JFS

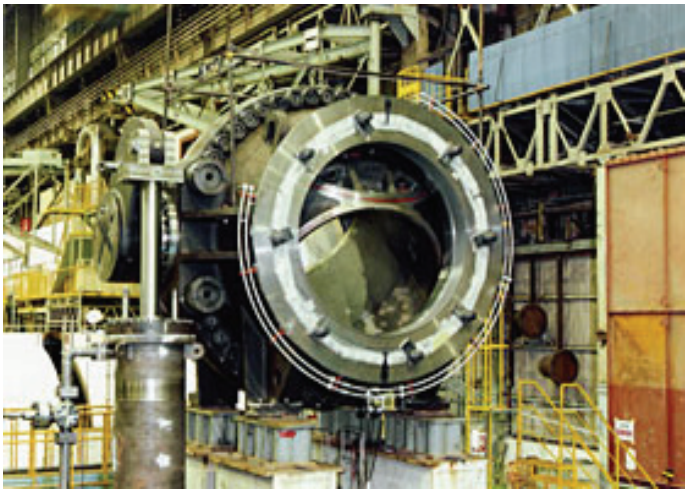
BEIJING JOINT FLOW SYSTEM CO.

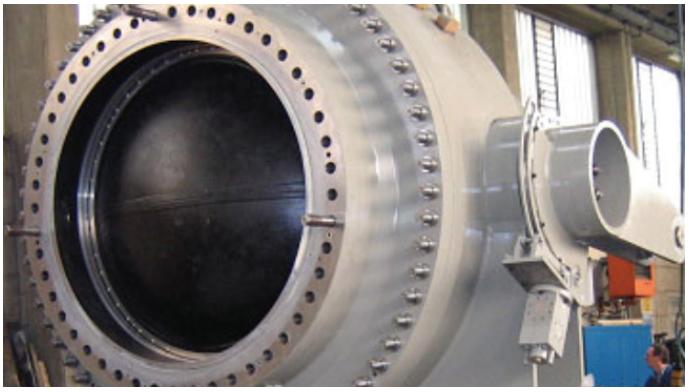
SPHERICAL VALVE

SERIES 14 SPHERICAL VALVE

HYDRAULIC CONTROLLED SPHERICAL VALVE

The Hydraulic Controlled Spherical Valve is usually used in hydropower station or pump storage power plant as inlet valve when the net water head is more than 300m. It is installed at inlet of the spiral case of hydraulic turbine.





FEATURE

- The Hydraulic Controlled Spherical Valve has maintenance seal in upstream and working seal in downstream. Maintenance seal is manual controlled, working seal is automatically controlled. Movable sealing ring of maintenance seal and working seal can be moved along the pipeline direction to form sealing with the fixed ring on the plug. Sealing pairs is friction-free in the operation. The valve has small driving torque, long life-span and best safety and reliability.
- The sealing pairs are well machined with stainless steel. The maintenance seal and working seal can be replaced without dismantling main body of valve.
- The sealing operation medium of movable sealing ring is the upstream pressured water. The maintenance seal is set with manual mechanical locking device, which acts on movable sealing ring of maintenance seal through equally distributed wedge slide, to ensure the reliability of the seal when the control pressure disappears.
- The Hydraulic Controlled Spherical Valve has mechanical locking device with hydraulic control system to lock the turning parts of valve. The tuning parts can be automatically locked at the close position. The manual lock for maintenance is also provided. When lock device operates, any mistaken dictation cannot damage locking devices and other equipment.

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- There is one position indicator which shows the valve real position, and inputting and quitting indicators of maintenance seal and working seal.
- The valve body is assembled by two parts. It is fabricated with steel plate.
- Two horizontal valve shafts are made of forged steel or stainless steel.
- Valve shaft is assembled in sliding bearing sleeve. The bearing with high load capacity is self-lubricating compounding material and with less friction factor.
- The stem seal between valve shaft and body is rubber and assembled in cover outside the body. So it can be replaced without dismantling main parts and draining off the penstock.
- The sliding bearing sleeve has rubber sealing structure at both ends for prevention of solid particles such as silt infiltration into bearings.
- The hydraulic control device is designed according to application requirement. There is one hydraulic control station (power-pack) and one control panel.
- The valve can be opened, closed by hydraulic pressurized oil .Internal build-up UPS can guarantee one or two times, open-close procedure (even if power failure occurs).

TEST DATA

Nominal Diameter DN (mm)	600-2500	24''-100''
Nominal Pressure PN (MPa)	3.0~10.0	150lb~600lb
Hydraulic Shell Test Pressure (MPa)	1.5 times of Nominal Pressure	1.5 times of Nominal Pressure
Hydraulic Seal Test Pressure (MPa)	1.1 times of Nominal Pressure	1.1 times of Nominal Pressure

*More test specifications are available on request.

HYDRAULIC CONTROLLED SPHERICAL VALVE

PARTS LIST & MATERIAL

Item	Parts Name	Material
1	Body	Carbon steel
2	Plug	Carbon steel
3	Stem	Carbon steel/Stainless steel
4	Movable sealing ring	Stainless steel
5	Fixed sealing ring	Stainless steel

*More material specifications are available on request.

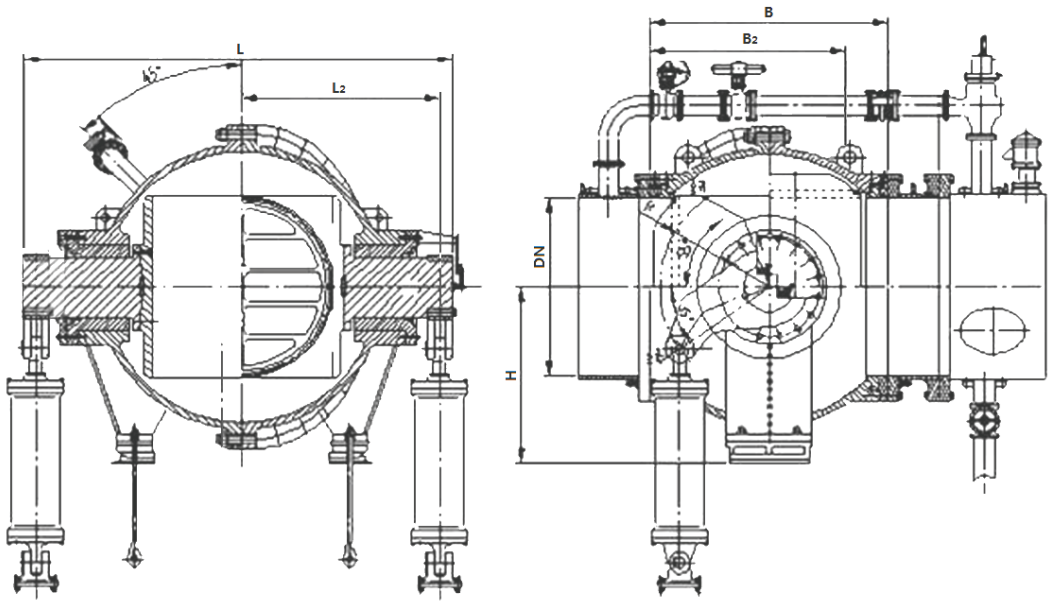
PERFORMANCE DATA

Item	Parts Name	Material
1	Applied temperature	≤80°
2	Applied Medium	Water, from river, reservoir, or Sea water
3	Time of valve opening	60s~120s
4	Time of valve closing	60s~120s
5	Maximum pressure of Hydraulic system	16MPa
6	Flow Resistance Coefficient	0.08

*More performance specifications are available on request.

HYDRAULIC CONTROLLED SPHERICAL VALVE

DIMENSION



DN	B	B_2	L	L_2	H
500	900	450	1480	880	560
600	1040	520	1680	920	700
700	1280	640	1880	950	760
800	1400	700	2030	980	850
1000	1620	810	2820	1400	1100
1100	1840	920	3200	1460	1150
1200	2030	1015	3340	1480	1300
1300	2080	1040	3340	1480	1400
1500	2250	1125	3200	1680	1600
1600	2430	1215	3800	1900	1650
1800	2740	1370	4000	2240	1850
2000	3040	1520	4220	2280	2020
2200	3260	1660	4440	2400	2280
2500	3670	1835	5565	2570	2450

*Detail dimensions refer to the assembly drawing when order.