

Oil transportation



Oil refining

## Shut-off Control Ball Valves DN 50–800, PN 4.0 MPa, TU 3742–014–54634853–2013

**Applications:** used as control or shut-off and control devices on trunk oil pipelines, oil product pipelines, and at pumping stations.

**Climatic version:** U, HL, UHL according to GOST 15150.

Ambient temperature:

- version U: –40°C to +40°C;
- versions HL and UHL: –60°C to +40°C.

**Placement category:** 1 according to GOST 15150.

**Earthquake resistance:**

- non-earthquake-resistant version (S0) for areas with seismic activity up to score 6 on MSK-64 scale;
- earthquake-resistant version (S) for areas with seismic activity score 6 through 9 on MSK-64 scale;
- heavy-duty earthquake-resistant version (PS) for areas with seismic activity score 9 through 10 on MSK-64 scale.

**Pipeline connection:**

- flanged (GOST 33259);
- welded.

**Valve tightness class:** A, B, and C to GOST 9544 (at the request of the customer).

**Compatible substances:** salable crude oil, oil products.

**Delivery package:**

The delivery includes:

- fully assembled Valve complete with all parts, assemblies, and components as per the specifications;
- kit of wear parts, tools and accessories, parts and assemblies with a limited service life, as required for operation and maintenance of the Valves, as per the negotiated spare parts list to the supply contract;
- electric drive complete with operating instructions and approvals (if stipulated in the contract);
- operating instructions and approvals.



### Service performance

Design service life, years	Design service life of removable parts, years	Design life time, hours	Warranty life, hours, min	Warranty service life
30	15	240000	17000	24 months

## Product code



Example: designation of a control ball Valve, nominal diameter DN 500, nominal pressure PN 2.5 MPa, permissible operating pressure differential across the Valve DR 2.5 MPa, equal percentage flow characteristic, nominal throughput 16,725 m<sup>3</sup>/h, heavy-duty earthquake-resistant version (PS) for areas with seismicity up to score 10, for continental climate and outdoor installation:  
**KShR-500-2.5-ΔP2.5-P-Kvy16725-PS-HL1**

**I**—Letter code of the Control Valve type

**KShR**—Control Ball Valve

**II**—Numerical code of the nominal diameter:

**50**—DN 50      **350**—DN 350

**80**—DN 80      **400**—DN 400

**100**—DN 100      **500**—DN 500

**150**—DN 150      **600**—DN 600

**200**—DN 200      **700**—DN 700

**250**—DN 250      **800**—DN 800

**300**—DN 300

**III**—Numerical code of the nominal pressure:

**1.6**—nominal pressure 1.6 MPa

**2.5**—nominal pressure 2.5 MPa

**4.0**—nominal pressure 4.0 MPa

**6.3**—nominal pressure 6.3 MPa

**8.0**—nominal pressure 8.0 MPa

**10.0**—nominal pressure 10.0 MPa

**12.5**—nominal pressure 12.5 MPa

**IV**—Numerical code of the pressure differential across the Valve:

**ΔP1.6**—pressure differential across the Valve 1.6 MPa

**ΔP2.5**—pressure differential across the Valve 2.5 MPa

**ΔP4.0**—pressure differential across the Valve 4.0 MPa

**ΔP6.3**—pressure differential across the Valve 6.3 MPa

**ΔP8.0**—pressure differential across the Valve 8.0 MPa

**ΔP10.0**—pressure differential across the Valve 10.0 MPa

**ΔP12.5**—pressure differential across the Valve 12.5 MPa

**V**—Letter code of the flow characteristic:

**P**—equal percentage

**L**—linear

**VI**—Conventional Valve capacity, m<sup>3</sup>/h

**VII**—Letter code of the earthquake resistance version:

**S0**—non-earthquake-resistant

**S**—earthquake-resistant

**PS**—heavy-duty earthquake-resistant

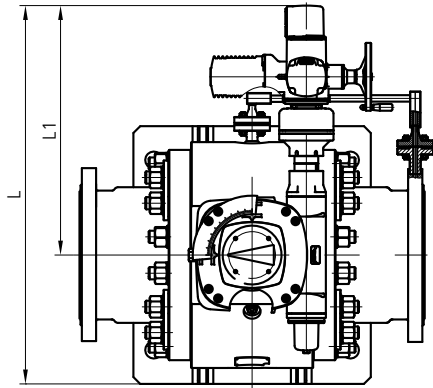
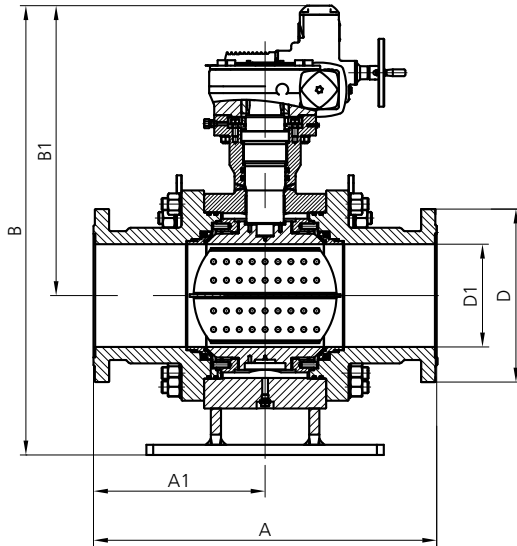
**VIII**—Letter code of the climatic version and placement category:

**U1**—for operation in a temperate climate, outdoor installation

**HL1**—for operation in a continental climate, outdoor installation

**UHL1**—for operation in a temperate or continental climate, outdoor installation

## Versions and dimensions



DN	Dimensions, mm							
	A	A1	B	B1	D1	D	L	L1
50	*	*	*	*	*	*	*	*
80	*	*	*	*	*	*	*	*
100	*	*	*	*	*	*	*	*
150	*	*	*	*	*	*	*	*
200	*	*	*	*	*	*	*	*
250	*	*	*	*	*	*	*	*
300	1012	506	1325	855	303	510	1115	735
350	*	*	*	*	*	*	*	*
400	*	*	*	*	*	*	*	*
500	*	*	*	*	*	*	*	*
600	*	*	*	*	*	*	*	*
700	*	*	*	*	*	*	*	*
800	*	*	*	*	*	*	*	*

## Materials of the key components, fittings, and seals

Part	Material grade
Body	Steel 20GL, GOST 21357-87
Nozzle	Steel 20GL, GOST 21357-87
Trunnion Ball	Steel ASTMA350 LF2
Inlet seat	Steel ASTMA350 LF2
Outlet seat	Steel ASTMA350 LF2
Bearing body	Steel 09G2S, GOST 19281-2014
Spindle	Steel 14H17N2, GOST 5632-72
Stud	Steel 40H, GOST 4543-71
Nut	Steel 35H, GOST 4543-71
Gasket	Graflex TN-200-P1-4,0-01-39x20x2, TU 2577-011-75250588-2010 TN