A Long Experience in Energy Equipment and one Goal:

The Customer's satisfaction.

VALVITALIA GROUP

GATE VALVES

Through Conduit: Slab and Expanding, Slab and Expanding API 6A, Fabricated Square and Round Body. Pressure Seal - Bolted Bonnet - Cryogenic.

VITAS

Throught Conduit Gate Valves Slab and Expanding

1. Design construction:
API 6D - ANSI B16.34
Testing according to API 6D
Marking according to MSS SP25
Fire safe design according to API 6FA-BS 6755 part2

2. Outside Screw and Yoke (OS&Y)
Floating seats with grease injector design 8”
Back seat design
Special packing with lantern ring and double ball grease injector
Electroless nickel plated slab gate and seat Vent and Drain valve

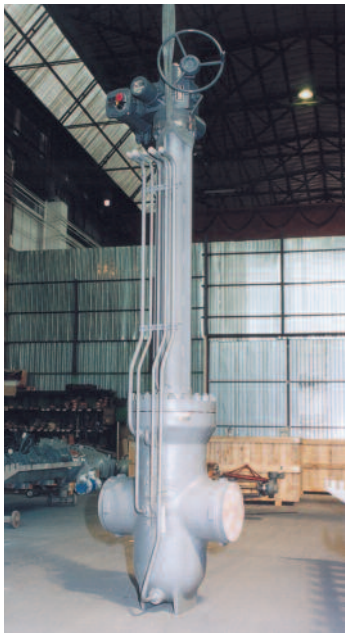
3. Full stellited seats and slab on request
Body Bonnet seal Spiral Wound (S.S. plus graphite) or RTJ
Other design at request
Valves are Full Bore or Reduced Bore

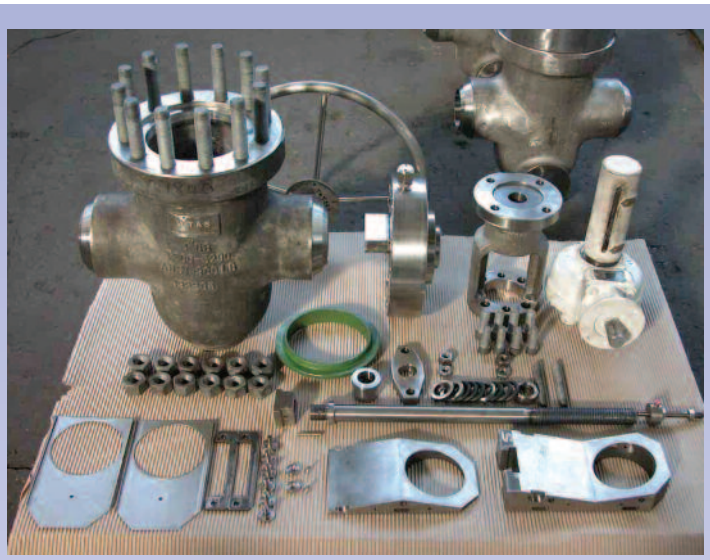
4. Flanges according ANSI B16.5 for size 2” to 24”
to ASME B 16.47 for size > 26”
Butt Welding Ends according to ANSI B16.25
Face to face according to API 6D

5. Suggested bevel gear operator for:
DN ≥ 20” Class 150 - DN ≥ 14” Class 300
DN ≥ 10” Classes 600 and 900 - DN ≥ 8” Class 1500
DN ≥ 4” Class 2500

6. For pressure and temperature
rating see material application

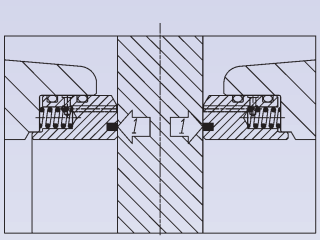
7. Valves are also available as expanding gate





Through Conduit Gate Valves are designed in accordance with the latest applicable revisions of API 6D for classes ANSI ISO, 300, 600, 900, 1500 and 2500.
The design is refered to the international standard code and is applied to verify all components and connections of the valve. The design of the stem is checked by applying the highest traction load caused by the slab gate which wins the reaction of the seats during the opening of the valve at full design Dp and at design temperature.
Technical Department has performed traction load tests on stems at the Mechanical Engineering University Department of Padova - Italy to verify the stem material yield value and maximum allowable load according to ASME II Part D. The seat ring are floating type-spring loaded to assure the contact with the slab gate in a way to provide an effective tight seal even at low differential pressure between inlet and outlet flange. The soft seat insert assures the primary sealing and the metal contact between slab and seats is the secondary sealing. Different soft seat materials required by Customer's specification are applied depending on the fluid process. The metal to metal seat is designed and manufactured on request for application either with aggressive and dirty fluid or when operation at very high temperature occurs. As an additional request, the Through Conduit Gate Valves are designed with the expanded slab with the addition of a relief valve in the body cavity.
On request Through Conduit Gate Valves are fitted with emergency seals to restore sealing in the event of soft seal damage. The fire safe design, if required, includes a supplementary sealing gasket (graphite) to avoid leakages in case of fire and burning of the soft seal as per BS 6755 Part 2 and / or API 6FA.

EXCELLENT DOUBLE BLOCK AND BLEED CAPABILITY
AUTOMATIC RELIEF OF EXCESS BODY PRESSURE



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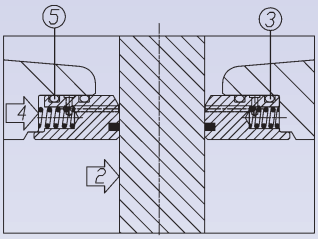

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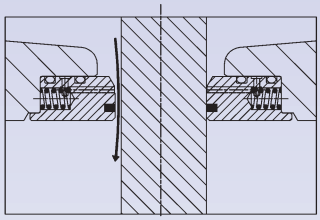


With equal pressure throughout the valve and gate in closed position. An initial seal (1) is formed with the raised TFE ring on the faces of the seats. The seat inserts clean both sides of the gate each time the valve is opened or closed. Powerful springs assure sealing independent of high pressure, low pressure, or vacuum providing a constant contact during any type of operation.

❷ As line pressure (2) is applied to the valve, it acts on the gate, forcing it against the seat ring on the downstream seat, a seal is formed (a the beginning a TFE-to-metal seal, then metal-to-metal). The O-ring (3) prevents any downsteal flow at this point. An upstream seal is provided when body pressure is bled off. This is caused by the force of line pressure acting against the upstream seat (4) moving the seat against the gate and providing a tight TFE-to-metal seal at this point. At the same time, the O-ring (5) forms a tight seal with the seat and body.

❸ Valve automatically relieves itself of excessive body pressure. When body pressure exceeds line pressure, from such causes as thermal expansion, the upstream seat is forced back into its recess and the excess pressure in the body is bled between the seat and the gate into the line.

Throught Conduit Gate Valves Slab and Expanding

Class ANSI 150 - Full Bore

size	inch	2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	48
A		51	76	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876	978	1022	1168
D		146	216	279	345	419	460	581	635	690	765	851	1020	1035	1180	1230	1300	1400	1460	1510	1640	1730	1980
C Travel		76	101	127	177	239	280	341	373	433	486	537	588	639	683	734	797	841	892	936	1038	1097	1243
H		470	660	762	890	1103	1450	1680	1867	2037	2223	1792	1942	2075	2182	2372	2490	2600	2690	2890	3039	3282	3577
H1		-	-	-	-	-	-	-	-	-	-	2449	2610	2874	3015	3256	3437	3591	3732	3976	4227	4528	4970
L BW		216	283	305	403	419	457	502	572	610	660	711	762	813	864	914	914	965	1016	1016	1118	1168	1321
L RF		178	203	229	267	292	330	356	381	406	432	457	508	508	559	610	660	711	762	813	914	965	1118
V		250	300	300	400	500	600	600	800	800	1100	-	-	-	-	-	-	-	-	-	-	-	-
V1		-	-	-	-	-	-	-	-	-	-	600	600	600	600	600	800	800	800	800	600	800	800
Weight	RF (Slab) Kg	35	55	85	142	240	350	460	600	730	900	1140	1700	2060	2300	2650	2900	3600	4500	5370	6800	7420	10420
Weight	BW (Slab) Kg	30	47	76	130	225	315	430	520	615	820	1050	1610	1960	2200	2480	2615	3270	4220	5010	6350	6840	9700

Class ANSI 150 - Reduced Bore

size	inch	3X2	4X3	6X4	8X6	10X8	12X10	14X12	16X14	18X16	20X18	24X20	32X24	40X36
A		51	76	102	152	203	254	305	337	387	438	489	591	876
D		146	216	280	345	420	460	581	635	690	765	851	1035	1510
C Travel		76	101	127	177	239	280	341	373	433	486	537	639	936
H		470	660	762	890	1103	1450	1680	1867	2037	2223	2300	2874	3976
H1		570	760	880	990	1303	1550	1817	2131	2290	2432	2449	2075	2760
Weight	RF (Slab) Kg	30	62	70	135	200	280	385	535	632	880	1585	1780	4750
Weight	BW (Slab) Kg	25	58	53	105	170	245	345	485	563	765	1345	-	-

Class ANSI 300 - Full Bore

size	inch	2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	48
A		51	76	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876	978	1022	1168
D		146	216	280	345	430	460	590	646	710	800	910	1035	1056	1200	1230	1300	1400	1460	1510	1640	1730	1960
C Travel		76	101	127	177	239	280	341	373	433	486	537	588	639	683	734	797	841	892	936	1038	1097	1243
H		470	660	760	890	1100	1450	1680	1680	1740	1825	1790	1940	2075	2180	2370	2490	2600	2690	2890	3040	3280	3580
H1		-	-	-	-	-	-	-	-	-	-	2450	2610	2875	3015	3256	3440	3590	3730	3975	4225	4530	4970
L BW-RF		216	283	305	403	419	457	502	762	838	914	991	1092	1143	1245	1346	1397	1524	1625	1727	1930	2007	2286
V		250	300	300	500	600	600	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V1		-	-	-	-	-	-	-	600	800	600	800	800	600	800	800	800	800	800	800	800	800	1000
Weight	RF (Slab) Kg	55	85	110	240	365	500	750	1050	1480	2040	2640	3500	4260	4800	5500	6300	7000	7900	8900	12800	15000	22000
Weight	BW (Slab) Kg	50	75	90	210	325	400	615	900	1340	1885	2420	3200	3950	4450	5090	5770	6440	7300	8200	12000	14000	-

Class ANSI 300 - Reduced Bore

size	inch	3x2	4x3	6x4	8x6	10x8	12x10	14x12	16x14	18x16	20x18	24x20
A		51	76	102	152	203	254	305	337	387	438	489
D		146	216	280	347	405	460	590	646	710	800	910
C Travel		76	101	127	177	239	280	341	373	433	486	537
H		470	660	762	890	1103	1450	1680	1867	2037	2223	2300
H1		570	760	880	1020	1203	1550	1772	1919	2139	2432	2599
Weight	RF (Slab) Kg	70	95	105	180	280	442	650	870	1190	1540	2310
Weight	BW (Slab) Kg	65	86	78	140	220	390	556	790	1010	1355	2040

Class ANSI 600 - Full Bore

size	inch	2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	48
A		51	76	102	152	203	254	305	337	387	438	489	540	590	635	686	737	781	832	876	978	1022	1168
D		146	216	200	335	421	500	600	650	745	846	910	1020	1100	1205	1230	1375	1400	1460	1510	1640	1730	1980
C Travel		76	101	110	170	220	270	320	365	437	460	539	590	630	675	736	780	831	882	926	977	977	1218
H		470	660	756	1050	1340	1067	1201	1483	1735	1827	1790	1940	2417	2593	2370	2943	2600	2690	2890	3040	3280	3865
H1		-	-	-	-	-	1592	1702	1906	2140	2426	2600	2610	3150	3350	3255	3671	3590	3730	3975	4225	4530	5235
L BW-RF		292	356	432	559	660	787	838	889	991	1092	1194	1295	1397	1448	1549	1651	1778	1930	2083	2388	2438	2794
L RTJ		295	359	435	562	664	791	841	892	994	1095	1200	1305	1407	1461	1562	1664	1794	1946	2099	-	-	-
V		300	300	400	400	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V1		-	-	-	-	-	600	600	600	600	600	600	600	800	800	800	800	800	800	800	800	800	800
Weight	RF (Slab) Kg	65	110	156	296	650	900	1135	1700	2360	2776	4200	5500	4930	6000	8100	7900	11500	13100	15200	18500	20600	28000
Weight	BW (Slab) Kg	53	102	132	270	570	768	1050	1630	2080	2470	3890	5180	4486	5680	7620	7340	10880	12380	14350	17400	-	-

Class ANSI 600 - Reduced Bore

size	inch	3X2	4X3	6X4	8X6	10X8	12X10	14X12	16X14	18X16	20X18	24X20
A		51	76	102	152	203	254	305	337	387	438	489
D		146	216	280	347	396	555	620	670	745	800	910
C Travel		76	101	110	170	220	270	320	365	437	460	539
H		470	660	762	890	1103	1450	1680	1867	2037	2223	2300
H1		570	760	880	1020	1203	1550	1772	1919	2139	2432	2599
Weight	RF (Slab) Kg	80	128	195	355	545	925	1165	1575	1850	2425	3500
Weight	BW (Slab) Kg	68	120	155	300	405	810	1110	1352	1655	1885	2950

Throught Conduit Gate Valves Slab and Expanding

Class ANSI 900 - Full Bore

size inch	3	4	6	8	10	12	14	16	18	20	24
A	76	102	152	203	254	305	324	375	425	473	572
D	222	286	380	420	590	685	765	850	950	1060	1190
C Travel	120	146	208	225	305	372	408	478	520	568	657
H	725	800	1070	925	1235	1220	1480	1650	2020	2370	2945
H1	-	-	-	-	1740	1790	2090	2330	2740	3140	3850
L BW-RF	381	457	610	737	838	965	1029	1130	1219	1321	1549
L RTJ	384	460	613	740	841	968	1038	1140	1232	1334	1568
V	500	800	1100	1100	-	-	-	-	-	-	-
V1	-	-	-	-	600	600	600	600	800	800	800
Weight RF (Slab) Kg	160	290	530	970	1300	2000	2600	3200	4000	5100	9450
Weight BW (Slab) Kg	145	265	310	620	1190	1810	2370	2880	3320	4250	8120

Class ANSI 900 - Reduced Bore

size inch	3x2	4x3	6x4	8x6	10x8	12x10	14x12	16x14	18x16	20x18	24x20
A	51	76	102	152	203	254	305	337	375	425	473
D	152	222	286	381	465	590	685	765	852	950	1060
C Travel	85	120	146	208	225	305	372	408	478	520	568
H	495	725	802	1070	1308	1448	1575	1816	1930	2464	2921
H1	610	874	956	1270	1500	1740	1790	2090	2330	2740	3140
Weight RF (Slab) Kg	120	160	250	400	688	1150	1625	2290	2915	3710	5765
Weight BW (Slab) Kg	105	145	180	300	540	971	1270	2020	2570	3384	5160

Class ANSI 1500 - Full Bore

size inch	2	3	4	6	8	10	12	14	16	18	20	22	24
A	51	76	102	146	194	241	289	314	362	407	457	495	534
D	152	222	286	380	485	610	710	790	890	990	1090	1195	1270
C Travel	85	120	146	196	244	291	355	395	460	500	552	603	647
H	495	725	800	1160	1080	1225	1310	1465	1640	2010	2450	2620	2975
H1	-	-	-	-	1520	1765	1815	2110	2350	2780	3300	3520	3920
L BW-RF	368	470	546	705	832	991	1130	1257	1384	1537	1664	1943	1943
L RTJ	371	473	549	711	841	1000	1146	1276	1407	1559	1686	1972	1972
V	400	500	600	800	-	-	-	-	-	-	-	-	-
V1	-	-	-	-	600	800	800	800	800	800	800	800	800
Weight RF (Slab) Kg	120	250	380	900	1500	2300	3300	4600	5900	7500	10500	14700	17000
Weight BW (Slab) Kg	100	220	340	810	1350	2050	2970	4050	5200	6650	9300	13200	15100

Class ANSI 1500 - Reduced Bore

size inch	3X2	4X3	6X4	8X6	10X8	12X10	14X12	16X14	18X16	20X18	24X20
A	51	76	102	146	194	241	289	318	362	407	457
D	152	222	266	381	483	610	711	787	889	991	1092
C Travel	85	120	146	196	244	291	355	395	460	500	552
H	495	724	802	1160	1380	1520	1650	1885	2010	2540	3000
H1	610	874	956	1320	1520	1785	1814	2110	2350	2780	3300
Weight RF (Slab) Kg	115	211	344	643	1148	1954	2996	4212	5293	6496	8126
Weight BW (Slab) Kg	62	154	256	461	851	1484	2402	3315	4099	4998	6220

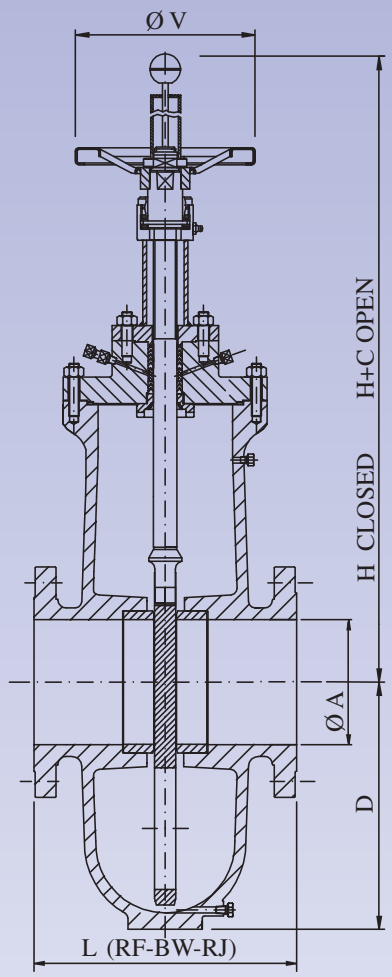
Class ANSI 2500 - Full Bore

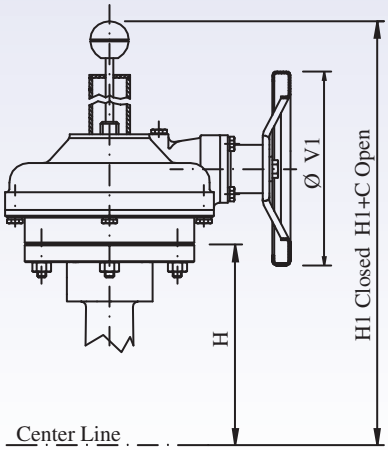
size inch	2	3	4	6	8	10	12
A	44	64	89	133	181	225	267
D	155	212	255	330	430	480	550
C Travel	82	110	122	170	220	275	320
H	545	710	640	790	950	1170	1435
H1	-	-	890	1065	1280	1610	1955
L BW-RF	451	578	673	914	1022	1270	1422
L RTJ	454	584	683	927	1038	1292	1445
V	400	500	-	-	-	-	-
V1	-	-	600	600	600	600	800
Weight RF (Slab) Kg	175	365	590	1440	2340	4000	5800
Weight BW (Slab) Kg	130	290	470	1150	1900	3200	4800

Class ANSI 2500 - Reduced Bore

size inch	
A	
D	
C Travel	
H	
H1	
Weight RF (Slab) Kg	
Weight BW (Slab) Kg	

On request





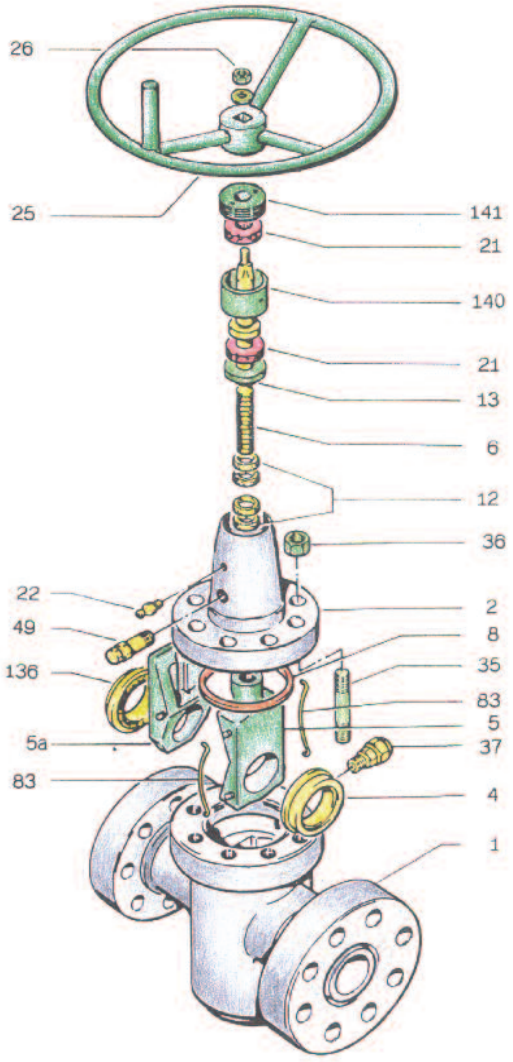
Throught Conduit Gate Valves Slab and Expanding API 6A

1
- Design according to API 6A
- Testing according to API 6A
- Marking according to API 6A

2
- Flanges according to API6A
- Butt Welding Ends according to API 6A
- Face to Face according to API 6A

3
- Double block & bleed in closed position
- Anti blow out stem
- Body cavity self reliving on slab gate
- Fire safe design (certificate on request)

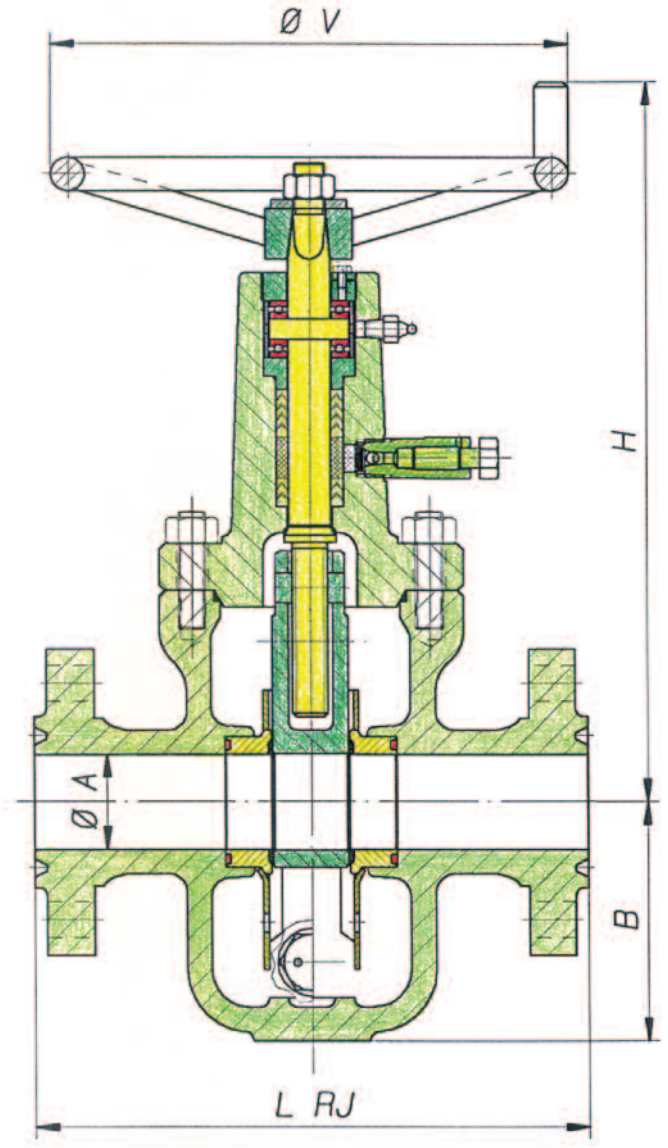
4
- Rising or no rising stem on request
- Body relief valve on request
- Grease injector on seats on request



PARTS LIST

Item No.	Description	Qty.
1	Body	1
2	Bonnet	1
4	Seat	2
5	Gate	1
5a	Segment	1
6	Stem	1
8	Bonnet seal ring	1
12	Packing set	1
13	Gland	1
21	Bearing	2
22	Grease fitting	1
25	Handwheel	1
26	Handwheel nut	1
27	Gate guide	2
35	Bonnet studs	8
36	Bonnet nuts	8
37	Body grease fitting	2
49	Packing injector	1
83	Gate spring	2
136	Seat “O”-Ring	2
140	Bearing spacer sleeve	1
141	Bearing retainer nut	1

Gate Valves
API 6A - 2000, 3000, 5000, 10000 & 15000 PSI



2000 FLANGED END DIMENSIONS

Size (Inch)	øA	H	LRJ	B	øV	Weight RJ(Kg)
2" 1/16	52,3 2,06"	485 19,1"	295,1 11,62"	133 5,25"	254 10"	59
2" 9/16	65 2,56"	514 20,25"	333,2 13,12"	155 6,1"	330 13"	80
3" 1/8	79,2 3,12"	584 23"	358,6 14,12"	190,5 7,5"	406 16"	111
4" 1/16	103,1 4,06"	676 26,6"	434,8 17,12"	235 9,25"	406 16"	164
5" 1/8	130.2 5.12"	730 28.7"	562 22.12"	285 11.2"	508 20"	270
7" 1/16	179.3 7.06"	880 34.6"	664 26.12"	390 15.3"	508 20"	450

3000 FLANGED END DIMENSIONS

Size (Inch)	øA	H	LRJ	B	øV	Weight RJ(Kg)
2" 1/16	52.3 2.06"	498 19.6"	371.3 14.62"	150 5.5"	330 13"	82
2" 9/16	65 2.56"	524 20.6"	422.1 16.62	165 6.5"	406 16"	115
3" 1/8	79.2 3.12"	584 23"	434.8 17.12"	190.5 7.5"	406 16"	127
4" 1/16	103.1 4.06"	676 26.6"	511 20.12"	235 9.25"	508 20"	236
5" 1/8	130.2 5.12"	730 28.7"	613 24.12"	290 11.4"	508 20"	290
7" 1/16	179.3 7.06"	880 34.6"	714 28.12"	400 15,74"	610 24"	480

5000 FLANGED END DIMENSIONS

Size (Inch)	øA	H	LRJ	B	øV	Weight RJ(Kg)
2" 1/16	52.3 2.06"	498 19.6"	371.3 14.62"	140 5.5"	330 13"	82
2" 9/16	65 2.56"	524 20.6"	422.1 16.62	165 6.5"	406 16"	115
3" 1/8	79.2 3.12"	584 23"	473 18.62"	197 7.75"	406 16"	145
4" 1/16	103.1 4.06"	676 26.6"	549.1 21.62"	241 9.5"	508 20"	236
5" 1/8 *	130.2 5.12"	685 31.3"	727 28.62"	315 12.2"	610 24"	520
7" 1/16 *	179.3 7.06"	980 38.6"	813 32"	400 15.75"	760 30"	1430

10000 FLANGED END DIMENSIONS

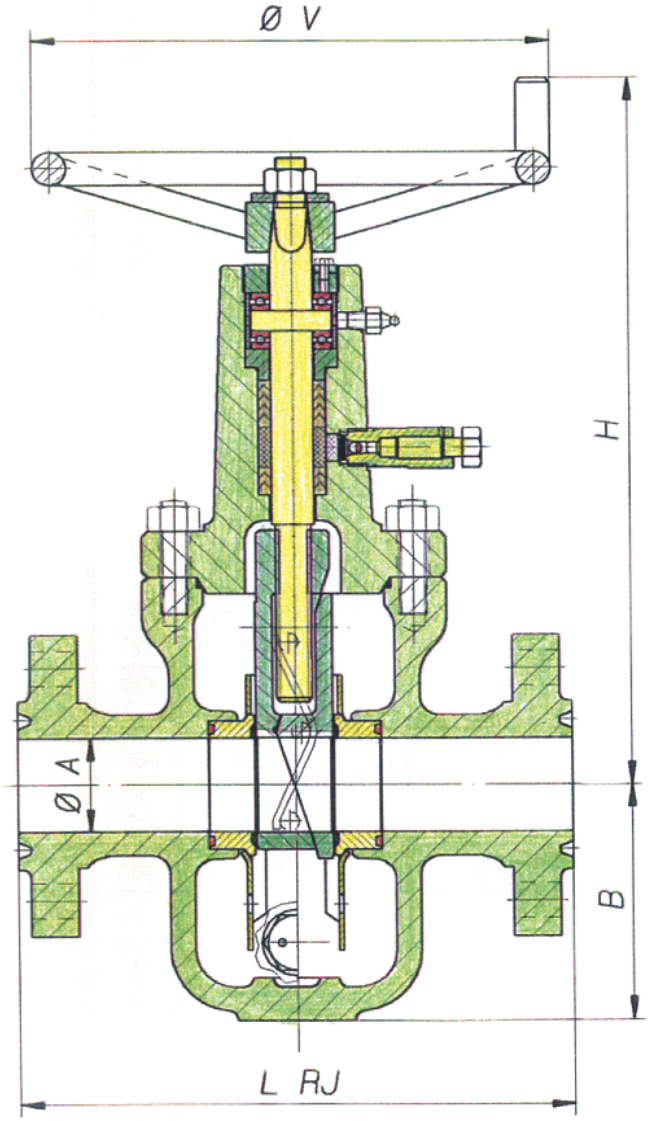
Size (Inch)	øA**	H	LRJ	B	øV	Weight RJ(Kg)
1" 13/16	45.97 1.81"	490 19.3"	464 18.25"	145 5.71"	400 15.7"	125
2" 1/16	52.3 2.06"	415 16.3"	521 20.5"	175 6.9"	400 15.7"	210
2" 9/16	65 2.56"	690 27.16	565 22.25"	230 9"	500 19.9"	230
3" 1/16 *	77.7 3.06"	1015 40"	619 24.38"	270 10.6"	600 23.6"	380
4" 1/16 *	103.1 4.06"	1015 40"	670 26.38"	270 10.6"	600 23.6"	660
5" 1/8 *	130 5.12"	1145 45"	737 29"	360 14.17"	600 23.6"	1030
7" 1/16 *	179.3 7.06"	1250 49.2"	889 35"	525 20.7"	750 29.5"	2060
9" *	228.6 9"	1170 55.9"	1200 47.27"	615 24.2"	750 29.5"	3300
13" 5/8 *	285.8 11.25"	1757 69.2	1181 46.5"	720 28.3"	750 26.5"	7200

15000 FLANGED END DIMENSIONS

Size (Inch)	øA**	H	LRJ	B	øV	Weight RJ(Kg)
1" 13/16	45.97 1.81"	520 20.5"	457 18"	160 6.3"	508 20"	200
2" 1/16	52.3 2.06"	540 21.25"	483 19"	170 6.7"	508 20"	220
2" 9/16 *	65 2.56"	620 24.4"	533 21"	190 7.5"	610 24"	350
3" 1/16 *	77.7 3.06"	700 27.6"	598 23.56"	260 10.2"	610 24"	750
4" 1/16 *	103.1 4.06"	840 33.1"	737 29"	350 13.8"	610 24"	1100

* With Epicyclic or Angle Reduction Gear
** Bore A can be supply at customer request
Hydraulic, pneumatic or electric actuation at request

Gate Valves Expanding
API 6A - 2000, 3000, 5000, 10000 & 15000 PSI



2000 FLANGED END DIMENSIONS

Size (Inch)	øA	H	LRJ	B	øV	Weight RJ(Kg)
2" 1/16	52,3 2,06"	485 19,1"	295,1 11,62"	133 5,25"	254 10"	59
2" 9/16	65 2,56"	514 20,25"	333,2 13,12"	155 6,1"	330 13"	80
3" 1/8	79,2 3,12"	584 23"	358,6 14,12"	190,5 7,5"	406 16"	111
4" 1/16	103,1 4,06"	676 26,6"	434,8 17,12"	235 9,25"	406 16"	164
5" 1/8	130.2 5.12"	730 28.7"	562 22.12"	285 11.2"	508 20"	270
7" 1/16	179.3 7.06"	880 34.6"	664 26.12"	390 15.3"	508 20"	450

3000 FLANGED END DIMENSIONS

Size (Inch)	øA	H	LRJ	B	øV	Weight RJ(Kg)
2" 1/16	52.3 2.06"	498 19.6"	371.3 14.62"	150 5.5"	330 13"	82
2" 9/16	65 2.56"	524 20.6"	422.1 16.62	165 6.5"	406 16"	115
3" 1/8	79.2 3.12"	584 23"	434.8 17.12"	190.5 7.5"	406 16"	127
4" 1/16	103.1 4.06"	676 26.6"	511 20.12"	235 9.25"	508 20"	236
5" 1/8	130.2 5.12"	730 28.7"	613 24.12"	290 11.4"	508 20"	290
7" 1/16	179.3 7.06"	880 34.6"	714 28.12"	400 15,74"	610 24"	480

5000 FLANGED END DIMENSIONS

Size (Inch)	øA	H	LRJ	B	øV	Weight RJ(Kg)
2" 1/16	52.3 2.06"	498 19.6"	371.3 14.62"	140 5.5"	330 13"	82
2" 9/16	65 2.56"	524 20.6"	422.1 16.62	165 6.5"	406 16"	115
3" 1/8	79.2 3.12"	584 23"	473 18.62"	197 7.75"	406 16"	145
4" 1/16	103.1 4.06"	676 26.6"	549.1 21.62"	241 9.5"	508 20"	254
5" 1/8 *	130.2 5.12"	685 31.3"	727 28.62"	315 12.2"	610 24"	550
7" 1/16 *	179.3 7.06"	980 38.6"	813 32"	400 15.75"	760 30"	1480

10000 FLANGED END DIMENSIONS

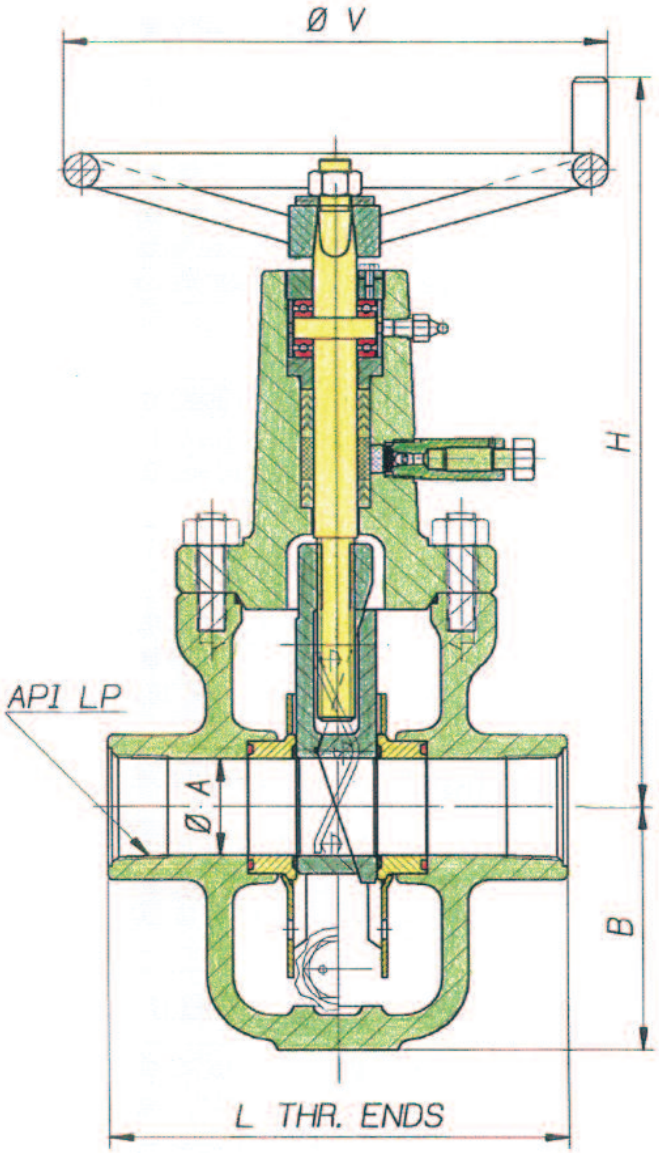
Size (Inch)	øA**	H	LRJ	B	øV	Weight RJ(Kg)
1" 13/16	45.97 1.81"	490 19.3"	464 18.25"	145 5.71"	400 15.7"	125
2" 1/16	52.3 2.06"	415 16.3"	521 20.5"	175 6.9"	400 15.7"	210
2" 9/16	65 2.56"	690 27.16	565 22.25"	230 9"	500 19.9"	230
3" 1/16 *	77.7 3.06"	1015 40"	619 24.38"	270 10.6"	600 23.6"	380
4" 1/16 *	103.1 4.06"	1015 40"	670 26.38"	270 10.6"	600 23.6"	660
5" 1/8 *	130 5.12"	1145 45"	737 29"	360 14.17"	600 23.6"	1030
7" 1/16 *	179.3 7.06"	1250 49.2"	889 35"	525 20.7"	750 29.5"	2060
9" *	228.6 9"	1170 55.9"	1200 47.27"	615 24.2"	750 29.5"	3300
13" 5/8 *	285.8 11.25"	1757 69.2	1181 46.5"	720 28.3"	750 26.5"	7200

15000 FLANGED END DIMENSIONS

Size (Inch)	øA**	H	LRJ	B	øV	Weight RJ(Kg)
1" 13/16	45.97 1.81"	520 20.5"	457 18"	160 6.3"	508 20"	200
2" 1/16	52.3 2.06"	540 21.25"	483 19"	170 6.7"	508 20"	220
2" 9/16 *	65 2.56"	620 24.4"	533 21"	190 7.5"	610 24"	350
3" 1/16 *	77.7 3.06"	700 27.6"	598 23.56"	260 10.2"	610 24"	750
4" 1/16 *	103.1 4.06"	840 33.1"	737 29"	350 13.8"	610 24"	1100

* With Epicyclic or Angle Reduction Gear
** Bore A can be supply at customer request
Hydraulic, pneumatic or electric actuation at request

Gate Valves Expanding
API 6A - 2000, 3000, 5000, 10000 & 15000 PSI



2000 THREADED END DIMENSIONS

Size (Inch)	øA	H	LTHR	B	øV	Weight THR (Kg)
2" 1/16	52,3 2,06"	485 19,1"	235 9.25"	133 5,25"	254 10"	46
2" 9/16	65 2,56"	514 20,25"	260.3 10.25"	155 6,1"	330 13"	64
3" 1/8	79,2 3,12"	584 23"	289 11.37"	190,5 7,5"	406 16"	94
4" 1/16	103,1 4,06"	676 26,6"	330.2 13"	235 9,25"	406 16"	128
5" 1/8	130.2 5.12"	730 28.7"	562 22.12"	285 11.2"	508 20"	220
7" 1/16	179.3 7.06"	880 34.6"	664 26.12"	390 15.3"	508 20"	360

3000 THREADED END DIMENSIONS

Size (Inch)	øA	H	LTHR	B	øV	Weight THR (Kg)
2" 1/16	52.3 2.06"	498 19.6"	244.5 9.62"	140 5.5"	330 13"	56
2" 9/16	65 2.56"	524 20.6"	260.3 10.25"	165 6.5"	406 16"	80
3" 1/8	79.2 3.12"	584 23"	289 11.37"	190.5 7.5"	406 16"	104
4" 1/16	103.1 4.06"	676 26.6"	330.2 13"	235 9.25"	508 20"	191
5" 1/8	130.2 5.12"	730 28.7"	- -	290 11.4"	508 20"	240
7" 1/16	179.3 7.06"	880 34.6"	- -	400 15,74"	610 24"	440

5000 THREADED END DIMENSIONS

Size (Inch)	øA	H	LTHR	B	øV	Weight THR (Kg)
2" 1/16	52.3 2.06"	498 19.6"	244.5 9.62"	140 5.5"	330 13"	56
2" 9/16	65 2.56"	524 20.6"	260.3 10.25"	165 6.5"	406 16"	80
3" 1/8	79.2 3.12"	584 23"	289 11.37"	190.5 7.5"	406 16"	104
4" 1/16	103.1 4.06"	676 26.6"	330.2 13"	235 9.25"	508 20"	191
5" 1/8 *	130.2 5.12"	685 31.3"	- -	315 12.2"	610 24"	440
7" 1/16 *	179.3 7.06"	980 38.6"	- -	400 15.75"	760 30"	1200

10000 THREADED END DIMENSIONS

Size (Inch)	øA**	H	LTHR	B	øV	Weight THR (Kg)
1" 13/16	45.97 1.81"	490 19.3"	- -	145 5.71"	400 15.7"	125
2" 1/16	52.3 2.06"	415 16.3"	- -	175 6.9"	400 15.7"	125
2" 9/16	65 2.56"	690 27.16	- -	230 9"	500 19.9"	140
3" 1/16 *	77.7 3.06"	1015 40"	- -	270 10.6"	600 23.6"	230
4" 1/16 *	103.1 4.06"	1015 40"	- -	270 10.6"	600 23.6"	460
5" 1/8 *	130 5.12"	1145 45"	- -	360 14.17"	600 23.6"	830
7" 1/16 *	179.3 7.06"	1250 49.2"	- -	525 20.7"	750 29.5"	1650
9" *	228.6 9"	1170 55.9"	- -	615 24.2"	750 29.5"	2650
13" 5/8 *	285.8 11.25"	1757 69.2	- -	720 28.3"	750 26.5"	5750

15000 FLANGED END DIMENSIONS

Size (Inch)	øA**	H	LTHR	B	øV	Weight THR (Kg)
1" 13/16	45.97 1.81"	520 20.5"	- -	160 6.3"	508 20"	160
2" 1/16	52.3 2.06"	540 21.25"	- -	170 6.7"	508 20"	180
2" 9/16 *	65 2.56"	620 24.4"	- -	190 7.5"	610 24"	280
3" 1/16 *	77.7 3.06"	700 27.6"	- -	260 10.2"	610 24"	600
4" 1/16 *	103.1 4.06"	840 33.1"	- -	350 13.8"	610 24"	900

* With Epicyclic or Angle Reduction Gear
** Bore A can be supply at customer request
Hydraulic, pneumatic or electric actuation at request

Trim Explanation for Vitas Gate Valves

VITAS Trim Code	API Spec. 6A Material Class	DESCRIPTION AND SERVICE TEMPERATURE
B-1	**AA**	**STANDARD TRIM** For essentially no corrosive liquids or gases. Typical examples are crude and refined oils, natural or refined gases and processed hydrocarbons. Typical uses are wellheads, manifolds, flow lines and other similar installations requiring a through conduit valve. The temperature limitations are 0° to 250°F, (-18° to 121°C).
B-2	**BB**	**STAINLESS TRIM** For substantially the same service as B-1 but where the corrosion resistance of 13 Chrome Stainless Steel internal parts are desirable. Also usable for mildly corrosive fluids and gases when limited corrosion of the internal body surfaces can be tolerated. The temperature limitations are 0° to 250°F, (-18° to 121°C). Recommended when partial pressure of CO_2 is greater than 30.
B-3	**CC**	**FULL STAINLESS TRIM** For only liquid or gaseous product for which the resistance of the 13 Chrome Stainless is adequate. Also used where the resistance of Stainless Steel is desirable from the standpoint of product purity. The temperature limitations are 0° to 250°F (-18° to 121°C). Recommended when partial pressure of CO_2 is greater than 30.
B-4	**EE**	**SOUR GAS AND OIL** Primarily for sour gas and oil where resistance to Hydrogen Sulphide embrittlement is required. Also suitable for other chemicals, products or hydrocarbons when H_2S is present. May be used when CO_2 is present in smaller amount than H_2S. The temperature limitations are 0° to 250°F (-18° to 121°C).
B-6	**FF**	**STAINLESS SOUR GAS AND OIL TRIM** Primarily for sour gas and oil when the CO_2 content exceeds the H_2S content. It is intended to provide resistance to the metal loss type of corrosion usually associated with CO_2 plus resistance to Hydrogen Sulphide embrittlement. The temperature limitations are 0° to 250°F (18° to 121°C).
B-1.1	**AA**	**LOW TEMPERATURE-STANDARD TRIM-GENERAL OILFIELD** For essentially no corrosive liquids or gases. Typical examples are crude and refined oils, natural or refined gases and processed hydrocarbons. Typical uses are wellheads, manifolds, flow lines and other similar installations requiring a through conduit valve. The temperature limitations are -50° to 180°F (-46° to 82°C).
B-4.1	**BB**	**LOW TEMPERATURE-SOUR GAS AND OIL** Primarily for sour gas and oil where resistance to Hydrogen Sulphide embrittlement is required. Also suitable for other chemicals, products or hydrocarbons vhen H_2S is present. May be used when CO_2 is present in smaller amount than H_2S. The temperature limitations are -50° to 180°F (-46 to 82°C).

Materials for Vitas Gate Valves

Services	Trim Code	Body & Bonnet	Bonnet Seal Ring	Gate & Segment	Seats	Stem	Gate Spring	Studs & Nuts	Packings Set V-Rings
General Oil Field Oil & Gas	**B-1**	API Type 2 or 3 Steel	C 1020	4130 (2)	4130 (2)	4130 (2)	Inconel 600	A193-B7 A194-2H	Teflon
General Service Slight Corrosion CO_2	**B-2**	API Type 2 or 3 Steel	C1020	410 SS EN55 (1)	410 SS EN55 (1)	410 SS (2)	Inconel 600	A193-B7 A194-2H	Teflon
Corrosive Service High CO_2 no H_2S	**B-3**	ASTM A217 CA-15 410 SS	AISI 316	410 SS EN55 (1)	410 SS EN55 (1)	17-4PH SS Aged Max. Rc33 (2)	Inconel 600	A193-B7 A194-2H	Teflon + 25% Glass
Sour Gas & Oil H_2S Meets NACE MR 0175-99	**B-4**	API Type 2 or 3 Steel Max. Rc22	AISI 316	17-4PH SS Aged Max. Rc33 (2) (3)	17-4PH SS Aged Max. Rc33 (2) (3)	17-4PH SS Aged Max. Rc33 (2)	Inconel X750	A193-B7M A194-2HM	Teflon + 25% Glass
Sour Gas & Oil $H_2S + CO_2$ Meets NACE MR 0175-99	**B-6**	ASTM A217 CA-15 410 SS Max. Rc22	AISI 316	17-4PH SS Aged Max. Rc33 (2) (3)	17-4PH SS Aged Max. Rc33 (2) (3)	17-4PH SS Aged Max. Rc33 (2)	Inconel X750	A193-B7M A194-2HM	Teflon + 25% Glass
General Oil Field Oil & Gas To –50°F	**B-1.1**	API Type 2 or 3 Steel Quenched & Tempered Impact Tested	AISI 316	4130 (2)	4130 (2)	4130 (2)	Inconel 600	A320-L7 A194-2H	Teflon + 40% Glass
Sour Gas & Oil $H_2S + CO_2$ To –50°F Meets NACE MR 0175-99	**B-4.1**	API Type 2 or 3 Steel Quenched & Tempered Impact Tested	AISI 316	17-4PH SS Aged Max. Rc33 (2) (3)	17-4PH SS Aged Max. Rc33 (2) (3)	17-4PH SS Aged Max. Rc33 (2)	Inconel X750	A320-L7M A194-Gr.4	Teflon + 40% Glass

(1) - Electroless Nickel Plated
(2) - MoS_2 coating
(3) - Hard faced as required

Full-Bore-Through Conduit

Give a full round bore through the valve, no smaller than that of the pipe. Minimizes pressure drop and turbulence is eliminated.

Parallel-Expanding-Gates

Provide an extraordinarily high seating force against both the upstream and downstream seats.

In-Line Reparability

Vitas plastic stem packing can be added to the packing box while the valve is under pressure. Internal parts can be replaced without removing the valve from the line.

Protected, Long-Life Seats

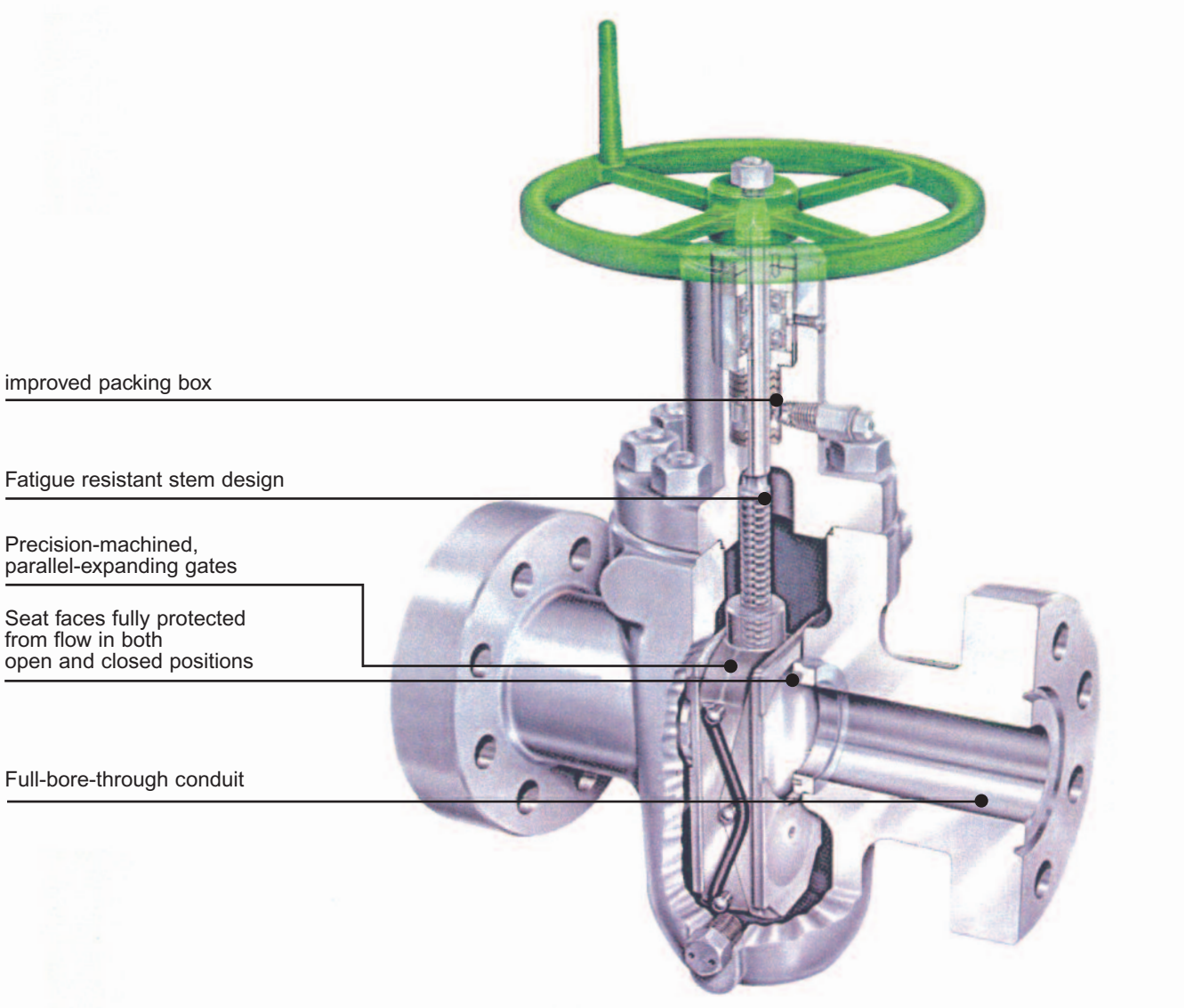
Seats are fuilly protected from flow in both open and closed positions, allowing exceptionally long service.

Low Operating Torque

Upper and lower roller-thrust bearings on the stem are isolated from pressures, thus making operation easier.

Stem & Gate coating

A molybdenum disulphide film on the stem and gate reduces the friction coefficient and assures a lubrication for the valve lifetime.



Hydraulic, pneumatic or electric actuation on request

VITAS reserves the right to change design without notice

Throught Conduit Gate Valves Fabricated Square and Round Body

1 Design construction:
API 6D - ANSI B16.34 - Testing according to API 6D
Marking according to MSS SP25 - Fire safe design according to API 6FA-BS 6755 part2

2 Outside Screw and Yoke (OS&Y) - Floating seats with grease injector design ≥ 8”
Back seat design - Special packing with lantern ring and double ball grease injector
Electroless nickel plated slab gate and seat
Vent and Drain valve

3 Full stellited seats and slab on request
Body Bonnet seal soft gasket (plus reinforced graphite if required)
Special design reinforced graphite for Class 150lbs
Valves are Full Bore or Reduced Bore construction

4 Flanges according ANSI B16.5 for size 2” to 24”
to ASME B 16.47 for size > 26”
Butt Welding Ends according to ANSI B16.25
Face to face according to API 6D

5 Suggested bevel gear operator for:
DN ≥ 20” Class 150 - DN ≥ 14” Class 300
DN ≥ 8” Class 600 - DN ≥ 6” Class 900
DN ≥ 4” Class 1500

6 For pressure and temperature
rating see material application

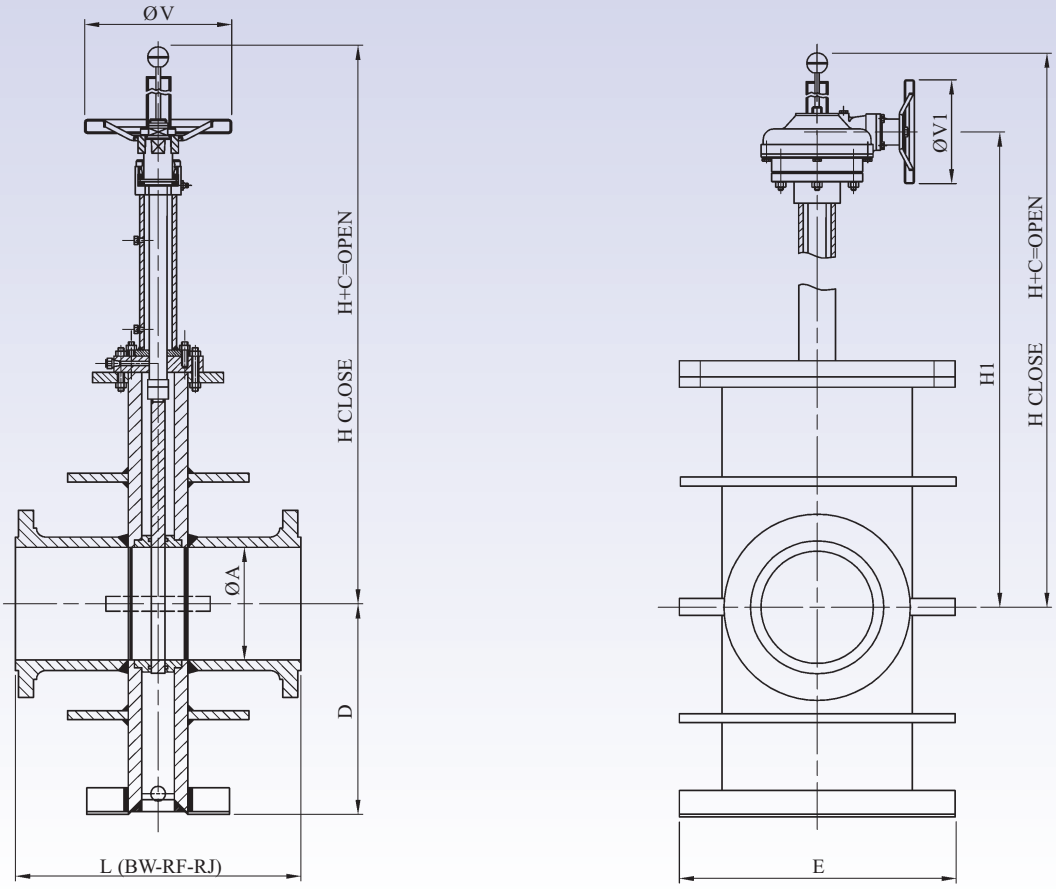
Throught Conduit Gate Valves
Fabricated Square and Round Body

Class ANSI 150

size inch	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	46	48
øA	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876	978	1022	1118	1168
E	350	420	440	530	630	650	730	800	898	985	1046	1135	1250	1275	1342	1438	1535	1645	1710	1890	2075
D	282	342	422	496	583	620	712	782	875	963	1053	1142	1225	1310	1380	1455	1535	1685	1775	1935	2010
H1	-	-	-	-	-	-	-	-	1656	1846	2003	2135	2246	2386	2554	2720	2820	3110	3276	3680	3720
C Travel	138	182	234	284	342	369	428	484	532	588	643	696	751	805	842	901	946	1042	1098	1185	1230
H Closed	765	920	1140	1360	1540	1620	1850	2020	2390	2630	2850	3030	3200	3390	3650	3870	4035	4400	4624	5115	5200
L BW	305	403	419	457	502	572	610	660	711	762	813	864	914	914	965	1016	1016	1118	1168	1270	1321
L RF	229	267	292	330	356	381	406	432	457	508	508	559	610	650	711	762	800	914	965	1118	1118
øV	300	400	400	500	500	750	750	750	-	-	-	-	-	-	-	-	-	-	-	-	-
øV1	-	-	-	-	-	-	-	-	600	750	750	750	750	750	750	750	750	750	750	750	750
Weight BW (kg)	86	184	320	445	530	800	910	1340	1625	1985	2345	2710	3160	3620	4160	4700	5120	6320	6950	8270	8930
Weight RF (kg)	104	210	360	490	600	890	1015	1490	1805	2205	2605	3010	3510	4020	4660	5220	5690	7020	7720	9170	9920

Class ANSI 300

size inch	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	46	48
øA	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876	978	1022	1118	1168
E	350	420	440	600	660	770	860	830	1060	1010	1250	1140	1030	1100	1170	1230	1285	1380	1520	1660	1740
D	282	342	422	496	583	620	712	782	875	963	1053	1142	1225	1310	1380	1455	1535	1685	1775	1935	2010
H1	-	-	-	-	-	1182	1334	1540	1656	1846	2003	2135	2246	2386	2554	2720	2820	3110	3276	3680	3720
C Travel	138	182	234	284	342	369	428	484	532	588	643	696	751	805	842	901	946	1042	1098	1185	1230
H Closed	775	926	1142	1361	1554	1662	1882	2052	2341	2505	2715	2945	3136	3332	3525	3718	3901	4341	4505	4898	5084
L BW-RF	305	403	419	457	502	762	838	914	991	1092	1143	1245	1346	1397	1524	1626	1727	1930	2007	2286	2286
L RJ	321	419	435	473	518	778	854	930	1010	1114	1165	1270	1372	1422	1553	1654	1756	1960	2035	2314	2314
øV	400	500	750	750	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
øV1	-	-	-	-	-	600	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
Weight BW (kg)	92	135	225	369	531	702	990	1350	1710	2160	2565	3060	3780	4500	5274	6030	7020	7920	9464	11340	14500
Weight RF (kg)	102	150	250	410	590	780	1100	1500	1900	2400	2850	3400	4200	5000	5860	6700	7800	8800	10515	12600	16100



Throught Conduit Gate Valves
Fabricated Square and Round Body

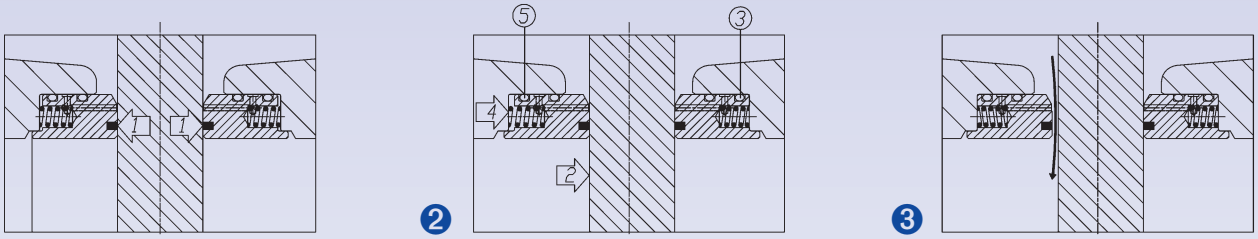
Class ANSI 400

size inch	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	46	48	52	54	56	60
øA	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876	978	1022	1118	1168	1267	1314	1365	1461
E	335	420	530	600	670	780	850	970	1020	1140	1170	1330	1420	1490	1600	1690	1795	1980	2010	2100	2150	2400	2600	2700	2850
D	282	342	422	496	583	620	712	782	875	963	1053	1142	1225	1310	1380	1455	1535	1685	1775	1935	2010	2190	2250	2330	2500
H1	532	660	828	969	1050	1182	1334	1540	1656	1837	2003	2135	2246	2386	2554	2720	2820	3110	3276	3680	3720	4070	4150	4310	4600
C Travel	138	182	234	284	342	369	428	484	532	588	643	696	751	805	842	901	946	1042	1098	1185	1230	1320	1370	1420	1520
H Closed	780	945	1170	1370	1570	1665	1895	2070	2345	2590	2780	2990	3140	3370	3580	3790	3980	4390	4549	5045	5260	5610	5740	5960	6360
L BW-RF	406	495	597	673	762	826	902	978	1054	1143	1232	1308	1397	1524	1651	1778	1880	2083	2185	2426	2540	2210	2260	2311	2350
L RJ	410	498	600	676	765	829	905	981	1060	1153	1241	1321	1410	1537	1667	1794	1895	-	-	-	-	-	-	-	-
øV	400	500	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
øV1	-	-	-	600	600	600	750	750	600	600	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
Weight BW (kg)	175	276	463	648	840	1085	1622	2074	2225	3330	4031	4830	5535	6543	7645	8750	9950	13352	14560	18475	20500	24000	26500	29800	33100
Weight RF (kg)	194	306	482	715	930	1200	1805	2303	2470	3695	4475	5360	6150	7266	8490	9715	11050	14828	16165	20580	22770	27000	29500	33200	39400

Class ANSI 600

size inch	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	40	42	46	48	52	54	56	60
øA	102	152	203	254	305	337	387	438	489	540	591	635	686	737	781	832	876	978	1022	1118	1168	1267	1314	1365	1461
E	320	390	430	600	660	770	840	870	950	1010	1140	1280	1340	1400	1515	1520	1580	1780	1850	1960	2180	2320	2450	2540	2810
D	282	342	422	496	583	620	712	782	875	963	1053	1142	1225	1310	1380	1455	1535	1685	1775	1935	2010	2120	2250	2350	2500
H1	-	-	-	969	1050	1182	1334	1540	1656	1837	2003	2135	2246	2386	2554	2720	2820	3110	3276	3680	3720	3980	4150	4310	4600
C Travel	138	182	234	284	342	369	428	484	532	588	643	696	751	805	842	901	946	1042	1098	1185	1230	1318	1370	1420	1520
H Closed	780	950	1175	1385	1585	1680	1910	2125	2355	2630	2815	3040	3190	3395	3620	3830	4035	4435	4635	5045	5260	5510	5740	5960	6360
L BW-RF	432	559	660	787	838	889	991	1092	1194	1295	1397	1448	1549	1651	1778	1930	2083	2388	2438	2489	2540	2667	2743	2794	2845
L RJ	435	562	664	791	841	892	994	1095	1200	1305	1407	1461	1562	1664	1794	1946	2099	-	-	-	-	-	-	-	-
øV	400	500	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
øV1	-	-	-	600	600	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
Weight BW (kg)	92	276	318	532	816	1142	1226	2036	2612	3335	4065	4420	5965	6756	7840	9040	10400	11800	15350	17200	21200	23900	29000	31800	35000
Weight RF (kg)	102	304	386	513	907	1205	1365	1260	2920	3715	4510	5040	6625	7515	8720	10050	11550	13120	17100	19050	23600	26600	-	-	-

EXCELLENT DOUBLE BLOCK AND BLEED CAPABILITY
AUTOMATIC RELIEF OF EXCESS BODY PRESSURE



With equal pressure throughout the valve and gate in closed position. An initial seal (1) is formed with the raised TFE ring on the faces of the seats. The seat inserts clean both sides of the gate each time the valve is opened or closed. Powerful springs assure sealing independent of high pressure, low pressure, or vacuum providing a constant contact during any type of operation.

❷ As line pressure (2) is applied to the valve, it acts on the gate, forcing it against the seat ring on the downstream seat, a seal is formed (a the beginning a TFE-to-metal seal, then metal-to-metal). The O-ring (3) prevents any downsteal flow at this point. An upstream seal is provided when body pressure is bled off. This is caused by the force of line pressure acting against the upstream seat (4) moving the seat against the gate and providing a tight TFE-to-metal seal at this point. At the same time, the O-ring (5) forms a tight seal with the seat and body.

❸ Valve automatically relieves itself of excessive body pressure. When body pressure exceeds line pressure, from such causes as thermal expansion, the upstream seat is forced back into its recess and the excess pressure in the body is bled between the seat and the gate into the line.

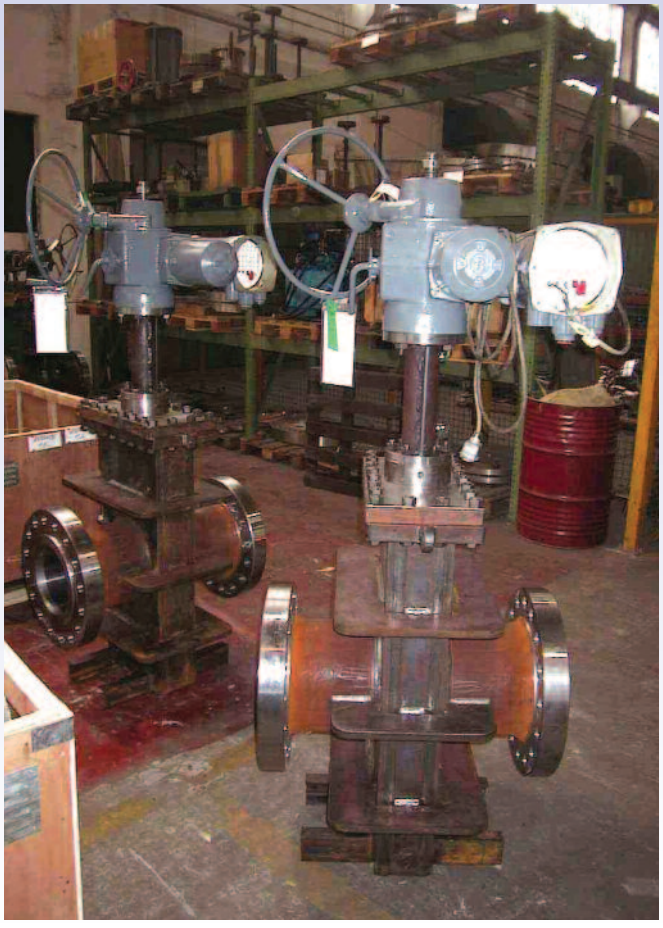
Throught Conduit Gate Valves
Fabricated Square and Round Body

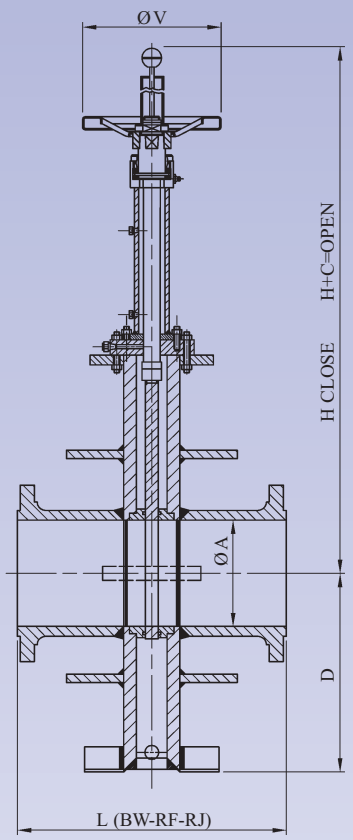
Class ANSI 900

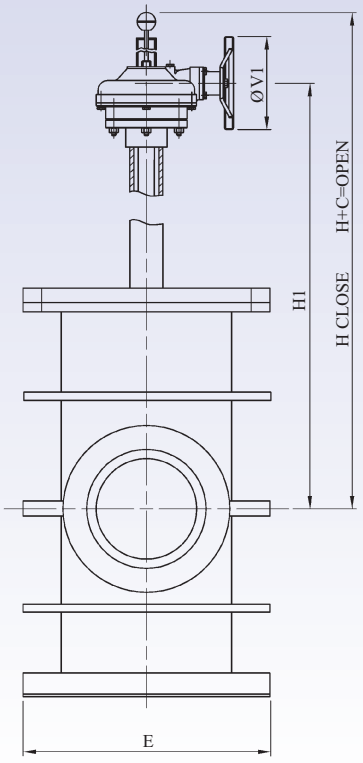
size inch	4	6	8	10	12	14	16	18	20	22	24	26	30	32
øA	102	152	203	254	305	324	375	425	473	524	571	619	714	762
E	450	540	580	590	690	830	900	960	1020	1230	1280	1340	1720	1860
D	290	352	442	514	588	651	735	821	894	998	1080	1240	1430	1560
H1	-	671	824	975	1149	1240	1388	1567	1722	1878	2040	2385	2810	3080
C Travel	130	202	248	294	350	362	415	465	512	568	615	654	758	804
H Closed	800	933	1177	1395	1643	1784	1971	2234	2440	2698	2905	3860	4060	4220
L BW-RF	457	610	737	838	965	1029	1130	1219	1321	1423	1549	1727	1727	2235
L RJ	460	613	740	841	968	1038	1140	1232	1334	-	1568	-	-	-
øV	500	-	-	-	-	-	-	-	-	-	-	-	-	-
øV1	-	600	750	750	750	750	750	750	750	750	750	750	750	750
Weight BW (kg)	475	585	775	1060	1470	1960	2580	3320	4295	5500	6850	8270	12000	15000
Weight RF (kg)	500	615	820	1120	1500	2030	2725	3470	4540	5800	7250	8710	-	-

Class ANSI 1500

size inch	4	6	8	10	12	14	16	18	20	22	24
øA	102	146	194	241	289	315	362	407	457	495	534
E	450	550	640	740	830	930	1030	1140	1210	1320	1420
D	280	370	440	530	600	690	770	830	920	1010	1100
H1	570	720	870	1015	1170	1350	1480	1610	1755	1920	2100
C Travel	137	181	234	281	335	368	414	453	510	547	586
H Closed	815	1050	1260	1480	1700	1935	2155	2310	2530	2815	3065
L BW-RF	546	705	832	991	1130	1257	1384	1537	1664	1943	1943
L RJ	549	711	841	1000	1146	1276	1407	1559	1686	1971	1971
øV1	600	750	750	750	750	750	750	750	750	750	750
Weight BW (kg)	510	650	860	1525	2035	2305	3810	4905	6250	7600	8475
Weight RF (kg)	536	685	905	1605	2145	2425	4010	5130	6580	8000	8890







Gate Valves Pressure Seal

1. Design construction.
   API 600 - ANSI B16.34
   Testing according to API 598 - BS 6755
   Marking according to MMS SP25

2. Outside Screw and Yoke (OS&Y)
   Self aligning packing gland in two parts
   Welded seats - Solid or flexible wedge

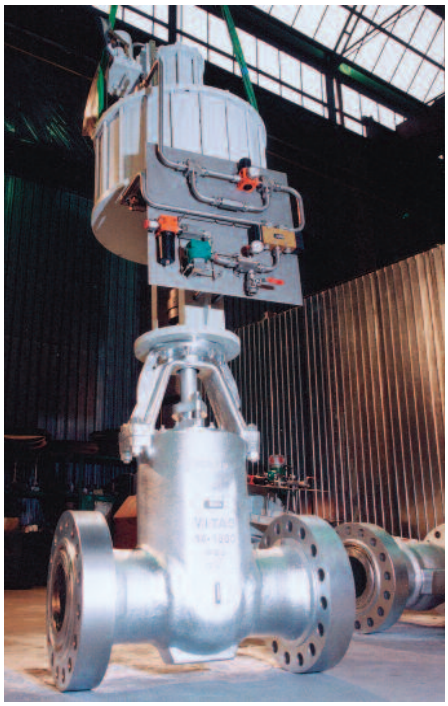
3. Flanges according to ANSI B 16.5 for DN 2" to 24"
   to ASME B 16.47 for DN >26"
   Butt Welding Ends according to ANSI B16.25
   Face to face according to ANSI B 16.10

4. Double ball bearing are assembled on:
   DN >6" for Classes 600 and 900
   DN >4" for Classes 1500 and 2500

5. Suggested bevel gear operator for
   DN > 8" Classes 600 and 900
   DN > 6" Class 1500
   DN > 3" Class 2500

6. Over pressure safety valve on request
   Lantern ring on request
   For pressure temperature rating see technical data

7. Special design of forged material
   available for 6"/1500 and larger



Gate Valves Pressure Seal

Class ANSI 600

size inch	2	3	4	6	8	10	12	14	16	18	20	24	30	36
mm	50	80	100	150	200	250	300	350	400	450	500	600	750	900
A	51	76	102	152	200	248	299	327	375	419	464	559	695	876
C Travel	68	96,5	130	175	234	276	330	350	417	460	506	607	775	920
H Closed	464	518	672	843	1125	1362	1380	1490	1520	1774	1920	2200	2800	3400
H1	-	-	-	-	1480	1500	1560	1805	1840	2400	2520	2850	3650	4400
L BW	178	254	305	457	584	711	813	889	991	1092	1194	1397	1651	2083
L RF	292	356	432	559	660	787	838	889	991	1092	1194	1397	1651	2083
V	200	300	400	600	-	-	-	-	-	-	-	-	-	-
V1	-	-	-	-	600	600	600	600	600	600	600	600	800	800
Weight RF kg	40	61	115	230	460	550	930	1080	1630	2350	2470	3400	*	*
Weight BW kg	36	53	94	165	390	430	750	890	1436	2052	2160	2710	*	10120
Figure	6P	6P	6P	6P	6P	6P	6P	6P	6P	6P	6P	6P	6P	6P
	102	103	104	106	108	110	112	114	116	118	120	124	130	136

Class ANSI 900

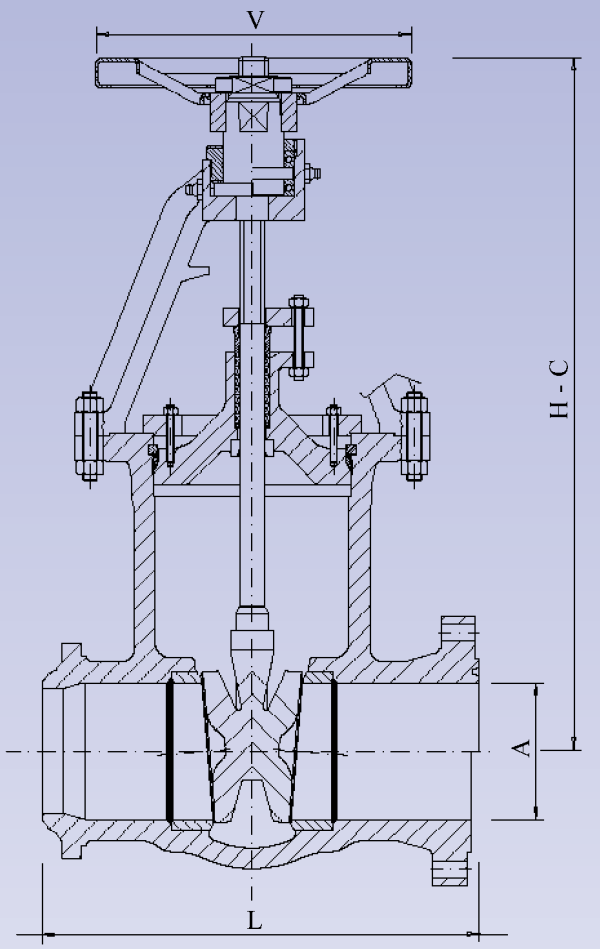
size inch	3	4	6	8	10	12	14	16	18	20	22	24	28
mm	80	100	150	200	250	300	350	400	450	500	550	600	700
A	73	99	146	191	238	283	31	356	400	445	460	534	622
C Travel	88	118	167	215	252	306	350	402	428	488	490	594	675
H Closed	564	730	830	1077	1160	1377	1467	1720	1810	1955	2510	2350	3285
H1	-	-	-	1510	1660	1930	2075	2305	2670	2600	2180	2950	-
L BW	305	356	508	660	787	914	991	1092	1219	1321	1321	1549	1549
L RF	381	457	610	737	838	965	1029	1130	1219	1321	1321	1549	1549
V	400	500	800	-	-	-	-	-	-	-	-	-	-
V1	-	-	-	600	600	800	600	600	600	600	750	600	800
Weight RF kg	95	151	280	545	870	1210	1720	2410	2780	3450	-	*	6900
Weight BW kg	75	118	210	430	700	990	1480	2100	2400	2950	3300	4800	6080
Figure	9P	9P	9P	9P	9P	9P	9P	9P	9P	9P	9P	9P	9P
	103	104	106	108	110	112	114	116	118	120	122	124	128

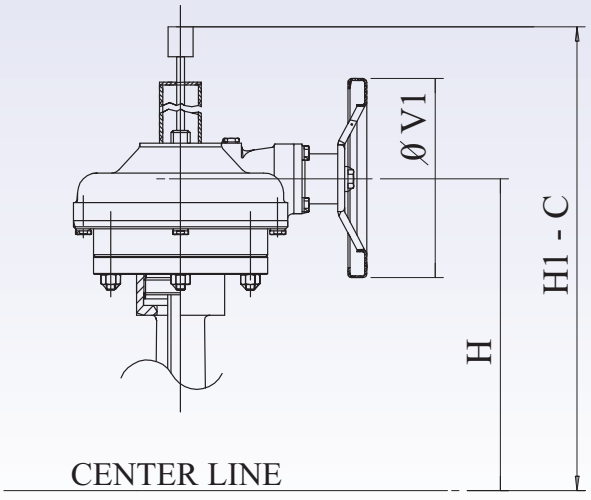
Class ANSI 1500

size inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
mm	50	65	80	100	130	150	200	250	300	350	400	450	500	600
A	48	57	70	92	111	137	178	222	263	289	330	350	416	498
C Travel	57	90	90	98	143	143	205	243	310	330	342	400	460	520
H Closed	488	570	570	690	830,7	830	1050	1291	1504	1520	1731	1950	2227	2520
H1	-	-	-	-	-	1275	1535	1730	2100	2180	2515	1800	3060	3460
L BW	216	254	305	406	483	559	71	864	991	1067	1194	1346	1473	1943
L RF	368	419	470	546	705	705	832	991	1130	1257	1384	-	1664	1943
V	400	500	500	600	600	-	-	-	-	-	-	-	-	-
V1	-	-	-	-	-	600	600	600	600	800	600	600	600	800
Weight RF kg	63,2	81	98	209	380	450	830	1240	2185	2930	4850	-	7450	9400
Weight BW kg	40	60	87	145	290	309	600	955	1650	2320	3800	-	6300	7810
Figure	15P	15P	15P	15P	15P	15P	15P	15P	15P	15P	15P	15P	15P	15P
	102	101	103	104	105	106	108	110	112	114	116	118	120	124

Class ANSI 2500

size inch	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
mm	50	65	80	100	150	200	250	300	350	400	450	500	600
A	38	47,5	57	73	111	146	184	219	242	276	311	343	413
C Travel	58	90	81	96	130	172	214	260	270	314	352	385	450
H Closed	552	570	668	743	1056	1222	1450	1560	1770	1820	1880	2080	2470
H1	-	-	920	1230	1465	1645	2140	2490	2710	2310	2480	2650	3180
L BW	279	330	368	457	610	762	914	1041	1178	1245	1397	1524	1676
L RF	451	508	578	673	914	1022	1270	1422	-	-	-	-	-
V	400	500	-	-	-	-	-	-	-	-	-	-	-
V1	-	-	300	600	600	600	600	800	800	800	800	800	800
Weight RF kg	98	179	195	335	710	1450	2730	2580	*	*	*	*	*
Weight BW kg	61	124	138	223	460	750	2096	1650	3700	*	*	*	*
Figure	25P	25P	25P	25P	25P	25P	25P	25P	25P	25P	25P	25P	25P
	102	101	103	104	106	108	110	112	114	116	118	120	124





Gate Valves Bolted Bonnet

1. Design construction.
   API 600 - BS 1414 - ANSI B16.34
   Testing according to API 598 - BS 6755
   Marking according to MMS SP25
   Outside Screw and Yoke (OS&Y)

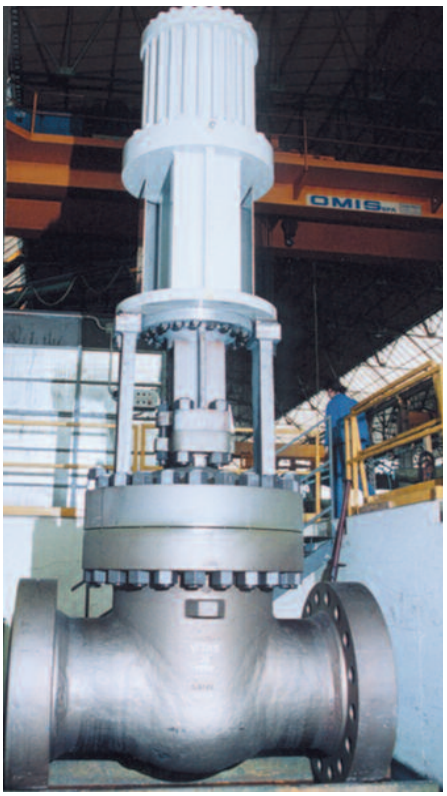
2. Self aligning packing gland in two parts - Soft seats design only on request
   Spiral-wound gasket for Classes 300 and 600 lbs
   Oval ring joint for Classes 900,1500 and 2500 lbs
   Special design reinforced grafite gasket for Class 150 lbs

3. Flanges according to ANSI B 16.5 for size 2" to 24" to ASME B 16.47 for size 1>26"
   Butt Welding Ends according to ANSI B16.25
   Face to face according to ANSI B 16.10
   Clamp end only on request

4. Lantern ring only on request
   For pressure temperature rating
   see technical data

5. Suggested bevel gear operator for DN >16" Class 150
   DN >12" Class 300
   DN > 8" Class 600 and 900
   DN > 6" Class 1500
   DN > 3" Class 2500

6. Double Yoke Nut bearing are assembled on: DN >14" Class 150
   DN > 12" Class 300
   DN > 6" Class 600 and 900



Gate Valves Bolted Bonnet

Class ANSI 150

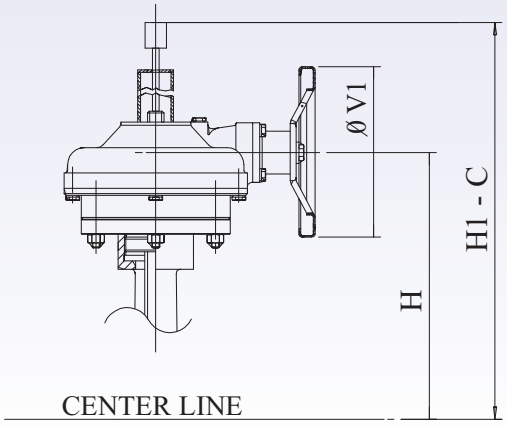
size inch	2	2.1/2	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	36	40	42	48	54	60
mm	50	65	80	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	900	1000	1050	1200	1350	1500
A	51	63.5	76	102	152	203	254	305	337	388	438	489	540	591	641	699	737	781	876	978	1029	1168	1315	1461
C Travel 65	76	90	125	150	208	276	351	367	418	454	510	560	610	650	740	760	820	915	1010	1050	1220	1365	1498	
H Closed	401	434	445	556	703	921	1065	1174	1330	1445	1630	1830	2036	2130	2285	2635	2592	2940	3300	3510	3820	4064	4400	5100
H1	-	-	-	-	-	-	-	-	-	-	2300	2550	2910	3010	3165	3465	3610	3950	4330	4830	4975	5505	6430	6850
L BW	216	241	283	305	402	419	457	502	572	610	660	711	813	813	864	914	914	965	1016	1168	1397	1270	*	*
L RF	178	190	203	229	267	292	330	356	381	406	432	457	508	508	559	610	610	660	711	813	813	864	1016	1270
V	250	300	300	300	400	500	600	600	800	800	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V1	-	-	-	-	-	-	-	-	-	-	600	600	600	800	800	800	800	800	800	800	800	800	800	800
Weight RF kg	26	34	38,7	55	95	164	237	343	352	450	671	790	1040	1150	1509	2084	2413	2787	3010	4880	5302	7520	10050	14800
Weight BW kg	23	30	34	48	89	134	241	331	333	445	675	776	1110	1085	*	*	*	*	*	*	*	*	*	V
Figure	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H	1H
	102	101	103	104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	136	140	142	148	154	160

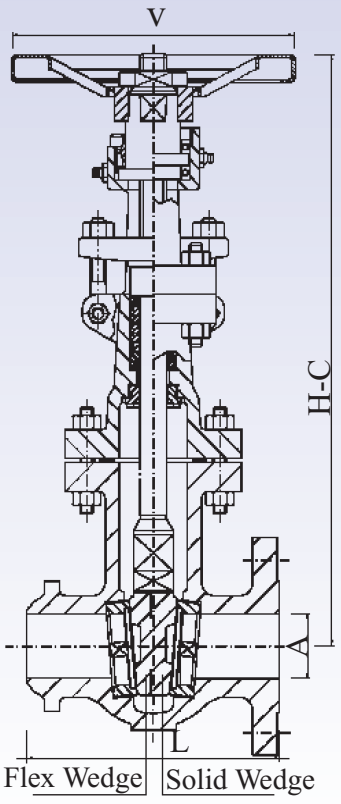
Class ANSI 300

size inch	2	2.1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	34	36	42	46	48
mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	850	900	1050	1150	1200
A	51	63.5	76	102	152	203	254	305	337	388	438	483	584	635	686	737	781	832	876	1029	1118	1168
C Travel 68	71	93	127	162	234	269	319	350	420	452	530	620	660	720	770	810	880	925	1060	1160	1220	
H Closed	401	434	493	594	766	971	1182	1280	1370	1575	1770	1980	2070	2460	2460	2930	2930	3290	3290	3812	4260	4260
H1	-	-	-	-	-	-	-	1855	1915	2285	2460	2860	3150	3285	3285	4010	4104	4410	4470	5300	5860	6040
L BW-RT	216	241	283	305	403	419	457	502	762	838	914	991	1143	1245	1346	1397	1524	1626	1727	1981	2235	2235
V	250	300	300	400	500	600	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V1	-	-	-	-	-	-	-	600	600	800	600	800	600	800	800	800	800	800	800	800	800	800
Weight RF kg	30	42.2	56	82	165	273	388	555	740	930	1210	1530	2520	3420	3960	4160	5250	6120	7160	11100	16700	22500
Weight BW kg	23	32	46	65	140	239	333	480	632	835	990	1360	2270	*	*	*	*	*	*	*	*	*
Figure	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H	3H
	102	101	103	104	106	108	110	112	114	116	118	120	124	126	128	130	132	134	136	142	146	148

Class ANSI 600

size inch	2	2.1/2	3	4	6	8	10	12	14	16	18	24	26	28	30	32	36	42
mm	50	65	80	100	150	200	250	300	350	400	450	600	650	700	750	800	900	1050
A	51	63.5	76	102	152	200	248	299	327	375	419	559	603	648	737	781	876	978
C Travel 62	78	96	127	170	220	270	330	350	420	470	600	650	685	780	805	930	1020	H
Closed 465	480	590	686	815	1052	1087	1248	1595	1720	1975	2375	2466	2580	3070	3150	3275	3850	H1
-	-	-	-	-	1430	1470	1790	2115	2380	2660	3270	3360	3570	4230	4320	4590	5250	L BW-
RF 292	330	356	432	559	600	787	838	889	991	1092	1397	1448	1549	1651	1778	2083	2438	L RTJ
295	333	359	435	562	664	791	841	892	994	1095	1407	1460	1562	1664	1794	2099	2454	
V	300	300	400	400	600	-	-	-	-	-	-	-	-	-	-	-	-	-
V1	-	-	-	-	-	600	800	600	600	600	600	800	800	800	800	800	800	800
Weight RF kg	44	51	81	136	294	509	760	1035	1440	1787	2430	4620	5120	7420	7914	9150	10400	24100
Weight BW kg	36	43	72	115	255	438	635	920	1310	1510	2160	3920	*	*	*	*	*	*
Figure	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H	6H
	102	101	103	104	106	108	110	112	114	116	118	124	126	128	130	132	136	142





Gate Valves Bolted Bonnet

Class ANSI 900

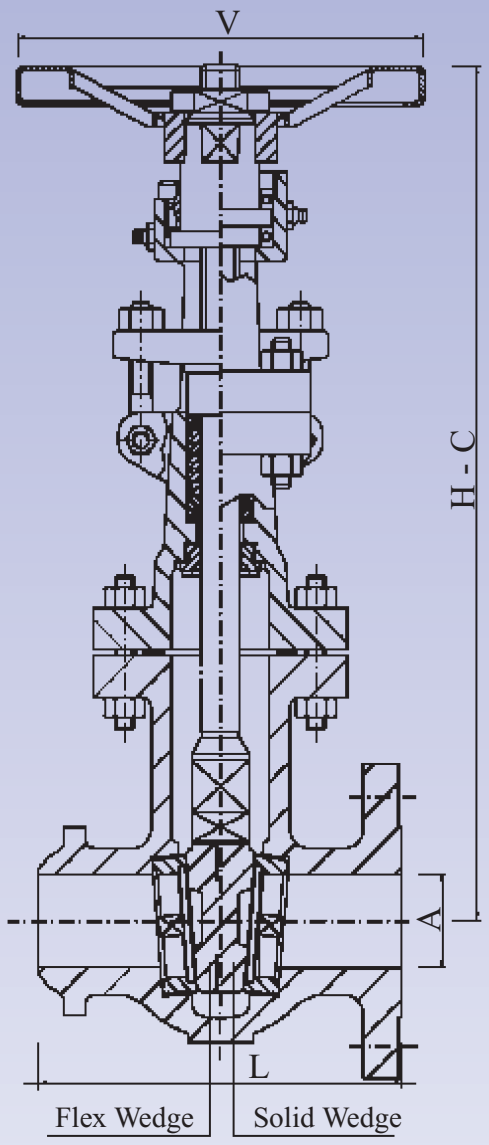
size inch	3	4	6	8	10	12	14	16	18	20	24
mm	80	100	150	200	250	300	350	400	450	500	600
A	73	99	146	191	238	283	311	356	400	4445	534
C travel	95	120	175	220	260	310	330	395	430	447	580
H Closed	615	760	960	1194	1335	1390	1545	1840	1840	2065	2320
H1	-	-	-	1550	1710	1980	2090	2390	2560	2963	3366
L BW-RF	381	457	610	737	838	965	1029	1130	1219	1321	1549
L RTJ	384	460	613	740	841	968	1038	1140	1232	1334	1568
V	400	500	800	-	-	-	-	-	-	-	-
V1	-	-	-	800	600	600	600	600	600	600	600
Weight RF kg	116	204	415	766	1050	1520	1760	2627	3200	5500	7350
Weight BW kg	97	178	367	665	915	980	1410	2160	2520	4650	6020
Figure	9R	9R	9R	9R	9R	9R	9R	9R	9R	9R	9R
	103	104	106	108	110	112	114	116	118	120	124

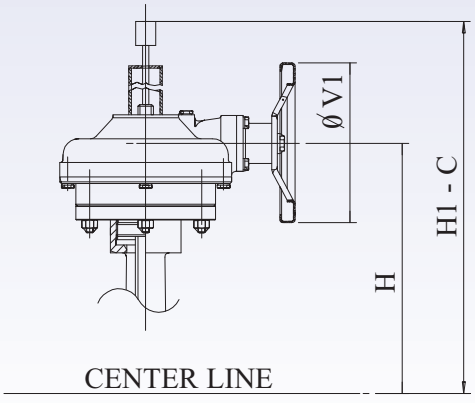
Class ANSI 1500

size inch	2	3	4	6	8	10	12	14	16	20	24	30
mm	50	80	100	150	200	250	300	350	400	500	600	750
A	48	69	92	137	178	222	264	289	330	416	498	686
C Travel 75	97	125	150	215	245	285	330	360	486	520	728	H
Closed 555	655	766	1003	1170	1400	1463	1677	1610	2376	2615	3186	
H1	-	-	-	1370	1550	1800	2010	2159	2380	3300	3490	3688
L BW-RF	368	470	546	705	832	991	1130	1257	1384	1664	1943	2500
L RTJ	371	473	549	711	841	1000	1146	1276	1407	1686	1971	2500
V	400	500	600	-	-	-	-	-	-	-	-	-
V1	-	-	-	800	600	800	800	800	800	800	800	800
Weight RF kg	97	178	288	691	1220	1831	2790	4420	5250	10100	18000	25900
Weight BW kg	76	146	254	588	1030	1590	2370	3610	4250	8600	15800	*
Figure	15R	15R	15R	15R	15R	15R	15R	15R	15R	15R	15R	15R
	102	103	104	106	108	110	112	114	116	120	124	130

Class ANSI 2500

size inch	2	3	4	6	8	10	12
mm	50	80	100	150	200	250	300
A	38	57	73	111	146	184	219
C Travel 68	95	97	160	175.5	215	225	
H Closed	630	736	765	1140	1380	1690	1950
H1	-	992	1036	1550	2680	2163	2544
L BW-RF	451	578	673	914	1022	1270	1422
L RTJ	454	584	683	927	1038	1292	1445
V	400	-	-	-	-	-	-
V1	-	300	600	600	600	600	800
Weight RF kg	181	334	520	1285	2050	3210	4900
Weight BW kg	140	280	390	990	1610	2370	3740
Figure	25R	25R	25R	25R	25R	25R	25R
	102	103	104	106	108	110	112





Gate Valves Cryogenic

1. Design construction:
   API 600 - BS 1873 - BS 6364
   Testing according to API 598 - BS 6755
   Marking according to MMS SP25

2. Outside Screw and Yoke (OS&Y)
   Self aligning gland in two parts
   Soft seats design on request
   Welded seats - Flexible wedge
   Pressure relief hole on wedge

3. Flanges according to:
   ANSI B16.5 for size 2" to 24" - ASME B16.47 for size >26"
   Butt Welding Ends according to ANSI B16.25
   Lantern ring only on request

4. Suggested bevel gear operator for Gate:
   DN > 18" Classes 150 - DN > 12" Classes 300
   DN > 8" Classes 600 and 900 - DN > 6" Class 1500
   DN > 3" Class 2500

Gate Valves Cryogenic

Class ANSI 150

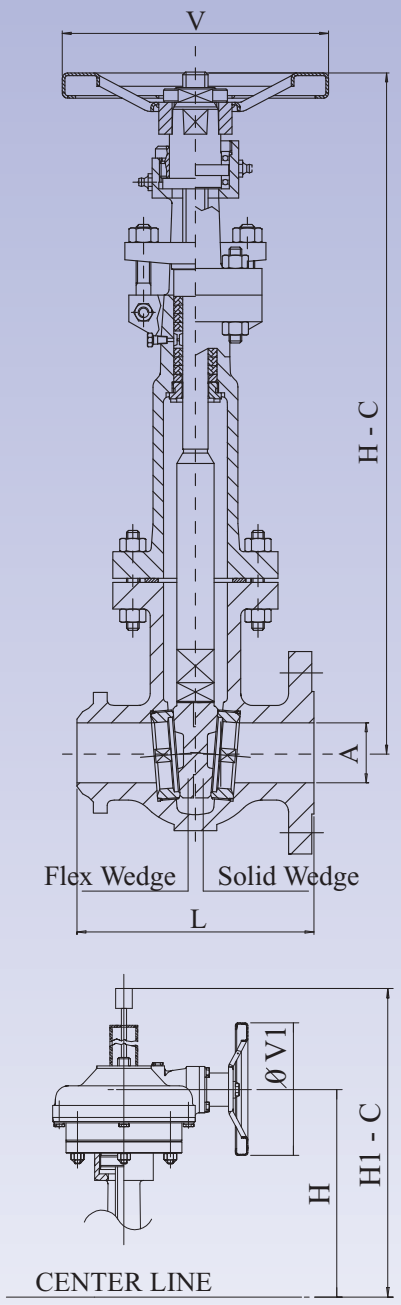
size inch	2	3	4	6	8	10	12	14	16	18	20	24	30
mm	50	80	100	150	200	250	300	350	400	450	500	600	750
A	51	76	102	152	203	254	305	337	388	438	489	591	737
C travel	65	90	120	167	223	284	322	367	418	454	510	610	740
Holosed	641	722	824	934	1099	1235	1420	1630	1745	1930	2130	2430	2892
H1	-	-	-	-	-	-	-	-	-	2930	3210	3730	4390
L BW	216	283	305	403	419	457	502	572	610	660	711	813	914
L RF	178	203	229	267	292	330	356	381	406	432	457	508	610
V	250	300	300	400	500	600	600	800	800	-	-	-	-
V1	-	-	-	-	-	-	-	-	-	600	600	800	80
Weight RF kg	31	45	62	103	173	247	355	366	466	689	810	1175	2433
Weight BW kg	28	40	55	97	143	251	343	347	461	693	796	1110	-
Figure	1C	1C	1C	1C	1C	1C	1C	1C	1C	1C	1C	1C	1C
	102	103	104	106	108	110	112	114	116	118	120	124	130

Class ANSI 300

size inch	2	3	4	6	8	10	12	14	16	18	20	24
mm	50	80	100	150	200	250	300	350	400	450	500	600
A	51	76	102	152	203	254	305	337	388	432	483	584
C Travel	68	93	127	162	234	269	319	350	420	452	530	620
Holosed	655	747	848	1020	1225	1436	1590	1680	1885	2020	2230	2380
H1	-	-	-	-	-	-	2290	2405	2785	2930	3230	3680
L BW-RF	216	283	305	403	419	457	502	762	838	914	991	1143
V	250	300	400	500	600	600	-	-	-	-	-	-
V1	-	-	-	-	-	-	600	600	800	600	800	800
Weight RF kg	35	61	89	173	282	398	567	754	946	1230	1550	2550
Weight BW kg	28	52	72	148	248	343	492	646	841	1010	1380	2300
Figure	3C	3C	3C	3C	3C	3C	3C	3C	3C	3C	3C	3C
	102	103	104	106	108	110	112	114	116	118	120	124

Class ANSI 600

size inch	2	3	4	6	8	10	12	14	16	18	20	24
mm	50	80	100	150	200	250	300	350	400	450	500	600
A	51	76	102	152	200	248	299	327	375	419	464	559
C Travel	62	96	127	170	220	270	330	350	433	480	470	600
H Closed	719	844	940	1065	1306	1341	1548	1840	1950	2275	2440	2620
H1	-	-	-	-	1760	1395	2220	2590	2850	3280	3440	3920
L BW-RF	292	356	432	559	660	787	838	889	991	1092	1194	1397
L RTJ	295	359	435	562	664	791	841	892	994	1095	1200	1407
V	300	400	400	600	-	-	-	-	-	-	-	-
V1	-	-	-	-	600	800	600	600	60	60	800	80
Weight RF kg	49	87	143	303	520	860	1048	1455	1527	2180	2675	4650
Weight BW kg	41	78	118	263	436	735	933	1325	1011	1115	1225	3950
Figure	6C	6C	6C	6C	6C	6C	6C	6C	6C	6C	6C	6C
	102	103	104	106	108	110	112	114	116	118	120	124



Class ANSI 900

size inch	3	4	6	8	10
mm	80	100	150	200	250
A	73	99	146	191	238
C Travel 95	120	175	220	260	H
Closed 869	1014	1214	1265	1585	
H1	-	-	-	1750	2130
L BW-RF	381	457	610	737	778
L RTJ	384	460	613	740	841
V	400	500	800	-	-
V1	-	-	-	800	600
Weight RF kg	123	212	425	778	1065
Weight BW kg	114	186	377	677	930
Figure	9D	9D	9D	9D	9D
	103	104	106	108	110

Class ANSI 1500

size inch	2	3	4	6	8
mm	50	80	100	150	200
A	48	69	92	137	178
C Travel 75	97	125	150	210	H
Closed 809	909	1020	1257	1420	
H1	-	-	-	1490	1670
L BW-RF	368	470	546	705	832
L RTJ	371	473	549	711	841
V	400	500	600	-	-
V1	-	-	-	800	600
Weight RF kg	103	185	298	703	1240
Weight BW kg	82	153	264	601	1050
Figure	15D	15D	15D	15D	15D
	102	103	104	106	108

Class ANSI 2500

size inch	2	3	4	6
mm	50	80	100	150
A	38	57	73	111
C Travel 68	95	97	160	H
Closed 880	986	1015	1390	
H1	-	1230	1260	1630
L BW-RF	491	578	673	914
L RTJ	454	584	683	927
V	400	-	-	-
V1	-	300	600	600
Weight RF kg	188	344	530	1305
Weight BW kg	147	290	405	1100
Figure	25D	25D	25D	25D
	102	103	104	106

A Long Experience in Energy Equipment and one Goal:

The Customer's satisfaction.

Vicenza Plant.

VALVITALIA S.p.A. - ***Vitas Division***
Via Soastene, 24 - 36040 Brendola (VI) - Italy
Phone: +39 0444 749111 - Fax: +39 0444 401498
E-mail: info.vitas@valvitalia.com
Web site: www.valvitalia.com

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