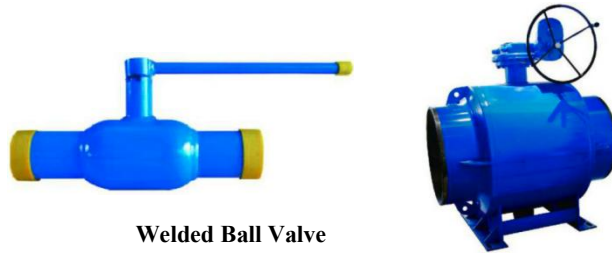


A5002-...Welded Ball Valve Series



**Welded Ball Valve
A5002-...Series
Welded
PN16/PN25**

Performance & Features:

Fully welded ball valves are forged from steel plates and integrally assembled and welded, eliminating potential external leakage of the medium. They adopt a spring-loaded seat assembly structure with strong adaptability to pressure and temperature variations, ensuring close contact between the sealing ring and the ball, and enabling flexible and easy opening and closing while ensuring reliable sealing. The ball and stem are precisely machined, reducing the friction coefficient between contact surfaces, further enhancing the valve's sealing performance and optimizing operating torque.

- ◆ Nominal diameter: DN15...DN1400 (For other size, please consult the person in charge at ZIGTOO for details);
- ◆ Fully welded valve body features an integrated structure. Adopting advanced forging technology, the valve body is forged into a one-piece shape. The main body is welded with nozzles using precision CNC welding equipment, forming a fully integrated valve with absolutely no external leakage.
- ◆ The ball is processed by a special high-precision mirror grinding machine, meeting the design requirements for roundness, coaxiality and concentricity, with the roundness controlled to less than 0.02 mm, and a surface roughness Ra controlled within 0.2 ~ 0.10 μm. Inspection completed in one pass using the built-in Renishaw electronic probe (measuring accuracy 0.001 mm), effectively ensuring consistency between inspection data and measurements from CMM.
- ◆ Multi-seal seat structure design and anti-blowout stem design, ensuring zero leakage of the valve.
- ◆ Sealing surface and ball surface normally closed, making them less susceptible to erosion by the medium, and allowing for easy installation and maintenance.
- ◆ Unique flow design adopted for the ball valve, ensuring low pressure drop and reduced pump power consumption, thereby greatly saving energy and lowering operating costs.
- ◆ Valve seat made of high-end international raw materials, featuring high structural density, excellent self-lubrication, low friction coefficient and good aging resistance.

Applications:

Welded ball valves can be used in applications such as district heating. They are also suitable for various regional energy management systems.

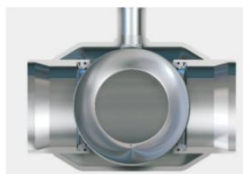
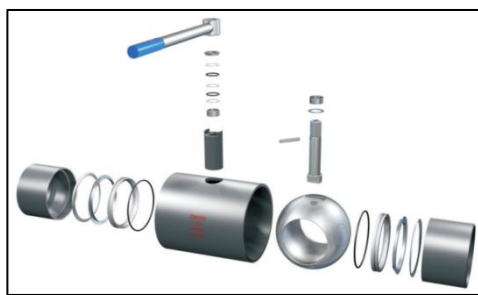
Model Designation:

For example: A5002 (H)-100-16C

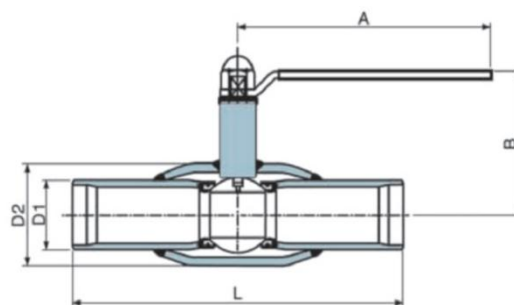
1. "A50": Ball Valve;
2. "0": 2-way Ball Valve; "3": 3-way Ball Valve;
3. "2": Welded Connection; "3": Flanged Connection;
4. "H": Handwheel Operated (omitted by default), "G": Gear-driven, "E": Electric Actuated, "P": Pneumatic Actuated;
5. "-100": Nominal Diameter DN100;
6. "-": Separator;
7. "-25/16": Nominal Pressure, PN25/PN16;
8. "C": Cast Steel, "P": Stainless Steel;

Technical Specification:

PN (Nominal Pressure)	PN16, PN25 (For others sizes, please consult the ZIGTOO representatives for details.);
Working Temperature	-25°C~180°C
Body	Cast Steel Pipe A105
Ball	Stainless Steel 304
Seat	Cast Steel A105
Seal	Carbon-Filled PTFE (PTFE+25%C)/Stainless Steel-Filled PTFE (PTFE+SPCB)
Valve Body Nozzle	Cast Steel Pipe A105
Shaft	Stainless Steel 304
Spring	Alloy Steel SM20C
Stem bushing	Alloy Steel SM20C

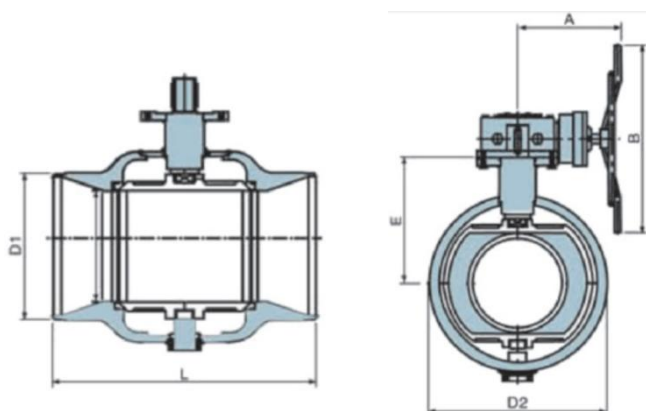


Dimension Chart: Handwheel Ball Valve:



DN	A	B	L	D1	D2
15	129	64	210	21.3	42
20	129	64	230	26.7	42
25	159	76	230	33.4	48
32	159	85	260	42.2	60
40	230	95	300	48.3	76
50	230	100	300	60.3	89
65	300	159	300	76.1	114
80	300	170	300	88.3	140
100	450	192	325	114.3	185
125	450	208	325	141.3	216
150	450	241	350	168.3	219

Gear Ball Valve:



DN	A	B	L	D1	D2	E
200	243	400	402	219	267	315
250	252	500	525	273	356	346
300	286	500	648	324	457	402
350	331	600	692	356	508	491
400	331	600	755	406	559	479
450	331	600	838	457	559	479
500	360	700	914	508	680	540
550	360	700	1035	559	718	577
600	413	800	1060	610	812	662
700	433	900	1346	712	1016	790
800	433	900	1524	813	1095	860
900	433	900	1727	914	1237	913
1000	433	900	1900	1016	1385	965
1100	550	900	2000	1118	1600	970
1200	550	900	2100	1220	1700	975

Installation Instructions:

- ◆ Valve installation position: For valves installed on horizontal pipelines, the stem orientation shall be selected in the following order: vertically upward, horizontal. Vertical downward installation is not permitted. Before installation, check whether a flow direction arrow is marked on the valve. If no flow direction is marked, medium may enter the valve from either direction, and the valve can be installed as demanded. If a flow direction is marked, ensure the installation orientation is correct, with the medium flow direction consistent with the arrow.
- ◆ Prior to welding, the valve shall be kept in the fully open position, and the pipeline shall be thoroughly cleaned. Compressed air may be used to blow away iron oxide scale, sand, welding slag and other debris to ensure cleanliness.
- ◆ During welding, the valve must remain in the open position to prevent contamination of the ball surface caused by welding contact. Meanwhile, avoid overheating the valve and implement proper cooling measures, such as using wet cloths to protect the valve. For the first welding pass, use argon arc welding for backing to prevent welding slag from damaging the valve.
- ◆ After welding, do not operate (open or close) the valve immediately. Allow the valve to cool down to ambient temperature before normal operation.
- ◆ For large-bore ball valves ($\geq \text{DN}600$), a bypass valve and bottom support may be installed as required by the project to ensure proper valve operation.
- ◆ When handling the valve, take care to protect it. If lifting with a crane is required, the lifting points shall be the lifting lugs or the centerline of the valve body. Do not use the handwheel, valve stem or handle as load-bearing points, so as to avoid damage to these components.

