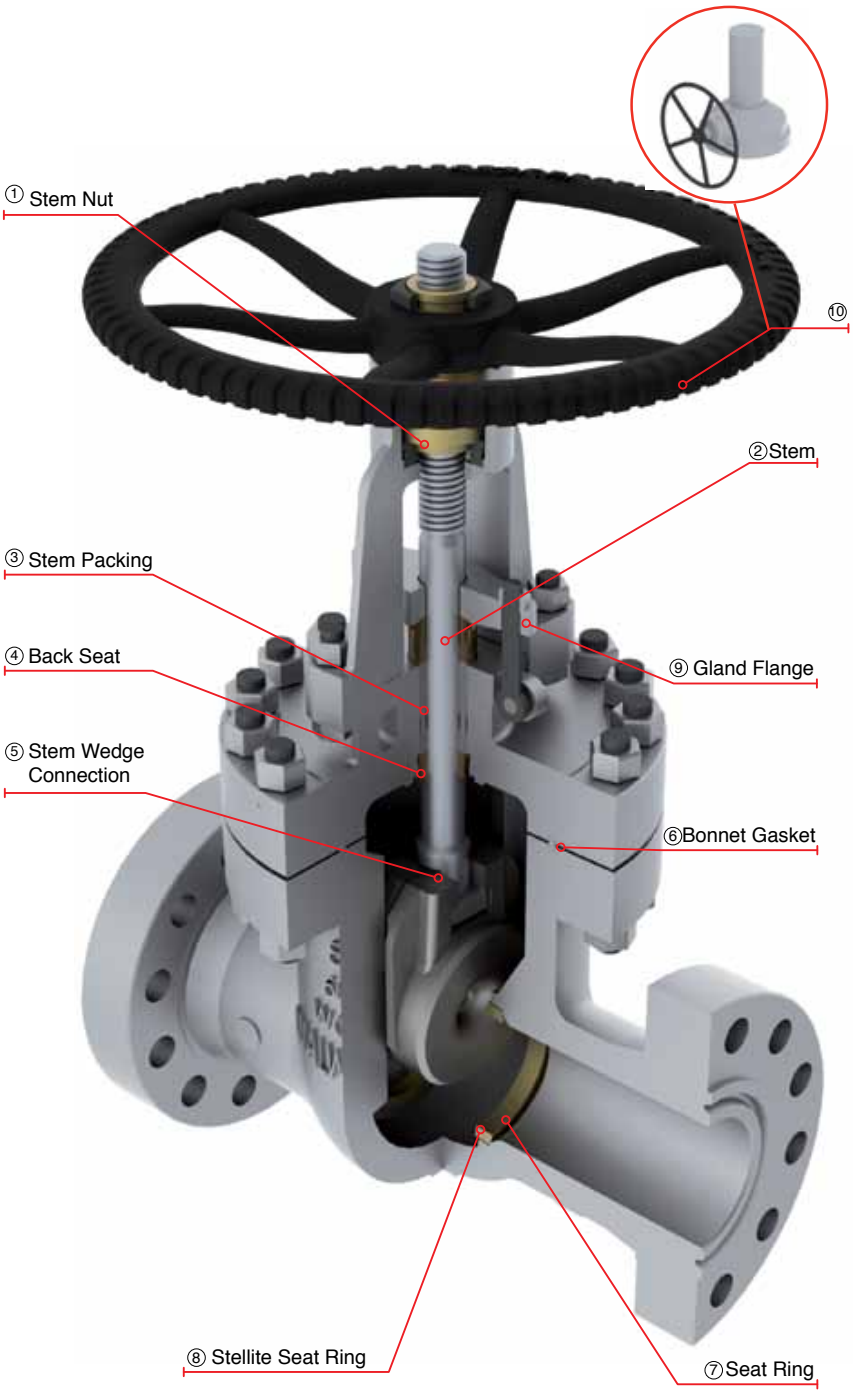
CAST STEEL GATE VALVES CLASS 600

CAST STEEL GATE VALVES HANDWHEEL OR GEAR OPERATED, WITH RISING STEM AND OUT SIDE SCREW AND YOKE (OS&Y)

DESIGN FEATURES

- Gate valves design in accordance with API-600, solid, flexible or parallel slide wedge/Disc.
- Gate valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Gate valves for Cryogenic service with gas column in accordance with BS-6364 upon request.
- Flange dimensions in accordance with ASME B16.5 for valves up to 24" nominal diameter.
- Hand-wheel, impact Hand-wheel, Chain-wheel, Gear operation, Electric, Pneumatic or Hydraulic Actuation as per Customer requirements.
- By-Pass, Lantern rings, grease injectors, special connections, etc.
- Low fugitive emissions control.
- NACE Service either MR-01-75 or MR-01-03.
- Test in accordance with API-598.
- Standard manufacturing flexible wedge from 2" and up



① Stem Nut, replaceable in line to avoid shut down of pipe line process.

② Rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to obtain low fugitive emissions.

③ Stem Packing is designed for optimum control of fugitive emissions leakage to the atmosphere. The ultra-low emission leakage rate is assured by the polished finish stem sealing area, the reduced diametrical clearances and the stem straightness control special designed packing. Live load packing arrangement available upon request.

④ Backseat, either threaded or welded designed to relieve back pressure on the stem packing when fully seated. Replacing stem packing under pressure is not recommended. Hard faced backseat available for severe service as per customer requirements.

⑤ Stem-Gate connection designed so that under severe applied loads (stuck gate), the stem will fail outside of the stuffing box pressure boundary.

⑥ Body to Bonnet ring type joint is designed to apply a uniform load to the gasket to assure a leak proof seal.

⑦ Seat rings are seal welded to provide a bubble tight joint.

⑧ Stellited Seat Rings provide increased resistance to wear, abrasion and erosion of the sealing surfaces.

⑨ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.

⑩ Gate valves supplied handwheel or gear operated.

CAST STEEL GATE VALVES, CLASS 600
(HANDWHEEL OPERATED)

Design Features

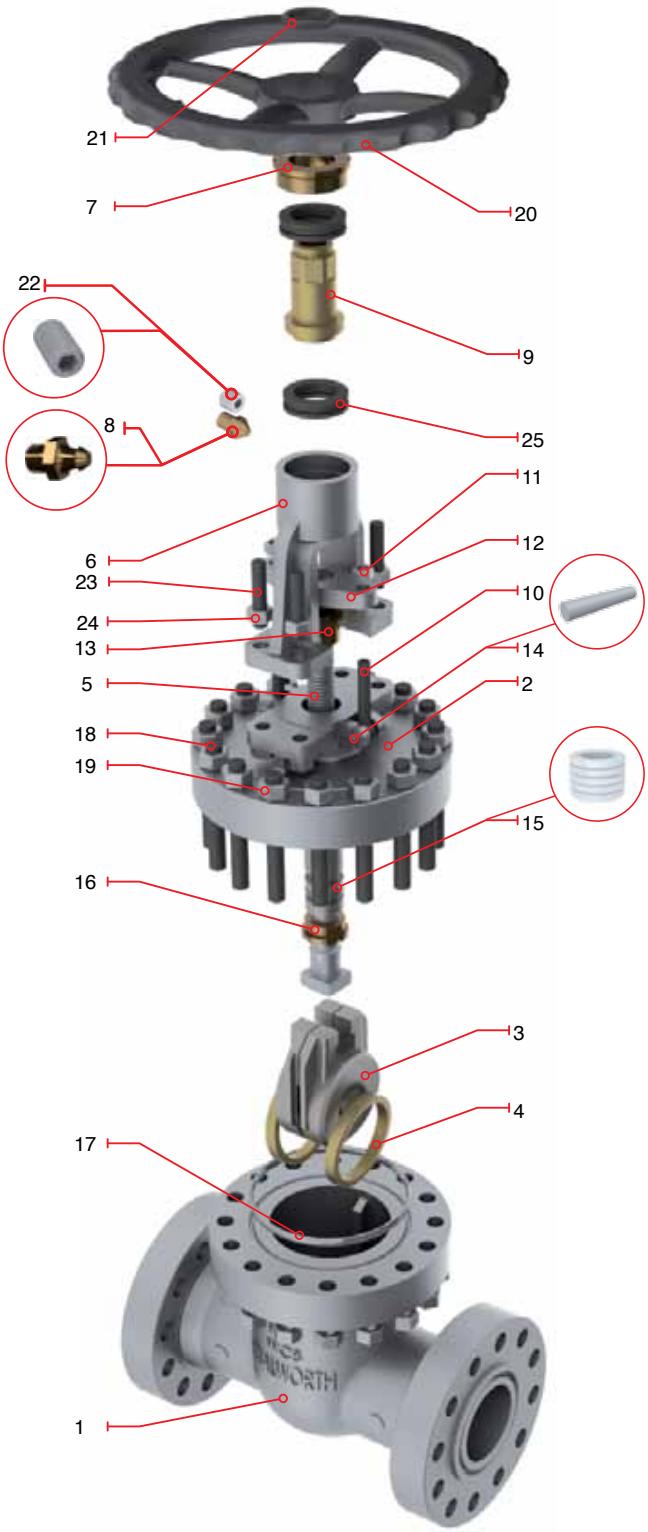
- Design in accordance with API-600
- Outside Screw & Yoke (OS & Y)
- Flexible Wedge as standard
- From 2" to 20" Handwheel operated as standard
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B16.25
- Flange dimensions larger than 24" according to ASME B16.47 Series A as standard
- Flange dimensions as per ASME B16.47 Series B available upon request

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5232RF	5232F	Flanged Raised Face
5232RTJ	5232RJ	Flanged Ring Type Joint
5232WE	5232WE	Buttweld

Regular Bill of Materials

No.	Description	WCB Trim UT
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST6
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Grease Fitting	Commercial Steel
9	Stem Nut	UNS C95600 or Ni-Resist
10	Eyebolt / Gland Flange Studs	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland Flange	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eye Lug Bolt / Eyebolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Ring Type Joint Gasket	ASTM A 108 GR 1010
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
23	Yoke Bolt	Alloy Steel
24	Yoke Bolt Nut	ASTM A 307
25	Stem Nut Bearing	Commercial Steel
*26	Stem Nut Oil Seal	Rubber/Commercial Steel
*27	Identification Plate	Stainless Steel

*Not Shown

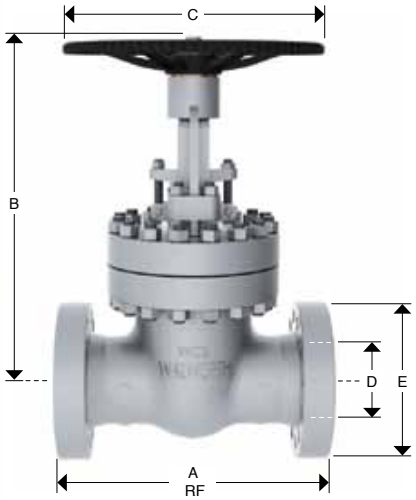


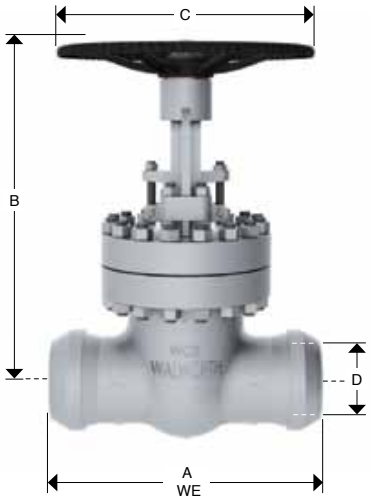
CAST STEEL GATE VALVES, CLASS 600
(HANDWHEEL OPERATED)

Design Features

- Design in accordance with API-600
- Outside Screw & Yoke (OS & Y)
- Flexible Wedge as standard
- From 2" to 20" Handwheel operated as Standard.
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B16.25

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5232RF	5232F	Flanged Raised Face
5232RTJ	5232RJ	Flanged Ring Type Joint
5232WE	5232WE	Buttweld





Dimensions and Weights

D Nominal Diameter	mm	51	64	76	102	152	203	254	305	356	406	457
	in	2	2 1/2	3	4	6	8	10	12	14	16	18
A (RF and WE)	mm	292	330	356	432	559	660	787	838	889	991	1,092
	in	11 1/2	13	14	17	22	26	31	33	35	39	43
A	mm	295	333	359	435	562	663	790	841	892	994	1095
(RTJ)	in	11 5/8	13 1/8	14 1/8	17 1/8	22 1/8	26 1/8	31 1/8	33 1/8	35 1/8	39 1/8	43 1/8
B	mm	432	495	546	673	845	1105	1283	1461	1676	1803	1956
	in	17	19 1/2	21 1/2	26 1/2	33 1/4	43 1/2	50 1/2	57 1/2	66	71	77
C	mm	254	254	254	305	457	508	660	660	711	711	914
	in	10	10	10	12	18	20	26	26	28	28	36
E	mm	165	191	210	273	356	419	508	559	603	686	743
	in	6 1/2	7 1/2	8 1/4	10 3/4	14	16 1/2	20	22	23 3/4	27	29 1/4
Weight	Kg	37	53	65	115	224	440	653	863	1141	1565	2560
5232RF/RTJ	lb	80.3	116.6	143	253	492.8	968	1436.6	1898.6	2510.2	3443	5632
Weight 5232WE	Kg	35	41	63	100	195	429	568	751	993	1362	2086
	lb	77	90.2	138.6	220.11	428.736	943.8	1249.842	1651.782	2183.874	2995.41	4589.2

CAST STEEL GATE VALVES, CLASS 600
(GEAR OPERATED)

Design Features

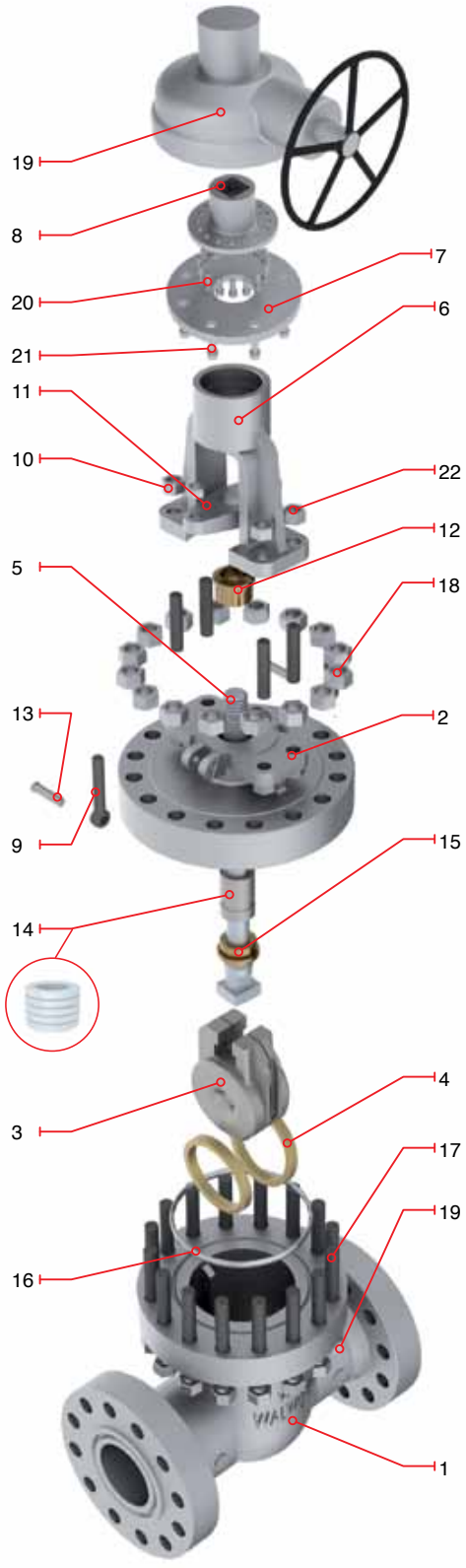
- Design in accordance with API-600
- Outside Screw & Yoke (OS & Y)
- Flexible Wedge as standard
- Size 24" and up to 36", supplied with gear operated as standard.
- Stem Nut with bearings 6" and up
- Flange dimensions for 24" as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B16.25
- Flange dimensions larger than 24" in accordance with ASME B16.47 Series A
- Flange dimensions as per ASME B16.47 Series B available upon request

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5232RF	5232F	Flanged Raised Face
5232RTJ	5232RJ	Flanged Ring Type Joint
5232WE	5232WE	Buttweld

Regular Bill of Materials

No.	Description	WCB Trim UT
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST6
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Stem Nut	ASTM B 148 UNS C95600
9	Eyebolt / Gland Flange Studs	Alloy Steel
10	Eyebolt Nut	ASTM A 307
11	Gland Flange	ASTM A 515 GR 70
12	Packing Bushing	ASTM A 108 GR 1020
13	Eye Lug Bolt / Eye Bolt Pin	Alloy Steel
14	Stem Packing	Graphite
15	Bonnet Bushing	ASTM A 276 Type 410
16	Ring Type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Stud	ASTM A 193 GR B7
18	Bonnet Stud Nut	ASTM A 194 GR 2H
19	Gear Operator	as customer requirements
20	Operator Bolts	Alloy Steel
21	Yoke Bolts	Alloy Steel
*22	Yoke Bolt Nut	ASTM A 307
*23	Identification Plate	Stainless Steel

*Not Shown

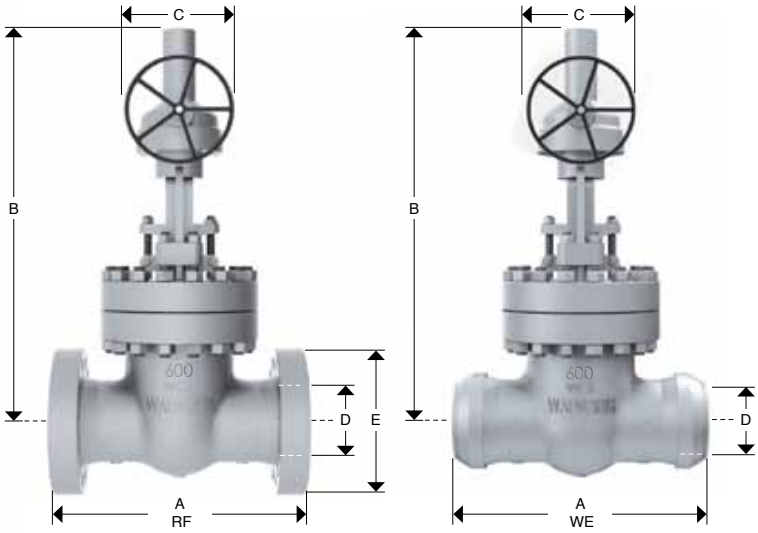


CAST STEEL GATE VALVES, CLASS 600
(GEAR OPERATED)

Design Features

- Design in accordance with API-600
- Outside Screw & Yoke (OS & Y)
- Flexible Wedge as standard
- Size 24" and 36", supplied with gear operator as standard.
- Flange Dimensios for 24" as per ASME B16.5
- Flange dimensions larger than 24" according to ASME B16.47 Series A as standard
- Flange dimensions as per ASME B16.47 Series B available upon request

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5232RF	5232F	Flanged Raised Face
5232RTJ	5232RJ	Flanged Ring Type Joint
5232WE	5232WE	Buttweld



Dimensions and Weights

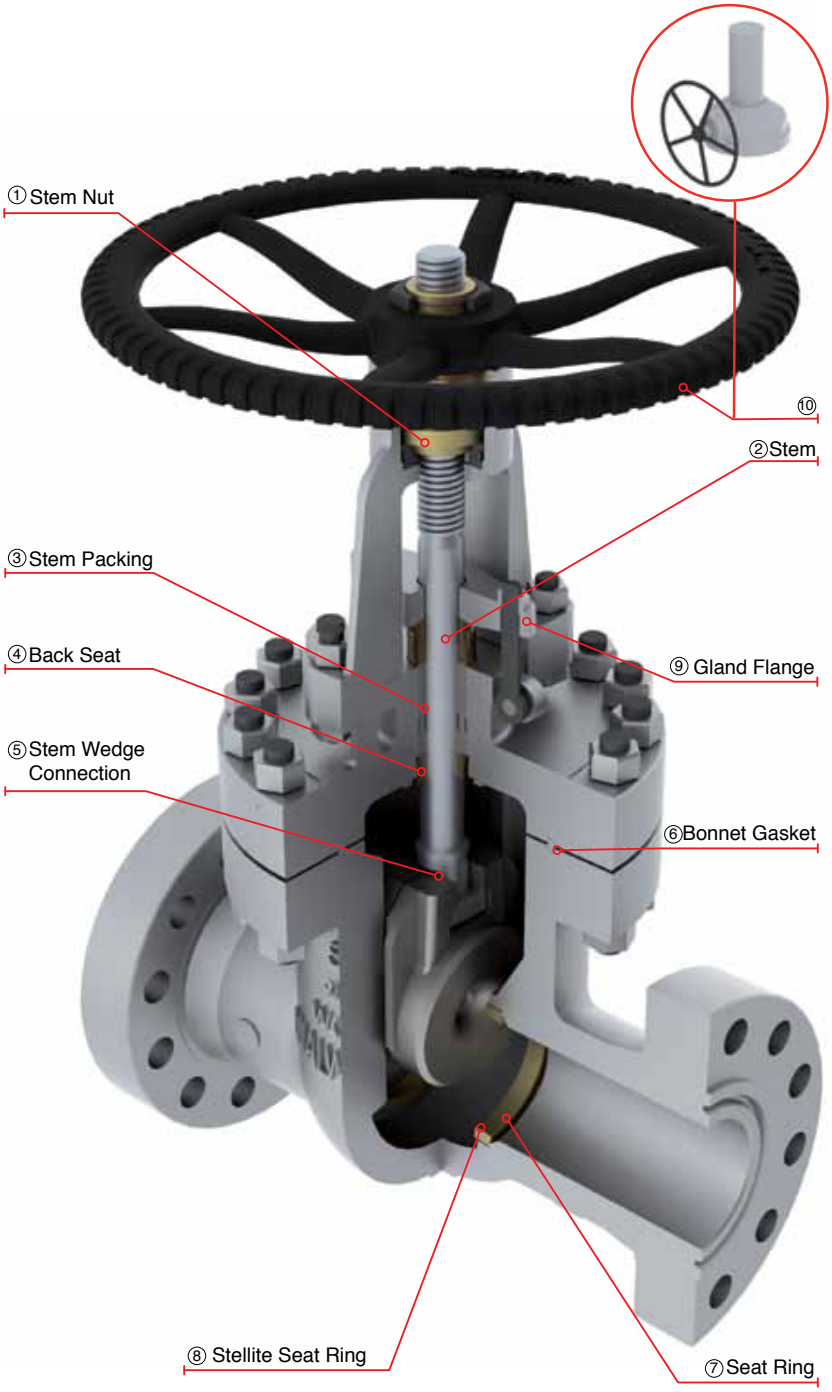
D Nominal Diameter	mm	508	610	762	914
	in	20	24	30	36
A	mm	1,194	1,397	1,651	2,083
(RF and WE)	in	47	55	65	82
A	mm	1200	1,407	1,664	2,099
(RTJ)	in	47 1/4	55 3/8	65 1/2	82 5/8
B	mm	2286	2743	3429	4115
	in	90	108	135	162
C	mm	914	762	762	762
	in	36	30	30	30
E	mm	813	940	1130	1315
	in	32	37	44 1/2	51 3/4
Weight	Kg	3000	4300	9890	14000
5232RF/RTJ	lb	6600	9460	21758	30800
Weight	Kg	2705	3901	8406	11900
5232WE	lb	5951	8582	18493	26180

CAST STEEL GATE VALVES CLASS 900

CAST STEEL GATE VALVES HANDWHEEL OR GEAR OPERATED, WITH RISING STEM AND OUT SIDE SCREW AND YOKE (OS&Y)

DESIGN FEATURES

- Gate valves design in accordance with API-600, solid, flexible or parallel slide wedge/Disc.
- Gate valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Gate valves for Cryogenic service with gas column in accordance with BS-6364 upon request.
- Flange dimensions in accordance with ASME B16.5 for valves up to 24" nominal diameter.
- Hand-wheel, impact Hand-wheel, Chain-wheel, Gear operation, Electric, Pneumatic or Hydraulic Actuation as per Customer requirements.
- By-Pass, Lantern rings, grease injectors, special connections, etc.
- Low fugitive emissions control.
- NACE Service either MR-01-75 or MR-01-03.
- Test in accordance with API-598.
- Standard manufacturing flexible wedge from 2" and up



① Stem Nut, replaceable in line to avoid shut down of pipe line process.

② Rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to obtain low fugitive emissions.

③ Stem Packing is designed for optimum control of fugitive emissions leakage to the atmosphere. The ultra-low emission leakage rate is assured by the polished finish stem sealing area, the reduced diametrical clearances and the stem straightness control special designed packing. Live load packing arrangement available upon request.

④ Backseat, either threaded or welded designed to relieve back pressure on the stem packing when fully seated. Replacing stem packing under pressure is not recommended. Hard faced backseat available for severe service as per customer requirements.

⑤ Stem-Gate connection designed so that under severe applied loads (stuck gate), the stem will fail outside of the stuffing box pressure boundary.

⑥ Body to Bonnet ring type joint is designed to apply a uniform load to the gasket to assure a leak proof seal.

⑦ Seat rings are seal welded to provide a bubble tight joint.

⑧ Stellited Seat Rings provide increased resistance to wear, abrasion and erosion of the sealing surfaces.

⑨ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.

⑩ Gate valves supplied handwheel or gear operated.