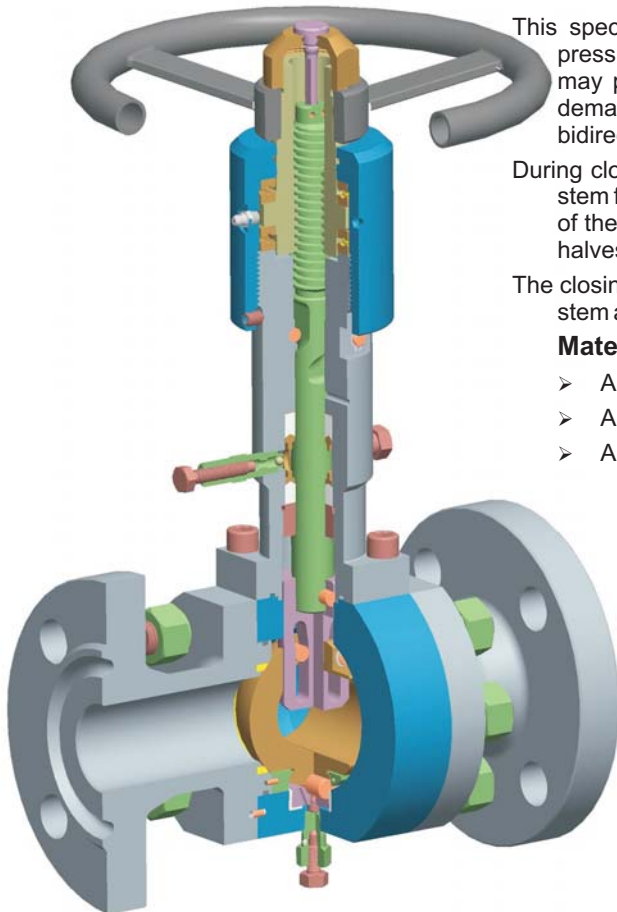


# LBX type dual closing ball valve

Dimension range	DN 50 - 200 / NPS 2" - 8"
Pressure range	PN 16 - 160 / Class 150 - 900
Temperature range	- 60°C - +150°C



This special valve with split closing element is designed for low and middle pressures. The dual closing ball valve – similarly to the traditional ball valve – may provide straight flow via the total cross section but with small torque demand contrary to the traditional one. The construction of the device ensures bidirectional sealing so the valves can be built in both flow directions.

During closing process the stem goes down while the spiral cam located on the stem forces the stem and the closing element to turn 90° frictionless. At the end of the closing process the wedge formed grooves tilting the closing element-halves to the sealing surfaces, providing closing in both directions.

The closing element is manufactured with high hardness nickel coating, while the stem and the activating head are nitrided.

**Materials:**

- ASTM A105
- ASTM A350 LF2
- ASTM A182 F316(L)

**Main features:**

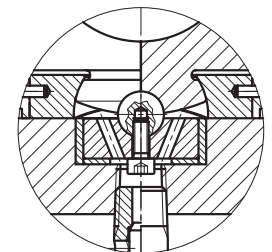
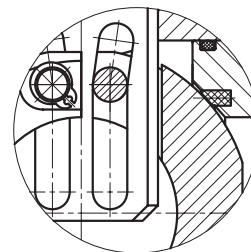
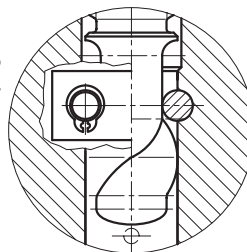
- Straight flow
- Split closing element
- Both side closing
- 90° turn of stem
- Turning and tilting closing element-halves
- Small torque demand as there is no friction between the closing element and the sealing
- Drain plug on the body
- Flanged or butt welded ends

**Design possibilities:**

- Electric motor operation
- Pneumatic operation
- Hydraulic operation

**Design standards:**

- Face to face length: ASME B16.10; EN 558
- Butt welded type: ASME B16.25; EN 12627
- Flanged type: ASME B16.5; EN 1092-1; GOST 12815; GOST 12821
- Pressure test: API 6D; EN 12266-1
- NACE design: NACE MR0175 / ISO 15156

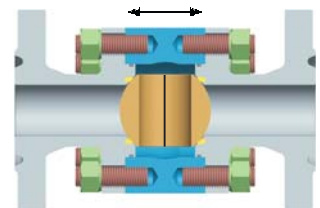
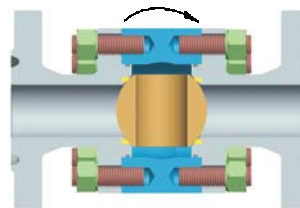
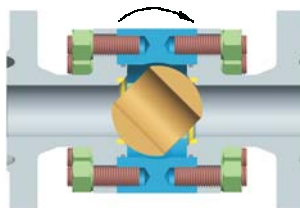
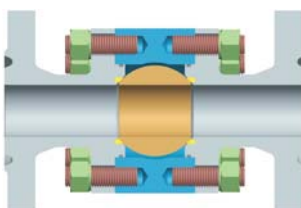


Opened position, stem on the upper dead point position

By descending the stem, the cam makes the closing elements rotating through the activator head

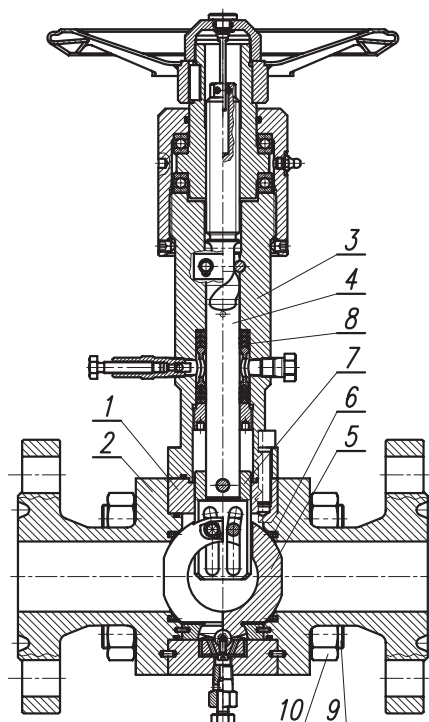
By 90° turning the closing elements turn into shutting position

While further descending, the stem the activating head opens the closing element-halves and presses them onto the seat ring



## List of the main components

### LBX type dual closing ball valve

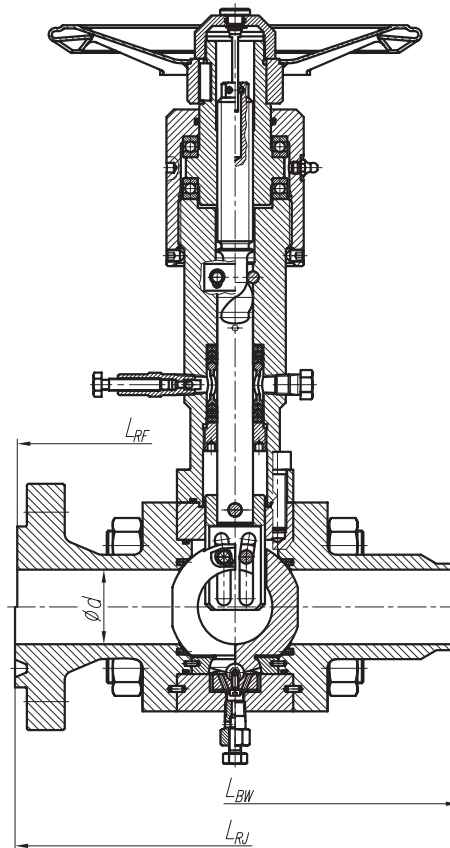


N°	Description	Standard design		NACE design	Corrosion-resistant design
		T= -29°C ~ +150°C	T= -46°C ~ +150°C	T= -46°C ~ +120°C	T= -60°C ~ +150°C
1	Body	ASTM A105	ASTM A350 LF2	ASTM A350 LF2	ASTM A182 316(L)
2	Flanged stub	ASTM A105	ASTM A350 LF2	ASTM A350 LF2	ASTM A182 316(L)
3	Bonnet	ASTM A105	ASTM A350 LF2	ASTM A350 LF2	ASTM A479 316(L)
4	Stem	ASTM A322 4140 (1)	ASTM A322 4140 (1)	ASTM A564 630	ASTM A564 630
5	Closing element	ASTM A322 4140 +ENP	ASTM A322 4140 +ENP	ASTM A182 F51 (+ENP)	ASTM A276 316(L)
6	Packing ring	PTFE DEVLON-V PEEK	PTFE DEVLON-V PEEK	PTFE DEVLON-V PEEK	PTFE DEVLON-V PEEK
7	Operating head	ASTM A322 4140 (1)	ASTM A322 4140 (1)	ASTM A564 630	ASTM A564 630
8	Gland packing	PTFE	PTFE	PTFE	PTFE
9	Bolt	ASTM A320 L7M	ASTM A320 L7M	ASTM A320 L7M	ASTM A193 B8M Cl.2
10	Nut	ASTM A194 2HM	ASTM A194 2HM	ASTM A194 2HM	ASTM A194 8M
	"O"-ring	VITON	VITON GLT	VITON GLT	VITON FVMQ

- (1) Nitrided
- ENP = Electroless Nickel Plating
- Materials for other mediums and temperature ranges according to purchase order
- The material of "O"-rings depends on the medium

# Chart of dimensions

## LBX type dual closing ball valve ANSI



### CLASS 150

NPS	d (mm)	L <sub>RF</sub> * (mm)	L <sub>RJ</sub> * (mm)	L <sub>BW</sub> * (mm)
2"	49	216	232	216
2 1/2"	62	241	257	241
3"	74	282	298	282
4"	100	305	321	305
6"	150	403	419	457
8"	201	502	518	521

### CLASS 300

NPS	d (mm)	L <sub>RF</sub> (mm)	L <sub>RJ</sub> (mm)	L <sub>BW</sub> (mm)
2"	49	216	232	216
2 1/2"	62	241	257	241
3"	74	282	298	282
4"	100	305	321	305
6"	150	403	419	457
8"	201	502	518	521

\* CLASS 300 face to face length

### CLASS 600

NPS	d (mm)	L <sub>RF</sub> (mm)	L <sub>RJ</sub> (mm)	L <sub>BW</sub> (mm)
2"	49	292	295	292
2 1/2"	62	330	333	330
3"	74	356	359	356
4"	100	432	435	432
6"	150	559	562	559

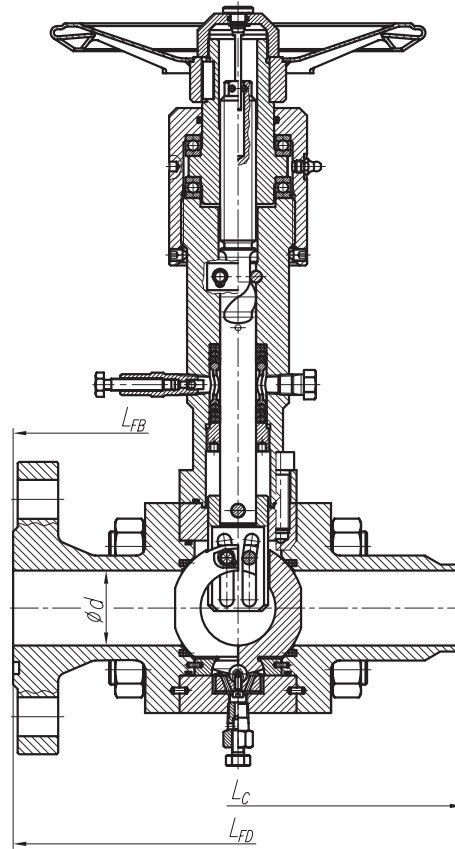
### CLASS 900

NPS	d (mm)	L <sub>RF</sub> (mm)	L <sub>RJ</sub> (mm)	L <sub>BW</sub> (mm)
2"	49	368	371	368
2 1/2"	62	419	422	419
3"	74	381	384	381
4"	100	457	460	457
6"	150	610	613	610

# Chart of dimensions

## LBX type dual closing ball valve

### EN



#### PN 16; PN 25; PN 40; PN 63

DN	d (mm)	LFB: LFD (mm)	Lc (mm)
50	49	230	230
65	62	290	290
80	74	310	310
100	100	350	350
150	150	480	480
200	201	600	600

#### PN 100; PN 160

DN	d (mm)	LFB: LFD (mm)	Lc (mm)
50	49	300	300
65	62	340	340
80	74	380	380
100	100	430	430
150	150	550	550