REGULATOR
SCIENTIFIC AND MANUFACTURING COMPANY

SAFETY VALVE

2018

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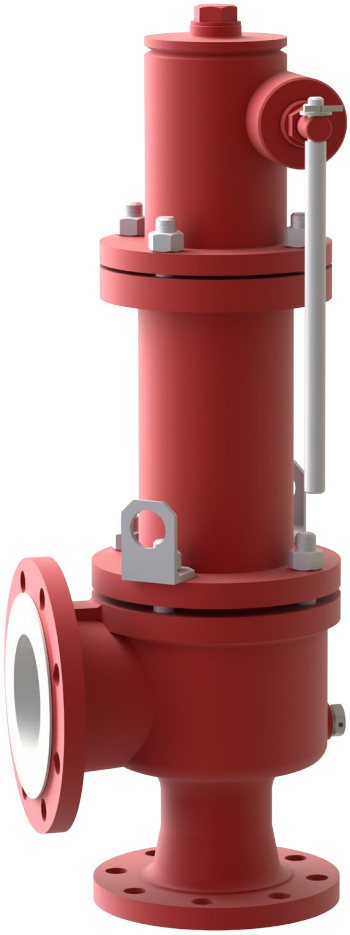
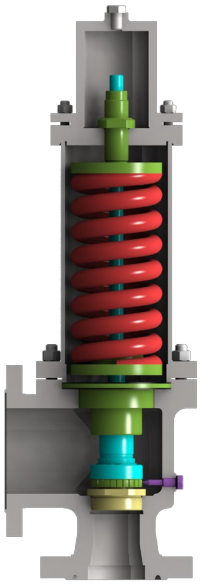
Spring-loaded safety valves



Designed for	protection of equipment against unacceptable pressure increase in main oil pipelines, oil product pipelines and process pipelines of the tank farm through the discharge of the medium into the outflow pipeline
DN inlet/outlet	15/25, 25/40, 50/80, 80/100, 100/150, 150/200, 200/300 mm
PN inlet/outlet	1,6/0,6, 4/1,6, 6,3/4, 10/4, 16/4, 25/4 MPa
Working medium	liquid and gases
Working medium's temperature	–70 ... +350°C
Ambient temperature	–70 ... +60°C
Type of seat sealing	metal-metal, metal-PTFE
Leakage class	A, B
Type of connection	flange, coupling, welding
Options	popping unit, bellows
Working medium discharge	open, close
Closing pressure	$0,8*P_n$

	$P_n \le 0,3$ MPa	**$3 < P_n \le 60$**	**$P_n > 60$**
Start-to-open pressure	$P_n+0,02$	$1,07*P_n$	$1,05*P_n$
Relieving pressure	$P_n+0,05$	$1,15*P_n$	$1,1*P_n$

Note: DN, PN, t may differ from the above.



Materials of the main parts

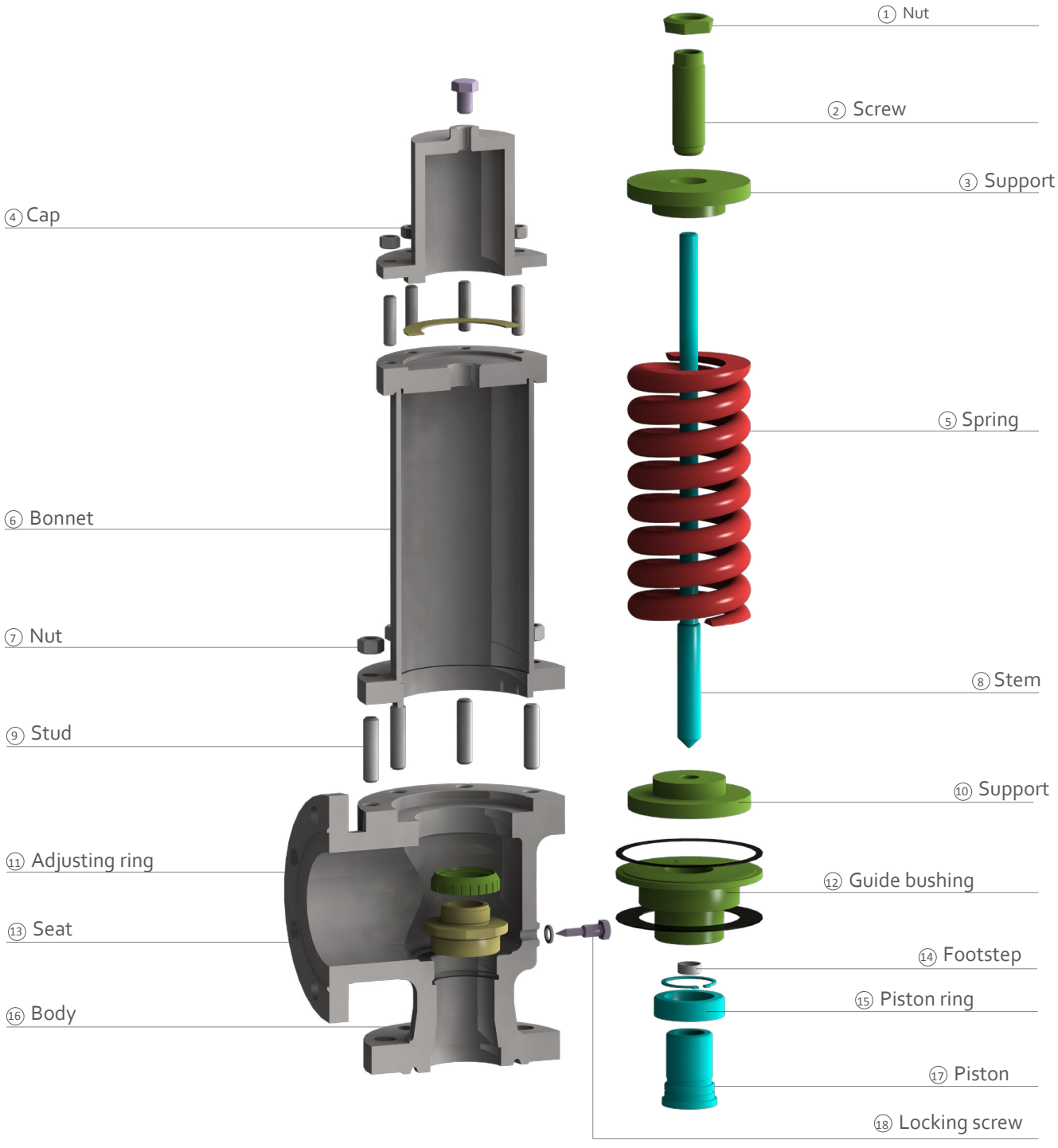
Body	LCB, WCB, A352GrLCC, GrA2Q, GrWCC, J02503, J02505, G21Mn5, J92630, J92701, ZG12Cr18Ni9Ti, ZG1Cr18Ni9, ZG1Cr18Ni9Ti, J92971, GX5CrNiMoNb19-11-2, SCS20
Seat	431, X20CrNi72, X22CrNi17, SUS431, 420, 1.4021, X20Cr13, 2Cr13, 321, X10CrNiTi18-9, SUS321, SUS321TK + coating, 316Ti, S31635, SUS316Ti + coating
Gaskets	PTFE, paronite, expanded graphite

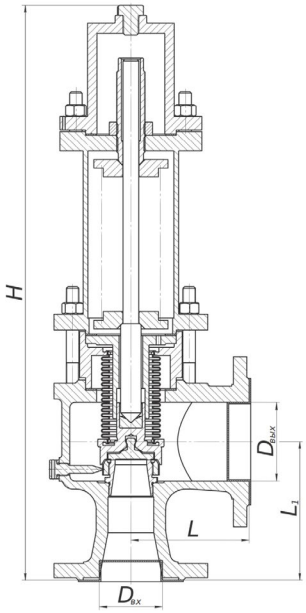
Reliability targets

Design life	11 years
Run-to-failure	830 cycles / 70 000 hours

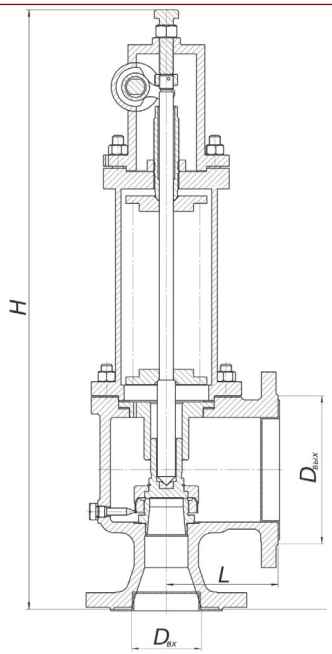
Description

Safety valves designed to protect equipment from invalid overpressure in the main and technological pipelines by the discharge of the working medium into the discharge pipe or the atmosphere and provide stop of discharging when the operating pressure is restored.

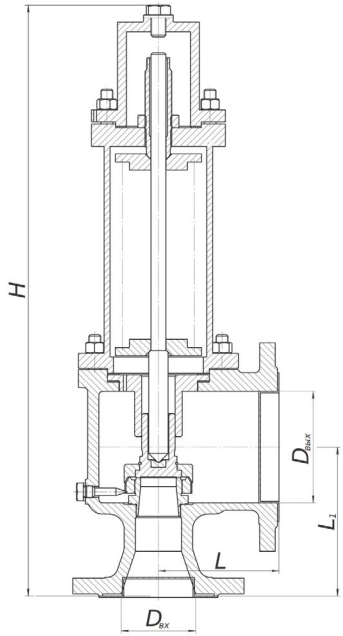




With bellows



With popping unit



Without popping unit

General dimensions and mass

DN inlet/outlet, mm	PN inlet/outlet, bar	Additional sealing	Popping unit	D seat , mm	S seat, mm²	α₁ gas	α₂ liquid	H, mm	L, mm	L₁, mm	Mass, kg	Marking
25/40	16/6	bellows	+	16	201	0,75	0,55	504	100	120	23	AM211.25.16.xxxx.x/x
				16	201	0,75	0,55	500	100	120	23	AM212.25.16.xxxx.x/x
		-	+	16	201	0,75	0,55	504	100	120	23	AM213.25.16.xxxx.x/x
				16	201	0,75	0,55	450	100	120	21	AM214.25.16.xxxx.x/x
	40/16	bellows	+	16	201	0,75	0,55	504	100	120	22	AM211.25.40.xxxx.x/x
				16	201	0,75	0,55	500	100	120	22	AM212.25.40.xxxx.x/x
		-	+	16	201	0,75	0,55	504	100	120	23	AM213.25.40.xxxx.x/x
				16	201	0,75	0,55	450	100	120	21	AM214.25.40.xxxx.x/x
	63/40	bellows	+	16	201	0,75	0,6	504	90	75	23	AM211.25.63.xxxx.x/x
				16	201	0,75	0,6	500	90	75	23	AM212.25.63.xxxx.x/x
		-	+	16	201	0,75	0,6	504	90	75	23	AM213.25.63.xxxx.x/x
				16	201	0,75	0,6	450	90	75	22	AM214.25.63.xxxx.x/x
	100/40	bellows	+	16	201	0,75	0,6	504	90	75	23	AM211.25.100.xxxx.x/x
				16	201	0,75	0,6	500	90	75	23	AM212.25.100.xxxx.x/x
		-	+	16	201	0,75	0,6	504	90	75	23	AM213.25.100.xxxx.x/x
				16	201	0,75	0,6	450	90	75	22	AM214.25.100.xxxx.x/x
	160/40	bellows	+	12	113	0,75	0,6	504	105	125	30	AM211.25.160.xxxx.x/x
				12	113	0,75	0,6	500	105	125	30	AM212.25.160.xxxx.x/x
		-	+	12	113	0,75	0,6	504	105	125	30	AM213.25.160.xxxx.x/x
				12	113	0,75	0,6	450	105	125	30	AM214.25.160.xxxx.x/x
50/80	16/6	bellows	+	33	855	0,6	0,5	738	130	155	46	AM211.50.16.xxxx.x/x
				33	855	0,6	0,5	691	130	155	43	AM212.50.16.xxxx.x/x
		-	+	33	855	0,6	0,5	662	130	155	40	AM213.50.16.xxxx.x/x
				33	855	0,6	0,5	595	130	155	36	AM214.50.16.xxxx.x/x
	40/16	bellows	+	33	855	0,6	0,5	738	130	155	48	AM211.50.40.xxxx.x/x
				33	855	0,6	0,5	691	130	155	45	AM212.50.40.xxxx.x/x
		-	+	33	855	0,6	0,5	662	130	155	42	AM213.50.40.xxxx.x/x
				33	855	0,6	0,5	595	130	155	38	AM214.50.40.xxxx.x/x
	63/40	bellows	+	33	855	0,75	0,55	901	145	160	64	AM211.50.63.xxxx.x/x
				33	855	0,75	0,55	831	145	160	60	AM212.50.63.xxxx.x/x
		-	+	33	855	0,75	0,55	795	145	160	57	AM213.50.63.xxxx.x/x
				33	855	0,75	0,55	725	145	160	53	AM214.50.63.xxxx.x/x

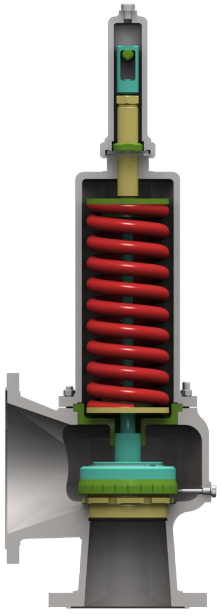
DN inlet/outlet, mm	PN inlet/outlet, bar	Additional sealing	Popping unit	D seat , mm	S seat, mm²	α1 gas	α2 liquid	H, mm	L, mm	L1, mm	Mass, kg	Marking
50/80	160/40	bellows	+	33	855	0,75	0,55	901	145	160	68	AM211.50.160.xxxx.x/x
				33	855	0,75	0,55	831	145	160	64	AM212.50.160.xxxx.x/x
		-	+	33	855	0,75	0,55	795	145	160	63	AM213.50.160.xxxx.x/x
				33	855	0,75	0,55	725	145	160	57	AM214.50.160.xxxx.x/x
80/100	16/6	bellows	+	40	1256	0,8	0,6	773	150	175	54	AM211.80.16.xxxx.x/x
				40	1256	0,8	0,6	730	150	175	50	AM212.80.16.xxxx.x/x
		-	+	40	1256	0,8	0,6	709	150	175	49	AM213.80.16.xxxx.x/x
				40	1256	0,8	0,6	666	150	175	45	AM214.80.16.xxxx.x/x
	40/16	bellows	+	40	1256	0,8	0,65	773	150	175	56	AM211.80.40.xxxx.x/x
				40	1256	0,8	0,65	730	150	175	52	AM212.80.40.xxxx.x/x
		-	+	40	1256	0,8	0,65	709	150	175	52	AM213.80.40.xxxx.x/x
				40	1256	0,8	0,65	666	150	175	48	AM214.80.40.xxxx.x/x
	63/40	bellows	+	40	1256	0,75	0,6	806	165	195	63	AM211.80.63.xxxx.x/x
				40	1256	0,75	0,6	763	165	195	59	AM212.80.63.xxxx.x/x
		-	+	40	1256	0,75	0,6	740	165	195	59	AM213.80.63.xxxx.x/x
				40	1256	0,75	0,6	700	165	195	55	AM214.80.63.xxxx.x/x
	160/40	bellows	+	33	855	0,75	0,6	806	165	195	73	AM211.80.160.xxxx.x/x
				33	855	0,75	0,6	763	165	195	69	AM212.80.160.xxxx.x/x
		-	+	33	855	0,75	0,6	750	165	195	70	AM213.80.160.xxxx.x/x
				33	855	0,75	0,6	710	165	195	65	AM214.80.160.xxxx.x/x
100/150	16/6	bellows	+	48	1809	0,75	0,6	885	160	200	76	AM211.100.16.xxxx.x/x
				48	1809	0,75	0,6	845	160	200	72	AM212.100.16.xxxx.x/x
		-	+	48	1809	0,75	0,6	833	160	200	70	AM213.100.16.xxxx.x/x
				48	1809	0,75	0,6	793	160	200	65	AM214.100.16.xxxx.x/x
	40/16	bellows	+	48	1809	0,75	0,6	885	160	200	74	AM211.100.40.xxxx.x/x
				48	1809	0,75	0,6	845	160	200	70	AM212.100.40.xxxx.x/x
		-	+	48	1809	0,75	0,6	833	160	200	74	AM213.100.40.xxxx.x/x
				48	1809	0,75	0,6	793	160	200	69	AM214.100.40.xxxx.x/x
	63/40	bellows	+	72	4071	0,7	0,5	1096	235	245	135	AM211.100.63.xxxx.x/x
				72	4071	0,7	0,5	1056	235	245	131	AM212.100.63.xxxx.x/x
		-	+	63	3117	0,7	0,5	1000	235	245	128	AM213.100.63.xxxx.x/x
				63	3117	0,7	0,5	1004	235	245	124	AM214.100.63.xxxx.x/x
	160/40	bellows	+	48	1809	0,75	0,6	1096	235	245	171	AM211.100.160.xxxx.x/x
				48	1809	0,75	0,6	1056	235	245	167	AM212.100.160.xxxx.x/x
		-	+	48	1809	0,75	0,6	1000	235	245	164	AM213.100.160.xxxx.x/x
				48	1809	0,75	0,6	1004	235	245	160	AM214.100.160.xxxx.x/x
150/200	40/16	bellows	+	75	4417	0,6	0,55	1021	205	245	141	AM211.150.40.xxxx.x/x
				75	4417	0,6	0,55	1006	205	245	125	AM212.150.40.xxxx.x/x
		-	+	75	4417	0,6	0,55	945	205	245	125	AM213.150.40.xxxx.x/x
				75	4417	0,6	0,55	930	205	245	141	AM214.150.40.xxxx.x/x
		bellows	+	75	4417	0,6	0,55	1021	205	245	156	AM211.150.40.xxxx.x/x
				75	4417	0,6	0,55	1006	205	245	130	AM212.150.40.xxxx.x/x
		-	+	75	4417	0,6	0,55	945	205	245	130	AM213.150.40.xxxx.x/x
				75	4417	0,6	0,55	930	205	245	114	AM214.150.40.xxxx.x/x
200/300	16/6	bellows	+	142	15836	0,65	0,5	1059	280	320	190	AM211.200.16.xxxx.x/x
				142	15836	0,65	0,5	1037	280	320	174	AM212.200.16.xxxx.x/x
		-	+	142	15836	0,65	0,5	1093	280	320	173	AM213.200.16.xxxx.x/x
				142	15836	0,65	0,5	1071	280	320	157	AM214.200.16.xxxx.x/x
		bellows	+	162	20611	0,6	0,5	1059	280	320	190	AM211.200.16.xxxx.x/x-01
				162	20611	0,6	0,5	1037	280	320	174	AM212.200.16.xxxx.x/x-01
		-	+	162	20611	0,6	0,5	1093	280	320	173	AM213.200.16.xxxx.x/x-01
				162	20611	0,6	0,5	1071	280	320	157	AM214.200.16.xxxx.x/x-01

Spring-loaded safety valves by «Transneft» standard

Designed for	protection of equipment against unacceptable pressure increase in main oil pipelines, oil product pipelines and process pipelines of the tank farm through the discharge of the medium into the outflow pipeline
DN inlet/outlet	25/40, 40/65, 50/80, 80/100, 100/150, 150/200, 200/300 mm
PN inlet/outlet	1,6/0,6, 1,6/1,6, 2,5/0,6, 2,5/1,6, 2,5/2,5 MPa
Working medium	oil, oil products, water, vapor
Working medium's temperature	–15 ... +80°C for oil, –20 ... +60°C for oil products
Ambient temperature	–60 ... +40°C
Type of seat sealing	metal-metal
Leakage	leak no more than 5 cm^3/min
Type of connection	flange
Options	popping unit
Adjusting position	vertical with allowable deviation ±15°
Seismic stability	C0 (up to 6 points), C (up to 9 points), PC (up to 10 points)
Working medium discharge	close
Closing pressure	from 0,85*P_n to 0,9*P_n

	$P_n \leq 0,3$ MPa	**$0,3 < P_n \leq 2,5$**
Start-to-open pressure	P_n+0,02	1,07*P_n
Relieving pressure	P_n+0,05	1,15*P_n
Liquid flow rate (α_2)	not less than 0,6	

Note: DN, PN, t may differ from the above.



Materials of the main parts

Body	LCB, WCB, A352GrLCC, GrA2Q, GrWCC, J02503, J02505, G21Mn5
Trim	420, 1.4021, X20Cr13, 2Cr13, 13Mn6, 9MnSi5, SB49, 12Mn + 321, X10CrNiTi18-9, SUS321, SUS321TK + coating, 316Ti, S31635, SUS316Ti + coatin
Gaskets	expanded graphite

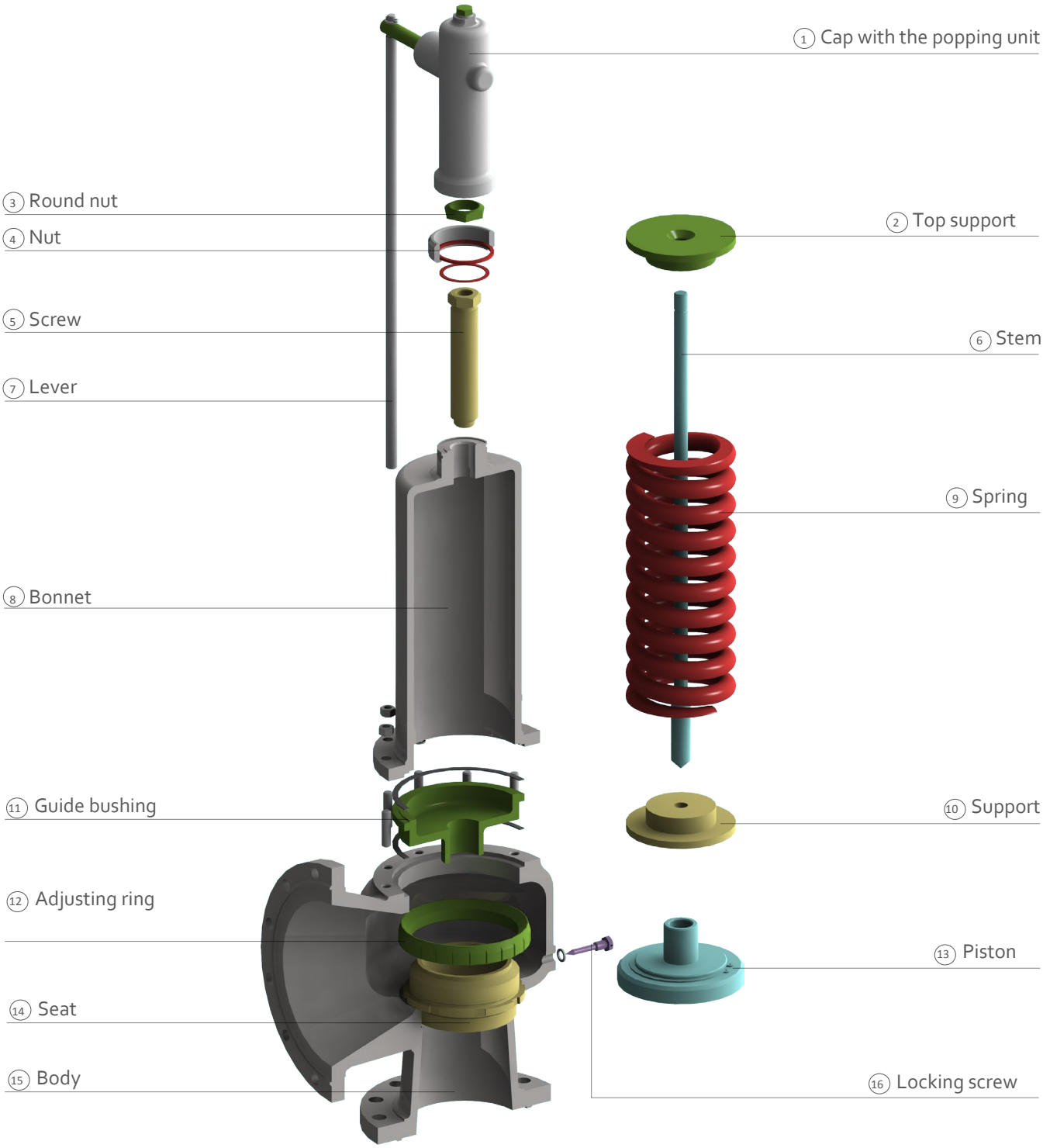
Reliability targets

Design life	30 years
Run-to-failure	1 000 cycles / 240 000 hours

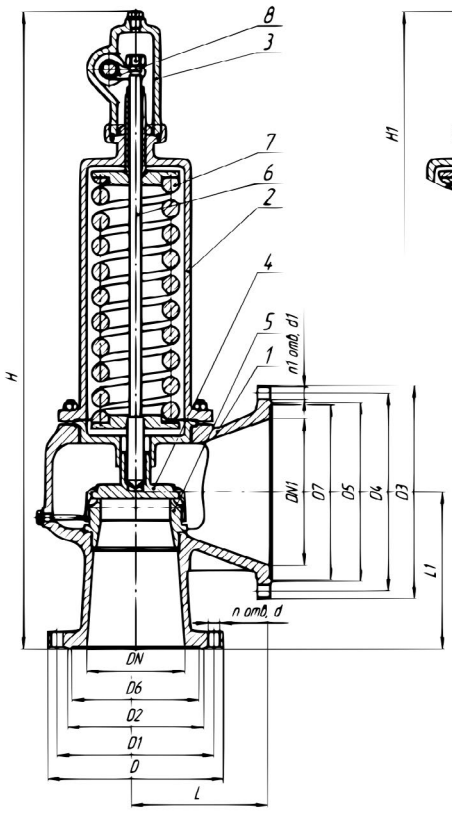
Description

Safety valves designed to protect equipment from invalid overpressure in the oil mains, oil-products pipelines and technological pipelines by the discharge of the working medium into the discharge pipe or the atmosphere and provide stop of discharging when the operating pressure is restored.

These valves are supplied for the construction of new pumping stations and reconstruction of existing ones. This series is made in accordance with the Standard for the Safety valves of Transneft Company.



With popping unit



Without popping unit

1 - spindle
2 - bonnet
3 - cap
4 - spindle
5 - seat
6 - stem
7 - spring
8 - popping unit

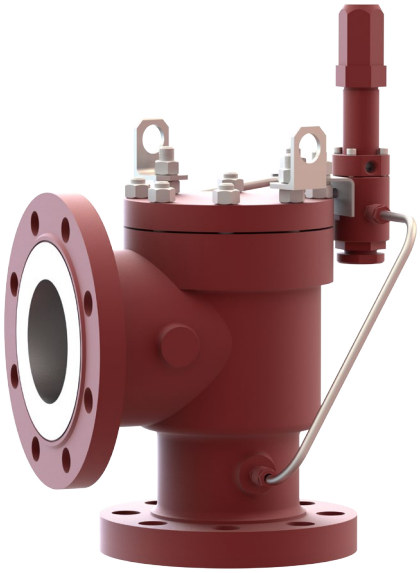
General dimensions and mass

DN inlet/outlet, mm	PN inlet, MPa	D, mm	D1, mm	D2, mm	D3, mm	D4, mm	D5, mm	D6, mm	D7, mm	n	n1	d, mm	d1, mm	L, mm	L1, mm	H, not more than , mm	Mass, kg	Marking
25/40	1,6	115	85	68	130	100	80	58	70	4	4	14	14	100	120	530	22	ППК-25/40-1,6/0,6-х-Ф-х-х
		115	85	68	130	100	80	58	70	4	4	14	14	100	120	530	25	ППКР-25/40-1,6/0,6-х-Ф-х-х
40/65		145	110	88	160	130	110	76	101	4	4	18	14	115	145	590	37	ППК-40/65-1,6/0,6-х-Ф-х-х
		145	110	88	160	130	110	76	101	4	4	18	14	115	145	590	40	ППКР-40/65-1,6/0,6-х-Ф-х-х
50/80		160	125	102	185	150	128	88	116	4	4	18	18	130	155	640	42	ППК-50/80-1,6/0,6-х-Ф-х-х
		160	125	102	185	150	128	88	116	4	4	18	18	130	155	640	45	ППКР-50/80-1,6/0,6-х-Ф-х-х
80/100		195	160	133	205	170	148	121	138	4	4	18	18	150	175	710	49	ППК-80/100-1,6/0,6-х-Ф-х-х
		195	160	133	205	170	148	121	138	4	4	18	18	150	175	710	52	ППКР-80/100-1,6/0,6-х-Ф-х-х
100/150		215	180	158	260	225	202	150	192	8	8	18	18	160	200	840	83	ППК-100/150-1,6/0,6-х-Ф-х-х
		215	180	158	260	225	202	150	192	8	8	18	18	160	200	840	86	ППКР-100/150-1,6/0,6-х-Ф-х-х
150/200		280	240	212	315	280	258	204	250	8	8	22	18	205	245	1020	127	ППК-150/200-1,6/0,6-х-Ф-х-х
		280	240	212	315	280	258	204	250	8	8	22	18	205	245	1020	135	ППКР-150/200-1,6/0,6-х-Ф-х-х
200/300		335	295	268	435	395	365	260	357	12	12	22	22	280	320	1310	277	ППК-200/300-1,6/0,6-х-Ф-х-х
		335	295	268	435	395	365	260	357	12	12	22	22	280	320	1410	284	ППКР-200/300-1,6/0,6-х-Ф-х-х
25/40	2,5	115	85	68	130	100	80	58	70	4	4	14	14	100	120	530	22	ППК-25/40-2,5/0,6-х-Ф-х-х
		115	85	68	130	100	80	58	70	4	4	14	14	100	120	530	25	ППКР-25/40-2,5/0,6-х-Ф-х-х
40/65		145	110	88	160	130	110	76	101	4	4	18	14	115	145	590	37	ППК-40/65-2,5/0,6-х-Ф-х-х
		145	110	88	160	130	110	76	101	4	4	18	14	115	145	590	40	ППКР-40/65-2,5/0,6-х-Ф-х-х
50/80		160	125	102	185	150	128	88	116	4	4	18	18	130	155	640	42	ППК-50/80-2,5/0,6-х-Ф-х-х
		160	125	102	185	150	128	88	116	4	4	18	18	130	155	640	45	ППКР-50/80-2,5/0,6-х-Ф-х-х
80/100		195	160	133	205	170	148	121	138	8	4	18	18	150	175	710	49	ППК-80/100-2,5/0,6-х-Ф-х-х
		195	160	133	205	170	148	121	138	8	4	18	18	150	175	710	52	ППКР-80/100-2,5/0,6-х-Ф-х-х
100/150		230	190	158	260	225	202	150	192	8	8	22	18	160	200	840	83	ППК-100/150-2,5/0,6-х-Ф-х-х
		230	190	158	260	225	202	150	192	8	8	22	18	160	200	840	86	ППКР-100/150-2,5/0,6-х-Ф-х-х
150/200		300	250	212	315	280	258	204	250	8	8	26	18	205	245	1020	127	ППК-150/200-2,5/0,6-х-Ф-х-х
		300	250	212	315	280	258	204	250	8	8	26	18	205	245	1020	135	ППКР-150/200-2,5/0,6-х-Ф-х-х
200/300		360	310	278	435	395	365	260	357	12	12	26	22	280	320	1310	277	ППК-200/300-2,5/0,6-х-Ф-х-х
		360	310	278	435	395	365	260	357	12	12	26	22	280	320	1410	284	ППКР-200/300-2,5/0,6-х-Ф-х-х

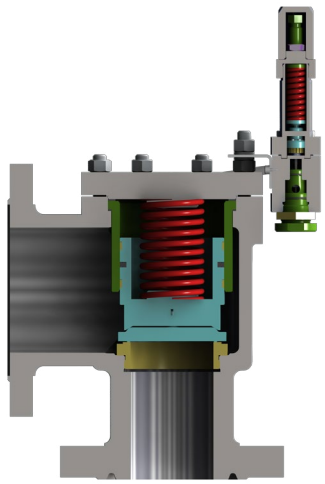
Ranges for valve spring pressures

DN of inlet branch pipe, mm	Ranges for valve spring pressures (Pn), MPa	
	for PN 1,6 MPa	for PN 2,5 MPa
25	from 0,40 to 0,80 from 0,80 to 1,60	from 0,40 to 0,80 from 0,80 to 1,60 from 1,60 to 2,50
40	from 0,05 to 0,15 from 0,15 to 0,30 from 0,30 to 0,70 from 0,70 to 1,60	from 0,05 to 0,15 from 0,15 to 0,30 from 0,30 to 0,70 from 0,70 to 2,00 from 2,00 to 2,50
50	from 0,05 to 0,12 from 0,12 to 0,25 from 0,25 to 0,40 from 0,40 to 0,80 from 0,80 to 1,60	from 0,05 to 0,12 from 0,12 to 0,25 from 0,25 to 0,40 from 0,40 to 0,80 from 0,80 to 2,00 from 2,00 to 2,50
80	from 0,05 to 0,12 from 0,12 to 0,25 from 0,25 to 0,40 from 0,40 to 0,80 from 0,80 to 1,60	from 0,05 to 0,12 from 0,12 to 0,30 from 0,30 to 0,50 from 0,50 to 0,80 from 0,80 to 2,00 from 2,00 to 2,50
100	from 0,05 to 0,10 from 0,08 to 0,16 from 0,15 to 0,30 from 0,25 to 0,45 from 0,45 to 0,85 from 0,80 to 1,60	from 0,05 to 0,10 from 0,08 to 0,16 from 0,15 to 0,30 from 0,25 to 0,45 from 0,45 to 0,85 from 0,80 to 1,60 from 1,60 to 2,50
150	from 0,05 to 0,15 from 0,15 to 0,30 from 0,30 to 0,50 from 0,50 to 0,80 from 0,80 to 1,20 from 1,20 to 1,60	from 0,05 to 0,15 from 0,15 to 0,30 from 0,30 to 0,50 from 0,50 to 0,80 from 0,80 to 1,20 from 1,20 to 1,80 from 1,80 to 2,50
200	from 0,30 to 0,40 from 0,40 to 0,50 from 0,50 to 0,70 from 0,70 to 0,90 from 0,90 to 1,20 from 1,20 to 1,60	from 0,30 to 0,40 from 0,40 to 0,50 from 0,50 to 0,70 from 0,70 to 0,90 from 0,90 to 1,20 from 1,20 to 1,60 from 1,60 to 2,00 from 2,00 to 2,50

Pilot-operated safety valves



Designed for	protection of equipment against unacceptable pressure increase in main oil pipelines, oil product pipelines and process pipelines of the tank farm through the discharge of the medium into the outflow pipeline
DN	25, 50, 80, 100, 150, 200 mm
PN	1,6, 2,5, 4, 6,3, 10, 16, 25, 32 MPa
Working medium	liquid and gases
Working medium's temperature	–60 ... +130°C
Ambient temperature	–60 ... +40°C
Pilot construction	blasting, bypass
Working medium's direction	under the spindle
Type of seat sealing	metal-metal, metal-PTFE
Leakage class	A, B
Type of connection	flange, coupling, welding, clamping, fitting
Options	popping unit, back pressure compensation
Adjusting position	up cap
Working medium discharge	open, close
Closing pressure	0,95 from P_n
Start-to-open pressure	1,01 from P_n
Relieving pressure	1,1 from P_n
Liquid flow rate (α_2)	0,65
Flow coefficient for gases (α_1)	0,83



Materials of the main parts

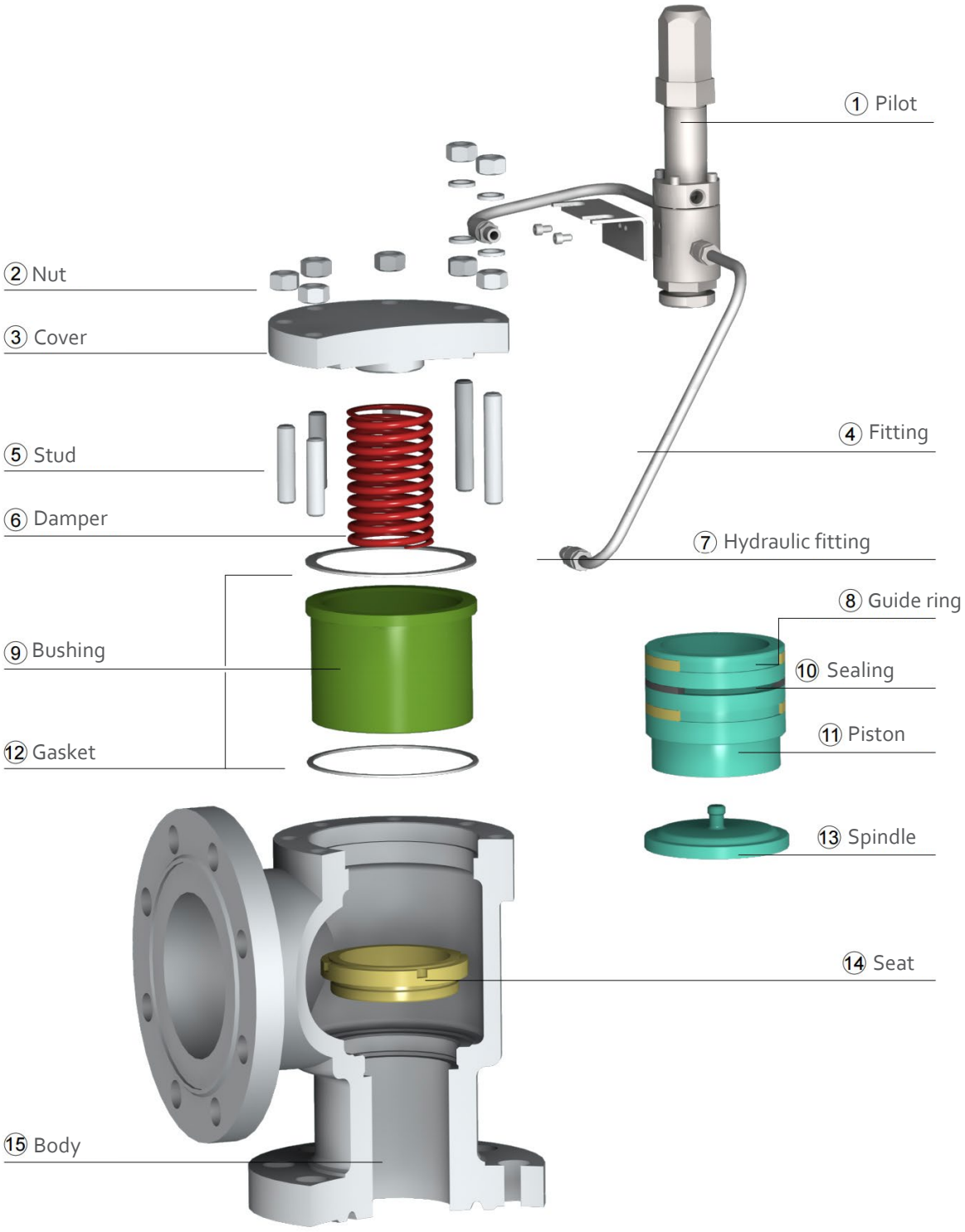
Body	LCB, WCB, A352GrLCC, GrA2Q, GrWCC, J02503, J02505, G21Mn5, J92630, J92701, ZG12Cr18Ni9Ti, ZG1Cr18Ni9, ZG1Cr18Ni9Ti, J92971, GX5CrNiMoNb19-11-2, SCS20
Trim	420, 1.4021, X20Cr13, 2Cr13, 431, X20CrNi72, X22CrNi17, SUS431 321, X10CrNiTi18-9, SUS321, SUS321TK + coating 316Ti, S31635, SUS316Ti + coating
Gaskets	PTFE, paronite, expanded graphite

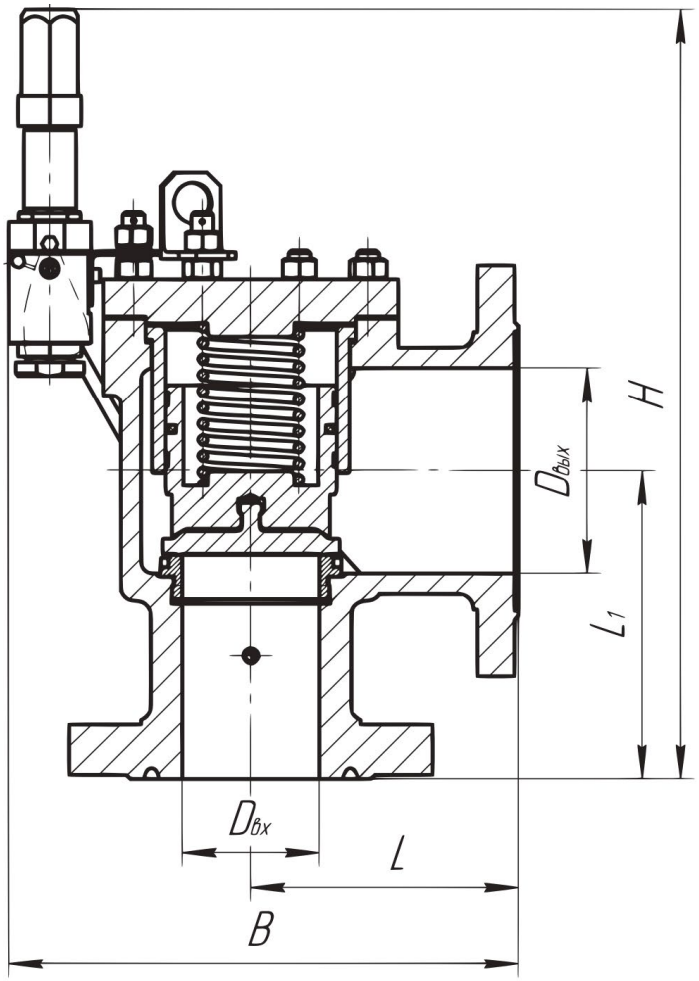
Reliability targets

Design life	11 years
Run-to-failure	830 cycles / 70 000 hours

Description

Pilot-operated (impulse) safety valves designed to protect equipment from invalid overpressure in the main and technological pipelines by the discharge of the working medium into the discharge pipe or the atmosphere and provide stop of discharging when the operating pressure is restored.

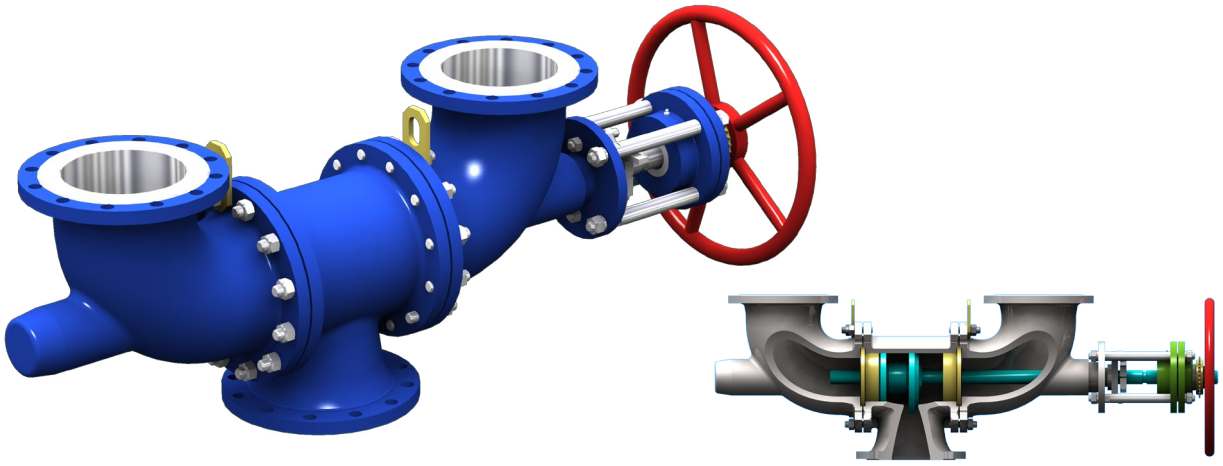




General dimensions

DN inlet/outlet, mm	PN inlet/outlet, bar	Pilot	D seat, mm	S seat, mm²	H, mm	B, mm	L, mm	L1, mm	Marking
25/50	16/6	Blasting	25	491	405	227	100	120	AM215.25.16.xxxx.x/x
		Bypass	25	491	405	227	100	120	AM219.25.16.xxxx.x/x
	40/16	Blasting	25	491	405	227	100	120	AM215.25.40.xxxx.x/x
		Bypass	25	491	405	227	100	120	AM219.25.40.xxxx.x/x
	63/40	Blasting	25	491	405	232	105	125	AM215.25.63.xxxx.x/x
		Bypass	25	491	405	232	105	125	AM219.25.63.xxxx.x/x
	160/40	Blasting	25	491	405	232	105	125	AM215.25.160.xxxx.x/x
		Bypass	25	491	405	232	105	125	AM219.25.160.xxxx.x/x
	250/40	Blasting	25	491	410	237	121	125	AM215.25.250.xxxx.x/x
		Bypass	25	491	410	237	121	125	AM219.25.250.xxxx.x/x
50/80	16/6	Blasting	50	1963	455	300	130	155	AM215.50.16.xxxx.x/x
		Bypass	50	1963	455	300	130	155	AM219.50.16.xxxx.x/x
	40/16	Blasting	50	1963	455	300	130	155	AM215.50.40.xxxx.x/x
		Bypass	50	1963	455	300	130	155	AM219.50.40.xxxx.x/x
	63/40	Blasting	50	1963	470	305	145	160	AM215.50.63.xxxx.x/x
		Bypass	50	1963	470	305	145	160	AM219.50.63.xxxx.x/x
	160/40	Blasting	50	1963	470	305	145	160	AM215.50.160.xxxx.x/x
		Bypass	50	1963	470	305	145	160	AM219.50.160.xxxx.x/x
	250/40	Blasting	50	1963	475	310	172	167	AM215.50.250.xxxx.x/x
		Bypass	50	1963	475	310	172	167	AM219.50.250.xxxx.x/x

DN inlet/outlet, mm	PN inlet/outlet, bar	Pilot	D seat, mm	S seat, mm²	H, mm	B, mm	L, mm	L1, mm	Marking
80/100	16/06	Blasting	80	5026	492	317	150	175	AM215.80.16.xxxx.x/x
		Bypass	80	5026	492	317	150	175	AM219.80.16.xxxx.x/x
	40/16	Blasting	80	5026	492	317	150	175	AM215.80.40.xxxx.x/x
		Bypass	80	5026	492	317	150	175	AM219.80.40.xxxx.x/x
	63/40	Blasting	80	5026	509	340	165	195	AM215.80.63.xxxx.x/x
		Bypass	80	5026	509	340	165	195	AM219.80.63.xxxx.x/x
	160/40	Blasting	80	5026	524	340	165	195	AM215.80.160.xxxx.x/x
		Bypass	80	5026	524	340	165	195	AM219.80.160.xxxx.x/x
	250/40	Blasting	80	5026	534	350	181	191	AM215.80.250.xxxx.x/x
		Bypass	80	5026	534	350	181	191	AM219.80.250.xxxx.x/x
100/150	16/6	Blasting	100	7854	571	371	160	290	AM215.100.16.xxxx.x/x
		Bypass	100	7854	571	371	160	290	AM219.100.16.xxxx.x/x
	40/16	Blasting	100	7854	571	371	160	290	AM215.100.40.xxxx.x/x
		Bypass	100	7854	571	371	160	290	AM219.100.40.xxxx.x/x
	63/40	Blasting	100	7854	576	376	195	255	AM215.100.63.xxxx.x/x
		Bypass	100	7854	576	376	195	255	AM219.100.63.xxxx.x/x
	160/40	Blasting	100	7854	576	376	195	255	AM215.100.160.xxxx.x/x
		Bypass	100	7854	576	376	195	255	AM219.100.160.xxxx.x/x
	250/40	Blasting	100	7854	629	386	233	249	AM215.100.250.xxxx.x/x
		Bypass	100	7854	629	386	233	249	AM219.100.250.xxxx.x/x
150/250	16/6	Blasting	150	17671	629	418	205	245	AM215.150.16.xxxx.x/x
		Bypass	150	17671	629	418	205	245	AM219.150.16.xxxx.x/x
	40/16	Blasting	150	17671	629	418	205	245	AM215.150.40.xxxx.x/x
		Bypass	150	17671	629	418	205	245	AM219.150.40.xxxx.x/x
	63/40	Blasting	150	17671	644	423	205	245	AM215.150.63.xxxx.x/x
		Bypass	150	17671	644	423	205	245	AM219.150.63.xxxx.x/x
	160/40	Blasting	150	17671	644	423	205	245	AM215.150.160.xxxx.x/x
		Bypass	150	17671	644	423	205	245	AM219.150.160.xxxx.x/x
200/300	16/6	Blasting	200	31416	717	540	280	320	AM215.200.16.xxxx.x/x
		Bypass	200	31416	717	540	280	320	AM219.200.16.xxxx.x/x
	40/16	Blasting	200	31416	717	540	280	320	AM215.200.40.xxxx.x/x
		Bypass	200	31416	717	540	280	320	AM219.200.40.xxxx.x/x
	63/40	Blasting	200	31416	737	560	280	320	AM215.200.63.xxxx.x/x
		Bypass	200	31416	737	560	280	320	AM219.200.63.xxxx.x/x
	160/40	Blasting	200	31416	737	560	280	320	AM215.200.160.xxxx.x/x
		Bypass	200	31416	737	560	280	320	AM219.200.160.xxxx.x/x



Correct use	distribution and mixing of working medium flows in main and process pipelines, and also in the composition of safety valve blocks
DN	3, 6, 10, 15, 25, 50, 80, 100, 150, 200, 300 mm
PN	0,6, 1,6, 2,5, 4, 6,3, 10, 16, 25 MPa
Working medium	liquid and gases
Working medium's temperature	–70 ... +550°C
Ambient temperature	–70 ... +60°C
Pilot construction	blasting, bypass
Класс герметичности	B
Type of connection	flange
Actuator	manual

Materials of the main parts

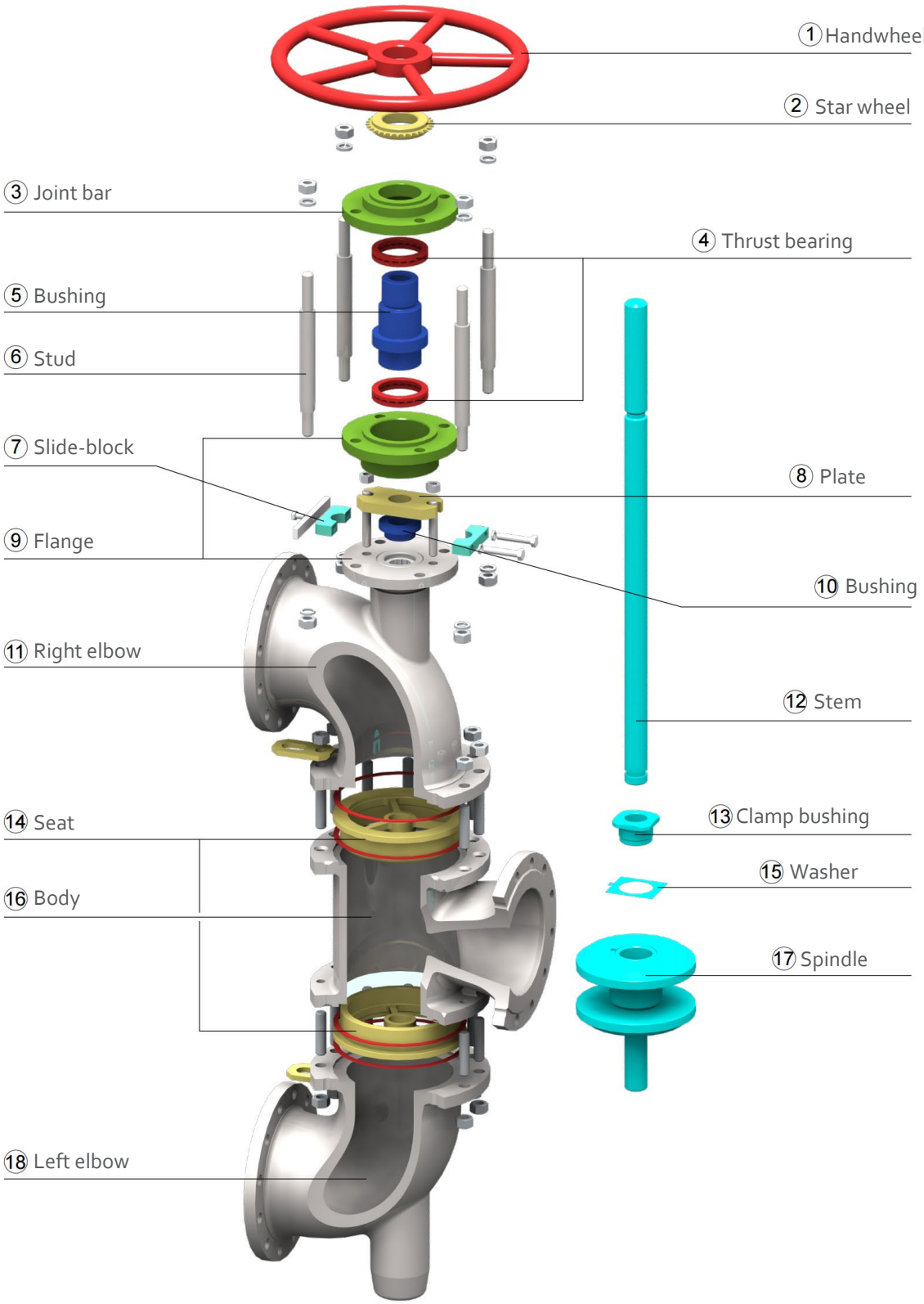
Body	LCB, WCB, A352GrLCC, GrA2Q, GrWCC, J02503, J02505, G21Mn5, J92630, J92701, ZG12Cr18Ni9Ti, ZG1Cr18Ni9, ZG1Cr18Ni9Ti, J92971, GX5CrNiMoNb19-11-2, SCS20
Trim	420, 1.4021, X20Cr13 , 2Cr13, 431, X20CrNi72, X22CrNi17, SUS431 321, X10CrNiTi18-9, SUS321, SUS321TK + coating 316Ti, S31635, SUS316Ti + coating

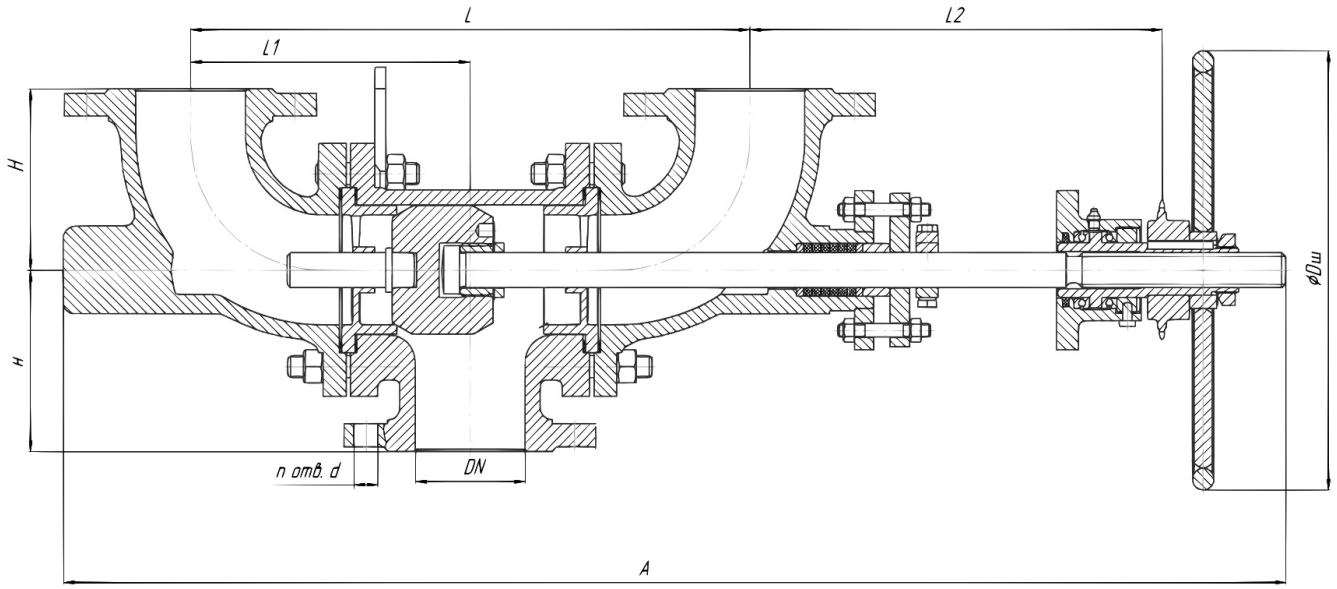
Reliability targets

Design life	not less than 10 years
Run-to-failure	not less than 2500 cycles

Description

Switching devices designed to be installed on pipelines with the purpose of distribution or mixing of the medium's flows. Can be supplied as blocks of switching devices together with safety valves in conditions when stopping of the workflow is impossible or undesirable, and there is a need for simultaneous disconnection of the safety valve and connection of the other one.

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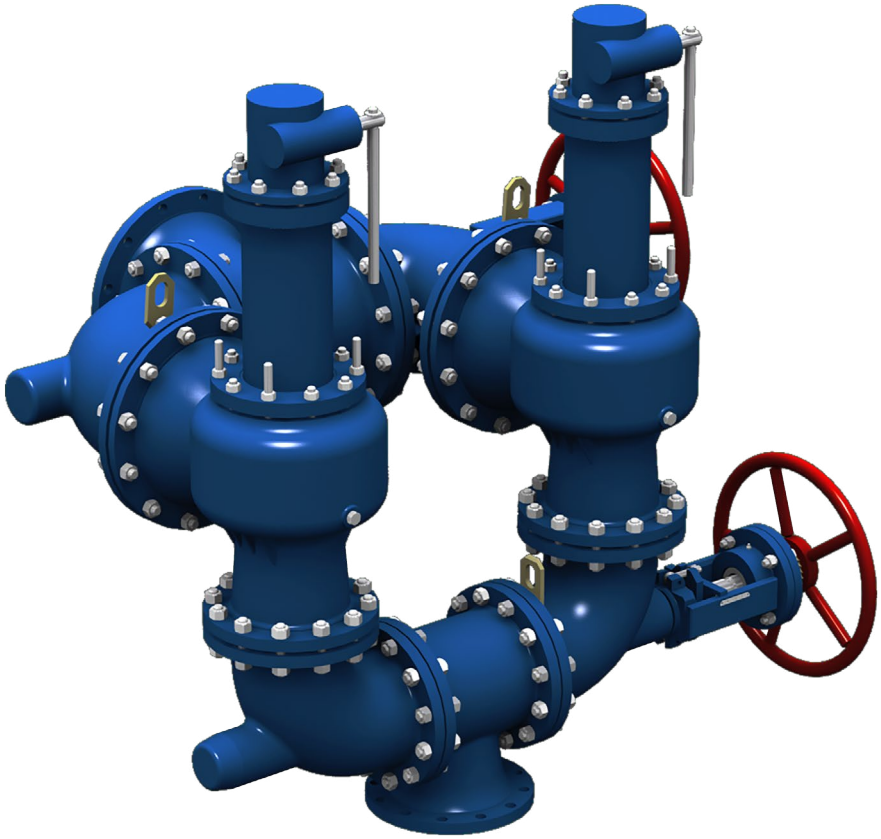
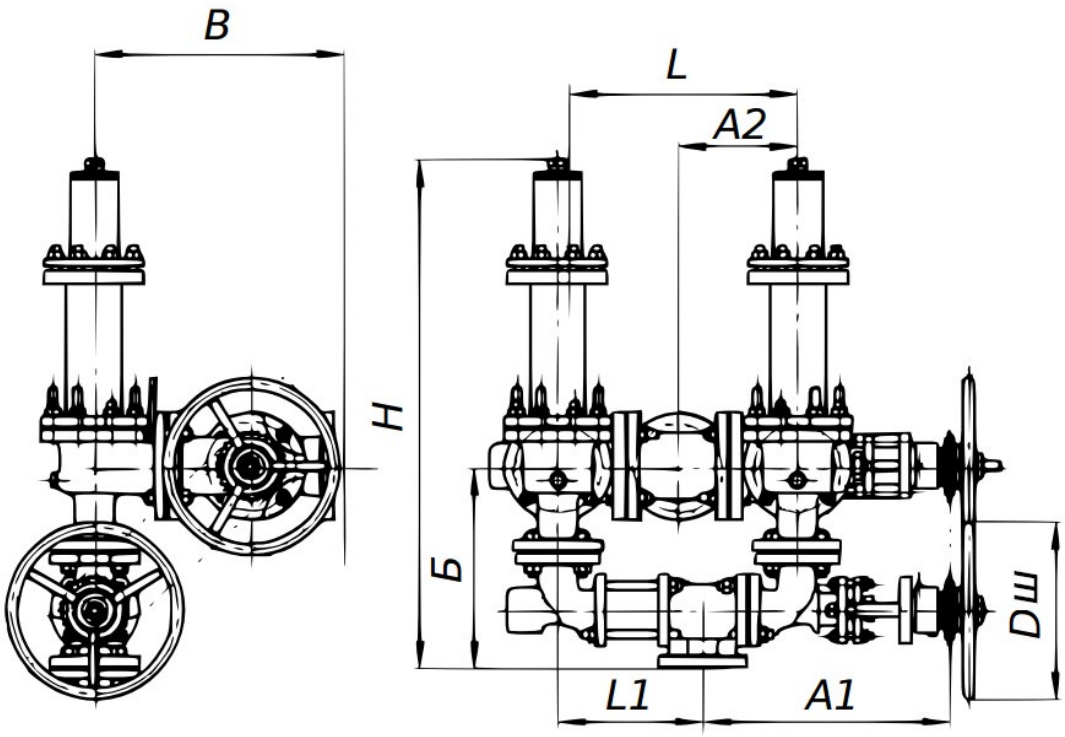
General dimensions and mass

DN, mm	PN, bar	L, mm	L1, mm	L2, mm	A, mm	n number of holes	d, mm	H, mm	Wheel diameter, mm	Mass, kg	Marking
25	16	340	170	275	775	4	14	95	205	31	AM531.25.16.xxxx.x-01
	25	340	170	275	775	4	18	95	250	31	AM531.25.25.xxxx.x-01
	40	340	170	275	775	4	18	95	250	31	AM531.25.40.xxxx.x-01
	63	430	215	275	840	4	18	120	250	42	AM531.25.63.xxxx.x-01
	100	430	215	275	840	4	18	120	250	45	AM531.25.100.xxxx.x-01
	160	430	215	275	840	4	18	120	250	45	AM531.25.160.xxxx.x-01
50	6	340	170	275	775	4	18	105	250	42	AM531.50.6.xxxx.x1
	16	340	170	275	775	4	18	105	250	44	AM531.50.16.xxxx.x
		430	170	275	865	4	18	105	250	47	AM531.50.16.xxxx.x-01
	25	340	170	275	775	4	18	105	250	45	AM531.50.25.xxxx.x
		430	170	275	865	4	18	105	250	48	AM531.50.25.xxxx.x-01
	40	340	170	275	775	4	18	105	250	45	AM531.50.40.xxxx.x
		430	170	275	865	4	18	105	250	48	AM531.50.40.xxxx.x-01
	63	430	215	305	913	4	22	180	400	85	AM531.50.63.xxxx.x-01
	100	430	215	305	913	4	26	180	400	110	AM531.50.100.xxxx.x-01
	160	430	215	305	913	4	26	180	400	110	AM531.50.160.xxxx.x-01
80	6	430	215	275	921	4	18	150	320	66	AM531.80.6.xxxx.x1
	16	430	215	270	921	4	18	150	320	69	AM531.80.16.xxxx.x
		510	215	270	1000	4	18	150	320	73	AM531.80.16.xxxx.x-01
	25	430	215	270	920	8	18	150	320	69	AM531.80.25.xxxx.x
		510	215	270	1000	8	18	150	320	74	AM531.80.25.xxxx.x-01
	40	430	215	270	920	8	18	150	320	69	AM531.80.40.xxxx.x
		510	215	270	990	8	18	150	320	74	AM531.80.40.xxxx.x-01
	63	510	255	374	1081	8	22	200	400	109	AM531.80.63.xxxx.x-01
	100	510	255	374	1085	8	26	200	400	140	AM531.80.100.xxxx.x-01
	160	510	255	374	1085	8	26	200	400	140	AM531.80.160.xxxx.x-01
100	6	510	255	276	993	4	18	165	400	96	AM531.100.6.xxxx.x1
	16	510	255	276	991	4	18	165	400	97	AM531.100.16.xxxx.x
		705	255	376	1310	4	18	165	400	122	AM531.100.16.xxxx.x-01
	25	510	255	376	1115	8	22	165	400	108	AM531.100.25.xxxx.x
		705	255	376	1310	8	22	165	400	125	AM531.100.25.xxxx.x-01
	40	510	255	376	1115	8	22	165	400	108	AM531.100.40.xxxx.x
		705	255	376	1310	8	22	165	400	125	AM531.100.40.xxxx.x-01
	63	705	352,5	492	1409	8	26	205	400	159	AM531.100.63.xxxx.x-01
	100	705	352,5	487	1394	8	30	205	400	247	AM531.100.100.xxxx.x-01
	160	705	352,5	487	1394	8	30	205	400	247	AM531.100.160.xxxx.x-01
150	6	705	352,5	376	1334	8	28	205	400	193	AM531.150.6.xxxx.x1
	16	705	352,5	376	1334	8	22	205	400	200	AM531.150.16.xxxx.x
		780	352,5	459	1508	8	22	205	400	215	AM531.150.16.xxxx.x-01
	25	705	352,5	492	1434	8	26	205	400	234	AM531.150.25.xxxx.x
		780	352,5	492	1434	8	26	205	400	244	AM531.150.25.xxxx.x-01
	40	705	352,5	492	1434	8	26	205	400	234	AM531.150.40.xxxx.x
		780	352,5	492	1434	8	26	205	400	244	AM531.150.40.xxxx.x-01
200	6	780	390	459	1525	8	18	250	400	241	AM531.200.6.xxxx.x
	16	780	390	492	1535	12	22	250	480	258	AM531.200.16.xxxx.x (-01)
	25	780	390	492	1546	12	26	250	480	292	AM531.200.25.xxxx.x
300	6	780	390	492	1566	12	22	300	480	348	AM531.300.6.xxxx.x

Blocks of safety valves





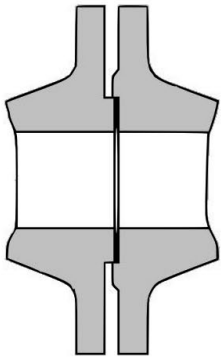
General dimensions and mass

DN inlet/outlet, mm	PN inlet/outlet, bar	Block composition	A1, mm	A2, mm	L1, mm	L, mm	Б, mm	B, mm	Wheel diameter inlet/outlet, mm	H, mm	Mass, kg	Marking
25/50	16/6	AM21X.25.16.XXXX.X AM21X.25.16.XXXX.X AM531.25.16.XXXX.X-01 AM531.50.6.XXXX.X	420	170	170	340	310	400	250/250	760	98	БПУ25.16.X.211.x/x
											98	БПУ25.16.X.212.x/x
											98	БПУ25.16.X.213.x/x
											96	БПУ25.16.X.214.x/x
	40/16	AM21X.50.40.XXXX.X AM21X.50.40.XXXX.X AM531.25.40.XXXX.X-01 AM531.50.16.XXXX.X	420	170	170	340	310	400	250/320	760	99	БПУ25.40.X.211.x/x
											99	БПУ25.40.X.212.x/x
											100	БПУ25.40.X.213.x/x
											98	БПУ25.40.X.214.x/x
	63/40	AM21X.25.40.XXXX.X AM21X.25.40.XXXX.X AM531.25.40.XXXX.X-01 AM531.50.16.XXXX.X	490	215	215	430	370	410	320/400	695	112	БПУ25.63.X.211.x/x
											112	БПУ25.63.X.212.x/x
											112	БПУ25.63.X.213.x/x
											111	БПУ25.63.X.214.x/x
	160/40	AM21X.25.160.XXXX.X AM21X.25.160.XXXX.X AM531.25.160.XXXX.X-01 AM531.50.40.XXXX.X	523	215	215	430	525	445	320/320	1110	122	БПУ25.160.X.211.x/x
											122	БПУ25.160.X.212.x/x
											122	БПУ25.160.X.213.x/x
											122	БПУ25.160.X.214.x/x
50/80	16/6	AM21X.50.16.XXXX.X AM21X.50.16.XXXX.X AM531.50.16.XXXX.X-01 AM531.80.6.XXXX.X	444	215	260	430	365	430	320/320	865	161	БПУ50.16.X.211.x/x
											158	БПУ50.16.X.212.x/x
											155	БПУ50.16.X.213.x/x
											151	БПУ50.16.X.214.x/x
	40/16	AM21X.50.40.XXXX.X AM21X.50.40.XXXX.X AM531.50.40.XXXX.X-01 AM531.80.16.XXXX.X	444	215	260	430	365	430	320/400	865	164	БПУ50.40.X.211.x/x
											161	БПУ50.40.X.212.x/x
											158	БПУ50.40.X.213.x/x
											154	БПУ50.40.X.214.x/x
	63/40	AM21X.50.63.XXXX.X AM21X.50.63.XXXX.X AM531.50.63.XXXX.X-01 AM531.80.40.XXXX.X	520	215	215	430	525	445	320/400	1110	220	БПУ50.63.X.211.x/x
											216	БПУ50.63.X.212.x/x
											213	БПУ50.63.X.213.x/x
											209	БПУ50.63.X.214.x/x
	160/40	AM21X.50.160.XXXX.X AM21X.50.160.XXXX.X AM531.50.160.XXXX.X-01 AM531.80.40.XXXX.X	523	215	215	430	520	445	400/320	1115	250	БПУ50.160.X.211.x/x
											246	БПУ50.160.X.212.x/x
											245	БПУ50.160.X.213.x/x
											239	БПУ50.160.X.214.x/x
80/100	16/6	AM21X.80.16.XXXX.X AM21X.80.16.XXXX.X AM531.80.16.XXXX.X-01 AM531.100.6.XXXX.X	490	255	295	510	475	480	320/400	985	225	БПУ80.16.X.211.x/x
											221	БПУ80.16.X.212.x/x
											220	БПУ80.16.X.213.x/x
											216	БПУ80.16.X.214.x/x
	40/16	AM21X.80.40.XXXX.X AM21X.80.40.XXXX.X AM531.80.40.XXXX.X-01 AM531.100.16.XXXX.X	490	255	295	510	475	480	320/400	985	231	БПУ80.40.X.211.x/x
											227	БПУ80.40.X.212.x/x
											227	БПУ80.40.X.213.x/x
											234	БПУ80.40.X.214.x/x
	63/40	AM21X.80.63.XXXX.X AM21X.80.63.XXXX.X AM531.80.63.XXXX.X-01 AM531.100.40.XXXX.X	631	255	255	510	600	495	320/400	1105	290	БПУ80.63.X.211.x/x
											286	БПУ80.63.X.212.x/x
											286	БПУ80.63.X.213.x/x
											282	БПУ80.63.X.214.x/x
	160/40	AM21X.80.160.XXXX.X AM21X.80.160.XXXX.X AM531.80.160.XXXX.X-01 AM531.100.40.XXXX.X	631	255	255	510	600	495	400/400	1115	331	БПУ80.160.X.211.x/x
											327	БПУ80.160.X.212.x/x
											328	БПУ80.160.X.213.x/x
											323	БПУ80.160.X.214.x/x

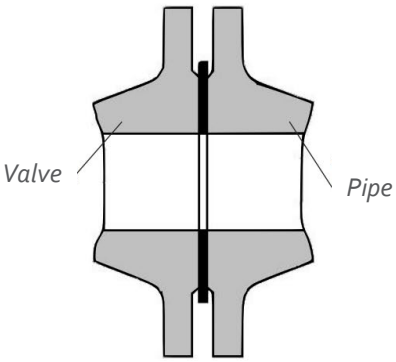
DN inlet/outlet, mm	PN inlet/outlet, bar	Block composition	A1, mm	A2, mm	L1, mm	L, mm	Б, mm	B, mm	Wheel diameter inlet/outlet, mm	H, mm	Mass, kg	Marking
100/150	16/6	AM21X.100.16.xxxx.x AM21X.100.16.xxxx.x AM531.100.16.xxxx.x-01 AM531.150.06.xxxx.x	630	352	450	705	530	600	400/400	1135	395	БПУ100.16.X.211.x/X
											391	БПУ100.16.X.212.x/x
											389	БПУ100.16.X.213.x/x
											384	БПУ100.16.X.214.x/x
	40/16	AM21X.100.40.xxxx.x AM21X.100.40.xxxx.x AM531.150.16.xxxx.x AM531.100.40.xxxx.x-01	630	352	450	705	530	600	400/400	1135	409	БПУ100.40.X.211.x/x
											405	БПУ100.40.X.212.x/x
											404	БПУ100.40.X.214.x/x
											409	БПУ100.40.X.213.x/x
	63/40	AM21X.100.63.xxxx.x AM21X.100.63.xxxx.x AM531.100.63.xxxx.x-01 AM531.150.40.xxxx.x	843	352,5	352,5	705	670	620	400/400	1440	542	БПУ100.63.X.211.x/x
											538	БПУ100.63.X.212.x/x
											535	БПУ100.63.X.213.x/x
											531	БПУ100.63.X.214.x/x
	160/40	AM21X.100.160.xxxx.x AM21X.100.160.xxxx.x AM531.100.160.xxxx.x-01 AM531.150.40.xxxx.x	840	352,5	352,5	705	670	620	400/400	1450	670	БПУ100.160.X.211.x/x
											666	БПУ100.160.X.212.x/x
											663	БПУ100.160.X.213.x/x
											659	БПУ100.160.X.214.x/x
150/200	16/6	AM21X.150.16.xxxx.x AM21X.150.16.xxxx.x AM531.150.16.xxxx.x-01 AM531.200.06.xxxx.x	812	390	427	710	670	705	400/400	1300	604	БПУ150.16.X.211.x/x
											588	БПУ150.16.X.212.x/x
											588	БПУ150.16.X.213.x/x
											604	БПУ150.16.X.214.x/x
	40/16	AM21X.150.40.xxxx.x AM21X.150.40.xxxx.x AM531.150.40.xxxx.x-01 AM531.200.16.xxxx.x	812	390	427	710	670	705	400/410	1300	706	БПУ150.40.X.211.x/x
											680	БПУ150.40.X.212.x/x
											680	БПУ150.40.X.213.x/x
											664	БПУ150.40.X.214.x/x
200/300	16/6	AM21X.200.16.xxxx.x AM21X.200.16.xxxx.x AM531.200.16.xxxx.x-01 AM531.300.06.xxxx.x	820	390	390	710	820	810	410/410	1610	810	БПУ200.16.X.211.x/x
											794	БПУ200.16.X.212.x/x
											793	БПУ200.16.X.213.x/x
											777	БПУ200.16.X.214.x/x

Types of connection to pipeline

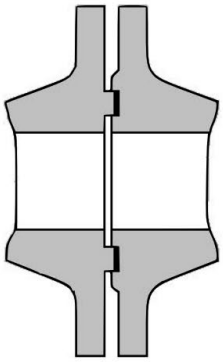
We can provide flange connection by GOST R 54432-2011 or ANSI B16.5.



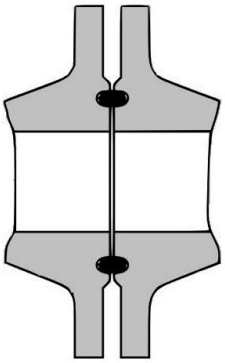
E/F - type



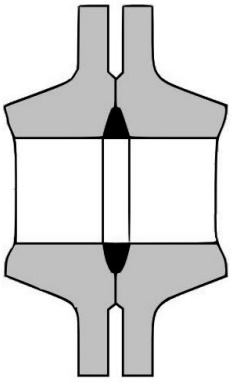
B/B - type



C,L/D,M - type



J/J - type



K/K - type

Notes

Our clients

GAZPROM

TRANSNEFT

LUKOIL

ROSNEFT

СНГ
SURGUTNEFTEGAS

SLAVNEFT

TOTAL

NORTGAZ

ZARUBEZHNEFT

EuroChem

УВЗ
Uralvagonzavod

NORNICKEL

Grossmann
Group

BELORUSNEFT

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