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Product Instructions

ZJHR-1

O-type Cut-off Ball Valve

Chongqing Chuanyi Control Valve Co., Ltd.

Foreword

This manual is applicable to the pneumatic O-type cut-off ball valve composed of AW and AT pneumatic actuators and O-type ball valve body components. The models include ZJHR-1000, ZJHR-1010, ZJHR-1100, ZJHR-1110, ZJHR-1001, ZJHR-1011, ZJHR-1101, ZJHR-1111, ZJHR-1003, ZJHR-1013, ZJHR-1103, and ZJHR-1113.

Users (customers) are supposed to read the manual carefully and fully understand it before use. In addition, the equipment operators and maintenance personnel should keep the manual properly for reference when necessary after the equipment is normally started.

The main contents of the Instructions include structure, operation principle, main technical parameters and performance, acceptance, handling and storage, unpacking, installation, start-up preparation and start-up, daily inspection and regular inspection, fault/abnormality identification methods and measures, disassembly and assembly.

With continuous research on and improvement of the control valve, the contents of the user manual may be inconsistent with the products purchased. Please get in touch with the following department at any time for any doubt about the products purchased or the manual.

Sales Department: Tel.: 023-67032525, 67032526 and 67032527
Fax: 023-67032523

Safety Precautions

To ensure acceptance, handling, storage, installation, start-up preparation, start-up, and maintenance of the control valves in a safe manner, correct operation and periodic maintenance are required. Please read the safety precautions in the user manual carefully and understand the safety precautions completely before operation.

This Operation Manual and safety precautions mainly introduce how to use ZJHR-1 O-type cut-off ball valve to adjust the pressure, temperature and level of fluid and control the flow of fluid. If the operation is not performed according to the operation method described in the manual, the user should be responsible for the safety.

The safety precautions that must be followed in the manual are indicated as follows, including warnings, caution titles, and descriptions.

⚠Warning

Casualty accidents may occur if there is non-conformance with precautions.

⚠Attention

Damage and fault of control valve and other equipment may occur in case of non-conformance to precautions.

1. Structure and Action Principle

1-1. AT actuator

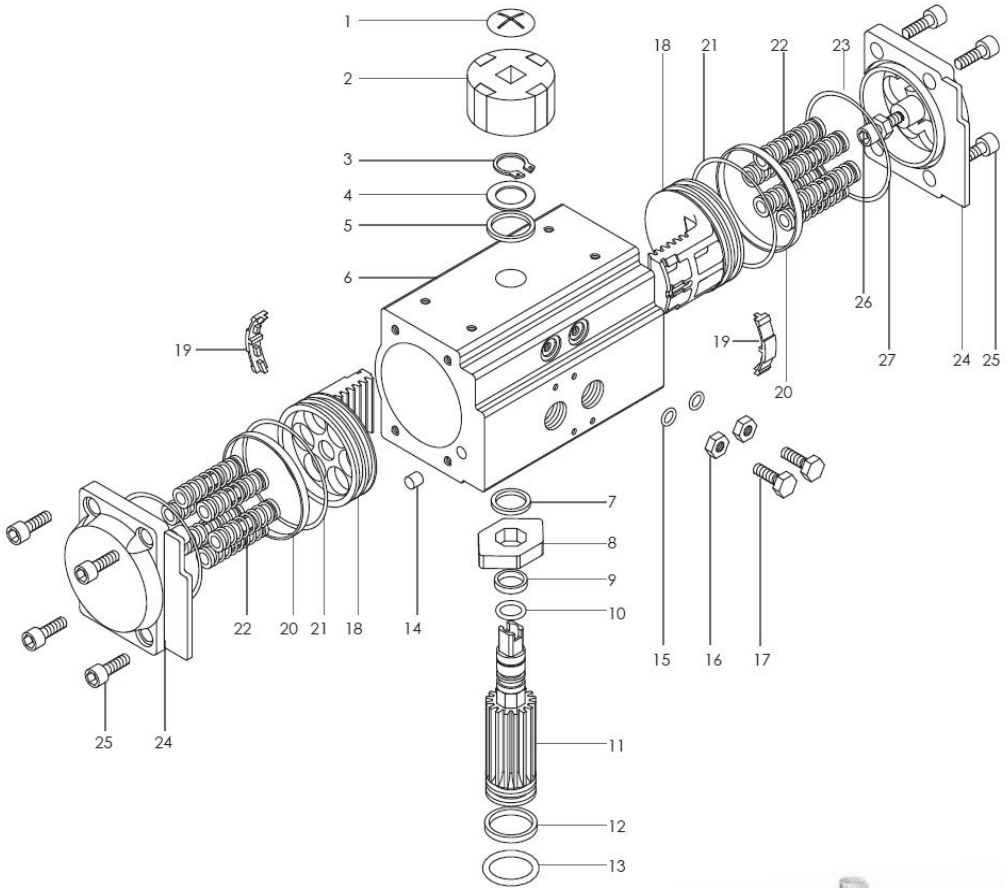
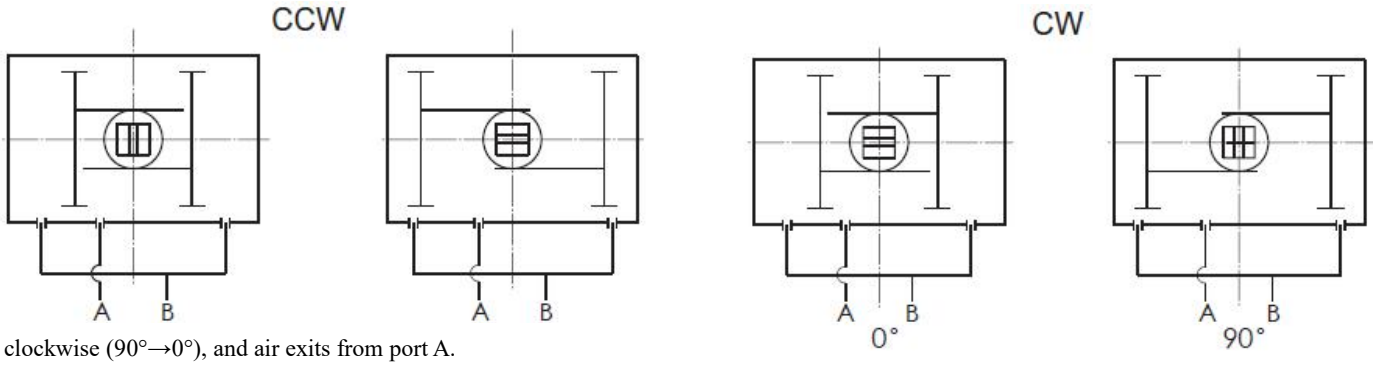


Fig. 1 Structure of AT Actuator

No.	Description	No.	Description
1	Indicator screw	15	Adjusting screw O-ring
2	Indicator	16	Adjusting screws and nuts
3	Circlip	17	Adjusting screw bolt
4	Washer	18	Piston
5	Outer gasket	19	Piston guide
6	Cylinder body	20	Piston bearing
7	Inner gasket	21	Piston O-ring
8	Cam	22	Spring
9	Upper shaft bearing	23	End cover O-ring
10	Upper shaft O-ring	24	End cover
11	Gear shaft	25	End cover screw bolt
12	Lower shaft bearing	26	Limit screw bolt
13	Lower shaft O-ring	27	Limit screw bolt
14	Plug		

Working principle
Double-acting actuator



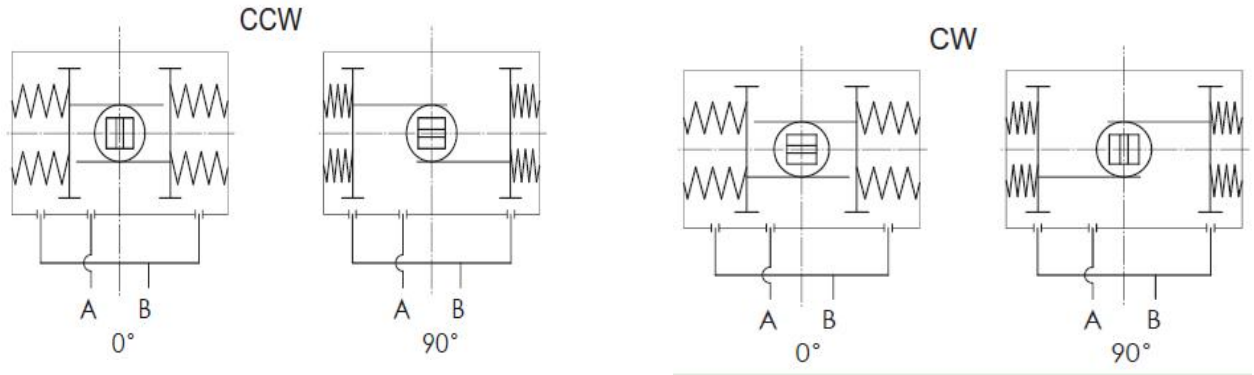
clockwise (90°→0°), and air exits from port A.

CW (Air to close)

When air enters from port A, the compressed air pushes the piston to move outwards, the output shaft of the actuator rotates clockwise (0°→90°), and air exits from port B.

When air enters from port B, the compressed air pushes the piston to move inward, the output shaft of the actuator rotates counterclockwise (90°→0°), and air exits from port A.

Single-acting actuator



CCW (air to open)

When air enters from port A, compressed air overcomes the spring force and pushes the piston to move outward, the output shaft of the actuator rotates counterclockwise (0°→90°), and air exits from port B;

When the actuator loses air, the piston moves inward under the action of spring force, the output shaft of the actuator rotates clockwise (90°→0°), and port A exhausts.

CW (Air to close)

When air enters from port B, the compressed air overcomes the spring force and pushes the piston to move outward, the output shaft of the actuator rotates clockwise (0°→90°), and port B exhausts;

When the actuator loses air, the piston moves inward under the action of spring force, the output shaft of the actuator rotates counterclockwise (90°→0°), and port A exhausts.

1-2. AW actuator

(1) AW double-acting actuator

Structure: It is mainly composed of box body, piston, shifting fork, shaft, cylinder, long double-headed screw, seal ring, slider and other parts. See Fig. 2 for the structure.

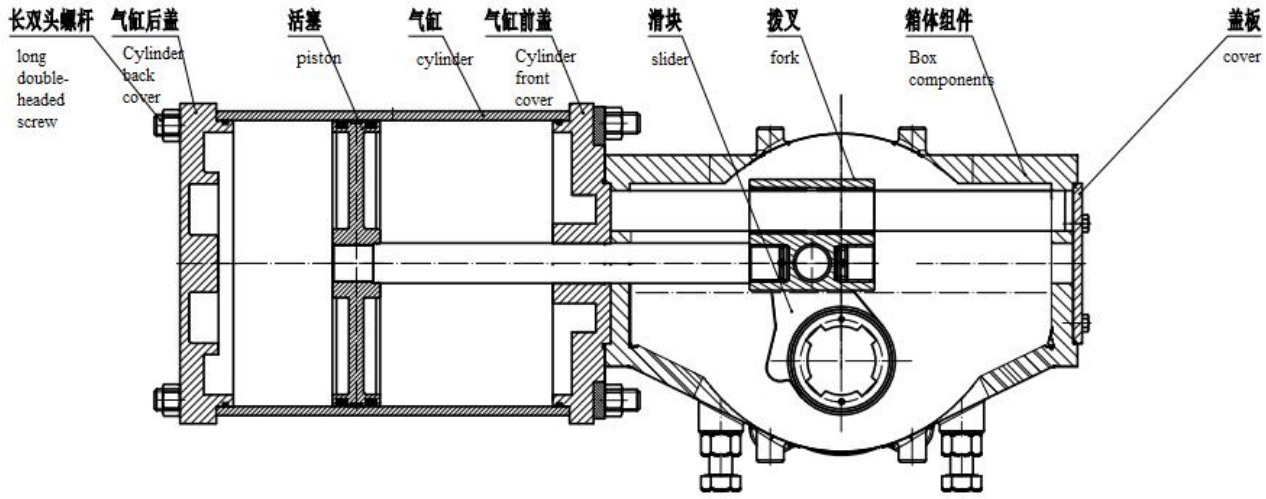


Fig. 2 Structure Diagram of AW Series Double-acting Actuator

Working principle: When the air source is connected to the (two) right (left) air inlets of the actuator cylinder, the air source enters the right (left) cylinder and pushes the piston to move leftward (rightward). The piston drives the piston rod to move together, and the piston rod pulls the shifting fork to rotate counterclockwise (clockwise), thus driving the main shaft to rotate counterclockwise (clockwise) and output torque. The main shaft remains in place after a loss of pressure. If you want to reset the spindle, just ventilate from the left (right) air inlet.

(2) AW single-acting pneumatic actuator

Structure: It is mainly composed of spring cylinder cover, outer spring, inner spring, spring cylinder, piston, shifting fork, piston rod, cylinder block, manual parts and other components, as shown in Fig. 3 and Fig. 4.

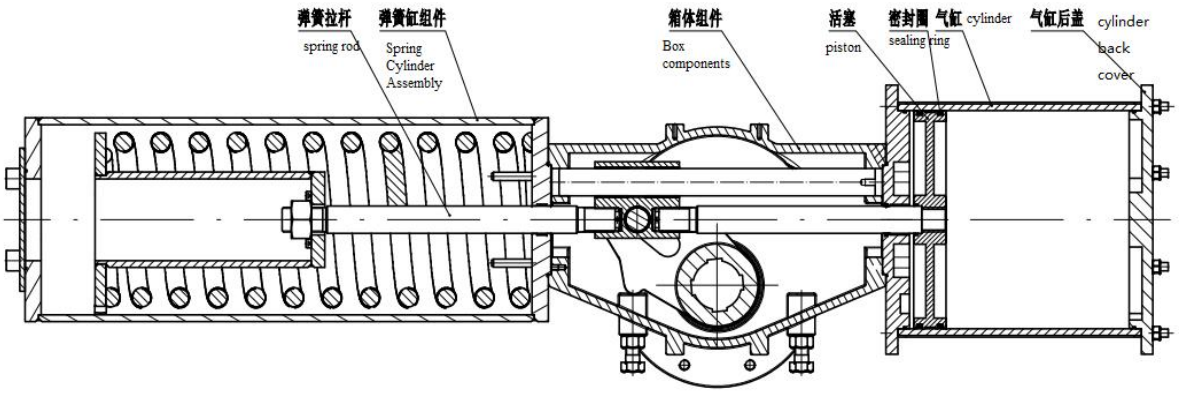


Fig. 3 Structure Diagram of AW Series Single-acting Actuator

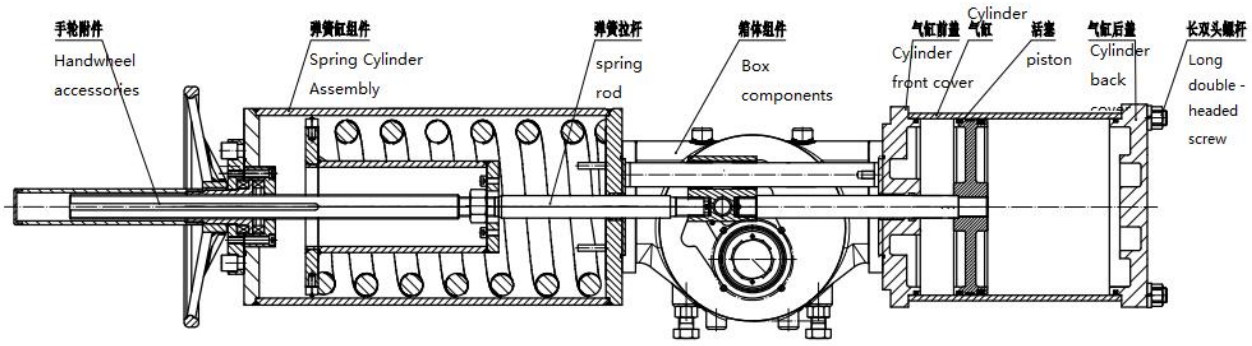


Fig. 4Structure Diagram of AW Series Single-acting Actuator with Handwheel

Working principle: When the air source is connected to the (two) right air inlets of the actuator, the air source enters the right (left) cylinder block and pushes the piston to move leftward (rightward). The piston drives the piston rod to move together, and the piston rod pulls the shifting fork to rotate counterclockwise (clockwise), thus driving the main shaft to rotate counterclockwise and output torque. At this time, the left (right) spring is compressed. When the right (left) cylinder loses pressure, the spring returns to its original position and the spindle also returns clockwise (counterclockwise).

1-3. ZJHR-1 valve components

ZJHR—1000, ZJHR—1010, ZJHR—1100 and ZJHR—1110 series O-type cut-off ball valves are designed according to international general standards. Pneumatic actuators and electric actuators widely used in the world with high reliability are selected, so that the whole machine is highly reliable. It has the advantages of compact structure, light weight, small volume and convenient assembly, disassembly and maintenance; it is used to control medium with high viscosity, fiber and particles.

ZJHR—1001, ZJHR—1011, ZJHR—1101 and ZJHR—1111 series O-type cut-off ball valves are mainly used in heat preservation occasions. When the crystallization temperature of the process medium is lower than the ambient temperature or the fluid temperature decreases, resulting in viscosity increase or fluid solidification, an insulation jacket device shall be added outside the ball valve body to achieve the purpose of heating and heat preservation by steam, so that the process can proceed as required.

The structure of valve components is shown in the following figure:

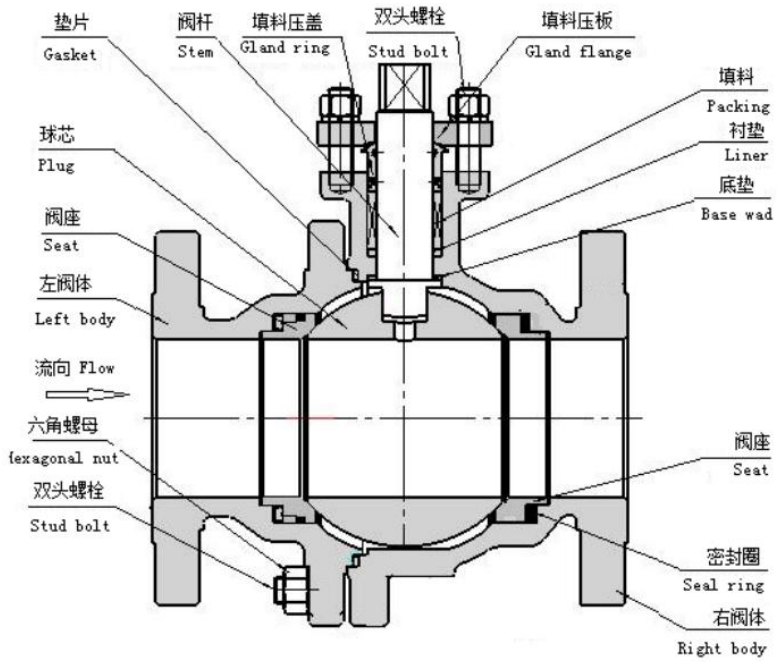


Fig. 5-1 Cast Hard Seal Floating Ball Valve

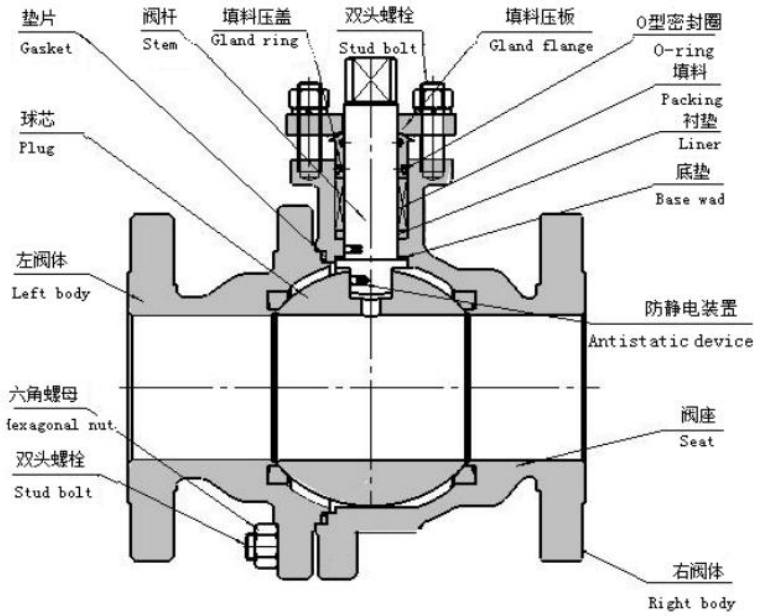


Fig. 5-2 Cast Soft-seal Floating Ball Valve

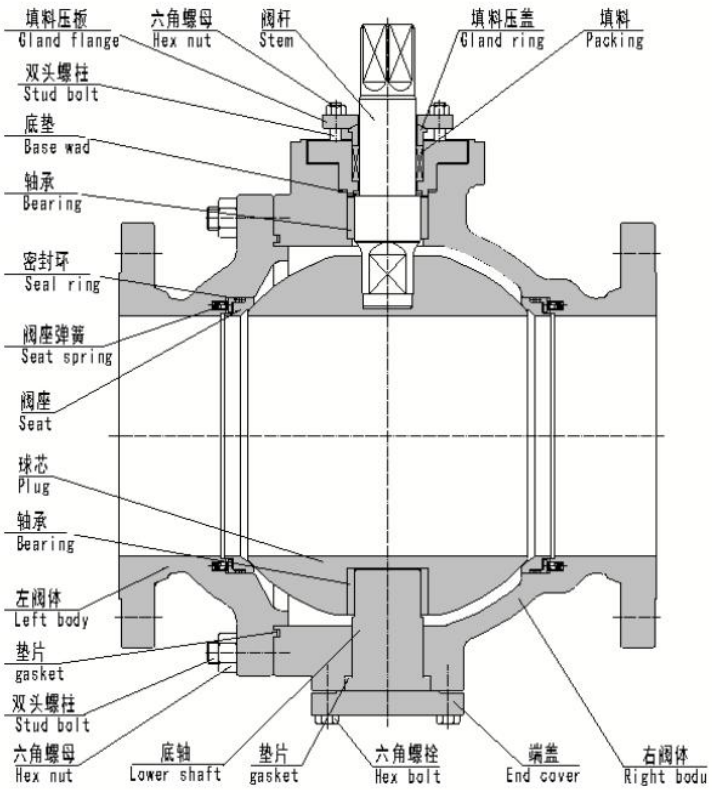


Fig. 5-3 Cast Fixed Ball Valve

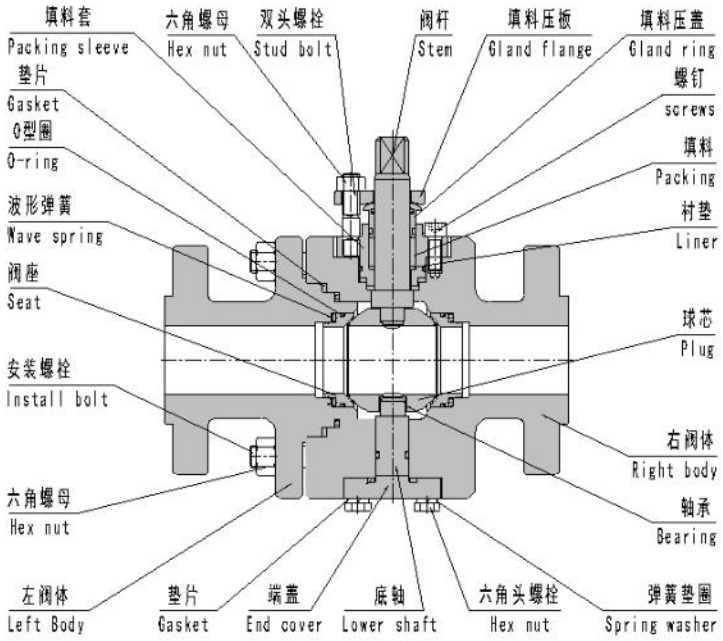


Fig. 5-4 Forged Trunnion Mounted Ball Valve

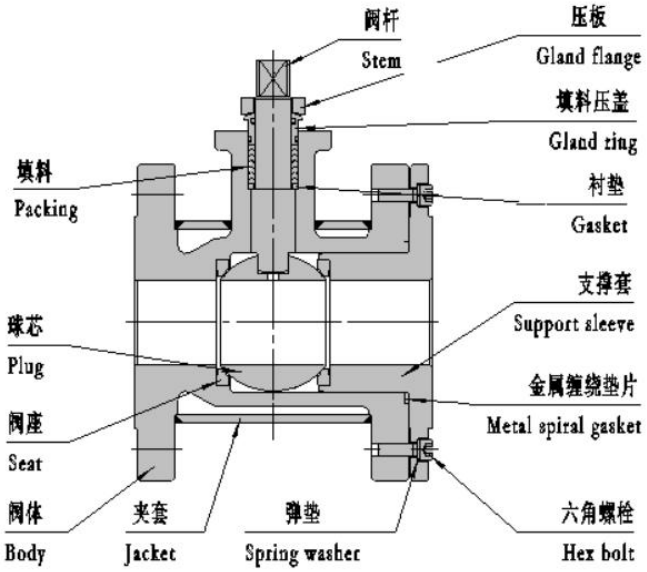


Fig. 5-5 Floating O-ball Insulation Ball Valve

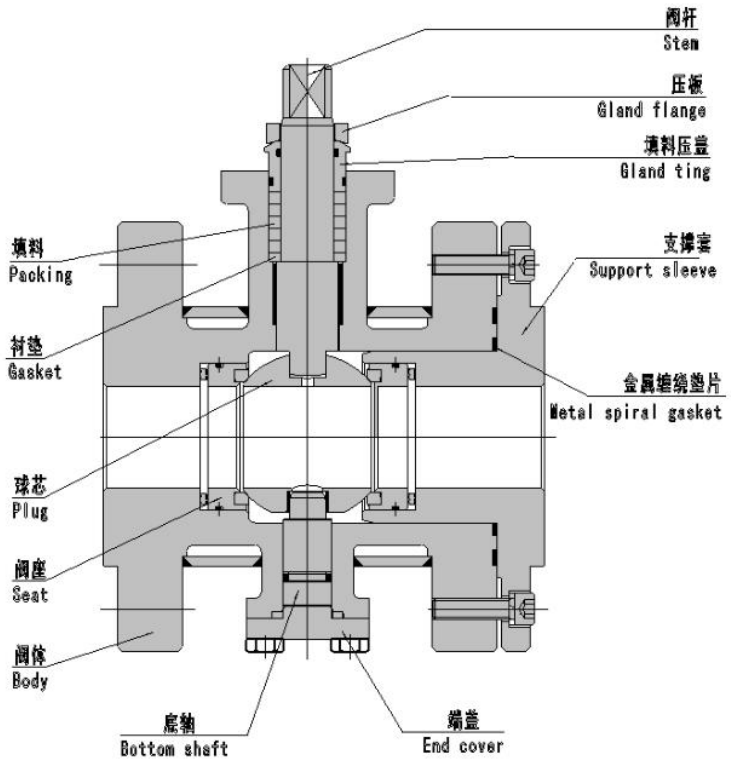


Fig. 5-6 Fixed O-type Ball Insulation Ball Valve

Note: The main air source pipeline provided on site shall not be less than G1/2" to ensure the normal use of the valve.

The valve body components of ball valves are mainly composed of left and right valve bodies, balls, valve seats, valve stems and other parts. If equipped with explosion-proof solenoid valve, explosion-proof travel switch and other accessories, it can be used in explosion-proof occasions. After being equipped with pneumatic accessories or spring return mechanism, the ball valve can be automatically in a fully open or closed position when the air source fails, thus ensuring the safe operation of the system.

2. Main Technical Parameters

●Valve body

Form	Straight-way ball valve
Nominal diameter	1/8"(6), 1/4"(8), 3/8"(10), 1/2"(15), 3/4"(20), 1"(25), 1%"(32), 1%"(40), 2"(50), 2%"(65), 3"(80), 4"(100), 5"(125), 6"(150), 8"(200), 10"(250), 12"(300), 14"(350), 16"(400), 18 "(450), 20"(500), 24"(600), 28"(700) 30"(750), 32"(800), 36"(900), 40"(1000)
Nominal pressure	PN 16, 20, 25, 40, 50, 63, 100, 110, 150, 160, 260, 420 Class 150, 300, 600, 900, 1500, 2500
Connection type	Flange type: FF, RF, MFM, RJ Flange Standards: ASME B16.5; JISB2201; HG/T 20592; HG/T 20615; JB/T 79.1; JB/T 79.2; GB/T 9112 female threaded end connection (1/8"-2") NPT ASME B1.20.1 ferrule type pipe joint end connection (DN6-25:1/4"-2")
Material	Refer to Table 1
Temperature range	-100℃~+550℃
Flange distance	See Table 11
Packing	PTFE packing and graphite packing

●Components in valve

Structure of valve plate	Spherical type
Flow characteristics	Switch type, ON-OFF
Material	Refer to Table 1

●Actuator

Model	Pneumatic actuator	
Specification	AT	AW
Air supply pressure	400～700kPa	
Air source interface	NPT1/8″, NPT1/4″, NPT3/8″, NPT1/2″, NPT3/4″	
Travel angle	90°	
Ambient temperature	Standard type: -20～+80°C; high temperature type: -15°～+120°C; low temperature type: -40～+80°C	
Accessories	Solenoid valve, air filter pressure reducer, lock-up valve, travel switch, valve position transmitter, handwheel mechanism, etc.	

Model	Electric actuator
Specification	Series M
Input signal	4～20mA·DC
Supply voltage	380VAC/50Hz (60Hz optional)
Travel angle	90°±5°
Ambient temperature	-25℃～+70℃

●Material combination of valve body and trim parts

Table 1 Materials and Operating Temperatures of Valve Body, Parts in Valve

·HT: heat treatment ·HF: surface hardening

Cast floating ball type

Valve body material		A216-WCB，A217-WC6，A217-WC9			A351-CF8，A351-CF8M，A351-CF3M		
Ball	Material	304		304	304/316/316L		304/316/316L
	Handling	Polishing		HF	Polishing		HF
Valve stem	Material	630		630/S20910	630/S20910		630/S20910
	Handling	HT		HT	HT		HT
Valve seat	Material	PTFE Alkenes + disulfide	PTFE + carbon fiber	304	PTFE + molybdenum disulfide	PTFE + carbon fiber	304/316/316L
	Handling	—	—	HF	—	—	HF
Jacket (For jacket type)	Material	A3			304		
Allowable leakage of valve seat		ClassVI	ClassVI	ClassV, VI	ClassVI	ClassVI	ClassV, VI

Cast fixed ball type

Valve body material		A216-WCB，A217-WC6，A217-WC9			A351-CF8，A351-CF8M，A351-CF3M		
Ball	Material	304		304	304/316/316L		304/316/316L
	Handling	Polishing		HF	Polishing		HF
Valve stem	Material	630		630/S20910	630/S20910		630/S20910
	Handling	HT		HT	HT		HT
Valve seat	Material	PTFE + molybdenum disulfide	PTFE + carbon fiber	304	PTFE + molybdenum disulfide	PTFE + carbon fiber	304/316/316L
	Handling	—	—	HF	—	—	HF
Jacket (For jacket type)	Material	A3			304		
Allowable leakage of valve seat		ClassVI	ClassVI	ClassV, VI	ClassVI	ClassVI	ClassV, VI

Forged floating ball

Valve body material		A105,A182-F11,A182-F22	A182-F304,A182-F316,A182-F316L
Ball	Material	304/F60	304/316/316L/F60/S20910
	Handling	HF	HF
Valve stem	Material	630/S20910/Inconel718	630/S20910/Inconel718
	Handling	HT	HT
Valve seat	Material	304/F60	304/316/316L/F60/S20910
	Handling	HF	HF
Allowable leakage of valve seat		ClassV, VI	

Forged fixed ball type

Valve body material		A105,A182-F11,A182-F22	A182-F304,A182-F316,A182-F316L
Ball	Material	304/F60	304/316/316L/F60/S20910
	Handling	HF	HF
Valve stem	Material	630/S20910/Inconel718	630/S20910/Inconel718
	Handling	HT	HT
Valve seat	Material	304/F60	304/316/316L/F60/S20910
	Handling	HF	HF
Allowable leakage of valve seat		ClassV, VI	

●Dimensions and weight

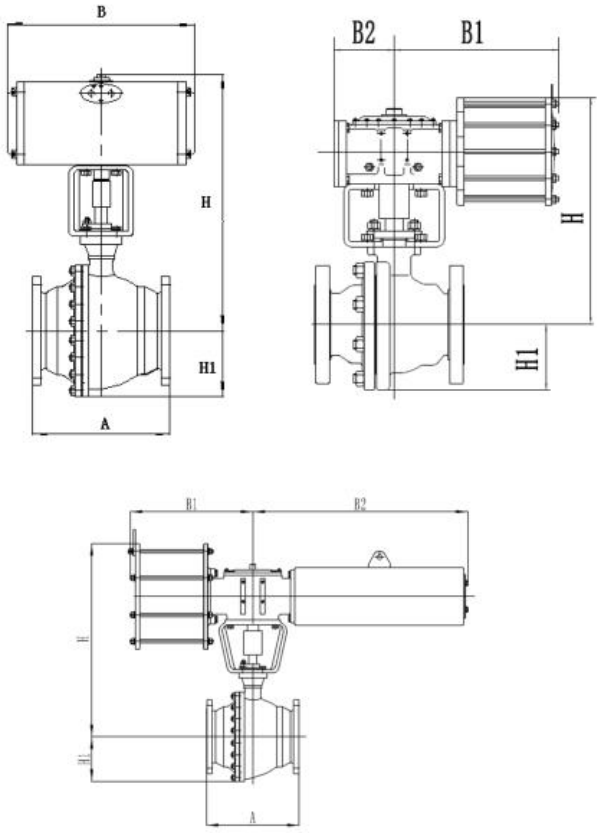


Fig. 6-1 Cast Floating Ball Valve with AW and AT Actuators

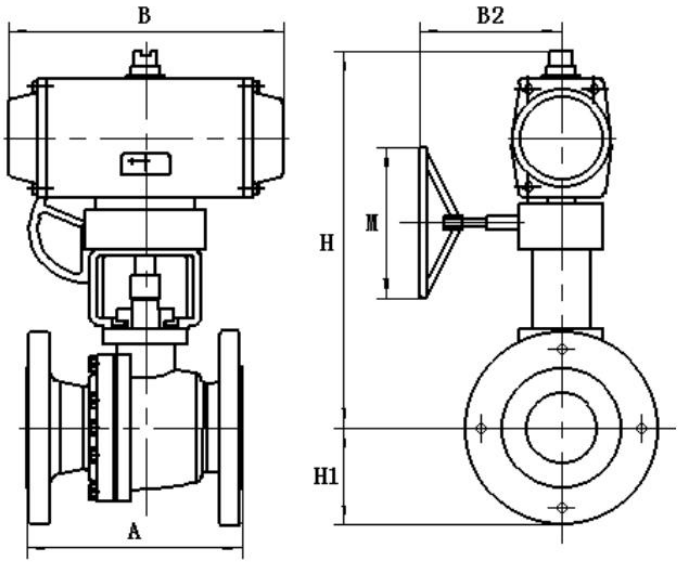


Fig. 6-2 Cast Floating Ball Valve with AT Actuator and Handwheel

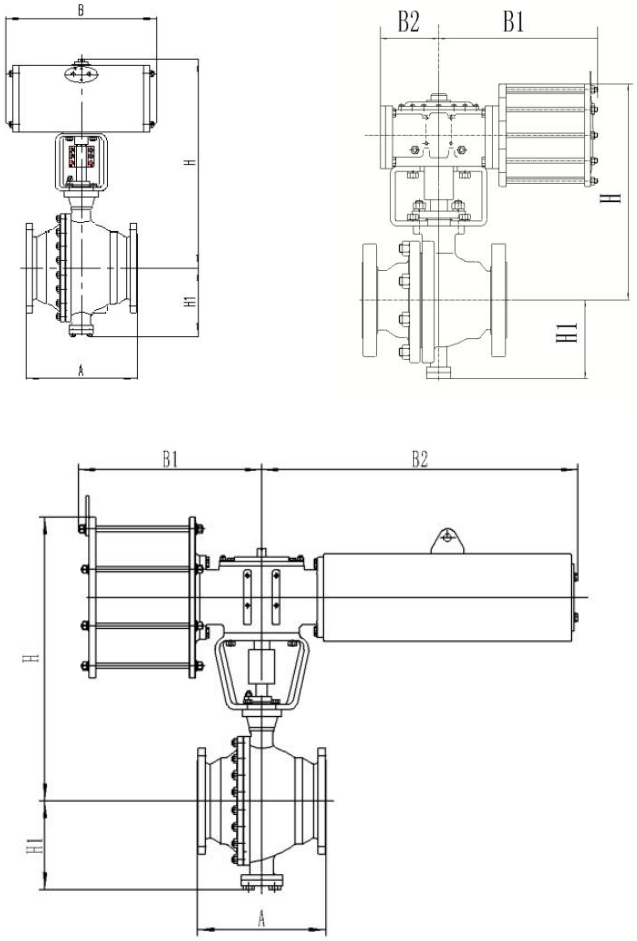


Fig. 6-3 Cast Trunnion Mounted Ball Valve with AW and AT Actuators

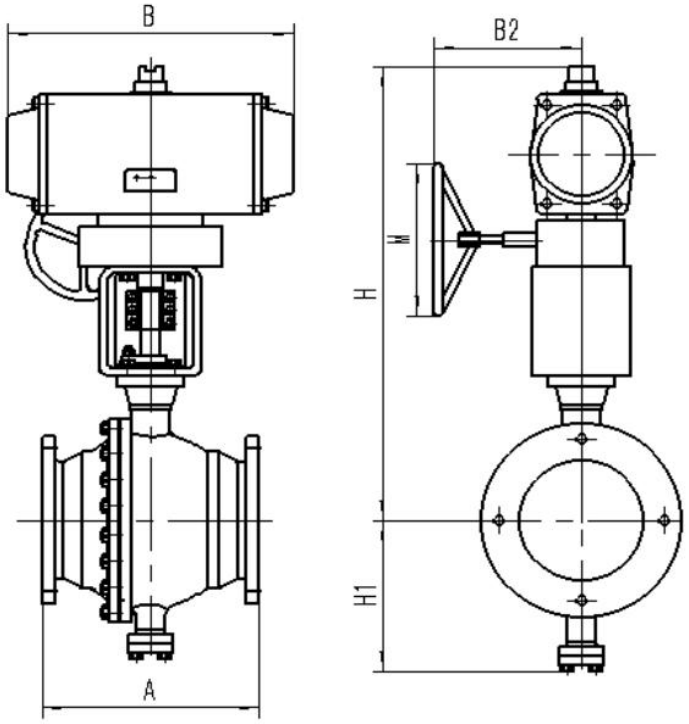


Fig. 6-4 Cast Fixed Ball Valve with AT Actuator and Handwheel

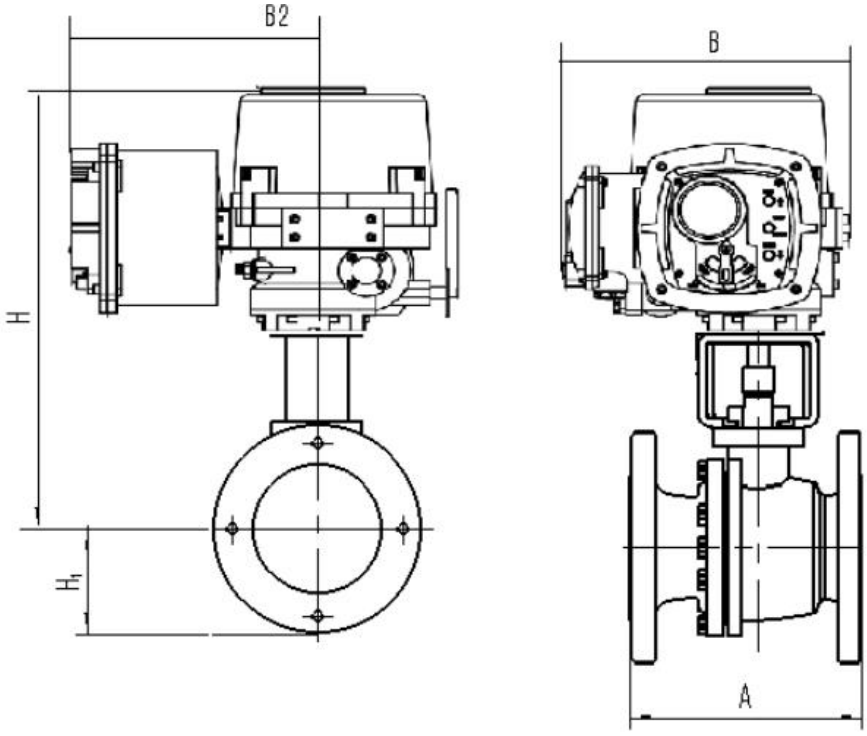


Fig. 6-5 Cast Floating Ball Valve with M0 Series Electric Actuator

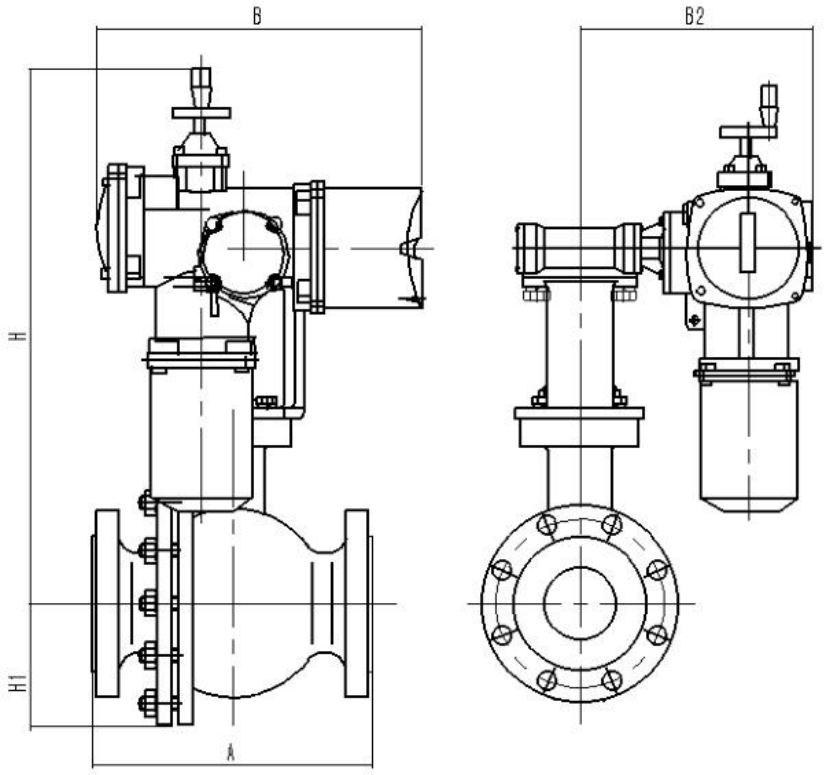


Fig. 6-6 Cast Floating Ball Valve with M8 Series Electric Actuator

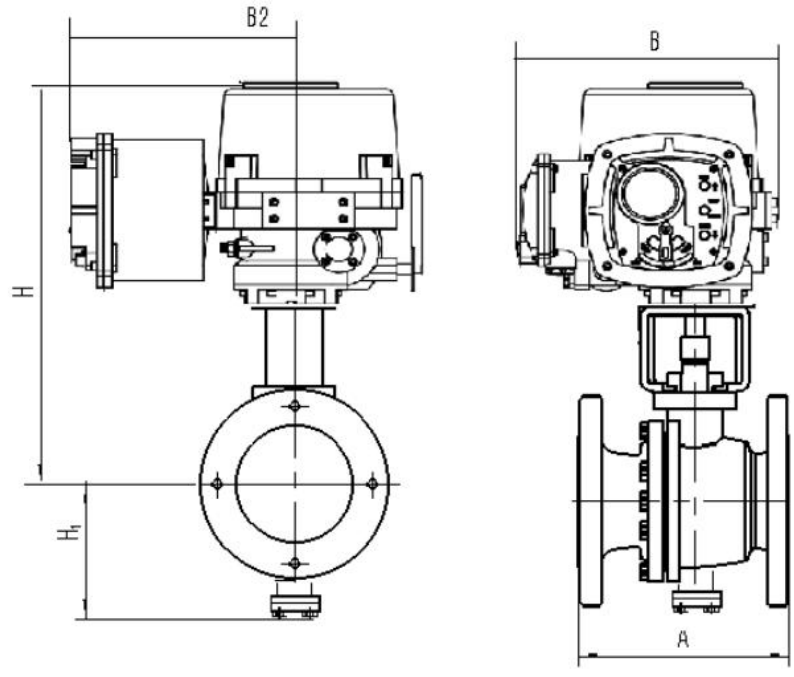


Fig. 6-7 Cast Fixed Ball Valve with M0 Series Electric Actuator

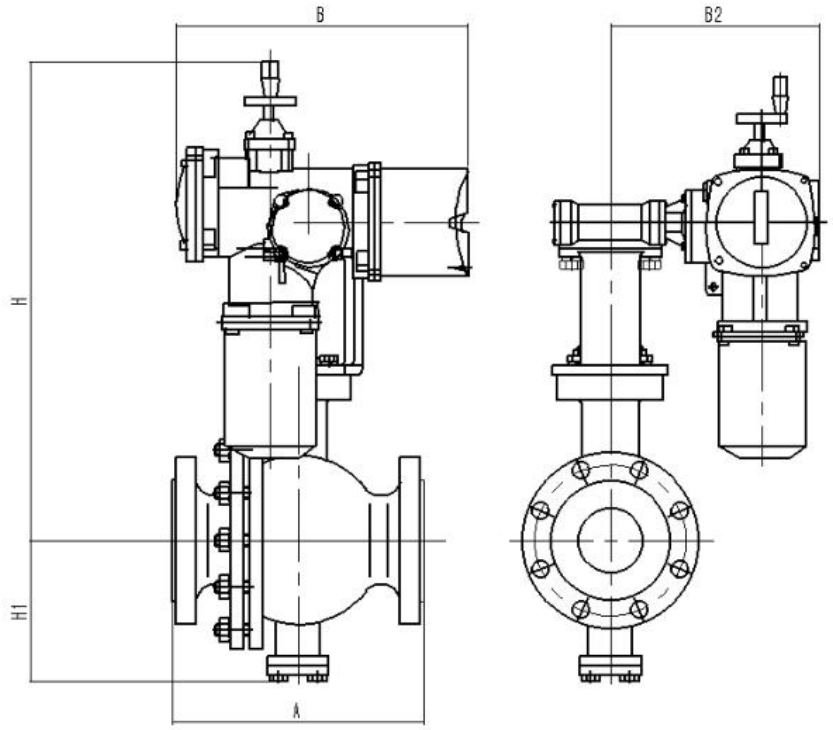


Fig. 6-8 Cast Fixed Ball Valve with M8 Series Electric Actuator

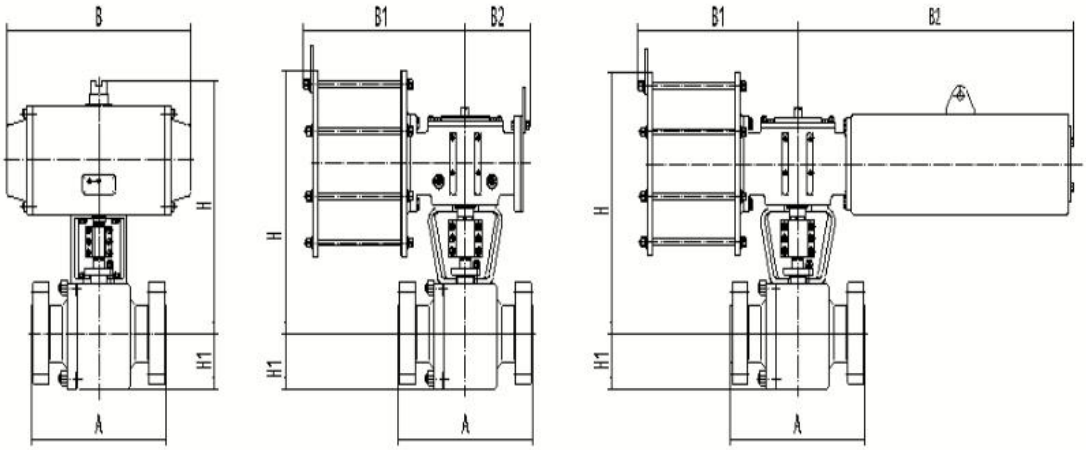


Fig. 6-9 Forged Globe Valve with AW and AT Actuators

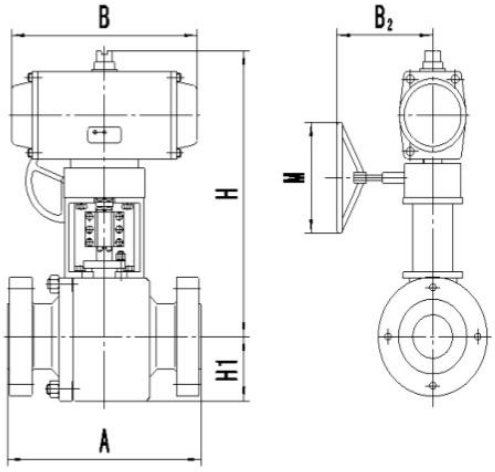


Fig. 6-10 Forged Ball Valve with AT Actuator and Handwheel

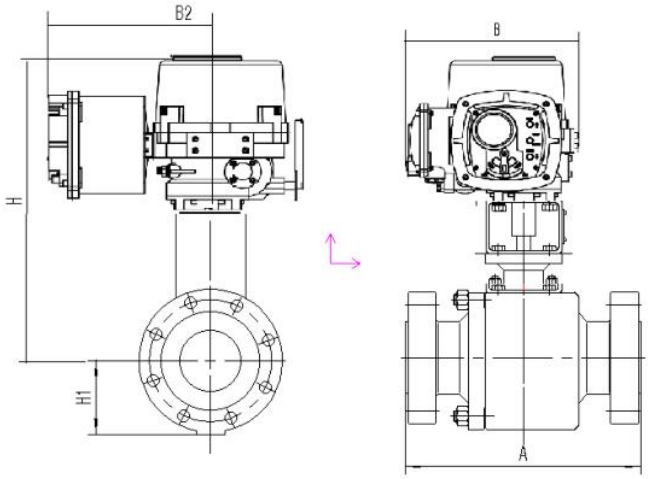


Fig. 6-11 Forged Ball Valve with M0 Series Electric Actuator

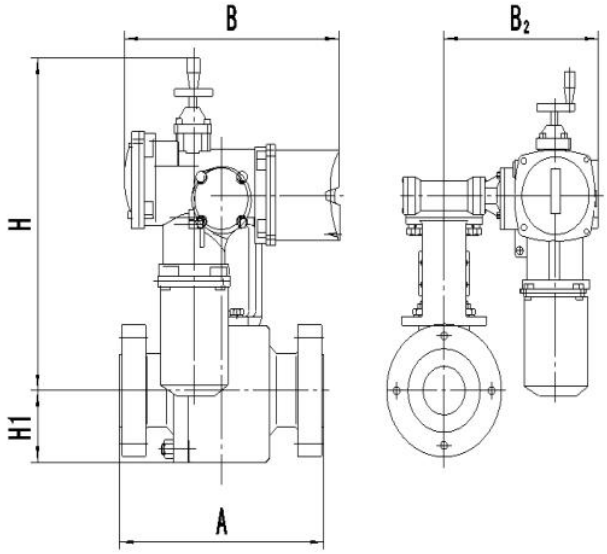


Fig. 6-12 Forged Ball Valve with M8 Series Electric Actuator

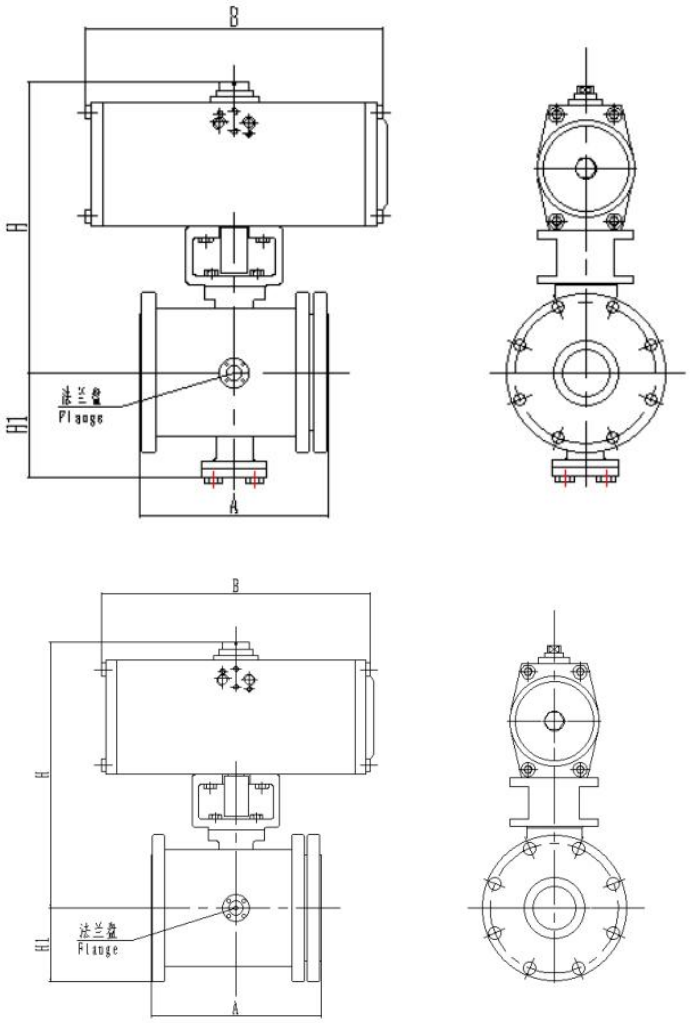
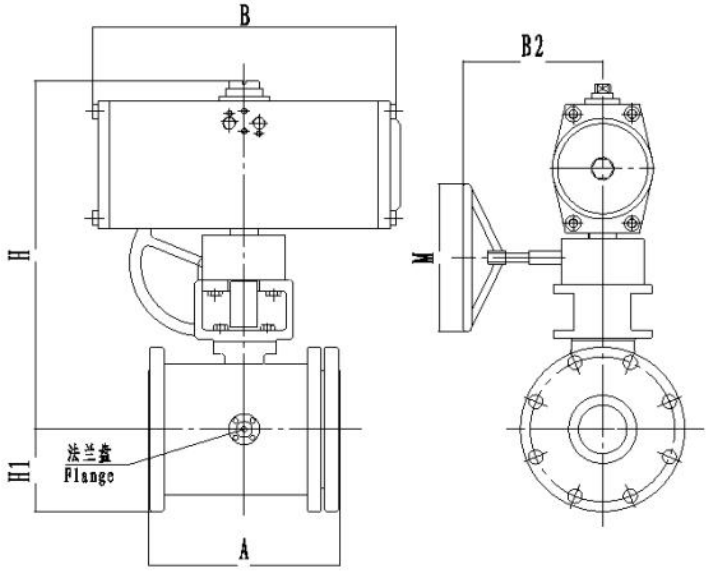


Fig. 6-13Insulation Type with AT Actuator



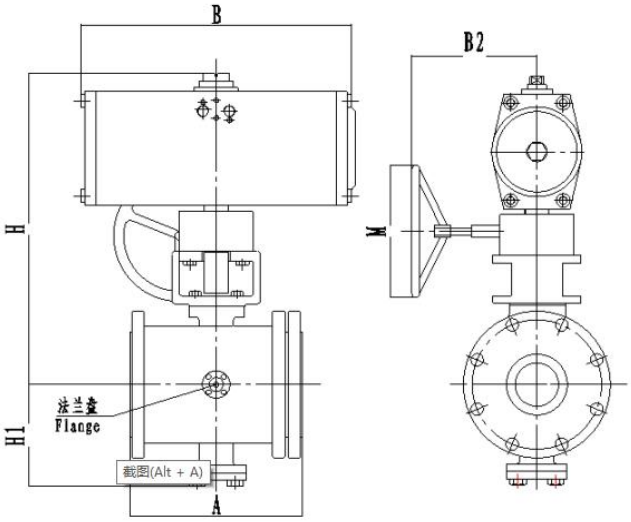


Fig. 6-14 Insulation Type with AT Actuator with Handwheel

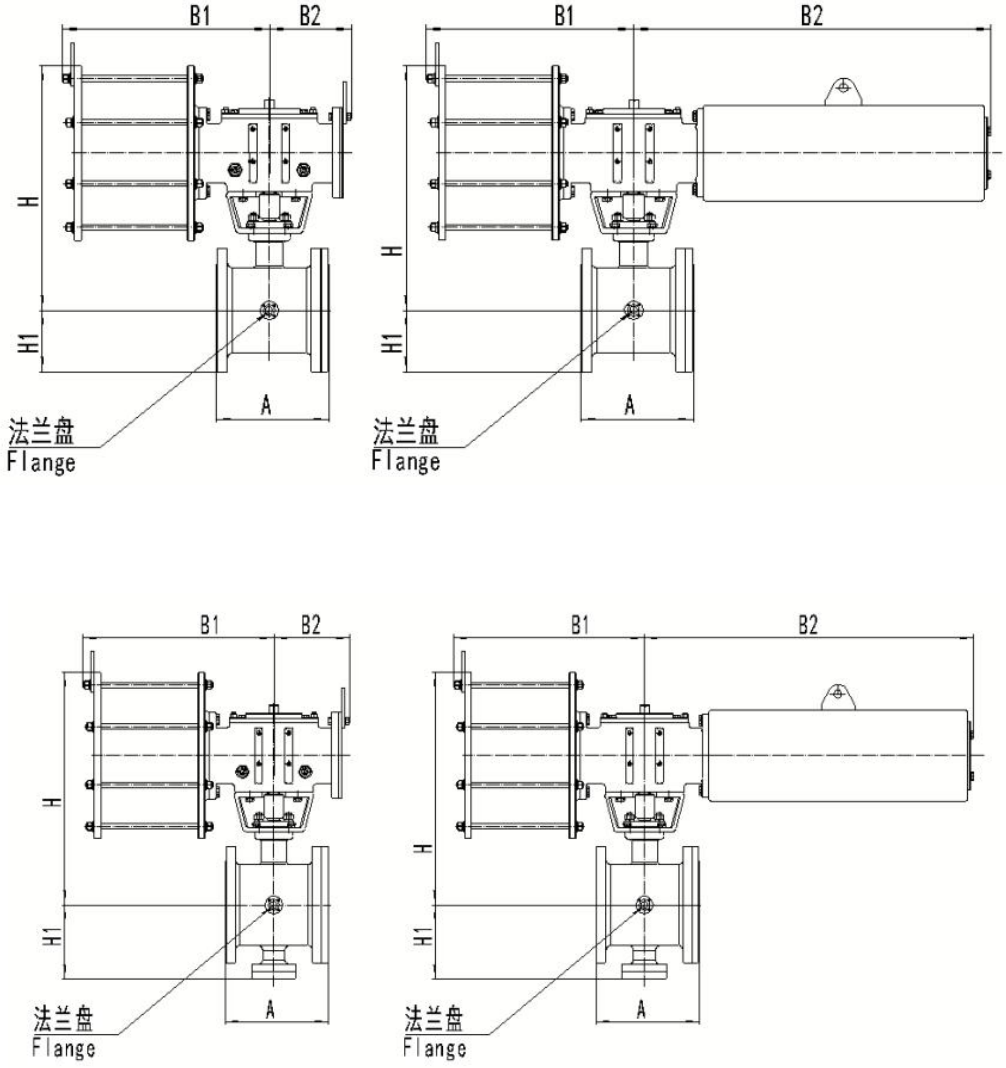


Fig. 6-15 Insulation Type with AW Actuator

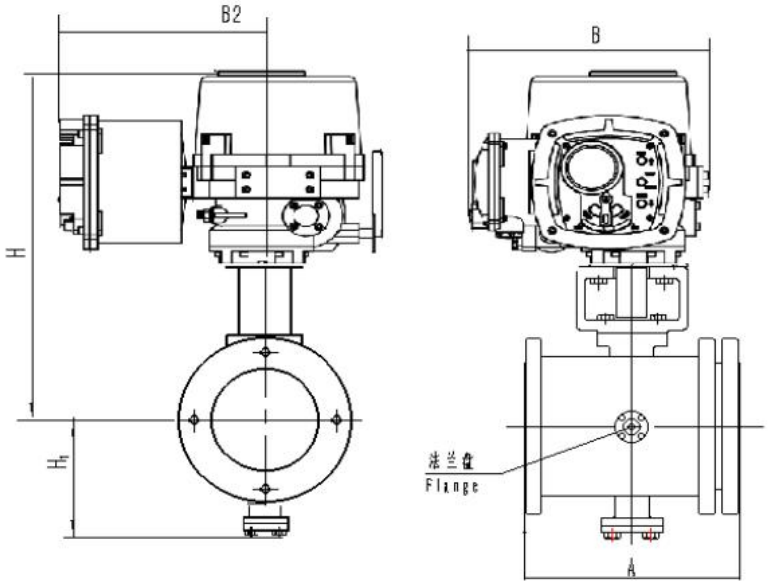


Fig. 6-16 Insulation Type with M0 Series Electric Actuator

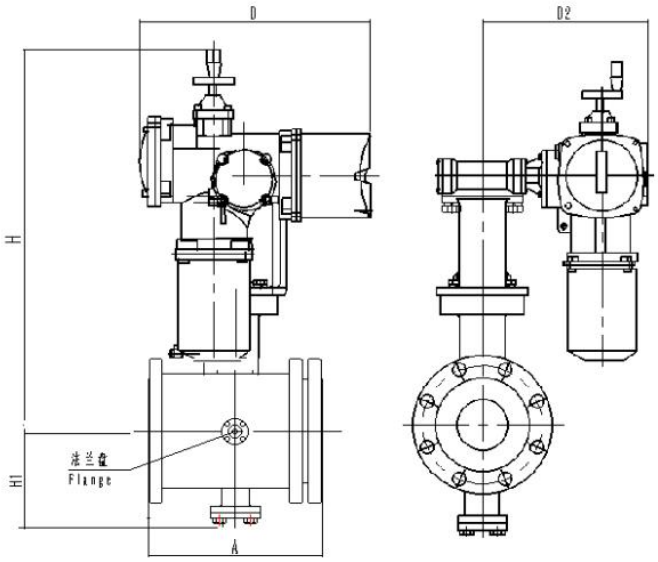


Fig. 6-17 Insulation Type with M8 Series Electric Actuator

Table 2-1 Overall Dimensions and Weight of Standard Type PN16,20/ Class150 with Pneumatic Actuator

mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2" (15)	AT52DR0	249.5	149			108	55		1"(25)	AT83SR4	286.5	204			127	55	
	AT52DD0									AT83SD4							
	AT75SR4	277	184							AT83SR5	286.5	204					
	AT75SD4									AT83SD5							
	AT63SR5	365.6	168							AT83DR0	286.5	204					
	AT63SD5									AT83DD0							
	AT83DR0	286.5	204							AT92DR0	294	262					
	AT83DD0									AT92DD0							
	AT92DR0	294	262							AT105SR4	310.5	268					
	AT92DD0									AT105SD4							
	AT105SR4	310.5	268							AT125SR4	332.5	301					
	AT105SD4									AT125SD4							
	AT125SR4	332.5	301							AT105SR5	310.5	268					
	AT125SD4									AT105SD5							
	AT75DR0	277	184						1¼"(32)	AT75DR0	282.5	184			140	57.5	
	AT75DD0									AT75DD0							
	AT105SR5	310.5	268							AT83DR0	292	204					
	AT105SD5									AT83DD0							
3/4" (20)	AT52DR0	249.5	149			117	55			AT92DR0	299.5	262					
	AT52DD0									AT92DD0							
	AT63DR0	265.5	168							AT92SR4	299.5	262					
	AT63DD0									AT92SD4							
	AT83SR4	286.5	204							AT105SR4	316	268					
	AT83SD4									AT105SD4							
	AT63SR5	265.5	168							AT92SR5	299.5	262					
	AT63SD5									AT92SD5							
	AT75SR5	277	184							AT125SR4	338	301					
	AT75SD5									AT125SD4							
	AT75SR4	277	184							AT105SR5	316	268					
	AT75SD4									AT105SD5							
	AT83DR0	286.5	204							AT125SR5	338	301					
	AT83DD0									AT125SD5							
	AT75DR0	277	184						1½"(40)	AT83DR0	299	204			165	62.5	
	AT75DD0									AT83DD0							
	AT92DR0	294	262							AT92DR0	306.5	262					
	AT92DD0									AT92DD0							
	AT105SR4	310.5	268							AT105SR5	323	268					
	AT105SD4									AT105SD5							
	AT105SR5	310.5	268							AT125SR5	345	301					
	AT105SD5									AT125SD5							
	AT125SR4	332.5	301							AT105SR4	323	268					
	AT125SD4									AT105SD4							
1"(25)	AT63DR0	265.5	168				55			AT125SR4	345	301					
	AT63DD0									AT125SD4							
	AT75DR0	277	184							AT105DD0	323	268					
	AT75DD0									AT105DR0							

Table 2-1 (Continued) Overall Dimensions and Weight of Standard Type PN16, 20/ Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1½"(40)	AT140SR4	362	394			165	62.5		3"(80)	AT190SR4	482	528			203	95	
	AT140SD4									AT190SD4							
2"(50)	AT92DR0	326.5	262			178	75			AT190SR5	482	528					
	AT92DD0									AT190SD5							
	AT105DR0	343	268							AT210SR4	507	532					
	AT105DD0									AT210SD4							
	AT125SR5	365	301						4"(100)	AT125DR0	434	301			229	115	
	AT125SD5									AT125DD0							
	AT140SR5	382	394							AT140DR0	451	394					
	AT140SD5									AT140DD0							
	AT125SR4	365	301							AT160SR4	476	458					
	AT125SD4									AT160SD4							
	AT83DR0	319	204							AT160SR5	476	458					
	AT83DD0									AT160SD5							
	AT125DR0	365	301							AT160DR0	476	458					
	AT125DD0									AT160DD0							
	AT140SR4	382	394							AT190SR4	519	528					
	AT140SD4									AT190SD4							
	AT160SR4	407	458							AT190DR0	519	528					
	AT160SD4									AT190DD0							
2½"(65)	AT92DR0	347	262			190	90			AT210SR5	544	532					
	AT92DD0									AT210SD5							
	AT105DR0	363.5	268							AT240SR4	578	602					
	AT105DD0									AT240SD4							
	AT125DR0	385.5	301						5"(125)	AT160DR0	515.5	458			356	135	
	AT125DD0									AT160DD0							
	AT125SR5	385.5	301							AT190DR0	558.8	528					
	AT125SD5									AT190DD0							
	AT140SR5	402.5	394							AT210DR0	583.5	532					
	AT140SD5									AT210DD0							
	AT140SR4	402.5	394							AT210SR4	583.5	532					
	AT140SD4									AT210SD4							
	AT140DR0	402.5	394							AT210SR5	583.5	532					
	AT140DD0									AT210SD5							
	AT160SR4	427.5	458							AT240SR4	617.5	602					
	AT160SD4									AT240SD4							
	AT160SR5	427.5	458							AT240SR5	617.5	602					
	AT160SD5									AT240SD5							
	AT190SR4	470.5	528							AT270SR4	656.5	722					
	AT190SD4									AT270SD4							
3"(80)	AT105DR0	375	268			203	95		6"(150)	AT190DR0	612	528			394	157.5	
	AT105DD0									AT190DD0							
	AT125DR0	397	301							AT210DR0	637	532					
	AT125DD0									AT210DD0							
	AT140DR0	414	394							AT240SR5	671	602					
	AT140DD0									AT240SD5							
	AT140SR4	414	394							AT240DR0	671	602					
	AT140SD4									AT240DD0							
	AT140SR5	414	394							AT270SR4	710	722					
	AT140SD5									AT270SD4							
	AT160SR4	439	458							AT300SR4	730	758					
	AT160SD4									AT300SD4							
	AT160DR0	439	458							AW22D001	619.5		520	200			
	AT160DD0																

Table 2-1 (Continued) Overall Dimensions and Weight of Standard Type PN16, 20/ Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
6"(150)	AW24SR51 AW24SD51	637		520	910	394	157.5		10"(250)	AW32SR43 AW32SD43	976		700	1160	533	280	
	AW24SR42 AW24SD42	647		650	910					AW40SR43 AW40SD43	1011		700	1160			
	AW27SR42 AW27SD42	677		650	910					AT270DR0 AT270DD0	1006.5	722			610	380	
8"(200)	AT210DR0 AT210DD0	729	532			457	230.5		12"(300)	AT300DR0 AT300DD0	1026.5	758					
	AT240DR0 AT240DD0	763	602							AW24D002	943.5		650	250			
	AT270SR5 AT270SD5	802	722							AW27D002	973.5		650	250			
	AT270DR0 AT270DD0	802	722							AW27D003	988.5		700	270			
	AT300SR4 AT300SD4	822	758							AW30D003	998.5		700	270			
	AW22D001	711.5		520	200					AW32D003	1013.5		700	270			
	AW22D002	721.5		650	250					AW35D003	1023.5		700	270			
	AW27SR52 AW27SD52	769		650	950					AW32SR43 AW32SD43	1013.5		700	1160			
	AW30SR42 AW30SD42	769		650	1050					AW32SR53 AW32SD53	1013.5		700	1160			
	AW30SR52 AW30SD52	769		650	1050					AW45SR44 AW45SD44	1078.5		800	1250			
	AW32SR42 AW32SD42	794		650	1050					AW45SR53 AW45SD53	1073.5		700	1250			
10"(250)	AT240DR0 AT240DD0	930	602			533	280			AW45SR54 AW45SD54	1078.5		800	1250			
	AT270DR0 AT270DD0	969	722						14"(350)	AT300DR0 AT300DD0	961.5	758			686	438	
	AT300DR0 AT300DD0	989	758							AT350DR0 AT350DD0	1021.5	888					
	AW22D001	878.5		520	200					AW27D002	908.5		650	250			

	AW22D002	888.5		650	250					AW27D003	923.5		700	270			
	AW24D002	906		650	250					AW32D003	948.5		700	270			
	AW27D002	936		650	250					AW35D003	958.5		700	270			
	AW27D003	951		700	270					AW40D004	988.5		800	320			
	AW30SR52	936		650	1050					AW40SR43	983.5		700	1160			
	AW30SD52									AW40SD43							
	AW32SR42	961		650	1050					AW40SR53	983.5		700	1160			
	AW32SD42									AW40SD53							

Table 2-1 (Continued) Overall Dimensions and Weight of Standard Type PN16, 20/ Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
14"(350)	AW45SR54	1013.5		800	1250	686	438		18"（450）	AW55SR45	1805		950	1600	864	540	
	AW45SD54									AW55SD45							
	AW50SR44	1038.5		800	1350					AW55SR54	1765		800	1350			
	AW50SD44									AW55SD54							
	AW55SR55	1103.5		950	1600					AW60SR55	1830		950	1600			
	AW55SD55									AW60SD55							
	AW60SR45	1128.5		950	1600					AW65SR45	1855		950	1600			
	AW60SD45									AW65SD45							
16"(400)	AT350DR0	1393	888			762	440			AW65SR55	1855		950	1600			
	AT350DD0									AW65SD55							
	AW32D003	1320		700	270				20"（500）	AW45D004	1785		800	320	914	600	
	AW35D003	1330		700	270					AW50D004	1810		800	320			
	AW40D004	1360		800	320					AW55D005	1875		950	370			
	AW45D004	1385		800	320					AW60D005	1900		950	370			
	AW50D005	1450		950	370					AW65SR45	1925		950	1600			
										AW65SD45							
	AW45SR44	1385		800	1250					AW65SR55	1925		950	1600			
	AW45SD44									AW65SD55							
	AW45SR54	1385		800	1250					AW70SR46	1980		1270	2250			
	AW45SD54									AW70SD46							
	AW50SR44	1410		800	1350					AW70SR55	1950		950	2250			
	AW50SD44									AW70SD55							
	AW55SR55	1475		950	1600					AW70SR56	1980		1270	2250			
	AW55SD55									AW70SD56							
	AW60SR45	1500		950	1600					AW75SR46	2010		1270	2250			
	AW60SD45									AW75SD46							
	AW60SR55	1500		950	1600				24"（600）	AW60D005	2000		950	370	1067	700	
	AW60SD55																
	AW65SR45	1525		950	1600					AW65D005	2025		950	370			
	AW65SD45																
18"（450）	AW40D004	1690		800	320	864	540			AW65D006	2055		1270	460			
	AW45D00	1715		80	320					AW75SR56	211		127	225			

	4			0					AW75SD56	0		0	0			
	AW50D005	1780		950	370				AW80SR46 AW80SD46	2135		1270	2300			
	AW55D005	1805		950	370				AW85SR56 AW85SD56	2165		1270	2300			

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

Table 2-2 Boundary Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN16, 20/ Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Restart kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"（15）	AT52DR0+SD-1	359.5	149		180	Φ1800	**108**	55		1"（25）	AT83SR4+SD-2	396.5	204		210	Φ2000	**127**	**55**	
	AT52DD0+SD-1										AT83SD4+SD-2								
	AT75SR4+SD-1	387	184								AT83SR5+SD-2	396.5	204						
	AT75SD4+SD-1										AT83SD5+SD-2								
	AT63SR5+SD-1	475.6	168								AT83DR0+SD-2	396.5	204						
	AT63SD5+SD-1										AT83DD0+SD-2								
	AT83DR0+SD-2	416.5	204		210	Φ2000					AT92DR0+SD-2	404	262						
	AT83DD0+SD-2										AT92DD0+SD-2								
	AT92DR0+SD-2	424	262								AT105SR4+SD-3	440.5	268		240	Φ2800			
	AT92DD0+SD-2										AT105SD4+SD-3								
	AT105SR4+SD-3	440.5	268		240	Φ2800					AT125SR4+SD-3	462.5	301						
	AT105SD4+SD-3										AT125SD4+SD-3								
	AT125SR4+SD-3	462.5	301								AT105SR5+SD-3	440.5	268						
	AT125SD4+SD-3										AT105SD5+SD-3								
	AT75DR0+SD-1	387	184		180	Φ1800				1¼" -32	AT75DR0+SD-1	392.5	184		180	Φ1800	140	57.5	
	AT75DD0+SD-1										AT75DD0+SD-1								
	AT105SR5+SD-3	440.5	268		240	Φ2800					AT83DR0+SD-2	422	204		210	Φ2000			
	AT105SD5+SD-3										AT83DD0+SD-2								
3/4"（20）	AT52DR0+SD-1	359.5	149		180	Φ1800	**117**	55			AT92DR0+SD-2	429.5	262						
	AT52DD0+SD-1										AT92DD0+SD-2								
	AT63DR0+SD-1	375.5	168								AT92SR4+SD-2	429.5	262						
	AT63DD0+SD-1										AT92SD4+SD-2								
	AT63SR5+SD-1	375.5	168								AT92SR5+SD-2	429.5	262						
	AT63SD5+SD-1										AT92SD5+SD-2								
	AT75SR5+SD-1	387	184								AT105SR4+SD-3	446	268		240	Φ2800			
	AT75SD5+SD-1										AT105SD4+SD-3								
	AT75SR4+SD-1	387	184								AT125SR4+SD-3	468	301						
	AT75SD4+SD-1										AT125SD4+SD-3								
	AT83SR4+SD-2	416.5	204		210	Φ2000					AT105SR5+SD-3	446	268						
	AT83SD4+SD-2										AT105SD5+SD-3								
	AT75DR0+SD-1	387	184		180	Φ1800					AT125SR5+SD-3	468	301						
	AT75DD0+SD-1										AT125SD5+SD-3								
	AT83DR0+SD-2	416.5	204		210	Φ2000				1½"（40）	AT83DR0+SD-2	429	204		210	Φ2000	165	62.5	
	AT83DD0+SD-2										AT83DD0+SD-2								
	AT92DR0+SD-2	424	262								AT92DR0+SD-2	436.5	262						
	AT92DD0+SD-2										AT92DD0+SD-2								
	AT105SR4+SD-3	440.5	268		240	Φ2800					AT105SR5+SD-3	453	268		240	Φ2800			
	AT105SD4+SD-3										AT105SD5+SD-3								
	AT105SR5+SD-3	440.5	268								AT125SR5+SD-3	475	301						
	AT105SD5+SD-3										AT125SD5+SD-3								
	AT125SR4+SD-3	462.5	301								AT105SR4+SD-3	453	268						
	AT125SD4+SD-3										AT105SD4+SD-3								
1"（25）	AT63DR0+SD-1	375.5	168		180	Φ1800	**127**	**55**			AT125SR4+SD-3	475	301						
	AT63DD0+SD-1										AT125SD4+SD-3								
	AT75DR0+SD-1	387	184								AT105DD0+SD-3	453	268						
	AT75DD0+SD-1										AT105DR0+SD-3								

Table 2-2 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN16, 20/ Class150 with Pneumatic Actuator mm

Nominal diameter Inch	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1½"（40）	AT140SR4+SD-4 AT140SD4+SD-4	527	394		300	Φ320	165	62.5		3"（80）	AT190SR4+SD-5 AT190SD4+SD-5	667	528		330	Φ400	203	95	
2"（50）	AT92DR0+SD-2 AT92DD0+SD-2	456.5	262		210	Φ200	178	75			AT190SR5+SD-5 AT190SD5+SD-5	667	528						
	AT83DR0+SD-2 AT83DD0+SD-2	449	204								AT210SR4+SD-5 AT210SD4+SD-5	692	532						
	AT105DR0+SD-3 AT105DD0+SD-3	473	268		240	Φ280				4"（100）	AT125DR0+SD-3 AT125DD0+SD-3	564	301		240	Φ280	229	115	
	AT125SR5+SD-3 AT125SD5+SD-3	495	301								AT140DR0+SD-4 AT140DD0+SD-4	616	394		300	Φ320			
	AT125SR4+SD-3 AT125SD4+SD-3	495	301								AT160SR4+SD-4 AT160SD4+SD-4	641	458						
	AT125DR0+SD-3 AT125DD0+SD-3	495	301								AT160SR5+SD-4 AT160SD5+SD-4	641	458						
	AT140SR5+SD-4 AT140SD5+SD-4	547	394		300	Φ320					AT160DR0+SD-4 AT160DD0+SD-4	641	458						
	AT140SR4+SD-4 AT140SD4+SD-4	547	394								AT190SR4+SD-5 AT190SD4+SD-5	704	528		330	Φ400			
	AT160SR4+SD-4 AT160SD4+SD-4	572	458								AT190DR0+SD-5 AT190DD0+SD-5	704	528						
2½"（65）	AT92DR0+SD-2 AT92DD0+SD-2	477	262		210	Φ200	190	90			AT210SR5+SD-5 AT210SD5+SD-5	729	532						
	AT105DR0+SD-3 AT105DD0+SD-3	493.5	268		240	Φ280					AT240SR4+SD-6 AT240SD4+SD-6	778	602		350	Φ500			
	AT125DR0+SD-3 AT125DD0+SD-3	515.5	301							5"（125）	AT160DR0+SD-4 AT160DD0+SD-4	680.5	458		300	Φ320	356	135	
	AT125SR5+SD-3 AT125SD5+SD-3	515.5	301								AT190DR0+SD-5 AT190DD0+SD-5	743.8	528		330	Φ400			
	AT140SR5+SD-4 AT140SD5+SD-4	567.5	394		300	Φ320					AT210DR0+SD-5 AT210DD0+SD-5	768.5	532						
	AT140SR4+SD-4 AT140SD4+SD-4	567.5	394								AT210SR4+SD-5 AT210SD4+SD-5	768.5	532						
	AT140DR0+SD-4 AT140DD0	567.5	394								AT210SR5+SD-5 AT210SD5+	768.5	532						

	+SD-4										SD-5								
	AT160SR4+SD-4	592.5	458								AT240SR4+SD-6	817.5	602		350	Φ500			
	AT160SD4+SD-4										AT240SD4+SD-6								
	AT160SR5+SD-4	592.5	458								AT240SR5+SD-6	817.5	602						
	AT160SD5+SD-4										AT240SD5+SD-6								
	AT190SR4+SD-5	655.5	528		330	Φ400					AT270SR4+SD-7	856.5	722		365	Φ600			
	AT190SD4+SD-5										AT270SD4+SD-7								
3"（80）	AT105DR0+SD-3	505	268		240	Φ280	203	95		6"（150）	AT190DR0+SD-5	797	528		330	Φ400	394	157.5	
	AT105DD0+SD-3										AT190DD0+SD-5								
	AT125DR0+SD-3	527	301								AT210DR0+SD-5	822	532						
	AT125DD0+SD-3										AT210DD0+SD-5								
	AT140DR0+SD-4	579	394		300	Φ320					AT240SR5+SD-6	871	602		350	Φ500			
	AT140DD0+SD-4										AT240SD5+SD-6								
	AT140SR4+SD-4	579	394								AT240DR0+SD-6	871	602						
	AT140SD4+SD-4										AT240DD0+SD-6								
	AT140SR5+SD-4	579	394								AT270SR4+SD-7	910	722		365	Φ600			
	AT140SD5+SD-4										AT270SD4+SD-7								
	AT160SR4+SD-4	604	458								AT300SR4+SD-7	930	758						
	AT160SD4+SD-4										AT300SD4+SD-7								
	AT160DR0+SD-4	604	458																
	AT160DD0+SD-4																		

Table 2-2 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN16, 20/ Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
8"（200）	AT210DR0+SD-5	914	532		330	Φ400	457	230.5		12"（300）	AT270DR0+SD-6	1206.5	722		350	Φ500	610	380	
	AT210DD0+SD-5										AT270DD0+SD-6								
	AT240DR0+SD-6	963	602		350	Φ500					AT300DR0+SD-7	1226.5	758		365	Φ600			
	AT240DD0+SD-6										AT300DD0+SD-7								
	AT270SR5+SD-7	1002	722		365	Φ600				14"（350）	AT300DR0+SD-7	1161.5	758			Φ600	686	438	
	AT270SD5+SD-7										AT300DD0+SD-7								
	AT270DR0+SD-6	1002	722		350	Φ500					AT350DR0+SD-8	1251.5	888		460	Φ800			
	AT270DD0+SD-6										AT350DD0+SD-8								
	AT300SR4+SD-	1022	758		365	Φ600				16"（400）	AT350DR0+SD-8	1623	888			Φ800	762	440	
	7AT300SD4+SD-7										AT350DD0+SD-8								

10"（250）	AT240DR0+SD-6	1130	602		350	Φ500	533	280												
	AT240DD0+SD-6																			
	AT270DR0+SD-	1169	722																	
	6AT270DD0+SD-																			
	6																			
	AT300DR0+SD-7	1189	758		365	Φ600														
	AT300DD0+SD-7																			

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulation type

Table 2-3 Overall dimensions and weight of standard O-type ball valve PN25, 40, 50/Class300 with pneumatic actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2"(15)	AT52DR0	249.5	149			140	62.5		1"(25)	AT63DR0	265.5	168			165	62.5	
	AT52DD0									AT63DD0							
	AT63DR0	265.5	168							AT75DR0	277	184					
	AT63DD0									AT75DD0							
	AT63SR5	265.5	168							AT83DR0	286.5	204					
	AT63SD5									AT83DD0							
	AT75DR0	277	184							AT83SR4	286.5	204					
	AT75DD0									AT83SD4							
	AT75SR5	277	184							AT83SR5	286.5	204					
	AT75SD5									AT83SD5							
	AT75SR4	277	184							AT92DR0	294	262					
	AT75SD4									AT92DD0							
	AT83DR0	286.5	204							AT92SR4	294	262					
	AT83DD0									AT92SD4							
	AT83SR4	286.5	204							AT92SR5	294	262					
	AT83SD4									AT92SD5							
	AT92DR0	294	262							AT105SR4	310.5	268					
	AT92DD0									AT105SD4							
	AT105SR4	310.5	268							AT105SR4	310.5	268					
	AT105SD4									AT105SD4							
	AT105SR5	273	285							AT105SR5	310.5	268					
	AT105SD5									AT105SD5							
	AT125SR4	332.5	301							AT125SR4	332.5	301					
	AT125SD4									AT125SD4							
	AT125SR5	332.5	301							AT125SR5	332.5	301					
	AT125SD5									AT125SD5							
3/4"(20)	AT52DR0	249.5	149			152	62.5		1¼"(32)	AT75DR0	282.5	184			178	67.5	
	AT52DD0									AT75DD0							
	AT63DR0	265.5	168							AT83DR0	292	204					
	AT63DD0									AT83DD0							
	AT63SR5	265.5	168							AT92DR0	292	204					
	AT63SD5									AT92DD0							
	AT75DR0	277	184							AT92SR4	292	204					
	AT75DD0									AT92SD4							
	AT75SR4	277	184							AT92SR5	292	204					
	AT75SD4									AT92SD5							
	AT75SR5	277	184							AT105DR0	316	268					
	AT75SD5									AT105DD0							
	AT83DR0	286.5	204							AT105SR4	316	268					
	AT83DD0									AT105SD4							
	AT83SR4	286.5	204							AT105SR5	316	268					
	AT83SD4									AT105SD5							
	AT83SR5	286.5	204							AT125SR4	338	301					
	AT83SD5									AT125SD4							
	AT92DR0	294	262							AT125SR4	338	301					
	AT92DD0									AT125SD4							
	AT92SR4	294	262							AT125SR5	338	301					
	AT92SD4									AT125SD5							
	AT105SR4	310	268							AT140SR4	335	394					
	AT105SD4									AT140SD4							
	AT105SR5	310	268						1½"(40)	AT83DR0	299	204			190	77.5	
	AT105SD5									AT83DD0							
	AT125SR4	332.5	301							AT92DR0	306.5	262					
	AT125SD4									AT92DD0							
	AT125SR5	332.5	301							AT105DR0	323	268					
	AT125SD5									AT105DD0							

Table 2-3 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1½"(40)	AT105SR4	323	268			190	77.5		2½"(65)	AT190SR4	470.5	528			241	95	
	AT105SD4									AT190SD4							
	AT105SR5	323	268							AT190SR5	470.5	528					
	AT105SD5									AT190SD5							
	AT125DR0	345	301						3"(80)	AT105DR0	375	268			283	105	
	AT125DD0									AT105DD0							
	AT125SR4	345	301							AT125DR0	397	301					
	AT125SD4									AT125DD0							
	AT125SR5	345	301							AT140DR0	414	394					
	AT125SD5									AT140DD0							
	AT140SR4	362	394							AT140SR4	414	394					
	AT140SD4									AT140SD4							
	AT140SR5	362	394							AT140SR5	414	394					
	AT140SD5									AT140SD5							
2"(50)	AT83DR0	319	204			216	82.5			AT160DR0	439	458					
	AT83DD0									AT160DD0							
	AT92DR0	326.5	262							AT160SR4	439	458					
	AT92DD0									AT160SD4							
	AT105DR0	343	268							AT160SR5	439	458					
	AT105DD0									AT160SD5							
	AT125DR0	365	301							AT190SR4	482	528					
	AT125DD0									AT190SD4							
	AT125SR4	365	301							AT190DR0	482	528					
	AT125SD4									AT190DD0							
	AT125SR5	365	301							AT190SR5	482	528					
	AT125SD5									AT190SD5							
	AT140DR0	382	394							AT210SR4	507	532					
	AT140DD0									AT210SD4							
	AT140SR4	382	394							AT210SR5	507	532					
	AT140SD4									AT210SD5							
	AT140SR5	382	394						4"(100)	AT125DR0	454	301			305	127.5	
	AT140SD5									AT125DD0							
	AT160SR4	407	458							AT140DR0	471	394					
	AT160SD4									AT140DD0							
	AT160SR5	407	458							AT160DR0	496	458					
	AT160SD5									AT160DD0							
2½"(65)	AT92DR0	347	262			241	95			AT160SR4	496	458					
	AT92DD0									AT160SD4							
	AT105DR0	363.5	268							AT160SR5	496	458					
	AT105DD0									AT160SD5							
	AT125DR0	385.5	301							AT190DR0	539	528					
	AT125DD0									AT190DD0							
	AT125SR5	385.5	301							AT190SR4	539	528					
	AT125SD5									AT190SD4							
	AT140DR0	402.5	394							AT190SR5	539	528					
	AT140DD0									AT190SD5							
	AT140SR4	402.5	394							AT210DR0	564	532					
	AT140SD4									AT210DD0							
	AT140SR5	402.5	394							AT210SR4	564	532					
	AT140SD5									AT210SD4							
	AT160DR0	427.5	458							AT210SR5	564	532					
	AT160DD0									AT210SD5							
	AT160SR4	427.5	458							AT240SR4	598	602					
	AT160SD4									AT240SD4							
	AT160SR5	427.5	458							AT240SR5	598	602					
	AT160SD5									AT240SD5							

Table 2-3 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
4"(100)	AT270SR4 AT270SD4	637	722			305	127.5		6"(150)	AW30SR52 AW30SD52	677		650	1050	403	160.5	
5"(125)	AT160DR0 AT160DD0	515.5	458			381	140.5			AW32SR42 AW32SD42	702		650	1050			
	AT190DR0 AT190DD0	558.5	528						8"(200)	AT210DR0 AT210DD0	729	532			502	230.5	
	AT210DR0 AT210DD0	583.5	532							AT240DR0 AT240DD0	763	602					
	AT210SR4 AT210SD4	583.5	532							AT270DR0 AT270DD0	802	722					
	AT210SR5 AT210SD5	583.5	532							AT270SR5 AT270SD5	802	722					
	AT240DR0 AT240DD0	617.5	602							AT300DR0 AT300DD0	822	758					
	AT240SR4 AT240SD4	617.5	602							AT300SR4 AT300SD4	822	758					
	AT240SR5 AT240SD5	617.5	602							AW22D001	711.5		520	200			
	AT270SR4 AT270SD4	656.5	722							AW22D002	721.5		650	250			
	AT270SR5 AT270SD5	656.5	722							AW24D002	739		650	250			
	AT300SR4 AT300SD4	676.5	758							AW27D003	784		700	270			
6"(150)	AT190DR0 AT190DD0	612	528			403	160.5			AW27SR52 AW27SD52	769		650	950			
	AT210DR0 AT210DD0	637	532							AW30SR42 AW30SD42	769		650	1050			
	AT240DR0 AT240DD0	671	602							AW30SR52 AW30SD52	769		650	1050			
	AT240SR5 AT240SD5	671	602							AW32SR42 AW32SD42	794		650	1050			
	AT270DR0 AT270DD0	710	722							AW32SR43 AW32SD43	809		700	1160			
	AT270SR4 AT270SD4	710	722							AW32SR52 AW32SD52	794		650	1050			
	AT270SR5 AT270SD5	710	722							AW35SR53 AW35SD53	819		700	1160			
	AT300SR4 AT300SD4	730	758							AW40SR43 AW40SD43	744		700	1160			
	AT300SR5 AT300SD5	730	758							AW45SR44 AW45SD44	874		800	1250			
	AW22D001	691.5		520	200					AW45SR53 AW45SD53	869		700	1250			
	AW22D002	629.5		650	250				10"(250)	AT240DR0 AT240DD0	930	602			568	280	
	AW24D002	647		650	250					AT270DR0 AT270DD0	969	722					
	AW24SR42 AW24SD42	647		650	910					AT300DR0 AT300DD0	989	758					
	AW27SR42 AW27SD42	677		650	910					AW22D002	888.5		650	250			
	AW27SR52 AW27SD52	677		650	910					AW24D002	906		650	250			
	AW30SR42 AW30SD42	677		650	1050					AW27D002	936		650	250			

Table 2-3 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
10"(250)	AW27D003	951		700	270	568	280		12"(300)	AW45SR54 AW45SD54	988.5		800	1250	648	318	
	AW30D003	961		700	270					AW50SR44 AW50SD44	1013.5		800	1350			
	AW35D003	986		700	270					AW55SR44 AW55SD44	1038.5		800	1350			
	AW30SR52 AW30SD52	936		650	1050					AW55SR55 AW55SD55	1078.5		950	1600			
	AW32SR42 AW32SD42	961		650	1050					AW60SR45 AW60SD45	1103.5		950	1600			
	AW32SR43 AW32SD43	976		700	1160					AW60SR55 AW60SD55	1103.5		950	1600			
	AW32SR53 AW32SD53	946		700	1160					AW65SR45 AW65SD45	1128.5		950	1600			
	AW35SR53 AW35SD53	986		700	1160				14"(350)	AT300DR0 AT300DD0	961.5	758			762	352	
	AW40SR43 AW40SD43	1011		700	1160					AT350DR0 AT350DD0	1021.5	888					
	AW45SR44 AW45SD44	1041		800	1250					AW27D002	908.5		650	250			
	AW50SR44 AW50SD44	1066		800	1350					AW27D003	923.5		700	270			
	AW45SR53 AW45SD53	1036		700	1250					AW32D003	948.5		700	270			
	AW45SR54 AW45SD54	1041		800	1250					AW35D003	958.5		700	270			
12"(300)	AT270DR0 AT270DD0	916.5	722			648	318			AW40D004	988.5		800	320			
	AT300DR0 AT300DD0	936.5	758							AW45D004	1013.5		800	320			
	AT350DR0 AT350DD0	996.5	888							AW50D005	1078.5		950	370			
	AW24D002	853.5		650	250					AW55D005	1103.5		950	370			
	AW27D002	883.5		650	250					AW40SR43 AW40SD43	983.5		700	1160			
	AW27D003	898.5		700	270					AW40SR53 AW40SD53	983.5		700	1160			
	AW30D003	908.5		700	270					AW45SR44 AW45SD44	1013.5		800	1250			
	AW32D003	923.5		700	270					AW40SR53 AW40SD53	983.5		700	1160			
	AW35D003	933.5		700	270					AW50SR44 AW50SD44	1038.5		800	1350			
	AW40D004	963.5		800	320					AW55SR44 AW55SD44	1063.5		700	1350			
	AW45D004	988.5		800	320					AW55SR55 AW55SD55	1103.5		950	1600			
	AW32SR43 AW32SD43	923.5		700	1160					AW60SR45 AW60SD45	1128.5		950	1600			
	AW32SR53 AW32SD53	923.5		700	1160					AW60SR55 AW60SD55	1128.5		950	1600			
	AW40SR43 AW40SD43	958.5		700	1160					AW65SR45 AW65SD45	1153.5		950	1600			
	AW45SR44 AW45SD44	988.5		800	1250					AW65SR55 AW65SD55	1153.5		950	1600			

Table 2-3 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
14"(350)	AW70SR45	1178.5		950	1800	762	352		18"（450）	AW55D005	2025		950	370	914	540	
	AW70SD45																
	AW70SR46	1209.5		1270	2250					AW60D005	2050		950	370			
	AW70SD46																
	AW70SR55	1178.5		950	2250					AW65D005	2075		950	370			
	AW70SD55																
16"(400)	AW32D003	1685		700	270	838	440			AW55SR45	2025		950	1600			
										AW55SD45							
	AW35D003	1695		700	270					AW55SR54	1985		800	1350			
										AW55SD54							
	AW35D004	1700		800	320					AW65SR45	2075		950	1600			
										AW65SD45							
	AW40D004	1725		800	320					AW65SR55	2075		950	1600			
										AW65SD55							
	AW45D004	1750		800	320					AW70SR45	2100		950	1800			
										AW70SD45							
	AW50D005	1815		950	370					AW70SR46	2130		1270	2250			
										AW70SD46							
	AW55D005	1840		950	370					AW70SR55	2100		950	2250			
										AW70SD55							
	AW60D005	1865		950	370					AW70SR56	2130		1270	2250			
										AW70SD56							
	AW45SR44	1750		800	1250					AW75SR46	2160		1270	2250			
	AW45SD44									AW75SD46							
	AW45SR54	1750		800	1250					AW75SR56	2160		1270	2250			
	AW45SD54									AW75SD56							
	AW50SR44	1775		800	1350					AW80SR46	2185		1270	2300			
	AW50SD44									AW80SD46							
	AW50SR54	1775		800	1350				20"（500）	AW45D004	1955		800	320	991	600	
	AW50SD54																
	AW55SR45	1840		952	1600					AW50D004	1980		800	320			
	AW55SD45																
	AW60SR45	1865		950	1600					AW55D005	2045		950	370			
	AW60SD4																

	5																
	AW60SR55 AW60SD55	1865		950	1600					AW60D005	2070		950	370			
	AW65SR45 AW65SD45	1890		950	1600					AW65D005	2095		950	370			
	AW65SR55 AW65SD55	1890		950	1600					AW65D006	2125		1270	460			
	AW70SR45 AW70SD45	1915		950	1600					AW65SR45 AW65SD45	2070		950	1600			
	AW70SR46 AW70SD46	1946		1270	2250					AW65SR55 AW65SD55	2095		950	1600			
	AW70SR55 AW70SD55	1915		950	2250					AW70SR46 AW70SD46	2150		1270	2250			
	AW70SR56 AW70SD56	1945		1270	2250					AW70SR56 AW70SD56	2150		1270	2250			
	AW75SR46 AW75SD46	1975		1270	2250					AW75SR46 AW75SD46	2180		1270	2250			
18"（450)	AW40D004	1910		800	320	914	540			AW75SR56 AW75SD56	2180		1270	2250			
	AW45D004	1935		800	320					AW80SR46 AW80SD46	2205		1270	2300			
	AW50D005	2000		950	370					AW85SR56 AW85SD56	2235		1270	2300			

Table 2-3 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
24"（600)	AW65D005	1995		950	370	1143	700										
	AW65D006	2025		1270	460												
	AW70D006	2050		1270	460												
	AW75SR56 AW75SD56	2080		1270	2250												
	AW80SR46 AW80SD46	2105		1270	2300												
	AW85SR56 AW85SD56	2135		1270	2300												

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulation type

Table 2-4 Standard O-type ball valve (with handwheel) PN25, 40, 50/Class300 with pneumatic actuator Overall dimension and weight mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"（15）	AT52DR0+SD-1	359.5	149		180	Φ180	140	62.5		1"(25)	AT63DR0+SD-1	375.5	168		180	Φ180	165	62.5	
	AT52DD0+SD-1										AT63DD0+SD-1								
	AT63DR0+SD-1	375.5	168								AT75DR0+SD-1	387	184						
	AT63DD0+SD-1										AT75DD0+SD-1								
	AT63SR5+SD-1	375.5	168								AT83DR0+SD-2	416.5	204		210	Φ200			
	AT63SD5+SD-1										AT83DD0+SD-2								
	AT75DR0+SD-1	387	184								AT83SR4+SD-2	416.5	204						
	AT75DD0+SD-1										AT83SD4+SD-2								
	AT75SR5+SD-1	387	184								AT83SR5+SD-2	416.5	204						
	AT75SD5+SD-1										AT83SD5+SD-2								
	AT75SR4+SD-1	387	184								AT92DR0+SD-2	424	262						
	AT75SD4+SD-1										AT92DD0+SD-2								
	AT83DR0+SD-2	416.5	204		210	Φ200					AT92SR4+SD-2	424	262						
	AT83DD0+SD-2										AT92SD4+SD-2								
	AT83SR4+SD-2	416.5	204								AT92SR5+SD-2	424	262						
	AT83SD4+SD-2										AT92SD5+SD-2								
	AT92DR0+SD-2	424	262								AT105SR4+SD-3	440.5	268		240	Φ280			
	AT92DD0+SD-2										AT105SD4+SD-3								
	AT105SR4+SD-3	440.5	268		240	Φ280					AT105SR4+SD-3	440.5	268						
	AT105SD4+SD-3										AT105SD4+SD-3								
	AT105SR5+SD-3	403	285								AT105SR5+SD-3	440.5	268						
	AT105SD5+SD-3										AT105SD5+SD-3								
	AT125SR4+SD-3	462.5	301								AT125SR4+SD-3	462.5	301						
	AT125SD4+SD-3										AT125SD4+SD-3								
	AT125SR5+SD-3	462.5	301								AT125SR5+SD-3	462.5	301						
	AT125SD5+SD-3										AT125SD5+SD-3								
3/4"（20）	AT52DR0+SD-1	359.5	149		180	Φ180	152	62.5		1¼"（32）	AT75DR0+SD-1	392.5	184		180	Φ180	178	67.5	
	AT52DD0+SD-1										AT75DD0+SD-1								
	AT63DR0+SD-1	375.5	168								AT83DR0+SD-2	422	204		210	Φ200			
	AT63DD0+SD-1										AT83DD0+SD-2								
	AT63SR5+SD-1	375	16								AT92DR0+SD-2	422	20						

	AT63SD5+SD-1	.5	8								AT92DD0+SD-2		4					
	AT75DR0+SD-1 AT75DD0+SD-1	387	184								AT92SR4+SD-2 AT92SD4+SD-2	422	204					
	AT75SR4+SD-1 AT75SD4+SD-1	387	184								AT92SR5+SD-2 AT92SD5+SD-2	422	204					
	AT75SR5+SD-1 AT75SD5+SD-1	387	184								AT105DR0+SD-3 AT105DD0+SD-3	446	268					
	AT83DR0+SD-2 AT83DD0+SD-2	416.5	204								AT105SR4+SD-3 AT105SD4+SD-3	446	268					
	AT83SR4+SD-2 AT83SD4+SD-2	416.5	204								AT105SR5+SD-3 AT105SD5+SD-3	446	268					
	AT83SR5+SD-2 AT83SD5+SD-2	416.5	204		210	Φ200					AT125SR4+SD-3 AT125SD4+SD-3	468	301		240	Φ280		
	AT92DR0+SD-2 AT92DD0+SD-2	424	262								AT125SR4+SD-3 AT125SD4+SD-3	468	301					
	AT92SR4+SD-2 AT92SD4+SD-2	424	262								AT125SR5+SD-3 AT125SD5+SD-3	468	301					
	AT105SR4+SD-3 AT105SD4+SD-3	440	268								AT140SR4+SD-4 AT140SD4+SD-4	500	394		300	Φ320		
	AT105SR5+SD-3 AT105SD5+SD-3	440	268		240	Φ280				1½"（40）	AT83DR0+SD-2 AT83DD0+SD-2	429	204		210	Φ200	190	77.5
	AT125SR4+SD-3 AT125SD4+SD-3	462.5	301								AT92DR0+SD-2 AT92DD0+SD-2	436.5	262					
	AT125SR5+SD-3 AT125SD5+SD-3	462.5	301								AT105DR0+SD-3 AT105DD0+SD-3	453	268		240	Φ280		

Table 2-4 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1½"（40）	AT105SR4+SD-3	453	268		240	Φ280	190	77.5		2½"（65）	AT190SR4+SD-5	655.5	528		330	Φ400	241	95	
	AT105SD4+SD-3										AT190SD4+SD-5								
	AT105SR5+SD-3	453	268								AT190SR5+SD-5	655.5	528						
	AT105SD5+SD-3										AT190SD5+SD-5								
	AT125DR0+SD-3	475	301							3"（80）	AT105DR0+SD-3	505	268		240	Φ280	283	105	
	AT125DD0+SD-3										AT105DD0+SD-3								
	AT125SR4+SD-3	475	301								AT125DR0+SD-3	527	301						
	AT125SD4+SD-3										AT125DD0+SD-3								
	AT125SR5+SD-3	475	301								AT140DR0+SD-4	579	394		300	Φ320			
	AT125SD5+SD-3										AT140DD0+SD-4								
	AT140SR4+SD-4	527	394		300	Φ320					AT140SR4+SD-4	579	394						
	AT140SD4+SD-4										AT140SD4+SD-4								
	AT140SR5+SD-4	527	394								AT140SR5+SD-4	579	394						
	AT140SD5+SD-4										AT140SD5+SD-4								
2"（50）	AT83DR0+SD-2	449	204		210	Φ200	216	82.5			AT160DR0+SD-4	604	458						
	AT83DD0+SD-2										AT160DD0+SD-4								
	AT92DR0+SD-2	456	262								AT160SR4+SD-4	604	458						
	AT92DD0+SD-2										AT160SD4+SD-4								
	AT105DR0+SD-3	473	268		240	Φ280					AT160SR5+SD-4	604	458						
	AT105DD0+SD-3										AT160SD5+SD-4								
	AT125DR0+SD-3	495	301								AT190SR4+SD-5	667	528		330	Φ400			
	AT125DD0+SD-3										AT190SD4+SD-5								
	AT125SR4+SD-3	495	301								AT190DR0+SD-5	667	528						
	AT125SD4+SD-3										AT190DD0+SD-5								
	AT125SR5+SD-3	495	301								AT190SR5+SD-5	667	528						
	AT125SD5+SD-3										AT190SD5+SD-5								
	AT140DR0+SD-4	547	394		300	Φ320					AT210SR4+SD-5	692	532						
	AT140DD0+SD-4										AT210SD4+SD-5								
	AT140SR4+SD-4	547	394								AT210SR5+SD-5	692	532						
	AT140SD4+SD-4										AT210SD5+SD-5								
	AT140SR5+SD-4	547	394							4"（100）	AT125DR0+SD-3	584	301		240	Φ280	305	127.5	
	AT140SD5+SD-4										AT125DD0+SD-3								
	AT160SR4+SD-4	572	458								AT140DR0+SD-4	636	394		300	Φ320			
	AT160SD4+SD-4										AT140DD0+SD-4								
	AT160SR5+SD-4	572	458								AT160DR0+SD-4	661	458						
	AT160SD5+SD-4										AT160DD0+SD-4								
2½"（65）	AT92DR0+SD-2	477	262		210	Φ200	241	95			AT160SR4+SD-4	661	458						
	AT92DD0+SD-2										AT160SD4+SD-4								
	AT105DR0+SD-3	493	268		240	Φ280					AT160SR5+SD-4	661	458						
	AT105DD0+SD-3										AT160SD5+SD-4								
	AT125DR0+SD-3	515	301								AT190DR0+SD-5	724	528		330	Φ400			
	AT125DD0+SD-3										AT190DD0+SD-5								
	AT125SR5+SD-3	515	301								AT190SR4+SD-5	724	528						
	AT125SD5+SD-3										AT190SD4+SD-5								
	AT140DR0+SD-4	567	394		300	Φ320					AT190SR5+SD-5	724	528						
	AT140DD0+SD-4										AT190SD5+SD-5								
	AT140SR4+SD-4	567	394								AT210DR0+SD-5	749	532						
	AT140SD4+SD-4										AT210DD0+SD-5								
	AT140SR5+SD-4	567	394								AT210SR4+SD-5	749	532						
	AT140SD5+SD-4										AT210SD4+SD-5								
	AT160DR0+SD-4	592	458								AT210SR5+SD-5	749	532						
	AT160DD0+SD-4										AT210SD5+SD-5								
	AT160SR4+SD-4	592	458								AT240SR4+SD-6	798	602		365	Φ500			
	AT160SD4+SD-4										AT240SD4+SD-6								
	AT160SR5+SD-4	592	458								AT240SR5+SD-6	798	602						
	AT160SD5+SD-4										AT240SD5+SD-6								

Table 2-4 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Restart Qty. Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
4"（100）	AT270SR4+SD-7 AT270SD4+SD-7	837	722		365	Φ600	305	127.5			AT270SR4+SD-7 AT270SD4+SD-7	910	722						
5"（125）	AT160DR0+SD-4 AT160DD0+SD-4	680.5	458		300	Φ320	381	140.5		6"(150)	AT270SR5+SD-7 AT270SD5+SD-7	910	722		365	Φ600	403	160.5	
	AT190DR0+SD-5 AT190DD0+SD-5	743.5	528		330	Φ400					AT300SR4+SD-7 AT300SD4+SD-7	930	758						
	AT210DR0+SD-5 AT210DD0+SD-5	768.5	532								AT300SR5+SD-7 AT300SD5+SD-7	930	758						
	AT210SR4+SD-5 AT210SD4+SD-5	768.5	532							8"(200)	AT210DR0+SD-5 AT210DD0+SD-5	914	532		330	Φ400	502	230.5	
	AT210SR5+SD-5 AT210SD5+SD-5	768.5	532								AT240DR0+SD-6 AT240DD0+SD-6	963	602		350	Φ500			
	AT240DR0+SD-6 AT240DD0+SD-6	817.5	602		350	Φ500					AT270DR0+SD-6 AT270DD0+SD-6	1002	722						
	AT240SR4+SD-6 AT240SD4+SD-6	817.5	602								AT270SR5+SD-7 AT270SD5+SD-7	1002	722		365	Φ600			
	AT240SR5+SD-6 AT240SD5+SD-6	817.5	602								AT300DR0+SD-7 AT300DD0+SD-7	1022	758						
	AT270SR4+SD-7 AT270SD4+SD-7	856.5	722		365	Φ600					AT300SR4+SD-7 AT300SD4+SD-7	1022	758						
	AT270SR5+SD-7 AT270SD5+SD-7	856.5	722							10"（250）	AT240DR0+SD-6 AT240DD0+SD-6	1130	602		350	Φ500	568	280	
	AT300SR4+SD-7 AT300SD4+SD-7	876.5	758								AT270DR0+SD-6 AT270DD0+SD-6	1169	722						
6"（150）	AT190DR0+SD-5 AT190DD0+SD-5	797	528		330	Φ400	403	160.5			AT300DR0+SD-7 AT300DD0+SD-7	1189	758		365	Φ600			
	AT210DR0+SD-5 AT210DD0+SD-5	822	532							12"（300）	AT270DR0+SD-6 AT270DD0+SD-6	1116.5	722		350	Φ500	648	318	
	AT240DR0+SD-6 AT240DD0+SD-6	871	602		350	Φ500					AT300DR0+SD-7 AT300DD0+SD-7	1136.5	758		365	Φ600			
	AT240SR5+SD-6 AT240SD5+SD-6	871	602								AT350DR0+SD8 AT350DD0+SD8	1226.5	888		460	Φ800			
	AT270DR0+SD-6	910	72							14"	AT300DR0+SD-7	116	75		36	Φ6	76	352	

	AT270DD0 +SD-6		2						（350）	AT300DD0 +SD-7	1.5	8		5	00	2		
										AT350DR0 +SD8	125	88		46	Φ8			
										AT350DD0 +SD8	1.5	8		0	00			

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulation type

Table 2-5 Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator
mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
	AT52DR0	290	149							AT105DR0	343	268					
	AT52DD0									AT105DD0							
	AT63DR0	300	168							AT105SR5	343	268					
	AT63DD0									AT105SD5							
	AT75SR4	311	184							AT125DR0	365	301					
	AT75SD4									AT125DD0							
	AT75SR5	311	184							AT125SR4	365	301					
	AT75SD5								3/4"(20)	AT125SD4					**190**	70	
	AT83DR0	320	204							AT125SR5	365	301					
	AT83DD0									AT125SD5							
	AT83SR5	320	204							AT140SR4	382	394					
	AT83SD5									AT140SD4							
	AT83SR4	320	204							AT140SR5	382	394					
	AT83SD4									AT140SD5							
1/2"(15)	AT92DR0	330	262			165	70			AT63DR0	300	168					
	AT92DD0									AT63DD0							
	AT105DR0	343	268							AT75DR0	310	184					
	AT105DD0									AT75DD0							
	AT105SR5	343	268							AT83DR0	320	204					
	AT105SD5									AT83DD0							
	AT125SR5	365	301							AT83SR4	320	204					
	AT125SD5									AT83SD4							
	AT125DR0	365	301						1"(25)	AT83SR5	320	204			216	70	
	AT125DD0									AT83SD5							
	AT125SR4	365	301							AT92SR4	330	262					
	AT125SD4									AT92SD4							
	AT140SR4	382	394							AT92SR5	330	262					
	AT140SD4									AT92SD5							
	AT140SR5	382	394							AT92DR0	330	262					
	AT140SD5									AT92DD0							
3/4"(20	AT52DR0	29	14			19	70			AT105SR4	34	26					

)	AT52DD0	0	9			0				AT105SD4	3	8					
	AT63DR0	300	168							AT105SR5	343	268					
	AT63DD0									AT105SD5							
	AT75DR0	311	184							AT105DR0	343	268					
	AT75DD0									AT105DD0							
	AT75SR4	311	184							AT125DR0	365	301					
	AT75SD4									AT125DD0							
	AT75SR5	311	184							AT125SR4	365	301					
	AT75SD5									AT125SD4							
	AT83SR4	320	204							AT125SR5	365	301					
	AT83SD4									AT125SD5							
	AT83DR0	320	204							AT140SR4	382	394					
	AT83DD0									AT140SD4							
	AT83SR5	320	204							AT140SR5	382	394					
	AT83SD5									AT140SD5							
	AT92SR4	330	262							AT75DR0	322	184					
	AT92SD4									AT75DD0							
	AT92SR5	330	262							AT83DR0	331	204					
	AT92SD5									AT83DD0							
	AT92DR0	330	262						1¼"(32)	AT92DR0	339	262			229	87	
	AT92DD0									AT92DD0							
	AT105SR4	343	268							AT92SR4	339	262					
	AT105SD4									AT92SD4							

Table 2-5 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1¼"(32)	AT92SR5	339	262			229	87		2"(50)	AT92DR0	383	262			292	106	
	AT92SD5									AT92DD0							
	AT105SR4	354	268							AT105DR0	399	268					
	AT105SD4									AT105DD0							
	AT105SR5	354	268							AT125DR0	421	301					
	AT105SD5									AT125DD0							
	AT105DR0	354	268							AT125SR4	421	301					
	AT105DD0									AT125SD4							
	AT125SR4	376	301							AT125SR5	421	301					
	AT125SD4									AT125SD5							
	AT125SR5	376	301							AT140SR4	438	394					
	AT125SD5									AT140SD4							
	AT125DR0	376	301							AT140SR5	438	394					
	AT125DD0									AT140SD5							
	AT140SR4	393	394							AT140DR0	438	394					
	AT140SD4									AT140DD0							
	AT140SR5	393	394							AT160DR0	463	458					
	AT140SD5									AT160DD0							
	AT160SR4	418	458							AT160SR4	463	458					
	AT160SD4									AT160SD4							
	AT160SR5	418	458							AT160SR5	463	458					
	AT160SD5									AT160SD5							
1½"(40)	AT83DR0	367	204			241	106			AT190SR4	506	528					
	AT83DD0									AT190SD4							
	AT92DR0	375	262							AT190SR5	506	528					
	AT92DD0									AT190SD5							
	AT105DR0	405	268						2½"(65)	AT105DR0	428	285			330	134	
	AT105DD0									AT105DD0							
	AT105SR4	405	268							AT125DR0	450	301					
	AT105SD4									AT125DD0							

	AT105SR5 AT105SD5	405	268							AT140DR0 AT140DD0	467	394					
	AT125SR4 AT125SD4	413	301							AT140SR4 AT140SD4	467	394					
	AT125SR5 AT125SD5	413	301							AT140SR5 AT140SD5	467	394					
	AT125DR0 AT125DD0	413	301							AT160SR4 AT160SD4	492	458					
	AT140SR4 AT140SD4	430	394							AT160SR5 AT160SD5	492	458					
	AT140SR5 AT140SD5	430	394							AT160DR0 AT160DD0	492	458					
	AT140DR0 AT140DD0	430	394							AT190DR0 AT190DD0	535	528					
	AT160SR4 AT160SD4	445	458							AT190SR4 AT190SD4	535	528					
	AT160SR5 AT160SD5	445	458							AT190SR5 AT190SD5	535	528					
	AT190SR4 AT190SD4	488	528							AT210SR4 AT210SD4	560	532					

Table 2-5 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
2½"(65)	AT210SR5 AT210SD5	560	532			330	134		4"(100)	AT210SR4 AT210SD4	627	532			406	181	
3"(80)	AT125DR0 AT125DD0	502	301			356	144			AT210SR5 AT210SD5	627	532					
	AT140DR0 AT140DD0	519	394							AT210DR0 AT210DD0	627	532					
	AT140SR	51	39							AT240SR	66	60					

	4 AT140SD4	9	4							4 AT240SD4	1	2					
	AT140SR5 AT140SD5	519	394							AT240DR0 AT240DD0	661	602					
	AT160DR0 AT160DD0	544	458							AT240SR5 AT240SD5	661	602					
	AT160SR4 AT160SD4	544	458							AT270SR4 AT270SD4	700	722					
	AT160SR5 AT160SD5	544	458							AT270SR5 AT270SD5	700	722					
	AT190SR4 AT190SD4	587	528							AT300SR4 AT300SD4	720	758					
	AT190SR5 AT190SD5	587	528						5"(125)	AT160DR0 AT160DD0	645	458			457	245	
	AT190DR0 AT190DD0	587	528							AT190DR0 AT190DD0	691	528					
	AT210DR0 AT210DD0	612	532							AT210DR0 AT210DD0	716	532					
	AT210SR4 AT210SD4	612	532							AT210SR4 AT210SD4	716	532					
	AT210SR5 AT210SD5	612	532							AT210SR5 AT210SD5	716	532					
	AT240SR4 AT240SD4	646	602							AT240SR4 AT240SD4	750	602					
	AT240SR5 AT240SD5	646	602							AT240SR5 AT240SD5	750	602					
	AT270SR4 AT270SD4	685	722							AT240DR0 AT240DD0	750	602					
4"(100)	AT140DR0 AT140DD0	534	394			406	181			AT270SR4 AT270SD4	789	722					
	AT160DR0 AT160DD0	559	458							AT270SR5 AT270SD5	789	722					
	AT160SR4 AT160SD4	559	458							AT270DR0 AT270DD0	789	722					
	AT160SR	55	45							AT300SR	80	75					

	5 AT160SD5	9	8							4 AT300SD4	9	8					
	AT190DR0 AT190DD0	602	528							AT300SR5 AT300SD5	809	758					
	AT190SR4 AT190SD4	602	528						6"(150)	AT190DR0 AT190DD0	741	528			495	254	
	AT190SR5 AT190SD5	602	528							AT210DR0 AT210DD0	766	532					

Table 2-5 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator **mm**

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight (kg)
6"(150)	AT240DR0	800	602			495	254		8"(200)	AW30D003	1146		700	270	597	305	
	AT240DD0																
	AT240SR5	800	602							AW35D003	1171		700	270			
	AT240SD5																
	AT270SR4	839	722							AW27SR52	1121		650	950			
	AT270SD4									AW27SD52							
	AT270SR5	839	722							AW30SR42	1121		650	1050			
	AT270SD5									AW30SD42							
	AT270DR0	839	722							AW30SR52	1121		650	1050			
	AT270DD0									AW30SD52							
	AT300SR4	859	758							AW32SR42	1146		650	1050			
	AT300SD4									AW32SD42							
	AT300SR5	859	758							AW32SR43	1161		700	1160			
	AT300SD5									AW32SD43							
	AT300DR0	859	758							AW32SR52	1146		650	1050			
	AT300DD0									AW32SD52							
	AW22D002	759		650	250					AW35SR53	1171		700	1160			
										AW35SD53							
	AW24D002	776		650	250					AW40SR43	1196		700	1160			
										AW40SD43							
	AW30SR42	806		650	1050					AW45SR44	1226		800	1250			
	AW30SD42									AW45SD44							
	AW30SR52	806		650	1050					AW45SR53	1221		700	1250			
	AW30SD52									AW45SD53							
	AW32SR42	831		650	1050				10"(250)	AT240DR0	1163	602			673	336	
	AW32SD42									AT240DD0							
	AW32SR43	846		700	1160					AT270DR0	1202	722					
	AW32SD43									AT270DD0							
	AW32SR52	831		650	1050					AT300DR0	1222	758					
	AW32SD52									AT300DD0							
	AW40SR43	881		700	1160					AT350DR0	1282	888					
	AW40SD43									AT350DD0							
8"(200)	AT210DR0	1081	532			597	305			AW22D002	1122		650	250			
	AT210DD0																
	AT240DR0	1115	602							AW24D002	1139		650	250			
	AT240DD0																
	AT270DR0	1154	722							AW27D002	1169		650	250			
	AT270DD0																
	AT300DR0	1174	758							AW27D003	1184		700	270			
	AT300DD0																
	AT300SR4	1174	758							AW30D003	1194		700	270			
	AT300SD4																
	AT300SR5	1174	758							AW35D003	1219		700	270			
	AT300SD5																
	AW22D001	1064		520	200					AW40D004	1249		800	320			
	AW22D002	1074		650	250					AW30SR52	1169		650	1050			
										AW30SD52							
	AW24D002	1091		650	250					AW32SR42	1194		650	1050			
										AW32SD42							
	AW27D003	1121		650	250					AW32SR43	1209		700	1160			
										AW32SD43							

Table 2-5 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator **mm**

Nominal Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
10"(250)	AW32SR53	1209		700	1160	673	336		12"(300)	AW55SR55	1419		950	1600	762	427	
	AW32SD53									AW55SD55							
	AW45SR44	1274		800	1250					AW60SR45	1444		950	1600			
	AW45SD44									AW60SD45							
	AW45SR53	1269		700	1250					AW60SR55	1444		950	1600			
	AW45SD53									AW60SD55							
	AW45SR54	1274		800	1250					AW65SR45	1469		950	1600			
	AW45SD54									AW65SD45							
	AW50SR44	1299		800	1350					AW70SR45	1494		950	1800			
	AW50SD44									AW70SD45							
	AW55SR44	1324		800	1350					AW70SR55	1494		950	2250			
	AW55SD44									AW70SD55							
	AW55SR55	1364		950	1600				14"(350)	AT300DR0	1456	758			826	463	
	AW55SD55									AT300DD0							
12"(300)	AT270DR0	1257	722			762	427			AT350DR0	1516	888					
	AT270DD0									AT350DD0							
	AT300DR0	1277	758							AW27D003	1418		700	270			
	AT300DD0																
	AT350DR0	1337	888							AW32D003	1443		700	270			
	AT350DD0																
	AW24D002	1194		650	250					AW35D003	1453		700	270			
	AW27D002	1224		650	250					AW45D004	1508		800	320			
	AW27D003	1239		700	270					AW50D005	1573		950	370			
	AW32D003	1264		700	270					AW55D005	1598		950	370			
	AW40D004	1304		800	320					AW60D005	1623		950	370			
	AW45D004	1329		800	320					AW40SR43	1		700	1160			
										AW40SD43	478						
	AW50D005	1394		950	370					AW40SR53	1478		700	1160			
										AW40SD53							
	AW32SR43	1264		700	1160					AW45SR44	1508		800	1250			
	AW32SD43									AW45SD44							
	AW32SR53	1264		700	1160					AW45SR53	1503		700	1250			
	AW32SD53									AW45SD53							
	AW35SR53	1274		700	1160					AW45SR54	1508		800	1250			
	AW35SD53									AW45SD54							
	AW40SR43	1299		700	1160					AW50SR44	1533		800	1350			
	AW40SD43									AW50SD44							
	AW40SR53	1299		700	1160					AW60SR55	1623		950	1600			
	AW40SD53									AW60SD55							
	AW45SR44	1329		800	1250					AW65SR45	1648		950	1600			
	AW45SD44									AW65SD45							
	AW55SR44	1379		800	1350					AW70SR45	1673		950	1800			
	AW55SD44									AW70SD45							

Table 2-5 Continued Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator **mm**

Nominal Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
14"(350)	AW70SR46	1704		1270	2250	826	463		16"(400)	AW75SR56	2230		1270	2250	902	440	
	AW70SD46									AW75SD56							
	AW70SR55	1673		950	2250				18"（450）	AW40D004	2050		800	320	978	640	
	AW70SD55																
	AW70SR56	1703		1270	2250					AW45D004	2075		800	320			

	AW70SD56															
	AW75SR46 AW75SD46	1733		1270	2250					AW50D004	2100		800	320		
	AT350DR0 AT350DD0	2013	888							AW60D005	2190		950	370		
	AW32D003	1940		700	270					AW65D005	2215		950	370		
	AW35D003	1950		700	270					AW65D006	2245		1270	460		
	AW40D004	1980		800	320					AW70D006	2270		1270	460		
	AW50D005	2070		950	370					AW55SR45 AW55SD45	2165		950	1600		
	AW55D005	2095		950	370					AW55SR54 AW55SD54	2125		800	1350		
	AW60D005	2120		950	370					AW65SR45 AW65SD45	2215		950	1600		
	AW65D005	2145		950	370					AW65SR55 AW65SD55	2215		950	1600		
	AW65D006	2175		1270	460					AW70SR46 AW70SD46	2271		1270	2250		
	AW45SR44 AW45SD44	2005		800	1250					AW70SR56 AW70SD56	2271		1270	2250		
16"(400)	AW45SR54 AW45SD54	2005		800	1250	902	440			AW75SR46 AW75SD46	2300		1270	2250		
	AW50SR44 AW50SD44	2030		800	1350					AW75SR56 AW75SD56	2300		1270	2250		
	AW50SR54 AW50SD54	2030		800	1350					AW80SR46 AW80SD46	2325		1270	2300		
	AW55SR45 AW55SD45	2095		950	1600					AW85SR56 AW85SD56	2355		1270	2300		
	AW55SR54 AW55SD54	2055		800	1350					AW45D004	2190		800	320		
	AW70SR45 AW70SD45	2170		950	1800					AW50D004	2215		800	320		
	AW70SR46 AW70SD46	2201		1270	2250					AW65D005	2330		950	370		
	AW70SR55 AW70SD55	2170		950	2250				20"（500）	AW65D006	2360		1270	460	1054	740
	AW70SR56 AW70SD56	2200		1270	2250					AW70D006	2385		1270	460		
	AW75SR46 AW75SD46	2230		1270	2250					AW65SR45 AW65SD45	2330		950	1600		

Table 2-5 Continued Overall Dimensions and Weight of Standard O-type Ball Valve PN63 with Pneumatic Actuator **mm**

Nominal Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
20"（500）	AW65SR55 AW65SD55	2330		950	1600	1054	740		24"（600）	AW65D006	2549		1270	460	1232		
	AW75SR56 AW75SD56	2415		1270	2250					AW70D006	2574		1270	460			
	AW80SR46 AW80SD46	2440		1270	2300					AW75D007	2634		1350	480			
	AW85SR56 AW85SD56	2470		1270	2300					AW80SR46 AW80SD46	2629		1270	2300			
										AW85SR56 AW85SD56	2659		1270	2300			

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

Table 2-6 Boundary Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN63 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2" (15)	AT52DR0+SD-1	400	149		180	Φ180	165	70		3/4" (20)	AT105DR0+SD-3	473	268		240	Φ280	**190**	70	
	AT52DD0+SD-1										AT105DD0+SD-3								
	AT63DR0+SD-1	410	168								AT105SR5+SD-3	473	268						
	AT63DD0+SD-1										AT105SD5+SD-3								
	AT75SR4+SD-1	421	184								AT125DR0+SD-3	495	301						
	AT75SD4+SD-1										AT125DD0+SD-3								
	AT75SR5+SD-1	421	184								AT125SR4+SD-3	495	301						
	AT75SD5+SD-1										AT125SD4+SD-3								
	AT83DR0+SD-2	450	204		210	Φ200					AT125SR5+SD-3	495	301						
	AT83DD0+SD-2										AT125SD5+SD-3								
	AT83SR5+SD-2	450	204								AT140SR4+SD-4	547	394		300	Φ320			
	AT83SD5+SD-2										AT140SD4+SD-4								
	AT83SR4+SD-2	450	204								AT140SR5+SD-4	547	394						
	AT83SD4+SD-2										AT140SD5+SD-4								
	AT92DR0+SD-2	460	262							1" (25)	AT63DR0+SD-1	410	168		180	Φ180	216	70	
	AT92DD0+SD-2										AT63DD0+SD-1								
	AT105DR0+SD-3	473	268		240	Φ280					AT75DR0+SD-1	420	184						
	AT105DD0+SD-3										AT75DD0+SD-1								
	AT105SR5+SD-3	473	268								AT83DR0+SD-2	450	204		210	Φ200			
	AT105SD5+SD-3										AT83DD0+SD-2								
	AT125SR5+SD-3	495	301								AT83SR4+SD-2	450	204						
	AT125SD5+SD-3										AT83SD4+SD-2								
	AT125DR0+SD-3	495	301								AT83SR5+SD-2	450	204						
	AT125DD0+SD-3										AT83SD5+SD-2								
	AT125SR4+SD-3	495	301								AT92SR4+SD-2	460	262						
	AT125SD4+SD-3										AT92SD4+SD-2								
	AT140SR4+SD-4	547	394		300	Φ320					AT92SR5+SD-2	460	262						
	AT140SD4+SD-4										AT92SD5+SD-2								
	AT140SR5+SD-4	547	394								AT92DR0+SD-2	460	262						
	AT140SD5+SD-4										AT92DD0+SD-2								
3/4" (20)	AT52DR0+SD-1	400	149		180	Φ180	190	70			AT105SR4+SD-3	473	268		240	Φ280			
	AT52DD0+SD-1										AT105SD4+SD-3								
	AT63DR0+S	41	16								AT105SR5+	47	26						

	D-1	0	8								SD-3	3	8					
	AT63DD0+SD-1										AT105SD5+SD-3							
	AT75DR0+SD-1	421	184								AT105DR0+SD-3	473	268					
	AT75DD0+SD-1										AT105DD0+SD-3							
	AT75SR4+SD-1	421	184								AT125DR0+SD-3	495	301					
	AT75SD4+SD-1										AT125DD0+SD-3							
	AT75SR5+SD-1	421	184								AT125SR4+SD-3	495	301					
	AT75SD5+SD-1										AT125SD4+SD-3							
	AT83SR4+SD-2	450	204								AT125SR5+SD-3	495	301					
	AT83SD4+SD-2										AT125SD5+SD-3							
	AT83DR0+SD-2	450	204								AT140SR4+SD-4	547	394					
	AT83DD0+SD-2										AT140SD4+SD-4				300	Φ320		
	AT83SR5+SD-2	450	204								AT140SR5+SD-4	547	394					
	AT83SD5+SD-2				210	Φ200					AT140SD5+SD-4							
	AT92SR4+SD-2	460	262								AT75DR0+SD-1	432	184		180	Φ180		
	AT92SD4+SD-2										AT75DD0+SD-1							
	AT92SR5+SD-2	460	262								AT83DR0+SD-2	461	204					
	AT92SD5+SD-2									1¼"（32）	AT83DD0+SD-2						229	87
	AT92DR0+SD-2	460	262								AT92DR0+SD-2	469	262		210	Φ200		
	AT92DD0+SD-2										AT92DD0+SD-2							
	AT105SR4+SD-3	473	268		240	Φ280					AT92SR4+SD-2	469	262					
	AT105SD4+SD-3										AT92SD4+SD-2							

Table 2-6 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN63 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1¼" (32)	AT92SR5+SD-2	469	262		210	Φ200	229	87		2" (50)	AT92DR0+SD-2	513	262		210	Φ200	292	106	
	AT92SD5+SD-2										AT92DD0+SD-2								
	AT105SR4+SD-3	484	268		240	Φ280					AT105DR0+SD-3	529	268		240	Φ280			
	AT105SD4+SD-3										AT105DD0+SD-3								
	AT105SR5+SD-3	484	268								AT125DR0+SD-3	551	301						
	AT105SD5+SD-3										AT125DD0+SD-3								
	AT105DR0+SD-3	484	268								AT125SR4+SD-3	551	301						
	AT105DD0+SD-3										AT125SD4+SD-3								
	AT125SR4+SD-3	506	301								AT125SR5+SD-3	551	301						
	AT125SD4+SD-3										AT125SD5+SD-3								
	AT125SR5+SD-3	506	301								AT140SR4+SD-4	603	394		300	Φ320			
	AT125SD5+SD-3										AT140SD4+SD-4								
	AT125DR0+SD-3	506	301								AT140SR5+SD-4	603	394						
	AT125DD0+SD-3										AT140SD5+SD-4								
	AT140SR4+SD-4	558	394		300	Φ320					AT140DR0+SD-4	603	394						
	AT140SD4+SD-4										AT140DD0+SD-4								
	AT140SR5+SD-4	558	394								AT160DR0+SD-4	628	458						
	AT140SD5+SD-4										AT160DD0+SD-4								
	AT160SR4+SD-4	583	458								AT160SR4+SD-4	628	458						
	AT160SD4+SD-4										AT160SD4+SD-4								
	AT160SR5+SD-4	583	458								AT160SR5+SD-4	628	458						
	AT160SD5+SD-4										AT160SD5+SD-4								
1½" (40)	AT83DR0+SD-2	497	204		210	Φ200	241	106		2½" (65)	AT190SR4+SD-5	691	528		330	Φ400	330	134	
	AT83DD0+SD-2										AT190SD4+SD-5								
	AT92DR0+SD-2	505	262								AT190SR5+SD-5	691	528						
	AT92DD0+SD-2										AT190SD5+SD-5								
	AT105DR0+SD-3	535	268		240	Φ280					AT105DR0+SD-3	558	285		240	Φ280			
	AT105DD0+SD-3										AT105DD0+SD-3								
	AT105SR4+SD-3	535	268								AT125DR0+SD-3	580	301						
	AT105SD4+SD-3										AT125DD0+SD-3								
	AT105SR5+SD-3	535	268								AT140DR0+SD-4	632	394		300	Φ320			
	AT105SD5+SD-3										AT140DD0+SD-4								
	AT125SR4+SD-3	543	301								AT140SR4+SD-4	632	394						
	AT125SD4+SD-3										AT140SD4+SD-4								
	AT125SR5+SD-3	543	301								AT140SR5+SD-4	632	394						
	AT125SD5+SD-3										AT140SD5+SD-4								
	AT125DR0+SD-3	543	301								AT160SR4+SD-4	657	458						
	AT125DD0+SD-3										AT160SD4+SD-4								
	AT140SR4+SD-4	595	394		300	Φ320					AT160SR5+SD-4	657	458						
	AT140SD4+SD-4										AT160SD5+SD-4								
	AT140SR5+SD-4	595	394								AT160DR0+SD-4	657	458						
	AT140SD5+SD-4										AT160DD0+SD-4								
	AT140DR0+SD-4	595	394								AT190DR0+SD-5	720	528		330	Φ400			
	AT140DD0+SD-4										AT190DD0+SD-5								
	AT160SR4+SD-4	610	458								AT190SR4+SD-5	720	528						
	AT160SD4+SD-4										AT190SD4+SD-5								
	AT160SR5+SD-4	610	458								AT190SR5+SD-5	720	528						
	AT160SD5+SD-4										AT190SD5+SD-5								
	AT190SR4+SD-5	673	528		330	Φ400					AT210SR4+SD-5	745	532						
	AT190SD4+SD-5										AT210SD4+SD-5								

Table 2-6 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN63 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
2½"（65）	AT210SR5+SD-5 AT210SD5+SD-5	745	532		330	Φ400	330	134			AT210SR4+SD-5 AT210SD4+SD-5	812	532		330	Φ400			
3"（80）	AT125DR0+SD-3 AT125DD0+SD-3	632	301		240	Φ280	356	144			AT210SR5+SD-5 AT210SD5+SD-5	812	532						
	AT140DR0+SD-4 AT140DD0+SD-4	684	394		300	Φ320					AT210DR0+SD-5 AT210DD0+SD-5	812	532						
	AT140SR4+SD-4 AT140SD4+SD-4	684	394							4"（100）	AT240SR4+SD-6 AT240SD4+SD-6	861	602		350	Φ500	406	181	
	AT140SR5+SD-4 AT140SD5+SD-4	684	394								AT240DR0+SD-6 AT240DD0+SD-6	861	602						
	AT160DR0+SD-4 AT160DD0+SD-4	709	458								AT240SR5+SD-6 AT240SD5+SD-6	861	602						
	AT160SR4+SD-4 AT160SD4+SD-4	709	458								AT270SR4+SD-7 AT270SD4+SD-7	900	722		365	Φ600			
	AT160SR5+SD-4 AT160SD5+SD-4	709	458								AT270SR5+SD-7 AT270SD5+SD-7	900	722						
	AT190SR4+SD-5 AT190SD4+SD-5	772	528		330	Φ400					AT300SR4+SD-7 AT300SD4+SD-7	920	758						
	AT190SR5+SD-5 AT190SD5+SD-5	772	528							5"（125）	AT160DR0+SD-4 AT160DD0+SD-4	810	458		300	Φ320	457	245	
	AT190DR0+SD-5 AT190DD0+SD-5	772	528								AT190DR0+SD-5 AT190DD0+SD-5	876	528		330	Φ400			
	AT210DR0+SD-5 AT210DD0+SD-5	797	532								AT210DR0+SD-5 AT210DD0+SD-5	901	532						
	AT210SR4+SD-5 AT210SD4+SD-5	797	532								AT210SR4+SD-5 AT210SD4+SD-5	901	532						
	AT210SR5+SD-5 AT210SD5+SD-5	797	532								AT210SR5+SD-5 AT210SD5+SD-5	901	532						
	AT240SR4+SD-6 AT240SD4+SD-6	846	602		350	Φ500					AT240SR4+SD-6 AT240SD4+SD-6	950	602		350	Φ500			
	AT240SR5+SD-6 AT240SD5+SD-6	846	602								AT240SR5+SD-6 AT240SD5+SD-6	950	602						
	AT270SR4+SD-7 AT270SD4+SD-7	885	722		365	Φ600					AT240DR0+SD-6 AT240DD0+SD-6	950	602						
4"（100）	AT140DR0+SD-4 AT140DD0+SD-4	699	394		300	Φ320	406	181			AT270DR0+SD-6 AT270DD0+SD-6	989	722		365	Φ600	495	254	
	AT160DR0+SD-4 AT160DD0+SD-4	724	458								AT270SR4+SD-7 AT270SD4+SD-7	989	722						
	AT160SR4+SD-4 AT160SD4+SD-4	724	458								AT270SR5+SD-7 AT270SD5+SD-7	989	722						
	AT160SR5+SD-4 AT160SD5+SD-4	724	458								AT300SR4+SD-7 AT300SD4+SD-7	1009	758						
	AT190DR0+SD-5 AT190DD0+SD-5	787	528		330	Φ400					AT300SR5+SD-7 AT300SD5+SD-7	1009	758						
	AT190SR4+SD-5 AT190SD4+SD-5	787	528							6"（150）	AT190DR0+SD-5 AT190DD0+SD-5	926	528		330	Φ400			
	AT190SR5+SD-5 AT190SD5+SD-5	787	528								AT210DR0+SD-5 AT210DD0+SD-5	951	532						

Table 2-6 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN63 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
6"（150）	AT240DR0+SD-6	1000	602		350	Φ500	495	254		8"（200）	AT300SR4+SD-7	1374	758		365	Φ600	597	305	
	AT240DD0+SD-6										AT300SD4+SD-7								
	AT240SR5+SD-6	1000	602								AT300SR5+SD-7	1374	758						
	AT240SD5+SD-6										AT300SD5+SD-7								
	AT270DR0+SD-6	1039	722							10"（250）	AT240DR0+SD-6	1363	602		350	Φ500	673	336	
	AT270DD0+SD-6										AT240DD0+SD-6								
	AT270SR4+SD-7	1039	722		365	Φ600					AT270DR0+SD-6	1402	722						
	AT270SD4+SD-7										AT270DD0+SD-6								
	AT270SR5+SD-7	1039	722								AT300DR0+SD-7	1422	758		365	Φ600			
	AT270SD5+SD-7										AT300DD0+SD-7								
	AT300SR4+SD-7	1059	758								AT350DR0+SD-8	1482	888		460	Φ800			
	AT300SD4+SD-7										AT350DD0+SD-8								
	AT300SR5+SD-7	1059	758							12"（300）	AT270DR0+SD-6	1457	722		350	Φ500	762	427	
	AT300SD5+SD-7										AT270DD0+SD-6								
	AT300DR0+SD-7	1059	758								AT300DR0+SD-7	1477	758		365	Φ600			
	AT300DD0+SD-7										AT300DD0+SD-7								
8"（200）	AT210DR0+SD-5	1266	532		330	Φ400	597	305			AT350DR0+SD-8	1567	888		460	Φ800			
	AT210DD0+SD-5										AT350DD0+SD-8								
	AT240DR0+SD-6	1315	602		350	Φ500				14"（350）	AT300DR0+SD-7	1656	758		365	Φ600	826	463	
	AT240DD0+SD-6										AT300DD0+SD-7								
	AT270DR0+SD-6	1354	722								AT350DR0+SD-8	1746	888		460	Φ800			
	AT270DD0+SD-6										AT350DD0+SD-8								
	AT300DR0+SD-7	1374	758		365	Φ600				16"（400）	AT350DR0+SD-8	2243	888				902	440	
	AT300DD0+SD-7										AT350DD0+SD-8								

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulation type

Table 2-7 Overall dimensions and weight of standard O-type ball valve PN100, 110/Class600 with pneumatic actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
	AT52DR0	290	149							AT105DR0	343	268					
	AT52DD0									AT105DD0							
	AT63DR0	300	168							AT105SR5	343	268					
	AT63DD0									AT105SD5							
	AT75SR4	311	184							AT125DR0	365	301					
	AT75SD4									AT125DD0							
	AT75SR5	311	184							AT125SR4	365	301					
	AT75SD5								3/4"(20)	AT125SD4					**190**	70	
	AT83DR0	320	204							AT125SR5	365	301					
	AT83DD0									AT125SD5							
	AT83SR5	320	204							AT140SR4	382	394					
	AT83SD5									AT140SD4							
	AT83SR4	320	204							AT140SR5	382	394					
	AT83SD4									AT140SD5							
1/2"(15)	AT92DR0	330	262			165	70			AT63DR0	300	168					
	AT92DD0									AT63DD0							
	AT105DR0	343	268							AT75DR0	310	184					
	AT105DD0									AT75DD0							
	AT105SR5	343	268							AT83DR0	320	204					
	AT105SD5									AT83DD0							
	AT125SR5	365	301							AT83SR4	320	204					
	AT125SD5									AT83SD4							
	AT125DR0	365	301						1"(25)	AT83SR5	320	204			216	70	
	AT125DD0									AT83SD5							
	AT125SR4	365	301							AT92SR4	330	262					
	AT125SD4									AT92SD4							
	AT140SR4	382	394							AT92SR5	330	262					
	AT140SD4									AT92SD5							
	AT140SR5	382	394							AT92DR0	330	262					
	AT140SD5									AT92DD0							
3/4"(20	AT52DR0	29	14			19	70			AT105SR4	34	26					

)	AT52DD0	0	9			0				AT105SD4	3	8					
	AT63DR0	300	168							AT105SR5	343	268					
	AT63DD0									AT105SD5							
	AT75DR0	311	184							AT105DR0	343	268					
	AT75DD0									AT105DD0							
	AT75SR4	311	184							AT125DR0	365	301					
	AT75SD4									AT125DD0							
	AT75SR5	311	184							AT125SR4	365	301					
	AT75SD5									AT125SD4							
	AT83SR4	320	204							AT125SR5	365	301					
	AT83SD4									AT125SD5							
	AT83DR0	320	204							AT140SR4	382	394					
	AT83DD0									AT140SD4							
	AT83SR5	320	204							AT140SR5	382	394					
	AT83SD5									AT140SD5							
	AT92SR4	330	262						1¼"(32)	AT75DR0	322	184			229	87	
	AT92SD4									AT75DD0							
	AT92SR5	330	262							AT83DR0	331	204					
	AT92SD5									AT83DD0							
	AT92DR0	330	262							AT92DR0	339	262					
	AT92DD0									AT92DD0							
	AT105SR4	343	268							AT92SR4	339	262					
	AT105SD4									AT92SD4							

Table 2-7 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1¼"(32)	AT92SR5	339	262			229	87		2"(50)	AT92DR0	383	262			292	106	
	AT92SD5									AT92DD0							
	AT105SR4	354	268							AT105DR0	399	268					
	AT105SD4									AT105DD0							
	AT105SR5	354	268							AT125DR0	421	301					
	AT105SD5									AT125DD0							
	AT105DR0	354	268							AT125SR4	421	301					
	AT105DD0									AT125SD4							
	AT125SR4	376	301							AT125SR5	421	301					
	AT125SD4									AT125SD5							
	AT125SR5	376	301							AT140SR4	438	394					
	AT125SD5									AT140SD4							
	AT125DR0	376	301							AT140SR5	438	394					
	AT125DD0									AT140SD5							

	AT140SR4	393	394							AT140DR0	438	394					
	AT140SD4									AT140DD0							
	AT140SR5	393	394							AT160DR0	463	458					
	AT140SD5									AT160DD0							
	AT160SR4	418	458							AT160SR4	463	458					
	AT160SD4									AT160SD4							
	AT160SR5	418	458							AT160SR5	463	458					
	AT160SD5									AT160SD5							
	AT83DR0	367	204							AT190SR4	506	528					
	AT83DD0									AT190SD4							
	AT92DR0	375	262							AT190SR5	506	528					
	AT92DD0									AT190SD5							
	AT105DR0	405	268							AT105DR0	428	285					
	AT105DD0									AT105DD0							
	AT105SR4	405	268							AT125DR0	450	301					
	AT105SD4									AT125DD0							
	AT105SR5	405	268							AT140DR0	467	394					
	AT105SD5									AT140DD0							
	AT125SR4	413	301							AT140SR4	467	394					
	AT125SD4									AT140SD4							
	AT125SR5	413	301							AT140SR5	467	394					
1½"(40)	AT125SD5					241	106			AT140SD5							
	AT125DR0	413	301							AT160SR4	492	458					
	AT125DD0									AT160SD4					330	134	
	AT140SR4	430	394							AT160SR5	492	458					
	AT140SD4									AT160SD5							
	AT140SR5	430	394							AT160DR0	492	458					
	AT140SD5									AT160DD0							
	AT140DR0	430	394							AT190DR0	535	528					
	AT140DD0									AT190DD0							
	AT160SR4	445	458							AT190SR4	535	528					
	AT160SD4									AT190SD4							
	AT160SR5	445	458							AT190SR5	535	528					
	AT160SD5									AT190SD5							
	AT190SR4	488	528							AT210SR4	560	532					
	AT190SD4									AT210SD4							

Table 2-7 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
2½"(65)	AT210SR5	560	532			330	134		4"(100)	AT210SR4	627	532			432	181	
	AT210SD5									AT210SD4							
3"(80)	AT125DR0	502	301			356	144			AT210SR5	627	532					
	AT125DD0									AT210SD5							
	AT140DR0	519	394							AT210DR0	627	532					
	AT140DD0									AT210DD0							
	AT140SR4	51	39							AT240SR4	66	60					

	AT140SD4	9	4							AT240SD4	1	2					
	AT140SR5 AT140SD5	519	394							AT240DR0 AT240DD0	661	602					
	AT160DR0 AT160DD0	544	458							AT240SR5 AT240SD5	661	602					
	AT160SR4 AT160SD4	544	458							AT270SR4 AT270SD4	700	722					
	AT160SR5 AT160SD5	544	458							AT270SR5 AT270SD5	700	722					
	AT190SR4 AT190SD4	587	528							AT300SR4 AT300SD4	720	758					
	AT190SR5 AT190SD5	587	528							AT160DR0 AT160DD0	645	458					
	AT190DR0 AT190DD0	587	528							AT190DR0 AT190DD0	691	528					
	AT210DR0 AT210DD0	612	532							AT210DR0 AT210DD0	716	532					
	AT210SR4 AT210SD4	612	532							AT210SR4 AT210SD4	716	532					
	AT210SR5 AT210SD5	612	532							AT210SR5 AT210SD5	716	532					
	AT240SR4 AT240SD4	646	602						5"(125)	AT240SR4 AT240SD4	750	602			508	245	
	AT240SR5 AT240SD5	646	602							AT240SR5 AT240SD5	750	602					
	AT270SR4 AT270SD4	685	722							AT240DR0 AT240DD0	750	602					
4"(100)	AT140DR0 AT140DD0	534	394			432	181			AT270SR4 AT270SD4	789	722					
	AT160DR0 AT160DD0	559	458							AT270SR5 AT270SD5	789	722					
	AT160SR4 AT160SD4	559	458							AT270DR0 AT270DD0	789	722					
	AT160SR5	55	45							AT300SR4	80	75					

	AT160SD5	9	8							AT300SD4	9	8					
	AT190DR0	602	528							AT300SR5	809	758					
	AT190DD0									AT300SD5							
	AT190SR4	602	528							AT190DR0	741	528					
	AT190SD4									AT190DD0							
	AT190SR5	602	528						6"(150)	AT210DR0	766	532				254	
	AT190SD5									AT210DD0							

Table 2-7 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight (kg)
6"(150)	AT240DR0	800	602			559	254		8"(200)	AW30D003	1146		700	270	660	305	
	AT240DD0																
	AT240SR5	800	602							AW35D003	1171		700	270			
	AT240SD5																
	AT270SR4	839	722							AW27SR52	1121		650	950			
	AT270SD4									AW27SD52							
	AT270SR5	839	722							AW30SR42	1121		650	1050			
	AT270SD5									AW30SD42							
	AT270DR0	839	722							AW30SR52	1121		650	1050			
	AT270DD0									AW30SD52							
	AT300SR4	859	758							AW32SR42	1146		650	1050			
	AT300SD4									AW32SD42							
	AT300SR5	859	758							AW32SR43	1161		700	1160			
	AT300SD5									AW32SD43							
	AT300DR0	859	758							AW32SR52	1146		650	1050			
	AT300DD0									AW32SD52							
	AW22D002	759		650	250					AW35SR53	1171		700	1160			
										AW35SD53							
	AW24D002	776		650	250					AW40SR43	1196		700	1160			
										AW40SD43							
	AW30SR42	806		650	1050					AW45SR44	1226		800	1250			
	AW30SD42									AW45SD44							
	AW30SR52	806		650	1050					AW45SR53	1221		700	1250			
	AW30SD52									AW45SD53							
	AW32SR42	831		650	1050				10"(250)	AT240DR0	1163	602			787	336	
	AW32SD42									AT240DD0							
	AW32SR43	846		700	1160					AT270DR0	1202	722					
	AW32SD43									AT270DD0							
	AW32SR52	831		650	1050					AT300DR0	1222	758					
	AW32SD52									AT300DD0							
	AW40SR43	881		700	1160					AT350DR0	1282	888					
	AW40SD43									AT350DD0							
8"(200)	AT210DR0	1081	532			660	305			AW22D002	1122		650	250			
	AT210DD0																
	AT240DR0	1115	602							AW24D002	1139		650	250			
	AT240DD0																
	AT270DR0	1154	722							AW27D002	1169		650	250			
	AT270DD0																
	AT300DR0	1174	758							AW27D003	1184		700	270			
	AT300DD0																
	AT300SR4	1174	758							AW30D003	1194		700	270			
	AT300SD4																
	AT300SR5	1174	758							AW35D003	1219		700	270			
	AT300SD5																
	AW22D001	1064		520	200					AW40D004	1249		800	320			
	AW22D002	1074		650	250					AW30SR52	1169		650	1050			
										AW30SD52							
	AW24D002	1091		650	250					AW32SR42	1194		650	1050			
										AW32SD42							
	AW27D003	1121		650	250					AW32SR43	1209		700	1160			
										AW32SD43							

Table 2-7 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 with Pneumatic Actuator **mm**

Nominal Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
10"(250)	AW32SR53	1209		700	1160	787	336		12"(300)	AW55SR55	1419		950	1600	838	427	
	AW32SD53									AW55SD55							
	AW45SR44	1274		800	1250					AW60SR45	1444		950	1600			
	AW45SD44									AW60SD45							
	AW45SR53	1269		700	1250					AW60SR55	1444		950	1600			
	AW45SD53									AW60SD55							
	AW45SR54	1274		800	1250					AW65SR45	1469		950	1600			
	AW45SD54									AW65SD45							
	AW50SR44	1299		800	1350					AW70SR45	1494		950	1800			
	AW50SD44									AW70SD45							
	AW55SR44	1324		800	1350					AW70SR55	1494		950	2250			
	AW55SD44									AW70SD55							
	AW55SR55	1364		950	1600				14"(350)	AT300DR0	1456	758			889	463	
	AW55SD55									AT300DD0							
12"(300)	AT270DR0	1257	722			838	427			AT350DR0	1516	888					
	AT270DD0									AT350DD0							
	AT300DR0	1277	758							AW27D003	1418		700	270			
	AT300DD0																
	AT350DR0	1337	888							AW32D003	1443		700	270			
	AT350DD0																
	AW24D002	1194		650	250					AW35D003	1453		700	270			
	AW27D002	1224		650	250					AW45D004	1508		800	320			
	AW27D003	1239		700	270					AW50D005	1573		950	370			
	AW32D003	1264		700	270					AW55D005	1598		950	370			
	AW40D004	1304		800	320					AW60D005	1623		950	370			
	AW45D004	1329		800	320					AW40SR43	1478		700	1160			
										AW40SD43							
	AW50D005	1394		950	370					AW40SR53	1478		700	1160			
										AW40SD53							
	AW32SR43	1264		700	1160					AW45SR44	1508		800	1250			
	AW32SD43									AW45SD44							
	AW32SR53	1264		700	1160					AW45SR53	1503		700	1250			
	AW32SD53									AW45SD53							
	AW35SR53	1274		700	1160					AW45SR54	1508		800	1250			
	AW35SD53									AW45SD54							
	AW40SR43	1299		700	1160					AW50SR44	1533		800	1350			
	AW40SD43									AW50SD44							
	AW40SR53	1299		700	1160					AW60SR55	1623		950	1600			
	AW40SD53									AW60SD55							
	AW45SR44	1329		800	1250					AW65SR45	1648		950	1600			
	AW45SD44									AW65SD45							
	AW55SR44	1379		800	1350					AW70SR45	1673		950	1800			
	AW55SD44									AW70SD45							

Table 2-7 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 with Pneumatic Actuator mm

Nominal Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
14"(350)	AW70SR46	1704		1270	2250	889	463		16"(400)	AW75SR56	2230		1270	2250	991	440	
	AW70SD46									AW75SD56							
	AW70SR55	1673		950	2250				18"（450）	AW40D004	2050		800	320	1092	640	
	AW70SD55																
	AW70SR56	1703		1270	2250					AW45D004	2075		800	320			
	AW70SD56																
	AW75SR46	1733		1270	2250					AW50D004	2100		800	320			
	AW75SD46																
16"(400)	AT350DR0	2013	888			991	440			AW60D005	2190		950	370			
	AT350DD0																
	AW32D003	1940		700	270					AW65D005	2215		950	370			
	AW35D003	1950		700	270					AW65D006	2245		1270	460			
	AW40D004	1980		800	320					AW70D006	2270		1270	460			
	AW50D005	2070		950	370					AW55SR45	2165		950	1600			
										AW55SD45							
	AW55D005	2095		950	370					AW55SR54	2125		800	1350			
										AW55SD54							
	AW60D005	2120		950	370					AW65SR45	2215		950	1600			
										AW65SD45							
	AW65D005	2145		950	370					AW65SR55	2215		950	1600			
										AW65SD55							
	AW65D006	2175		1270	460					AW70SR46	2271		1270	2250			
										AW70SD46							
	AW45SR44	2005		800	1250	991	440			AW70SR56	2271		1270	2250			
	AW45SD44									AW70SD56							
	AW45SR54	2005		800	1250					AW75SR46	2300		1270	2250			
	AW45SD54									AW75SD46							
	AW50SR44	2030		800	1350					AW75SR56	2300		1270	2250			
	AW50SD44									AW75SD56							
	AW50SR54	2030		800	1350					AW80SR46	2325		1270	2300			
	AW50SD54									AW80SD46							
	AW55SR45	2095		950	1600					AW85SR56	2355		1270	2300			
	AW55SD45									AW85SD56							
	AW55SR54	2055		800	1350				20"（500）	AW45D004	2190		800	320	1194	740	
	AW55SD54																
	AW70SR45	2170		950	1800					AW50D004	2215		800	320			
	AW70SD45																
	AW70SR46	2201		1270	2250					AW65D005	2330		950	370			
	AW70SD46																
	AW70SR55	2170		950	2250					AW65D006	2360		1270	460			
	AW70SD55																
	AW70SR56	2200		1270	2250					AW70D006	2385		1270	460			
	AW70SD56																
	AW75SR46	2230		1270	2250					AW65SR45	2330		950	1600			
	AW75SD46									AW65SD45							

Table 2-7 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 with Pneumatic Actuator mm

ZJHR-1 O-type cut-off ball valve

Nominal Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
20"（500）	AW65SR55	2330		950	1600	1194	740		24"（600）	AW65D006	2549		1270	460	1397		
	AW65SD55																
	AW75SR56	2415		1270	2250					AW70D006	2574		1270	460			
	AW75SD56																
	AW80SR46	2440		1270	2300					AW75D007	2634		1350	480			
	AW80SD46																
	AW85SR56	2470		1270	2300					AW80SR46	2629		1270	2300			
	AW85SD56									AW80SD46							
										AW85SR56	2659		1270	2300			
										AW85SD56							

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulation type

Table 2-8 Standard O-type ball valve (with handwheel) PN100, 110/Class600 with pneumatic actuator Overall dimension and weight mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"（15）	AT52DR0+SD-1	400	149		180	Φ180	165	70		3/4"（20）	AT105DR0+SD-3	473	268		240	Φ280	190	70	
	AT52DD0+SD-1										AT105DD0+SD-3								
	AT63DR0+SD-1	410	168								AT105SR5+SD-3	473	268						
	AT63DD0+SD-1										AT105SD5+SD-3								
	AT75SR4+SD-1	421	184								AT125DR0+SD-3	495	301						
	AT75SD4+SD-1										AT125DD0+SD-3								
	AT75SR5+SD-1	421	184								AT125SR4+SD-3	495	301						
	AT75SD5+SD-1										AT125SD4+SD-3								
	AT83DR0+SD-2	450	204		210	Φ200					AT125SR5+SD-3	495	301						
	AT83DD0+SD-2										AT125SD5+SD-3								
	AT83SR5+SD-2	450	204								AT140SR4+SD-4	547	394		300	Φ320			
	AT83SD5+SD-2										AT140SD4+SD-4								
	AT83SR4+SD-2	450	204								AT140SR5+SD-4	547	394						
	AT83SD4+SD-2										AT140SD5+SD-4								
	AT92DR0+SD-2	460	262							1"（25）	AT63DR0+SD-1	410	168		180	Φ180	216	70	
	AT92DD0+SD-2										AT63DD0+SD-1								
	AT105DR0+SD-3	473	268		240	Φ280					AT75DR0+SD-1	420	184						
	AT105DD0+SD-3										AT75DD0+SD-1								
	AT105SR5+SD-3	473	268								AT83DR0+SD-2	450	204		210	Φ200			
	AT105SD5+SD-3										AT83DD0+SD-2								
	AT125SR5+SD-3	495	301								AT83SR4+SD-2	450	204						
	AT125SD5+SD-3										AT83SD4+SD-2								
	AT125DR0+SD-3	495	301								AT83SR5+SD-2	450	204						
	AT125DD0+SD-3										AT83SD5+SD-2								
	AT125SR4+SD-3	495	301								AT92SR4+SD-2	460	262						
	AT125SD4+SD-3										AT92SD4+SD-2								
	AT140SR4+SD-4	547	394		300	Φ320					AT92SR5+SD-2	460	262						
	AT140SD4+SD-4										AT92SD5+SD-2								
	AT140SR5+SD-4	547	394								AT92DR0+SD-2	460	262						
	AT140SD5+SD-4										AT92DD0+SD-2								
3/4"（20）	AT52DR0+SD-1	400	149		180	Φ180	190	70			AT105SR4+SD-3	473	268		240	Φ280			
	AT52DD0+SD-1										AT105SD4+SD-3								
	AT63DR0+SD-1	410	168								AT105SR5+SD-3	473	268						
	AT63DD0+SD-1										AT105SD5+SD-3								
	AT75DR0+SD-1	421	184								AT105DR0+SD-3	473	268						
	AT75DD0+SD-1										AT105DD0+SD-3								
	AT75SR4+SD-1	421	184								AT125DR0+SD-3	495	301						
	AT75SD4+SD-1										AT125DD0+SD-3								
	AT75SR5+SD-1	421	184								AT125SR4+SD-3	495	301						
	AT75SD5+SD-1										AT125SD4+SD-3								
	AT83SR4+SD-2	450	204		210	Φ200		70			AT125SR5+SD-3	495	301						
	AT83SD4+SD-2										AT125SD5+SD-3								
	AT83DR0+SD-2	450	204								AT140SR4+SD-4	547	394		300	Φ320			
	AT83DD0+SD-2										AT140SD4+SD-4								
	AT83SR5+SD-2	450	204								AT140SR5+SD-4	547	394						
	AT83SD5+SD-2										AT140SD5+SD-4								
	AT92SR4+SD-2	460	262							1¼"（32）	AT75DR0+SD-1	432	184		180	Φ180	229	87	
	AT92SD4+SD-2										AT75DD0+SD-1								
	AT92SR5+SD-2	460	262								AT83DR0+SD-2	461	204		210	Φ200			
	AT92SD5+SD-2										AT83DD0+SD-2								
	AT92DR0+SD-2	460	262								AT92DR0+SD-2	469	262						
	AT92DD0+SD-2										AT92DD0+SD-2								
	AT105SR4+SD-3	473	268		240	Φ280					AT92SR4+SD-2	469	262						
	AT105SD4+SD-3										AT92SD4+SD-2								

Table 2-8 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1¼" (32)	AT92SR5+SD-2	469	262		210	Φ200	229	87		2" (50)	AT92DR0+SD-2	513	262		210	Φ200	292	106	
	AT92SD5+SD-2										AT92DD0+SD-2								
	AT105SR4+SD-3	484	268		240	Φ280					AT105DR0+SD-3	529	268		240	Φ280			
	AT105SD4+SD-3										AT105DD0+SD-3								
	AT105SR5+SD-3	484	268								AT125DR0+SD-3	551	301						
	AT105SD5+SD-3										AT125DD0+SD-3								
	AT105DR0+SD-3	484	268								AT125SR4+SD-3	551	301						
	AT105DD0+SD-3										AT125SD4+SD-3								
	AT125SR4+SD-3	506	301								AT125SR5+SD-3	551	301						
	AT125SD4+SD-3										AT125SD5+SD-3								
	AT125SR5+SD-3	506	301								AT140SR4+SD-4	603	394		300	Φ320			
	AT125SD5+SD-3										AT140SD4+SD-4								
	AT125DR0+SD-3	506	301								AT140SR5+SD-4	603	394						
	AT125DD0+SD-3										AT140SD5+SD-4								
	AT140SR4+SD-4	558	394		300	Φ320					AT140DR0+SD-4	603	394						
	AT140SD4+SD-4										AT140DD0+SD-4								
	AT140SR5+SD-4	558	394								AT160DR0+SD-4	628	458						
	AT140SD5+SD-4										AT160DD0+SD-4								
	AT160SR4+SD-4	583	458								AT160SR4+SD-4	628	458						
	AT160SD4+SD-4										AT160SD4+SD-4								
	AT160SR5+SD-4	583	458								AT160SR5+SD-4	628	458						
	AT160SD5+SD-4										AT160SD5+SD-4								
1½" (40)	AT83DR0+SD-2	497	204		210	Φ200	241	106		2½" (65)	AT190SR4+SD-5	691	528		330	Φ400	330	134	
	AT83DD0+SD-2										AT190SD4+SD-5								
	AT92DR0+SD-2	505	262								AT190SR5+SD-5	691	528						
	AT92DD0+SD-2										AT190SD5+SD-5								
	AT105DR0+SD-3	535	268		240	Φ280					AT105DR0+SD-3	558	285		240	Φ280			
	AT105DD0+SD-3										AT105DD0+SD-3								
	AT105SR4+SD-3	535	268								AT125DR0+SD-3	580	301						
	AT105SD4+SD-3										AT125DD0+SD-3								
	AT105SR5+SD-3	535	268								AT140DR0+SD-4	632	394		300	Φ320			
	AT105SD5+SD-3										AT140DD0+SD-4								
	AT125SR4+SD-3	543	301								AT140SR4+SD-4	632	394						
	AT125SD4+SD-3										AT140SD4+SD-4								
	AT125SR5+SD-3	543	301								AT140SR5+SD-4	632	394						
	AT125SD5+SD-3										AT140SD5+SD-4								
	AT125DR0+SD-3	543	301								AT160SR4+SD-4	657	458						
	AT125DD0+SD-3										AT160SD4+SD-4								
	AT140SR4+SD-4	595	394		300	Φ320					AT160SR5+SD-4	657	458						
	AT140SD4+SD-4										AT160SD5+SD-4								
	AT140SR5+SD-4	595	394								AT160DR0+SD-4	657	458						
	AT140SD5+SD-4										AT160DD0+SD-4								
	AT140DR0+SD-4	595	394								AT190DR0+SD-5	720	528		330	Φ400			
	AT140DD0+SD-4										AT190DD0+SD-5								
	AT160SR4+SD-4	610	458								AT190SR4+SD-5	720	528						
	AT160SD4+SD-4										AT190SD4+SD-5								
	AT160SR5+SD-4	610	458								AT190SR5+SD-5	720	528						
	AT160SD5+SD-4										AT190SD5+SD-5								
	AT190SR4+SD-5	673	528		330	Φ400					AT210SR4+SD-5	745	532						
	AT190SD4+SD-5										AT210SD4+SD-5								

Table 2-8 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
2½"（65）	AT210SR5+SD-5	745	532		330	Φ400	330	134		4"（100）	AT210SR4+SD-5	812	532		330	Φ400	432	181	
	AT210SD5+SD-5										AT210SD4+SD-5								
3"（80）	AT125DR0+SD-3	632	301		240	Φ280	356	144			AT210SR5+SD-5	812	532						
	AT125DD0+SD-3										AT210SD5+SD-5								
	AT140DR0+SD-4	684	394		300	Φ320					AT210DR0+SD-5	812	532						
	AT140DD0+SD-4										AT210DD0+SD-5								
	AT140SR4+SD-4	684	394								AT240SR4+SD-6	861	602		350	Φ500			
	AT140SD4+SD-4										AT240SD4+SD-6								
	AT140SR5+SD-4	684	394								AT240DR0+SD-6	861	602						
	AT140SD5+SD-4										AT240DD0+SD-6								
	AT160DR0+SD-4	709	458								AT240SR5+SD-6	861	602						
	AT160DD0+SD-4										AT240SD5+SD-6								
	AT160SR4+SD-4	709	458								AT270SR4+SD-7	900	722		365	Φ600			
	AT160SD4+SD-4										AT270SD4+SD-7								
	AT160SR5+SD-4	709	458								AT270SR5+SD-7	900	722						
	AT160SD5+SD-4										AT270SD5+SD-7								
	AT190SR4+SD-5	772	528		330	Φ400					AT300SR4+SD-7	920	758						
	AT190SD4+SD-5										AT300SD4+SD-7								
	AT190SR5+SD-5	772	528							5"（125）	AT160DR0+SD-4	810	458		300	Φ320	508	245	
	AT190SD5+SD-5										AT160DD0+SD-4								
	AT190DR0+SD-5	772	528								AT190DR0+SD-5	876	528		330	Φ400			
	AT190DD0+SD-5										AT190DD0+SD-5								
	AT210DR0+SD-5	797	532								AT210DR0+SD-5	901	532						
	AT210DD0+SD-5										AT210DD0+SD-5								
	AT210SR4+SD-5	797	532								AT210SR4+SD-5	901	532						
	AT210SD4+SD-5										AT210SD4+SD-5								
	AT210SR5+SD-5	797	532								AT210SR5+SD-5	901	532						
	AT210SD5+SD-5										AT210SD5+SD-5								
	AT240SR4+SD-6	846	602		350	Φ500					AT240SR4+SD-6	950	602		350	Φ500			
	AT240SD4+SD-6										AT240SD4+SD-6								
	AT240SR5+SD-6	846	602								AT240SR5+SD-6	950	602						
	AT240SD5+SD-6										AT240SD5+SD-6								
	AT270SR4+SD-7	885	722		365	Φ600					AT240DR0+SD-6	950	602						
	AT270SD4+SD-7										AT240DD0+SD-6								
4"（100）	AT140DR0+SD-4	699	394		300	Φ320	432	181			AT270DR0+SD-6	989	722		365	Φ600			
	AT140DD0+SD-4										AT270DD0+SD-6								
	AT160DR0+SD-4	724	458								AT270SR4+SD-7	989	722						
	AT160DD0+SD-4										AT270SD4+SD-7								
	AT160SR4+SD-4	724	458								AT270SR5+SD-7	989	722						
	AT160SD4+SD-4										AT270SD5+SD-7								
	AT160SR5+SD-4	724	458								AT300SR4+SD-7	1009	758						
	AT160SD5+SD-4										AT300SD4+SD-7								
	AT190DR0+SD-5	787	528		330	Φ400					AT300SR5+SD-7	1009	758						
	AT190DD0+SD-5										AT300SD5+SD-7								
	AT190SR4+SD-5	787	528							6"（150）	AT190DR0+SD-5	926	528		330	Φ400	559	254	
	AT190SD4+SD-5										AT190DD0+SD-5								
	AT190SR5+SD-5	787	528								AT210DR0+SD-5	951	532						
	AT190SD5+SD-5										AT210DD0+SD-5								

Table 2-8 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (with Handwheel) PN100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight Kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
6"（150）	AT240DR0+SD-6	1000	602		350	Φ500	559	254		8"（200）	AT300SR4+SD-7	1374	758		365	Φ600	660	305	
	AT240DD0+SD-6										AT300SD4+SD-7								
	AT240SR5+SD-6	1000	602								AT300SR5+SD-7	1374	758						
	AT240SD5+SD-6										AT300SD5+SD-7								
	AT270DR0+SD-6	1039	722							10"（250）	AT240DR0+SD-6	1363	602		350	Φ500	787	336	
	AT270DD0+SD-6										AT240DD0+SD-6								
	AT270SR4+SD-7	1039	722		365	Φ600					AT270DR0+SD-6	1402	722						
	AT270SD4+SD-7										AT270DD0+SD-6								
	AT270SR5+SD-7	1039	722								AT300DR0+SD-7	1422	758		365	Φ600			
	AT270SD5+SD-7										AT300DD0+SD-7								
	AT300SR4+SD-7	1059	758								AT350DR0+SD-8	1512	888		460	Φ800			
	AT300SD4+SD-7										AT350DD0+SD-8								
	AT300SR5+SD-7	1059	758							12"（300）	AT270DR0+SD-6	1457	722		350	Φ500	838	427	
	AT300SD5+SD-7										AT270DD0+SD-6								
	AT300DR0+SD-7	1059	758								AT300DR0+SD-7	1477	758		365	Φ600			
	AT300DD0+SD-7										AT300DD0+SD-7								
8"（200）	AT210DR0+SD-5	1266	532		330	Φ400	660	305			AT350DR0+SD-8	1567	888		460	Φ800			
	AT210DD0+SD-5										AT350DD0+SD-8								
	AT240DR0+SD-6	1315	602		350	Φ500				14"	AT300DR0+SD-7	1656	758		365	Φ600	889	463	
	AT240DD0+SD-6									-350	AT300DD0+SD-7								
	AT270DR0+SD-6	1354	722								AT350DR0+SD-8	1746	888		460	Φ800			
	AT270DD0+SD-6										AT350DD0+SD-8								
	AT300DR0+SD-7	1374	758		365	Φ600				16"	AT350DR0+SD-8	2243	888				991	440	
	AT300DD0+SD-7									-400	AT350DD0+SD-8								

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulation type

Table 2-9 Standard O-type ball valve (forged sections) PN150, 160/Class900 with pneumatic actuator Overall dimension and weight mm

Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg	Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2"(15)	AT105DR0	375	285			254	84		2"(50)	AT140DR0	479	394			368	106	
	AT105DD0									AT140DD0							
	AT125DR0	397	350							AT160DR0	504	458					
	AT125DD0									AT160DD0							
	AT125SR5	397	350							AT190SR5	547	528					
	AT125SD5									AT190SD5							
	AT140SR5	417	394							AT210SR5	572	532					
	AT140SD5									AT210SD5							
	AT160SR5	439	458						2½"(65)	AT160DR0	598	458			419	130	
	AT160SD5									AT160DD0							
3/4"(20)	AT105DR0	375	285			254	84			AT190DR0	641	528					
	AT105DD0									AT190DD0							
	AT125DR0	397	350							AT210SR5	666	532					
	AT125DD0									AT210SD5							
	AT125SR5	397	350							AT240SR5	700	602					
	AT125SD5									AT240SD5							
	AT140SR5	417	394						3"(80)	AT190DR0	795	528			381	148	
	AT140SD5									AT190DD0							
	AT160SR5	439	458							AT210DR0	820	532					
	AT160SD5									AT210DD0							
1"(25)	AT105DR0	375	285			254	84			AT240SR5	854	602					
	AT105DD0									AT240SD5							
	AT125DR0	397	350							AT240DR0	854	602					
	AT125DD0									AT240DD0							
	AT125SR5	397	350							AT270SR5	893	722					
	AT125SD5									AT270SD5							
	AT140SR5	417	394							AT300SR5	913	758					
	AT140SD5									AT300SD5							
	AT160SR5	439	458						4"(100)	AT210DR0	912	532			457	170	
	AT160SD5									AT210DD0							
1¼"(32)	AT125DR0	410	301			279	91			AT240DR0	946	602					
	AT125DD0									AT240DD0							
	AT140DR0	427	394							AT270DR0	985	722					
	AT140DD0									AT270DD0							
	AT140SR5	427	394							AT270SR5	985	722					
	AT140SD5									AT270SD5							
	AT160SR5	452	458							AT300SR5	1005	758					
	AT160SD5									AT300SD5							
	AT190SR5	495	528							AW30SR52	952		650	1050			
	AT190SD5									AW30SR52							
1½"(40)	AT140DR0	434	394			305	94			AW32SR42	977		650	1050			
	AT140DD0									AW32SD42							
	AT160DR0	459	458						5"(125)	AT240DR0	1038	602			559	177.5	
	AT160DD0									AT240DD0							
	AT160SR5	459	458							AT270DR0	1077	722					
	AT160SD5									AT270DD0							
	AT190SR5	502	528							AT300DR0	1097	758					
	AT190SD5									AT300DD0							
	AT190SR5	502	528							AW30SR52	1044		650	1050			
	AT190SD5									AW30SD52							
	AT210SR5	527	532							AW32SR42	1069		650	1050			
	AT210SD5									AW32SD42							

Table 2-9 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (Forged Section) PN150, 160/Class900 with Pneumatic Actuator mm

Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg	Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
5"(125)	AW35SR53	1094		700	1160	559	177.5		8"(200)	AW45SR53	1341		700	1250	737	247	
	AW35SD53									AW45SD53							
	AW40SR43	1119		700	1160					AW50SR54	1371		800	1350			
	AW40SD43									AW50SD54							
6"(150)	AT270DR0	1093	722			610	196.5			AW55SR44	1396		800	1350			
	AT270DD0									AW55SD44							
	AT300DR0	1113	758						10"(250)	AW40D004	1302		800	320	838	281	
	AT300DD0																
	AW30D003	1085		700	270					AW55D005	1417		950	370			
	AW35D003	1110		700	270					AW55SR44	1377		800	1350			
										AW55SD44							
	AW35SR53	1110		700	1160					AW70SR45	1492		950	1800			
	AW35SD53									AW70SD45							
	AW40SR43	1135		700	1160					AW50D005	1392		950	370			
	AW40SD43																
	AW45SR44	1165		800	1250					AW50SR54	1352		800	1350			
	AW45SD44									AW50SD54							
	AW45SR53	1160		700	1250					AW65SR55	1467		950	1600			
	AW45SD53									AW65SD55							
8"(200)	AW35D003	1291		700	270	737	247		12"(300)	AW50D005	1538		950	370	965	319	
	AW35D004	1296		800	320					AW55D005	1563		950	370			
	AW40D004	1321		800	320					AW65SR55	1613		950	1600			
										AW65SD55							
	AW45SR44	1346		800	1250					AW70SR45	1638		950	1800			
	AW45SD44									AW70SD45							

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

3. The structure length A in the table is for RF flange connection.

Table 2-10 Boundary Dimensions and Weight of Standard O-type Ball Valve (Forged) PN150, 160/Class900 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"（15）	AT105DR0+SD-3	505	285		240	Φ280	254	84		2"(50)	AT140DR0+SD-4	644	394		300	Φ320	368	106	
	AT105DD0+SD-3										AT140DD0+SD-4								
	AT125DR0+SD-3	527	350								AT160DR0+SD-4	669	458						
	AT125DD0+SD-3										AT160DD0+SD-4								
	AT125SR5+SD-3	527	350								AT190SR5+SD-5	732	528		330	Φ400			
	AT125SD5+SD-3										AT190SD5+SD-5								
	AT140SR5+SD-4	582	394		300	Φ320					AT210SR5+SD-5	757	532						
	AT140SD5+SD-4										AT210SD5+SD-5								
	AT160SR5+SD-4	604	458							2½"（65）	AT160DR0+SD-4	763	458		300	Φ320	419	130	
	AT160SD5+SD-4										AT160DD0+SD-4								
3/4"（20）	AT105DR0+SD-3	505	285		240	Φ280	254	84			AT190DR0+SD-5	826	528		330	Φ400			
	AT105DD0+SD-3										AT190DD0+SD-5								
	AT125DR0+SD-3	527	350								AT210SR5+SD-5	851	532						
	AT125DD0+SD-3										AT210SD5+SD-5								
	AT125SR5+SD-3	527	350								AT240SR5+SD-6	900	602		350	Φ500			
	AT125SD5+SD-3										AT240SD5+SD-6								
	AT140SR5+SD-4	582	394		300	Φ320				3"（80）	AT190DR0+SD-5	980	528		330	Φ400	381	148	
	AT140SD5+SD-4										AT190DD0+SD-5								
	AT160SR5+SD-4	604	458								AT210DR0+SD-5	1005	532						
	AT160SD5+SD-4										AT210DD0+SD-5								
1"（25）	AT105DR0+SD-3	505	285		240	Φ280	254	84			AT240SR5+SD-6	1054	602		350	Φ500			
	AT105DD0+SD-3										AT240SD5+SD-6								
	AT125DR0+SD-3	527	350								AT240DR0+SD-6	1054	602						
	AT125DD0+SD-3										AT240DD0+SD-6								
	AT125SR5+SD-3	527	350								AT270SR5+SD-7	1093	722		365	Φ600			
	AT125SD5+SD-3										AT270SD5+SD-7								
	AT140SR5+SD-4	582	394		300	Φ320					AT300SR5+SD-7	1113	758						
	AT140SD5+SD-4										AT300SD5+SD-7								
	AT160SR5+SD-4	604	458							4"（100）	AT210DR0+SD-5	1097	532		330	Φ400	457	170	
	AT160SD5+SD-4										AT210DD0+SD-5								
1¼"（32）	AT125DR0+SD-3	610	301		240	Φ280	279	91			AT240DR0+SD-6	1146	602		350	Φ500			
	AT125DD0+SD-3										AT240DD0+SD-6								
	AT140DR0+SD-4	592	394		300	Φ320					AT270DR0+SD-6	1185	722						
	AT140DD0+SD-4										AT270DD0+SD-6								
	AT140SR5+SD-4	592	394								AT270SR5+SD-7	1185	722		365	Φ600			
	AT140SD5+SD-4										AT270SD5+SD-7								
	AT160SR5+SD-4	617	458								AT300SR5+SD-7	1205	758						
	AT160SD5+SD-4										AT300SD5+SD-7								
	AT190SR5+SD-5	680	528		330	Φ400				5"（125）	AT240DR0+SD-6	1238	602		350	Φ500	559	177.5	
	AT190SD5+SD-5										AT240DD0+SD-6								
1½"（40）	AT140DR0+SD-4	599	394		300	Φ320	305	94			AT270DR0+SD-6	1277	722						
	AT140DD0+SD-4										AT270DD0+SD-6								
	AT160DR0+SD-4	624	458								AT300DR0+SD-7	1297	758		365	Φ600			
	AT160DD0+SD-4										AT300DD0+SD-7								
	AT160SR5+SD-4	624	458							6"（150）	AT270DR0+SD-6	1293	722		350	Φ500	610	196.5	
	AT160SD5+SD-4										AT270DD0+SD-6								
	AT190SR5+SD-5	687	528		330	Φ400					AT300DR0+SD-7	1313	758		365	Φ600			
	AT190SD5+SD-5										AT300DD0+SD-7								
	AT190SR5+SD-5	687	528																
	AT190SD5+SD-5																		
	AT210SR5+SD-5	712	532																
	AT210SD5+SD-5																		

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

3. The structure length A in the table is for RF flange connection.

Table 2-11 Overall Dimensions and Weight of O-type Ball Valve (Forged Section) PN260/Class1500 with Pneumatic Actuator mm

Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg	Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2"(15)	AT125DR0	397	301			254	84		2½"(65)	AT190DR0	652	528			422	130	
	AT125DD0									AT190DD0							
	AT140DR0	414	394							AT210DR0	677	532					
	AT140DD0									AT210DD0							
	AT160SR5	439	458							AT240DR0	711	602					
	AT160SD5									AT240DD0							
	AT190SR5	482	528							AT240SR5	711	602					
	AT190SD5									AT240SD5							
3/4"(20)	AT125DR0	397	301			254	84			AT270SR5	750	722					
	AT125DD0									AT270SD5							
	AT140DR0	414	394							AT300SR5	770	758					
	AT140DD0									AT300SD5							
	AT160SR5	439	458						3"(80)	AT210DR0	886	532			473	160	
	AT160SD5									AT210DD0							
	AT190SR5	482	528							AT240DR0	920	602					
	AT190SD5									AT240DD0							
1"(25)	AT125DR0	397	301			254	84			AT270DR0	959	722					
	AT125DD0									AT270DD0							
	AT140DR0	414	394							AT270SR5	959	722					
	AT140DD0									AT270SD5							
	AT160SR5	439	458							AT300SR5	979	758					
	AT160SD5									AT300SD5							
	AT190SR5	482	528							AW30SR52	926		650	1050			
	AT190SD5									AW30SD52							
1¼"(32)	AT140DR0	427	394			279	91			AW32SR42	951		650	1050			
	AT140DD0									AW32SD42							
	AT160DR0	452	458						4"(100)	AT240DR0	923	602			549	180	
	AT160DR0									AT240DD0							
	AT160SR5	452	458							AT270DR0	962	722					
	AT160SD5									AT270DD0							
	AT190SR5	495	528							AT300DR0	982	758					
	AT190SD5									AT300DD0							
	AT210SR5	520	532							AT300SR5	982	758					
	AT210SD5									AT300SD5							
1½"(40)	AT140DR0	449	394			305	94			AT350DR0	1042	930					
	AT140DD0									AT350DD0							
	AT160DR0	474	458							AW30SR52	929		650	1050			
	AT160DR0									AW30SD52							
	AT190DR0	517	528							AW32SR42	954		650	1050			
	AT190DD0									AW32SD42							
	AT190SR5	517	528							AW35SR53	979		700	1160			
	AT190SD5									AW35SD53							
	AT210SR5	542	532							AW40SR43	1004		700	1160			
	AT210SD5									AW40SD43							
	AT240SR5	576	602						5"(125)	AT300DR0	1192	758			673	197.5	
	AT240SD5									AT300DD0							
2"(50)	AT160DR0	504	458			371	106			AT350DR0	1252	930					
	AT160DR0									AT350DD0							
	AT190DR0	547	528							AW35D003	1119		700	270			
	AT190DD0																
	AT210SR5	572	532							AW35SR53	1190		700	1160			
	AT210SD5									AW35SD53							
	AT210DR0	572	532							AW40SR43	1215		700	1160			
	AT210DD0									AW40SD43							
	AT240SR5	606	602							AW45SR44	1245		800	1250			
	AT240SD5									AW45SD44							
	AT270SR5	645	722							AW45SR53	1240		700	1250			
	AT270SD5									AW45SD53							

Table 2-11 Continued Overall Dimensions and Weight of Standard O-type Ball Valve (Forged Section)

PN260/Class1500 with Pneumatic Actuator mm

Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg	Nominal diameter Inch(mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
6"(150)	AT350DR0	1204	888			711	216.5		8"(200)	AW55SR44	1387		800	1350	841	263	
	AT350DD0									AW55SD44							
	AW30D003	1116		700	270					AW65SR55	1477		950	1600			
	AW35D004	1146		800	320					AW65SD55							
	AW35D003	1141		700	270					AW70SR45	1502		950	1800			
	AW40D004	1171		800	320					AW70SD45							
	AW45SR44	1196		800	1250				10"(250)	AW50D005	1459		950	370	1000	322	
	AW45SD44									AW55D005	1484		950	370			
	AW45SR53	1191		700	1250					AW60D005	1509		950	370			
	AW45SD53									AW65D005	1554		950	370			
	AW50SR54	1221		800	1350					AW65SR55	1534		950	1600			
	AW50SD54									AW65SD55							
	AW55SR44	1246		800	1350					AW70SR45	1559		950	1800			
	AW55SD44									AW70SD45							
8"(200)	AW35D004	1287		800	320	841	263		12"(300)	AW50D005	1659		950	370	1146	370	
	AW40D004	1312		800	320					AW60D005	1709		950	370			
	AW50D005	1402		950	370					AW65D005	1754		950	370			
	AW55D005	1427		950	370					AW65SR55	1734		950	1600			
	AW50SR54	1362		800	1350					AW65SD55							
	AW50SD54									AW70SR45	1759		950	1800			
										AW70SD45							

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

3. The structure length A in the table is for RF flange connection.

Table 2-12 Boundary Dimensions and Weight of Standard O-type Ball Valve (Forged) PN260/Class1500 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"（15）	AT125DR0+SD-3	527	301		240	Φ280	254	84		2"（50）	AT190DR0+SD-5	732	528		330	Φ400	371	106	
	AT125DD0+SD-3										AT190DD0+SD-5								
	AT140DR0+SD-4	579	394		300	Φ320					AT210SR5+SD-5	757	532						
	AT140DD0+SD-4										AT210SD5+SD-5								
	AT160SR5+SD-4	604	458								AT210DR0+SD-5	757	532						
	AT160SD5+SD-4										AT210DD0+SD-5								
	AT190SR5+SD-5	667	528		330	Φ400					AT240SR5+SD-6	806	602		350	Φ500			
	AT190SD5+SD-5										AT240SD5+SD-6								
3/4"（20）	AT125DR0+SD-3	527	301		240	Φ280	254	84			AT270SR5+SD-7	845	722		365	Φ600			
	AT125DD0+SD-3										AT270SD5+SD-7								
	AT140DR0+SD-4	579	394		300	Φ320				2½"（65）	AT190DR0+SD-5	837	528		330	Φ400	422	130	
	AT140DD0+SD-4										AT190DD0+SD-5								
	AT160SR5+SD-4	604	458								AT210DR0+SD-5	862	532						
	AT160SD5+SD-4										AT210DD0+SD-5								
	AT190SR5+SD-5	667	528		330	Φ400					AT240DR0+SD-6	911	602		350	Φ500			
	AT190SD5+SD-5										AT240DD0+SD-6								
1"（25）	AT125DR0+SD-3	527	301		240	Φ280	254	84			AT240SR5+SD-6	911	602						
	AT125DD0+SD-3										AT240SD5+SD-6								
	AT140DR0+SD-4	579	394		300	Φ320					AT270SR5+SD-7	950	722		365	Φ600			
	AT140DD0+SD-4										AT270SD5+SD-7								
	AT160SR5+SD-4	604	458								AT300SR5+SD-7	970	758						
	AT160SD5+SD-4										AT300SD5+SD-7								
	AT190SR5+SD-5	667	528		330	Φ400				3"（80）	AT210DR0+SD-5	1071	532		330	Φ400	473	160	
	AT190SD5+SD-5										AT210DD0+SD-5								
1¼"（32）	AT140DR0+SD-4	592	394		300	Φ320	279	91			AT240DR0+SD-6	1120	602		350	Φ500			
	AT140DD0+SD-4										AT240DD0+SD-6								
	AT160DR0+SD-4	617	458								AT270DR0+SD-6	1159	722						
	AT160DR0+SD-4										AT270DD0+SD-6								
	AT160SR5+SD-4	617	458								AT270SR5+SD-7	1159	722		365	Φ600			
	AT160SD5+SD-4										AT270SD5+SD-7								
	AT190SR5+SD-5	680	528		330	Φ400					AT300SR5+SD-7	1179	758						
	AT190SD5+SD-5										AT300SD5+SD-7								
	AT210SR5+SD-5	705	532							4"（100）	AT240DR0+SD-6	1123	602		350	Φ500	549	180	
	AT210SD5+SD-5										AT240DD0+SD-6								
1½"（40）	AT140DR0+SD-4	614	394		300	Φ320	305	94			AT270DR0+SD-6	1162	722						
	AT140DD0+SD-4										AT270DD0+SD-6								
	AT160DR0+SD-4	639	458								AT300DR0+SD-7	1182	758		365	Φ600			
	AT160DR0+SD-4										AT300DD0+SD-7								
	AT190DR0+SD-5	702	528		330	Φ400					AT300SR5+SD-7	1182	758						
	AT190DD0+SD-5										AT300SD5+SD-7								
	AT190SR5+SD-5	702	528								AT350DR0+SD-8	1272	930		460	Φ800			
	AT190SD5+SD-5										AT350DD0+SD-8								
	AT210SR5+SD-5	727	532							5"（125）	AT300DR0+SD-7	1392	758		365	Φ600	673	197.5	
	AT210SD5+SD-5										AT300DD0+SD-7								
	AT240SR5+SD-6	776	602		350	Φ500					AT350DR0+SD-8	1482	930						
	AT240SD5+SD-6										AT350DD0+SD-8								
2"（50）	AT160DR0+SD-4	669	458		300	Φ320	371	106		6"（150）	AT350DR0+SD-8	1434	888		460	Φ800	711	216.5	
	AT160DR0+SD-4										AT350DD0+SD-8								

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

3. The structure length A in the table is for RF flange connection.

Table 2-13 Overall Dimensions and Weight of Standard O-type Ball Valve (Forging) PN420/Class2500 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"（15）	AT140DR0+SD-4	612	394		300	Φ320	308	88		1½"（40）	AT240SR5+SD-6	819	602		350	Φ500	384	116	
	AT140DD0+SD-4										AT240SD5+SD-6								
	AT160DR0+SD-4	637	458								AT270SR5+SD-7	858	722		365	Φ600			
	AT160DD0+SD-4										AT270SD5+SD-7								
	AT190SR5+SD-5	700	528		330	Φ400				2"（50）	AT210DR0+SD-5	786	532		330	Φ400	454	132	
	AT190SD5+SD-5										AT210DD0+SD-5								
	AT210SR5+SD-5	725	532								AT240DR0+SD-6	835	602		350	Φ500			
	AT210SD5+SD-5										AT240DD0+SD-6								
3/4"（20）	AT140DR0+SD-4	612	394		300	Φ320	308	88			AT240SR5+SD-6	835	319						
	AT140DD0+SD-4										AT240SD5+SD-6								
	AT160DR0+SD-4	637	458								AT270SR5+SD-7	874	722		365	Φ600			
	AT160DD0+SD-4										AT270SD5+SD-7								
	AT190SR5+SD-5	700	528		330	Φ400					AT300SR5+SD-7	894	758						
	AT190SD5+SD-5										AT300SD5+SD-7								
	AT210SR5+SD-5	725	532							2½"（65）	AT240DR0+SD-6	901	602		350	Φ500	514	145	
	AT210SD5+SD-5										AT240DD0+SD-6								
1"（25）	AT140DR0+SD-4	612	394		300	Φ320	308	88			AT270DR0+SD-6	940	722						
	AT140DD0+SD-4										AT270DD0+SD-6								
	AT160DR0+SD-4	637	458								AT270SR5+SD-7	940	722		365	Φ600			
	AT160DD0+SD-4										AT270SD5+SD-7								
	AT190SR5+SD-5	700	528		330	Φ400					AT300SR5+SD-7	960	758						
	AT190SD5+SD-5										AT300SD5+SD-7								
	AT210SR5+SD-5	725	532								AT350SR5+SD-8	1050	888		460	Φ800			
	AT210SD5+SD-5										AT350SD5+SD-8								
1¼"（32）	AT160DR0+SD-4	664	458		300	Φ320	349	105		3"（80）	AT270DR0+SD-6	1172	722		350	Φ500	584	178	
	AT160DD0+SD-4										AT270DD0+SD-6								
	AT190DR0+SD-5	727	528		330	Φ400					AT300DR0+SD-7	1192	758		365	Φ600			
	AT190DD0+SD-5										AT300DD0+SD-7								
	AT190SR5+SD-5	727	528								AT300SR5+SD-7	1192	758						
	AT190SD5+SD-5										AT300SD5+SD-7								
	AT210SR5+SD-5	752	532								AT350SR5+SD-8	1282	888		460	Φ800			
	AT210SD5+SD-5										AT350SD5+SD-8								
	AT240SR5+SD-6	801	602		350	Φ500				4"（100）	AT300DR0+SD-7	1228	758		365	Φ600	683	203	
	AT240SD5+SD-6										AT300DD0+SD-7								
1½"（40）	AT190DR0+SD-5	745	528		330	Φ400	384	116			AT350DR0+SD-8AT350DD0+SD-	1318	888		460	Φ800			
	AT190DD0+SD-5																		
	AT210SR5+SD-5	770	532							5"（125）	AT350DR0+SD-8	1504	888		460	Φ800	803	215	
	AT210SD5+SD-5										AT350DD0+SD-8								

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

3. The structure length A in the table is for RF flange connection.

Table 2-14 Overall Dimensions and Weight of Standard O-type Ball Valve (Forged) PN420/Class2500 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M (φ)	A	H1	Weight kg	Nominal diameter Inch (mm)	Actuator	H	B	B1	B2	M (φ)	A	H1	Weight kg
1/2"(15)	AT160SR5+SD4	792	560		280	320	308	88	67	3"(80)	AT350DR0+SD8	1512	930				584	178	555
	AT160SD5+SD4										AT350DD0+SD8								
	AT190SR5+SD5	885	540		290	400			83										
	AT190SD5+SD5																		
	AT140DR0+SD4	766	405		280	320			65										
	AT140DD0+SD4																		
3/4"(20)	AT210SR5+SD5	910	560		290	400	308	88	95	4"	AT350DR0+SD8	1548	930				683	203	794
	AT210SD5+SD5									-100	AT350DD0+SD8								
	AT140DR0+SD4	768	405		280	320			66										
	AT140DD0+SD4																		
1"(25)	AT210SR5+SD5	910	560		290	400	308	88	97										
	AT210SD5+SD5																		
	AT160DR0+SD4	792	560		280	320			68	5"	AT350DR0+SD8	1647	930				803	215	929
	AT160DD0+SD4									-125	AT350DD0+SD8								
1¼"	AT240SR5+SD6	1001	620		330	500	349	105	144										
-32	AT240SD5+SD6																		
	AT190DR0+SD5	897	540		290	400			101										
	AT190DD0+SD5																		
1½"(40)	AT270SR5+SD7	1058	740		370	600	384	116	200										
	AT270SD5+SD7																		
	AT190DR0+SD5	917	540		290	400			122										
	AT190DD0+SD5																		
2"(50)	AT300SR5+SD7	1094	800		370	600	454	132	287.5										
	AT300SD5+SD7																		
	AT210DR0+SD5	1042	740		290	400			263.5										
	AT210DD0+SD5																		
2½"(65)	AT300SR5+SD7	1200	800		370	600	514	145	470										
	AT300SD5+SD7																		
	AT350SR5+SD8	1280	930		370	600			750										
	AT350SD5+SD8																		
	AT270DR0+SD6	1190	740		330	500			430										
	AT270DD0+SD6																		

Note: 1. The overall dimensions in this table do not include accessories. 2. Non-insulated type

3. The structure length A in the table is for RF flange connection.

Table 2-15Overall Dimensions and Weight of Standard O-type Ball Valve PN16, 20/Class150 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A	H	H1	B1	B2	B	Weight kg
		PN1.6 PN2.0 Class150						
1/2"(15)	M0311	108	426.5	55		280	365	
3/4"(20)	M0311	117	426.5	55		280	365	
1"(25)	M0311	127	426.5	55		280	365	
1¼"(32)	M0311	140	432	57.5		280	365	
1½"(40)	M0311	165	439	63		280	365	
	M0321					280	365	
2"(50)	M0311	178	459	75		280	365	
	M0321					280	365	
2½"(65)	M0321	190	479.5	90		280	365	
	M0330		519.5			300	410	
3"(80)	M0321	203	491	95		280	365	
	M0330		531			300	410	
	M0360					300	410	
4"(100)	M0330	229	568	115		300	410	
	M0360					300	410	
5"(125)	M0360	356	607.5	135		300	410	
	M8310+A8010		598.5			357	460	
	M8510+A8005					328	460	
	M8510+A8020					385	460	
6"(150)	M8310+A8020	394	700	157.5		385	460	
	M8510+A8020					385	460	
	M8320+A8020		705			385	460	
	M8520+A8020					385	460	
8"(200)	M8320+A8020	457	808	230.5		385	460	
	M8520+A8020					385	460	
	M8320+A8040		900			405	544	
	M8520+A8040					405	544	
10"(250)	M8320+A8040	533	1067	280		405	544	
	M8520+A8040					405	544	
	M8330+A8040		975			405	492	
	M8530+A8090		1048.5			454	492	

Table 2-15 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN16, 20/Class150 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A	H	H1	B1	B2	B	Weight kg
		PN1.6PN2.0Class150						
12"(300)	M8330+A8040	610	1012.5	318		405	492	
	M8330+A8090+ G6502		1086			454	492	
	M8530+A8090+ G6502							
14"(350)	M8330+A8161	686	1307	352		684	544	
	M8530+A8162							
	M8540+A8160		1357					
16"(400)	M8330+A8090	762	1728.5	440		454	492	
	M8530+A8090+ G6502					454	492	
	M8330+A8162					684	544	
	M8340+A8160							
	M8530+A8162							
	M8540+A8160							
18"(450)	M8330+A8161	864	2058	540		684	544	
	M8530+A8161					980	544	
	M8330+A8162					684	544	
	M8340+A8160							
	M8540+A8160							
20"(500)	M8330+A8162	914	2128	600		980	544	
	M8540+A8160							
	M8340+A8250							
	M8540+A8250							

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

Table 2-16 Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN2.5 PN4.0 PN5.0 Class300	H	H1	B1	B2	B	Weight kg
1/2"(15)	M0311	140	389	62.5		280	365	
3/4"(20)	M0311	152	389	62.5		280	365	
1"(25)	M0311	165	389	62.5		280	365	
1¼"(32)	M0311	178	419	67.5		280	365	
	M0321		419			280	365	
1½"(40)	M0311	190	419	77.5		280	365	
	M0321		419			280	365	
2"(50)	M0311	216	429	82.5		280	365	
	M0321		429			280	365	
	M0330		469			300	410	
2½"(65)	M0321	241	469	95		280	365	
	M0330		509			300	410	
	M0360		509			300	410	
	M8310+A8005		509			328	460	
3"(80)	M0321	283	479	105		280	365	
	M0330		519			300	410	
	M0360		519			300	410	
	M8310+A8005		519			328	460	
	M8510+A8005		519			328	460	
	M8310+A8010		527			357	460	
	M8510+A8010		527			357	460	
4"(100)	M0330	305	559	127.5		300	410	
	M0360		559			300	410	
	M8310+A8010		600			328	460	
	M8510+A8010		600			357	460	
	M8510+A8020		670			385	460	
5"(125)	M0360	381	609	140.5		300	410	

Table 2-16 Overall Dimensions and Weight of Standard O-type Ball Valves PN25, 40, 50/Class300 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN2.5PN4.0PN5.0 Class300	H	H1	B1	B2	B	Weight kg
5"(125)	M8310+A8010	381	657	140.5		357	460	
	M8320+A8020		690			385	460	
	M8510+A8020		657			385	460	
	M8520+A8020		690			385	460	
6"(150)	M8320+A8020	403	691	160.5		385	460	
	M8320+A8040		700			405	460	
	M8510+A8020		695			385	460	
	M8520+A8020		691			385	460	
	M8520+A8040		700			405	460	
8"(200)	M8320+A8020	502	870	230.5		385	460	
	M8520+A8020		870			385	460	
	M8320+A8040		900			405	460	
	M8520+A8040		900			405	460	
	M8330+A8040		930			405	492	
	M8330+A8090		980			454	492	
	M8530+A8090		980			454	492	
10"(250)	M8320+A8020	568	935	280		385	460	
	M8320+A8040		955			405	460	
	M8520+A8040		955			405	460	
	M8530+A8040		975			405	492	
	M8330+A8040		975			405	492	
	M8330+A8090		986			454	492	
	M8340+A8090		1046			454	544	
	M8530+A8090		986			454	492	
	M8530+A8090+ G6502		986			454	492	
12"(300)	M8330+A8040	648	1050	318		405	492	

Table 2-16 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN25, 40, 50/Class300 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN2.5PN4.0PN5.0 Class300	H	H1	B1	B2	B	Weight kg
12"(300)	M8530+A8040	648	1050	318		405	492	
	M8330+A8090		1086			454	492	
	M8530+A8090		1086			454	492	
	M8340+A8090		1146			454	544	
	M8430+A8161		1207			684	544	
	M8330+A8162		1207			684	544	
	M8530+A8090+ G6502		1086			454	492	
	M8530+A8162		1207			684	544	
14"(350)	M8330+A8090	762	1160	352		454	492	
	M8530+A8090		1160			454	492	
	M8530+A8090+ G6502		1160			454	492	
	M8430+A8161		1307			684	544	
	M8330+A8161		1307			684	544	
	M8340+A8160		1307			684	544	
	M8540+A8160		1307			684	544	
	M8540+A8250		1338			692	544	
16"(400)	M8330+A8090	838	1388	440		454	492	
	M8530+A8090+ G6502		1388			454	492	
	M8530+A8161		1408			684	544	
	M8330+A8162		1408			684	544	
	M8340+A8160		1408			692	544	
	M8350+A8250		1478			980	544	
	M8540+A8250		1438			692	544	
	M8550+A8250		1478			980	544	
18"(450)	M8330+A8161	914	1488	540		684	544	
	M8530+A8161		1488			684	544	
	M8350+A8250		1568			980	544	
	M8550+A8250		1568			980	544	

Table 2-16 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN25, 40, 50/Class300 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN2.5PN4.0PN5.0 Class300	H	H1	B1	B2	B	Weight kg
20"(500)	M8330+A8162	991	1608	600		684	544	
	M8340+A8160		1608			692	544	
	M8540+A8160		1608			692	544	
	M8350+A8250		1658			980	544	
	M8540+A8250		1638			692	544	

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

Table 2-17 Overall Dimensions and Weight of Standard O-type Ball Valve PN63 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN100PN110 Class600	H	H1	B1	B2	B	Weight kg
1/2"(15)	M0311	165	419	70		280	365	
3/4"(20)	M0311	190	419	70		280	365	
1"(25)	M0311	216	459	70		280	365	
	M0321		459			280	365	
1¼"(32)	M0311	229	471	87		280	365	
	M0321		471			280	365	
1½"(40)	M0311	241	507	106		280	365	
	M0321		507			280	365	
	M0330		547			300	410	
2"(50)	M0311	292	527	106		280	365	
	M0321		527			280	365	
	M0330		567			300	410	
	M0360		567			300	410	
2½"(65)	M0321	330	609	134		280	365	
	M0330		649			300	410	
	M0360		689			300	410	
	M8310+A8005		689			328	460	
	M8310+A8010		697			357	460	
	M8510+A8010		697			357	460	
3"(80)	M0321	356	650	144		280	365	
	M0330		690			300	410	
	M0360		690			300	410	
	M8310+A8005		690			328	460	
	M8310+A8010		698			357	460	
	M8510+A8010		698			357	460	
	M8310+A8020		732			385	460	
	M8510+A8020		732			385	460	
4"(100)	M0330	406	750	181		300	410	
	M0360		750			300	410	
	M8310+A8010		792			357	460	
	M8510+A8010		792			357	460	
	M8320+A8020		836			385	460	
	M8510+A8020		836			385	460	
	M8520+A8020		836			385	460	
5"(125)	M0360	457	859	245		300	410	
	M8310+A8010		901			357	460	
	M8310+A8020		916			385	460	
	M8320+A8020		916			385	460	
	M8510+A8020		916			385	460	
	M8520+A8020		916			385	460	
	M8520+A8040		926			405	460	
6"(150)	M8310+A8010	495	936	254		357	460	
	M8320+A8020		932			385	460	
	M8510+A8020		932			385	460	
	M8520+A8020		932			385	460	
	M8320+A8040		934			405	460	
	M8330+A8040		934			405	492	
	M8520+A8040		934			405	460	
	M8330+A8090		957			454	492	
	M8530+A8090		957			454	492	

Table 2-17 Continued Overall Dimensions and Weight of Standard O-type Ball Valve PN63 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN100PN110 Class600	H	H1	B1	B2	B	Weight kg
8"(200)	M8320+A8020	597	998	305		385	460	
	M8520+A8020		998			385	460	
	M8320+A8040		998			405	460	
	M8330+A8040		1005			405	492	
	M8530+A8040		1005			405	492	
	M8330+A8090		1016			454	492	
	M8330+A8090		1016			454	492	
	M8340+A8090		1076			454	544	
	M8530+A8090		1016			454	492	
	M8540+A8090		1076			454	544	
10"(250)	M8320+A8020	673	1117	336		385	460	
	M8320+A8040		1117			405	460	
	M8520+A8040		1117			405	492	
	M8530+A8040		1117			405	492	
	M8330+A8090		1128			454	492	
	M8340+A8090		1230			454	544	
	M8530+A8090		1128			454	492	
	M8540+A8090		1230			454	544	
	M8340+A8160		1250			684	544	
	M8540+A8160		1250			684	544	
12"(300)	M8330+A8040	762	1185	427		405	492	
	M8530+A8040		1185			405	492	
	M8330+A8090		1196			454	492	
	M8540+A8160		1317			684	544	
	M8330+A8161		1317			684	544	
	M8340+A8250		1348			692	544	
	M8540+A8250		1348			692	544	
14"(350)	M8330+A8090	826	1338	463		454	492	
	M8340+A8250		1488			692	544	
	M8530+A8090		1338			454	492	
	M8530+A8161		1338			684	544	
	M8540+A8250		1368			692	544	
	M8340+A8090		1338			454	544	
	M8340+A8160		1458			684	544	
	M8530+A8161		1338			684	544	
	M8330+A8162		1338			684	544	
	M8530+A8162		1338			684	544	
16"(400)	M8340+A8090	902	1587	440		454	544	
	M8340+A8160		1607			684	544	
	M8530+A8161		1607			684	544	
	M8330+A8162		1607			684	544	
	M8530+A8162		1607			684	544	
	M8340+A8250		1638			692	544	
	M8540+A8250		1638			692	544	
18"(450)	M8330+A8161	978	1718	640		684	544	
	M8530+A8161		1718			684	544	
	M8350+A8400		1645			980	544	
	（35000Nm）							
	M8550+A8400		1645			980	544	
	（35000Nm）							
20"(500)	M8330+A8162	1054	2218	740		684	544	
	M8340+A8160		2218			684	544	
	M8350+A8400		1945			980	544	
	（35000Nm）							
	M8550+A8400		1945			980	544	
	（35000Nm）							

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

Table 2-18 Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN100PN110 Class600	H	H1	B1	B2	B	Weight kg
1/2"(15)	M0311	165	419	70		280	365	
3/4"(20)	M0311	190	419	70		280	365	
1"(25)	M0311	216	459	70		280	365	
	M0321		459			280	365	
1¼"(32)	M0311	229	471	87		280	365	
	M0321		471			280	365	
1½"(40)	M0311	241	507	106		280	365	
	M0321		507			280	365	
	M0330		547			300	410	
2"(50)	M0311	292	527	106		280	365	
	M0321		527			280	365	
	M0330		567			300	410	
	M0360		567			300	410	
2½"(65)	M0321	330	609	134		280	365	
	M0330		649			300	410	
	M0360		689			300	410	
	M8310+A8005		689			328	460	
	M8310+A8010		697			357	460	
	M8510+A8010		697			357	460	
3"(80)	M0321	356	650	144		280	365	
	M0330		690			300	410	
	M0360		690			300	410	
	M8310+A8005		690			328	460	
	M8310+A8010		698			357	460	
	M8510+A8010		698			357	460	
	M8310+A8020		732			385	460	
	M8510+A8020		732			385	460	
4"(100)	M0330	432	750	181		300	410	
	M0360		750			300	410	
	M8310+A8010		792			357	460	
	M8510+A8010		792			357	460	
	M8320+A8020		836			385	460	
	M8510+A8020		836			385	460	
	M8520+A8020		836			385	460	
5"(125)	M0360	508	859	245		300	410	
	M8310+A8010		901			357	460	
	M8310+A8020		916			385	460	
	M8320+A8020		916			385	460	
	M8510+A8020		916			385	460	
	M8520+A8020		916			385	460	
	M8520+A8040		926			405	460	
6"(150)	M8310+A8010	559	936	254		357	460	
	M8320+A8020		932			385	460	
	M8510+A8020		932			385	460	
	M8520+A8020		932			385	460	
	M8320+A8040		934			405	460	
	M8330+A8040		934			405	492	
	M8520+A8040		934			405	460	
	M8330+A8090		957			454	492	
	M8530+A8090		957			454	492	
8"(200)	M8320+A8020	660	998	305		385	460	
	M8520+A8020		998			385	460	
	M8320+A8040		998			405	460	
	M8330+A8040		1005			405	492	
	M8530+A8040		1005			405	492	
	M8330+A8090		1016			454	492	
	M8330+A8090		1016			454	492	
	M8340+A8090		1076			454	544	
	M8530+A8090		1016			454	492	
	M8540+A8090		1076			454	544	

Table 2-18 (Continued) Overall Dimensions and Weight of Standard O-type Ball Valve PN100, 110/Class600 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A PN100PN110 Class600	H	H1	B1	B2	B	Weight kg
10"(250)	M8320+A8020	787	1117	336		385	460	
	M8320+A8040		1117			405	460	
	M8520+A8040		1117			405	492	
	M8530+A8040		1117			405	492	
	M8330+A8090		1128			454	492	
	M8340+A8090		1230			454	544	
	M8530+A8090		1128			454	492	
	M8540+A8090		1230			454	544	
	M8340+A8160		1250			684	544	
	M8540+A8160		1250			684	544	
12"(300)	M8330+A8040	838	1185	427		405	492	
	M8530+A8040		1185			405	492	
	M8330+A8090		1196			454	492	
	M8540+A8160		1317			684	544	
	M8330+A8161		1317			684	544	
	M8340+A8250		1348			692	544	
	M8540+A8250		1348			692	544	
14"(350)	M8330+A8090	889	1338	463		454	492	
	M8340+A8250		1488			692	544	
	M8530+A8090		1338			454	492	
	M8530+A8161		1338			684	544	
	M8540+A8250		1368			692	544	
	M8340+A8090		1338			454	544	
	M8340+A8160		1458			684	544	
	M8530+A8161		1338			684	544	
	M8330+A8162		1338			684	544	
	M8530+A8162		1338			684	544	
16"(400)	M8340+A8090	991	1587	440		454	544	
	M8340+A8160		1607			684	544	
	M8530+A8161		1607			684	544	
	M8330+A8162		1607			684	544	
	M8530+A8162		1607			684	544	
	M8340+A8250		1638			692	544	
	M8540+A8250		1638			692	544	
18"(450)	M8330+A8161	1092	1718	640		684	544	
	M8530+A8161		1718			684	544	
	M8350+A8400 （35000Nm）		1645			980	544	
	M8550+A8400 （35000Nm）		1645			980	544	
20"(500)	M8330+A8162	1194	2218	740		684	544	
	M8340+A8160		2218			684	544	
	M8350+A8400 （35000Nm）		1945			980	544	
	M8550+A8400 （35000Nm）		1945			980	544	

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

Table 2-19 Overall Dimensions and Weight of Hard-Seal Forged Ball Valve PN150, 160/Class900 Equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A	H	H1	B1	B2	B	Weight kg
		Class900/PN150,160						
3/4"(15)	M0330	254	650	84		297.5	410	
1/2"(20)	M0330	254	650	84		297.5	410	
1"(25)	M0330	254	650	84		297.5	410	
1¼"(32)	M0330	279	710	91		297.5	410	
1½"(40)	M0360	305	710	94		297.5	410	
	M8310+A8005		742			300	459	
2"(50)	M0360	368	760	106		300	410	
	M8310+A8010		768			357	460	
	M8510+A8010		768			357	460	
2½"(65)	M0360	419	800	130		300	410	
	M8310+A8010		808			357	460	
	M8510+A8020		842			357	460	
3"(80)	M8310+A8010	381	866	148		357	460	
	M8310+A8020		900			385	460	
	M8520+A8020		900			385	460	
4"(100)	M8320+A8020	457	940	170		385	460	
	M8320+A8040		950			405	460	
	M8520+A8040		950			405	460	
5"(125)	M8320+A8040	559	1012	177.5		405	460	
	M8330+A8040		1019			405	492	
	M8530+A8090		1030			454	492	
6"(150)	M8330+A8040	610	1089	196.5		405	492	
	M8340+A8090		1100			454	544	
	M8540+A8090		1100			454	544	
8"(200)	M8330+A8090	737	1280	247		454	492	
	M8540+A8160		1401			684	544	
10"(250)	M8340+A8160	838	1380	281		684	544	
	M8340+A8250		1411			692	544	
	M8540+A8250		1411			692	544	
12"(300)	M8340+A8160	965	1450	318		684	544	
	M8340+A8250		1481			692	544	
	M8350+A8400		1521			980	544	
	（35000Nm）							
	M8550+A8400		1521			980	544	
	（35000Nm）							

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

4. The structure length A in the table is for RF flange connection.

Table 2-20 Overall Dimensions and Weight of PN260/Class1500 Hard Seal Forged Ball Valve Equipped with M Series Electric Actuator mm

Nominal diameter	Actuator	A	H	H1	B1	B2	B	Weight
Inch(mm)		Class1500/PN260						kg
3/4"(15)	M0330	254	650	84		300	410	
	M0360		650			300	410	
1/2"(20)	M0330	254	710	84		300	410	
	M0360		710			300	410	
1"(25)	M0330	254	710	84		300	410	
	M0360		710			300	410	
1¼"(32)	M0330	279	710	91		300	410	
	M0360		710			300	410	
1½"(40)	M0360	305	710	94		300	410	
	M8310+A8010		720			357	460	
	M8510+A8010		720			357	460	
2"(50)	M8310+A8010	371	636	106		357	460	
	M8310+A8020		670			385	460	
	M8510+A8010		636			357	460	
	M8510+A8020		670			385	460	
2½"(65)	M8310+A8020	422	920	130		385	460	
	M8320+A8020		956			385	460	
	M8510+A8020		920			385	460	
	M8520+A8020		956			385	460	
3"(80)	M8320+A8020	473	1000	160		385	460	
	M8320+A8040		1000			405	460	
	M8520+A8020		1000			385	460	
	M8520+A8040		1000			405	460	
4"(100)	M8330+A8040	549	1020	180		405	492	
	M8330+A8090		1030			454	492	
	M8520+A8040		1020			405	460	
	M8530+A8040		1020			405	492	
	M8530+A8090		1030			454	492	
5"(125)	M8330+A8040	673	1190	197.5		454	492	
	M8330+A8090		1200			405	492	
	M8340+A8090		1300			454	544	
	M8530+A8040		1190			405	492	
	M8530+A8090		1200			405	492	
	M8540+A8090		1300			454	544	
6"(150)	M8330+A8090	711	1350	216.5		405	492	
	M8340+A8090		1450			454	544	
	M8340+A8160		1470			684	544	
	M8530+A8090		1350			405	492	
6"(150)	M8530+A8161	711	1470	216.5		684	544	
	M8540+A8160		1470			684	544	
8"(200)	M8340+A8090	841	1560	263		454	544	
	M8340+A8160		1580			684	544	
	M8340+A8250		1610			692	544	
	M8540+A8160		1580			684	544	
	M8540+A8250		1610			692	544	
10"(250)	M8340+A8160	1000	1660	322		684	544	
	M8340+A8250		1691			692	544	
12"(300)	M8350+A8250	1146	1760	372		684	544	
	M8350+A8400 (35000Nm)		1718			980	544	
	M8350+A8400 (45000Nm)		1718			980	544	
	M8350+A8400 (65000Nm)		1718			980	544	

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

4. The structure length A in the table is RJ flange connection form.

Table 2-21Overall Dimensions and Weight of PN420/Class2500 Hard-seal Forged Ball Valve equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A	H	H1	B1	B2	B	Weight kg
		Class2500/PN420						
3/4"(15)	M0360	308	670	88		300	410	
	M8310+A8010		690			357	460	
	M8510+A8010		690			357	460	
1/2"(20)	M0360	308	750	88		300	410	
	M8310+A8010		770			357	460	
	M8510+A8010		770			357	460	
1"(25)	M0360	308	750	88		300	410	
	M8310+A8010		770			357	460	
	M8510+A8010		770			357	460	
1¼"(32)	M0360	349	750	105		300	410	
	M8310+A8010		770			357	460	
	M8510+A8010		770			357	460	
1½"(40)	M8310+A8010	384	640	116		357	460	
	M8310+A8020		660			385	460	
	M8320+A8020		670			385	460	
	M8510+A8010		640			357	460	
	M8510+A8020		660			385	460	
	M8520+A8020		670			385	460	
2"(50)	M8310+A8020	454	760	132		357	460	
	M8320+A8020		780			385	460	
	M8510+A8020		760			385	460	
	M8520+A8020		780			385	460	
	M8520+A8040		810			405	460	
2½"(65)	M8310+A8020	514	970	145		385	460	
	M8320+A8020		990			385	460	
	M8320+A8040		1020			405	460	
	M8520+A8020		990			385	460	
	M8520+A8040		1020			405	460	
3"(80)	M8320+A8040	584	1080	178		454	492	
	M8330+A8040		1090			405	460	
	M8330+A8090		1130			454	492	
3"(80)	M8520+A8040	584	1080	178		454	492	
	M8530+A8040		1090			405	460	
	M8530+A8090		1130			454	492	
4"(100)	M8330+A8040	683	1110	203		405	460	
	M8330+A8090		1170			454	492	
	M8340+A8090		1190			454	544	
	M8530+A8040		1110			405	460	
	M8530+A8090		1170			454	492	
	M8540+A8090		1190			454	544	
5"(125)	M8330+A8090	803	1300	215		454	492	
	M8340+A8090		1350			454	544	
	M8330+A8161		1350			684	544	
	M8530+A8090		1300			454	492	
	M8530+A8161		1350			684	544	
	M8530+A8162		1350			684	544	
	M8540+A8090		1350			454	544	
	M8540+A8160		1400			684	544	
6"(150)	M8340+A8090	927	1390	263		454	544	
	M8330+A8161		1370			684	544	
	M8330+A8162		1370			684	544	
	M8340+A8160		1420			684	544	
	M8340+A8250		1450			692	544	
	M8540+A8090		1390			454	544	
	M8540+A8160		1420			684	544	
	M8540+A8250		1450			692	544	

Table 2-21 Continued Overall Dimensions and Weight of Hard Seal Forged Ball Valve PN420/Class2500 equipped with M Series Electric Actuator mm

Nominal diameter Inch(mm)	Actuator	A	H	H1	B1	B2	B	Weight kg
		Class2500/PN420						
8"(200)	M8330+A8161	1038	1480	302		684	544	
	M8330+A8162		1480			684	544	
	M8340+A8160		1500			684	544	
	M8340+A8250		1560			692	544	
	M8350+A8400		1600			980	544	
	(35000Nm)							
	M8540+A8160		1500			684	544	
	M8540+A8250		1560			692	544	
	M8450+A8400		1600			980	544	
	(35000Nm)							

Note: 1. The table configuration is only used as a reference for the torque required by the valve. For other functional requirements and models, please refer to the sample of M series actuators.

2. Non-thermal insulation type 3. The connection form is direct connection.

4. The structure length A in the table is RJ flange connection form.

Table 3-1 Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN16, 20/Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping caliber (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2" (15)	1½" (40)	AT52DR0	249.5	149			140	63		1"(25)	2"(50)	AT83SR4	286.5	204			140	75	
		AT52DD0										AT83SD4							
		AT75SR4	277	184								AT83SR5	286.5	204					
		AT75SD4										AT83SD5							
		AT63SR5	365.6	168								AT83DR0	286.5	204					
		AT63SD5										AT83DD0							
		AT83DR0	286.5	204								AT92DR0	294	262					
		AT83DD0										AT92DD0							
		AT92DR0	294	262								AT105SR4	310.5	268					
		AT92DD0										AT105SD4							
		AT105SR4	310.5	268								AT125SR4	332.5	301					
		AT105SD4										AT125SD4							
		AT125SR4	332.5	301								AT105SR5	310.5	268					
		AT125SD4										AT105SD5							
		AT75DR0	277	184						1¼" (32)	2"(50)	AT75DR0	282.5	184			165	75	
		AT75DD0										AT75DD0							
		AT105SR5	310.5	268								AT83DR0	292	204					
		AT105SD5										AT83DD0							
3/4" (20)	1½" (40)	AT52DR0	249.5	149			140	63				AT92DR0	299.5	262					
		AT52DD0										AT92DD0							
		AT63DR0	265.5	168								AT92SR4	299.5	262					
		AT63DD0										AT92SD4							
		AT83SR4	286.5	204								AT105SR4	316	268					
		AT83SD4										AT105SD4							
		AT63SR5	265.5	168								AT92SR5	299.5	262					
		AT63SD5										AT92SD5							
		AT75SR5	277	184								AT125SR4	338	301					
		AT75SD5										AT125SD4							
		AT75SR4	277	184								AT105SR5	316	268					
		AT75SD4										AT105SD5							
		AT83DR0	286.5	204								AT125SR5	338	301					
		AT83DD0										AT125SD5							
		AT75DR0	277	184						1½" (40)	2½" (65)	AT83DR0	299	204			165	90	
		AT75DD0										AT83DD0							
		AT92DR0	294	262								AT92DR0	306.5	262					
		AT92DD0										AT92DD0							
		AT105SR4	310.5	268								AT105SR5	323	268					
		AT105SD4										AT105SD5							
		AT105SR5	310.5	268								AT125SR5	345	301					
		AT105SD5										AT125SD5							
		AT125SR4	332.5	301								AT105SR4	323	268					
		AT125SD4										AT105SD4							
1"(25)	2"(50)	AT63DR0	265.5	168			140	75				AT125SR4	345	301					
		AT63DD0										AT125SD4							
		AT75DR0	277	184								AT105DD0	323	268					
		AT75DD0										AT105DR0							

Table 3-1 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN16, 20/Class150 with Pneumatic Actuator **mm**

Nominal diameter Inch (mm)	Piping caliber (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping caliber (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
1½"（40）	2½"（65）	AT140SR4	362	394			165	90		3"(80)	5"（125）	AT190SR4	482	528			229	128	
		AT140SD4										AT190SD4							
2"(50)	3"（80）	AT92DR0	326.5	262			178	95				AT190SR5	482	528					
		AT92DD0										AT190SD5							
		AT105DR0	343	268								AT210SR4	507	532					
		AT105DD0										AT210SD4							
		AT125SR5	365	301						4"（100）	6"（150）	AT125DR0	434	301			254	140	
		AT125SD5										AT125DD0							
		AT140SR5	382	394								AT140DR0	451	394					
		AT140SD5										AT140DD0							
		AT125SR4	365	301								AT160SR4	476	458					
		AT125SD4										AT160SD4							
		AT83DR0	319	204								AT160SR5	476	458					
		AT83DD0										AT160SD5							
		AT125DR0	365	301								AT160DR0	476	458					
		AT125DD0										AT160DD0							
		AT140SR4	382	394								AT190SR4	519	528					
		AT140SD4										AT190SD4							
		AT160SR4	407	458								AT190DR0	519	528					
		AT160SD4										AT190DD0							
2½"（65）	4"（100）	AT92DR0	347	262			190	115				AT210SR5	544	532					
		AT92DD0										AT210SD5							
		AT105DR0	363.5	268								AT240SR4	578	602					
		AT105DD0										AT240SD4							
		AT125DR0	385.5	301						5"（125）	8"（200）	AT160DR0	515.5	458			267	173	
		AT125DD0										AT160DD0							
		AT125SR5	385.5	301								AT190DR0	558.8	528					
		AT125SD5										AT190DD0							
		AT140SR5	402.5	394								AT210DR0	583.5	532					
		AT140SD5										AT210DD0							
		AT140SR4	402.5	394								AT210SR4	583.5	532					
		AT140SD4										AT210SD4							
		AT140DR0	402.5	394								AT210SR5	583.5	532					
		AT140DD0										AT210SD5							
		AT160SR4	427.5	458								AT240SR4	617.5	602					
		AT160SD4										AT240SD4							
		AT160SR5	427.5	458								AT240SR5	617.5	602					
		AT160SD5										AT240SD5							
		AT190SR4	470.5	528								AT270SR4	656.5	722					
		AT190SD4										AT270SD4							
3"(80)	5"（125）	AT105DR0	375	268			229	128		6"（150）	10"（250）	AT190DR0	612	528			292	203	
		AT105DD0										AT190DD0							
		AT125DR0	397	301								AT210DR0	637	532					
		AT125DD0										AT210DD0							
		AT140DR0	414	394								AT240SR5	671	602					
		AT140DD0										AT240SD5							
		AT140SR4	414	394								AT240DR0	671	602					
		AT140SD4										AT240DD0							
		AT140SR5	414	394								AT270SR4	710	722					
		AT140SD5										AT270SD4							
		AT160SR4	439	458								AT300SR4	730	758					
		AT160SD4										AT300SD4							
		AT160DR0	439	45								AW22D00	619.		52	20			

		AT160DD0		8								1	5		0	0			

Table 3-1 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN16, 20/Class150 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping caliber (mm)	Actuator	H	B	B1	B2	A	H1	Weight kg
6"（150）	10"（250）	AW24SR51	637		520	910	292	203		10"（250）	14"（350）	AT240DR0	930	602			457	330	
		AW24SD51										AT240DD0							
		AW24SR42	647		650	910						AT270DR0	969	722					
		AW24SD42										AT270DD0							
		AW27SR42	677		650	910						AT300DR0	989	758					
		AW27SD42										AT300DD0							
8"（200）	12"（300）	AT210DR0	729	532			330	243				AW22D001	878.5		520	200			
		AT210DD0																	
		AT240DR0	763	602								AW22D002	888.5		650	250			
		AT240DD0																	
		AT270SR5	802	722								AW24D002	906		650	250			
		AT270SD5																	
		AT270DR0	802	722								AW27D002	936		650	250			
		AT270DD0																	
		AT300SR4	822	758								AW27D003	951		700	270			
		AT300SD4																	
		AW22D001	711.5		520	200						AW30SR52	936		650	1050			
												AW30SD52							
		AW22D002	721.5		650	250						AW32SR42	961		650	1050			
												AW32SD42							
		AW27SR52	769		650	950						AW32SR43	976		700	1160			
		AW27SD52										AW32SD43							
		AW30SR42	769		650	1050						AW40SR43	1011		700	1160			
		AW30SD42										AW40SD43							
		AW30SR52	769		650	1050													
		AW30SD52																	
		AW32SR42	794		650	1050													
		AW32SD42																	

Note: 1. The overall dimensions in this table do not include accessories.

2.PN16 DN40 and PN16 DN100 are threaded hole flanges.

Table 3-2 Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN16, 20/Class150 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Execution Mechanism	H	B	B1	B2	M	A	H1	Weight Kg
1/2" （15）	1½" （40）	AT52DR0+SD-1	359.5	149		180	Φ180	**140**	63	
		AT52DD0+SD-1								
		AT75SR4+SD-1	387	184						
		AT75SD4+SD-1								
		AT63SR5+SD-1	475.6	168						
		AT63SD5+SD-1								
		AT83DR0+SD-2	416.5	204		210	Φ200			
		AT83DD0+SD-2								
		AT92DR0+SD-2	424	262						
		AT92DD0+SD-2								
		AT105SR4+SD-3	440.5	268		240	Φ280			
		AT105SD4+SD-3								
		AT125SR4+SD-3	462.5	301						
		AT125SD4+SD-3								
		AT75DR0+SD-1	387	184		180	Φ180			
		AT75DD0+SD-1								
		AT105SR5+SD-3	440.5	268		240	Φ280			
		AT105SD5+SD-3								
3/4" （20）	1½" （40）	AT52DR0+SD-1	359.5	149		180	Φ180	140	63	
		AT52DD0+SD-1								
		AT63DR0+SD-1	375.5	168						
		AT63DD0+SD-1								
		AT63SR5+SD-1	375.5	168						
		AT63SD5+SD-1								
		AT75SR5+SD-1	387	184						
		AT75SD5+SD-1								
		AT75SR4+SD-1	387	184						
		AT75SD4+SD-1								
		AT83SR4+SD-2	416.5	204		210	Φ200			
		AT83SD4+SD-2								
		AT75DR0+SD-1	387	184		180	Φ180			
		AT75DD0+SD-1								
		AT83DR0+SD-2	416.5	204		210	Φ200			
		AT83DD0+SD-2								
		AT92DR0+SD-2	424	262						
		AT92DD0+SD-2								
		AT105SR4+SD-3	440.5	268		240	Φ280			
		AT105SD4+SD-3								
		AT105SR5+SD-3	440.5	268						
		AT105SD5+SD-3								
		AT125SR4+SD-3	462.5	301						
		AT125SD4+SD-3								
1" （25）	2" （50）	AT63DR0+SD-1	375.5	168		180	Φ180	140	75	
		AT63DD0+SD-1								
		AT75DR0+SD-1	387	184						
		AT75DD0+SD-1								
		AT83SR4+SD-2	416.5	204		210	Φ200			
		AT83SD4+SD-2								
		AT83SR5+SD-2	416.5	204						
		AT83SD5+SD-2								

Table 3-2 Continued Boundary Dimensions and Weight of Insulation Type O-type Ball Valve PN16, 20/Class150 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Execution Mechanism	H	B	B1	B2	M	A	H1	Weight Kg
1" (25)	2" (50)	AT83DR0+SD-2	416.5	204		210	Φ200	140	75	
		AT83DD0+SD-2								
		AT92DR0+SD-2	424	262						
		AT92DD0+SD-2								
		AT105SR4+SD-3	440.5	268		240	Φ280			
		AT105SD4+SD-3								
		AT125SR4+SD-3	462.5	301						
		AT125SD4+SD-3								
		AT105SR5+SD-3	440.5	268						
		AT105SD5+SD-3								
1¼" (32)	2" (50)	AT75DR0+SD-1	392.5	184		180	Φ180	165	75	
		AT75DD0+SD-1								
		AT83DR0+SD-2	422	204		210	Φ200			
		AT83DD0+SD-2								
		AT92DR0+SD-2	429.5	262						
		AT92DD0+SD-2								
		AT92SR4+SD-2	429.5	262						
		AT92SD4+SD-2								
		AT92SR5+SD-2	429.5	262						
		AT92SD5+SD-2								
		AT105SR4+SD-3	446	268		240	Φ280			
		AT105SD4+SD-3								
		AT125SR4+SD-3	468	301						
		AT125SD4+SD-3								
		AT105SR5+SD-3	446	268						
		AT105SD5+SD-3								
		AT125SR5+SD-3	468	301						
		AT125SD5+SD-3								
1½" (40)	2½" (65)	AT83DR0+SD-2	429	204		210	Φ200	165	90	
		AT83DD0+SD-2								
		AT92DR0+SD-2	436.5	262						
		AT92DD0+SD-2								
		AT105SR5+SD-3	453	268		240	Φ280			
		AT105SD5+SD-3								
		AT125SR5+SD-3	475	301						
		AT125SD5+SD-3								
		AT105SR4+SD-3	453	268						
		AT105SD4+SD-3								
		AT125SR4+SD-3	475	301						
		AT125SD4+SD-3								
		AT105DD0+SD-3	453	268						
		AT105DR0+SD-3								
		AT140SR4+SD-4	527	394		300	Φ320			
		AT140SD4+SD-4								
2" (50)	3" (80)	AT92DR0+SD-2	456.5	262		210	Φ200	178	75	
		AT92DD0+SD-2								
		AT83DR0+SD-2	449	204						
		AT83DD0+SD-2								
		AT105DR0+SD-3	473	268		240	Φ280			
		AT105DD0+SD-3								
		AT125SR5+SD-3	495	301						
		AT125SD5+SD-3								

Table 3-2 Continued Boundary Dimensions and Weight of Insulation Type O-type Ball Valve PN16, 20/Class150 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Execution Mechanism	H	B	B1	B2	M	A	H1	Weight K g
2" （50）	3" （80）	AT125SR4+SD-3	495	301		240	Φ280	178	75	
		AT125SD4+SD-3								
		AT125DR0+SD-3	495	301						
		AT125DD0+SD-3								
		AT140SR5+SD-4	547	394		300	Φ320			
		AT140SD5+SD-4								
		AT140SR4+SD-4	547	394						
		AT140SD4+SD-4								
		AT160SR4+SD-4	572	458						
		AT160SD4+SD-4								
2½" （65）	4" （100）	AT92DR0+SD-2	477	262		210	Φ200	190	115	
		AT92DD0+SD-2								
		AT105DR0+SD-3	493.5	268		240	Φ280			
		AT105DD0+SD-3								
		AT125DR0+SD-3	515.5	301						
		AT125DD0+SD-3								
		AT125SR5+SD-3	515.5	301						
		AT125SD5+SD-3								
		AT140SR5+SD-4	567.5	394		300	Φ320			
		AT140SD5+SD-4								
		AT140SR4+SD-4	567.5	394						
		AT140SD4+SD-4								
		AT140DR0+SD-4	567.5	394						
		AT140DD0+SD-4								
		AT160SR4+SD-4	592.5	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	592.5	458						
		AT160SD5+SD-4								
		AT190SR4+SD-5	655.5	528		330	Φ400			
		AT190SD4+SD-5								
3" （80）	5" （125）	AT105DR0+SD-3	505	268		240	Φ280	229	128	
		AT105DD0+SD-3								
		AT125DR0+SD-3	527	301						
		AT125DD0+SD-3								
		AT140DR0+SD-4	579	394		300	Φ320			
		AT140DD0+SD-4								
		AT140SR4+SD-4	579	394						
		AT140SD4+SD-4								
		AT140SR5+SD-4	579	394						
		AT140SD5+SD-4								
		AT160SR4+SD-4	604	458						
		AT160SD4+SD-4								
		AT160DR0+SD-4	604	458						
		AT160DD0+SD-4								
		AT190SR4+SD-5	667	528		330	Φ400			
		AT190SD4+SD-5								
		AT190SR5+SD-5	667	528						
		AT190SD5+SD-5								
		AT210SR4+SD-5	692	532						
		AT210SD4+SD-5								

Table 3-2 Continued Boundary Dimensions and Weight of Insulation Type O-type Ball Valve PN16, 20/Class150 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Execution Mechanism	H	B	B1	B2	M	A	H1	Weight K g
4" （100）	6" （150）	AT125DR0+SD-3	564	301		240	Φ280	254	140	
		AT125DD0+SD-3								
		AT140DR0+SD-4	616	394		300	Φ320			
		AT140DD0+SD-4								
		AT160SR4+SD-4	641	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	641	458						
		AT160SD5+SD-4								
		AT160DR0+SD-4	641	458						
		AT160DD0+SD-4								
		AT190SR4+SD-5	704	528		330	Φ400			
		AT190SD4+SD-5								
		AT190DR0+SD-5	704	528						
		AT190DD0+SD-5								
		AT210SR5+SD-5	729	532						
		AT210SD5+SD-5								
		AT240SR4+SD-6	778	602		350	Φ500			
		AT240SD4+SD-6								
5" （125）	8" （200）	AT160DR0+SD-4	680.5	458		300	Φ320	267	173	
		AT160DD0+SD-4								
		AT190DR0+SD-5	743.8	528		330	Φ400			
		AT190DD0+SD-5								
		AT210DR0+SD-5	768.5	532						
		AT210DD0+SD-5								
		AT210SR4+SD-5	768.5	532						
		AT210SD4+SD-5								
		AT210SR5+SD-5	768.5	532						
		AT210SD5+SD-5								
		AT240SR4+SD-6	817.5	602		350	Φ500			
		AT240SD4+SD-6								
		AT240SR5+SD-6	817.5	602						
		AT240SD5+SD-6								
		AT270SR4+SD-7	856.5	722		365	Φ600			
		AT270SD4+SD-7								
6" （150）	10" （250）	AT190DR0+SD-5	797	528		330	Φ400	292	203	
		AT190DD0+SD-5								
		AT210DR0+SD-5	822	532						
		AT210DD0+SD-5								
		AT240SR5+SD-6	871	602		350	Φ500			
		AT240SD5+SD-6								
		AT240DR0+SD-6	871	602						
		AT240DD0+SD-6								
		AT270SR4+SD-7	910	722		365	Φ600			
		AT270SD4+SD-7								
		AT300SR4+SD-7	930	758						
		AT300SD4+SD-7								

Table 3-2 Continued Boundary Dimensions and Weight of Insulation Type O-type Ball Valve PN16, 20/Class150 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch (mm)	Piping caliber (mm)	Execution Mechanism	H	B	B1	B2	M	A	H1	Weight Kg
8" （200）	12" （300）	AT210DR0+SD-5	914	532		330	Φ400	330	243	
		AT210DD0+SD-5								
		AT240DR0+SD-6	963	602		350	Φ500			
		AT240DD0+SD-6								
		AT270SR5+SD-7	1002	722		365	Φ600			
		AT270SD5+SD-7								
		AT270DR0+SD-6	1002	722		350	Φ500			
		AT270DD0+SD-6								
		AT300SR4+SD-7	1022	758		365	Φ600			
		AT300SD4+SD-7								
10" （250）	14" （350）	AT240DR0+SD-6	1130	602		350	Φ500	457	330	
		AT240DD0+SD-6								
		AT270DR0+SD-6	1169	722						
		AT270DD0+SD-6								
		AT300DR0+SD-7	1189	758		365	Φ600			
		AT300DD0+SD-7								

Note: 1. The overall dimensions in this table do not include accessories.

2.PN16 DN40 and PN16 DN100 are threaded hole flanges.

Table 3-3Overall Dimensions and Weight of Insulation Type O-shaped Ball Valves PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2"（15）	1½"（40）	AT52DR0	249.5	149			140	78		1"（25）	2"（50）	AT63DR0	265.5	168			140	83	
		AT52DD0										AT63DD0							
		AT63DR0	265.5	168								AT75DR0	277	184					
		AT63DD0										AT75DD0							
		AT63SR5	265.5	168								AT83DR0	286.5	204					
		AT63SD5										AT83DD0							
		AT75DR0	277	184								AT83SR4	286.5	204					
		AT75DD0										AT83SD4							
		AT75SR5	277	184								AT83SR5	286.5	204					
		AT75SD5										AT83SD5							
		AT75SR4	277	184								AT92DR0	294	262					
		AT75SD4										AT92DD0							
		AT83DR0	286.5	204								AT92SR4	294	262					
		AT83DD0										AT92SD4							
		AT83SR4	286.5	204								AT92SR5	294	262					
		AT83SD4										AT92SD5							
		AT92DR0	294	262								AT105SR4	310.5	268					
		AT92DD0										AT105SD4							
		AT105SR4	310.5	268								AT105SR4	310.5	268					
		AT105SD4										AT105SD4							
		AT105SR5	273	285								AT105SR5	310.5	268					
		AT105SD5										AT105SD5							
		AT125SR4	332.5	301								AT125SR4	332.5	301					
		AT125SD4										AT125SD4							
		AT125SR5	332.5	301								AT125SR5	332.5	301					
		AT125SD5										AT125SD5							
3/4"（20）	1½"（40）	AT52DR0	249.5	149			140	78		1¼"（32）	2"（50）	AT75DR0	282.5	184			165	83	
		AT52DD0										AT75DD0							
		AT63DR0	265.5	168								AT83DR0	292	204					
		AT63DD0										AT83DD0							
		AT63SR5	265.5	168								AT92DR0	292	204					
		AT63SD5										AT92DD0							
		AT75DR0	277	184								AT92SR4	292	204					
		AT75DD0										AT92SD4							
		AT75SR4	277	184								AT92SR5	292	204					
		AT75SD4										AT92SD5							
		AT75SR5	277	184								AT105DR0	316	268					
		AT75SD5										AT105DD0							
		AT83DR0	286.5	204								AT105SR4	316	268					
		AT83DD0										AT105SD4							
		AT83SR4	286.5	204								AT105SR5	316	268					
		AT83SD4										AT105SD5							
		AT83SR5	286.5	204								AT125SR4	338	301					
		AT83SD5										AT125SD4							
		AT92DR0	294	262								AT125SR4	338	301					
		AT92DD0										AT125SD4							
		AT92SR4	294	262								AT125SR5	338	301					
		AT92SD4										AT125SD5							
		AT105SR4	310	268								AT140SR4	335	394					
		AT105SD4										AT140SD4							
		AT105SR5	310	268						1½"（40）	2½"（65）	AT83DR0	299	204			165	95	
		AT105SD5										AT83DD0							
		AT125SR4	332.5	301								AT92DR0	306.5	262					
		AT125SD4										AT92DD0							
		AT125SR5	332.5	301								AT105DR0	323	268					
		AT125SD5										AT105DD0							

Table 3-3 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator **mm**

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Restart Qty.kg
1½" (40)	2½" (65)	AT105SR4	323	268			165	95		2½" (65)	4" (100)	AT190SR4	470.5	528			190	128	
		AT105SD4										AT190SD4							
		AT105SR5	323	268								AT190SR5	470.5	528					
		AT105SD5										AT190SD5							
		AT125DR0	345	301						3" (80)	5" (125)	AT105DR0	375	268			229	140	
		AT125DD0										AT105DD0							
		AT125SR4	345	301								AT125DR0	397	301					
		AT125SD4										AT125DD0							
		AT125SR5	345	301								AT140DR0	414	394					
		AT125SD5										AT140DD0							
		AT140SR4	362	394								AT140SR4	414	394					
		AT140SD4										AT140SD4							
		AT140SR5	362	394								AT140SR5	414	394					
		AT140SD5										AT140SD5							
2" (50)	3" (80)	AT83DR0	319	204			178	105				AT160DR0	439	458					
		AT83DD0										AT160DD0							
		AT92DR0	326.5	262								AT160SR4	439	458					
		AT92DD0										AT160SD4							
		AT105DR0	343	268								AT160SR5	439	458					
		AT105DD0										AT160SD5							
		AT125DR0	365	301								AT190SR4	482	528					
		AT125DD0										AT190SD4							
		AT125SR4	365	301								AT190DR0	482	528					
		AT125SD4										AT190DD0							
		AT125SR5	365	301								AT190SR5	482	528					
		AT125SD5										AT190SD5							
		AT140DR0	382	394								AT210SR4	507	532					
		AT140DD0										AT210SD4							
		AT140SR4	382	394								AT210SR5	507	532					
		AT140SD4										AT210SD5							
		AT140SR5	382	394						4" (100)	6" (150)	AT125DR0	454	301			254	160	
		AT140SD5										AT125DD0							
		AT160SR4	407	458								AT140DR0	471	394					
		AT160SD4										AT140DD0							
		AT160SR5	407	458								AT160DR0	496	458					
		AT160SD5										AT160DD0							
2½" (65)	4" (100)	AT92DR0	347	262			190	128				AT160SR4	496	458					
		AT92DD0										AT160SD4							
		AT105DR0	363.5	268								AT160SR5	496	458					
		AT105DD0										AT160SD5							
		AT125DR0	385.5	301								AT190DR0	539	528					
		AT125DD0										AT190DD0							
		AT125SR5	385.5	301								AT190SR4	539	528					
		AT125SD5										AT190SD4							
		AT140DR0	402.5	394								AT190SR5	539	528					
		AT140DD0										AT190SD5							
		AT140SR4	402.5	394								AT210DR0	564	532					
		AT140SD4										AT210DD0							
		AT140SR5	402.5	394								AT210SR4	564	532					
		AT140SD5										AT210SD4							
		AT160DR0	427.5	458								AT210SR5	564	532					
		AT160DD0										AT210SD5							
		AT160SR4	427.5	458								AT240SR4	598	602					
		AT160SD4										AT240SD4							
		AT160SR5	427.5	458								AT240SR5	598	602					
		AT160SD5										AT240SD5							

Table 3-3 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Restart Qty.kg
4"（100）	6"（150）	AT270SR4 AT270SD4	637	722			254	160		6"（150）	10"（250）	AW30SR52 AW30SD52	677		650	1050	292	223	
5"（125）	8"（200）	AT160DR0 AT160DD0	515.5	458			267	190				AW32SR42 AW32SD42	702		650	1050			
		AT190DR0 AT190DD0	558.5	528						8"（200）	12"（300）	AT210DR0 AT210DD0	729	532			330	260	
		AT210DR0 AT210DD0	583.5	532								AT240DR0 AT240DD0	763	602					
		AT210SR4 AT210SD4	583.5	532								AT270DR0 AT270DD0	802	722					
		AT210SR5 AT210SD5	583.5	532								AT270SR5 AT270SD5	802	722					
		AT240DR0 AT240DD0	617.5	602								AT300DR0 AT300DD0	822	758					
		AT240SR4 AT240SD4	617.5	602								AT300SR4 AT300SD4	822	758					
		AT240SR5 AT240SD5	617.5	602								AW22D001	711.5		520	200			
		AT270SR4 AT270SD4	656.5	722								AW22D002	721.5		650	250			
		AT270SR5 AT270SD5	656.5	722								AW24D002	739		650	250			
		AT300SR4 AT300SD4	676.5	758								AW27D003	784		700	270			
6"（150）	10"（250）	AT190DR0 AT190DD0	612	528			292	223				AW27SR52 AW27SD52	769		650	950			
		AT210DR0 AT210DD0	637	532								AW30SR42 AW30SD42	769		650	1050			
		AT240DR0 AT240DD0	671	602								AW30SR52 AW30SD52	769		650	1050			
		AT240SR5 AT240SD5	671	602								AW32SR42 AW32SD42	794		650	1050			
		AT270DR0 AT270DD0	710	722								AW32SR43 AW32SD43	809		700	1160			
		AT270SR4 AT270SD4	710	722								AW32SR52 AW32SD52	794		650	1050			
		AT270SR5 AT270SD5	710	722								AW35SR53 AW35SD53	819		700	1160			
		AT300SR4 AT300SD4	730	758								AW40SR43 AW40SD43	744		700	1160			
		AT300SR5 AT300SD5	730	758								AW45SR44 AW45SD44	874		800	1250			
		AW22D001	691.5		520	200						AW45SR53 AW45SD53	869		700	1250			
		AW22D002	629.5		650	250				10"（250）	14"（350）	AT240DR0 AT240DD0	930	602			457	330	
		AW24D002	647		650	250						AT270DR0 AT270DD0	969	722					
		AW24SR42 AW24SD42	647		650	910						AT300DR0 AT300DD0	989	758					
		AW27SR42 AW27SD42	677		650	910						AW22D002	888.5		650	250			
		AW27SR52 AW27SD52	677		650	910						AW24D002	906		650	250			
		AW30SR42	677		6	1						AW27D002	936		65	250			

		AW30SD42			50	050									0				

Table 3-3 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Restart Qty.kg
10"（250）	14"（350）	AW27D003	951		700	270	457	330		10"	14"	AW35SR53	986		700	1160	457	330	
										-250	-350	AW35SD53							
		AW30D003	961		700	270						AW40SR43	1011		700	1160			
												AW40SD43							
		AW35D003	986		700	270						AW45SR44	1041		800	1250			
												AW45SD44							
		AW30SR52	936		650	1050						AW50SR44	1066		800	1350			
		AW30SD52										AW50SD44							
		AW32SR42	961		650	1050						AW45SR53	1036		700	1250			
		AW32SD42										AW45SD53							
		AW32SR43	976		700	1160						AW45SR54	1041		800	1250			
		AW32SD43										AW45SD54							
		AW32SR53	946		700	1160													
		AW32SD53																	

Note: The overall dimensions in this table do not include accessories.

Table 3-4 Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight Kg
1/2"(15)	1½"(40)	AT52DR0+SD-1	359.5	149		180	Φ180	**140**	78	
		AT52DD0+SD-1								
		AT63DR0+SD-1	375.5	168						
		AT63DD0+SD-1								
		AT63SR5+SD-1	375.5	168						
		AT63SD5+SD-1								
		AT75DR0+SD-1	387	184						
		AT75DD0+SD-1								
		AT75SR5+SD-1	387	184						
		AT75SD5+SD-1								
		AT75SR4+SD-1	387	184						
		AT75SD4+SD-1								
		AT83DR0+SD-2	416.5	204		210	Φ200			
		AT83DD0+SD-2								
		AT83SR4+SD-2	416.5	204						
		AT83SD4+SD-2								
		AT92DR0+SD-2	424	262						
		AT92DD0+SD-2								
		AT105SR4+SD-3	440.5	268		240	Φ280			
		AT105SD4+SD-3								
		AT105SR5+SD-3	403	285						
		AT105SD5+SD-3								
		AT125SR4+SD-3	462.5	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	462.5	301						
		AT125SD5+SD-3								
3/4"(20)	1½"(40)	AT52DR0+SD-1	359.5	149		180	Φ180	**140**	78	
		AT52DD0+SD-1								
		AT63DR0+SD-1	375.5	168						
		AT63DD0+SD-1								
		AT63SR5+SD-1	375.5	168						
		AT63SD5+SD-1								
		AT75DR0+SD-1	387	184						
		AT75DD0+SD-1								
		AT75SR4+SD-1	387	184						
		AT75SD4+SD-1								
		AT75SR5+SD-1	387	184						
		AT75SD5+SD-1								
		AT83DR0+SD-2	416.5	204		210	Φ200			
		AT83DD0+SD-2								
		AT83SR4+SD-2	416.5	204						
		AT83SD4+SD-2								
		AT83SR5+SD-2	416.5	204						
		AT83SD5+SD-2								
		AT92DR0+SD-2	424	262						
		AT92DD0+SD-2								
		AT92SR4+SD-2	424	262						
		AT92SD4+SD-2								
		AT105SR4+SD-3	440	268		240	Φ280			
		AT105SD4+SD-3								
		AT105SR5+SD-3	440	268						
		AT105SD5+SD-3								
		AT125SR4+SD-3	462.5	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	462.5	301						
		AT125SD5+SD-3								

Table 3-4 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight Kg
1"(25)	2"(50)	AT63DR0+SD-1	375.5	168		180	Φ180	**140**	83	
		AT63DD0+SD-1								
		AT75DR0+SD-1	387	184						
		AT75DD0+SD-1								
		AT83DR0+SD-2	416.5	204		210	Φ200			
		AT83DD0+SD-2								
		AT83SR4+SD-2	416.5	204						
		AT83SD4+SD-2								
		AT83SR5+SD-2	416.5	204						
		AT83SD5+SD-2								
		AT92DR0+SD-2	424	262						
		AT92DD0+SD-2								
		AT92SR4+SD-2	424	262						
		AT92SD4+SD-2								
		AT92SR5+SD-2	424	262						
		AT92SD5+SD-2								
		AT105SR4+SD-3	440.5	268		240	Φ280			
		AT105SD4+SD-3								
		AT105SR4+SD-3	440.5	268						
		AT105SD4+SD-3								
		AT105SR5+SD-3	440.5	268						
		AT105SD5+SD-3								
		AT125SR4+SD-3	462.5	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	462.5	301						
		AT125SD5+SD-3								
1¼"(32)	2"(50)	AT75DR0+SD-1	392.5	184		180	Φ180	**165**	83	
		AT75DD0+SD-1								
		AT83DR0+SD-2	422	204		210	Φ200			
		AT83DD0+SD-2								
		AT92DR0+SD-2	422	204						
		AT92DD0+SD-2								
		AT92SR4+SD-2	422	204						
		AT92SD4+SD-2								
		AT92SR5+SD-2	422	204						
		AT92SD5+SD-2								
		AT105DR0+SD-3	446	268		240	Φ280			
		AT105DD0+SD-3								
		AT105SR4+SD-3	446	268						
		AT105SD4+SD-3								
		AT105SR5+SD-3	446	268						
		AT105SD5+SD-3								
		AT125SR4+SD-3	468	301						
		AT125SD4+SD-3								
		AT125SR4+SD-3	468	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	468	301						
		AT125SD5+SD-3								
		AT140SR4+SD-4	500	394		300	Φ320			
		AT140SD4+SD-4								

Table 3-4 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight
Inch(mm)										Kg
1½"(40)	2½"(65)	AT83DR0+SD-2	429	204		210	Φ200	**165**	95	
		AT83DD0+SD-2								
		AT92DR0+SD-2	436.5	262						
		AT92DD0+SD-2								
		AT105DR0+SD-3	453	268		240	Φ280			
		AT105DD0+SD-3								
		AT105SR4+SD-3	453	268		240	Φ280			
		AT105SD4+SD-3								
		AT105SR5+SD-3	453	268						
		AT105SD5+SD-3								
		AT125DR0+SD-3	475	301						
		AT125DD0+SD-3								
		AT125SR4+SD-3	475	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	475	301						
		AT125SD5+SD-3								
		AT140SR4+SD-4	527	394		300	Φ320			
		AT140SD4+SD-4								
		AT140SR5+SD-4	527	394						
		AT140SD5+SD-4								
2"(50)	3"(80)	AT83DR0+SD-2	449	204		210	Φ200	**178**	105	
		AT83DD0+SD-2								
		AT92DR0+SD-2	456.5	262						
		AT92DD0+SD-2								
		AT105DR0+SD-3	473	268		240	Φ280			
		AT105DD0+SD-3								
		AT125DR0+SD-3	495	301						
		AT125DD0+SD-3								
		AT125SR4+SD-3	495	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	495	301						
		AT125SD5+SD-3								
		AT140DR0+SD-4	547	394		300	Φ320			
		AT140DD0+SD-4								
		AT140SR4+SD-4	547	394						
		AT140SD4+SD-4								
		AT140SR5+SD-4	547	394						
		AT140SD5+SD-4								
		AT160SR4+SD-4	572	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	572	458						
		AT160SD5+SD-4								
2½"(65)	4"(100)	AT92DR0+SD-2	477	262		210	Φ200	**190**	128	
		AT92DD0+SD-2								
		AT105DR0+SD-3	493.5	268		240	Φ280			
		AT105DD0+SD-3								
		AT125DR0+SD-3	515.5	301						
		AT125DD0+SD-3								
		AT125SR5+SD-3	515.5	301						
		AT125SD5+SD-3								

Table 3-4 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight
Inch(mm)										Kg
2½"(65)	4"(100)	AT140DR0+SD-4	567.5	394		300	Φ320	**190**	128	
		AT140DD0+SD-4								
		AT140SR4+SD-4	567.5	394						
		AT140SD4+SD-4								
		AT140SR5+SD-4	567.5	394						
		AT140SD5+SD-4								
		AT160DR0+SD-4	592.5	458						
		AT160DD0+SD-4								
		AT160SR4+SD-4	592.5	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	592.5	458						
		AT160SD5+SD-4								
		AT190SR4+SD-5	655.5	528		330	Φ400			
		AT190SD4+SD-5								
		AT190SR5+SD-5	655.5	528						
		AT190SD5+SD-5								
3"(80)	5"(125)	AT105DR0+SD-3	505	268		240	Φ280	**229**	140	
		AT105DD0+SD-3								
		AT125DR0+SD-3	527	301						
		AT125DD0+SD-3								
		AT140DR0+SD-4	579	394		300	Φ320			
		AT140DD0+SD-4								
		AT140SR4+SD-4	579	394						
		AT140SD4+SD-4								
		AT140SR5+SD-4	579	394						
		AT140SD5+SD-4								
		AT160DR0+SD-4	604	458						
		AT160DD0+SD-4								
		AT160SR4+SD-4	604	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	604	458						
		AT160SD5+SD-4								
		AT190SR4+SD-5	667	528		330	Φ400			
		AT190SD4+SD-5								
		AT190DR0+SD-5	667	528						
		AT190DD0+SD-5								
		AT190SR5+SD-5	667	528						
		AT190SD5+SD-5								
		AT210SR4+SD-5	692	532						
		AT210SD4+SD-5								
		AT210SR5+SD-5	692	532						
		AT210SD5+SD-5								

Table 3-4 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight
Inch(mm)										Kg
4"(100)	6"(150)	AT125DR0+SD-3	584	301		240	Φ280	**254**	160	
		AT125DD0+SD-3								
		AT140DR0+SD-4	636	394		300	Φ320			
		AT140DD0+SD-4								
		AT160DR0+SD-4	661	458						
		AT160DD0+SD-4								
		AT160SR4+SD-4	661	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	661	458						
		AT160SD5+SD-4								
		AT190DR0+SD-5	724	528		330	Φ400			
		AT190DD0+SD-5								
		AT190SR4+SD-5	724	528						
		AT190SD4+SD-5								
		AT190SR5+SD-5	724	528						
		AT190SD5+SD-5								
		AT210DR0+SD-5	749	532						
		AT210DD0+SD-5								
		AT210SR4+SD-5	749	532						
		AT210SD4+SD-5								
		AT210SR5+SD-5	749	532						
		AT210SD5+SD-5								
		AT240SR4+SD-6	798	602		365	Φ500			
		AT240SD4+SD-6								
		AT240SR5+SD-6	798	602						
		AT240SD5+SD-6								
		AT270SR4+SD-7	837	722		365	Φ600			
		AT270SD4+SD-7								
5"(125)	8"(200)	AT160DR0+SD-4	680.5	458		300	Φ320	**267**	190	
		AT160DD0+SD-4								
		AT190DR0+SD-5	743.5	528		330	Φ400			
		AT190DD0+SD-5								
		AT210DR0+SD-5	768.5	532						
		AT210DD0+SD-5								
		AT210SR4+SD-5	768.5	532						
		AT210SD4+SD-5								
		AT210SR5+SD-5	768.5	532						
		AT210SD5+SD-5								
		AT240DR0+SD-6	817.5	602		350	Φ500			
		AT240DD0+SD-6								
		AT240SR4+SD-6	817.5	602						
		AT240SD4+SD-6								
		AT240SR5+SD-6	817.5	602						
		AT240SD5+SD-6								
		AT270SR4+SD-7	856.5	722		365	Φ600			
		AT270SD4+SD-7								
		AT270SR5+SD-7	856.5	722						
		AT270SD5+SD-7								
		AT300SR4+SD-7	876.5	758						
		AT300SD4+SD-7								

Table 3-4 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN25, 40, 50/Class300 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight Kg
6"(150)	10"(250)	AT190DR0+SD-5	797	528		330	Φ400	**292**	223	
		AT190DD0+SD-5								
		AT210DR0+SD-5	822	532						
		AT210DD0+SD-5								
		AT240DR0+SD-6	871	602		350	Φ500			
		AT240DD0+SD-6								
		AT240SR5+SD-6	871	602						
		AT240SD5+SD-6								
		AT270DR0+SD-6	910	722						
		AT270DD0+SD-6								
		AT270SR4+SD-7	910	722		365	Φ600			
		AT270SD4+SD-7								
		AT270SR5+SD-7	910	722						
		AT270SD5+SD-7								
		AT300SR4+SD-7	930	758						
		AT300SD4+SD-7								
		AT300SR5+SD-7	930	758						
		AT300SD5+SD-7								
8"(200)	12"(300)	AT210DR0+SD-5	914	532		330	Φ400	**330**	260	
		AT210DD0+SD-5								
		AT240DR0+SD-6	963	602		350	Φ500			
		AT240DD0+SD-6								
		AT270DR0+SD-6	1002	722						
		AT270DD0+SD-6								
		AT270SR5+SD-7	1002	722		365	Φ600			
		AT270SD5+SD-7								
		AT300DR0+SD-7	1022	758						
		AT300DD0+SD-7								
		AT300SR4+SD-7	1022	758						
		AT300SD4+SD-7								
10"(250)	14"(350)	AT240DR0+SD-6	1130	602		350	Φ500	**457**	330	
		AT240DD0+SD-6								
		AT270DR0+SD-6	1169	722						
		AT270DD0+SD-6								
		AT300DR0+SD-7	1189	758		365	Φ600			
		AT300DD0+SD-7								

Note: The overall dimensions in this table do not include accessories.

Table 3-5Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve with Pneumatic Actuator (PN63, 100, 110/Class600) **mm**

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight kg
1/2"（15）	1½"（40）	AT52DR0	290	149			**165**	83		3/4"（20）	1½"（40）	AT105DR0	343	268			**190**	83	
		AT52DD0										AT105DD0							
		AT63DR0	300	168								AT105SR5	343	268					
		AT63DD0										AT105SD5							
		AT75SR4	311	184								AT125DR0	365	301					
		AT75SD4										AT125DD0							
		AT75SR5	311	184								AT125SR4	365	301					
		AT75SD5										AT125SD4							
		AT83DR0	320	204								AT125SR5	365	301					
		AT83DD0										AT125SD5							
		AT83SR5	320	204								AT140SR4	382	394					
		AT83SD5										AT140SD4							
		AT83SR4	320	204								AT140SR5	382	394					
		AT83SD4										AT140SD5							
		AT92DR0	330	262						1"（25）	2"（50）	AT63DR0	300	168			**216**	83	
		AT92DD0										AT63DD0							
		AT105DR0	343	268								AT75DR0	310	184					
		AT105DD0										AT75DD0							
		AT105SR5	343	268								AT83DR0	320	204					
		AT105SD5										AT83DD0							
		AT125SR5	365	301								AT83SR4	320	204					
		AT125SD5										AT83SD4							
		AT125DR0	365	301								AT83SR5	320	204					
		AT125DD0										AT83SD5							
		AT125SR4	365	301								AT92SR4	330	262					
		AT125SD4										AT92SD4							
		AT140SR4	382	394								AT92SR5	330	262					
		AT140SD4										AT92SD5							
		AT140SR5	382	394								AT92DR0	330	262					
		AT140SD5										AT92DD0							
3/4"（20）	1½"（40）	AT52DR0	290	149			**190**	83				AT105SR4	343	268					
		AT52DD0										AT105SD4							
		AT63DR0	300	168								AT105SR5	343	268					
		AT63DD0										AT105SD5							
		AT75DR0	311	184								AT105DR0	343	268					
		AT75DD0										AT105DD0							
		AT75SR4	311	184								AT125DR0	365	301					
		AT75SD4										AT125DD0							
		AT75SR5	311	184								AT125SR4	365	301					
		AT75SD5										AT125SD4							
		AT83SR4	320	204								AT125SR5	365	301					
		AT83SD4										AT125SD5							
		AT83DR0	320	204								AT140SR4	382	394					
		AT83DD0										AT140SD4							
		AT83SR5	320	204								AT140SR5	382	394					
		AT83SD5										AT140SD5							
		AT92SR4	330	262						1¼"（32）	2"（50）	AT75DR0	322	184			**229**	86	
		AT92SD4										AT75DD0							
		AT92SR5	330	262								AT83DR0	331	204					
		AT92SD5										AT83DD0							
		AT92DR0	330	262								AT92DR0	339	262					
		AT92DD0										AT92DD0							
		AT105SR4	343	268								AT92SR4	339	262					
		AT105SD4										AT92SD4							

Table 3-5 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight kg
1¼"（32）	2"（50）	AT92SR5	339	262			**229**	86		2"（50）	3"（80）	AT92DR0	383	262			**292**	106	
		AT92SD5										AT92DD0							
		AT105SR4	354	268								AT105DR0	399	268					
		AT105SD4										AT105DD0							
		AT105SR5	354	268								AT125DR0	421	301					
		AT105SD5										AT125DD0							
		AT105DR0	354	268								AT125SR4	421	301					
		AT105DD0										AT125SD4							
		AT125SR4	376	301								AT125SR5	421	301					
		AT125SD4										AT125SD5							
		AT125SR5	376	301								AT140SR4	438	394					
		AT125SD5										AT140SD4							
		AT125DR0	376	301								AT140SR5	438	394					
		AT125DD0										AT140SD5							
		AT140SR4	393	394								AT140DR0	438	394					
		AT140SD4										AT140DD0							
		AT140SR5	393	394								AT160DR0	463	458					
		AT140SD5										AT160DD0							
		AT160SR4	418	458								AT160SR4	463	458					
		AT160SD4										AT160SD4							
		AT160SR5	418	458								AT160SR5	463	458					
		AT160SD5										AT160SD5							
1½"（40）	2½"（65）	AT83DR0	367	204			**241**	105		2½"（65）	4"（100）	AT190SR4	506	528					
		AT83DD0										AT190SD4							
		AT92DR0	375	262								AT190SR5	506	528					
		AT92DD0										AT190SD5							
		AT105DR0	405	268								AT105DR0	428	285			**330**	134	
		AT105DD0										AT105DD0							
		AT105SR4	405	268								AT125DR0	450	301					
		AT105SD4										AT125DD0							
		AT105SR5	405	268								AT140DR0	467	394					
		AT105SD5										AT140DD0							
		AT125SR4	413	301								AT140SR4	467	394					
		AT125SD4										AT140SD4							
		AT125SR5	413	301								AT140SR5	467	394					
		AT125SD5										AT140SD5							
		AT125DR0	413	301								AT160SR4	492	458					
		AT125DD0										AT160SD4							
		AT140SR4	430	394								AT160SR5	492	458					
		AT140SD4										AT160SD5							
		AT140SR5	430	394								AT160DR0	492	458					
		AT140SD5										AT160DD0							
		AT140DR0	430	394								AT190DR0	535	528					
		AT140DD0										AT190DD0							
		AT160SR4	445	458								AT190SR4	535	528					
		AT160SD4										AT190SD4							
		AT160SR5	445	458								AT190SR5	535	528					
		AT160SD5										AT190SD5							
		AT190SR4	488	528								AT210SR4	560	532					
		AT190SD4										AT210SD4							

Table 3-5 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight kg
2½"（65）	4"（100）	AT210SR5	560	532			**330**	134				AT210SR4	627	532					
		AT210SD5										AT210SD4							
		AT125DR0	502	301								AT210SR5	627	532					
		AT125DD0										AT210SD5							
		AT140DR0	519	394								AT210DR0	627	532					
		AT140DD0										AT210DD0							
		AT140SR4	519	394								AT240SR4	661	602					
		AT140SD4										AT240SD4							
		AT140SR5	519	394								AT240DR0	661	602			**406**	182	
		AT140SD5										AT240DD0							
		AT160DR0	544	458								AT240SR5	661	602					
		AT160DD0										AT240SD5							
		AT160SR4	544	458								AT270SR4	700	722					
		AT160SD4										AT270SD4							
		AT160SR5	544	458								AT270SR5	700	722					
		AT160SD5										AT270SD5							
		AT190SR4	587	528								AT300SR4	720	758					
3"（80）	5"（125）	AT190SD4					**356**	155		4"（100）	6"（150）	AT300SD4							
		AT190SR5	587	528								AT160DR0	645	458					
		AT190SD5										AT160DD0							
		AT190DR0	587	528								AT190DR0	691	528					
		AT190DD0										AT190DD0							
		AT210DR0	612	532								AT210DR0	716	532					
		AT210DD0										AT210DD0							
		AT210SR4	612	532								AT210SR4	716	532					
		AT210SD4										AT210SD4							
		AT210SR5	612	532								AT210SR5	716	532					
		AT210SD5										AT210SD5							
		AT240SR4	646	602								AT240SR4	750	602					
		AT240SD4										AT240SD4							
		AT240SR5	646	602								AT240SR5	750	602			**457**	245	
		AT240SD5										AT240SD5							
		AT270SR4	685	722								AT240DR0	750	602					
		AT270SD4										AT240DD0							
		AT140DR0	534	394								AT270SR4	789	722					
		AT140DD0										AT270SD4							
		AT160DR0	559	458								AT270SR5	789	722					
		AT160DD0										AT270SD5							
		AT160SR4	559	458								AT270DR0	789	722					
		AT160SD4										AT270DD0							
		AT160SR5	559	458								AT300SR4	809	758					
4"（100）	6"（150）	AT160SD5					**406**	182				AT300SD4							
		AT190DR0	602	528								AT300SR5	809	758					
		AT190DD0										AT300SD5							
		AT190SR4	602	528								AT190DR0	741	528					
		AT190SD4										AT190DD0							
		AT190SR5	602	528						6"（150）	10"（250）	AT210DR0	766	532			**495**	254	
		AT190SD5										AT210DD0							

Table 3-5 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight kg
6"（150）	10"（250）	AT240DR0	800	602			495	254		8"（200）	12"（300）	AW30D003	1146		700	270	597	305	
		AT240DD0																	
		AT240SR5	800	602								AW35D003	1171		700	270			
		AT240SD5																	
		AT270SR4	839	722								AW27SR52	1121		650	950			
		AT270SD4										AW27SD52							
		AT270SR5	839	722								AW30SR42	1121		650	1050			
		AT270SD5										AW30SD42							
		AT270DR0	839	722								AW30SR52	1121		650	1050			
		AT270DD0										AW30SD52							
		AT300SR4	859	758								AW32SR42	1146		650	1050			
		AT300SD4										AW32SD42							
		AT300SR5	859	758								AW32SR43	1161		700	1160			
		AT300SD5										AW32SD43							
		AT300DR0	859	758								AW32SR52	1146		650	1050			
		AT300DD0										AW32SD52							
		AW22D002	759		650	250						AW35SR53	1171		700	1160			
												AW35SD53							
		AW24D002	776		650	250						AW40SR43	1196		700	1160			
												AW40SD43							
		AW30SR42	806		650	1050						AW45SR44	1226		800	1250			
		AW30SD42										AW45SD44							
		AW30SR52	806		650	1050						AW45SR53	1221		700	1250			
		AW30SD52										AW45SD53							
		AW32SR42	831		650	1050				10"（250）	14"（350）	AT240DR0	1163	602			673	400	
		AW32SD42										AT240DD0							
		AW32SR43	846		700	1160						AT270DR0	1202	722					
		AW32SD43										AT270DD0							
		AW32SR52	831		650	1050						AT300DR0	1222	758					
		AW32SD52										AT300DD0							
		AW40SR43	881		700	1160						AT350DR0	1282	888					
		AW40SD43										AT350DD0							
8"（200）	12"（300）	AT210DR0	1081	532			597	305				AW22D002	1122		650	250			
		AT210DD0																	
		AT240DR0	1115	602								AW24D002	1139		650	250			
		AT240DD0																	
		AT270DR0	1154	722								AW27D002	1169		650	250			
		AT270DD0																	
		AT300DR0	1174	758								AW27D003	1184		700	270			
		AT300DD0																	
		AT300SR4	1174	758								AW30D003	1194		700	270			
		AT300SD4																	
		AT300SR5	1174	758								AW35D003	1219		700	270			
		AT300SD5																	
		AW22D001	1064		520	200						AW40D004	1249		800	320			
		AW22D002	1074		650	250						AW30SR52	1169		650	1050			
												AW30SD52							
		AW24D002	1091		650	250						AW32SR42	1194		650	1050			
												AW32SD42							
		AW27D003	1121		650	250						AW32SR43	1209		700	1160			
												AW32SD43							

Table 3-5 (Continued) Overall Dimensions and Weight of Insulation Type O-shaped Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator mm

Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight Kg	Nominal diameter Inch (mm)	Piping Caliber	Actuator	H	B	B1	B2	A	H1	Weight (kg)
10"（250）	14"（350）	AW32SR53	1209		700	1160	673	400		10"（250）	14"（350）	AW50SR44	1299		800	1350	673	400	
		AW32SD53										AW50SD44							
		AW45SR44	1274		800	1250						AW55SR44	1324		800	1350			
		AW45SD44										AW55SD44							
		AW45SR53	1269		700	1250						AW55SR55	1364		950	1600			
		AW45SD53										AW55SD55							
		AW45SR54	1274		800	1250													
		AW45SD54																	

Note: The overall dimensions in this table do not include accessories.

Table 3-6 Boundary Dimensions and Weight of Insulation Type O-type Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator (with Handwheel) **mm**

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1/2"(15)	1½"(40)	AT52DR0+SD-1	400	149		180	Φ180	**165**	83	
		AT52DD0+SD-1								
		AT63DR0+SD-1	410	168						
		AT63DD0+SD-1								
		AT75SR4+SD-1	421	184						
		AT75SD4+SD-1								
		AT75SR5+SD-1	421	184						
		AT75SD5+SD-1								
		AT83DR0+SD-2	450	204		210	Φ200			
		AT83DD0+SD-2								
		AT83SR5+SD-2	450	204						
		AT83SD5+SD-2								
		AT83SR4+SD-2	450	204						
		AT83SD4+SD-2								
		AT92DR0+SD-2	460	262						
		AT92DD0+SD-2								
		AT105DR0+SD-3	473	268		240	Φ280			
		AT105DD0+SD-3								
		AT105SR5+SD-3	473	268						
		AT105SD5+SD-3								
		AT125SR5+SD-3	495	301						
		AT125SD5+SD-3								
		AT125DR0+SD-3	495	301						
		AT125DD0+SD-3								
		AT125SR4+SD-3	495	301						
		AT125SD4+SD-3								
		AT140SR4+SD-4	547	394		300	Φ320			
		AT140SD4+SD-4								
		AT140SR5+SD-4	547	394						
		AT140SD5+SD-4								
3/4"(20)	1½"(40)	AT52DR0+SD-1	400	149		180	Φ180	**190**	83	
		AT52DD0+SD-1								
		AT63DR0+SD-1	410	168						
		AT63DD0+SD-1								
		AT75DR0+SD-1	421	184						
		AT75DD0+SD-1								
		AT75SR4+SD-1	421	184						
		AT75SD4+SD-1								
		AT75SR5+SD-1	421	184						
		AT75SD5+SD-1								
		AT83SR4+SD-2	450	204		210	Φ200			
		AT83SD4+SD-2								
		AT83DR0+SD-2	450	204						
		AT83DD0+SD-2								
		AT83SR5+SD-2	450	204						
		AT83SD5+SD-2								
		AT92SR4+SD-2	460	262						
		AT92SD4+SD-2								
		AT92SR5+SD-2	460	262						
		AT92SD5+SD-2								
		AT92DR0+SD-2	460	262						
		AT92DD0+SD-2								
		AT105SR4+SD-3	473	268		240	Φ280			
		AT105SD4+SD-3								
		AT105DR0+SD-3	473	268						
		AT105DD0+SD-3								

Table 3-6 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight kg
3/4"(20)	1½"(40)	AT105SR5+SD-3	473	268		240	Φ280	**190**	83	
		AT105SD5+SD-3								
		AT125DR0+SD-3	495	301						
		AT125DD0+SD-3								
		AT125SR4+SD-3	495	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	495	301						
		AT125SD5+SD-3								
		AT140SR4+SD-4	547	394		300	Φ320			
		AT140SD4+SD-4								
		AT140SR5+SD-4	547	394						
		AT140SD5+SD-4								
1"(25)	2"(50)	AT63DR0+SD-1	410	168		180	Φ180	**216**	83	
		AT63DD0+SD-1								
		AT75DR0+SD-1	420	184						
		AT75DD0+SD-1								
		AT83DR0+SD-2	450	204		210	Φ200			
		AT83DD0+SD-2								
		AT83SR4+SD-2	450	204						
		AT83SD4+SD-2								
		AT83SR5+SD-2	450	204						
		AT83SD5+SD-2								
		AT92SR4+SD-2	460	262						
		AT92SD4+SD-2								
		AT92SR5+SD-2	460	262						
		AT92SD5+SD-2								
		AT92DR0+SD-2	460	262						
		AT92DD0+SD-2								
		AT105SR4+SD-3	473	268		240	Φ280			
		AT105SD4+SD-3								
		AT105SR5+SD-3	473	268						
		AT105SD5+SD-3								
		AT105DR0+SD-3	473	268						
		AT105DD0+SD-3								
		AT125DR0+SD-3	495	301						
		AT125DD0+SD-3								
		AT125SR4+SD-3	495	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	495	301						
		AT125SD5+SD-3								
		AT140SR4+SD-4	547	394		300	Φ320			
		AT140SD4+SD-4								
		AT140SR5+SD-4	547	394						
		AT140SD5+SD-4								
1¼"(32)	2"(50)	AT75DR0+SD-1	432	184		180	Φ180	**229**	86	
		AT75DD0+SD-1								
		AT83DR0+SD-2	461	204		210	Φ200			
		AT83DD0+SD-2								
		AT92DR0+SD-2	469	262						
		AT92DD0+SD-2								
		AT92SR4+SD-2	469	262						
		AT92SD4+SD-2								
		AT92SR5+SD-2	469	262						
		AT92SD5+SD-2								
		AT105SR4+SD-3	484	268		240	Φ280			
		AT105SD4+SD-3								

Table 3-6 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight kg
1¼"(32)	2"(50)	AT105SR5+SD-3	484	268		240	Φ280	**229**	86	
		AT105SD5+SD-3								
		AT105DR0+SD-3	484	268						
		AT105DD0+SD-3								
		AT125SR4+SD-3	506	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	506	301						
		AT125SD5+SD-3								
		AT125DR0+SD-3	506	301						
		AT125DD0+SD-3								
		AT140SR4+SD-4	558	394		300	Φ320			
		AT140SD4+SD-4								
		AT140SR5+SD-4	558	394						
		AT140SD5+SD-4								
		AT160SR4+SD-4	583	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	583	458						
		AT160SD5+SD-4								
1½"(40)	2½"(65)	AT83DR0+SD-2	497	204		210	Φ200	**241**	105	
		AT83DD0+SD-2								
		AT92DR0+SD-2	505	262						
		AT92DD0+SD-2								
		AT105DR0+SD-3	535	268		240	Φ280			
		AT105DD0+SD-3								
		AT105SR4+SD-3	535	268						
		AT105SD4+SD-3								
		AT105SR5+SD-3	535	268						
		AT105SD5+SD-3								
		AT125SR4+SD-3	543	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	543	301						
		AT125SD5+SD-3								
		AT125DR0+SD-3	543	301						
		AT125DD0+SD-3								
		AT140SR4+SD-4	595	394		300	Φ320			
		AT140SD4+SD-4								
		AT140SR5+SD-4	595	394						
		AT140SD5+SD-4								
		AT140DR0+SD-4	595	394						
		AT140DD0+SD-4								
		AT160SR4+SD-4	610	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	610	458						
		AT160SD5+SD-4								
		AT190SR4+SD-5	673	528		330	Φ400			
		AT190SD4+SD-5								
2"(50)	3"(80)	AT92DR0+SD-2	513	262		210	Φ200	**292**	106	
		AT92DD0+SD-2								
		AT105DR0+SD-3	529	268		240	Φ280			
		AT105DD0+SD-3								
		AT125DR0+SD-3	551	301						
		AT125DD0+SD-3								
		AT125SR4+SD-3	551	301						
		AT125SD4+SD-3								
		AT125SR5+SD-3	551	301						
		AT125SD5+SD-3								

Table 3-6 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight kg
2"(50)	3"(80)	AT140SR4+SD-4	603	394		300	Φ320	**292**	106	
		AT140SD4+SD-4								
		AT140SR5+SD-4	603	394						
		AT140SD5+SD-4								
		AT140DR0+SD-4	603	394						
		AT140DD0+SD-4								
		AT160DR0+SD-4	628	458						
		AT160DD0+SD-4								
		AT160SR4+SD-4	628	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	628	458						
		AT160SD5+SD-4								
		AT190SR4+SD-5	691	528		330	Φ400			
		AT190SD4+SD-5								
		AT190SR5+SD-5	691	528						
		AT190SD5+SD-5								
2½"(65)	4"(100)	AT105DR0+SD-3	558	285		240	Φ280	**330**	134	
		AT105DD0+SD-3								
		AT125DR0+SD-3	580	301						
		AT125DD0+SD-3								
		AT140DR0+SD-4	632	394		300	Φ320			
		AT140DD0+SD-4								
		AT140SR4+SD-4	632	394						
		AT140SD4+SD-4								
		AT140SR5+SD-4	632	394						
		AT140SD5+SD-4								
		AT160SR4+SD-4	657	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	657	458						
		AT160SD5+SD-4								
		AT160DR0+SD-4	657	458						
		AT160DD0+SD-4								
		AT190DR0+SD-5	720	528		330	Φ400			
		AT190DD0+SD-5								
		AT190SR4+SD-5	720	528						
		AT190SD4+SD-5								
		AT190SR5+SD-5	720	528						
		AT190SD5+SD-5								
		AT210SR4+SD-5	745	532						
		AT210SD4+SD-5								
		AT210SR5+SD-5	745	532						
		AT210SD5+SD-5								
3"(80)	5"(125)	AT125DR0+SD-3	632	301		240	Φ280	**356**	155	
		AT125DD0+SD-3								
		AT140DR0+SD-4	684	394		300	Φ320			
		AT140DD0+SD-4								
		AT140SR4+SD-4	684	394						
		AT140SD4+SD-4								
		AT140SR5+SD-4	684	394						
		AT140SD5+SD-4								
		AT160DR0+SD-4	709	458						
		AT160DD0+SD-4								
		AT160SR4+SD-4	709	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	709	458						
		AT160SD5+SD-4								

Table 3-6 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight kg
3"(80)	5"(125)	AT190SR4+SD-5	772	528		330	Φ400	**356**	155	
		AT190SD4+SD-5								
		AT190SR5+SD-5	772	528						
		AT190SD5+SD-5								
		AT190DR0+SD-5	772	528						
		AT190DD0+SD-5								
		AT210DR0+SD-5	797	532						
		AT210DD0+SD-5								
		AT210SR4+SD-5	797	532						
		AT210SD4+SD-5								
		AT210SR5+SD-5	797	532						
		AT210SD5+SD-5								
		AT240SR4+SD-6	846	602		350	Φ500			
		AT240SD4+SD-6								
		AT240SR5+SD-6	846	602						
		AT240SD5+SD-6								
		AT270SR4+SD-7	885	722		365	Φ600			
		AT270SD4+SD-7								
4"(100)	6"(150)	AT140DR0+SD-4	699	394		300	Φ320	**406**	182	
		AT140DD0+SD-4								
		AT160DR0+SD-4	724	458						
		AT160DD0+SD-4								
		AT160SR4+SD-4	724	458						
		AT160SD4+SD-4								
		AT160SR5+SD-4	724	458						
		AT160SD5+SD-4								
		AT190DR0+SD-5	787	528		330	Φ400			
		AT190DD0+SD-5								
		AT190SR4+SD-5	787	528						
		AT190SD4+SD-5								
		AT190SR5+SD-5	787	528						
		AT190SD5+SD-5								
		AT210SR4+SD-5	812	532		330	Φ400			
		AT210SD4+SD-5								
		AT210SR5+SD-5	812	532						
		AT210SD5+SD-5								
		AT210DR0+SD-5	812	532						
		AT210DD0+SD-5								
		AT240SR4+SD-6	861	602		350	Φ500			
		AT240SD4+SD-6								
		AT240DR0+SD-6	861	602						
		AT240DD0+SD-6								
		AT240SR5+SD-6	861	602						
		AT240SD5+SD-6								
		AT270SR4+SD-7	900	722		365	Φ600			
		AT270SD4+SD-7								
		AT270SR5+SD-7	900	722						
		AT270SD5+SD-7								
		AT300SR4+SD-7	920	758						
		AT300SD4+SD-7								
5"(125)	8"(200)	AT160DR0+SD-4	810	458		300	Φ320	**457**	245	
		AT160DD0+SD-4								
		AT190DR0+SD-5	876	528		330	Φ400			
		AT190DD0+SD-5								
		AT210DR0+SD-5	901	532						
		AT210DD0+SD-5								

Table 3-6 Continued Overall Dimensions and Weight of Insulation Type O-type Ball Valve PN63, 100, 110/Class600 with Pneumatic Actuator (with Handwheel) mm

Nominal diameter Inch(mm)	Diameter of piping	Actuator	H	B	B1	B2	M	A	H1	Weight kg
5"(125)	8"(200)	AT210SR4+SD-5	901	532		330	Φ400	**457**	245	
		AT210SD4+SD-5								
		AT210SR5+SD-5	901	532						
		AT210SD5+SD-5								
		AT240SR4+SD-6	950	602		350	Φ500			
		AT240SD4+SD-6								
		AT240SR5+SD-6	950	602						
		AT240SD5+SD-6								
		AT240DR0+SD-6	950	602						
		AT240DD0+SD-6								
		AT270DR0+SD-6	989	722						
		AT270DD0+SD-6								
		AT270SR4+SD-7	989	722		365	Φ600			
		AT270SD4+SD-7								
		AT270SR5+SD-7	989	722						
		AT270SD5+SD-7								
		AT300SR4+SD-7	1009	758						
		AT300SD4+SD-7								
		AT300SR5+SD-7	1009	758						
		AT300SD5+SD-7								
6"(150)	10"(250)	AT190DR0+SD-5	926	528		330	Φ400	**495**	254	
		AT190DD0+SD-5								
		AT210DR0+SD-5	951	532						
		AT210DD0+SD-5								
		AT240DR0+SD-6	1000	602		350	Φ500			
		AT240DD0+SD-6								
		AT240SR5+SD-6	1000	602						
		AT240SD5+SD-6								
		AT270DR0+SD-6	1039	722						
		AT270DD0+SD-6								
		AT270SR4+SD-7	1039	722		365	Φ600			
		AT270SD4+SD-7								
		AT270SR5+SD-7	1039	722						
		AT270SD5+SD-7								
		AT300SR4+SD-7	1059	758						
		AT300SD4+SD-7								
		AT300SR5+SD-7	1059	758						
		AT300SD5+SD-7								
		AT300DR0+SD-7	1059	758						
		AT300DD0+SD-7								

Note: The overall dimensions in this table do not include accessories.

3. Installation

3-1 Valve Installation

Warning

As the control valve is heavy, the following should be noted to avoid major personal injury due to improper operation.

●When the control valve is connected with the process pipeline, please use appropriate hoisting machinery that meets the provisions of the Labor Safety and Health Law for lifting. At this time, it is absolutely not allowed to stand or operate the hoisting machinery under the lifted objects.

●If the whole machine needs to be lifted during on-site installation, the lifting lugs of the actuator cannot be used, and the lifting holes on the valve body must be used.

●Personnel carrying out any adjustments to the installation of valves shall use equipment and clothing normally used for valve installation.

●Lines must be depressurized, drained and vented before valves are installed.

●Handling and installation of all valves and actuators must be carried out by personnel trained in all aspects of erection and manual/mechanical handling techniques.

●Personnel injury may result from packing leakage. Valve packing is tightened from the factory; however, it may be necessary to re-adjust the packing to meet specific application conditions.

●Please clean the inside of piping thoroughly to remove sundries, welding slag and rust before installing this control valve. Any foreign

Precautions for installation: We have adjusted the limit screw on the actuator in place before its leaving from the factory. Please do not adjust the limit screw during use. If you need to do so, please consult the technical personnel of Chongqing Chuanyi Control Valve Co., Ltd.

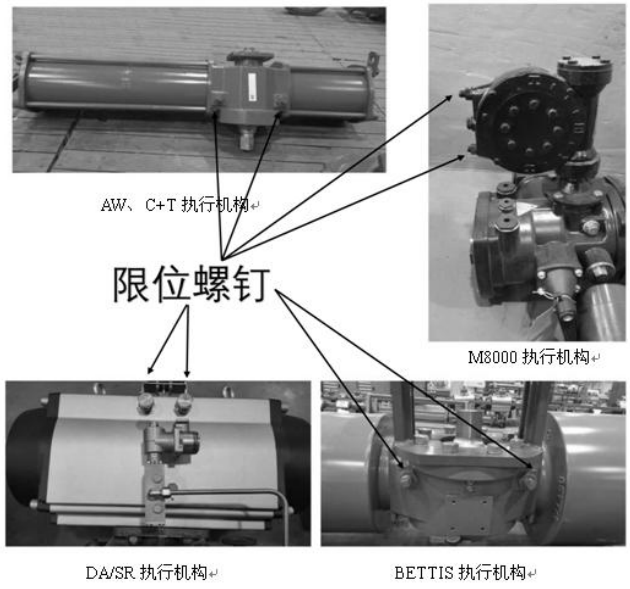


Fig. 7 Schematic Diagram of Stop Screw Positions of Various Actuators

3-2 Installation Position

The standard mounting arrangement for a control valve assembly is to mount the actuator vertically above the valve. Other positions may cause uneven wear of the valve trim, affecting the performance of the valve. It is allowed to install within the range shown in Fig. 8 as a last resort. If the control valve may be subject to vibration and external force, the yoke attached to the control valve or the piping

bracket should be used.

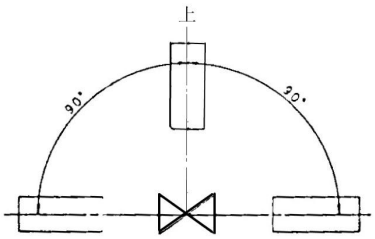


Fig. 8

3-3 Installation Direction and Support Requirements of Actuator on Pipeline

The control valve assembly is normally mounted with the actuator vertically above the valve. Other locations may result in uneven wear of the valve trim affecting the performance of the valve. For some valves, when the actuator is not vertical, it may also need to be supported by bracing.

Suggestions for pipeline installation direction of various actuators:

(1) HA series: vertical installation is recommended. According to the field use data, there is no problem in some HA2~4 horizontal installation and use. However, according to theoretical analysis, the probability of problems in horizontal installation of HA4X2 or HA5Y actuators is relatively large.

●When HA4X2 or HA5Y actuator is placed horizontally, the membrane type diaphragm assembly has no support in the inner cavity and is entirely supported at the guide sleeve of push rod. This position is mainly used for guiding. If it bears support, the gravity of the diaphragm assembly (including tray, etc.) will be completely pressed on the edge of the push rod guide, resulting in large friction. In addition, the material of push rod 304 is not wear-resistant, which may easily cause scratches to the push rod and abnormal sound. Seizing and scratching of seals leading to air leakage. ;

●The HA actuator is of a multi-spring structure, and the spring has only 1 side guide, which is very short and weak in strength. When placed horizontally, it is easy to cause the spring to topple over, which may lead to failure of the whole machine.

(2) HV series: any installation

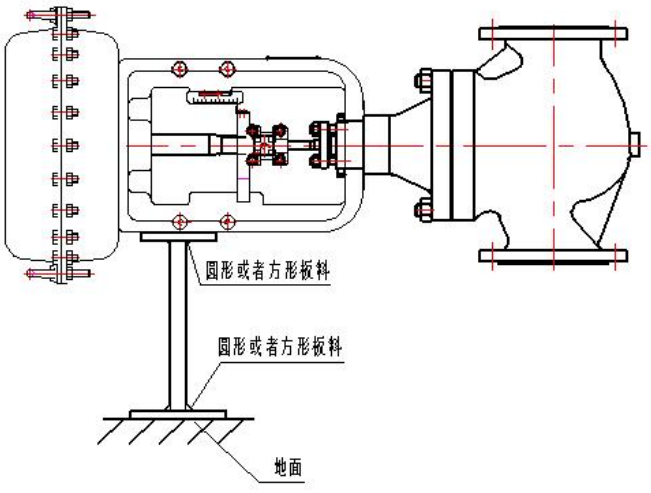
(3) AT series: any installation

(4) AW series: any installation

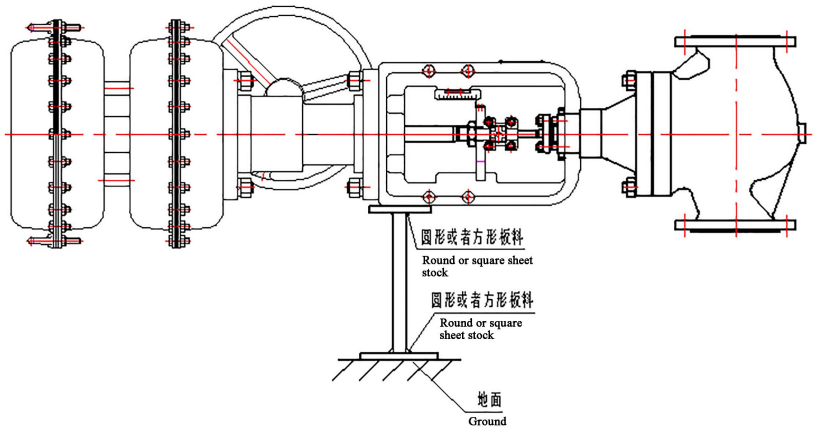
(5) VR series: The actuator shall be installed vertically, and horizontal installation is prohibited.

The reason is similar to that of the above HA diaphragm actuator. Due to the straight stroke and corner stroke, there is a large rotational eccentricity, which easily leads to friction and jamming inside the cylinder.

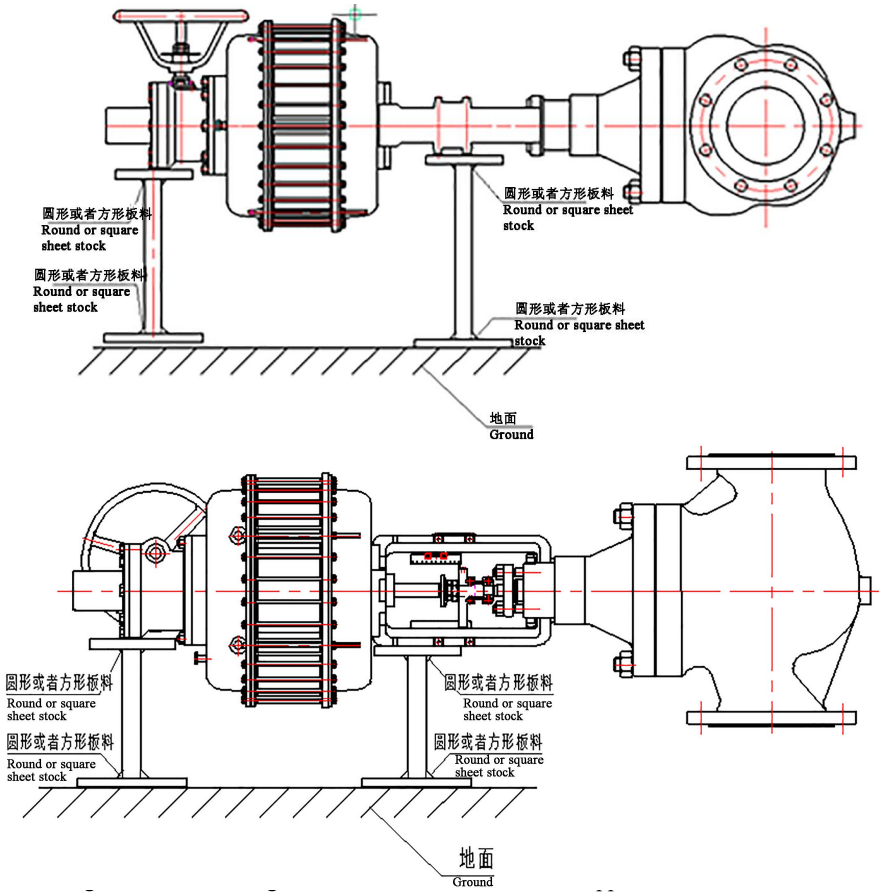
●When the actuator is installed horizontally, it is necessary to support the schematic diagram with supports:



Schematic Diagram of Horizontal Installation Support of HA1~4



Schematic Diagram of HA4X2 Horizontal Installation Support



3-4 Precautions for Connecting Actuator with Valve

3-4-1 Connection with pneumatic actuator

（1） For HA Reverse Actuators

Introduce an air source pressure of 40 kPa into the diaphragm chamber, place a transition block between the push rod and the valve stem, remove the input air source to make the valve core contact with the valve seat; at this time, adjust the precision reducing valve, introduce an air source pressure of 20 kPa into the diaphragm chamber of the actuator, remove the transition block and connect the slotted nut.

（2） For HA direct action actuators

Place a transition block between the push rod and the valve stem, introduce a certain air source pressure into the diaphragm

chamber of the actuator to make the valve core contact with the valve seat, adjust the input value of the air source pressure to 20 kPa, remove the transition block, and connect the slotted nut.

（3） For HA pneumatic diaphragm actuator and HV single-acting cylinder piston actuator

Check the spring range according to the nameplate. According to the starting position, adjust the precision pressure reducing valve, introduce the maximum air source pressure within the spring range into the diaphragm chamber of the actuator, and observe whether the product can go through the full stroke.

（4） For double-acting actuators

Input an air source pressure of 500kPa from the upper end, adjust the precision reducing valve when the push rod reaches the lower end, input a certain air source pressure from the lower end to move the push rod upward by 2mm, and connect the slotted nut (or other connecting pieces). According to the starting position, install and fix the travel board, input an air source pressure of 500Kpa from the lower end, and observe whether the product can go through the full stroke.

3-4-2 Connection with Electric Actuator

（1） Connect the actuator and valve body components, remove the actuator housing, and loosen the mechanical limit mechanism and limit switch.

（2） Turn the handwheel to make the push rod contact with the valve stem, then turn the handwheel for 2 turns in the opposite direction, connect the push rod and the valve stem, install the travel board, and fix the lower end limit switch and mechanical limit mechanism. Connect the power and control wires according to the actuator instructions. Give the control signal, make the valve travel to the full stroke, and fix the upper end limit switch and mechanical limit mechanism. Note that the limit switch at the starting point and ending point of the actuator shall act before the mechanical limit mechanism. Check whether the action mode of electric opening or closing is correct.

（3） Cut off the power supply and signal, remove the connecting wire and install the housing.

4. Maintenance

Valve parts are subject to normal wear and must be inspected and replaced as required. The frequency of inspection and maintenance depends on the severity of process conditions. Packing maintenance and replacement operations can be carried out while the valve is still installed in the pipeline. The contents of regular observation and maintenance are as follows:

1. Check the actuator for air leakage;
2. Check whether the control accessories work normally;
3. Whether the packing part leaks;
4. Whether the valve operates smoothly;
5. Whether the system flow is normal.

⚠Warning

Avoid personal injury or property damage caused by sudden release of process pressure or bursting of parts. Before carrying out any maintenance operation:

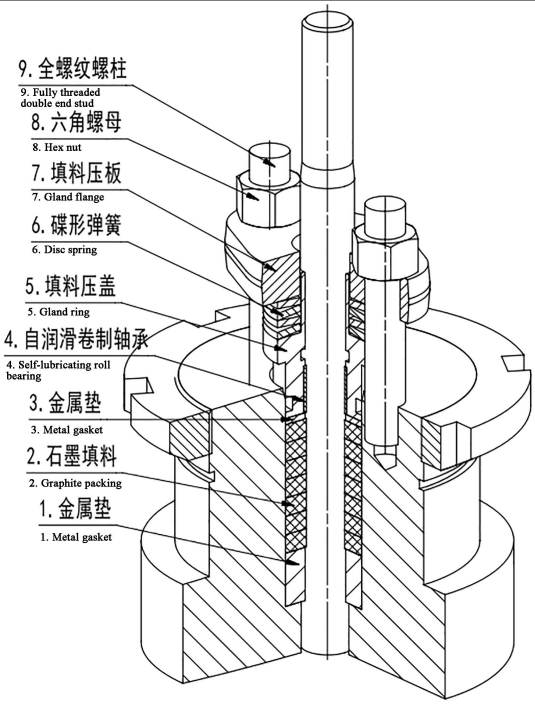
●Always wear protective gloves, clothes and goggles during any maintenance operation to avoid personal injury.

●Disconnect all operating lines that supply air pressure, power or control signals to the actuator. Make sure that the actuator does not suddenly open or close the valve.

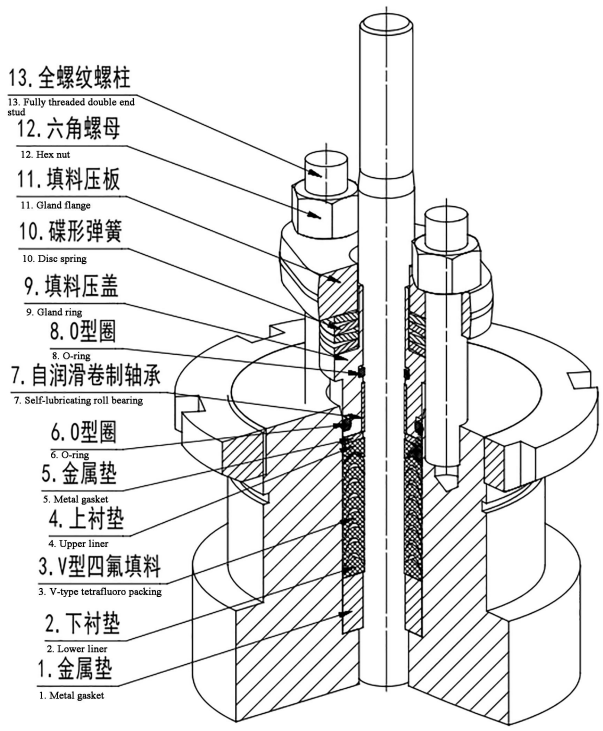
●Isolate the process pressure from the valve by bypassing or completely shutting down the process. Completely relieve the process pressure on both sides of the valve. Drain the process medium on both sides of the valve.

●Vent the pneumatic actuator loading pressure and release any actuator spring pre-compression force.

4-1 Maintenance of packing



Graphite packing system



PTFE packing system

If non-spring-loaded packing leaks unexpectedly, an attempt should first be made to limit the leakage by adding a little PTFE or graphite packing and then strengthening the stem seal by tightening the packing flange nuts.

If the packing is relatively new and seats snugly on the stem, and if tightening of the packing flange nuts does not stop leakage, the stem may be worn or scored so that a seal cannot be formed, and the surface finish of the new stem is critical to forming an excellent packing seal. If the leakage is from the outside diameter of the packing, it may be caused by nicks or scratches in the stuffing box wall.

When the control valve is used for high-temperature medium (such as steam) and other working conditions, it is recommended to fill lubricating oil into graphite packing every six months. Filling method: fully open the valve body, slightly loosen the nut of the control valve gland flange, drop non-iced lubricating oil into the gap between the valve stem and the packing, and let the valve stem reciprocate several times to achieve the purpose of lubrication.

4-2 Replacement of packing

（1） Isolate the control valve from line pressure, relieve pressure on both sides of the body and discharge process media from both sides of the valve, using a lock to ensure that these measures remain effective when you are working on the equipment.

（2） Input a certain air pressure to the actuator so that the pointer points at 80%~90% of the fully closed position.

（3） Loosen the hexagon bolt on the slotted nut that connects the valve stem and pushrod, and remove the slotted nut to separate the actuator pushrod from the valve stem.

（4） Loosen the yoke lock nut and lift it down.

（5） Lift the actuator to separate it from the valve body.

（6） Loosen the gland flange nut so that the packing does not stick to the valve stem, and remove all travel indicator parts and slotted nuts from the valve stem threads.

Warning

To avoid personal injury or property damage caused by uncontrolled movement of the bonnet, loosen the bonnet according to instructions given in next step. Do not forcibly pull or remove the tightly attached bonnet with tools that can expand and contract or

Attention

Avoid damage to the seating surfaces caused by the spool and stem assembly falling off the bonnet after partially lifting it.

(7) The bonnet is fixed to the valve body by hex nuts. Loosen these nuts by about 3 mm and then shake the bonnet or pry it apart between the bonnet and valve to loosen the body-to-bonnet gasket joint surface. Pry up the bonnet with a pry bar along its periphery until it is loosened. If no fluid is leaking from the joint surfaces, remove nuts or hexagon head screws completely and carefully lift bonnet off body.

(8) Remove the lock nut, separate the valve core and valve stem from the bonnet, and place the parts on the surface of protective materials to prevent damage to the seal ring or seating surface.

(9) Remove the bonnet gasket and cover the opening of the valve to protect the surface of the seal ring and prevent foreign matters from entering the inner cavity of the valve body.

(10) Remove the packing flange nut, gland flange and packing gland. Use a round bar or other tools that will not scratch the packing box wall to carefully push out all remaining packing parts from the valve side of the bonnet to clean the packing box and metal packing parts.

(11) Check the surface of valve stem thread and stuffing box for sharp edges, which may cut packing. Scratches or burrs will cause leakage of stuffing box or damage new packing. If the surface condition cannot be improved by gentle sanding with abrasive paper, replace damaged parts.

(12) Remove the cover protecting the inner cavity of the valve body and install a new bonnet serrated washer to ensure that the gasket seating surface is clean and smooth, then slide the bonnet along the stem and onto the stud.

> Attention⚠
>
> The correct method of tightening the screw bolts compresses the serrated washer, thereby adequately sealing the body-to-bonnet joint.
>
> Proper screw bolt tightening methods include, but are not limited to, ensuring that the threads of the screw bolts are clean and evenly tightening the nuts on hex-head screws or stud bolts in a crisscross pattern. Tightening one hex head screw or nut may

(13) Install screw bolts and install new packing or metal packing box parts according to the corresponding structure. When the packing is PTFE, place a smooth-edged pipe on the valve stem and gently knock each soft packing part into the stuffing box. Slide the packing gland and gland flange properly and install the nut of the gland flange. When the packing is V-shaped graphite packing, put it into the stuffing box first, and then install the packing gland, gland flange, packing screw bolt and nut. Compress the packing by tightening the packing nut.

4-3 Maintenance and removal of valve trim

4-3-1 Rust prevention

For the ZJHR-1 O-type cut-off ball valve produced by our company, under non-oil prohibition conditions, our company has applied antirust oil to the non-coating surface of carbon steel products to prevent product rust. The application area includes, but is not limited to, the valve body flow channel and flange sealing surface.

Note: Anti-rust oil is an anti-rust product with mineral oil as the base oil. If cleaning is required, organic solvent or high temperature steam can be used for cleaning. After cleaning, the product will have no anti-rust ability.

4-3-2 Removal

(1) Disassembly and assembly of floating ball valve

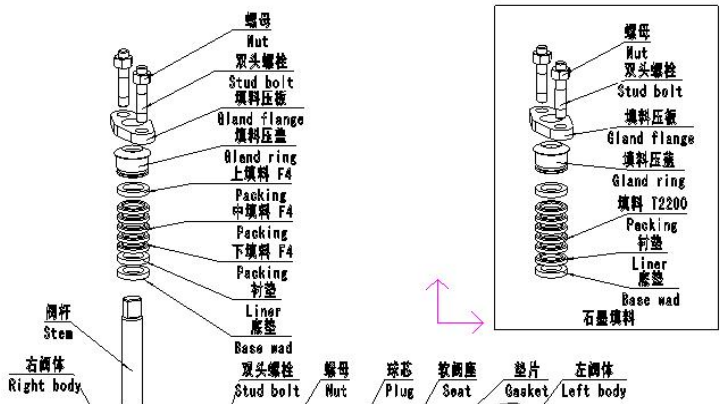


Fig. 10 Exploded View of Floating Ball Valve

Before dismantling the valve, make sure that the pipeline pressure is released and the valve is in the open position. The electric ball valve shall also disconnect the power source.

Specific disassembly steps of ball valve:

1).Open the valve to a half-open position and flush possible hazardous substances inside and outside the valve body;

2) Remove the connecting screw bolts and nuts on the flanges on both sides, and completely remove the valve from the pipeline;

3) Disassemble the driving device, yoke and connecting piece in sequence;

4) Remove the gland flange and packing gland, and take out the packing;

5) Remove the connecting screw bolts and nuts between the left and right valve bodies, separate the left and right valve bodies, and remove the washers;

6) Take out the ball and valve seat;

7) Push the valve stem down gently from the middle hole of the valve body until it is completely taken out;

8) Place all parts in the designated positions.

（2）Sequence of Disassembly for Fixed Ball Valve

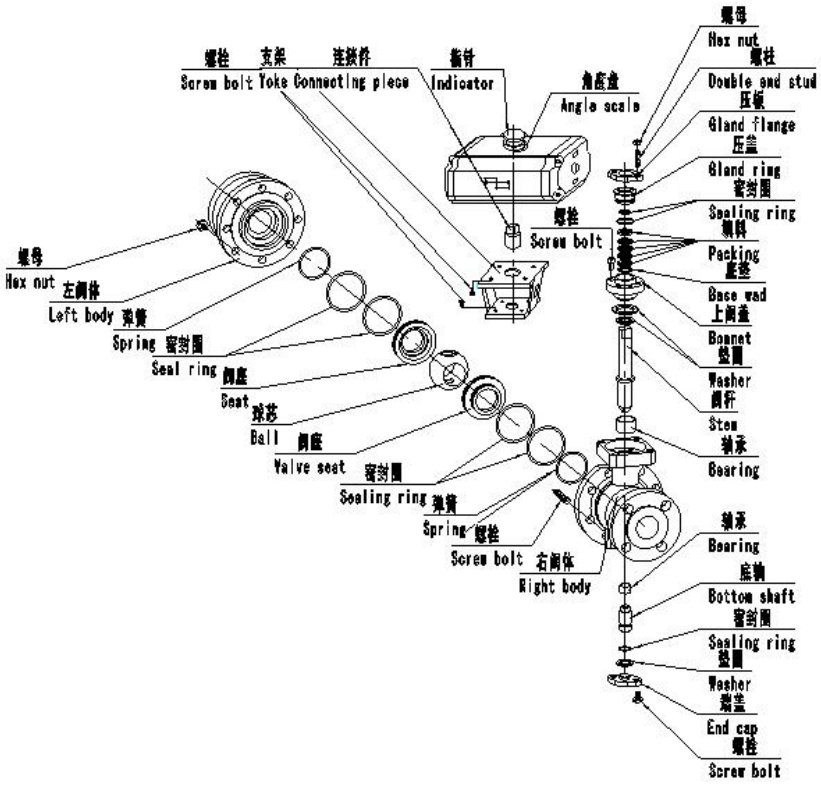


Fig. 11 Exploded View of Fixed Ball Valve

Before dismantling the valve, make sure that the pipeline pressure is released and the valve is in the open position. The electric ball valve

shall also disconnect the power source.

Specific disassembly steps of ball valve:

1).Open the valve to a half-open position and flush possible hazardous substances inside and outside the valve body;

2) Remove the connecting screw bolts and nuts on the flanges on both sides, and completely remove the valve from the pipeline;

3) Disassemble the driving device, yoke and connecting piece in sequence;

4) Remove the gland flange and packing gland, and take out the packing and bottom gasket;

5) Remove the bonnet and take out the washer;

6) Take out the valve stem;

7) Remove the end cover and take out the washer and bottom shaft;

8) Remove the connecting screw bolts and nuts between the left and right valve bodies, separate the left and right valve bodies, and remove the washer;

9) Take out the ball, valve seat and spring;

10) Remove the seal ring from the valve seat;

11) Remove the bottom plug and washer;

12) Remove each grease injection valve (only for API ball valves).

13) Place all parts in the designated positions.

4-3-3 Lapping-in of Valve Core and Seat

For metal valve seat construction, the seating surfaces of the plug, valve seat ring or liner can be lapped to improve shut-off performance. (Deep cuts should be removed by machining rather than grinding).

> Attention⚠
>
> To avoid damage to the bellows seal bonnet assembly, do not attempt to lapp metal seating surfaces. Any forced lapping rotation will damage the internal elements of the bonnet on the bellows seal.

Grinding method:

（1） Wipe the valve core and seat clean.

（2） Apply a layer of high-quality abrasive sand with particle size of 280 to 600 evenly and appropriately at the valve core valve line;

（3） Install the valve cover and fix it with the valve body;

（4） Install a slotted nut or other clamping device to clamp the valve stem, and then rotate the valve core and the valve seat for running-in;

（5） During grinding, attention shall be paid to slight force, stability and uniformity;

（6） After grinding for a period of time, remove the slotted nut, other clamping devices and bonnet, and check whether the contact area between the two valve lines of the valve core and valve seat is more than 90%; if so, carry out assembly; otherwise, repeat steps 1) ~ 6).

4-3-4 Assembly

The assembling order is reverse to the disassembling order.

5. Acceptance, Handling and Storage

5-1. Acceptance and handling

> ⚠Warning
>
> As the control valve is heavy, the following should be noted during handling. Otherwise, serious personal injury may be caused.
>
> ●Hoisting machinery conforming to the labor safety and health law shall be used for loading, unloading and handling. It is absolutely forbidden to stand or operate hoisting machinery under hoisted objects.
>
> ●For small-size products packed in corrugated boxes, the strength of the packing box is often reduced due to wetting by water.

5-2. Storage

(1) Before being installed on the pipeline, it must be kept in a packaged state.

(2) It is not allowed to keep it in the following places:

(a) Where there is rain.

(b) Where temperature exceeds 60°C.

(c) Dusty places.

(d) Where humidity exceeds the permitted level

(3) If the package is disassembled for performance inspection during acceptance, it must be repackaged until installation begins.

(4) Do not open the plugs and covers of air piping interfaces and electrical wiring interfaces before the commencement of air piping works and electrical wiring works.

(5) If the storage period is more than one year, the packing will often be hardened and aged. Therefore, please open the package, loosen the hex nut for fastening the packing by 2 turns, and store it in this state. When in use, please tighten the hex nut and apply air or water pressure equivalent to the fluid pressure from the connecting flange of the piping to check for leakage in the packing part. If there is any leakage, the packing should be replaced with a new one. Please follow the instructions of disassembly and assembly for replacement essentials.

(6) In case of storage after use, please handle according to the following items:

（a） Please carefully clean the inside of the control valve with water and dry it.

（b） Do not damage the sealing surface of the piping connecting flange shown in Fig. 13-1.

（c） Please carry out rust-proof treatment for the position prone to rusting.

Please carry out waterproof treatment on the air piping interface and electrical wiring interface.

6. Devanning

Warning

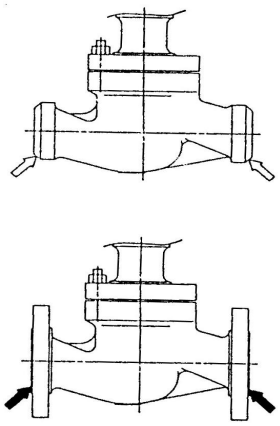
- When taking out the control valve from the packing box and lifting it, please use a standardized sling suitable for the weight of the control valve to avoid damaging the control valve. At this time, please use the eyebolts on both sides of the actuator (the eyebolts are also a pair of screw bolts with ring heads for pressing the diaphragm cover), and make the load even. Please refer to Fig. 13-2. However, if the weight marked on the surface of the packing box exceeds the following limited weight range, please do not use the eyebolt installed on the membrane cover, and it must be carried out as shown in Fig. 13-3. Otherwise, personal injury or death may be caused due to unsafe hoisting.

Actuator model	Maximum load (kg)	Single actuator weight (kg)
HA1	160	8
HA2	160	16
HA3	160	32
HA4	220	68

Attention

After unpacking, the following should be noted to prevent damage of control valve.

- Please do not damage the sealing surface or welding groove of the piping connecting flange as shown in Fig. 12-1 to avoid leakage on the sealing surface.
- When accessories such as positioner, accelerator and solenoid valve and manual operating mechanism are installed on the



Avoid damage

Surface indicated by the arrow

Fig. 12-1

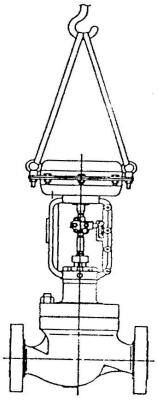


Fig. 12-2

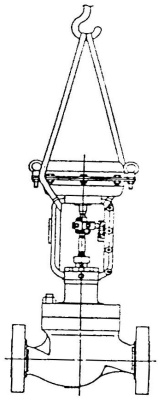


Fig. 12-3

7. Routine Inspection and Regular Inspection

7-1 Daily inspection

For the control valve that plays an important role in production, the routine inspection should be performed as follows.

- In order to prevent malfunction, please confirm whether there is air leakage at the air source interface.
- Please confirm whether there is leakage at the packing and gasket. In case of fluid leakage, please check the valve stem for damage or seizure. If no abnormality is found, please tighten the packing while confirming the action state.
- Please confirm whether there is abnormal sound and whether the control valve and piping vibrate during action.

7-2 Regular Inspection

All items subject to the above routine inspection shall be inspected for all control valves once every six months.

In case of any abnormality found in routine inspection and regular inspection that cannot be handled, disassembly and maintenance can be carried out during shutdown or contact the Sales Department of Chongqing Chuanyi Control Valve Co., Ltd.

8. Fault Symptoms, Causes and Measures

Table 4

Fault symptom	Cause	Solution
The valve stem does not rotate well	1. The packing is pressed too tightly. 2. The valve stem and its mating part are damaged or have gathered dirt 3. Too many times of opening and closing 4. The packing gland tilts outward and the valve stem is blocked. 5. The valve stem is bent. 6. The pre-tightening specific pressure of valve seat and ball is too large.	1. Re-adjust the loose screw bolts 2. Disassemble, repair and remove dirt 3. Disassemble and clean it to remove dirt 4. Enlarge the inner hole of packing gland or make corrections. 5. Replace the valve stem 6. Clean or replace the valve seat.
Internal leakage of valve	1. Insufficient pre-tightening force 2. The sealing surface is damaged or dirty 3. The seal ring is damaged	1. Increase the pre-tightening force 2. Trim or grind the sealing surface and remove dirt. 3. Replace the seal ring.
Leakage at the stem packing	1. Insufficient packing pressing force 2. The packing is used too old and fails.	1. Tighten the gland screw bolts 2. Replace the packing
Leakage of gasket between valve body and support sleeve	1. Insufficient tightening torque 2. The gasket is damaged.	1. Increase the torque. 2. Replace the gasket

9. Suggestions on Disposal of Abandoned Valves

⚠Attention

●The following so-called discarded valves refer to the valves of fixed assets that are scrapped according to relevant regulations and whose production is stopped.

●After the product is scrapped, the parts polluted by the medium shall be disposed of by a qualified professional organization.

1. After the abandoned valve is shut down as planned, it should be identified and evaluated for safety and environmental factors, corresponding countermeasures should be formulated, and thorough process treatment should be carried out. After passing the sampling analysis, there will be no residual materials in it to achieve a state of safe shutdown and pollution control.

2. During the process of treatment of discarded valves, the emptying, pressure relief, replacement, and purging operations shall be carried out in strict accordance with the emptying and replacement scheme. The discharged "three wastes" materials shall be disposed of in accordance with relevant regulations to ensure that the wastewater and exhaust gas meet the discharge standards, and any kinds of wastewater and wastes are not allowed to be discharged into open ditches or rainwater drainage systems. Waste residue shall be sent to the place designated by the environmental protection department for disposal. Sound elimination and insulation facilities shall be provided during purging, and the noise generated shall not disturb residents (or cause pollution to the surrounding environment).

3. During the cleaning operation of abandoned valves, a detailed cleaning scheme shall be formulated to clarify the types, toxicity, hazards and control means of substances discharged during the cleaning process. Cleaning wastewater must be treated to meet the discharge requirements through analysis before it can be discharged or treated.

4. Valves that have been applied for asset scrapping shall be sealed or dismantled, or disposed of as waste materials. They shall not continue to be put into production, nor shall they be leased or transferred.

10. Ordering Notice

Please specify the following items during ordering:

1. Product model 2. Nominal diameter × valve seat diameter 3. Nominal pressure and flange connection type

4. Materials of valve body and internal components 5. Bonnet form 6. Flow characteristics

7. Actuator model and air supply pressure 8. Valve action type

9. Accessories (positioner, handwheel mechanism and pressure reducing valve) 10. Special requirements such as no oil or no copper

11. Medium name, temperature and specific gravity 12. Whether the medium viscosity contains suspension 13. Spare parts

Mailing address: No. 879, Caihe Road, Caijiagang Town, Beibei District, Chongqing

Chongqing Chuanyi Control Valve Co., Ltd.

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