

SLIDE TYPE GATE VALVES

DN 300 (12")...1200 (48") mm,

PN 1,6 (16)...12,5 (125) MPa (bar)

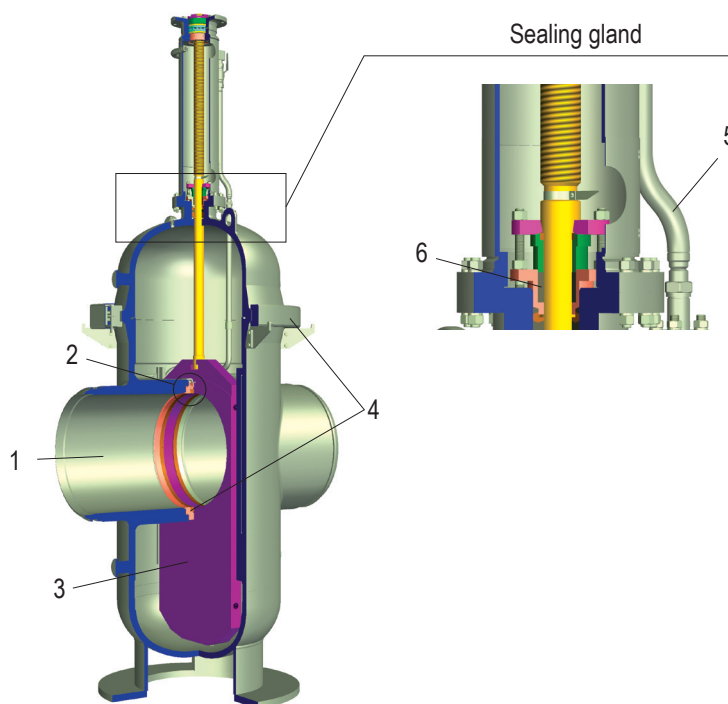
APPLICATION

Used as stop valves for pipelines transporting: oil, petrochemical products, synthetic oil and other explosive flammable liquids (Oil).

CONSTRUCTIONS RANGE TABLE

DN, mm (inch)	PN, MPa (bar)	Designation	Operating medium, temperature, °C	Connection to the pipeline	Type of operating
300 (12)	6,3 (63); 8,0 (80); 10,0 (100)	PT19005-300	Oil ≤ 90	Welded	Electric drive
400 (16)	6,3 (63); 8,0 (80); 10,0 (100)	PT19005-400			
500 (20)	1,6 (16); 2,5 (25); 4,0 (40)	PT19007-500			
	6,3 (63); 8,0 (80); 10,0 (100)	PT19005-500			
600 (24)	1,6 (16); 2,5 (25); 4,0 (40)	PT19007-600			
700 (28)	6,3 (63); 8,0 (80); 10,0 (100)	PT19005-700			
800 (32)	6,3 (63); 8,0 (80); 10,0 (100); 12,5 (125)	PT19005-800			
1000 (40)	6,3 (63); 8,0 (80); 10,0 (100); 12,5 (125)	PT19005-1000			
1050 (42)	6,3 (63); 8,0 (80); 10,0 (100)	PT19005-1050			
1200 (48)	8,0 (80); 10,0 (100); 12,5 (125)	PT19005-1200			

DESIGN FEATURES



1. Full bore body design enables maintenance and diagnostic equipment to pass through.

2. Seats with dual sealing technology (primary – “metal-to-metal”, secondary – “metal-to-elastoplastic”) increase reliability and extend service life of the valve.

3. Corrosion-resistant slab has fixed connection with body sealing rings and protects the rings and the gate valve inner cavity from abrasive wear-out and line medium deposits.

4. Gate valve design optimizes maintainability and minimizes direct and material costs of mid-life repair works of the valve without removal from pipeline. Clamp connection “body-to-cover” essentially facilitates disassembly of the valve and special design of the seats significantly simplify their replacement in the body.

5. Drain pipe allows sludge removal from the valve body. Drain pipe is made of stainless steel, installed inside the valve body and protected from freezing at low temperatures and damage during start-up / commissioning. Threaded port on the drain pipe enables to connect dewaxing devices and air bleed hoses. The port as well as the inlet in the bonnet for pressure relief valve can be used for leak tests of the gate valve.

6. Thermo expanded graphite for sealing gland and backup fluoroplastic sealing decrease friction wear-out and increase sealing gland durability.

Unlike other similar valves, gate valves provide valve tightness both in inlet and outlet sides. Valve design allows pressure relief in the valve body in case of accidental pressure increase exceeding design pressure.

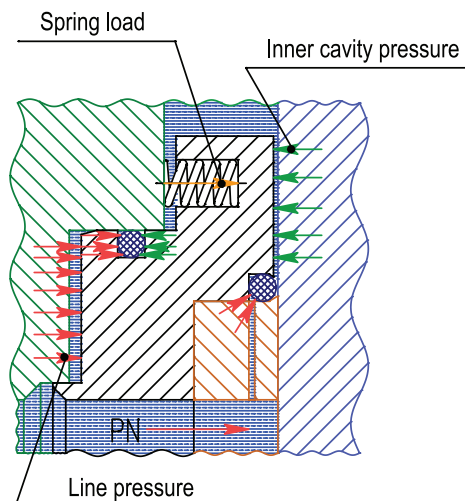
ACTUATION

Electric drive. When desired by Customer the gate valves may be completed with electric drives of Russian or international manufacturers (AUMA, ROTORK, LIMITORQUE, FESTO, etc).

TIGHTNESS

The closure sealing is metal-to-polyurethane type.

Complete tightness (zero leakage).



Seat design features a loose O-ring embedding that reduces the effort on the rings during valve operation, increases durability of sealing element and valve tightness stability during service life.

Valve tightness to the external environment in the connection "body-to-cover" is provided by rubber ring, in the stem by dual sealing gland.

MOUNTING IN THE PIPELINE

Line medium flow – bidirectional.

Mounting in the pipeline - recommended position – vertical with actuator upwards. When installed obliquely (with angle of slope exceeding 15°) it is recommended that supports under the yoke should be used in order not to exceed the bending moment capacity limit of the pipeline.

Connection to the pipeline – welded.

CLIMATIC SERVICE CONDITIONS

Ambient temperature range: – 60 °C to + 40 °C.

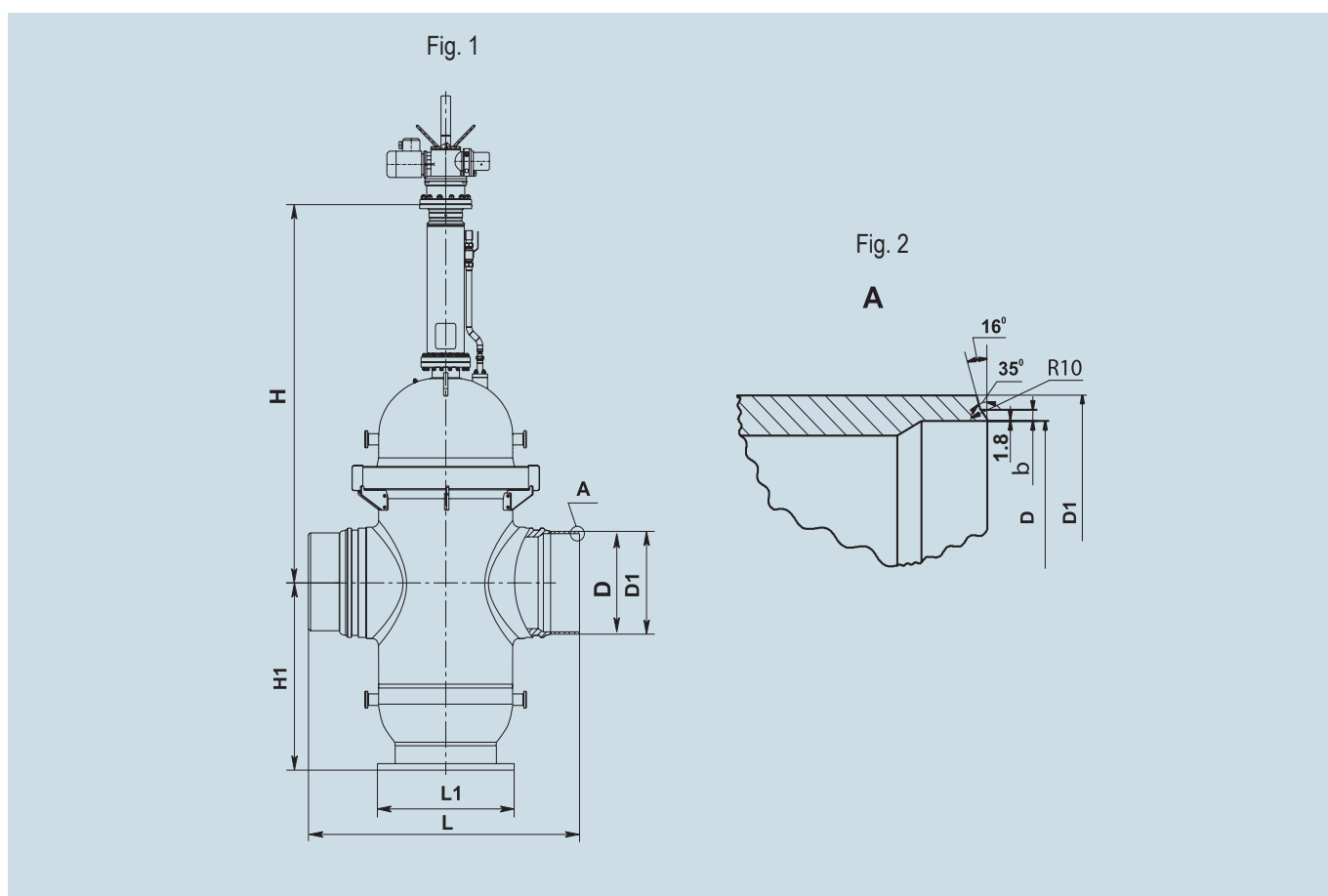
MINIMUM SERVICE LIFE – 30 years.

MATERIALS

Cadmium or zinc coating is available for tropical versions.

Part name	Material	
	DIN	ASTM
Body	GS-16Mn5; GS-20Mn5, 13Mn6	A216 Gr WCC, A350LF2
Gate	C 40	A572, AISI 1040
Spindle	X20Cr13	A473, A580, AISI 420
Ring	Rubber B14	
Cover	13Mn6	A350LF2
Nut	41CrS4	A331, AISI 5140
Pin	C35, 24CrMo5, 1.7218	A915, AISI 1035, A507, A519
Gland	Combined, with advanced reliability	
Flange	C35, 13Mn6	A915, AISI 1035, A350LF2
Nut	C35, 41CrS4	A322, AISI 5135, A331, AISI 5140
Pin	C35, 41CrS4	A322, AISI 5135, A331, AISI 5140
Thread bushing	Bronze	
Body ring overlay	Corrosion-resistant over welding	
Disk overlay	Bronze, polyurethane	

DIMENSIONS AND DRAWING



DN, mm (inch)	PN, MPa (bar)	Designation	Fig.	Dimensions, mm						Weight, kg *
				D	D1	H	H1	L	L1	
800 (32)	10,0 (100) 12,5 (125)	PT19005-800	1, 2	784	820	2927	1626	2700	1360	9530
1000 (40)	10,0 (100) 12,5 (125)	PT19005-1000	1, 2	976	1020	3554	2020	3000	1400	15785
1200 (48)	8,0 (80)	PT19005-1200		1188	1220	4236	2260	3350	1600	22500
	10,0 (100) 12,5 (125)			1176						

* Note: the table contains weights of gate valves complete without electric drives.

Fig. 1

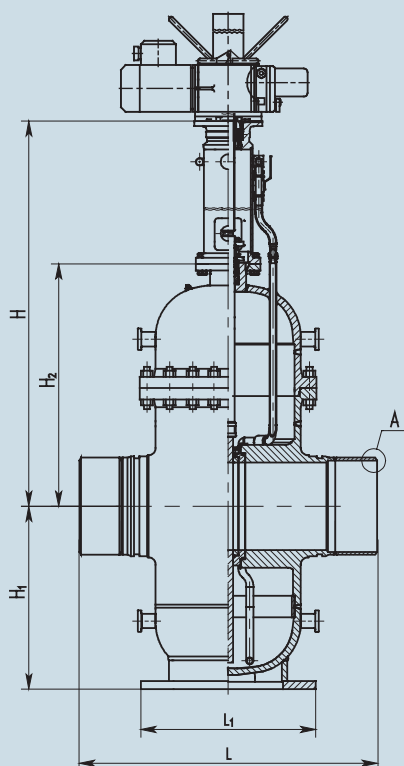


Fig. 2

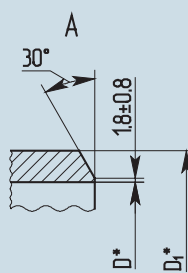
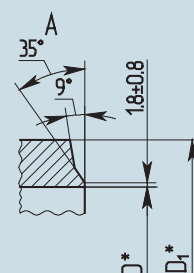


Fig. 3



DN, mm (inch)	PN, MPa (bar)	Designation	Fig.	Dimensions, mm							Weight, kg *
				D	D1	H	H1	H2	L	L1	
300 (12)	6,3 (63) 8,0 (80) 10,0 (100)	PT19005-300	1, 2	307	325	1684	725	953	1550	460	1945
400 (16)	6,3 (63) 8,0 (80) 10,0 (100)	PT19005-400	1, 2	388	420	2078	920	1158	1700	660	3760
500 (20)	1,6 (16) 2,5 (25)	PT19007-500	1	514	530	2121	1020	250	1900	-	3825
	4,0 (40)										3890
500 (20)	6,3 (63) 8,0 (80) 10,0 (100)	PT19005-500	1, 2	515	530	2179	1020	1244	1900	660	3980
600 (24)	1,6 (16) 2,5 (25) 4,0 (40)	PT19007-600	1	**	**	2550	1250	1532	2399	-	6912
700 (28)	6,3 (63) 8,0 (80) 10,0 (100)	PT19005-700	1, 2	700	720	2686	1405	1530	2550	1000	7343
800 (32)	6,3 (63) 8,0 (80)	PT19005-800	1, 2	798	820	2979	1620	1682	2700	1360	9390
			1, 3	784							
1000 (40)	6,3 (63) 8,0 (80)	PT19005-1000	1, 2	994	1020	3554	1986	2052	3000	1400	17295
			1, 3	988							
1050 (42)	6,3 (63) 8,0 (80) 10,0 (100)	PT19005-1050	1, 2	1026	1067	3141	2020	2081	3050	1400	18400
			1, 3	1040							
			1, 2	1026							
			1, 3	1040							
			1, 2	1026							
			1, 3	1040							

* Note: the table contains weights of gate valves complete without electric drives.

** Upon request.

COMPLETE SET OF SUPPLY

Complete set of supply includes: gate valve, gate valve certificate, technical manual and service guide. Electric actuator, mating flanges with fasteners and gaskets are supplied when required by Customer.