

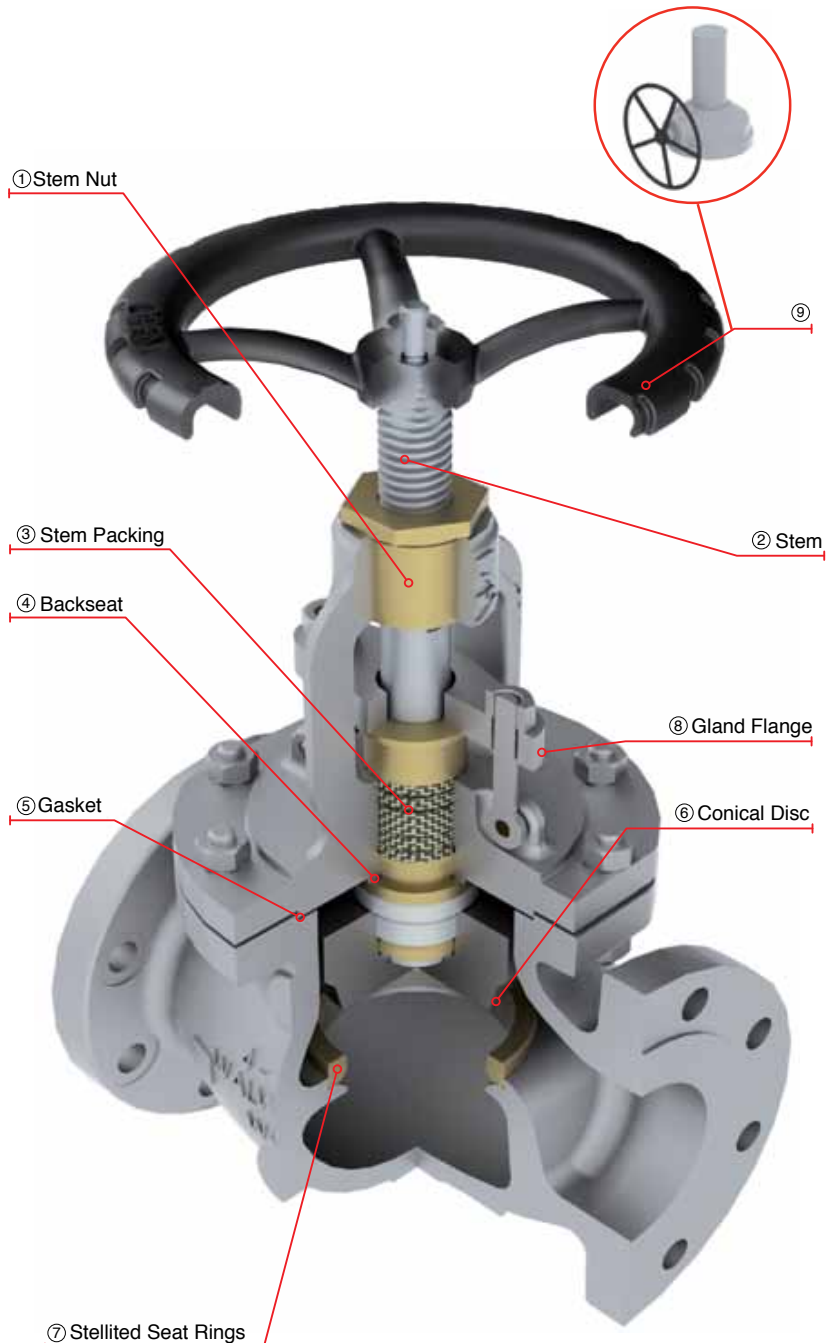
# CAST STEEL GLOBE VALVES CLASS 150

CAST STEEL GLOBE VALVES WITH RISING HANDWHEEL AND STEM.

## DESIGN FEATURES

- Globe valves design in accordance with API-623
- Globe valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Globe 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
- Handwheel, handwheel impact, 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
- Stop check design option available

- ① Stem Nut, replaceable in line to avoid shut down of pipe line process.
- ② Revolving rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to get 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 fine finish in the stem, 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 customer requirements
- ⑤ Body to Bonnet Joint designed to apply a uniform load to the gasket to assure a leak proof seal.
- ⑥ Conical Plug Type Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.
- ⑦ Stellite Seat Rings is seal welded to provide a increased resistance to wear, abrasion, and erosion of the sealing surfaces.
- ⑧ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.
- ⑨ Impact Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal. Gear operated is also available.



# CAST STEEL GLOBE VALVES, CLASS 150 (HANDWHEEL OPERATED)

## Design Features

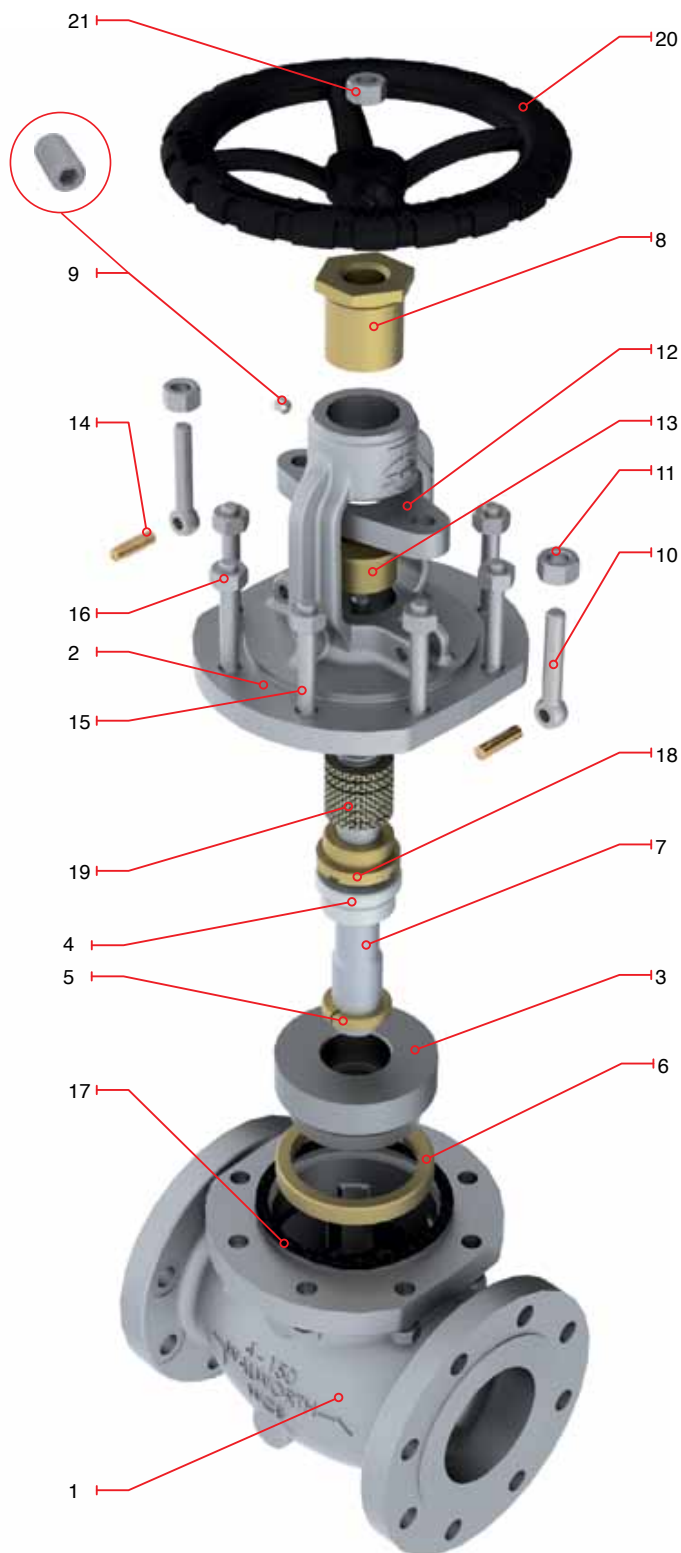
- Design in accordance with API-623
- Rising Stem and Handwheel
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 14" and larger
- Size 2" to 12" Handwheel Operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5275RF	5275F	Flanged Raised Face
5275RTJ	5275RJ	Flanged Ring Type Joint
5275WE	5275WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Locknut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70 + ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Set Screw	Alloy Steel
10	Eyebolt	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	Eyebolt Pin	Alloy Steel
15	Bonnet Stud	ASTM A 193 GR B7
16	Bonnet Stud Nut	ASTM A 194 GR 2H
17	Bonnet Gasket	Spiral Stainless 304/Graphite
18	Bonnet Bushing	ASTM A 276 Type 410
19	Stem Packing	Graphite
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 307
*22	Handwheel Washer	Commercial Steel
*23	Identification Plate	Stainless Steel

\*Not shown



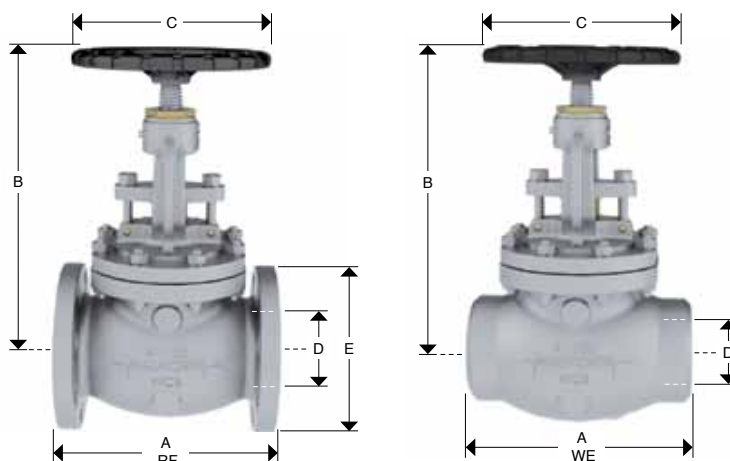
## CAST STEEL GLOBE VALVES, CLASS 150 (HANDWHEEL OPERATED)



### Design Features

- Design in accordance with API-623
- Rising Stem and Handwheel 6" and smaller
- Rising stem and fixed handwheel 8" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 14" and larger
- Size 2" to 12" Handwheel Operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5275RF	5275F	Flanged Raised Face
5275RTJ	5275RJ	Flanged Ring Type Joint
5275WE	5275WE	Buttweld



### Dimensions and Weights

D Nominal Diameter	mm	51	64	76	102	152	203	254	305
	in	2	2 1/2	3	4	6	8	10	12
A (RF and WE)	mm	203	216	241	292	406	495	622	699
	in	8	8 1/2	9 1/2	11 1/2	16	19 1/2	24 1/2	27 1/2
B	mm	329	386	354	432	513	643	668	830
	in	12 15/16	15 3/16	13.94	17	20 3/16	25 5/16	26 5/16	32 11/16
C	mm	203	203	203	254	356	406	457	610
	in	8	8	8	10	14	16	18	24
E	mm	152	178	191	229	279	343	406	483
	in	6	7	7 1/2	9	11	13 1/2	16	19
Weight 5275RF	Kg	18	29	34	55	100	186	267	399
	lb	40	64	75	121	220	409	587	878
Weight 5275WE	Kg	15	25	25	45	84	155	233	341
	lb	33	55	55	99	185	341	513	752

For size and dimensions not shown, please contact our Sales Department.

# CAST STEEL GLOBE VALVES, CLASS 150 (GEAR OPERATED)

## Design Features

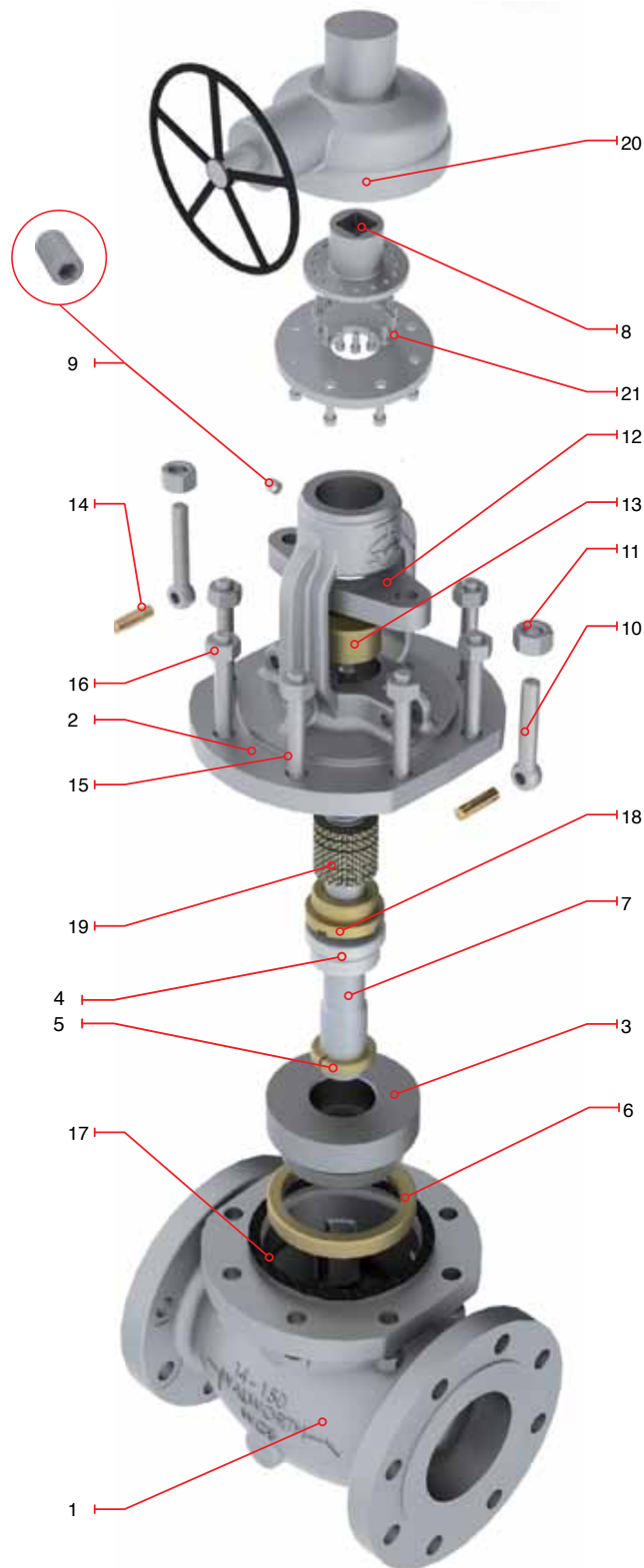
- Design in accordance with with API-623
- Rising Stem and Handwheel 6" and smaller
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 14" and larger
- Size 2" to 12" Handwheel Operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5275RF	5275F	Flanged Raised Face
5275RTJ	5275RJ	Flanged Ring Type Joint
5275WE	5275WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Locknut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70 + ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Set Screw	Alloy Steel
10	Eyebolt	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	Eyebolt Pin	Alloy Steel
15	Bonnet Stud	ASTM A 193 GR B7
16	Bonnet Stud Nut	ASTM A 194 GR 2H
17	Bonnet Gasket	Spiral Stainless 304/Graphite
18	Bonnet Bushing	ASTM A 276 Type 410
19	Stem Packing	Graphite
20	Gear Operator	as customer requirements
*21	Operator Bolts	Alloy Steel
*22	Identification Plate	Stainless Steel

\*Not shown

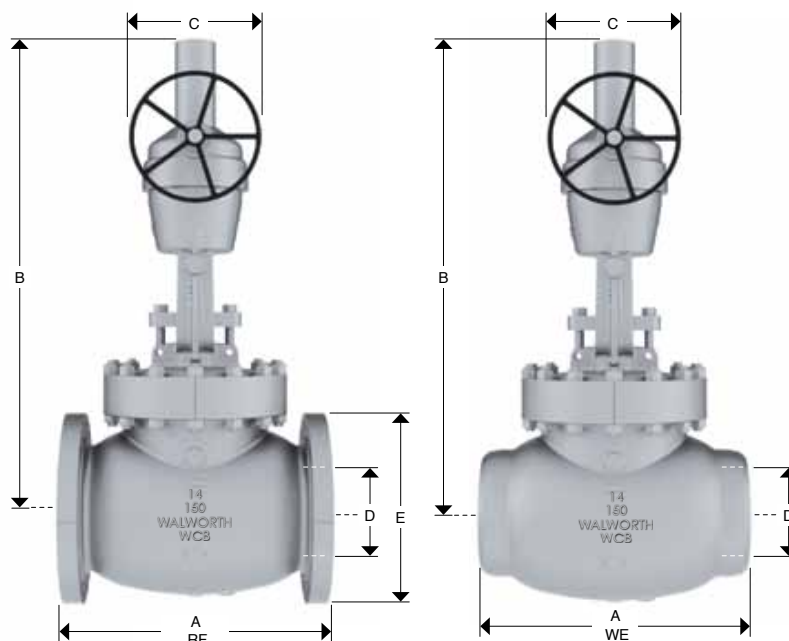


## CAST STEEL GLOBE VALVES, CLASS 150 (GEAR OPERATED)

### Design Features

- Design in accordance with API-623
- Rising Stem and Handwheel 6" and smaller
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 14" and larger
- Size 14" and up gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5275RF	5275F	Flanged Raised Face
5275RTJ	5275RJ	Flanged Ring Type Joint
5275WE	5275WE	Buttweld



### Dimensions and Weights

D Nominal Diameter	mm	356	406	457	508	610
	in	14	16	18	20	24
A (RF and WE)	mm	787	914	978	978	1295
	in	31	36	38.5	38 1/2	51
B	mm	990	996	1327	1230	1500
	in	39	39 1/4	52 1/4	48 3/8	59
C	mm	560	640	720	530	600
	in	22	25	28	21	23 1/2
E	mm	533	597	635	699	813
	in	21	23 1/2	25	27 1/2	32
Weight 5275RF	mm	530	678	998	1097	1613
	in	1166	1492	2196	2413.4	3548.6
Weight 5275WE	Kg	472	603	888	976	1436
	lb	1038	1328	1954	2148	3158

For size and dimensions not shown, please contact our Sales Department.



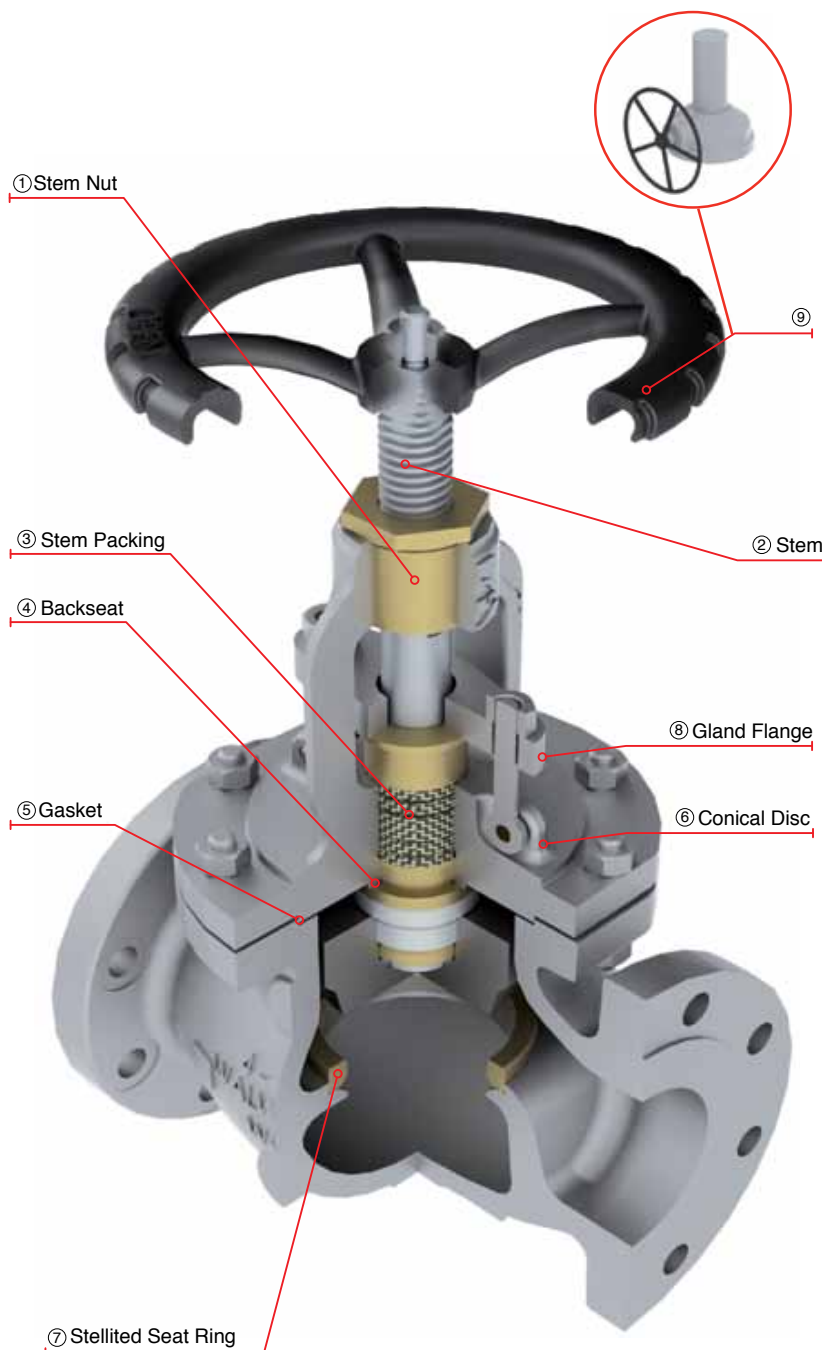
# CAST STEEL GLOBE VALVES CLASS 300

CAST STEEL GLOBE VALVES WITH RISING HANDWHEEL AND STEM.

## DESIGN FEATURES

- Globe valves design in accordance with API-623
- Globe valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Globe 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
- Handwheel, handwheel impact, 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
- Stop check design option available

- ① Stem Nut, replaceable in line to avoid shut down of pipe line process.
- ② Revolving rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to get 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 fine finish in the stem, 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 customer requirements
- ⑤ Body to Bonnet Joint designed to apply a uniform load to the gasket to assure a leak proof seal.
- ⑥ Conical Plug type Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.
- ⑦ Stellited Seat Ring is seal welded to provide a increased resistance to wear, abrasion, and erosion of the sealing surfaces.
- ⑧ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.
- ⑨ Impact Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal. Gear operated is also available.



# CAST STEEL GLOBE VALVES, CLASS 300 (HANDWHEEL OPERATED)

## Design Features

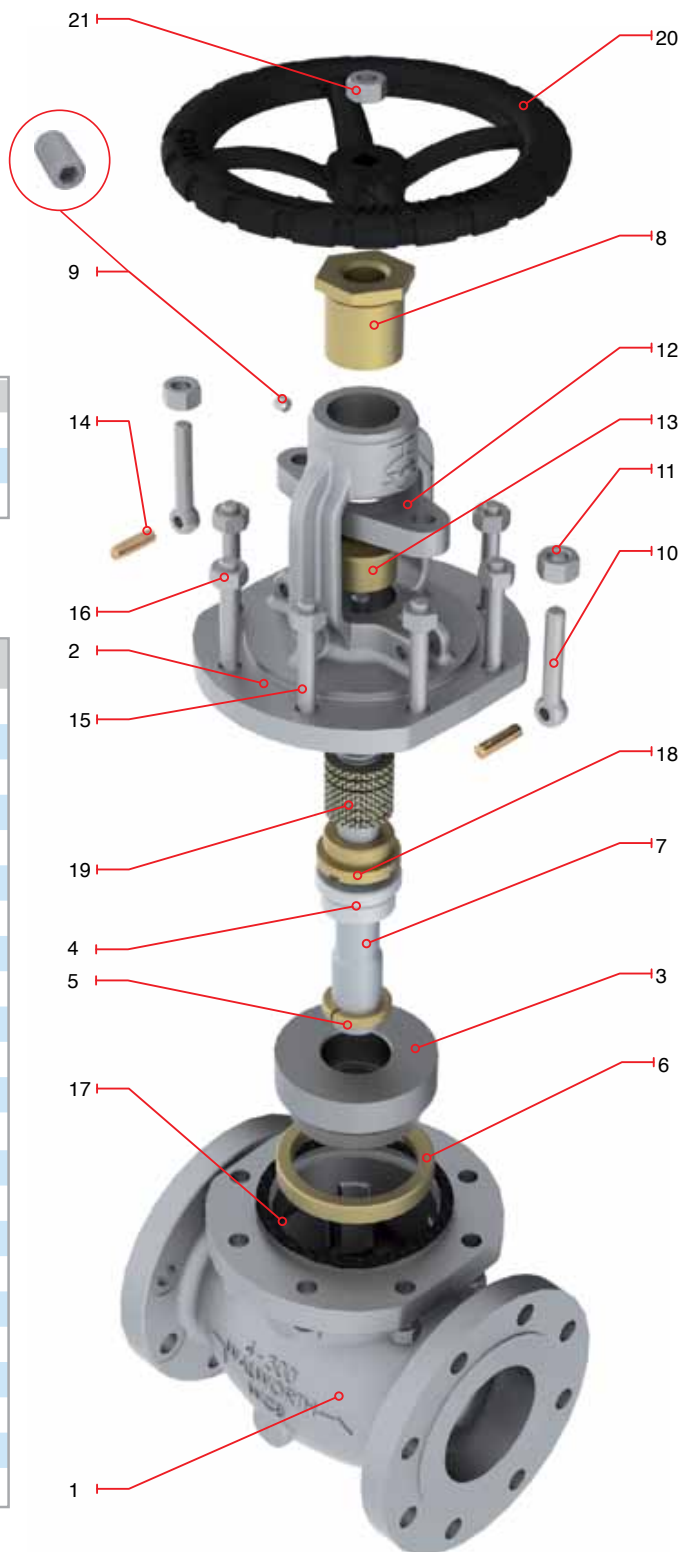
- Design in accordance with API-623
- Rising Stem and Handwheel: 6" and smaller
- Rising Stem and Fixed Handwheel: 8" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 2" to 12" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5281RF	5281F	Flanged Raised Face
5281RTJ	5281RJ	Flanged Ring Type Joint
5281WE	5281WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70 + ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Screw	Alloy Steel
10	Eyebolt	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	Eyebolt Pin	Alloy Steel
15	Bonnet Stud	ASTM A 193 GR B7
16	Bonnet Stud Nut	ASTM A 194 GR 2H
17	Bonnet Gasket	Spiral Stainless 304/Graphite
18	Bonnet Bushing	ASTM A 276 Type 410
19	Stem Packing	Graphite
20	Handwheel	ASTM A 197
21	Handwheel Washer	Commercial Steel
22	Handwheel Nut	ASTM A 307
*23	Identification Plate	Stainless Steel

\*Not Shown



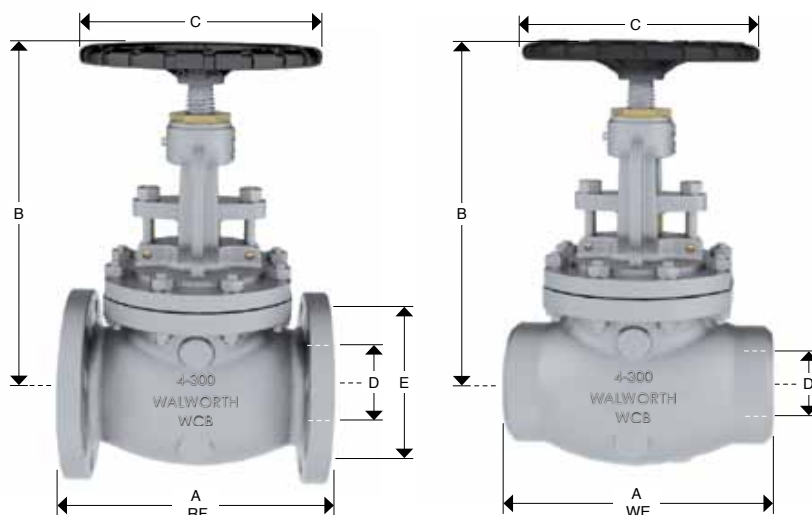
# CAST STEEL GLOBE VALVES, CLASS 300 (HANDWHEEL OPERATED)



## Design Features

- Design in accordance with API-623
- Rising Stem and Handwheel: 6" and smaller
- Rising Stem and Fixed Handwheel: 8" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 2" to 12" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5281RF	5281F	Flanged Raised Face
5281RTJ	5281RJ	Flanged Ring Type Joint
5281WE	5281WE	Buttweld



## Dimensions and Weights

D Nominal Diameter	mm	51	64	76	102	152	203	254	305
	in	2	2 1/2	3	4	6	8	10	12
A (RF and WE)	mm	267	292	318	356	445	559	622	711
	in	10 1/2	11 1/2	12 1/2	14	17 1/2	22	24 1/2	28
B	mm	360	505	418	511	621	854	1000	1180
	in	14 3/16	19 7/8	16 7/16	20 1/8	24 7/16	33 5/8	39 3/8	46 7/16
C	mm	203	254	254	356	457	610	762	965
	in	8	10	10	14	18	24	30	38
E	mm	165	191	210	254	318	381	445	521
	in	6 1/2	7 1/2	8 1/4	10	12 1/2	15	17 1/2	20 1/2
Weight 5281RF	Kg	26	43	50	78	154	294	461	675
	lb	57.2	94.6	110	171.6	338.8	646.8	1014.2	1485
Weight 5281WE	Kg	20	35	40	62	148	254	381	574
	lb	44	77	88	136	326	559	838	1262

For size and dimensions not shown, please contact our Sales Department.



# CAST STEEL GLOBE VALVES, CLASS 300 (GEAR OPERATED)

## Design Features

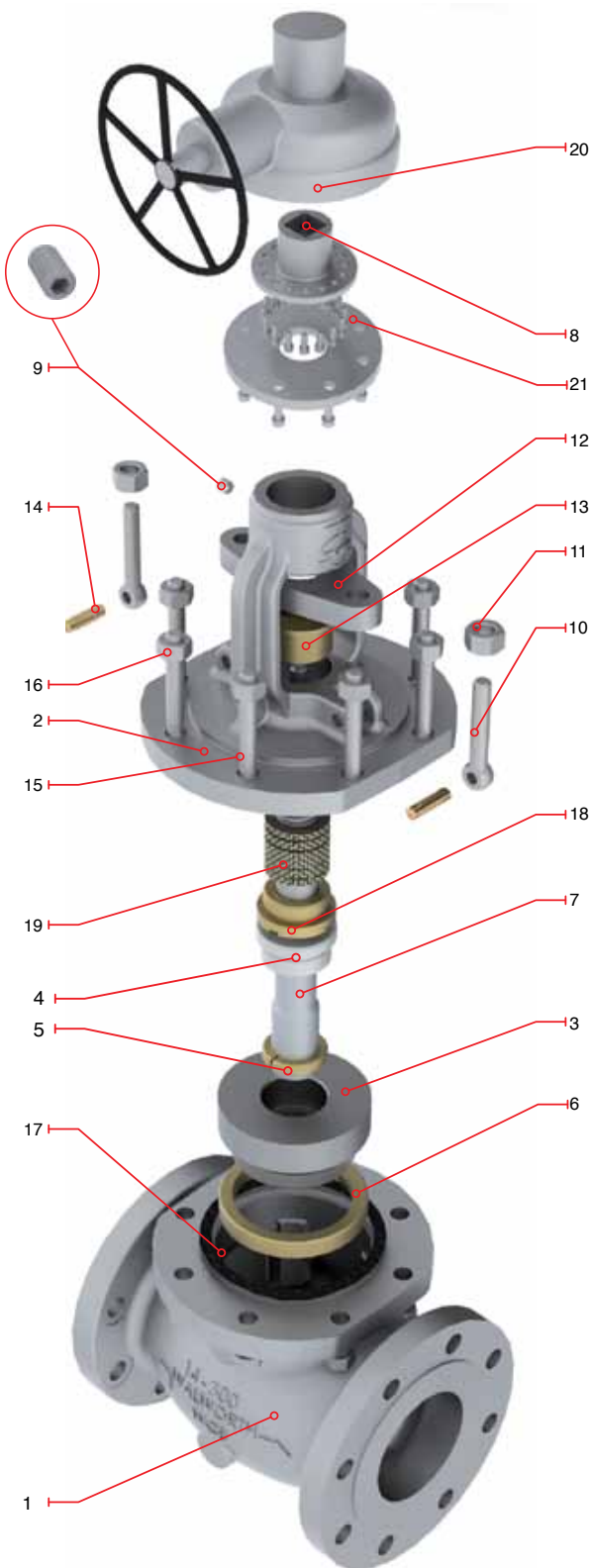
- Design in accordance with API-623
- Rising Stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 14" and up Gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5281RF	5281F	Flanged Raised Face
5281RTJ	5281RJ	Flanged Ring Type Joint
5281WE	5281WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Locknut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70 + ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Set Screw	Alloy Steel
10	Eyebolt	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	Eyebolt Pin	Alloy Steel
15	Bonnet Stud	ASTM A 193 GR B7
16	Bonnet Stud Nut	ASTM A 194 GR 2H
17	Bonnet Gasket	Spiral Stainless 304/Graphite
18	Bonnet Bushing	ASTM A 276 Type 410
19	Stem Packing	Graphite
20	Gear Operator	as customer requirements
21	Operator Bolts	Alloy Steel
*22	Identification Plate	Stainless Steel

\*Not Shown

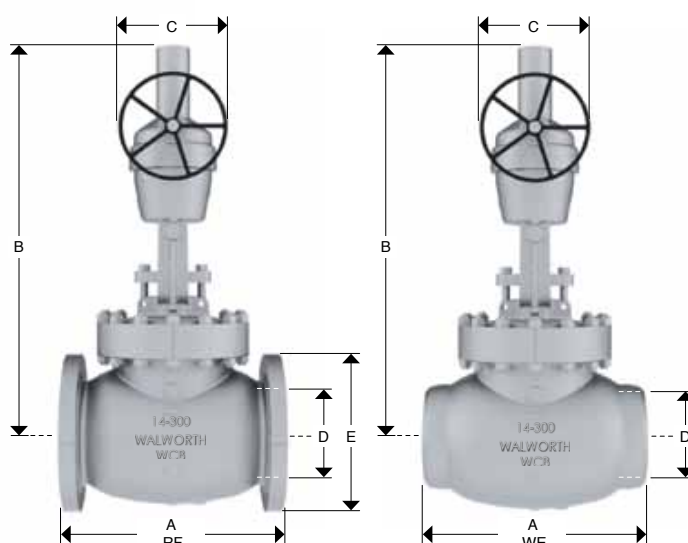


# CAST STEEL GLOBE VALVES, CLASS 300 (GEAR OPERATED)

## Design Features

- Design in accordance with with API-623
- Rising Stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 14" and up Gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5281RF	5281F	Flanged Raised Face
5281RTJ	5281RJ	Flanged Ring Type Joint
5281WE	5281WE	Buttweld



## Dimensions and Weights

D Nominal Diameter	mm	356	406	457	508	610
	in	14	16	18	20	24
A (RF and WE)	mm	838	864	977	1016	1346
	in	33	34	38 1/2	40	53
B	mm	1037	1173	1135	1500	1730
	in	40 7/8	46 1/8	44 5/8	59	68 1/8
C	mm	640	640	600	600	600
	in	25	25	23 5/8	23 5/8	23 5/8
E	mm	584	648	711	775	914
	in	23	25 1/2	28	30 1/2	36
Weight 5281RF	Kg	787	1097	1907	2119	2338
	lb	1731.4	2413.4	4195	4662	5144
Weight 5281WE	Kg	669	932	1678	1865	2057
	lb	1472	2051	3692	4102	4526

For size and dimensions not shown, please contact our Sales Department.

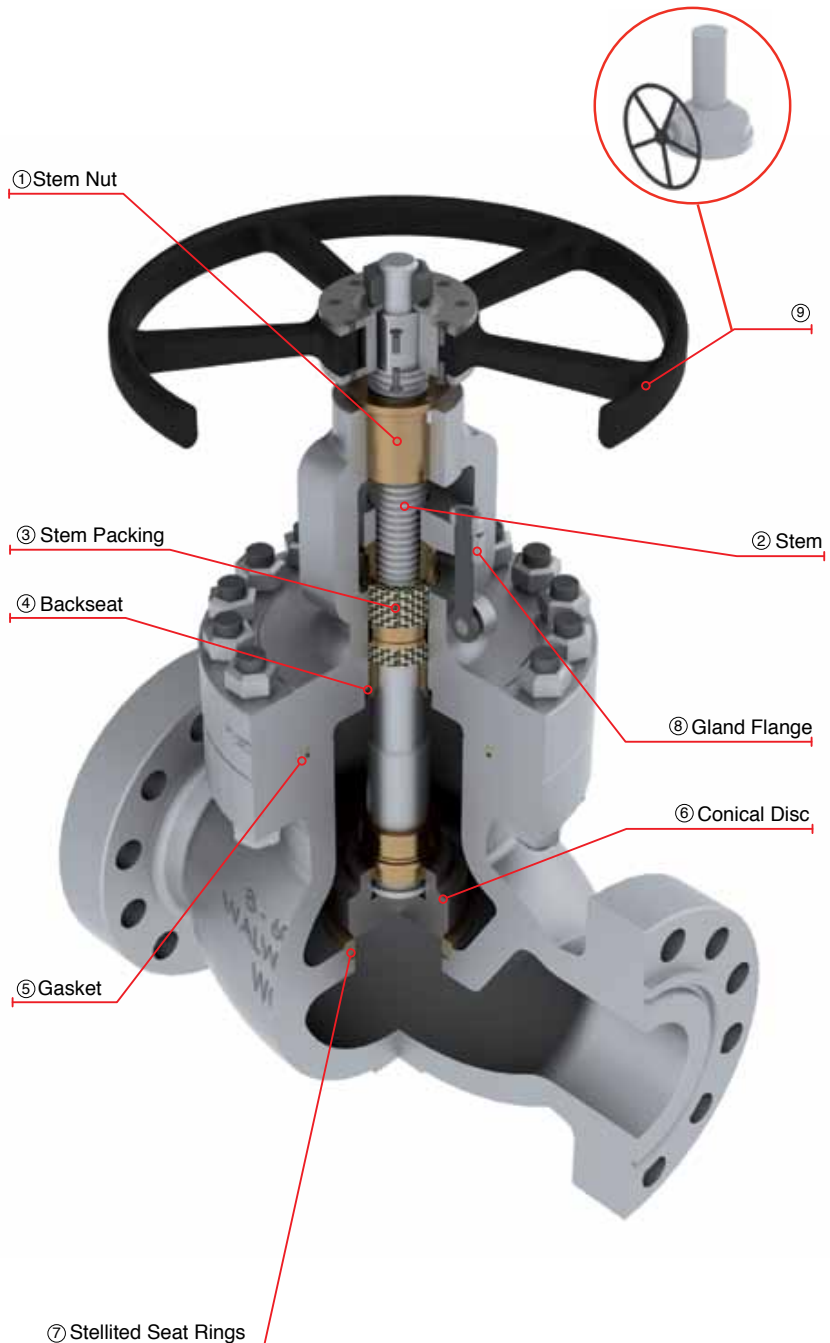
# CAST STEEL GLOBE VALVES CLASS 600

CAST STEEL GLOBE VALVES WITH RISING HANDWHEEL AND STEM.

## DESIGN FEATURES

- Globe valves design in accordance with API-623
- Globe valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Globe 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
- Handwheel, handwheel impact, 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
- Stop check design option available

- ① Stem Nut, replaceable in line to avoid shut down of pipe line process.
- ② Revolving rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to get 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 fine finish in the stem, 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 customer requirements
- ⑤ Body to Bonnet Ring Type Joint designed to apply a uniform load to the gasket to assure a leak proof seal.
- ⑥ Conical Plug type Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.
- ⑦ Stellited Seat Ring is seal welded to provide a increased resistance to wear, abrasion, and erosion of the sealing surfaces.
- ⑧ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.
- ⑨ Impact Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal. Gear operated is also available.



# CAST STEEL GLOBE VALVES, CLASS 600 (HANDWHEEL OPERATED)

## Design Features

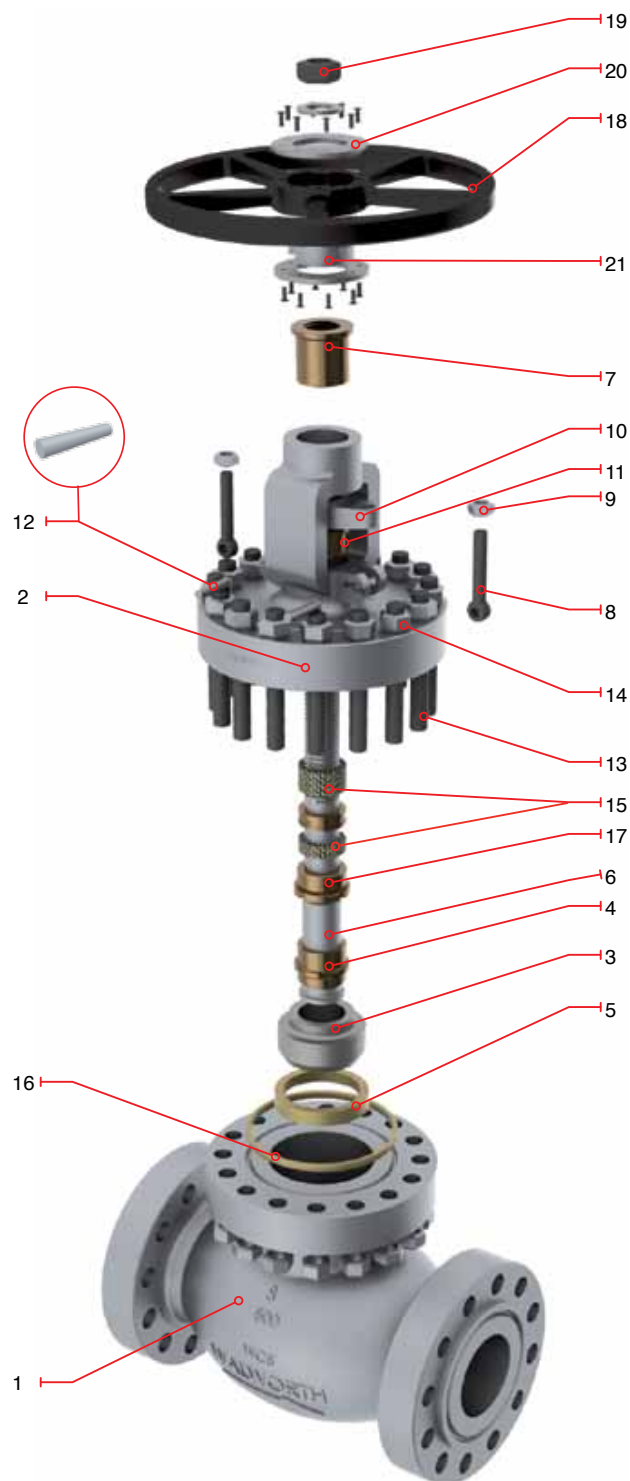
- Design in accordance with API-623
- Rising Stem and Handwheel: 2" to 6"
- Rising Stem and fixed handwheel 8" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 2" and 8" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5295RF	5295F	Flanged Raised Face
5295RTJ	5295RJ	Flanged Ring Type Joint
5295WE	5295WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Seat Ring	ASTM A 515 GR 70 + ST6
6	Stem	ASTM A 276 Type 410
7	Stem Nut	ASTM B 148 UNS C95600
8	Eyebolt	Alloy Steel
9	Eyebolt Nut	ASTM A 307
10	Gland Flange	ASTM A 515 GR 70
11	Packing Bushing	ASTM A 108 GR 1020
12	Eyebolt Pin	Alloy Steel
13	Bonnet Stud	ASTM A 193 GR B7
14	Bonnet Stud Nut	ASTM A 194 GR 2H
15	Stem Packing	Graphite
16	Ring type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Bushing	ASTM A 276 Type 410
18	Handwheel	ASTM A 197
19	Handwheel Nut	ASTM A 307
20	Clamp	Commercial Steel
21	Impact Bushing	ASTM A 216 GR WCB
22*	Stem Nut Set Screw	Alloy Steel
23*	Identification Plate	Stainless Steel

\*Not Shown





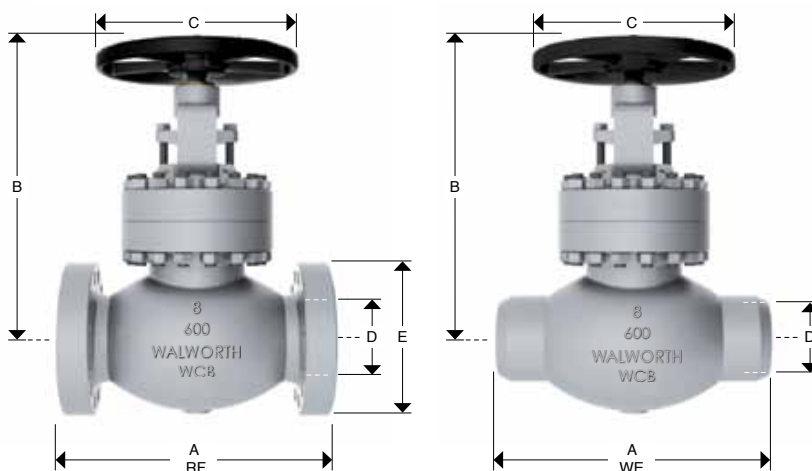
## CAST STEEL GLOBE VALVES, CLASS 600 (HANDWHEEL OPERATED)



### Design Features

- Design in accordance with API-623
- Rising Stem and Handwheel: 2" to 6"
- Rising stem and fixed handwheel 8"
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 2" and 8" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5295RF	5295F	Flanged Raised Face
5295RTJ	5295RJ	Flanged Ring Type Joint
5295WE	5295WE	Buttweld



### Dimensions and Weights

D Nominal Diameter	mm	51	64	76	102	152	200
	in	2	2 1/2	3	4	6	8
A (RF and WE)	mm	292	330	356	432	559	660
	in	11 1/2	13	14	17	22	26
A* (RTJ)	mm	295	333	359	435	562	663
	in	11 5/8	13 1/8	14 1/8	17 1/8	22 1/8	26 1/8
B	mm	400	501	493	582	783	925
	in	15 3/4	19 3/4	19 1/2	22 7/8	30 7/8	36 3/8
C	mm	250	300	350	400	500	560
	in	10	12	14	16	20	22
E	mm	165	190	210	273	356	419
	in	6 1/2	7 1/2	8 1/4	10 3/4	14	16 1/2
Weight 5295RF	Kg	36	63	66	120	278	429
	lb	79	139	145	264	611	944
Weight 5295WE	Kg	30	52	55	102	236	365
	lb	66	115	121	224	519	802

For size and dimensions not shown, please contact our Sales Department.

# CAST STEEL GLOBE VALVES, CLASS 600 (GEAR OPERATED)

## Design Features

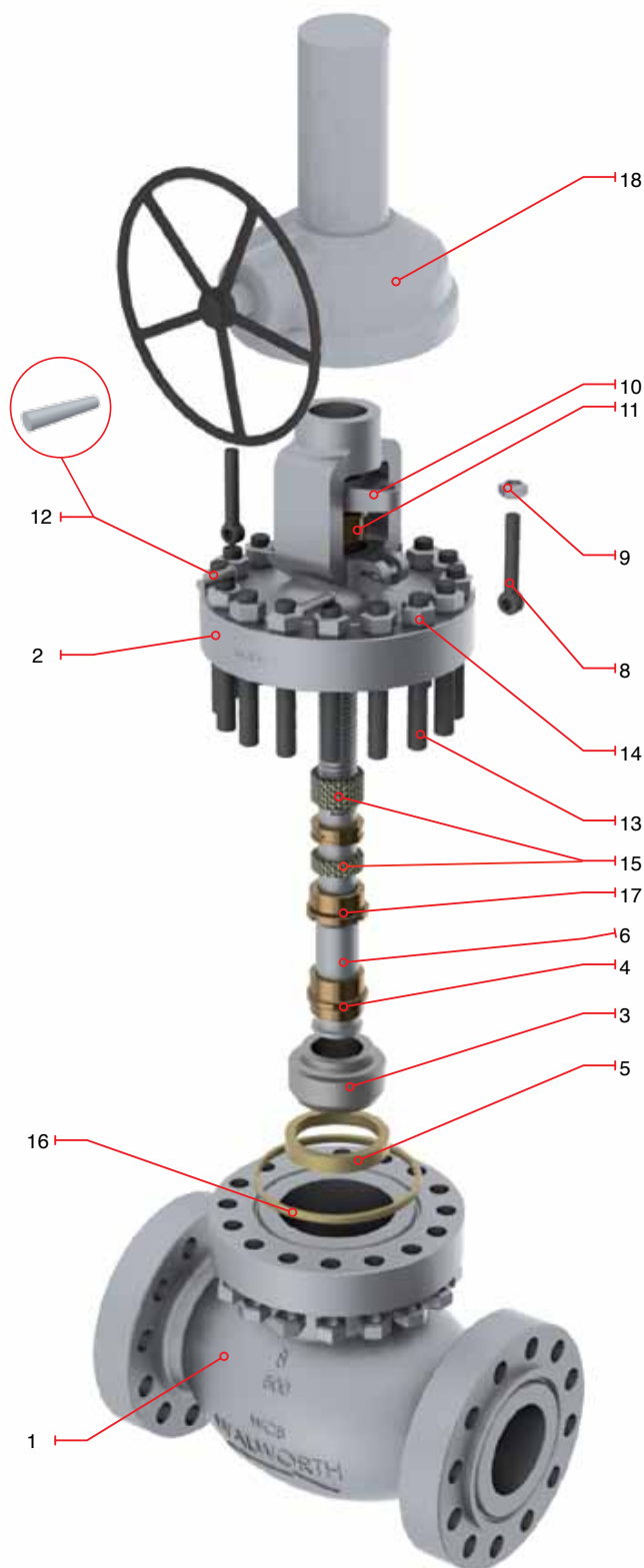
- Design in accordance with API-623
- Rising stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 10" and up Gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5295RF	5295F	Flanged Raised Face
5295RTJ	5295RJ	Flanged Ring Type Joint
5295WE	5295WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Seat Ring	ASTM A 515 GR 70 + ST6
6	Stem	ASTM A 276 Type 410
*7	Stem Nut	ASTM B 148 UNS C95600
8	Eyebolt	Alloy Steel
9	Eyebolt Nut	ASTM A 307
10	Gland Flange	ASTM A 515 GR 70
11	Packing Bushing	ASTM A 108 GR 1020
12	Eyebolt Pin	Alloy Steel
13	Bonnet Stud	ASTM A 193 GR B7
14	Bonnet Stud Nut	ASTM A 194 GR 2H
15	Stem Packing	Graphite
16	Rising type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Bushing	ASTM A 276 Type 410
18	Gear Operator	as customer requirements
*19	Operator Bolts	Alloy Steel
*20	Identification Plate	Stainless Steel

\*Not Shown



# CAST STEEL GLOBE VALVES, CLASS 600

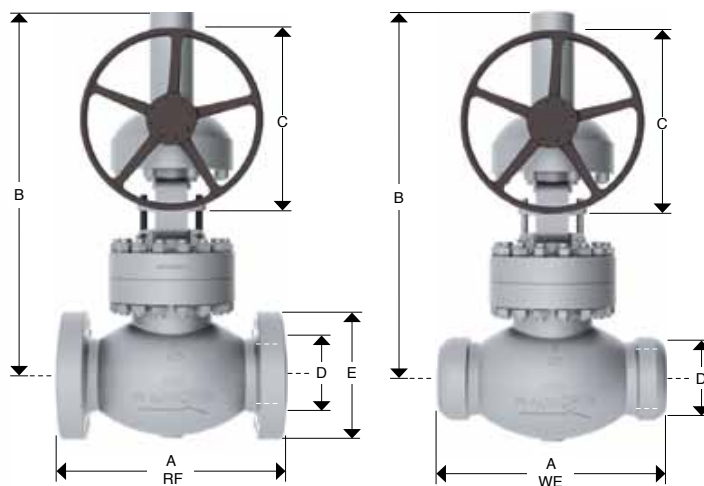
## (GEAR OPERATED)



### Design Features

- Design in accordance with API-623
- Rising Stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with Bearings: 8" and larger
- Size 10" and up Gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5295RF	5295F	Flanged Raised Face
5295RTJ	5295RJ	Flanged Ring Type Joint
5295WE	5295WE	Buttweld



### Dimensions and Weights

D Nominal Diameter	mm	254	305	356	406	457	508	610
	in	10	12	14	16	18	20	24
A (RF and WE)	mm	787	838	889	991	PCR	PCR	PCR
	in	31	33	35	39	PCR	PCR	PCR
A* (RTJ)	mm	790	841	892	994	PCR	PCR	PCR
	in	31 1/8	33 1/8	35 1/8	39 1/8	PCR	PCR	PCR
B	mm	994	1122	1196	1327	PCR	PCR	PCR
	in	39 1/8	44 1/8	47 1/8	52 1/4	PCR	PCR	PCR
C	mm	640	700	600	600	PCR	PCR	PCR
	in	25	28	23 5/8	23 5/8	PCR	PCR	PCR
E	mm	508	559	603	686	745	815	940
	in	20	22	23 3/4	27	29 1/4	32	37
Weight 5295RF	Kg	737	1194	1421	1899	PCR	PCR	PCR
	lb	1621	2627	3126	4178	PCR	PCR	PCR
Weight 5295WE	Kg	649	1051	1322	1766	PCR	PCR	PCR
	lb	1427	2312	2907	3885	PCR	PCR	PCR

PCR = Per customer request

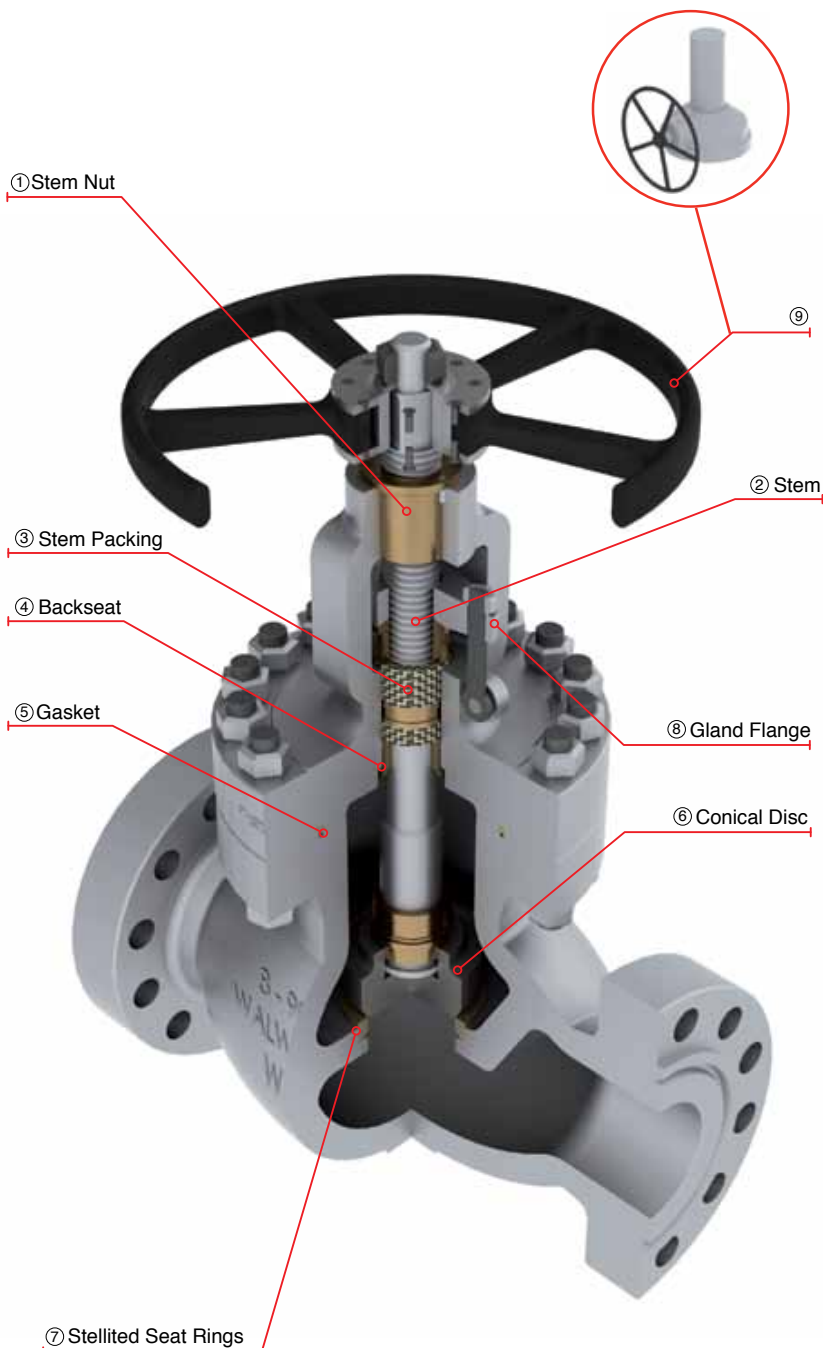
# CAST STEEL GLOBE VALVES CLASS 900

CAST STEEL GLOBE VALVES WITH RISING HANDWHEEL AND STEM.

## DESIGN FEATURES

- Globe valves design in accordance with with API-623
- Globe valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Globe 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
- Handwheel, handwheel impact, 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
- Stop check design option available

- ① Stem Nut, replaceable in line to avoid shut down of pipe line process.
- ② Revolving rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to get 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 fine finish in the stem, 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 customer requirements
- ⑤ Body to Bonnet Ring Type Joint designed to apply a uniform load to the gasket to assure a leak proof seal.
- ⑥ Conical Plug type Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.
- ⑦ Stellite Seat Rings is seal welded to provide a increased resistance to wear, abrasion, and erosion of the sealing surfaces.
- ⑧ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.
- ⑨ Impact Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal. Gear operated is also available.





# CAST STEEL GLOBE VALVES, CLASS 900 (HANDWHEEL OPERATED)

## Design Features

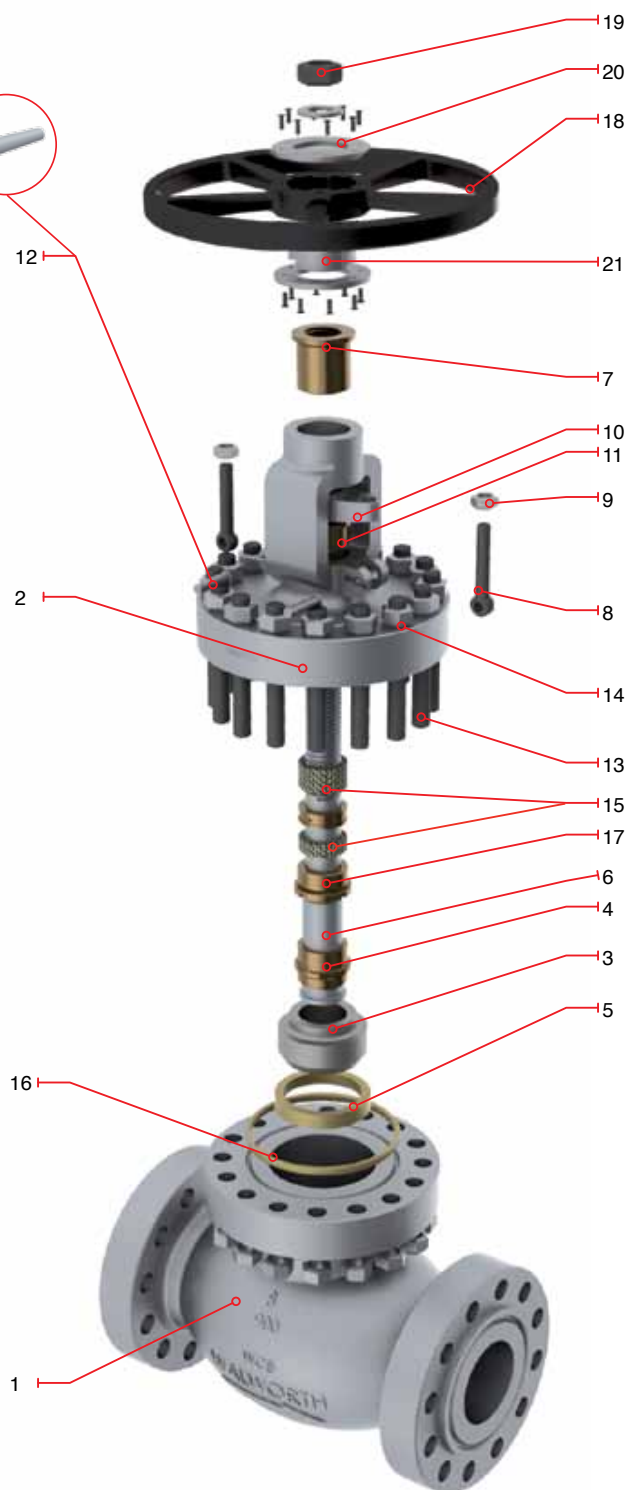
- Design in accordance with API-623
- Rising Stem and Handwheel: 2" to 3"
- Rising Stem and Fixed Handwheel: 4" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with bearings 4" and larger
- Size 2" to 6" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5301RF	5301F	Flanged Raised Face
5301RTJ	5301RJ	Flanged Ring Type Joint
5301WE	5301WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Seat Ring	ASTM A 515 GR 70 + ST6
6	Stem	ASTM A 276 Type 410
7	Stem Nut	ASTM B 148 UNS C95600
8	Eyebolt	Alloy Steel
9	Eyebolt Nut	ASTM A 307
10	Gland Flange	ASTM A 515 GR 70
11	Packing Bushing	ASTM A 108 GR 1020
12	Eyebolt Pin	Alloy Steel
13	Bonnet Stud	ASTM A 193 GR B7
14	Bonnet Stud Nut	ASTM A 194 GR 2H
15	Stem Packing	Graphite
16	Ring type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Bushing	ASTM A 276 Type 410
18	Handwheel	ASTM A 197
19	Handwheel Nut	ASTM A 307
20	Clamp	Commercial Steel
21	Impact Bushing	ASTM A 216 GR WCB
22*	Stem Nut Set Screw	Alloy Steel
23*	Identification Plate	Stainless Steel

\*Not Shown

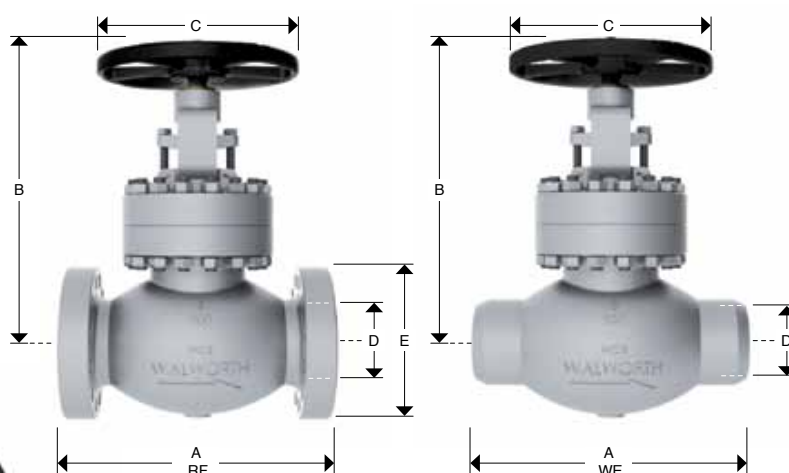


# CAST STEEL GLOBE VALVES, CLASS 900 (HANDWHEEL OPERATED)

## Design Features

- Design in accordance with API-623
- Rising Stem and Handwheel: 2" to 3"
- Rising Stem and Fixed Handwheel: 4" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Bonnet with bearings 4" and larger
- Size 2" to 6" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5301RF	5301F	Flanged Raised Face
5301RTJ	5301RJ	Flanged Ring Type Joint
5301WE	5301WE	Buttweld



## Dimensions and Weights

D Nominal Diameter	mm	76	102	152
	in	3	4	6
A (RF and WE)	mm	381	457	610
	in	15	18	24
A* (RTJ)	mm	384	460	613
	in	15 1/8	18 1/8	24 1/8
B	mm	573	738	854
	in	22 1/2	29	33 5/8
C	mm	400	450	560
	in	16	18	22
E	mm	241	292	381
	in	9 1/2	11 1/2	15
Weight 5301RF	Kg	113	206	328
	lb	249	453	722
Weight 5301WE	Kg	94	175	279
	lb	206	385	613

# CAST STEEL GLOBE VALVES, CLASS 900 (GEAR OPERATED)

## Design Features

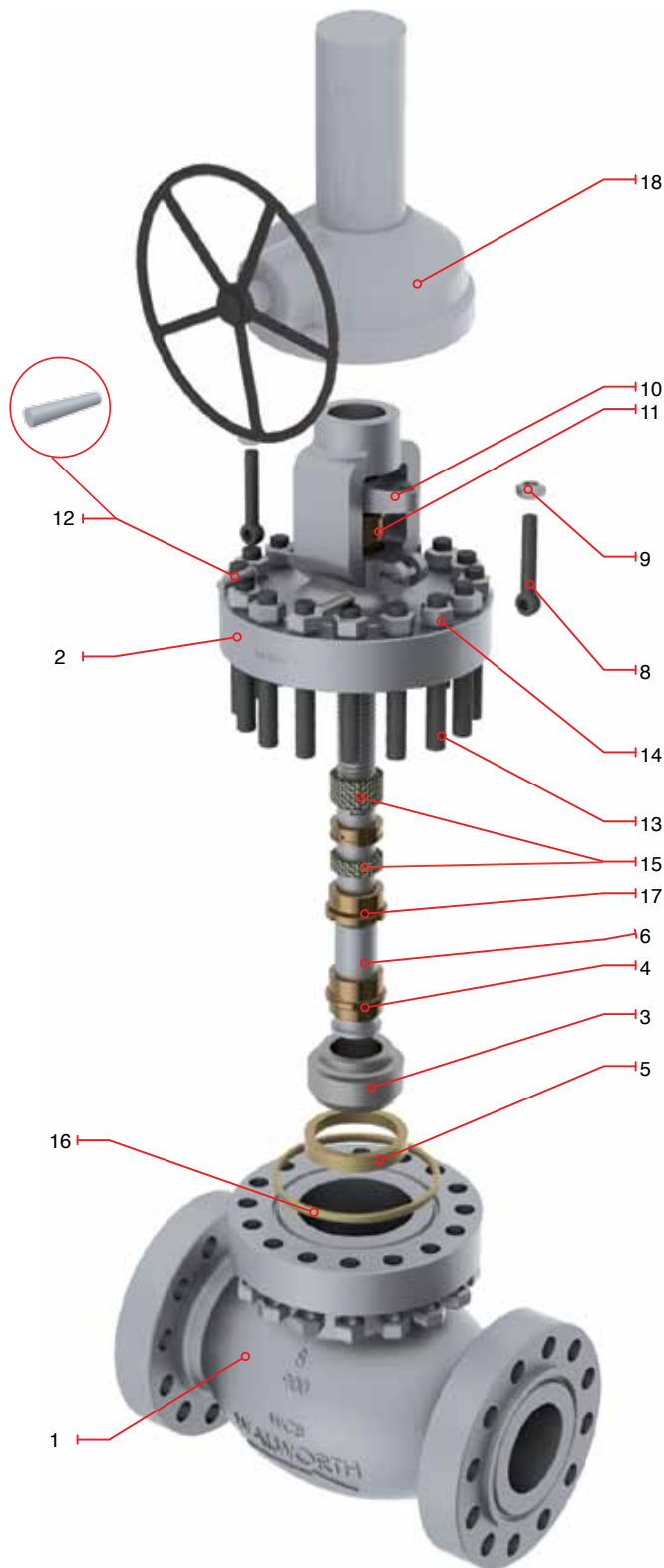
- Design in accordance with API-623
- Rising stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Size 8" and up Gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5301RF	5301F	Flanged Raised Face
5301RTJ	5301RJ	Flanged Ring Type Joint
5301WE	5301WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Seat Ring	ASTM A 515 GR 70 + ST6
6	Stem	ASTM A 276 Type 410
*7	Stem Nut	ASTM B 148 UNS C95600
8	Eyebolt	Alloy Steel
9	Eyebolt Nut	ASTM A 307
10	Gland Flange	ASTM A 515 GR 70
11	Packing Bushing	ASTM A 108 GR 1020
12	Eyebolt Pin	Alloy Steel
13	Bonnet Stud	ASTM A 193 GR B7
14	Bonnet Stud Nut	ASTM A 194 GR 2H
15	Stem Packing	Graphite
16	Ring type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Bushing	ASTM A 276 Type 410
18	Gear Operator	as customer requirements
*19	Operator Bolts	Alloy Steel
*20	Identification Plate	Stainless Steel

\*Not Shown



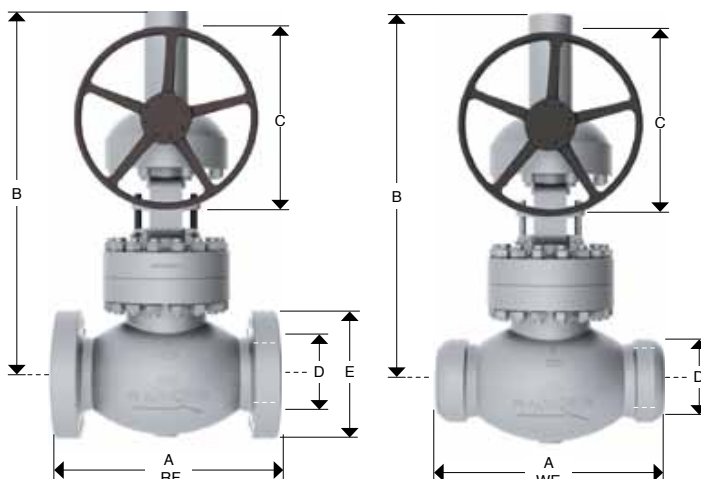
# CAST STEEL GLOBE VALVES, CLASS 900 (GEAR OPERATED)



## Design Features

- Design in accordance with API-623
- Rising stem
- Size 8" and up Gear operated as standard
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5301RF	5301F	Flanged Raised Face
5301RTJ	5301RJ	Flanged Ring Type Joint
5301WE	5301WE	Buttweld



## Dimensions and Weights

D Nominal Diameter	mm	203	254	305	356	406	457	508	610
	in	8	10	12	14	16	18	20	24
A (RF and WE)	mm	737	838	965	1029	PCR	PCR	PCR	PCR
	in	29	33	38	40 1/2	PCR	PCR	PCR	PCR
A* (RTJ)	mm	740	841	968	1038	PCR	PCR	PCR	PCR
	in	29 1/8	33 1/8	38 1/8	40 7/8	PCR	PCR	PCR	PCR
B	mm	907	980	1286	2083	PCR	PCR	PCR	PCR
	in	35 3/4	38 5/8	50 5/8	82	PCR	PCR	PCR	PCR
C	mm	640	530	600	956	PCR	PCR	PCR	PCR
	in	25	20 7/8	23 5/8	38	PCR	PCR	PCR	PCR
E	mm	470	545	610	640	705	785	855	1040
	in	18 1/2	21 1/2	24	25 1/4	27 3/4	31	33 3/4	41
Weight 5301RF	Kg	593	1850	2998	2900	PCR	PCR	PCR	PCR
	lb	1305	4070	6596	6380	PCR	PCR	PCR	PCR
Weight 5301WE	Kg	504	1721	2788	2697	PCR	PCR	PCR	PCR
	lb	1109	3785	6134	5933	PCR	PCR	PCR	PCR

PCR = Per customer request



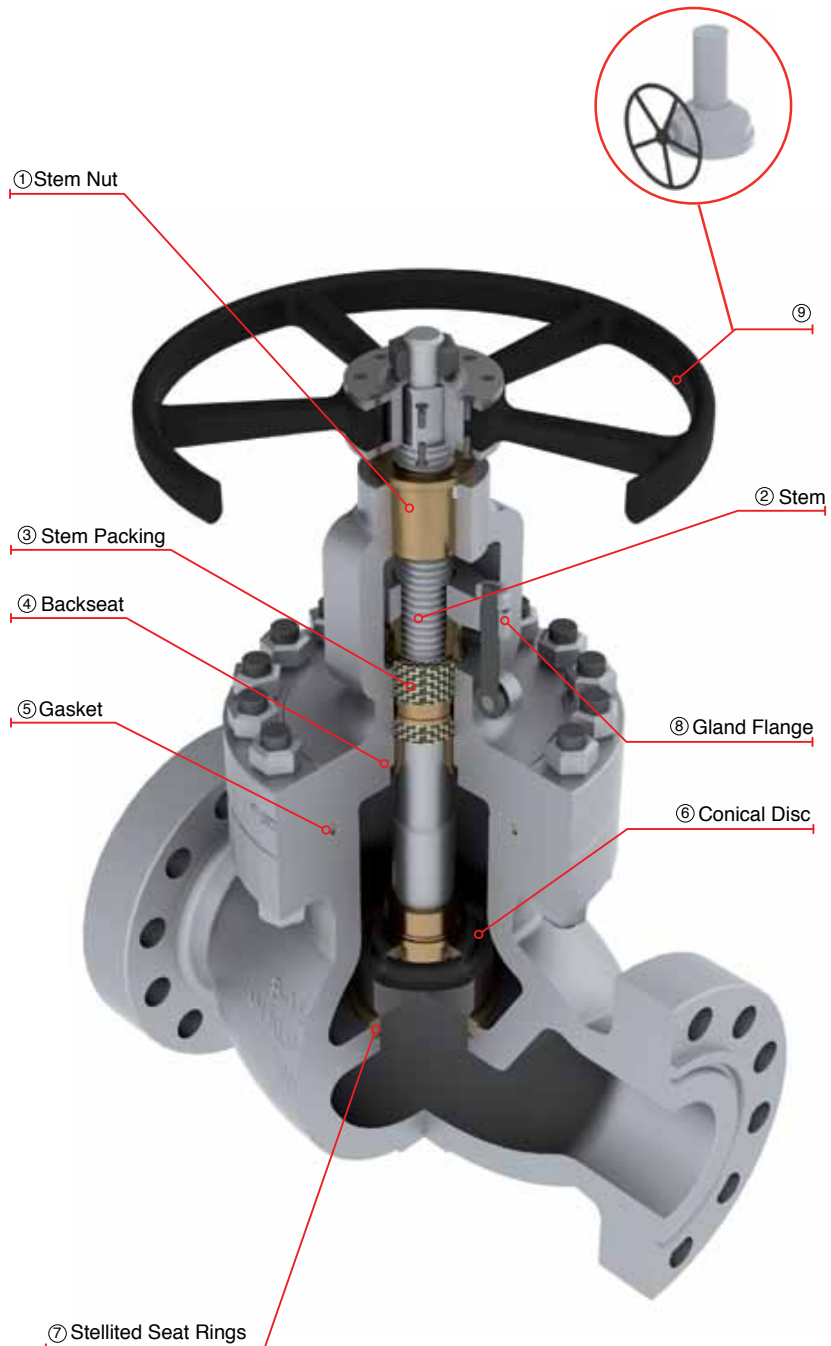
# CAST STEEL GLOBE VALVES CLASS 1500

CAST STEEL GLOBE VALVES WITH RISING HANDWHEEL AND STEM.

## DESIGN FEATURES

- Globe valves design in accordance with with API-623
- Globe valves option in accordance with API-603 only for stainless steel & nickel alloys.
- Globe 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
- Handwheel, handwheel impact, 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
- Stop check design option available

- ① Stem Nut, replaceable in line to avoid shut down of pipe line process.
- ② Revolving rising stem with precision ACME single or double thread for quick operation. Surface finish suitable to seal properly to get 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 fine finish in the stem, 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 customer requirements
- ⑤ Body to Bonnet Joint designed to apply a uniform load to the gasket to assure a leak proof seal.
- ⑥ Conical Plug type Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.
- ⑦ Stellite Seat Ring is seal welded to provide a increased resistance to wear, abrasion, and erosion of the sealing surfaces.
- ⑧ Two pieces arrangement gland flange and stem packing bushing for self-alignment to avoid stem damage.
- ⑨ Impact Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal. Gear operated is also available.



# CAST STEEL GLOBE VALVES, CLASS 1500 (HANDWHEEL OPERATED)

## Design Features

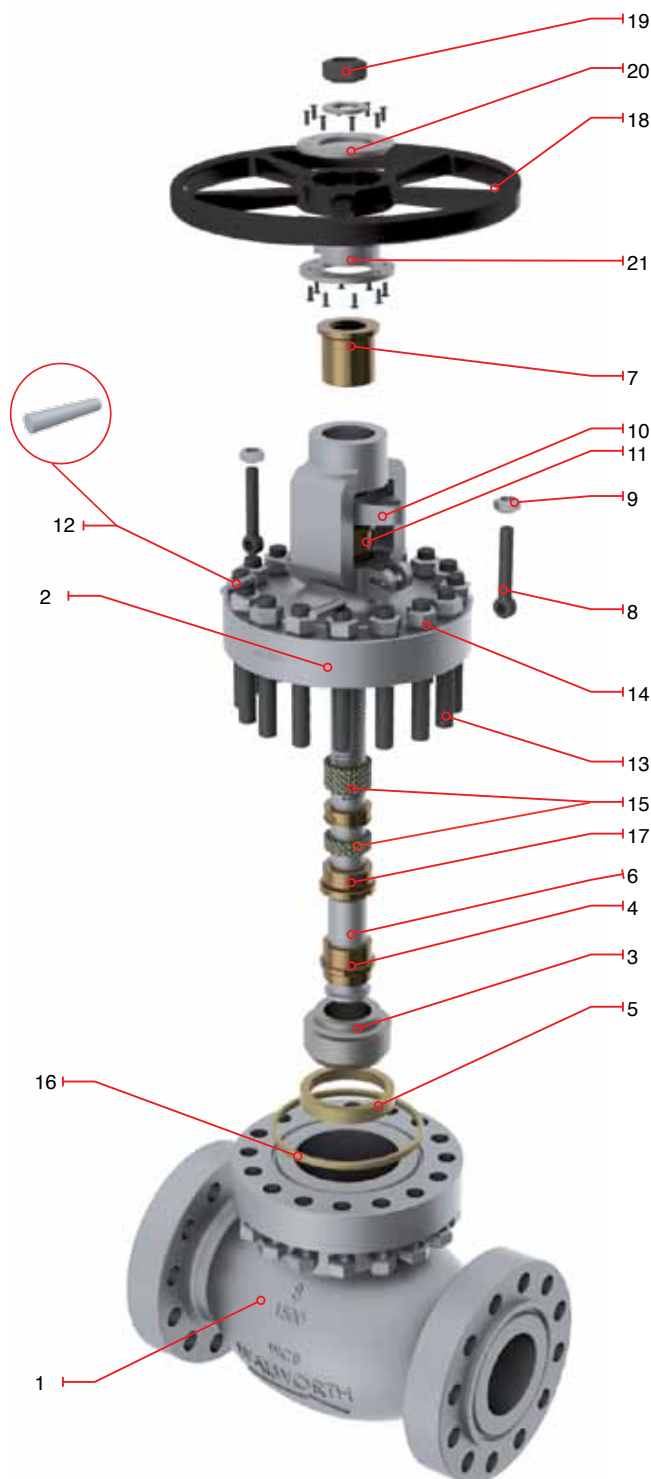
- Design in accordance with API-623
- Rising Stem and Handwheel: 2" and 2 1/2"
- Rising Stem and Fixed Handwheel: 3" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Yoke with Bearings: 3" and larger
- Size 2" to 6" Handwheel operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5308RF	5308F	Flanged Raised Face
5308RTJ	5308RJ	Flanged Ring Type Joint
5308WE	5308WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Seat Ring	ASTM A 515 GR 70 + ST6
6	Stem	ASTM A 276 Type 410
7	Stem Nut	ASTM B 148 UNS C95600
8	Eyebolt	Alloy Steel
9	Eyebolt Nut	ASTM A 307
10	Gland Flange	ASTM A 515 GR 70
11	Packing Bushing	ASTM A 108 GR 1020
12	Eyebolt Pin	Alloy Steel
13	Bonnet Stud	ASTM A 193 GR B7
14	Bonnet Stud Nut	ASTM A 194 GR 2H
15	Stem Packing	Graphite
16	Ring type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Bushing	ASTM A 276 Type 410
18	Handwheel	ASTM A 197
19	Handwheel Nut	ASTM A 307
20	Clamp	Commercial Steel
21	Impact Bushing	ASTM A 216 GR WCB
22*	Stem Nut Set Screw	Alloy Steel
23*	Identification Plate	Stainless Steel

\*Not Shown



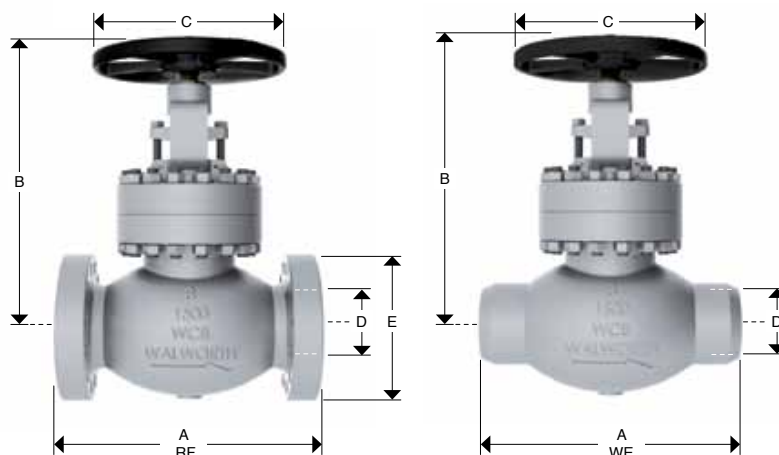
## CAST STEEL GLOBE VALVES, CLASS 1500 (HANDWHEEL OPERATED)

### Design Features

- Design in accordance with API-623
- Rising Stem and Handwheel: 2" and 2 1/2"
- Rising Stem and Fixed Handwheel: 3" and up
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Yoke with Bearings: 3" and larger
- Size 2" to 6" Handwheel operated as standard



Catalog Figure No.	ID Plant Figure No.	Type of Ends
5308RF	5308F	Flanged Raised Face
5308RTJ	5308RJ	Flanged Ring Type Joint
5308WE	5308WE	Buttweld



### Dimensions and Weights

D Nominal Diameter	mm	51	64	76	102	152
	in	2	2 1/2	3	4	6
A (RF and WE)	mm	368	419	470	546	705
	in	14 1/2	16 1/2	18 1/2	21 1/2	27 3/4
A* (RTJ)	mm	371	422	473	549	711
	in	14 5/8	16 5/8	18 5/8	21 5/8	28
B	mm	477	537	622	733	933
	in	18 3/4	21 1/4	24 1/2	28 7/8	36 3/4
C	mm	350	350	450	450	640
	in	14	14	18	18	25
E	mm	216	244	267	311	394
	in	8 1/2	9 5/8	10 1/2	12 1/4	15 1/2
Weight 5308RF	Kg	82	121	161	252	574
	lb	180	266	354	554	1262
Weight 5308WE	Kg	68	100	134	214	487
	lb	150	221	294	471	1072

# CAST STEEL GLOBE VALVES, CLASS 1500 (GEAR OPERATED)

## Design Features

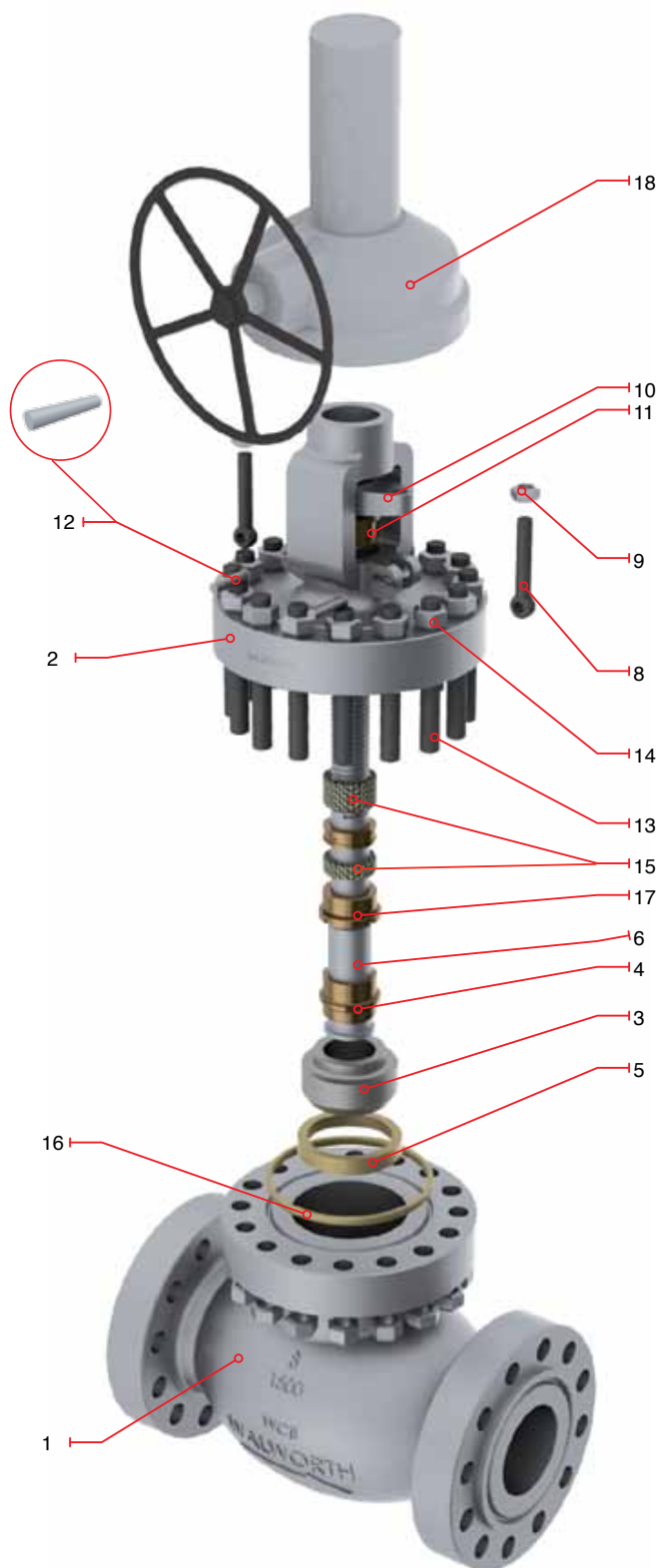
- Design in accordance with API-623
- Rising stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25
- Yoke with Bearings: 3" and larger
- Size 8" and up Gear operated as standard

Catalog Figure No.	ID Plant Figure No.	Type of Ends
5308RF	5308F	Flanged Raised Face
5308RTJ	5308RJ	Flanged Ring Type Joint
5308WE	5308WE	Buttweld

## Regular Bill of Materials

No.	Description	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Seat Ring	ASTM A 515 GR 70 + ST6
6	Stem	ASTM A 276 Type 410
*7	Stem Nut	ASTM B 148 UNS C95600
8	Eyebolt	Alloy Steel
9	Eyebolt Nut	ASTM A 307
10	Gland Flange	ASTM A 515 GR 70
11	Packing Bushing	ASTM A 108 GR 1020
12	Eyebolt Pin	Alloy Steel
13	Bonnet Stud	ASTM A 193 GR B7
14	Bonnet Stud Nut	ASTM A 194 GR 2H
15	Stem Packing	Graphite
16	Ring type Joint Gasket	ASTM A 108 GR 1010
17	Bonnet Bushing	ASTM A 276 Type 410
18	Gear Operator	as customer requirements
*19	Operator Bolts	Alloy Steel
*20	Identification Plate	Stainless Steel

\*Not Shown





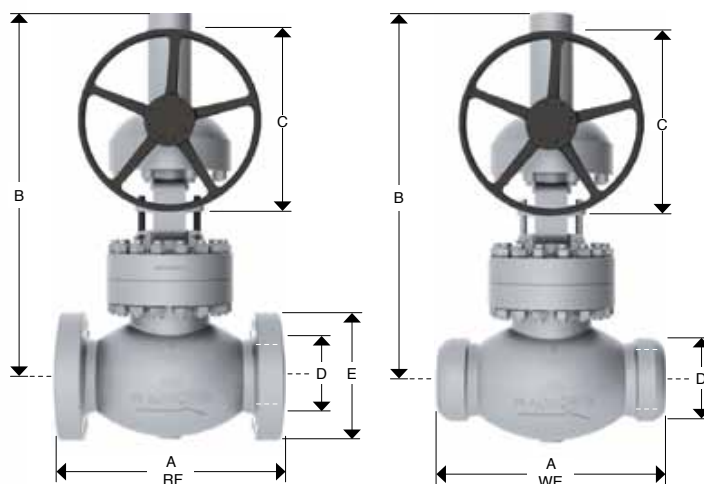
## CAST STEEL GLOBE VALVES, CLASS 1500

### Design Features

- Design in accordance with API-623
- Rising stem
- Flange dimensions as per ASME B16.5
- End to end dimensions as per ASME B16.10
- WE dimensions as per ASME B 16.25 Yoke with Bearings:
- Yoke with Bearings: 3" and larger
- Size 8" and up to 24" Gear operated as standard



Catalog Figure No.	ID Plant Figure No.	Type of Ends
5308RF	5308F	Flanged Raised Face
5308RTJ	5308RJ	Flanged Ring Type Joint
5308WE	5308WE	Buttweld



### Dimensions and Weights

D Nominal Diameter	mm	203	254	305	356	406	457	508	610
	in	8	10	12	14	16	18	20	24
A (RF and WE)	mm	832	991	1130	1257	PCR	PCR	PCR	PCR
	in	32 3/4	39	44 1/2	49 1/2	PCR	PCR	PCR	PCR
A* (RTJ)	mm	842	1001	1146	1276	PCR	PCR	PCR	PCR
	in	33 1/8	39 3/8	45 1/8	50 1/4	PCR	PCR	PCR	PCR
B	mm	1029	1618	1675	1800	PCR	PCR	PCR	PCR
	in	40 1/2	63 3/4	66	70 3/4	PCR	PCR	PCR	PCR
C	mm	640	600	600	600	PCR	PCR	PCR	PCR
	in	25	23 5/8	23 5/8	23 5/8	PCR	PCR	PCR	PCR
E	mm	483	585	673	750	825	915	985	1170
	in	19	23	26 1/2	29 1/2	32 1/2	36	38 3/4	46
Weight 5308RF	Kg	949	2238	3308	4678	PCR	PCR	PCR	PCR
	lb	2088	4924	7278	10292	PCR	PCR	PCR	PCR
Weight 5308WE	Kg	807	2081	3076	4351	PCR	PCR	PCR	PCR
	lb	1775	4579	6768	9571	PCR	PCR	PCR	PCR

PCR = Per customer request