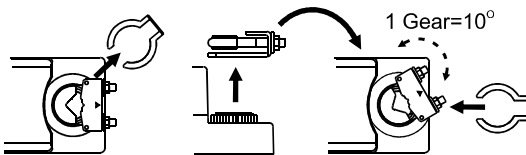
D - 3-point control
A - Proportional control

Power supply code
200 - AC 220V
24 - AC/DC 24V

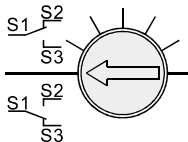
Torque code
04 - 4 N.m
06 - 6 N.m
10 - 10N.m

Limits for rotation

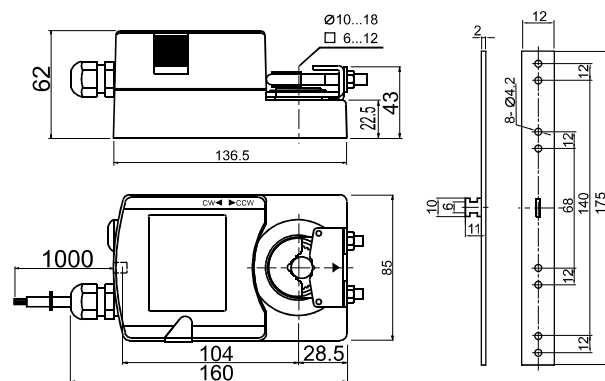
Mechanical Limiter Adjustment



Built-in Microswitch Adjustment (For EMO-...S)
Loosen the screw of the microswitch.

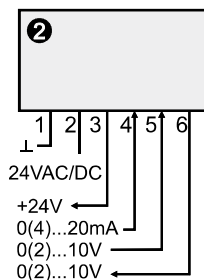
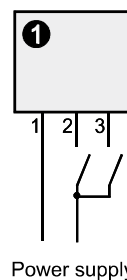


Dimensions



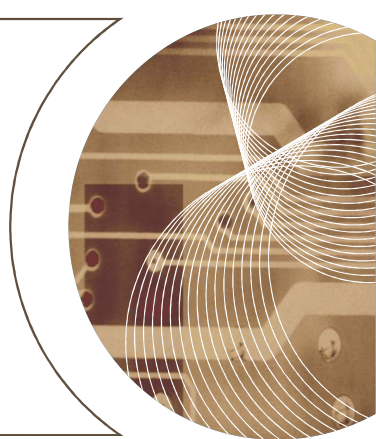
Wiring diagrams & power

AK24 - D...	①	AC/DC24V
AK200 - D...	①	AC230V
AK24 - A...	②	AC/DC24V



16,25,40N.m Air Damper

The actuator is suitable for circular spindle $\square 10 - 18\text{mm}$, or square spindle size $8 - 14\text{mm}$, length $>40\text{mm}$, and the rotation direction can be reversed by pushing the CCW/CW switch side of the case. To change the input/output signal valve, open the case, and find the JP plug on the PCB. The control signal valve can be changed by connecting the plug, torque could be 16 N.m, 25N.m and 40 N.m.

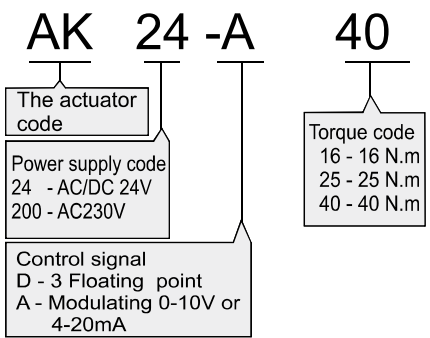


Technical data

Model code	AK 200 - D16	AK 24 - A16 /D16	
Output torque	16 N.m	25 N.m	40N.m
Power supply	AK200 - D...	AK24 - D...	AK24 - A...
	AC230V	AC/DC24V	AC/DC24V
Run time	50...150s	60...150s	60...150s
Operating power	6VA,3W	6VA,3W	6VA,3W
Standstill power	1...2.5VA		
Output angle	90° (95° Max)		
ON/OFF control signal	2 wires control		
Modulating control signal 1	DC0(2)...10V (100k ohm)		
Modulating control signal 2	DC0(4)...20mA (500 ohm)		
Modulating feedback signal	DC0(2)...10V		
Protection rank	IP54		
Ambient conditions	-10...+55°C 0...90% RH		
Noise max	40dB(A)		
Weight	1.5...2kg		



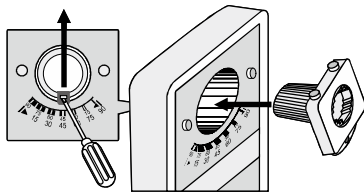
Model code description



Limits for rotation

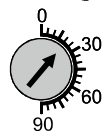
Mechanical Limiter Adjustment

1. Use a screw-driver to put aside the spring flap.
2. Take off the spindle connector.
3. Rotate the spindle connector to the suitable position (one tooth is equivalent to 5 degrees)
4. Put back the spindle connector.



Use a screw-driver to :

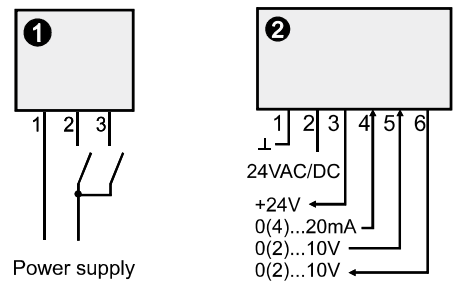
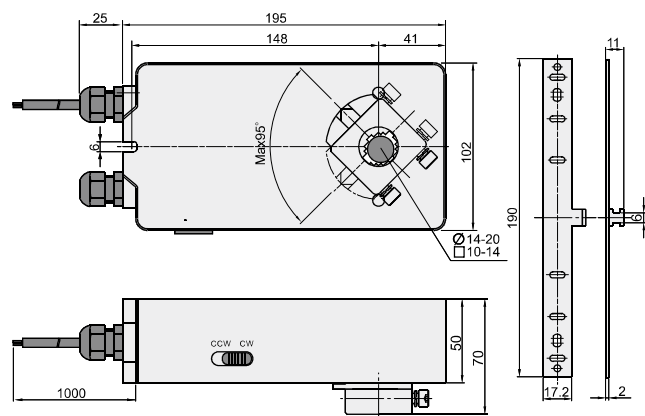
1. Rotate to the required position;
2. Adjustment completed.



Wiring diagrams & power

AK24 - D...	①	AC/DC24V
AK200 - D...	①	AC230V
AK24 - A...	②	AC/DC24V

Dimensions





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