



ISO 6164 BALL VALVES

Literature





Figure 1

ISO 6164 Ball Valves

Introduction:

ISO 6164 ball valves are made to ISO 6164-1 (ISO250) and ISO 6164-2 (ISO400) standards. For ISO 6164 ball Valves, the size available is 4" and made of stainless steel material.

ISO 6164 is a valve design to use in high pressure hydraulic systems. The valve working pressure is determined by valve body size and when the body size goes bigger, the valve operation pressure goes lower. The final overall running pressure is determined by pipe or tube rating and flange connected. The working temperature ranges from -10°C to 100°C, subjected to the material combination of the complete ball valve.

Model Type (ISO 6164-1)	Unit Weight (kg)	Working Pressure PN (bar)
KH-DN13-ISO250	2.90	350
KH-DN19-ISO250	6.80	350
KH-DN25-ISO250	7.20	315
KH-DN32-ISO250	12.50	250
KH-DN38-ISO250	16.60	250
KH-DN51-ISO250	24.90	250
KH-DN56-ISO250	26.60	250
KH-DN63-ISO250	36.90	250

Table 1: ISO 250 Ball Valve Series

Model Type (ISO 6164-2)	Unit Weight (kg)	Working Pressure PN (bar)
KH-DN13-ISO400	2.90	400
KH-DN19-ISO400	6.80	400
KH-DN25-ISO400	7.20	400
KH-DN32-ISO400	12.50	400
KH-DN38-ISO400	16.60	400
KH-DN51-ISO400	24.90	400
KH-DN56-ISO400	26.60	400
KH-DN63-ISO400	42.53	400
KH-DN70-ISO400	43.00	315
KH-DN80-ISO400 (PN100)	51.00	100
KH-DN80-ISO400 (PN400)	63.00	400

Table 2: ISO 400 Ball Valve Series

Materials:

The material available for ISO 6164 ball valves is stainless steel and carbon steel. The major component parts of the ball valve consist of the body, ball, stem, ball seats and O-ring. Please refer to the standard chemical combination below. Other chemical combinations can be customized upon request.

Materials	DN 15-50 212A	DN 15-50 2128	DN 15-50 282A	DN 15-50 2828
Body	Steel	Steel	Steel	Steel
Ball	Steel	Steel	Steel	Steel
Stem	Steel	Steel	Duplex	Duplex
Ball Seats	POM	POM	POM	POM
O-rings	NBR	FPM	NBR	FPM
T Min. / T Max.	-10°C / 100°C	-10°C / 100°C	-10°C / 100°C	-10°C / 100°C

Table 3: Chemical combination for complete ball valve

How do you stop a ball valve leak?

When larger ball valve size has to be activated at full differential pressure, a smaller ball valve can be used before activation in order to equalize the pressure. A **combined bypass** within the **flange valve body** to provide **less leakage points** compared to a pipe installation solution.

Both main valve and bypass valve can be offered with locking device features or any other accessory like limit switches or actuators.

- Bypass valve is a standard manifold mounting PKH valve which can be easily removed, replaced and maintained.
- Bypass manifold mounting valve provides bubble tight shut off application.

What are ball valve accessories?

Valve can be customised with additional accessories options on request as per below:

- **Locking devices**
- **Actuators packages**
- Mounting holes
- Alternative lever designs and materials
- Position switches
- Special combination
- Detent

What is a ball valve used for?

The ball valve can be applied in different industry:

- Pipeline construction
- Machine tool
- System engineering
- Offshore sector
- Marine hydraulic
- Power units
- Oil & Gas refinery rings

Does the valve have any certification?

MHA valve has the following test facilities:

Test mediums	<ul style="list-style-type: none"> ● Hydraulic oil ● Water ● Air ● Helium ● Nitrogen
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Test Pressures	<ul style="list-style-type: none"> • 0.6 MPa to 40 MPa air • 0.01 MPa to 650 MPa water • 20 MPa nitrogen • Helium leak test
Test Temperatures	<ul style="list-style-type: none"> • 20°C to 500°C

Table 4: Test Facilities by MHA-Zentgraf

MHA carries out the following technical approval and issues certificates as below:

6.1 Test certificates according to DIN EN 10204 for ball valves

- 3.1
- 2.2

6.2 Material certificates according to DIN EN 10204

- 3.1
- 3.2
- 2.2

Certificate Type	Types of Test Certificates	Content of Certificates	Confirmation of Certificate by
2.2	Test Report	Confirmation of accordance to the order stating the results of non-specific tests	The manufacturer
3.1	Inspection Certificate 3.1	Confirmation of accordance to the order stating the results of specific tests	Authorised manufacturer inspection representative (independent party from the production division)
3.2	Inspection Certificate 3.2	Confirmation of accordance to the order stating the results of specific tests	Authorised manufacturer inspection representative (independent party from the production division) and the authorised buyer inspection representative or the inspection representative who is authorised by official legal regulation

Table 5: Material Cert Type by MHA-Zentgraf

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