

S43 121 3250 – Gate valve butt welding

S43 121 3420 – Gate valve butt welding



High Pressure Gate Valves [GHP]

DN 15(1/2") ÷ DN 300 (12")

PN 250 ÷ PN 420

Class 1500 ÷ Class 2500

Design

- Forged or casted body and bonnet
- Pressure sealing bonnet (self-sealing design).
- Rising stem (RS), outside screw and yoke (OS&Y)
- Split wedge type obturator
- Seating surfaces made from Stellite

Applications

- Power plant, Chemical, Petrochemical, Refining, water supply and other

Media

- Depending on the gate valves materials for: water, steam, gas, oil and other non-aggressive media.

Pressure and

temperature (table D.6.4)

- Pressures up to 420 bar
- Class 1500 ÷ Class 2500
- Temperature up to 600 °C

Materials (table D.6.1)

- Carbon, heat resistant alloys and stainless steel

Advantages

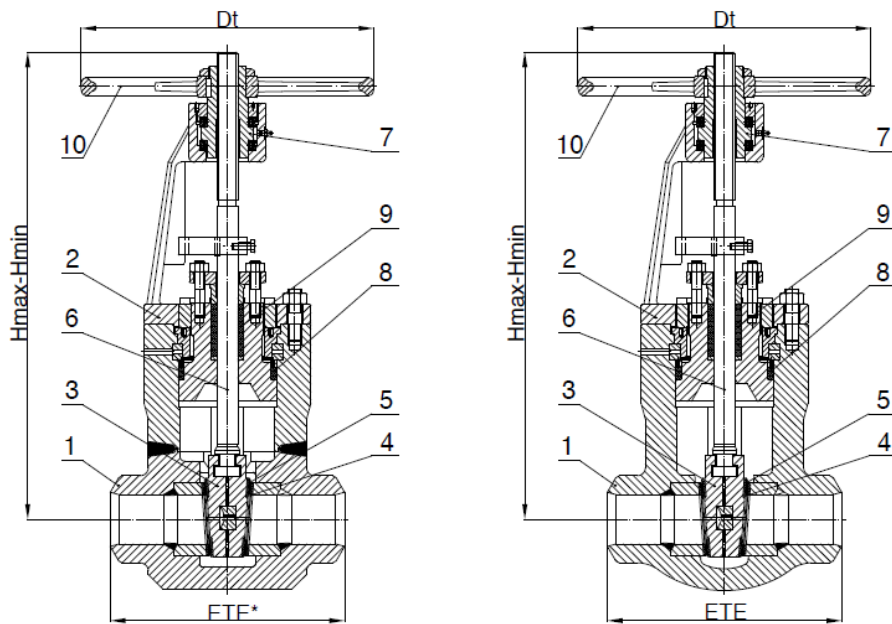
- Long service life
- Respect to emission standards
- Easy handling and maintenance
- Stem packing replacement in working conditions

Options

- Electric actuator
- Position indicator
- Extended stem
- Locking device
- By-pass
- Welding ends according to: GOST, DIN, EN.
- Other paint finishes are available upon customer's request

Testing

- Every produced gate valve was tested according to API 598 or EN 12266



Drawing D.6.1 Parts and dimensions

List of materials

Table D.6.1

Item	Part		Groups of materials according to ASME B16.34				
			1.1	1.3 i1.5	1.9	1.10	1.15
			Application				
			up to 425 °C	up to 470 °C	up to 595 °C	up to 595 °C	up to 600 °C
			Material Code				
		12 and 13	20 and 21	22 and 23	24 and 25	28 and 29	
1	Body	Forged	A105	A182 F1	A182 F11	A182 F22	A182 F91
		Cast	A216 WCB	A217 WC1	A217 WC6	A217 WC9	A217 C12A
2	Bonnet		A216 WCB	A217 WC1	A217 WC6	A217 WC9	A217 C12A
3	Wedge	Forged	A105	A182 F1	A182 F11	A182 F22	A182 F91
		Cast	A216 WCB	A217 WC1	A217 WC6	A217 WC9	A217 C12A
4	Trim	Body Seats	HF (Stellite)				
5		Wedge seats	HF (Stellite)				
6		Stem	1.4122				
7	Stem Nut		Cu alloy				
8	Bonnet Gasket		braided graphite with corrosion inhibitor				
9	Stem Packing		braided graphite with corrosion inhibitor				
10	Handwheel		cast carbon steel				

Standards

Table D.6.2

High Pressure Gate Valves	Class 1500(PN 250) ÷ Class 2500(PN 420)
End-to-end dimensions according to	ASME/ANSI B16.10 and manufacturer standard
Welding ends according to	ASME/ANSI B16.25

[GHP] Dimensions (mm) Class 1500 (PN 250) - Cast body

Table D.6.3

DN	50	65	80	100	125	150	200	250	300
ETE	216	254	305	406	483	559	711	864	991
H max	540	700	835	920	1170	1515	1720	2355	2650
H min	480	622	735	805	1030	1340	1500	2080	2300
Dt	315	315	400	500	500	500	630	630	630
📏 (kg)	47	57	66	123	497	312	690	1086	1380

[GHP] Dimensions (mm) Class 2500 (PN 420) - Cast body

Table D.6.4

DN	50	65	80	100	125	150	200	250	300
ETE	279	330	368	457	533	610	762	914	1041
H max	540	700	835	920	1170	1515	1720	2355	2650
H min	480	622	735	805	1030	1340	1500	2080	2300
Dt	315	400	500	500	500	630	630	630	730
📏 (kg)	63	85	94	265	275	346	750	1260	1720

[GHP] Dimensions (mm) Class 1500 (PN 250) - Forged body

Table D.6.5

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
ETE*	90	114	140	165	178	250	300	350	400	450	500	600	700	800
H max	181	203	267	297	297	540	700	835	920	1170	1515	1720	2355	2650
H min	165	183	237	255	255	480	622	735	805	1030	1340	1500	2080	2300
Dt	100	120	150	150	150	315	400	500	500	500	630	630	630	730
📏 (kg)	3,0	5,1	7,3	10,2	13	37	46	95	220	370	510	845	1540	2045

ETE* - according to manufacturer standard

[GHP] Dimensions (mm) Class 2500 (PN 420) - Forged body

Table D.6.6

DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
ETE*	114	148	180	232	232	250	300	350	400	450	500	600	700	800
H max	203	270	297	349	349	540	700	835	920	1170	1515	1720	2355	2650
H min	183	237	255	313	313	480	622	735	805	1030	1340	1500	2080	2300
Dt	120	150	150	250	250	315	400	500	500	500	630	630	630	730
📏 (kg)	5,3	7,3	11,5	18	18	43	54	115	250	420	580	960	1750	2320

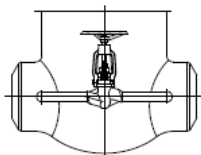
ETE* - according to manufacturer standard

Range of application

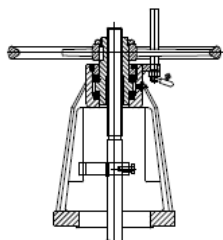
Table D.6.7

Material Group (Code)	Materials	Class	Pressure (bar) / temperature (°C) ratings according to ANSI B16.34																			
			-29 +38	50	100	150	200	250	300	325	350	375	400	425	450	475	500	538	550	575	600	
1.1 (12 and 13)	A 105 A216 WCB	1500	259	259	258	255	253	253	253	251	245	236	217	180	144	109	76	37				
		2500	431	431	430	425	421	421	421	418	408	393	362	300	240	182	122	62				
1.3 (21)	A217 WC1	1500	240	240	240	240	240	240	240	240	237	225	204	171	135	98	69	37				
		2500	400	400	400	400	400	400	400	400	394	375	340	284	225	163	115	62				
1.5 (20)	A182 F1	1500	240	240	240	240	240	240	240	240	240	240	240	240	236	214	150	71				
		2500	400	400	400	400	400	400	400	400	400	400	400	400	393	356	251	118				
1.9 (22 and 23)	A182 F11 cl.2 A217 WC6	1500	259	259	259	259	259	259	259	259	257	253	251	248	236	214	161	93	79	55	38	
		2500	431	431	431	431	431	431	431	431	429	421	418	414	393	356	268	155	132	92	64	
1.10 (24 and 25)	A182 F22 cl.3 A217 WC9	1500	259	259	258	255	251	250	249	248	246	244	244	244	236	214	179	115	98	66	43	
		2500	431	431	430	425	419	417	415	413	410	406	406	406	393	356	298	192	163	110	72	
1.15 (28 and 29)	A182 F91 A217 C12A	1500	259	259	259	259	259	259	259	259	257	253	251	248	236	214	179	145	145	143	122	
		2500	431	431	431	431	431	431	431	431	429	421	418	414	393	356	298	242	242	238	203	

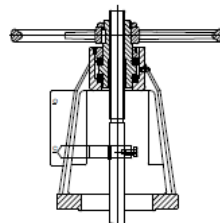
Optional execution



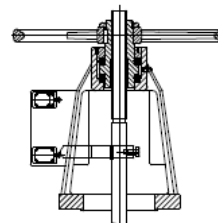
By - pass



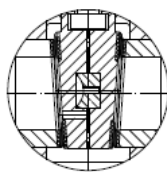
Locking device



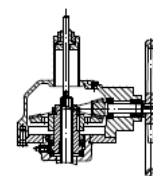
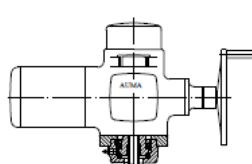
Position indicator



Limit switches



With hole in wedge



Control by electric, hydraulic actuator
or by gear

