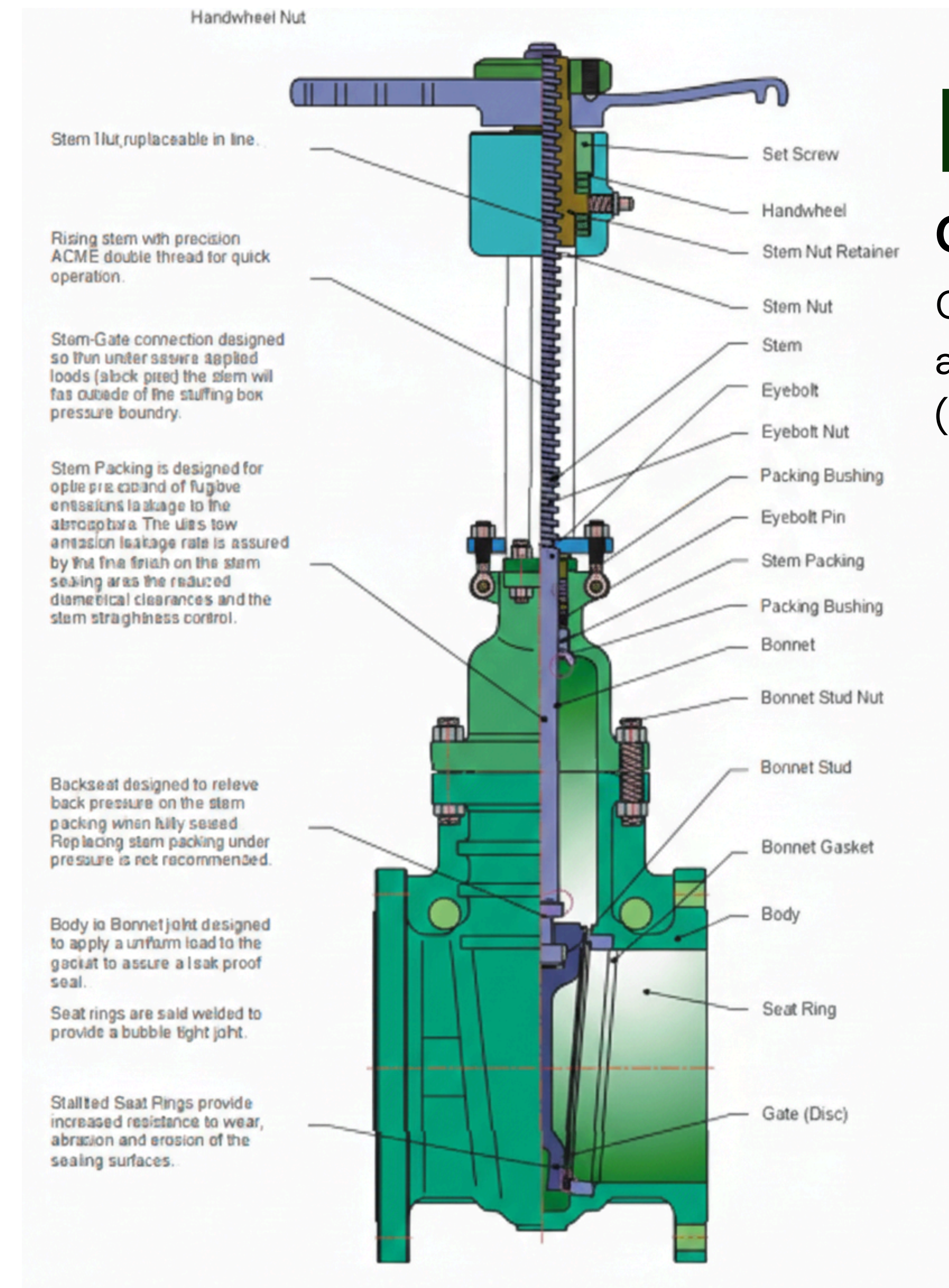




KPI GROUP

www.kpivalves.com

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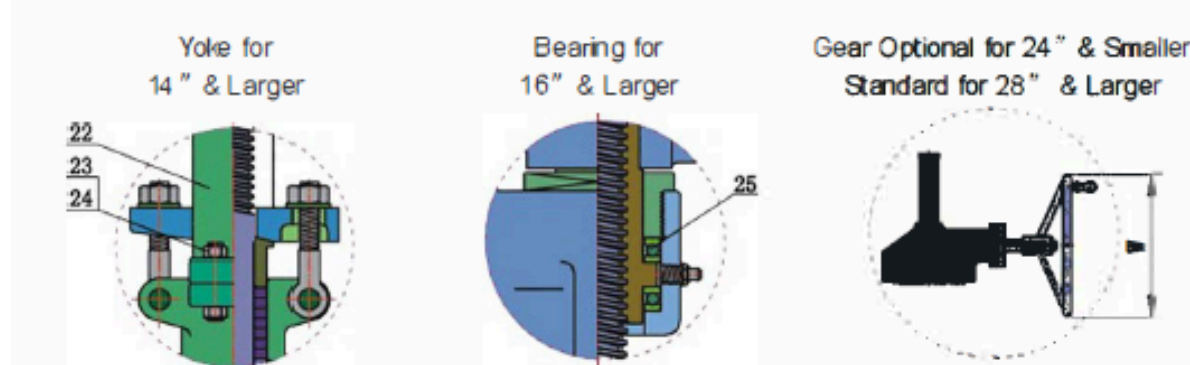
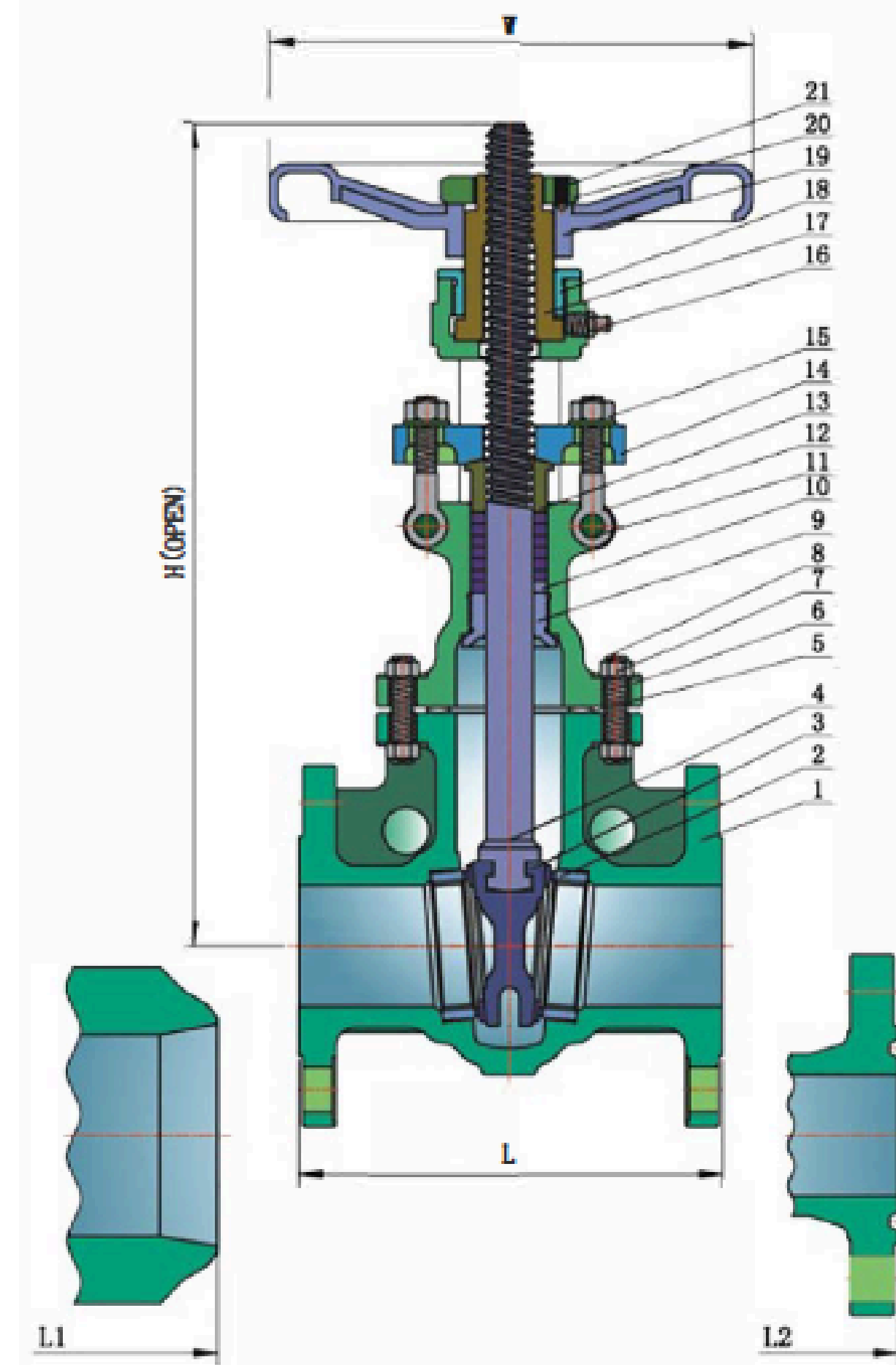
KPI Valve 01

Cast Steel Gate Valve

Cast Steel Gate Valves with fixed handwheel and rising stem (outside screw and yoke) (OS&Y)

KPI Valve 02

Cast Steel Gate Valve Class 150



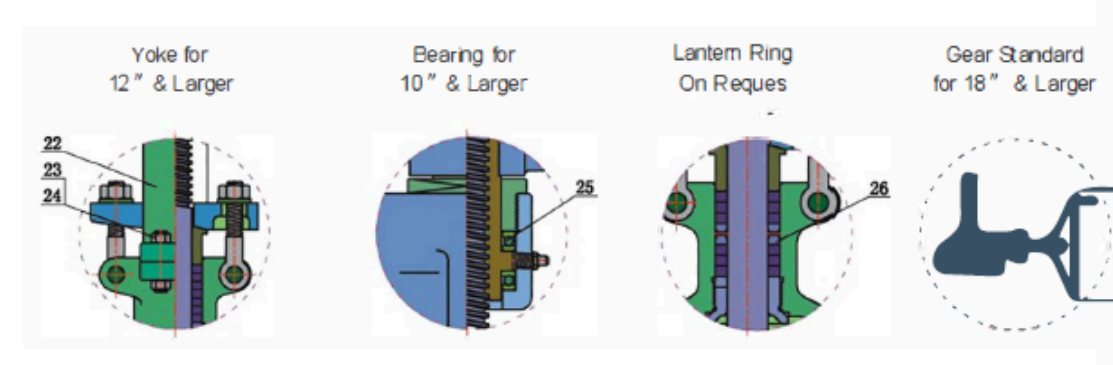
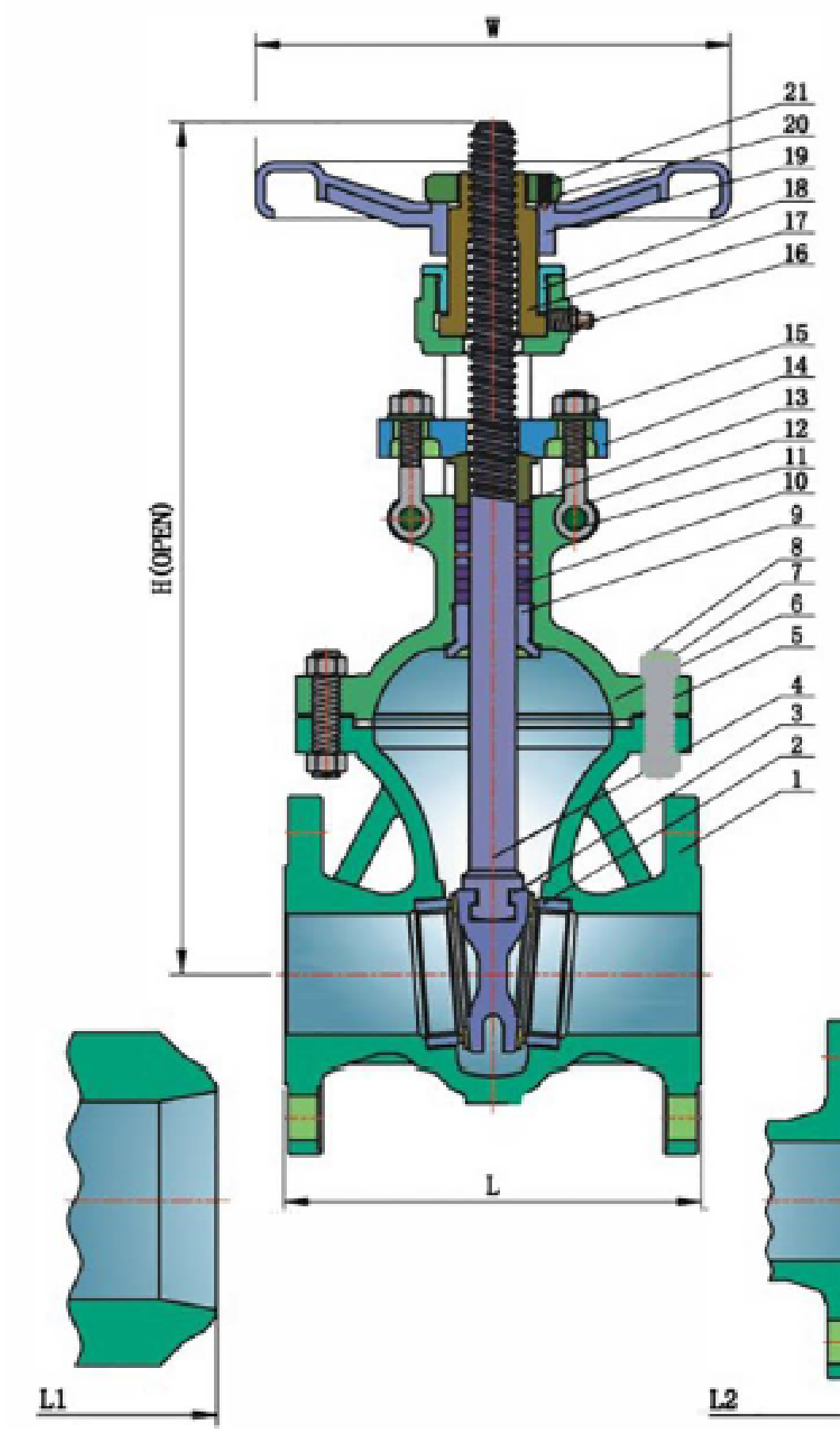
FEATURES		SPECIFICATIONS	
OS & Y, Rising Stem		Design	ASME B16.34/API 600
Bolted Bonnet		Face to Face	ASME B16.10
Flexible Wedge (2" Solid)		End to End	ASME B16.10
Extended Bonnet for Cryogenic Services		End Flange	ASME B16.5
By Pass On Request		BW End	ASME B16.25
Locking Device Optional		Test	API 598
		Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket	Soft Iron+Graphite
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel

Dimensions and Weights																		
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	36"
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	800	900
L	in	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	24.00	24.00	28.00	28.00
	mm	178	191	203	229	267	292	330	356	381	406	432	457	508	610	610	711	711
L1	in	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	36.00	36.00	38.00	40.00
	mm	216	241	283	305	403	419	457	502	572	610	660	711	813	914	914	965	1016
L2	in	7.50	8.00	8.50	9.50	11.00	12.00	13.50	14.50	15.50	16.50	17.50	18.50	20.50	-	-	-	-
	mm	191	203	216	241	279	305	343	368	394	419	445	470	521	-	-	-	-
H	in	15.31	17.28	19.69	23.43	30.59	38.39	45.67	54.72	61.22	71.30	82.80	90.55	102.72	130.98	141.97	145.98	154.49
	mm	389	439	500	595	777	975	1160	1390	1555	1811	2103	2300	2609	3327	3595	3708	3924
W	in	8	8	10	10	14	14	16	18	22	24	25	27	30	24	24	24	24
	mm	200	200	250	250	350	350	400	450	560	600	640	680	760	610	610	610	610
Weight RF	kg	17	23	29	47	80	129	192	287	410	571	720	1170	1466	1931	2380	2490	3600

KPI Valve 03

Cast Steel Gate Valve Class 300



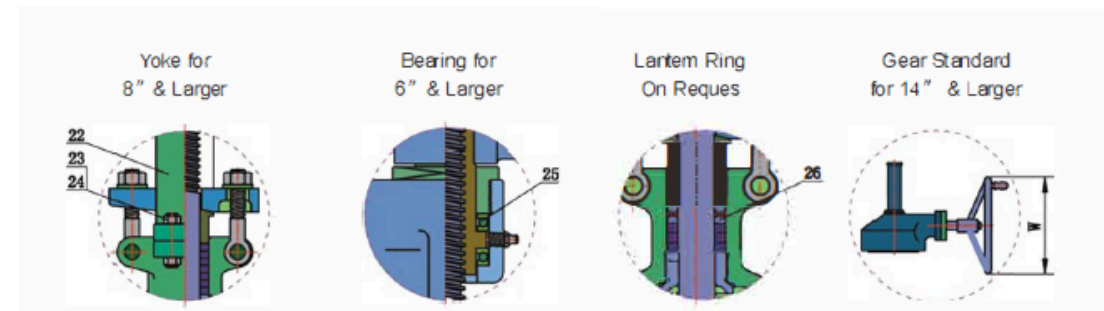
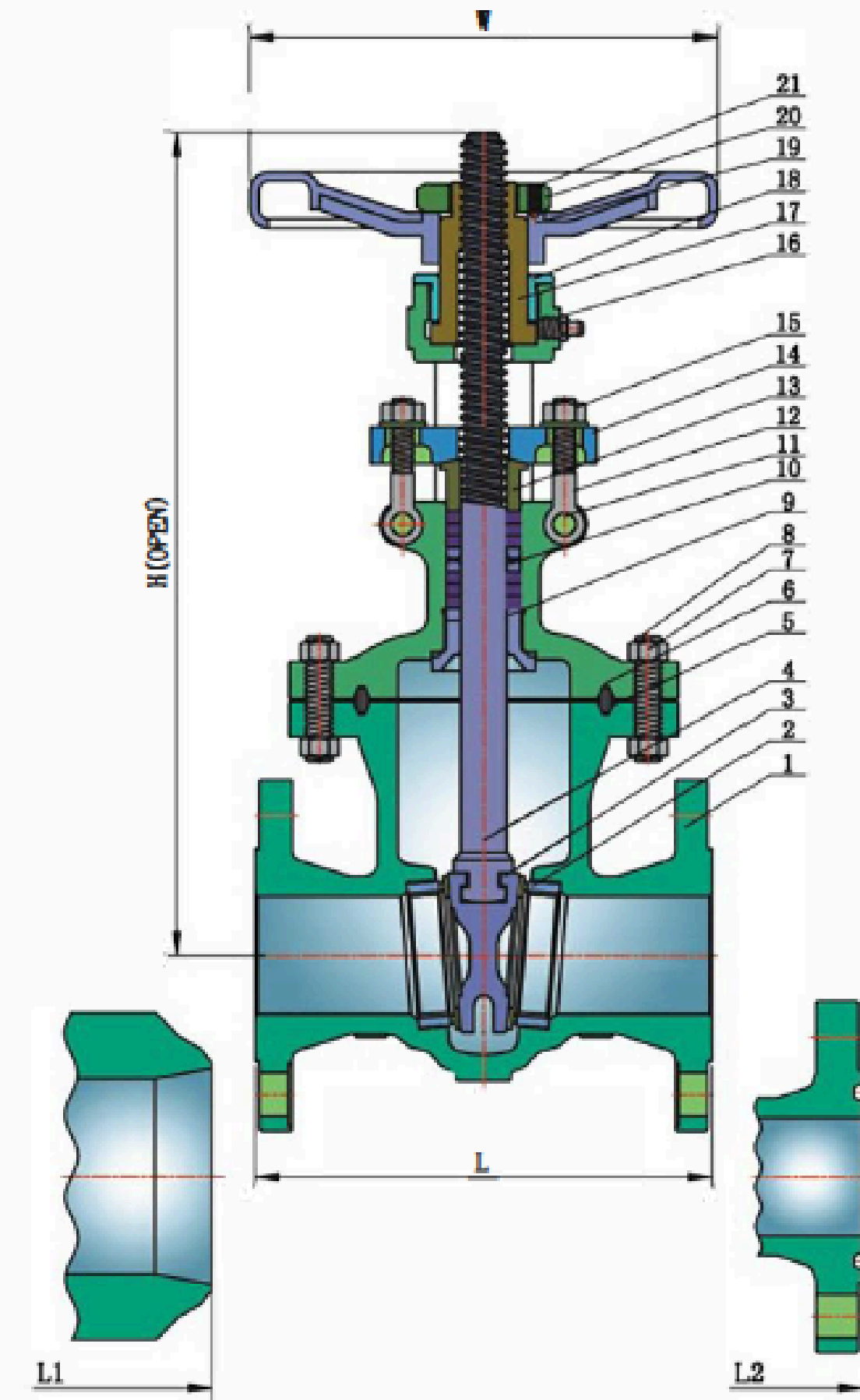
FEATURES		SPECIFICATIONS	
OS & Y, Rising Stem		Design	ASME B16.34/API 600
Bolted Bonnet		Face to Face	ASME B16.10
Flexible Wedge (2" Solid)		End to End	ASME B16.10
Extended Bonnet for Cryogenic Services		End Flange	ASME B16.5
By Pass On Request		BW End	ASME B16.25
Locking Device Optional		Test	API 598
		Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket	Soft Iron+Graphite
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel
26	Lantern Ring On Request	ASTM A276 Type 410

Dimensions and Weights																	
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	
L	in	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	24.00	24.00	28.00
	mm	178	191	203	229	267	292	330	356	381	406	432	457	508	610	610	711
L1	in	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	36.00	36.00	38.00
	mm	216	241	283	305	403	419	457	502	572	610	660	711	813	914	914	965
L2	in	7.50	8.00	8.50	9.50	11.00	12.00	13.50	14.50	15.50	16.50	17.50	18.50	20.50	-	-	-
	mm	191	203	216	241	279	305	343	368	394	419	445	470	521	-	-	-
H	in	16.93	19.88	20.87	24.80	31.50	39.69	48.82	57.87	64.76	72.48	77.13	86.38	102.28	122.05	130.71	
	mm	430	505	530	630	800	1008	1240	1470	1645	1841	1959	2194	2598	3100	3320	
W	in	8	10	10	10	14	16	18	20	24	24	24	24	24	24	24	
	mm	200	250	250	250	350	400	450	500	600	600	600	610	610	610	610	
Weight RF	kg	30	45	57	88	147	219	368	522	694	1080	1235	1655	2320	3893	4930	

KPI Valve 04

Cast Steel Gate Valve Class 600



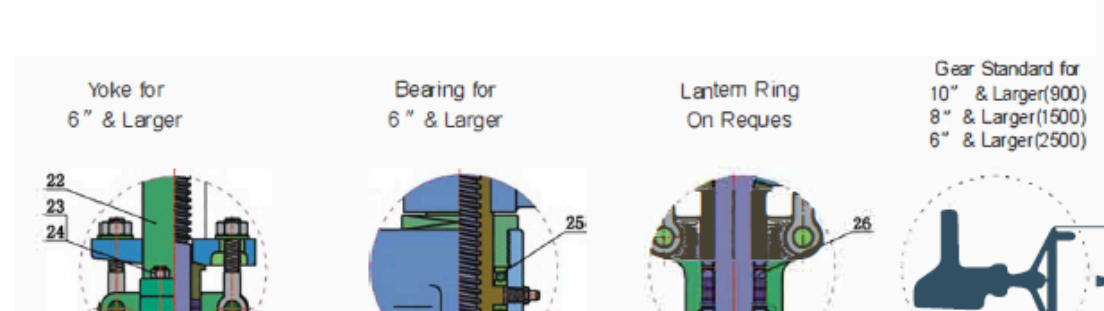
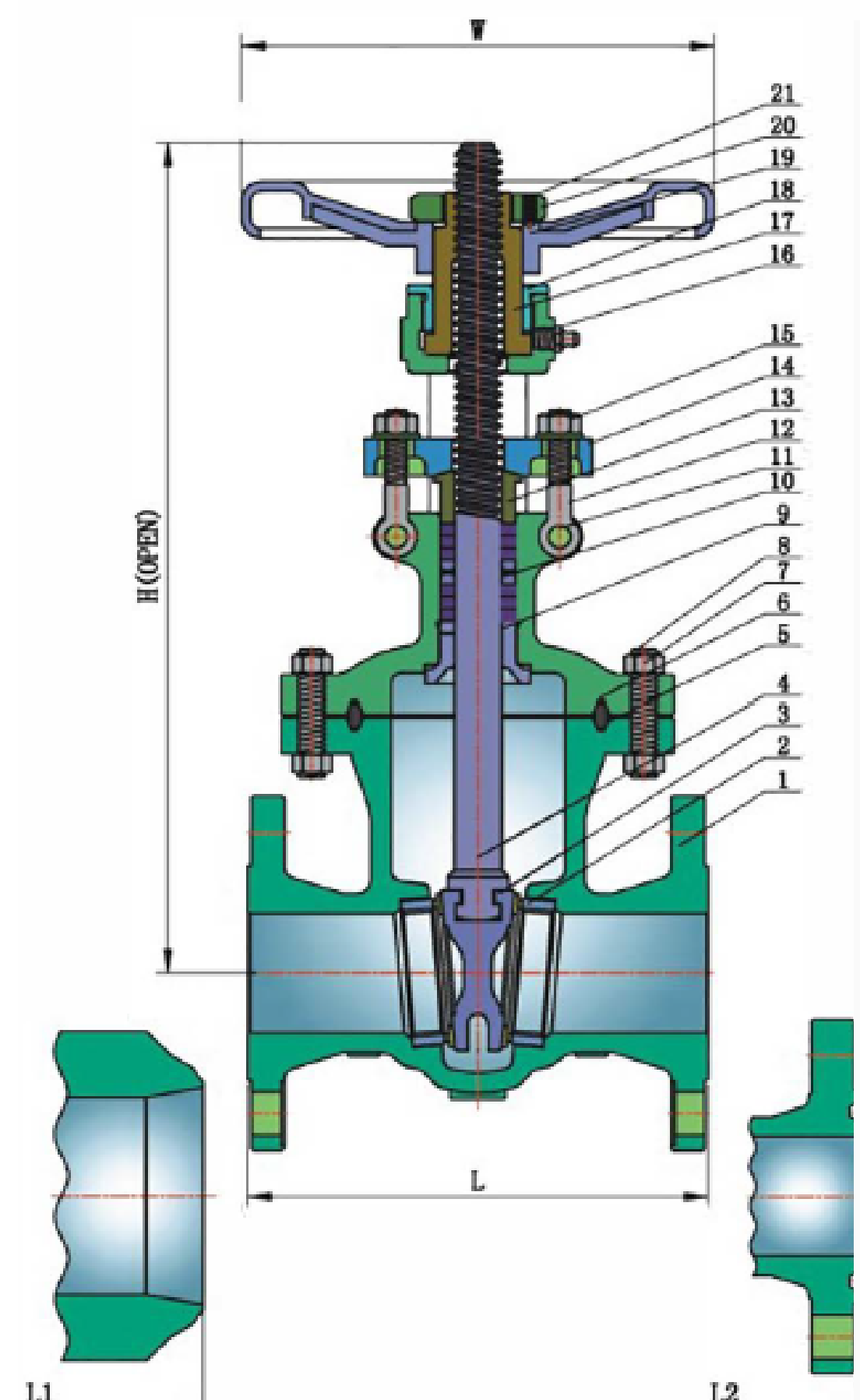
FEATURES		SPECIFICATIONS	
OS & Y.Rising Stem	Design	ASME B16.34/API 600	
Bolted Bonnet	Face to Face	ASME B16.10	
Flexible Wedge (2" Solid)	End to End	ASME B16.10	
Extended Bonnet for Cryogenic Services	End Flange	ASME B16.5	
By Pass On Request	BW End	ASME B16.25	
Locking Device Optional	Test	API 598	
	Special	NACE MR-01-75	

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket Ring Joint	Soft Iron
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel
26	Lantern Ring On Request	ASTM A276 Type 410

Dimensions and Weights														
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
L/L1	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	330	356	432	559	660	787	838	889	991	1092	1194	1397
L2	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38
	mm	295	333	359	436	562	663	790	841	892	994	1095	1200	1407
H	in	17.91	23.14	21.65	27.17	35.83	41.83	49.49	57.80	63.90	71.50	88.98	106.50	110.63
	mm	455	588	550	690	910	1065	1257	1468	1623	1816	2260	2705	2810
W	in	10	10	10	14	18	20	25	27	24	24	24	24	24
	mm	250	250	250	350	450	500	640	680	610	610	610	610	610
Weight RF	kg	45	55	76	127	277	485	754	936	1316	1672	2070	2405	4550

KPI Valve 05

Cast Steel Gate Valve Class 900-2500



FEATURES		SPECIFICATIONS	
OS & Y.Rising Stem	Design	ASME B16.34/API 600	
Bolted Bonnet	Face to Face	ASME B16.10	
Flexible Wedge (2" Solid)	End to End	ASME B16.10	
Extended Bonnet for Cryogenic Services	End Flange	ASME B16.5	
By Pass On Request	BW End	ASME B16.25	
Locking Device Optional	Test	API 598	
	Special	NACE MR-01-75	

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Stem	ASTM A182 GR.F6
5	Gasket Ring Joint	Soft Iron
6	Bonnet	ASTM A216 GR.WCB
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Backseat Bushing	ASTM A276 Type 410
10	Stem Packing	Braided Graphite & Die formed Graphite Ring
11	Eye Bolt Pins	Carbon Steel
12	Gland Eye Bolts	ASTM A307 GR.B
13	Gland	ASTM A276 Type 410
14	Gland Flange	ASTM A216 GR.WCB
15	Eye Bolt Nuts	ASTM A194 GR.2H
16	Grease Nipple	Carbon steel
17	Stem Nut	ASTM A439 GR.D-2
18	Retaining Nut	Carbon steel
19	Handwheel	Ductile Iron
20	Handwheel Nut	Carbon steel
21	Screw	Carbon steel
22	Yoke	ASTM A216 GR.WCB
23	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
24	Yoke Pan Bolts	ASTM A193 GR.B7
25	Bearing	Steel
26	Lantern Ring On Request	ASTM A276 Type 410

Dimensions and Weights	CALSS 900												CALSS 1500						CALSS 2500						
	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00
	mm	368	419	381	457	610	737	838	965	368	419	470	546	705	832	991	1130	451	508	578	673	914	1022	1270	1422
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88
	mm	371	422	384	460	613	740	841	968	371	422	473	549	711	842	1000	1146	454	514	584	683	927	1038	1282	1445
H	in	24.41	27.76	29.02	32.48	41.83	47.98	52.95	72.44	27.36	27.76	30.31	34.33	42.99	55.12	62.95	72.44	27.58	29.53	34.82	43.19	57.09	63.39	81.73	89.80
	mm	620	705	737	825	1065	1219	1345	1840	695	705	770	872	1082	1400	1600	1840	700	750	887	1079	1450	1610	2076	2281
W	in	12	14	14	16	20	24	24	24	14	16	16	20	24	24	24	24	14	18	18	20	24	24	24	24
	mm	300	350	350	400	500	600	610	610	350	400	400	500	600	610	610	610	350	450	450	500	610	610	610	610
Weight RF	kg	95	108	125	194	378	635	900	1550	95	128	181	275	527	1000	2200	3300	135	210	271	506	1600	2460	4570	7150

KPI Valve 06

Cast Steel Globe Valve

Impactor 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.

Stem Nut replaceable in the line.

Revolving rising stem with precision ACME thread.

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.

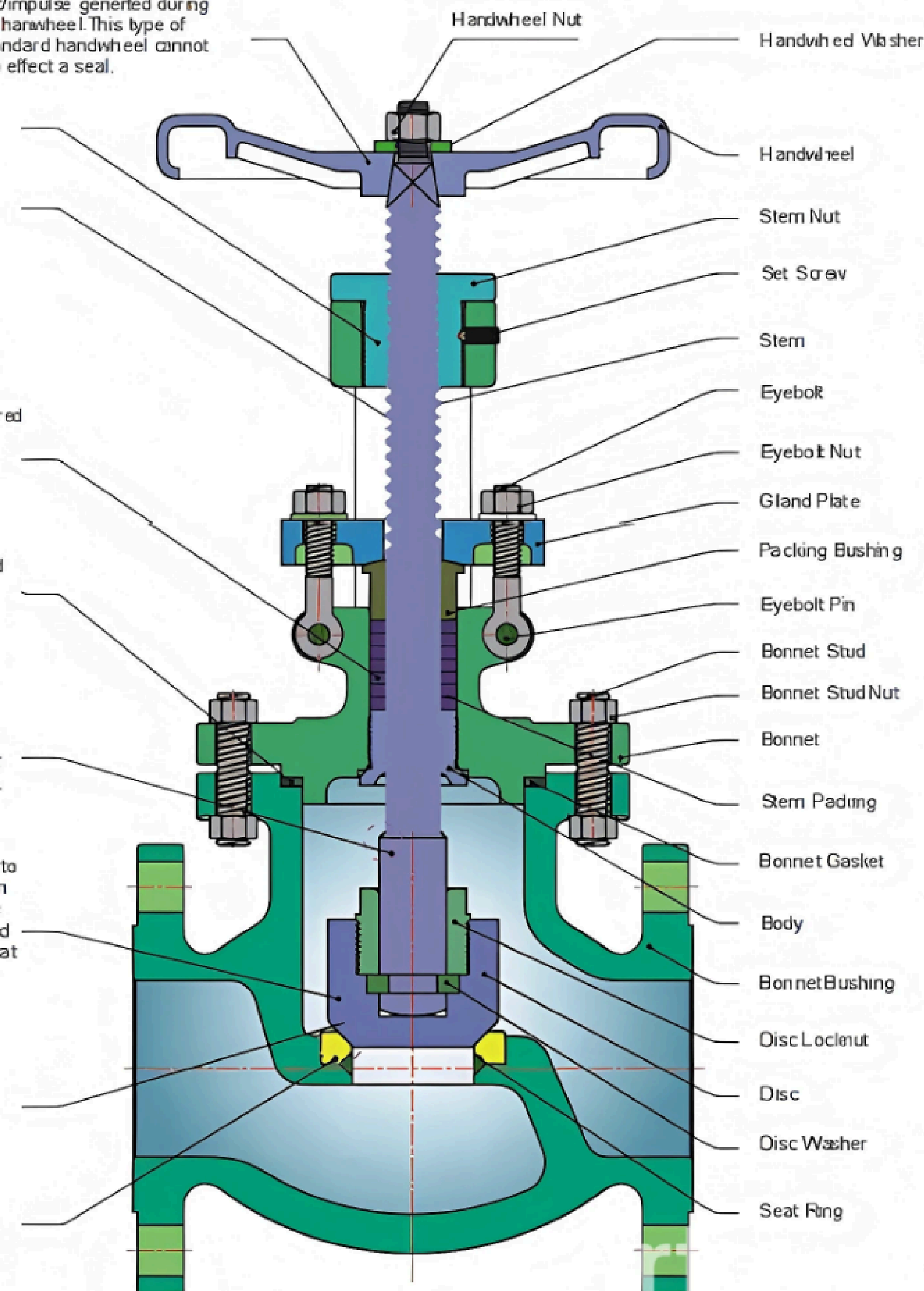
Body to Bonnet Joint designed to apply a uniform load to the gasket to assure a leak proof seal.

Backseat designed to relieve back pressure on the stem packing when fully seated. Replacing stem packing under pressure is not recommended.

Conical 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.

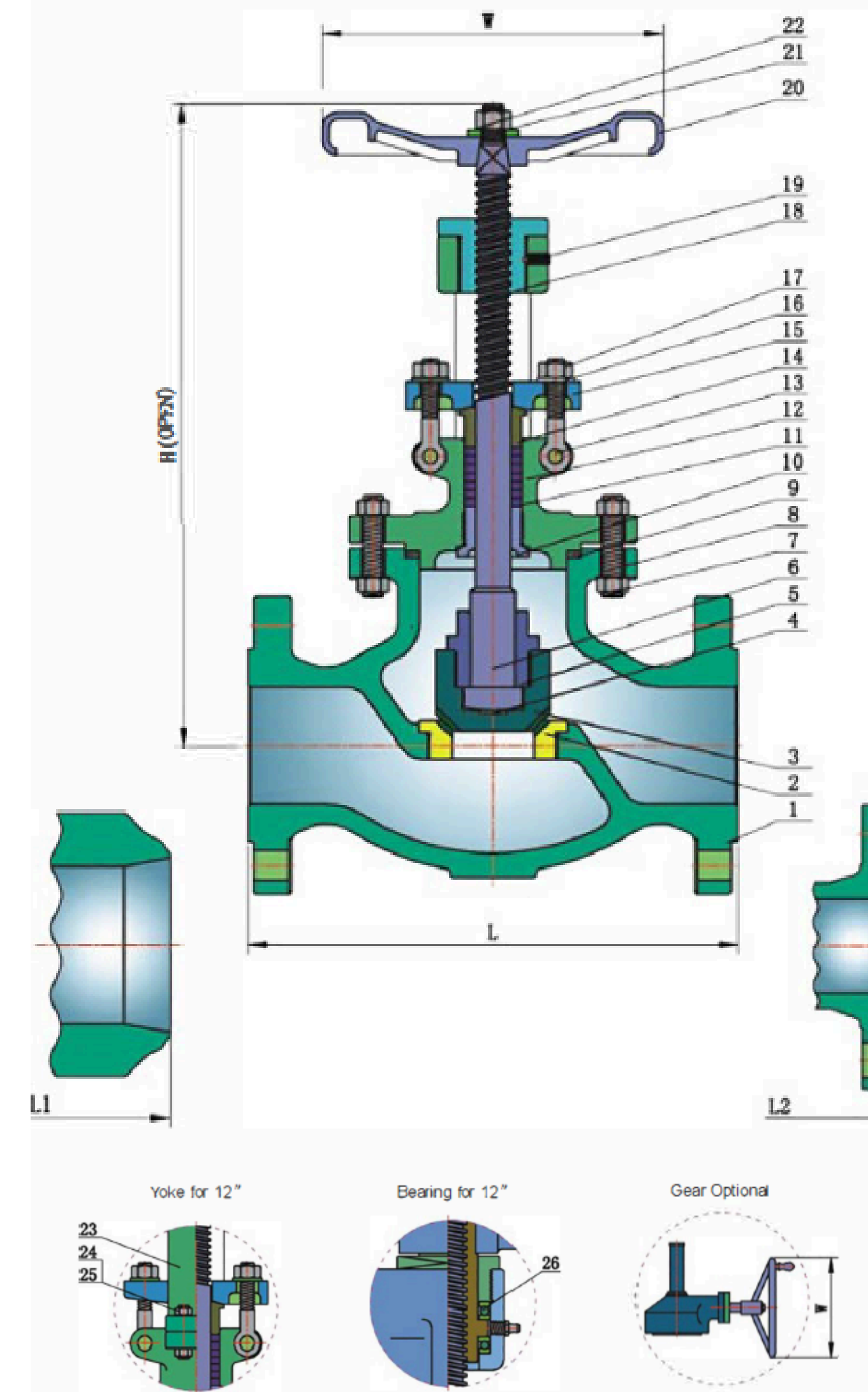
Stellite Seat Ring providing increased resistance to wear, abrasion and erosion of the sealing surface.

Seat ring is all welded to provide a bubble tight joint.



KPI Valve 07

Cast Steel Globe Valve Class 150



FEATURES

- OS & Y Rising Stem
- Bolted Bonnet
- Conic Disc
- Extended Bonnet for Cryogenic Services
- Impact hand wheel Optional
- Gear Optional

SPECIFICATIONS

Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

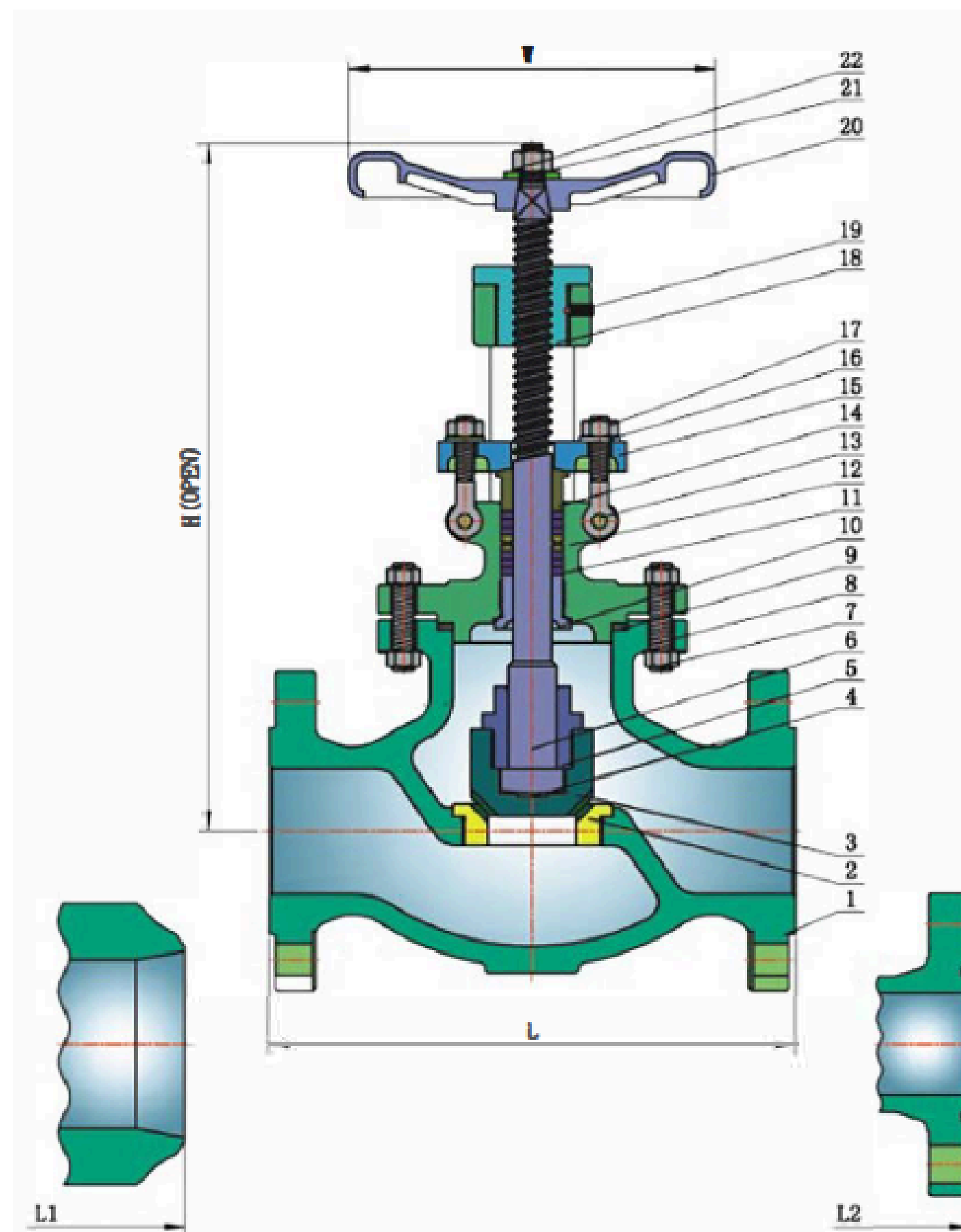
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft Iron+Graphite
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel

Dimensions and Weights

SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300
L/L1	in	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50
	mm	203	216	241	292	406	495	622	698
L2	in	8.50	9.00	10.00	12.00	16.50	20.00	25.00	28.00
	mm	216	229	254	305	419	508	635	711
H	in	13.68	16.34	15.94	19.09	20.47	23.62	30.00	33.94
	mm	345	415	405	485	520	600	762	862
W	in	8	8	10	12	14	18	20	25
	mm	200	200	250	300	350	450	500	640
Weight RF	kg	22	32	38	62	104	159	308	539

KPI Valve 08

Cast Steel Globe Valve Class 300



FEATURES

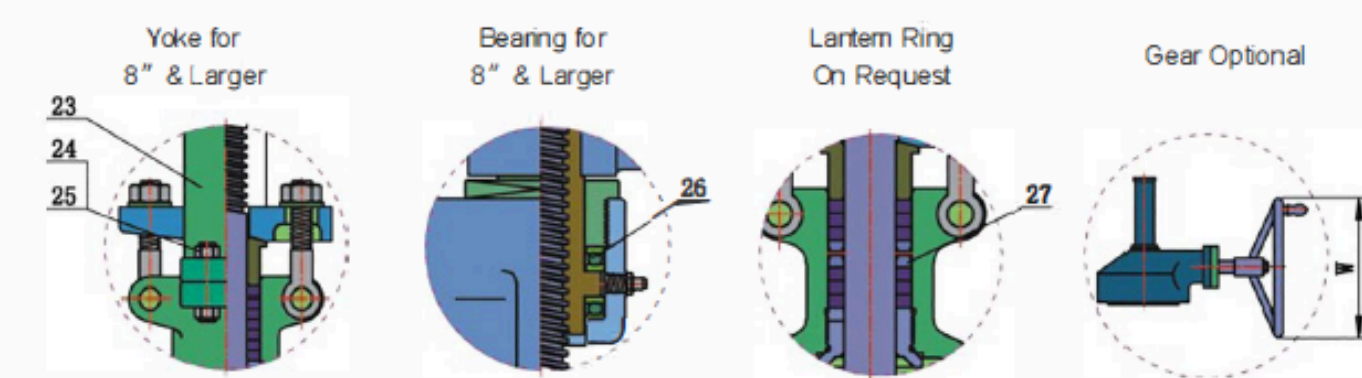
OS & Y, Rising Stem
Bolted Bonnet
Conic Disc
Extended Bonnet for Cryogenic Services
Impact hand wheel Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft Iron+Graphite
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel

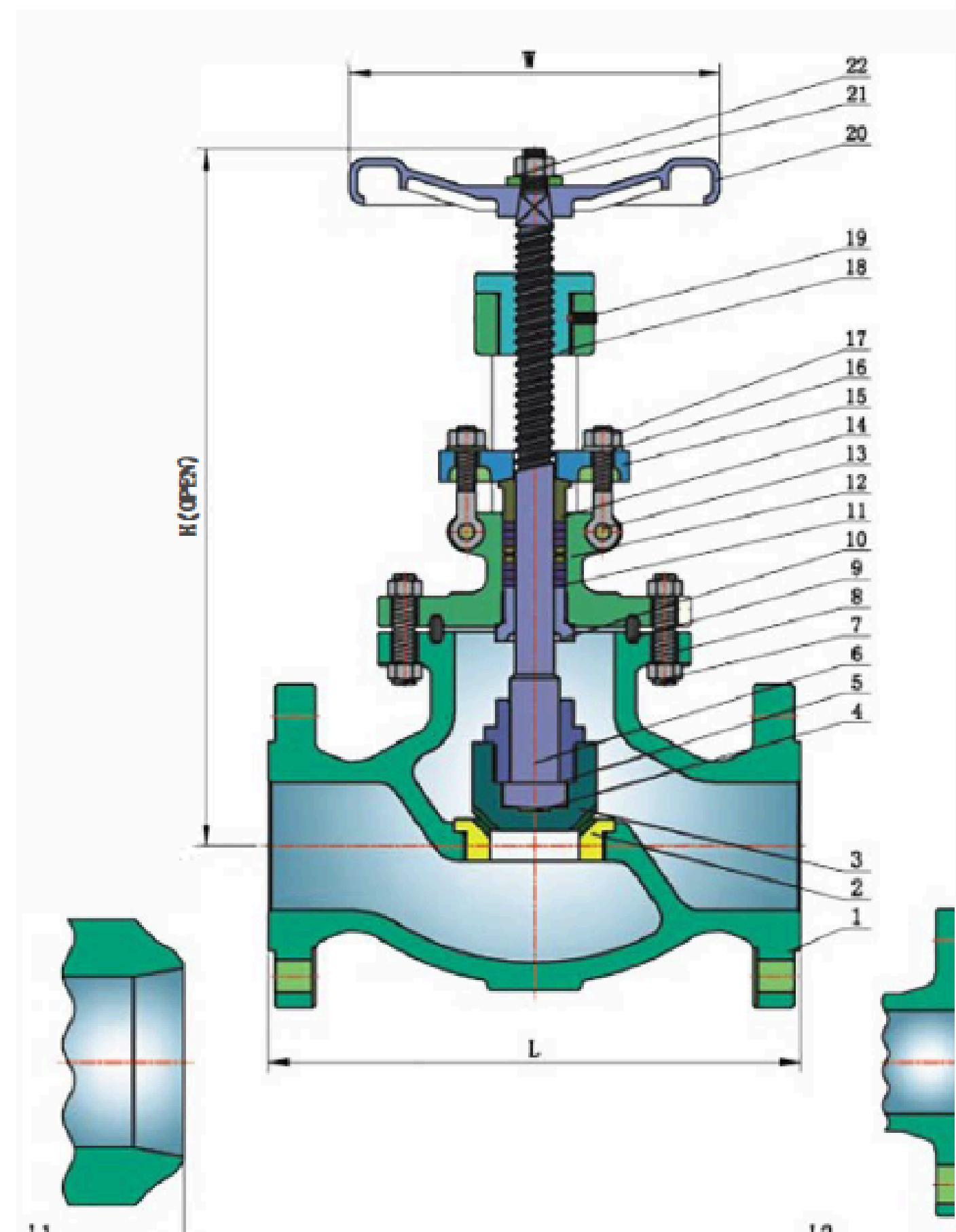


Dimensions and Weights

SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300
L/L1	in	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
	mm	267	292	318	356	445	559	622	711
L2	in	11.12	12.12	13.12	14.62	18.12	22.62	25.12	28.62
	mm	283	308	333	371	460	575	638	727
H	in	14.57	18.66	17.32	20.67	24.41	35.83	37.36	40.63
	mm	370	474	440	525	620	910	949	1032
W	in	8	10	10	14	18	22	24	26
	mm	200	250	250	350	450	560	600	650
Weight RF	kg	28	48	56	82	154	240	319	632

KPI Valve 09

Cast Steel Globe Valve Class 600



FEATURES

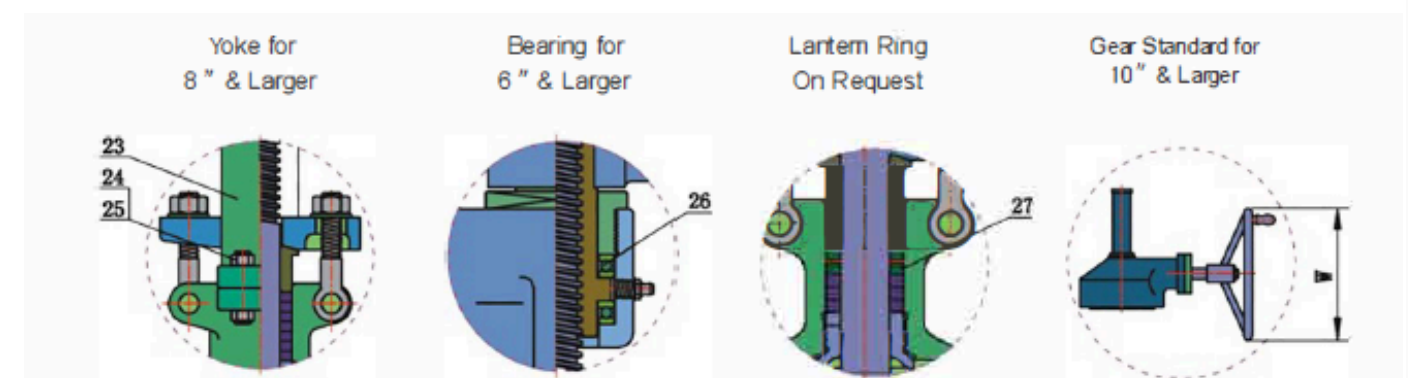
OS & Y, Rising Stem
Bolted Bonnet
Conic Disc
Extended Bonnet for Cryogenic Services
Impact hand wheel Optional
Gear Optional

SPECIFICATIONS

Design	ASME B16.34/BS1873
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS

ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GR.F6
7	Bonnet Bolt nuts	ASTM A194 GR.2H
8	Bonnet Bolt	ASTM A193 GR.B7
9	Gasket	Soft iron
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GR.WCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GR.WCB
16	Gland Eye Bolts	ASTM A307 GR.B
17	Eye Bolt Nuts	ASTM A194 GR.2H
18	Yoke Bush	ASTMA439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR.2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GR.WCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR.2H
25	Yoke Pan Bolts	ASTM A193 GR.B7
26	Bearing	Steel
27	Lantern Ring ON Request	ASTM A276 Type 410

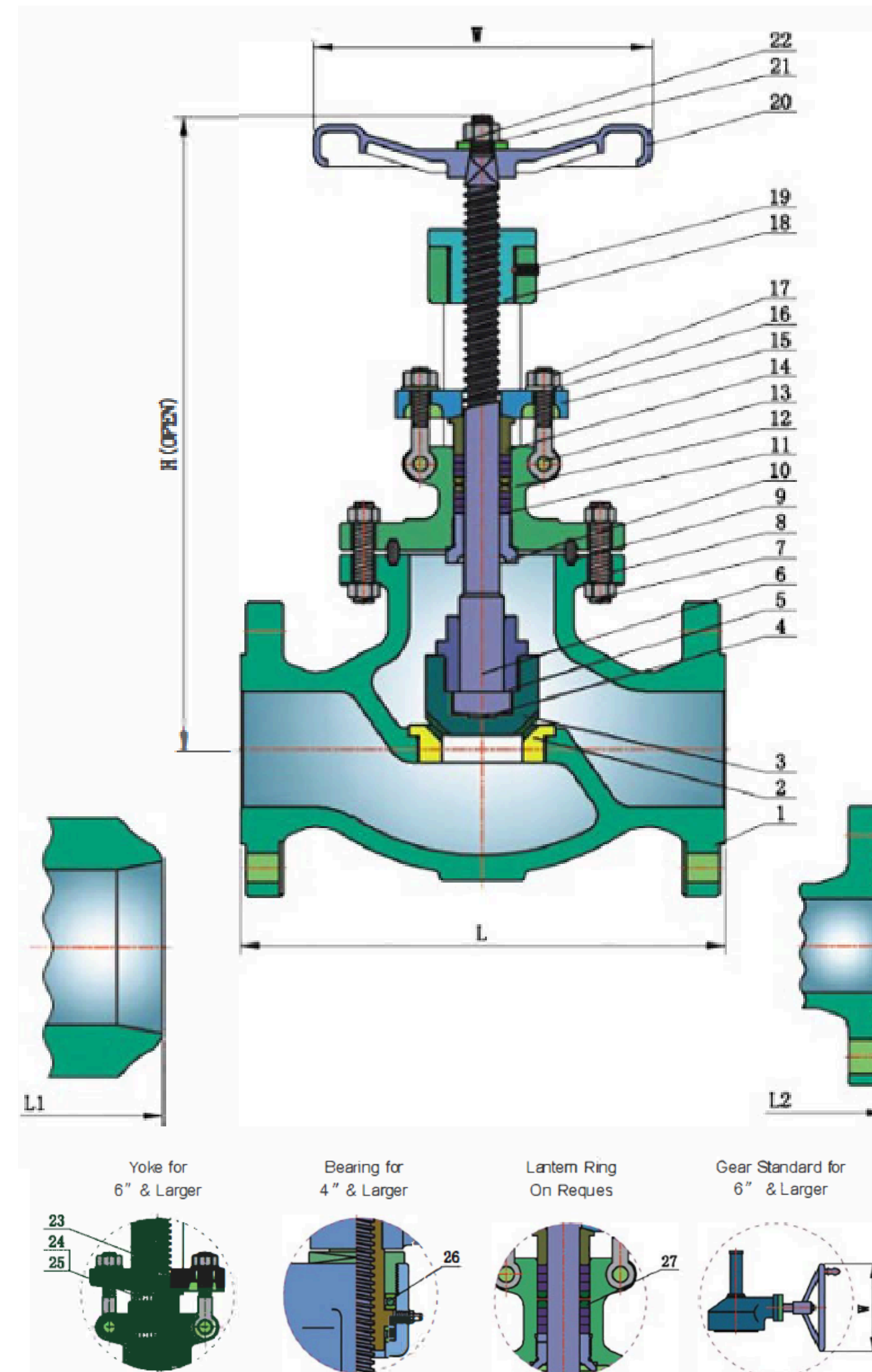


Dimensions and Weights

SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300
L/L1	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00
	mm	292	330	356	432	559	660	787	838
L2	in	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12
	mm	295	333	359	435	562	663	790	841
H	in	18.19	21.26	23.03	26.38	34.88	36.69	40.94	50.38
	mm	462	540	585	670	886	932	1040	1280
W	in	10	10	12	18	20	25	24	24
	mm	250	250	350	450	500	630	610	610
Weight RF	kg	36	70	85	123	404	450	700	900

KPI Valve 10

Cast Steel Globe Valve Class 900-2500



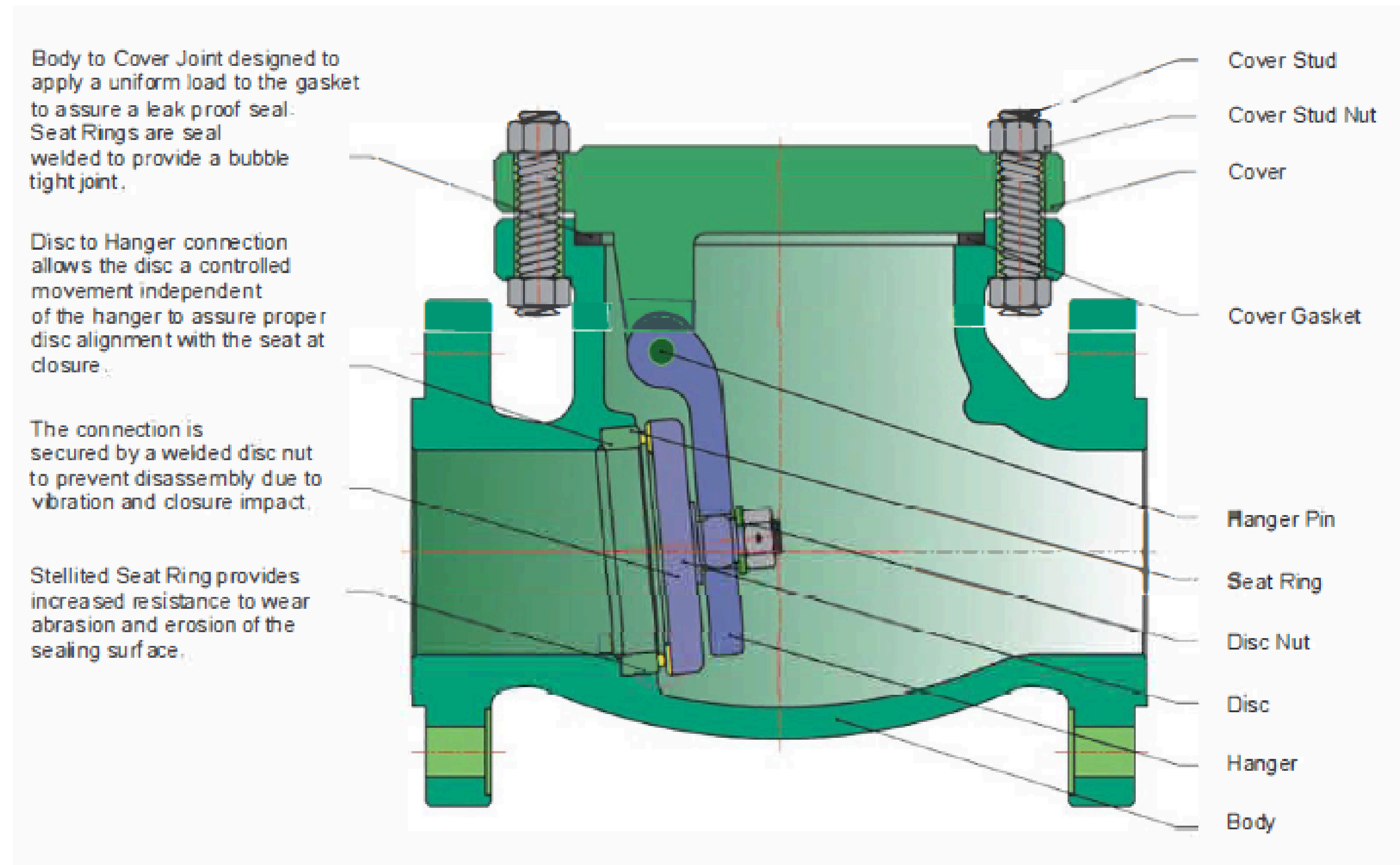
FEATURES	SPECIFICATIONS	
OS & Y-Rising Stem	Design	ASME B16.34/BS1873
Bolted Bonnet	Face to Face	ASME B16.10
Conic Disc	End to End	ASME B16.10
Extended Bonnet for Cryogenic Services	End Flange	ASME B16.5
Impact hand wheel Optional	BWEnd	ASME B16.25
Gear Optional	Test	API 598
	Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GRWCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A105+Stellite Faced
4	Disc Thrust Plate	ASTM A276 Type 420
5	Disc Nut	ASTM A276 Type 410
6	Stem	ASTM A182 GRF6
7	Bonnet Bolt nuts	ASTM A194 GR2H
8	Bonnet Bolt	ASTM A193 GRB7
9	Gasket	Soft Iron
10	Backseat Bushing	ASTM A276 Type 410
11	Stem Packing	Braided Graphite & Die formed Graphite Ring
12	Bonnet	ASTM A216 GRWCB
13	Eye Bolt Pins	Carbon Steel
14	Gland	ASTM A276 Type 410
15	Gland Flange	ASTM A216 GRWCB
16	Gland Eye Bolts	ASTM A307 GRB
17	Eye Bolt Nuts	ASTM A194 GR2H
18	Yoke Bush	ASTM A439 GRD-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Handwheel Nut	ASTM A194 GR2H
22	Washer	Carbon steel
23	Yoke	ASTM A216 GRWCB
24	Yoke Pan Bolt Nuts	ASTM A194 GR2H
25	Yoke Pan Bolts	ASTM A193 GRB7
26	Bearing	Steel
27	Lantern Ring ON Request	ASTM A276 Type 410

Dimensions and Weights	CALSS 900								CALSS 1500								CALSS 2500							
	in	2"	2.5"	3"	4"	6"	8"	in	2"	2.5"	3"	4"	6"	8"	in	2"	2.5"	3"	4"	6"	8"			
SIZE	mm	50	65	80	100	150	200	50	65	80	100	150	200	50	65	80	100	150	200					
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	14.50	16.50	18.50	21.50	27.75	32.75	17.75	20.00	22.75	26.50	36.00	40.25					
	mm	368	419	381	457	610	737	368	419	470	546	705	832	451	508	578	673	914	1022					
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	14.62	16.62	18.62	21.62	28.00	33.13	17.87	20.25	23.00	26.88	36.50	40.87					
	mm	371	422	384	460	613	740	371	422	473	549	711	841	454	514	584	683	927	1038					
H	in	23.62	25.98	26.18	31.50	43.62	46.61	25.98	25.98	30.31	33.46	45.08	52.95	28.35	31.50	34.84	49.61	75.00	97.05					
	mm	600	660	665	800	1108	1184	660	660	770	850	1145	1345	720	800	885	1260	1905	2465					
W	in	14	14	18	20	24	24	14	14	20	22	24	24	16	20	22	24	24	24					
	mm	350	350	450	500	610	610	350	350	500	560	610	610	400	500	560	600	610	610					
Weight RF	kg	95	138	122	195	435	730	95	138	250	435	540	970	176	264	308	759	1990	4390					

KPI Valve 11

Cast Steel Swing Check Valve



Body to Cover Joint designed to apply a uniform load to the gasket to assure a leak proof seal. Seat Rings are seal welded to provide a bubble tight joint.

Disc to Hanger connection allows the disc a controlled movement independent of the hanger to assure proper disc alignment with the seat at closure.

The connection is secured by a welded disc nut to prevent disassembly due to vibration and closure impact.

Stellite Seat Ring provides increased resistance to wear abrasion and erosion of the sealing surface.

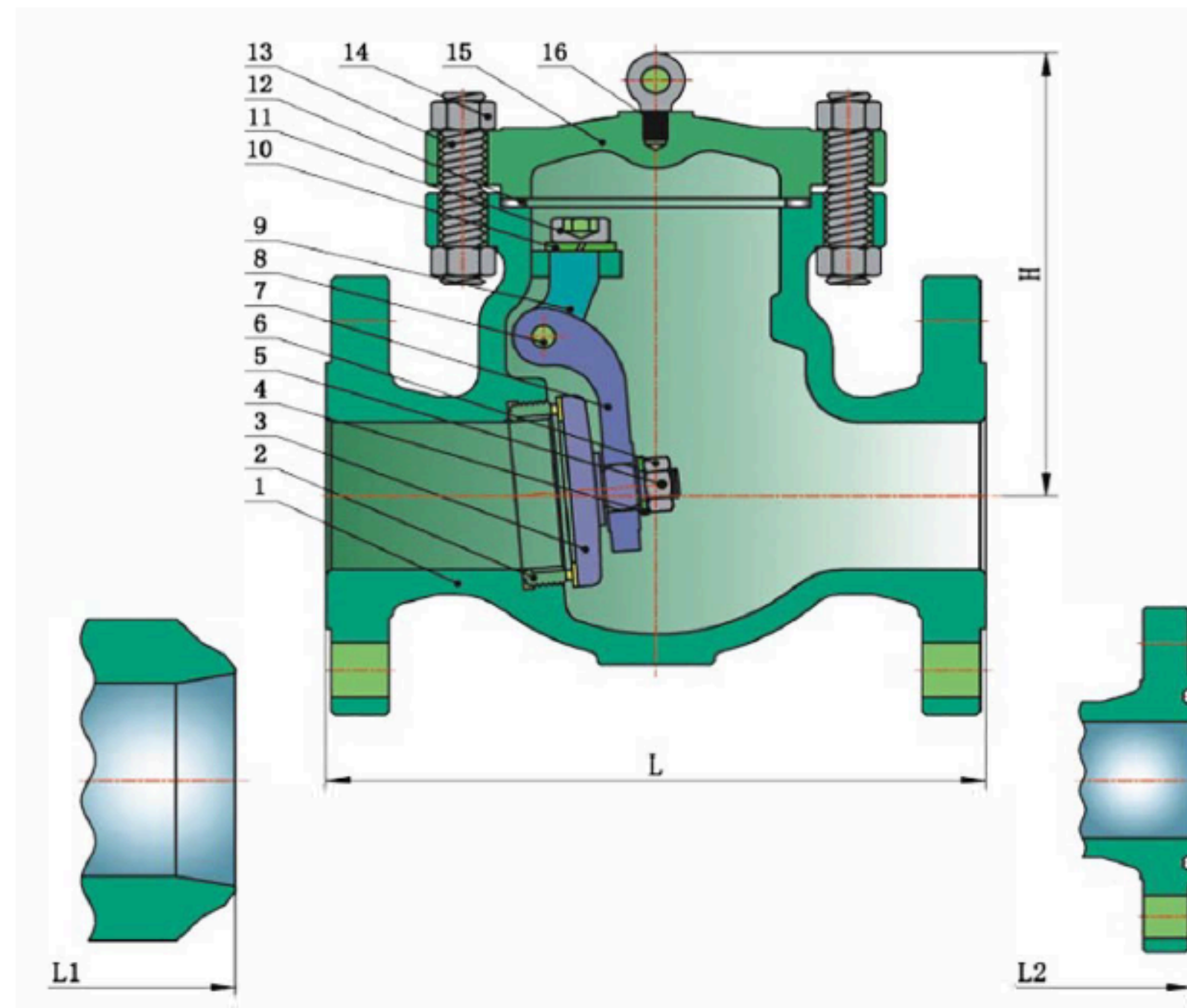
KPI Valve 12

Cast Steel Swing Check Valve Class 150

FEATURES	
Bolted Cover	
Swing Type Disc	
6" & Larger With Eye Bolt	
By Pass On Request	
Lever & Weight Optional	

SPECIFICATIONS	
Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Thrust Plate	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Hinge	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex. Bolt	Carbon Steel
12	Gasket	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon Steel



Dimensions and Weights														
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
L/L1	in	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00
	mm	203	216	241	292	356	495	622	699	787	864	978	978	1295
L2	in	8.5	9.00	10.00	12.00	14.50	20.00	25.00	28.00	31.50	34.50	39.00	39.00	51.50
	mm	216	229	2254	305	368	508	635	711	800	876	991	991	1308
H	in	6.10	6.70	7.09	8.66	10.55	12.20	14.57	16.73	18.70	20.67	22.83	24.72	34.72
	mm	155	170	180	220	268	310	370	425	475	525	580	628	882
Weight RF	kg	19	26	29	46	77	163	220	366	428	555	775	835	1180

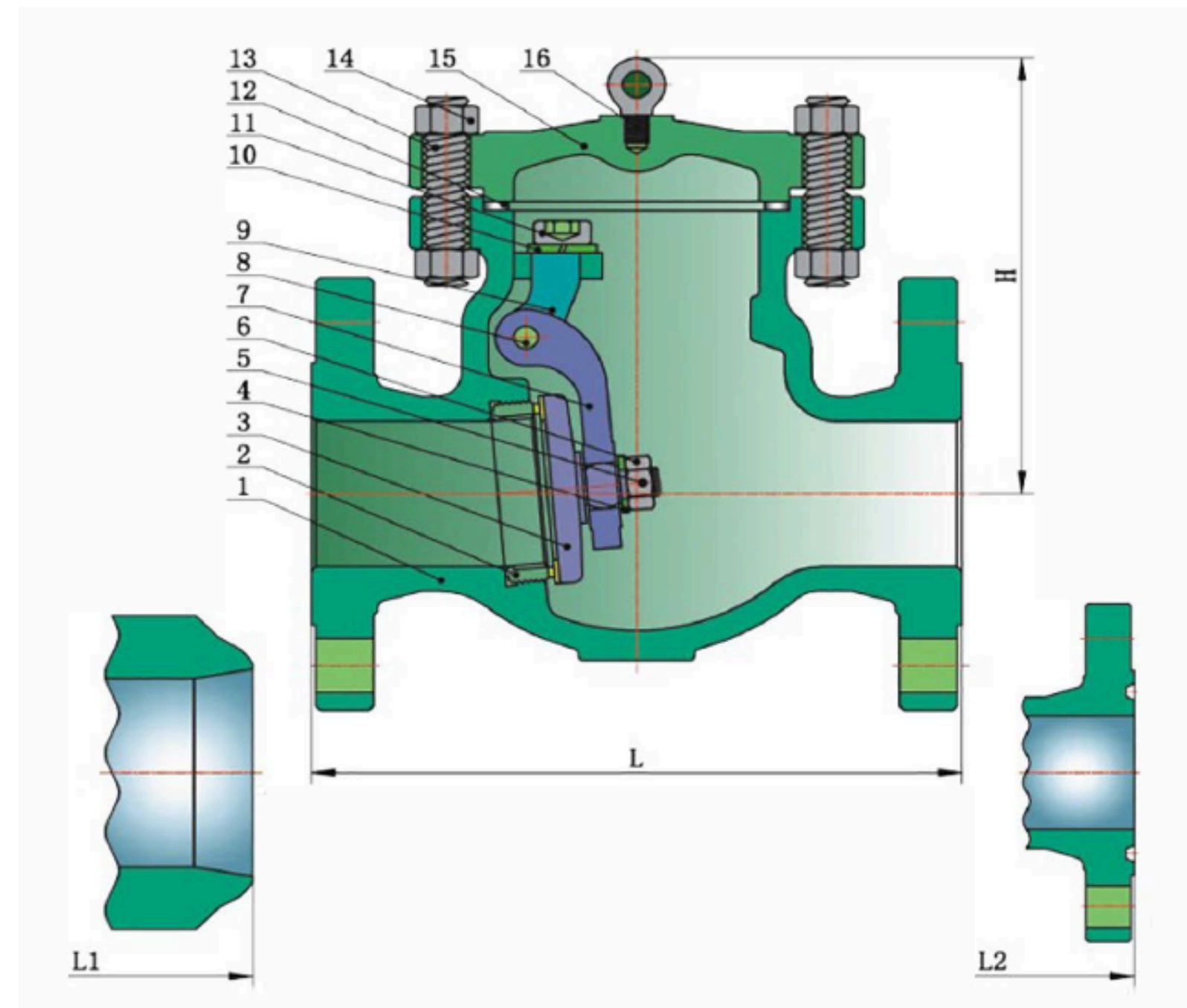
KPI Valve 13

Cast Steel Swing Check Valve Class 300

FEATURES	
Bolted Cover	
Swing Type Disc	
4" & Larger With Eye Bolt	
By Pass On Request	
Lever & Weight Optional	

SPECIFICATIONS	
Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Hinge	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex. Bolt	Carbon Steel
12	Gasket	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon Steel



Dimensions and Weights														
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
L/L1	in	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00
	mm	267	292	318	356	445	533	622	711	838	864	978	1016	1346
L2	in	11.12	12.12	13.12	14.62	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88
	mm	283	308	333	371	460	549	638	727	854	879	994	1035	1368
H	in	6.89	7.28	7.80	9.25	11.10	13.19	15.15	18.11	20.47	21.81	23.62	26.38	29.53
	mm	175	185	198	235	282	335	385	460	520	554	600	670	750
Weight RF	kg	21	30	39	69	125	210	307	450	680	640	1025	1320	1960

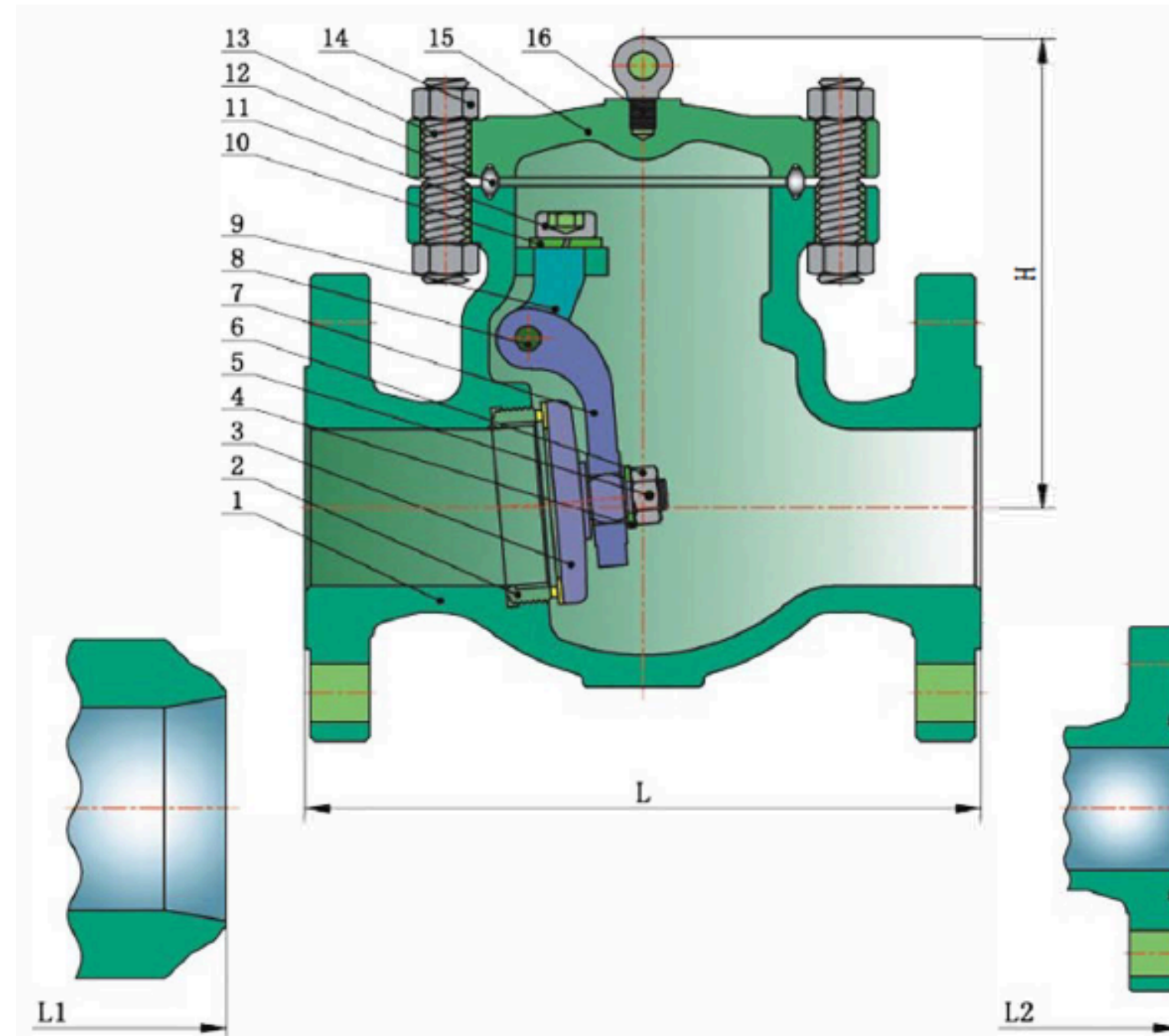
KPI Valve 14

Cast Steel Swing Check Valve Class 600

FEATURES	
Bolted Cover	
Swing Type Disc	
With Eye Bolt	
By Pass On Request	
Lever & Wight Optional	

SPECIFICATIONS	
Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Gasket, Ring Joint	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon steel



Dimensions and Weights														
SIZE	in	2"	2.5"	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
L/L1	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00
	mm	292	330	356	432	559	660	757	828	889	991	1092	1194	1397
L2	in	11.82	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38
	mm	295	333	359	435	562	663	790	841	892	994	1095	1200	1407
H	in	7.166	7.87	8.94	10.24	12.80	15.35	19.29	20.79	22.56	25.98	28.35	29.37	37.80
	mm	182	200	227	260	325	390	490	528	572	660	720	746	960
Weight RF	kg	36	49	70	122	269	465	673	875	994	1220	1620	2120	3100

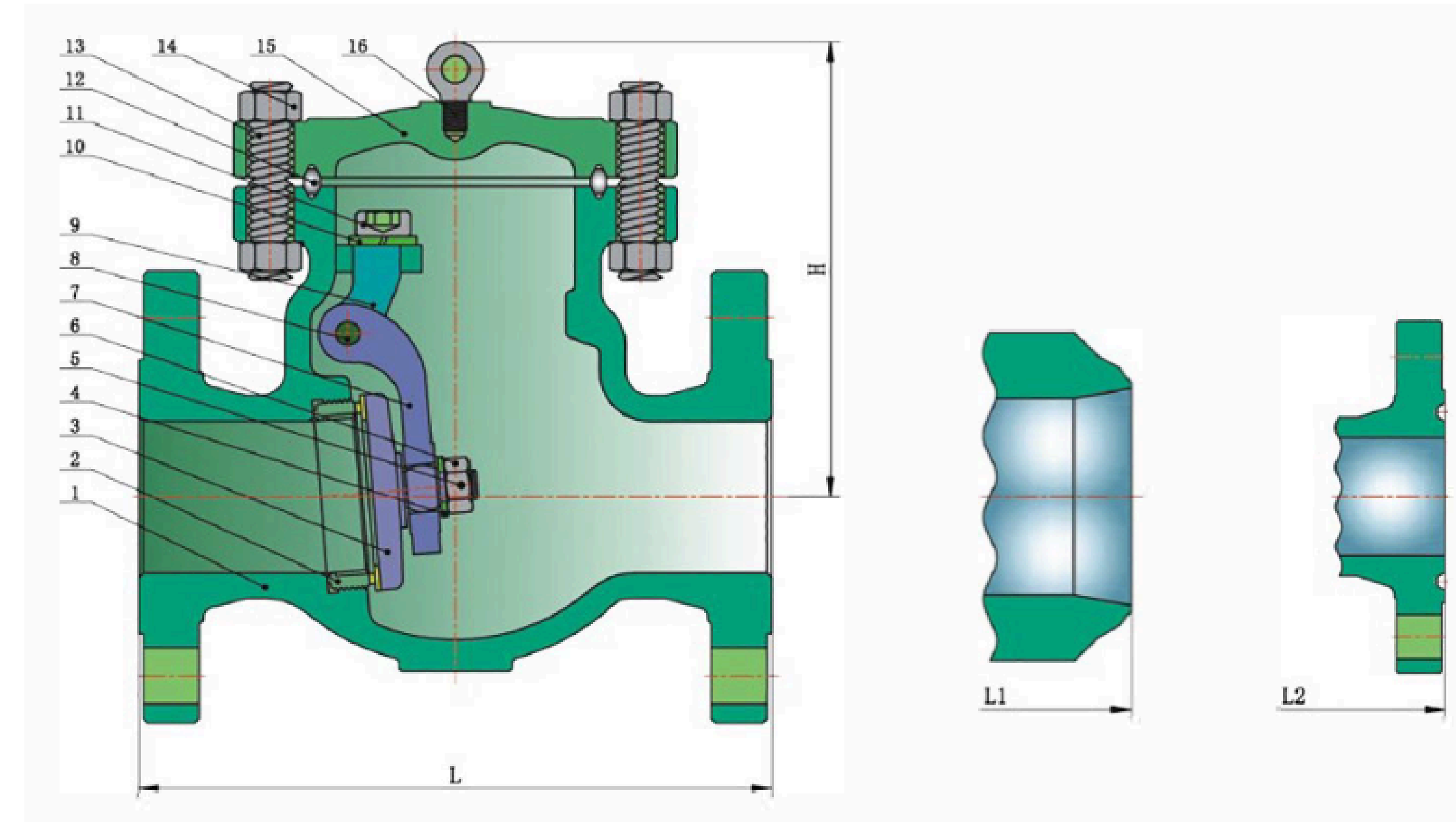
KPI Valve 15

Cast Steel Swing Check Valve Class 900-2500

FEATURES	
Bolted Cover	
Swing Type Disc	
With Eye Bolt	
By Pass On Request	
Lever & Wight Optional	

SPECIFICATIONS	
Design	ASME B16.34/BS 1868
Face to Face	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Gasket, Ring Joint	Soft Iron+Graphite
13	Cover Bolt	ASTM A193 GR.B7
14	Cover Bolt Nut	ASTM A194 GR.2H
15	Cover	ASTM A216 GR.WCB
16	Eye Bolt	Carbon steel



Dimensions and Weights		CALSS 900												CALSS 1500												CALSS 2500											
		2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"												
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"												
	mm	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300												
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00												
	mm	368	419	381	457	610	737	838	965	368	419	470	546	705	832	931	1130	451	508	578	673	914	1022	1270	1422												
L2	in	14.62	14.62	15.12	18.12	24.12	29.12	33.12	38.12	14.62	16.62	18.62	21.62	28.00	33.13	39.38	38.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88												
	mm	371	422	384	460	613	740	841	968	371	422	473	549	711	841	1000	1146	464	514	584	683	927	1038	1292	1445												
H	in	11.65	11.81	11.81	12.87	17.36	19.76	26.14	30.51	11.65	11.81	13.43	16.22	20.12	26.77	29.76	33.74	16.38	16.50	17.36	18.86	20.12	27.99	33.50	39.37												
	mm	296	300	300	327	441	502	664	775	296	300	341	412	511	680	756	857	416	419	441	479	511	711	851	1000												
Weight RF	kg	70	100	91	150	305	510	810	1120	70	100	150	245	550	1010	1550	2280	145	240	330	650	1400	2420	3750	5500												

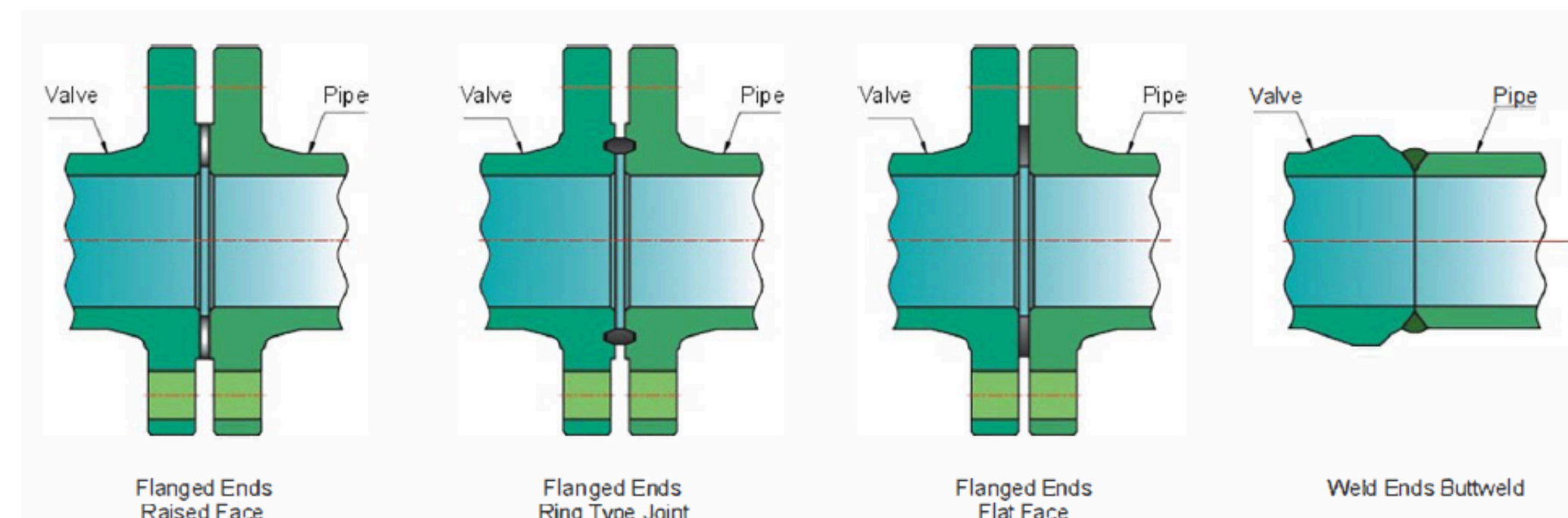
KPI Valve 16

Types Of End Connections

KPI cast steel valves can be supplied with flanged ends in raised face, flat faces or ring joint type as well as in welding ends (buttweld). They can also be supplied with combined ends, such as flanged by weld, in accordance to customer requirements. The butt-weld ends in standard valves are machined in accordance with ASM E B 16.25 and are supplied to meet the following pipe schedules:

Valve Pressure Class	Weld End Pipe Schedule
150/300	Schedule 40-2" to 10" Standard Wall-12" to 24"
600	Schedule 80
900	Schedule 160-2" to 3" Schedule 120-4" and Larger
1500	Schedule 160

The customer must clearly specify the pipe wall thickness and type of pipe to be welded to the valves for schedules different than the above.



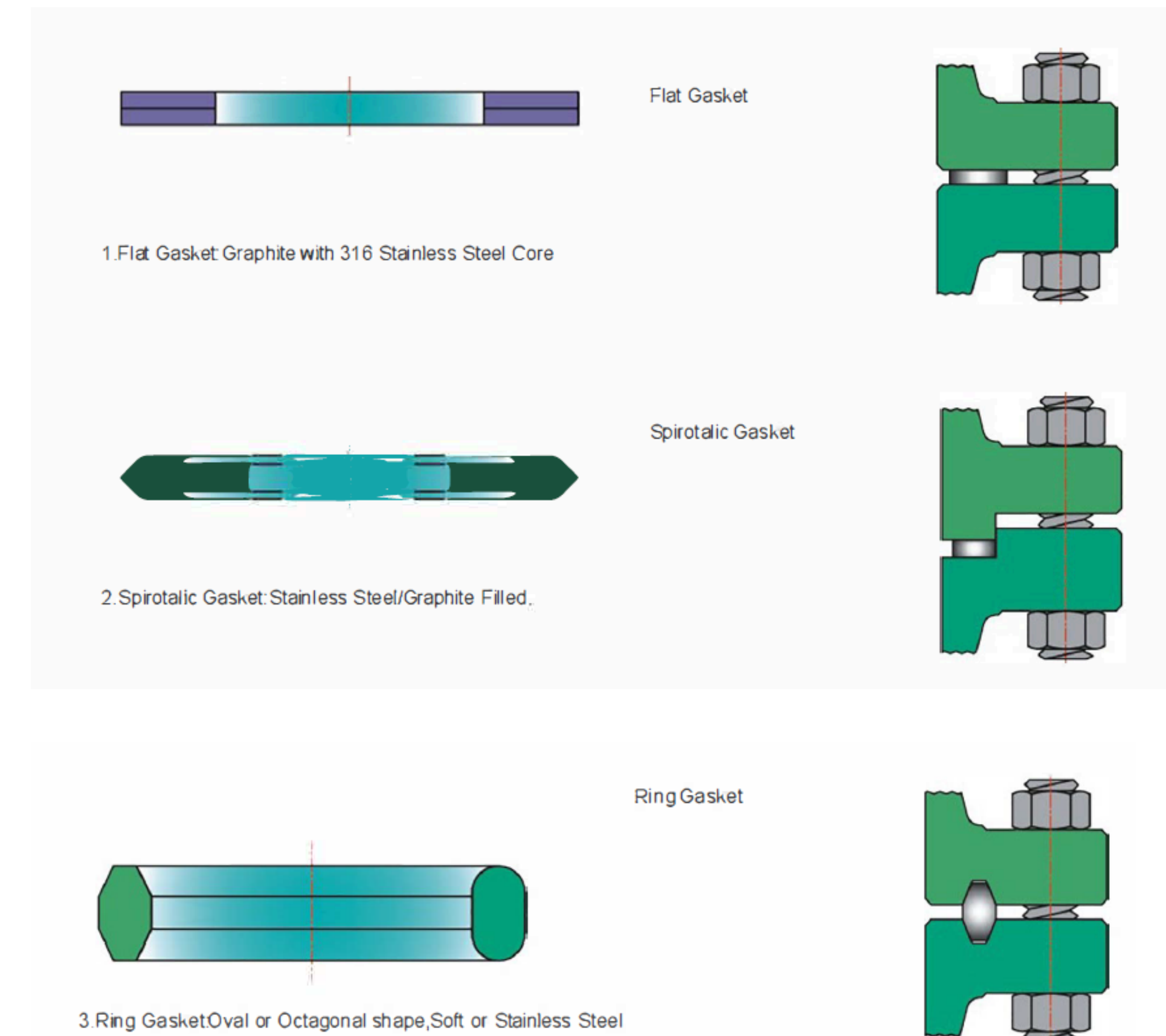
KPI Valve 17

Body And Bonnet Joint Seal Gaskets

KPI Cast steel standard valves are supplied with the types of body/bonnet gaskets shown in the table.

For special service conditions, the **KPI** valves can also be supplied with special shapes on joints and special materials, to comply with specific requirements of the customer.

VALVE	CLASS				
	150	300	600	900	1500
GATE	1	2	3	3	3
GLOBE	1	2	3	3	3
CHECK	1	2	3	3	3



KPI Valve 18

Stem Packing Standard Compression and Live Loading

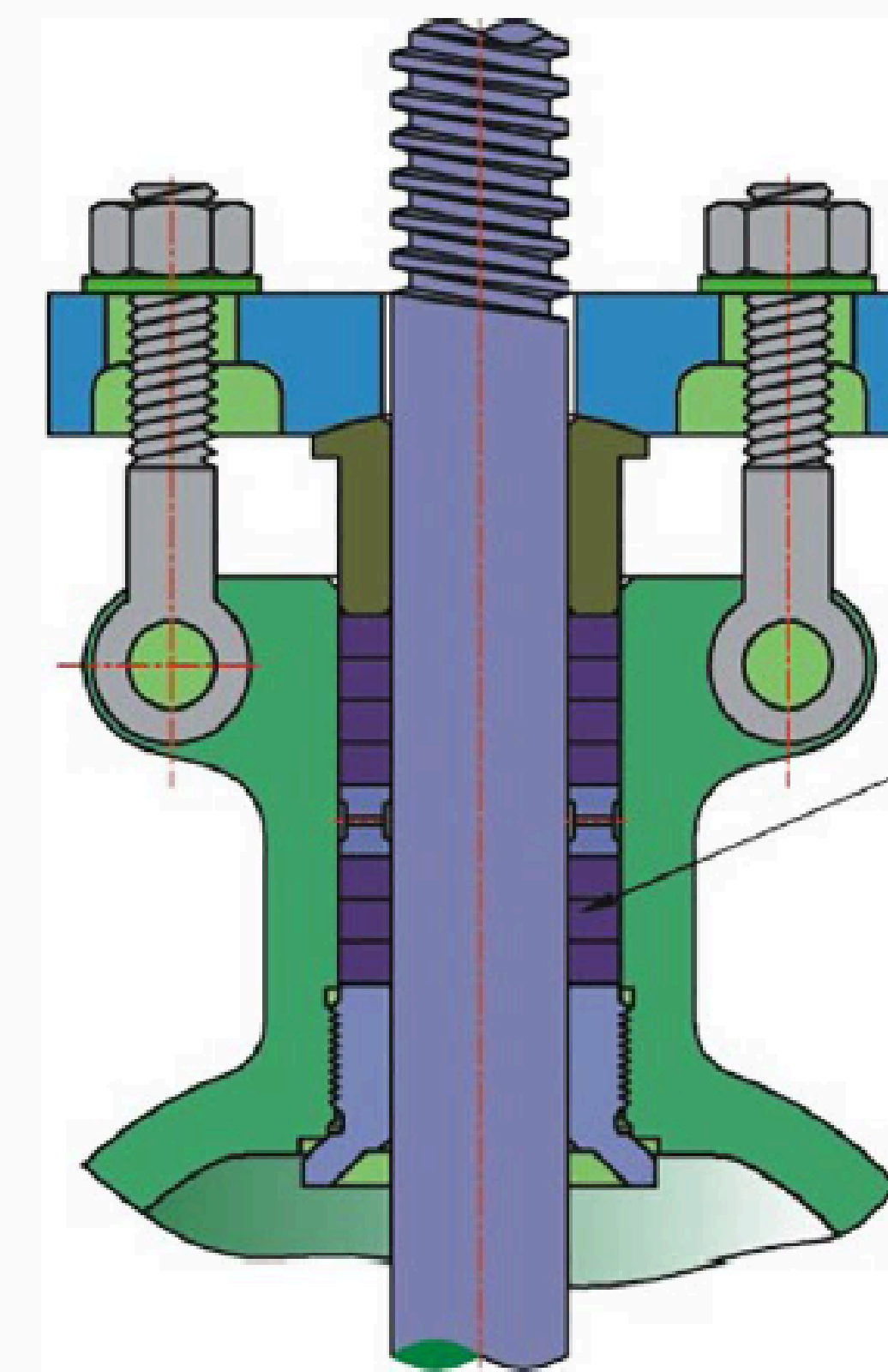
KPI Valves are designed, manufactured and tested to meet 50 PPMVOC fugitive emission leak rate as a standard off the shelf valve. This applies to all gate and globe valves, both Cast Steel and Forge Steel, without a requirement for a "special order"

KPI Uses a stem packing of flexible graphite incorporating a passive corrosion inhibitor in a combination of high and low density sealing rings with antiextrusion end rings reinforced with Inconel wire.

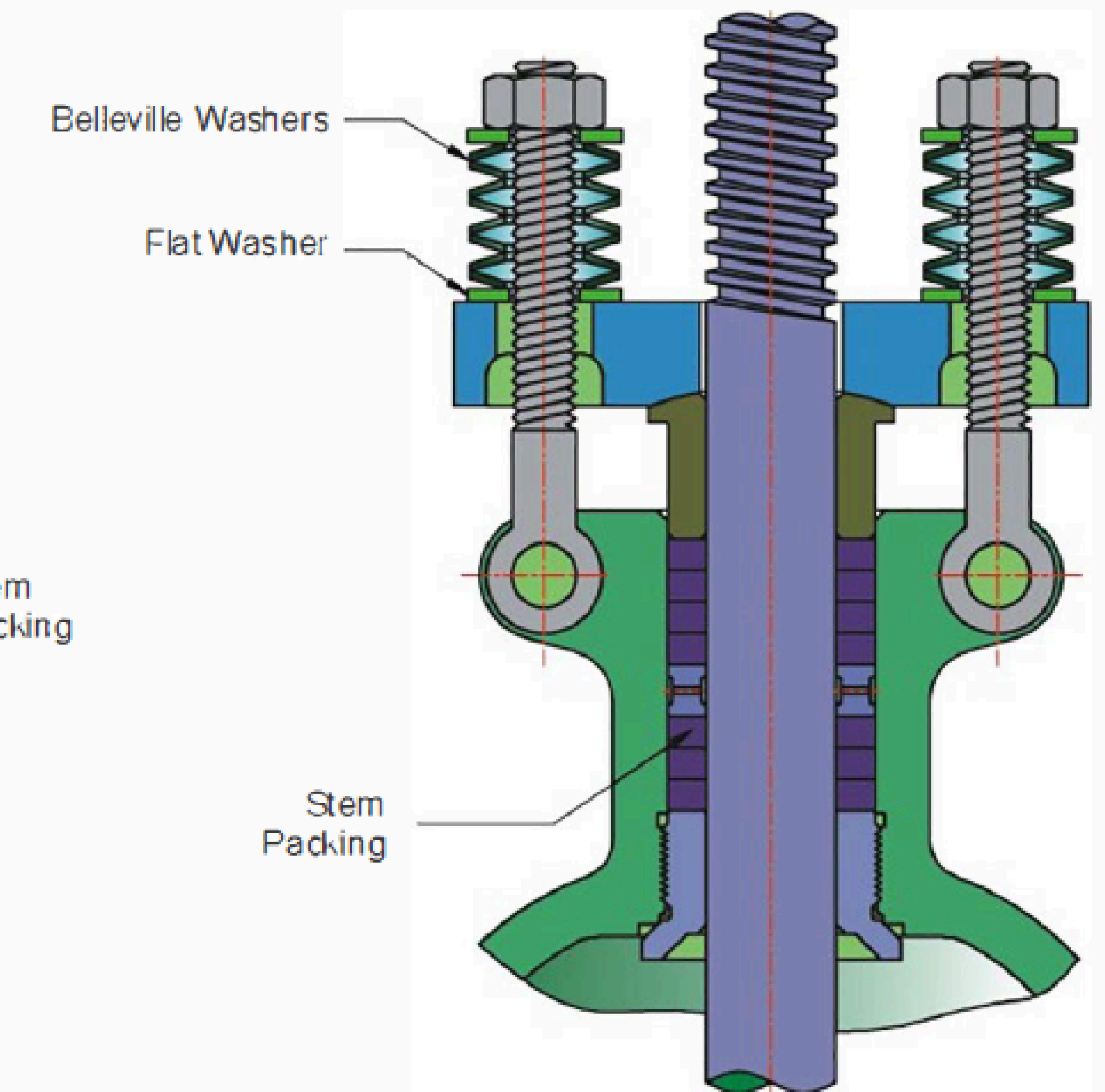
The long term KYN emission stem sealing ability of **KPI** packing is enhanced by reduced diametral clearances and close control of stem straightness and packing sealing surface finish.

KPI can also provide gate and globe valves with a stem packing live loading system for installations requiring frequent valve operation and/or having large variations in temperature/pressure or where it is desirable to eliminate the need for occasional adjustment of the packing to compensate for the variations in operation. Live loading will provide a constant compression against the packing to maintain the optimum seal over a long period of time and variations in the operating conditions

KPI Can also supply valves with stem packing of different types and materials to meet the customer requirements.



Standard Stem Packing System



Live Loading Stem Packing System

CAST STEEL GATE VALVE STANDARD MATERIALS OF PARTS

ITEM	PART NAME	CARBON STEEL			ALLOY STEEL			STAINLESS STEEL				
1	Body	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
2	seat ring	A105	A350 LF2	A350 LF2	A182 F1	A182 F11	A182 F5	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321
3	disc	A216 WCB	A352 LCB	A352 LCC	A216 WC1	A216 WC6	A216 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
4	stem	A182 F6	A182 F304	A182 F304	A182 F6	A182 F6	A182 F6	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321
5	Gasket	CL150-300	Soft Iron+Graphite	304+Graphite	304+Graphite	304+Graphite		304+Graphite				
		CL600-2500 Ring Joint	Soft Iron	304	304	316		316				
6	Bonnet	A216 WCB	A352 LCB	A352 LCC	A216 WC1	A216 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
7	bonnet bolt nuts	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8				
8	bonnet bolt	A193 B7	A193 L7	A193 L7	A193 B7	A193 B16	A193 B16	A193 B8				
9	backseat bushing	A276 410	A276 304	A276 304		A276 410		A276 304	A276 316	A276 316	A276 316L	A276 321
10	Stem Packing	Braided Graphite& Die formed Graphite Ring			Braided Graphite& Die formed Graphite Ring			Braided Graphite& Die formed Graphite Ring				
11	Eye Bolt Pins	Carbon Steel			A276 410			Stainless Steel				
12	Gland eye bolts	A307 B	A193 L7	A193 L7	A193 B7	A193 B16	A193 B16	A193 B8				
13	gland	A276 410	A276 304	A276 304				A276 304	A276 316	A276 304L	A276 316L	A276 321
14	gland flange	A216 WCB	A352 LCB	A352 LCB	A216 WC1	A216 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
15	Eye Bolt Nuts	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8	A194 8	A194 8	A194 8	A194 8
16	Grease Nipple	Carbon Steel			Carbon Steel			Stainless Steel				
17	Stem Nut	A439 D-2			A439 D-2			AL-Bronze				
18	Retaining Nut	Carbon Steel			Carbon Steel			Carbon Steel				
19	handwheel	Ductile Iron			Ductile Iron			Ductile Iron				
20	handwheel nut	Carbon Steel			Carbon Steel			Stainless Steel				
21	Screw	Carbon Steel			Carbon Steel			Stainless Steel				
22	yoke	A216 WCB	A352 LCB	A352 LCB	A216 WCB	A216 WCB	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
23	yoke pan bolt nuts	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8				
24	yoke pan bolts	A193 B7	A193 L7	A193 L7	A193 B7	A193 B16	A193 B16	A193 B8				
25	bearing	Steel			Steel			Steel				
26	Lantern Ring On Request	A276 410	A276 304	A276 304		A276 410		A276 304	A276 316	A276 316	A276 316L	A276 321

CAST STEEL GLOBE VALVE STANDARD MATERIALS OF PARTS

ITEM	PART NAME	CARBON STEEL			ALLOY STEEL			STAINLESS STEEL				
1	Body	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
2	seat ring	A105	A350 LF2	A350 LF2	A182 F1	A182 F11	A182 F5	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321
3	disc	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A216 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
4	Disc Thrust Plate	A276 420	A276 304	A276 304		A276 420		A276 304	A276 316	A276 304L	A276 316L	A276 321
5	Disc Nut	A276 410	A276 304	A276 304		A276 410		A276 304	A276 316	A276 304L	A276 316L	A276 321
6	stem	A182 F6	A182 F304	A182 F304	A182 F6	A182 F6	A182 F6	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321
7	bonnet Bolt Nuts	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8				
8	bonnet bolt	A193 B7	A193 L7	A193 L7	A193 B7	A193 B16	A193 B16	A193 B8				
9	Gasket	CL150-300	Soft Iron+Graphite	304+Graphite	304+Graphite	304+Graphite		304+Graphite				
		CL600-2500 Ring Joint	Soft Iron	304	304	316		316				
10	Backseat Bushing	A216 410	A276 304	A276 304		A276 410		A276 304	A276 316	A276 304L	A276 316L	A276 321
11	Stem Packing	Braided Graphite& Die formed Graphite Ring			Braided Graphite& Die formed Graphite Ring			Braided Graphite& Die formed Graphite Ring				
12	Bonnet	A216 WCB	A352 LCB	A352 LCC	A216 WC1	A216 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
13	Eye Bolt Pins	Carbon Steel			A276 410			Stainless Steel				
14	Gland	A276 410	A276 304	A276 304		A276 410		A276 304	A276 316	A276 304L	A276 316L	A276 321
15	Gland Flange	A216 WCB	A352 LCB	A352 LCC	A216 WC1	A216 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
16	Gland Eye Bolts	A307 B	A193 L7	A193 L7	A193 B7	A193 B16	A193 B16	A193 B8				
17	Eye Bolt Nuts	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8				
18	Yoke Bush	A439 D-2			A439 D-2			AL-Bronze				
19	Screw	Carbon Steel			Carbon Steel			Stainless Steel				
20	Handwheel	Carbon Steel			Ductile Iron			Ductile Iron				
21	Handwheel Nut	Ductile Iron			A194 2H			Stainless Steel				
22	Washer	Carbon Steel			Carbon Steel			Stainless Steel				
23	Yoke	A216 WCB	A352 LCB	A352 LCC	A216 WCB	A216 WCB	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
24	Yoke Pan Bolt Nuts	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8				
25	Yoke Pan Bolts	A193 B7	A193 L7	A193 L7	A193 B7	A193 B16	A193 B16	A193 B8				
26	Bearing	Steel			Steel			Steel				
27	Lantern Ring On Request	A276 410	A276 304	A276 304		A276 410		A276 304	A276 316	A276 304L	A276 316L	A276 321

KPI Valve 19

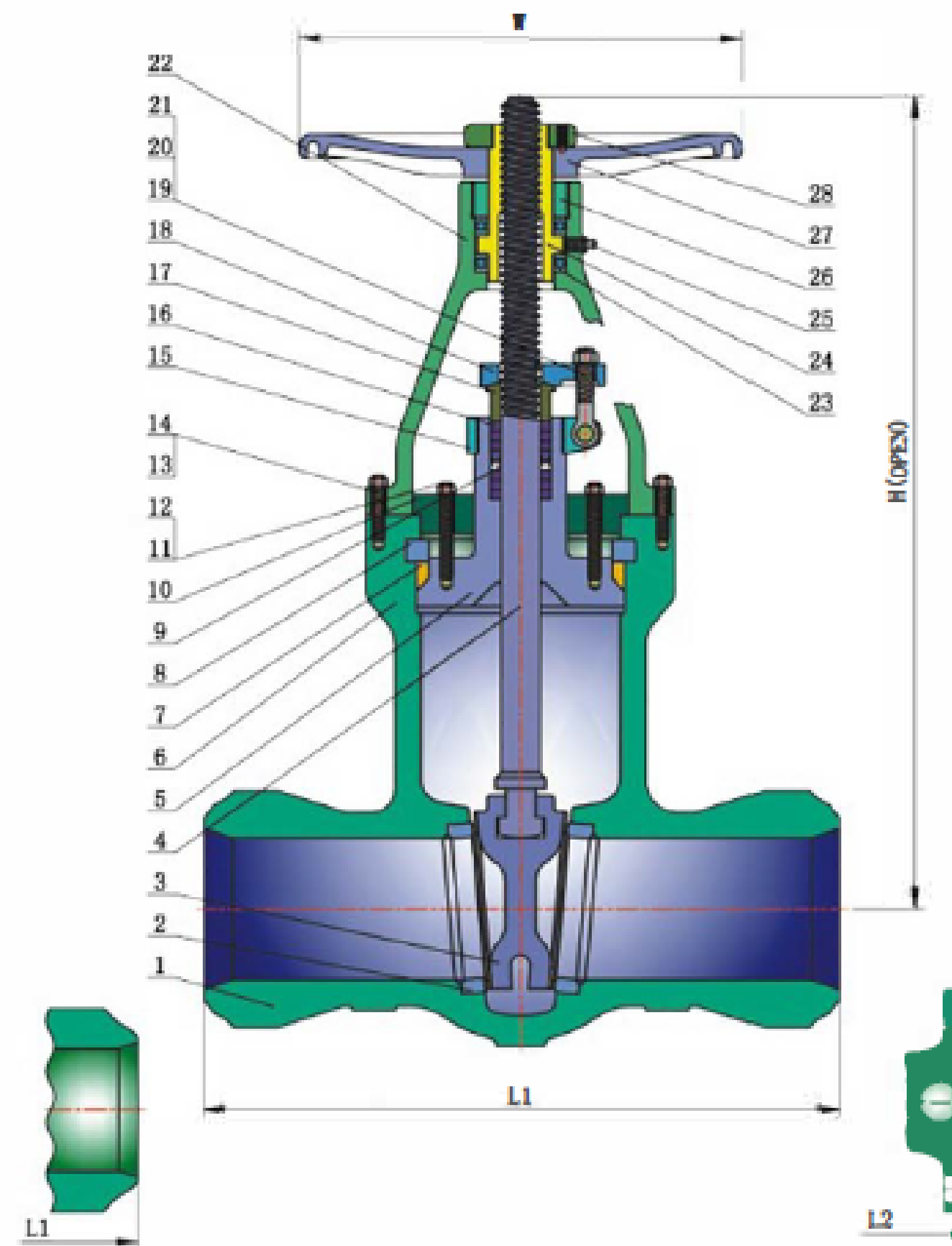
Materials Of Parts

CAST STEEL SWING CHECK VALVE STANDARD MATERIALS OF PARTS

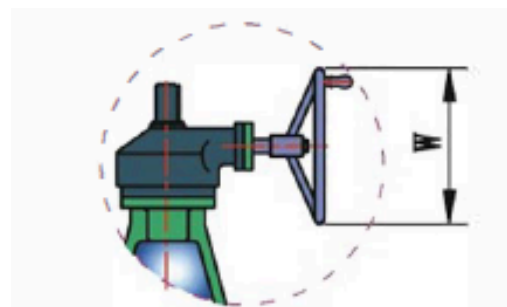
ITEM	PART NAME	CARBON STEEL			ALLOY STEEL			STAINLESS STEEL				
1	Body	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
2	seat ring	A105	A350 LF2	A350 LF2	A182 F1	A182 F11	A182 F5	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321
3	disc	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
4	Disc Washer	A276 410	A276 304	A276 304		A276 410		A276 316				
5	Disc Nut Pin	Stainless Steel			Stainless Steel			316				
6	Disc Nut	Stainless Steel			Stainless Steel			316				
7	Hinge	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
8	Hinge Pin	A182 F6	A182 F304	A182 F304	A182 F6	A182 F6	A182 F6	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321
9	Bearing Bracket	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
10	Spring Washer	Carbon steel			Stainless Steel			Stainless Steel				
11	Hex. Bolt	A193 B7	A193 L7	A307 L7	A193 B7	A193 B16	A193 B16	A193 B8				
12	Gasket	CL150-300	Soft Iron+Graphite	304+Graphite	304+Graphite	304+Graphite		304+Graphite				
		CL600-2500 Ring Joint	Soft Iron	304	304	316		316				
13	Cover Bolt	A193 B7	A193 L7	A307 L7	A193 B7	A193 B16	A193 B16	A193 B8				
14	Cover Bolt Nut	A194 2H	A194 4	A194 4	A194 2H	A194 4	A194 4	A194 8				
15	Cover	A216 WCB	A352 LCB	A352 LCC	A217 WC1	A217 WC6	A217 C5	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A351 CF8C
16	Eye Bolt	Carbon steel			Stainless Steel			Stainless Steel				
17	Plug	A105	A350 LF2	A350 LF2	A182 F1	A182 F11	A182 F5	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F321

KPI Valve 20

Pressure Seal Gate Valve Class 900-2500



Gear Standard for
8" & Larger(900)
8" & Larger(1500)
6" & Larger(2500)



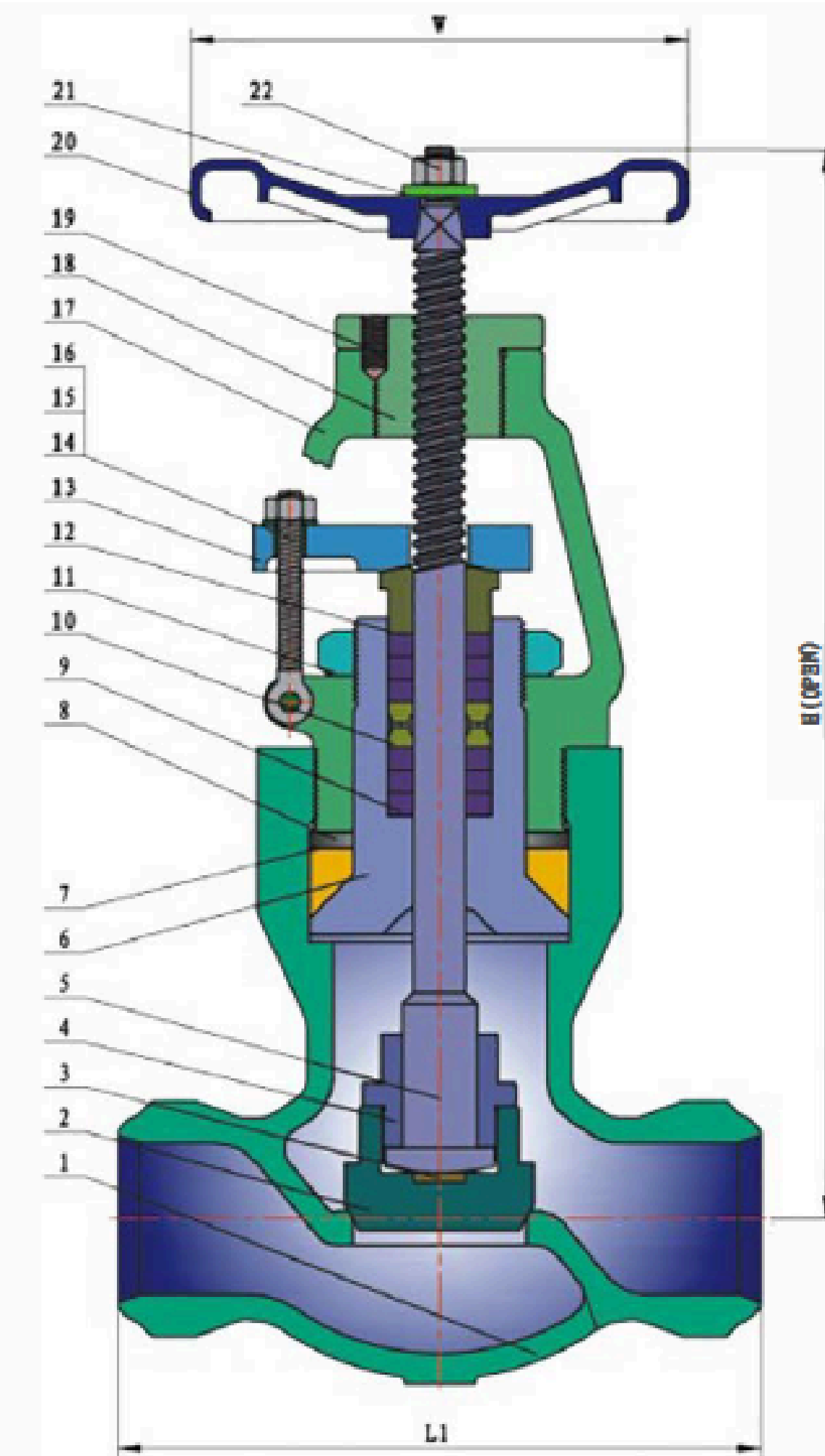
FEATURES		SPECIFICATIONS	
OS & Y, Rising Stem	Design	ASME B16.34	
Pressure Seal	Face to Face	ASME B16.10	
Flexible Wedge	End to End	ASME B16.10	
Backseat Weld-Deposited	End Flange	ASME B16.5	
By Pass On Request	BW End	ASME B16.25	
Locking Device Optional	Test	API 598	
Gear Optional	Special	NACE MR-01-75	

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR.WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR. WCB+Stellite Faced
4	Stem	ASTM A182 GR.F6
5	Bonnet	ASTM A216 GR. WCB+Stellite Faced
6	Gasket	ASTM A182 GR. F304
7	Thrust Ring	ASTM A276 Type 410
8	Separate Ring	Carbon Steel
9	Lantern Ring On Request	ASTM A276 Type 410
10	Bonnet Retainer	Carbon Steel
11	Bonnet Bolts	ASTM A193 GR.B7
12	Bonnet Bolt nuts	ASTM A194 GR.2H
13	Yoke Bolts	ASTM A194 GR.B7
14	Yoke Bolt Nuts	ASTM A193 GR.2H
15	Gland Eye	ASTM A216 GR.WCB
16	Stem Packing	Braided Graphite & Die formed Graphite Ring
17	Gland	ASTM A276 Type 410
18	Gland Flange	ASTM A216 GR.WCB
19	Eye Bolt Pins	Carbon steel
20	Gland Eye Bolts	ASTM A193 GR.B7
21	Eye Bolt Nuts	ASTM A194 GR.2H
22	Yoke	ASTM A216 GR.WCB
23	Bearing	Steel
24	Stem Nut	ASTM A439 GR. D-2
25	Grease Nipple	Carbon Steel
26	Retaining Nut	Carbon Steel
27	Handwheel	Ductile Iron
28	Handwheel Nut	Carbon Steel

Dimensions and Weights	CALSS 900												CALSS 1500												CALSS 2500											
	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"												
SIZE	in 50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300												
L	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	17.50	20.00	22.75	26.50	36.00	40.25	50.00	55.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50											
	mm	368	419	381	457	610	737	838	965	450	508	578	673	914	1022	1270	1422	368	419	470	546	705	832	991	1130											
L1	in	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	8.50	10.00	12.00	15.00	22.00	28.00	34.00	39.00											
	mm	216	254	305	356	508	660	787	914	279	330	368	457	610	762	914	1041	216	254	305	405	558	711	864	991											
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	55.88	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12											
	mm	371	422	384	460	613	740	841	968	454	514	584	683	927	1038	1292	1445	371	422	473	549	711	842	100	146											
H	in	24.41	30.00	30.71	33.86	40.35	50.63	60.63	70.28	24.00	30.55	30.90	34.40	44.02	53.46	66.14	74.50	24.00	30.55	30.90	34.40	40.35	53.46	61.74	74.50											
	mm	620	762	780	860	1025	1288	1540	1785	610	776	785	874	1118	1358	1680	1892	610	776	785	874	1025	1368	1568	1892											
W	in	12	14	14	16	20	24	24	24	14	18	18	20	24	24	24	12	16	16	20	24	24	24	24	24											
	mm	300	350	350	400	500	610	610	610	350	450	450	500	610	610	610	300	400	400	500	600	610	610	610	610											
Weight RF	kg	50	72	86	110	202	530	782	1135	80	112	122	192	480	830	1678	2320	50	92	92	145	230	540	1060	1184											

KPI Valve 21

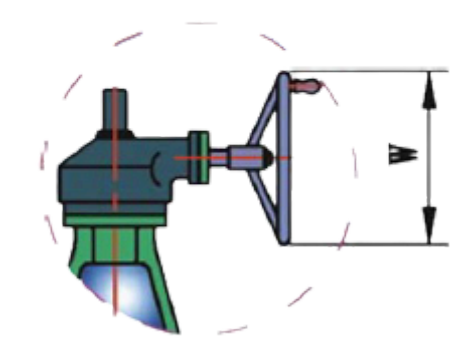
Pressure Seal Globe Valve Class 900-2500



FEATURES		SPECIFICATIONS	
OS & Y, Rising Stem	Design	ASME B16.34	
Pressure Seal	Face to Face	ASME B16.10	
Conic Disc	End to End	ASME B16.10	
Backseat Weld-Deposited	End Flange	ASME B16.5	
By Pass On Request	BW End	ASME B16.25	
Locking Device Optional	Test	API 598	
Gear Optional	Special	NACE MR-01-75	

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216GR.WCB+Stellite Faced
2	Disc	ASTM A105+13Cr Faced
3	Disc Thrust Plate	ASTM A276 Type 420
4	Disc Nut	ASTM A276 Type 410
5	Stem	ASTM A182 GR.F6
6	Bonnet	ASTM A216GR.WCB+Stellite Faced
7	Gasket	ASTM A182 GR.F304
8	Thrust Ring	ASTM A276 Type 410
9	Stem Packing	Braided Graphite & Die formed Graphite Ring
10	Lantern Ring	ASTM A276 Type 410
11	Bonnet Retainer	Carbon Steel
12	Gland	ASTM A276 Type 410
13	Gland Flange	ASTM A216 GR.WCB
14	Eye Bolt Pins	Carbon Steel
15	Gland Eye Bolts	ASTM A193 GR.B7
16	Eye Bolt Nuts	ASTM A194 GR.2H
17	Yoke	ASTM A216 GR.WCB
18	Yoke Bush	ASTM A439 GR.D-2
19	Screw	Carbon steel
20	Handwheel	Ductile Iron
21	Washer	Carbon steel
22	Handwheel Nut	ASTM A194 GR.2H

Gear Standard for
6" & Larger(900)
6" & Larger(1500)
4" & Larger(2500)



Dimensions and Weights	CALSS 900												CALSS 1500												CALSS 2500											
	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"	2"	2.5"	3"	4"	6"	8"												
SIZE	in 50	65	80	100	150	200	50	65	80	100	150	200	50	65	80	100	150	200	50	65	80	100	150	200												
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	14.50	16.50	18.50	21.50	27.75	32.75	17.75	20.00	22.75	26.50	36.00	40.25	50.00	55.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50							
	mm	368	419	381	457	610	737	838	965	450	508	578	673	914	1022	1270	1422	368	419	470	546	705	832	991	1130	1270	1422	1780	2030							
L2	in	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	55.88	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12											
	mm	371	422	384	460	613	740	841	968	454	514	584	683	927	1038	1292	1445	371	422	473	549	711	842	100	146											
H	in	24.41	30.00	30.71	33.86	40.35	50.63	60.63	70.28	24.00	30.55	30.90	34.40	44.02	53.46	66.14	74.50	24.00	30.55	30.90	34.40	40.35	53.46	61.74	74.50											
	mm	620	762	780	860	1025	1288	1540	1785	610	776	785	874	1118	1358	1680	1892	610	776	785	874	1025	1368	1568	1892											
W	in	14	14	14	16	20	24	24	24	14	18	18	20	24	24	24	12	16	16	20	24	24	24	24	24											
	mm	350	350	350	400	500	610	610	610	350	450	450	500	610	610	610	300	400	400	500	600	610	610	610	610											
Weight RF	kg	62	86	86	140	380	948	62	86	112	158	265	494	62	86	112	158	265	494	62	86	112	158	265	494											

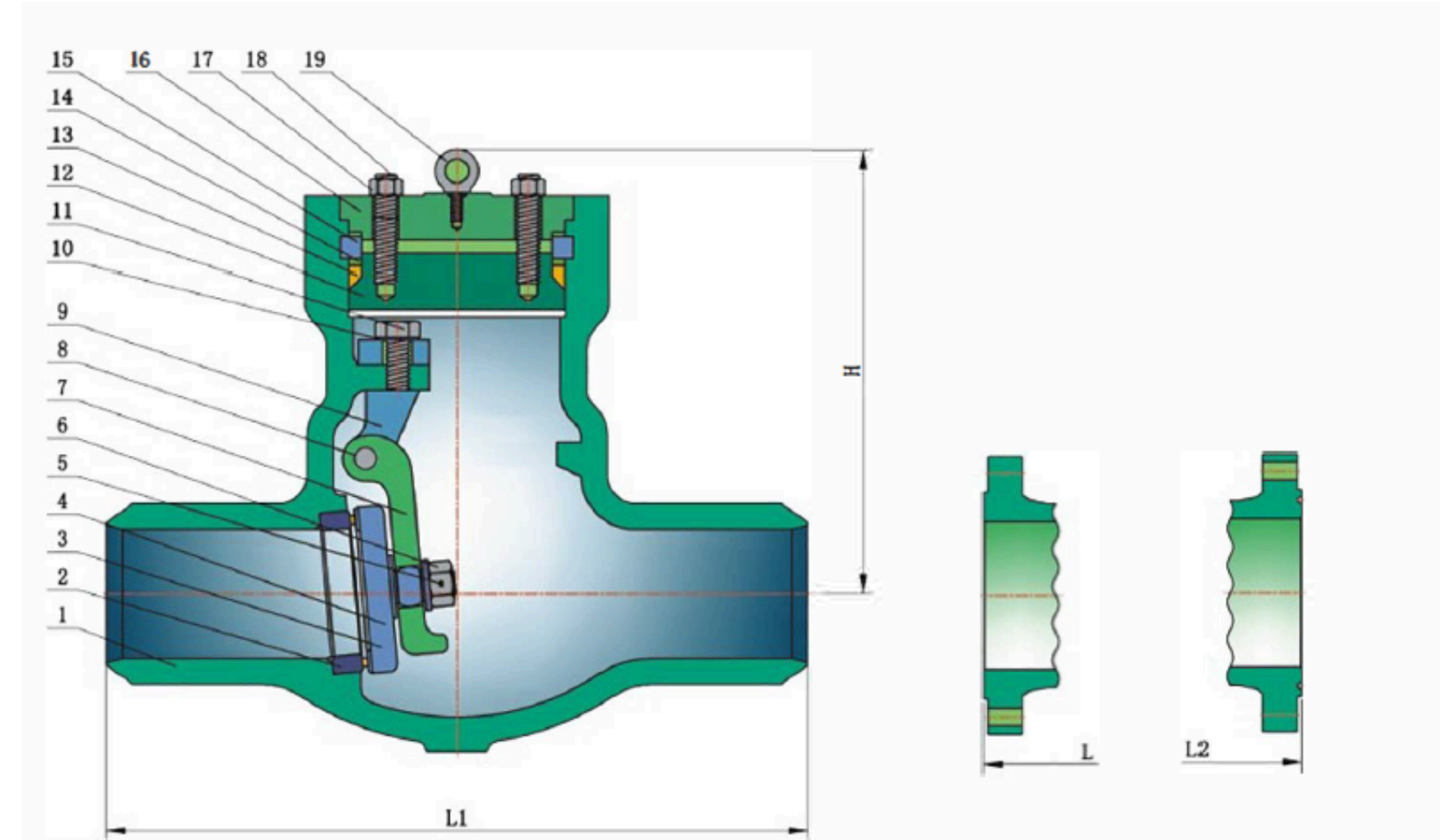
KPI Valve 22

Pressure Seal Swing Check Valve Class 900-2500

FEATURES	
Pressure Seal	
Swing Type Disc	
Type 1 Standard	
Type 2 Optional	
With Eye Bolt	
By Pass On Request	
Lever & Wight Optional	

SPECIFICATIONS	
Design	ASME B16.34
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
BW End	ASME B16.25
Test	API 598
Special	NACE MR-01-75

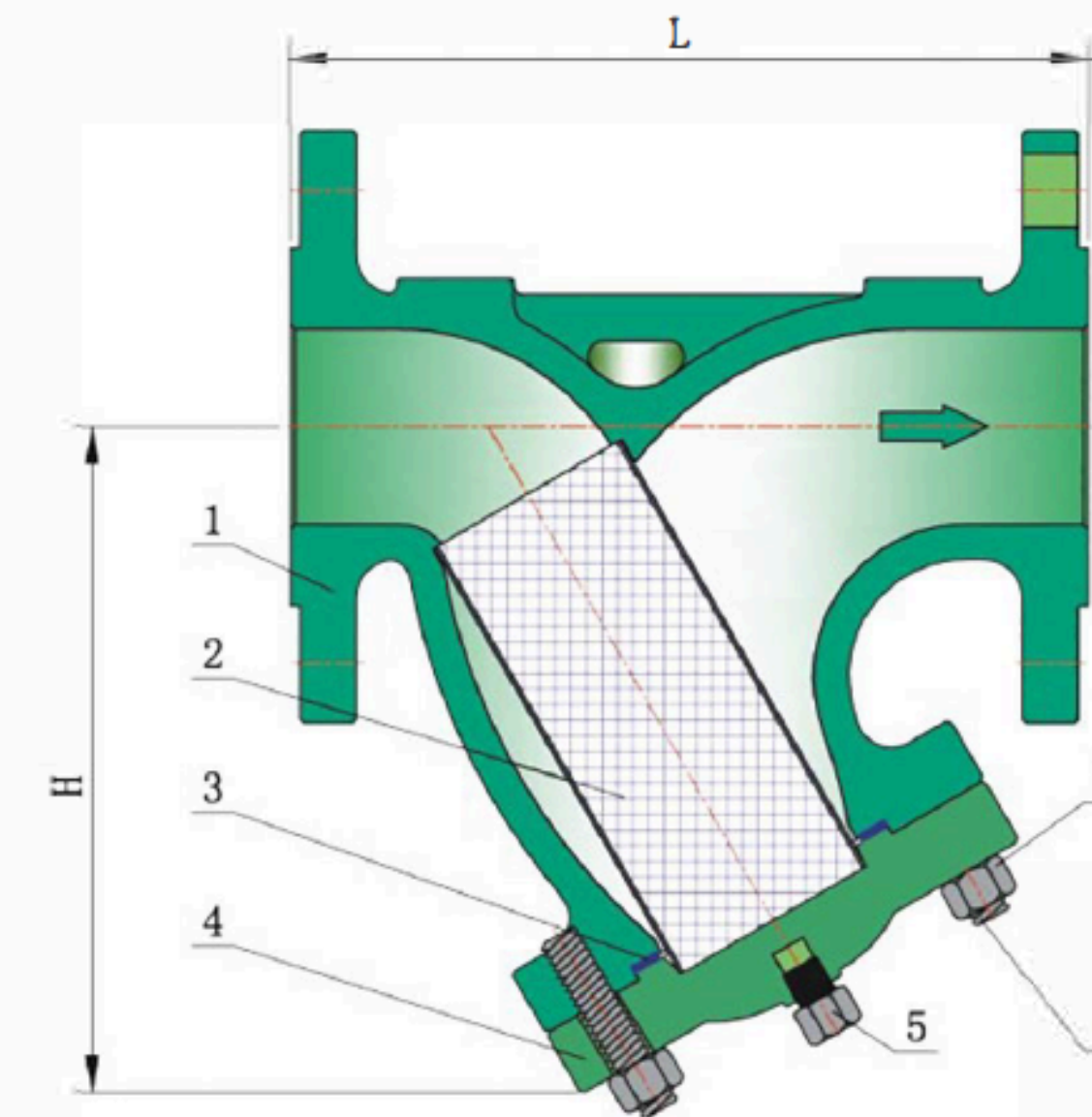
STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR. WCB
2	Seat Ring	ASTM A105+Stellite Faced
3	Disc	ASTM A216 GR.WCB+13Cr Faced
4	Disc Washer	ASTM A276 Type 410
5	Disc Nut Pin	Stainless Steel
6	Disc Nut	Stainless Steel
7	Higne	ASTM A216 GR.WCB
8	Hinge Pin	ASTM A182 GR.F6
9	Bearing Bracket	ASTM A216 GR.WCB
10	Spring Washer	Carbon Steel
11	Hex, Bolt	Carbon Steel
12	Bonnet	ASTM A216 GR.WCB
13	Gasket	ASTM A182 GR.F304
14	Thrust Ring	ASTM A 276 Type 410
15	Separate Ring	ASTM A 276 Type410
16	Cover	ASTM A216 GR.WCB
17	Cover Bolt	ASTM A193 GR.B7
18	Cover Bolt Nut	ASTM A194 GR.2H
19	Eye Bolt	Carbon steel



Dimensions and Weights		CALSS 900								CALSS 1500								CALSS 2500							
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"	2"	2.5"	3"	4"	6"	8"	10"	12"
	mm	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300	50	65	80	100	150	200	250	300
L/L1	in	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00
	mm	368	419	381	457	610	737	838	965	368	419	470	546	705	832	991	1130	451	508	578	673	914	1022	1270	1422
L2	in	14.62	14.62	15.12	18.12	24.12	29.12	33.12	38.12	14.62	16.62	18.62	21.62	28.00	33.13	39.38	45.12	17.87	20.25	23.00	26.88	36.50	40.87	50.88	56.88
	mm	371	422	384	460	613	740	841	968	422	473	549	711	841	1000	1146	1454	454	514	584	683	927	1038	1282	1445
H	in	11.65	11.81	11.81	12.87	17.36	19.76	26.14	30.51	11.65	11.81	13.43	16.22	20.12	26.77	29.76	33.74	16.38	16.50	17.36	18.86	20.12	27.99	33.50	39.37
	mm	296	300	300	327	441	502	664	775	296	300	341	412	511	680	756	857	416	419	441	479	511	711	851	1000
Weight BW	kg	50	77	68	115	230	387	632	910	50	77	115	130	452	845	1280	1780	110	190	260	535	1110	1980	2880	4350

KPI Valve 23

Cast steel Y-strainer Class 150-600



SPECIFICATIONS	
Design	ASME B16.34
Face to Face	ASME B16.10
End to End	ASME B16.10
End Flange	ASME B16.5
Test	API 598

STANDARD MATERIALS OF PARTS		
ITEM	PART NAME	MATERIAL
1	Body	ASTM A216 GR. WCB
2	Screen	ASTM A276 Type 304
3	Gasket	304+Graphite
4	Cover	ASTM A216 GR.WCB
5	Plug	ASTM A105
6	Cover Bolt	ASTM A193 GR.B7
7	Cover Bolt Nut	ASTM A194 GR.2H

Dimensions and Weights		CALSS 150									
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"		
	mm	50	65	80	100	150	200	250	300		
L	in	8.00	8.50	9.50	11.50	16.00	19.50	24.50	27.50		
	mm	203	216	241	292	406	495	622	699		
H	in	5.71	7.20	8.11	8.98	12.95	17.32	19.96	23.39		
	mm	145	183	206	228	329	440	507	594		
Weight	kg	12	18	21	32	48	105	169	215		

Dimensions and Weights		CALSS 300									
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"		
	mm	50	65	80	100	150	200	250	300		
L	in	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00		
	mm	267	292	318	356	445	559	622	711		
H	in	6.70	7.28	9.25	11.42	14.76	17.72	22.64	26.18		
	mm	170	185	235	290	375	450	575	665		
Weight	kg	15	18	35	51	92	182	285	307		

Dimensions and Weights		CALSS 600									
SIZE	in	2"	2.5"	3"	4"	6"	8"	10"	12"		
	mm	50	65	80	100	150	200	250	300		
L	in	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00		
	mm	292	330	356	432	559	660	787	838		
H	in	7.28	7.87	9.84	11.81	16.34	19.29	23.43	26.77		
	mm	185	200	250	300	415	490	595	680		
Weight	kg	35	40	48	90	220	360	500	781		

KPI Valve 24

Stem Data & Operation Torques

Gate Valve

CLASS	ITEM	VALVE SIZE																
		2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	32"
150	Stem Thread O.D.	3/4"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/2"	2 3/4"	2 3/4"	3"
	Thread Per Inch	5	5	5	5	5	4	4	4	3	3	3	3	3	3	3	3	2
	Pitch(in)	0.2	0.2	0.5	0.2	0.2	0.25	0.25	0.25	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.5
	Turns to Open	13	16	18	24	34	36	44	52	44	53	58	64	75	88	94	99	74
	Torque(N.m)	16	18	24	38	76	111	182	269	325	435	565	748	1256	1587	1935	2127	3239
300	Stem Thread O.D.	3/4"	3/4"	7/8"	1"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	2 3/4"	3"
	Thread Per Inch	5	5	5	5	4	4	4	3	3	3	3	3	3	3	3	2	2
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.25	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.5
	Turns to Open	14	16	18	24	26	36	44	40	45	53	58	64	75	88	94	99	74
	Torque(N.m)	23	26	35	55	159	291	458	661	810	1088	1430	1778	2823	4115	5653		
600	Stem Thread O.D.	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"	1 7/8"	2"	2 1/4"	2 1/4"	2 3/4"	2 3/4"	2 3/4"	3"
	Thread Per Inch	5	5	5	5	4	3	3	3	3	3	3	3	3	2			
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.5		
	Turns to Open	14	16	18	24	27	27	33	40	45	53	58	64	51				
	Torque(N.m)	35	47	70	122	406	641	1023	1508	2098	2816	3038	3981	6896				
900	Stem Thread O.D.	3/4"	1 1/8"	1 1/4"	1 3/8"	1 3/4"	1 7/8"	2 1/8"	2 1/4"	2 3/4"	3"							
	Thread Per Inch	5	5	5	4	3	3	3	3	3	3							
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333									
	Turns to Open	14	16	18	21	22	28	34	40									
	Torque(N.m)	80	90	95	159	569	978	1728	2601									
1500	Stem Thread O.D.	3/4"	1 1/8"	1 1/4"	1 3/8"	1 3/4"	1 7/8"	2 1/8"	2 1/4"	2 3/4"	3"							
	Thread Per Inch	5	5	4	4	3	3	3	3									
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333									
	Turns to Open	14	16	16	22	22	28	34	40									
	Torque(N.m)	117	172	224	349	1009	2025	3259	4437									
2500	Stem Thread O.D.	3/4"	1 1/8"	1 1/4"	1 3/8"	1 3/4"	1 7/8"	2 1/8"	2 1/4"	2 3/4"	3"							
	Thread Per Inch	5	5	4	4	3	3	2	2									
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333									
	Turns to Open	15	17	17	22	28	28	34	40									
	Torque(N.m)	165	224	281	559	1407	2913	5748	8332									

Globe Valve

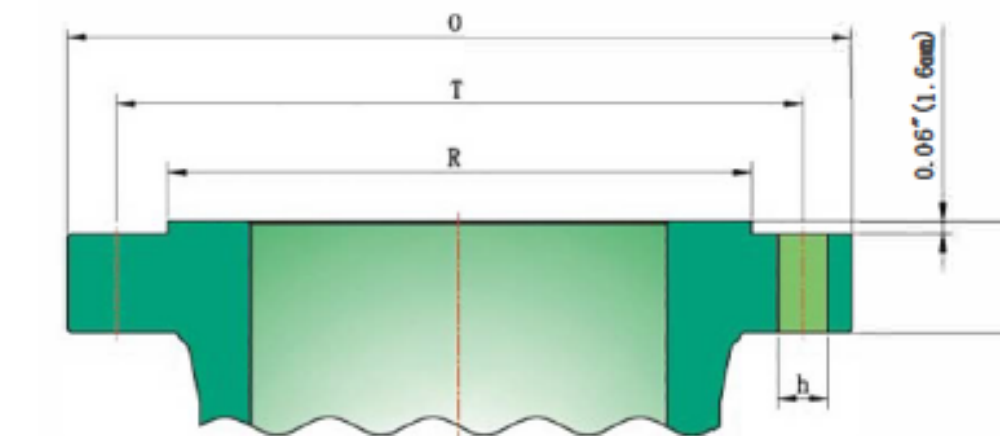
CLASS	ITEM	VALVE SIZE							
		2"	2.5"	3"	4"	6"	8"	10"	12"
150	Stem Thread O.D.	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"
	Thread Per Inch	5	5	5	5	4	4	4	3
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.25	0.25	0.333
	Turns to Open	4	7	7	5	8	7	9	10
	Torque(N.m)	47	66	84	157	239	326	620	1198
300	Stem Thread O.D.	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"
	Thread Per Inch	5	5	5	5	4	4	4	3
	Pitch(in)	0.2	0.2	0.2	0.2	0.25	0.25	0.333	0.333
	Turns to Open	4	8	7	8	8	7	9	9
	Torque(N.m)	62	85	118	218	727	1309	2160	3100
600	Stem Thread O.D.	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 3/4"	2"	2 1/8"
	Thread Per Inch	5	5	5	4	3	3	3	3
	Pitch(in)	0.2	0.2	0.2	0.25	0.333	0.333	0.333	0.333
	Turns to Open	8	8	8	8	9	9	9	9
	Torque(N.m)	142	244	316	602	1590	2782	4579	6216
900	Stem Thread O.D.	1 1/8"	1 1/4"	1 3/8"	1 3/4"	1 7/8"	2"		
	Thread Per Inch	5	4	4	4	3	3		
	Pitch(in)	0.2	0.25	0.25	0.25	0.333	0.333		
	Turns to Open	8	7	7	8	9	9		
	Torque(N.m)	285	412	528	1063	1792	3439		
1500	Stem Thread O.D.	1 1/4"	1 1/4"	1 3/8"	1 1/2"	2"	2 1/4"		
	Thread Per Inch	5	4	4	4	3	3		
	Pitch(in)	0.2	0.25	0.2	0.25	0.333	0.333		
	Turns to Open	8	7	7	8	9	9		
	Torque(N.m)	352	772	876	1816	3968	5011		
2500	Stem Thread O.D.	1 1/4"	1 1/2"	1 3/4"	1 3/4"	2"	2 1/2"		
	Thread Per Inch	4	4	3	3	3	3		
	Pitch(in)	0.25	0.25	0.333	0.333	0.333	0.333		
	Turns to Open	7	7	6	6	9	9		
	Torque(N.m)	502	824	959	2082	6530	9682		

KPI Valve 25

Steel End Flange Dimensions Class 150-300

ASME B16.5/ B16.47

CLASS 150 300 RF



CLASS	SIZE	O		R		C		T		h		Bolt		
		in	mm	in	mm	in	mm	in	mm	in	mm	QTY.	Diameter	
150	2	50	6.00	152	3.62	92	0.62	16	4.75	120.5	0.75	19	4	5/8
	2.5	65	7.00	178	4.12	105	0.69	18	5.50	139.5	0.75	19	4	5/8
	3	80	7.50	190	5.00	127	0.75	19	6.00	152.5	0.75	19	4	5/8
	4	100	9.00	229	6.19	157	0.94	24	7.50	190.5	0.75	19	8	5/8
	6	150	11.00	279	8.50	216	1.00	26	9.50	241.5	0.88	22	8	3/4
	8	200	13.50	343	10.62	270	1.12	29	11.75	298.5	0.88	22	8	3/4
	10	250	16.00	406	12.75	324	1.19	31	14.25	362	1.00	25	12	7/8
	12	300	19.00	483	15.00	381	1.25	32	17.00	432	1.00	25	12	7/8
	14	350	21.00	533	16.25	413	1.38	35	18.75	476	1.12	29	12	1
	16	400	23.50	597	18.50	470	1.44	37	21.25	540	1.12	29	16	1
	18	450	25.00	635	21.00	533	1.56	40	22.75	578	1.25	32	16	1 1/8
	20	500	27.50	699	23.00	584	1.69	43	25.00	635	1.25	32	20	1 1/8
	24	600	32.00	813	27.25	692	1.88	48	29.50	749.5	1.38	35	20	1 1/4
	28	700	36.50	927	31.50	800	2.81	72	34.00	863.5	1.38	35	28	1 1/4
	30	750	38.75	984	33.75	857	2.94	75	36.00	914.5	1.38	35	28	1 1/4
	300	32	800	41.75	1060	36.00	914	3.19	81	38.50	978	1.62	41	28
36		900	46.00	1168	40.25	1022	3.56	91	42.75	1086	1.62	41	32	1 1/2
2		50	6.50	165	3.62	92	0.88	23	5.00	127	0.75	19	8	5/8
2.5		65	7.50	190	4.12	105	1.00	26	5.88	179	0.88	22	8	3/4
3		80	8.25	210	5.00	127	1.12	29	6.62	168.5	0.88	22	8	3/4
4		100	10.00	254	6.19	157	1.25	32	7.88	200	0.88	22	8	3/4
6		150	12.50	318	8.50	216	1.44	37	10.62	270	0.88	22	12	3/4
8		200	15.00	381	10.62	270	1.62	42	13.00	330	1.00	25	12	7/8
10		250	17.50	445	12.75	324	1.88	48	15.25	387.5	1.12	29	16	1
12		300	20.50	521	15.00	381	2.00	51	17.75	451	1.25	32	16	1 1/8
14		350	23.00	584	16.25	413	2.12	54	20.25	514.5	1.25	32	20	1 1/8
16		400	25.50	648	18.50	470	2.25	58	22.50	571.5	1.38	35	20	1 1/4
18		450	28.00	711	21.00	533	2.38	61	24.75	628.5	1.38	35	24	1 1/4
20		500	30.50	775	23.00	584	2.50	64	27.00	686	1.38	35	24	1 1/4
24		600	36.00	914	27.25	692	2.75	70	32.00	813	1.62	41	24	1 1/2
28		700	40.75	1035	31.50	800	3.38	86	37.00	940	1.75	45	28	1 5/8
30	750	43.00	1092	33.75	857	3.62	92	39.25	997	1.88	48	28	1 3/4	

End Flange Dimensions: Size 2" - 24" to ASME B16.5, Size 28" - 36" to ASME B16.47 A.

Tolerances: Unit inch

Thickness C: NPS ≤ 18" +0.12,-0

NPS ≥ 20" +0.19,-0

Drilling and Facing Bolt Circle Diameter h: ±0.06

Eccentricity Between Center to Center of Adjacent Bolt Holes: ±0.03

Bolt Circle Diameter and Machined Facing Diameters:

NPS ≤ 2 1/2" ±0.03

NPS ≤ 2 1/2" ±0.06

Outside Diameter R: 0.06 Raised Face: ±0.03

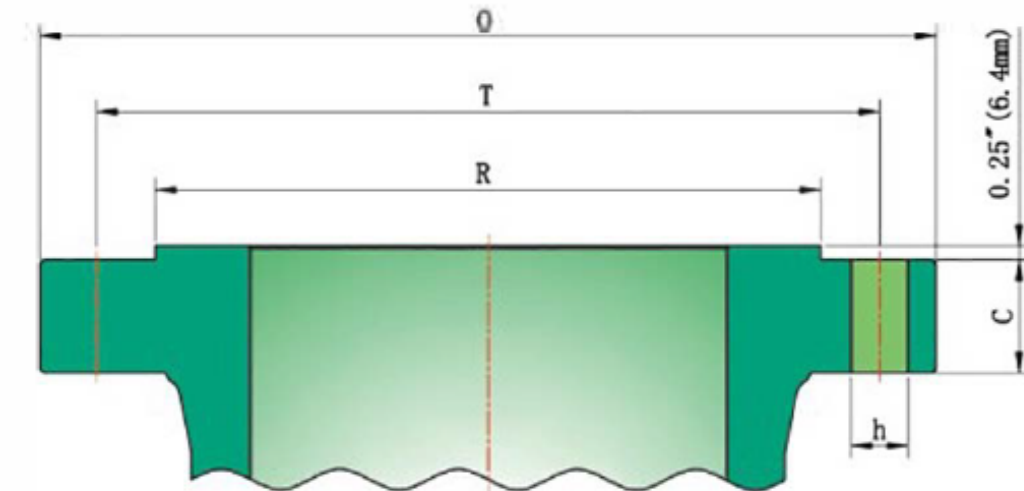
0.25 Raised Face: ±0.02

KPI Valve 26

Steel End Flange Dimensions Class 600-2500

ASME B16.5

CLASS 600 2500 RF



CLASS	SIZE		O		R		C		T		h		Boit	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		QTY.
600	2	50	6.50	165	3.62	92	1.00	26	5.00	127	0.75	19	8	5/8
	2.5	65	7.50	190	4.12	105	1.12	29	5.88	149	0.88	22	8	3/4
	3	80	8.25	210	5.00	127	1.25	32	6.62	168	0.88	22	8	3/4
	4	100	10.75	273	6.19	157	1.50	38	8.50	216	1.00	25	12	7/8
	6	150	14.00	356	8.50	216	1.88	48	11.50	292	1.12	29	12	1
	8	200	16.50	419	10.62	270	2.19	56	13.75	349	1.25	32	12	1 1/8
	10	250	20.00	508	12.75	324	2.50	64	17.00	432	1.38	35	16	1 1/4
	12	300	22.00	559	15.00	381	2.62	67	19.25	489	1.38	35	20	1 1/4
	14	350	23.75	603	16.25	413	2.75	70	20.75	527	1.50	38	20	1 3/8
	16	400	27.00	686	18.50	470	3.00	77	23.75	603	1.62	41	20	1 1/2
	18	450	29.25	743	21.00	533	3.25	83	25.75	654	1.75	44	20	1 5/8
	20	500	32.00	813	23.00	584	3.50	89	28.50	724	1.75	44	24	1 5/8
24	600	37.00	940	27.25	692	4.00	102	33.00	838	2.00	51	24	1 7/8	
900	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	7/8
	2.5	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1
	3	80	9.50	241	5.00	127	1.50	38.5	7.50	190.5	1.00	26	8	7/8
	4	100	11.50	292	6.19	157	1.75	44.5	9.25	234.9	1.25	32	8	1 1/8
	6	150	15.00	381	8.50	216	2.19	56.0	12.50	317.5	1.25	32	12	1 1/8
	8	200	18.50	470	10.62	270	2.50	63.5	15.50	393.7	1.50	39	12	1 3/8
	10	250	21.50	545	12.75	324	2.75	70.0	18.50	469.9	1.50	39	16	1 3/8
	12	300	24.00	610	15.00	381	3.12	79.5	21.00	533.4	1.50	39	20	1 3/8
	14	350	25.25	640	16.25	413	3.38	86.0	22.00	558.8	1.62	42	20	1 1/2
	16	400	27.75	705	18.50	470	3.50	89.0	24.25	615.9	1.75	45	20	1 5/8
	18	450	31.00	785	21.00	533	4.00	102.0	27.00	685.8	2.00	51	20	1 7/8
	20	500	33.75	855	23.00	584	4.25	108.0	29.50	749.3	2.12	54	20	2
24	600	41.00	1040	27.25	692	5.50	140.0	35.50	901.7	2.62	67	20	2 1/2	
1500	2	50	8.50	216	3.62	92	1.50	38.5	6.50	165.1	1.00	26	8	1
	2.5	65	9.62	244	4.12	105	1.62	41.5	7.50	190.5	1.12	29	8	1 1/8
	3	80	10.50	267	5.00	127	1.88	48.5	8.00	203.2	1.25	32	8	1 1/4
	4	100	12.25	311	6.19	157	2.12	54.0	9.50	239.3	1.38	35	8	1 3/8
	6	150	15.50	394	8.50	216	3.25	83.0	12.50	317.5	1.50	39	12	1 1/2
	8	200	19.00	483	10.62	270	3.62	92.9	15.50	393.7	1.75	45	12	1 3/4
	10	250	23.00	585	12.75	324	4.25	108.0	19.00	481.0	2.00	51	12	2
	12	300	26.50	675	15.00	381	4.88	124.0	22.50	571.5	2.12	54	16	2 1/8
	14	350	29.50	750	16.25	413	5.25	133.5	25.00	635.0	2.38	61	16	2 3/8
	16	400	32.50	825	18.50	470	5.75	146.5	27.75	703.2	2.62	67	16	2 5/8
	18	450	36.00	915	21.00	533	6.38	162.0	30.50	774.0	2.88	74	16	2 7/8
	20	500	38.75	985	23.00	584	7.00	178.0	32.75	848.2	3.12	80	16	3 1/8
24	600	46.00	1170	27.25	692	8.00	203.5	39.00	998.0	3.62	93	16	3 5/8	
2500	2	50	9.25	235	3.62	92	2.00	51.0	6.75	170.7	1.12	29	8	1
	2.5	65	10.50	267	4.12	105	2.25	57.5	7.75	190.7	1.25	32	8	1 1/8
	3	80	12.00	305	5.00	127	2.62	67.0	9.00	222.0	1.38	35	8	1 1/4
	4	100	14.00	356	6.19	157	3.00	76.5	10.75	254.2	1.62	42	8	1 1/2
	6	150	19.00	483	8.50	216	4.25	108.0	14.50	364.2	2.12	54	8	2
	8	200	21.75	550	10.62	270	5.00	127.0	17.25	432.2	2.12	54	12	2
	10	250	26.50	675	12.75	324	6.50	165.5	21.50	533.2	2.62	67	12	2 1/2
	12	300	30.00	760	15.00	381	7.25	184.5	24.38	615.2	2.88	74	12	2 3/4

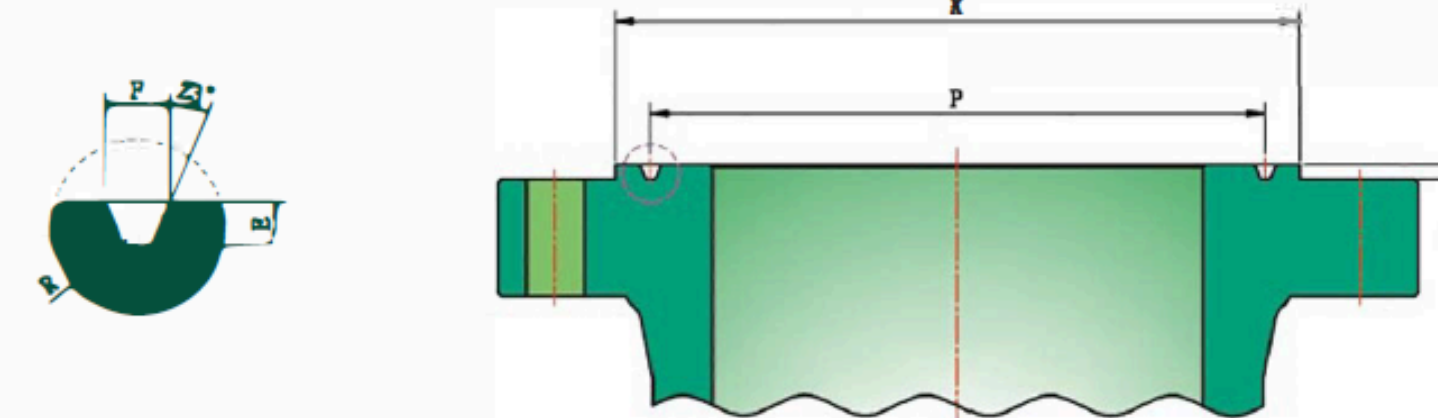
End Flange Dimensions: ASME B16.5 Tolerances: the Same as Class 150/300

KPI Valve 27

Dimensions of Ring Facing Class 150-2500

ASME B16.5/ B16.47

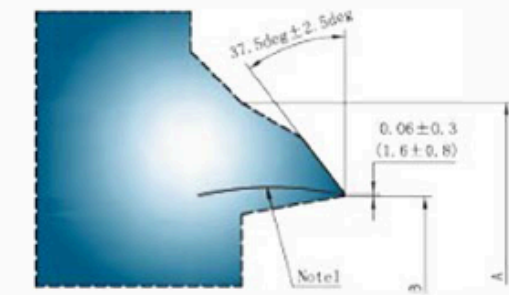
CLASS 150-2500 RTJ



CLASS	SIZE		Ring No.	P		E		F		R		K	
	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
150	2	50	R22	3.250	82.55	0.250	6.35	0.344	8.74	0.03	0.8	4.00	102
	2.5	65	R25	4.000	101.60	0.250	6.35	0.344	8.74	0.03	0.8	4.75	121
	3	80	R29	4.500	114.30	0.250	6.35	0.344	8.74	0.03	0.8	5.25	133
	4	100	R36	5.875	149.22	0.250	6.35	0.344	8.74	0.03	0.8	6.75	171
	6	150	R43	7.625	193.68	0.250	6.35	0.344	8.74	0.03	0.8	8.62	219
	8	200	R48	9.750	247.65	0.250	6.35	0.344	8.74	0.03	0.8	10.75	273
	10	250	R52	12.000	304.80	0.250	6.35	0.344	8.74	0.03	0.8	13.00	330
	12	300	R56	15.000	381.00	0.250	6.35	0.344	8.74	0.03	0.8	16.00	406
	14	350	R59	15.625	396.88	0.250	6.35	0.344	8.74	0.03	0.8	16.75	425
	16	400	R64	17.875	454.02	0.250	6.35	0.344	8.74	0.03	0.8	19.00	483
	18	450	R68	20.375	517.52	0.250	6.35	0.344	8.74	0.03	0.8	21.50	546
	20	500	R72	22.000	558.80	0.250	6.35	0.344	8.74	0.03	0.8	23.50	597
300	2	50	R26	3.250	82.55	0.312	7.92	0.469	11.91	0.03	0.8	4.25	108
	2.5	65	R26	4.000	101.60	0.312	7.92	0.469	11.91	0.03	0.8	5.00	127
	3	80	R31	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	5.75	146
	4	100	R37	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	6.88	175
	6	150	R45	8.312	211.13	0.312	7.92	0.469	11.91	0.03	0.8	9.50	214
	8	200	R49	10.625	269.88	0.312	7.92	0.469	11.91	0.03	0.8	11.88	302
	10	250	R53	12.750	323.85	0.312	7.92	0.469	11.91	0.03	0.8	14.00	356
	12	300	R57	15.000	381.00	0.312	7.92	0.469	11.91	0.03	0.8	16.25	413
	14	350	R61	16.500	419.10	0.312	7.92	0.469	11.91	0.03	0.8	18.00	457
	16	400	R65	18.500	469.50	0.312	7.92	0.469	11.91	0.03	0.8	20.00	508
	18	450	R69	21.000	533.40	0.312	7.92	0.469	11.91	0.03	0.8	22.62	575
	20	500	R73	23.000	584.20	0.375	9.52	0.531	13.49	0.06	1.5	25.00	635
600	2	50	R26	3.250	82.55	0.312	7.92	0.469	11.91	0.03	0.8	4.25	108
	2.5	65	R26	4.000	101.60	0.312	7.92	0.469	11.91	0.03	0.8	5.00	127
	3	80	R31	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	5.75	146
	4	100	R37	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	6.88	175
	6	150	R45	8.312	211.13	0.312	7.92	0.469	11.91	0.03	0.8	9.50	214
	8	200	R49	10.625	269.88	0.312	7.92	0.469	11.91	0.03	0.8	11.88	302
	10	250	R53	12.750	323.85	0.312	7.92	0.469	11.91	0.03	0.8	14.00	356
	12	300	R57	15.000	381.00	0.312	7.92	0.469	11.91	0.03	0.8	16.25	413
	14	350	R61	16.500	419.10	0.312	7.92	0.469	11.91	0.03	0.8	18.00	457
	16	400	R65	18.500	469.50	0.312	7.92	0.469	11.91	0.03	0.8	20.00	508
	18	450	R69	21.000	533.40	0.312	7.92	0.469	11.91	0.03	0.8	22.62	575
	20	500	R73	23.000	584.20	0.375	9.52	0.531	13.49	0.06	1.5	25.00	635
900	2	50	R27	3.750	95.25	0.312	7.92	0.469	11.91	0.03	0.8	4.88	124
	2.5	65	R27	4.250	107.96	0.312	7.92	0.469	11.91	0.03	0.8	5.38	137
	3	80	R35	4.875	123.82	0.312	7.92	0.469	11.91	0.03	0.8	6.62	168
	4	100	R39	5.875	149.22	0.312	7.92	0.469	11.91	0.03	0.8	7.62	194
	6	150	R46	8.312	211.12	0.375	9.52	0.531	13.49	0.06	1.5	9.75	248
	8	200	R50	10.625	269.88	0.438	11.13	0.656	16.66	0.06	1.5	12.50	318
	10	250	R54	12.750	323.85	0.438	11.13	0.656	16.66	0.06	1.5	14.62	371
	12	300	R58	15.000	381.00	0.562	14.27	0.906	23.01				

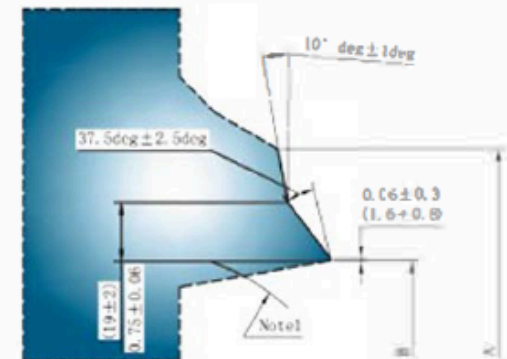
KPI Valve 28 ASME B16.25

Buttwelding End Dimensions



Note 1 Internal surface may be as formed or machined for dimension B at root face. Contour within the envelope shall be in accordance with section

Wall Thicknesses Not Over 0.88in(22mm)
Welding End Detail for joint Without Backing Ring



Wall Thicknesses Over 0.88in(22mm)
Welding End Detail for joint Without Backing Ring

Nominal Pipe Size		Schedule No. [Note(1)]	Wrought or Fabricated Components A [Note(1)]		Cast Steel Valves, A [Note(2)]		B		C [Note(3)]		T	
DN	NPS		mm	in	mm	in	mm	in	mm	in	mm	in
65	2.5	40	43.0	2.88	75	2.96	62.5	2.469	62.93	2.479	5.16	0.203
		60					59	2.323	59.69	2.341	7.01	0.276
		80					54	2.125	55.28	2.178	9.53	0.375
		100					45	1.771	47.43	1.868	14.02	0.552
		XXS					78	3.068	78.25	3.081	5.49	0.126
80	3	40	88.9	3.50	91	3.95	73.5	2.900	74.53	2.934	7.62	0.300
		60					66.5	2.625	68.38	2.692	11.13	0.438
		80					58.5	2.300	61.19	2.409	15.24	0.600
		100					90	3.548	90.52	3.564	5.74	0.226
		XXS					85.5	3.364	86.42	3.402	8.08	0.318
90	3.5	40	101.6	4.00	105	4.12	102	4.026	102.73	4.044	6.02	0.237
		60					97	3.826	98.28	3.869	8.56	0.337
		80					92	3.624	93.78	3.692	11.13	0.438
		100					87.5	3.428	89.65	3.530	13.49	0.531
		XXS					80	3.152	83.30	3.279	17.12	0.674
125	5	40	141.3	5.56	144	5.69	128	5.047	128.80	5.070	6.55	0.258
		60					122	4.813	123.58	4.866	9.53	0.375
		80					116	4.563	118.04	4.647	12.70	0.500
		100					109.5	4.313	112.47	4.428	15.88	0.625
		XXS					103	4.063	106.92	4.209	19.05	0.750
150	6	40	168.3	6.62	172	6.78	154	6.065	154.82	6.094	7.11	0.280
		60					145.5	5.761	148.06	5.828	10.97	0.432
		80					140	5.501	142.29	5.600	14.27	0.562
		100					132	5.187	135.31	5.326	18.26	0.719
		XXS					124.5	4.897	128.86	5.072	21.95	0.864
200	8	40	219.1	8.62	223	8.78	203	7.981	203.75	8.020	8.18	0.322
		60					198.5	7.813	200.02	7.783	10.31	0.406
		80					193.5	7.625	195.84	7.709	12.70	0.500
		100					189	7.437	191.65	7.544	15.09	0.594
		120					182.5	7.187	186.11	7.326	18.26	0.719
250	10	40	273.0	10.75	278	10.94	254.5	10.020	255.74	10.070	9.27	0.365
		60					247.5	9.75	249.74	9.834	12.70	0.500
		80					243	9.652	245.55	9.670	15.09	0.594
		100					236.5	9.312	240.01	9.451	18.26	0.719
		120					230	9.062	234.44	9.232	21.44	0.844
300	12	40	323.8	12.75	329	12.97	305	12.000	306.08	12.053	9.53	0.375
		60					303	11.938	304.72	11.999	10.31	0.406
		80					298.5	11.750	300.54	11.834	12.70	0.500
		100					295	11.626	297.79	11.725	14.27	0.562
		120					289	11.374	292.17	11.505	17.48	0.688
350	14	40	355.6	14.00	362	14.25	335	13.200	336.08	13.212	10.31	0.406
		60					330	13.000	332.34	13.084	12.70	0.500
		80					325.5	12.812	328.15	12.920	15.09	0.594
		100					317.5	12.500	321.22	12.646	19.05	0.750
		120					308	12.124	312.86	12.318	23.83	0.938
400	16	40	406.4	16.00	413	16.25	387.5	15.250	388.68	15.303	9.53	0.375
		60					381	15.000	383.14	15.084	12.70	0.500
		80					373	14.688	376.21	14.811	16.66	0.656
		100					363.5	14.312	367.84	14.482	21.44	0.844
		120					354	13.938	359.53	14.155	26.19	1.031
450	18	40	457.2	18.00	464	18.28	438	17.250	439.48	17.303	9.53	0.375
		60					432	17.000	433.94	17.084	12.70	0.500
		80					428.5	16.876	431.19	16.975	14.27	0.562
		100					419	16.500	422.82	16.646	19.05	0.750
		120					409.5	16.124	414.46	16.318	23.83	0.938
500	20	40	508.0	20.00	516	20.31	489	19.250	490.28	19.303	9.53	0.375
		60					482.5	19.000	484.74	19.084	12.70	0.500
		80					478	18.812	480.55	18.920	15.09	0.594
		100					467	18.376	470.88	18.538	20.62	0.812
		120					455.5	17.938	461.13	18.155	26.19	1.031
550	22	40	558.8	22.00	567	22.34	539	21.250	541.08	21.303	9.53	0.375
		60					533	21.000	535.54	21.084	12.70	0.500
		80					514	20.250	518.86	20.428	22.23	0.875
		100					501	19.750	507.75	19.990	28.58	1.125
		120					488.5	19.250	496.63	19.553	34.93	1.375
600	24	40	609.6	24.00	619	24.38	590.5	23.250	591.88	23.303	9.53	0.375
		60					584	23.000	586.34	23.084	12.70	0.500
		80					581	22.876	583.59	22.975	14.27	0.562
		100					574.5	22.624	577.97	22.755	17.48	0.688
		120					560.5	22.062	565.49	22.263	24.61	0.969
650	26	40	660.4	26.00	670	26.38	645.5	25.376	645.50	25.413	7.92	0.312
		60					635	25.000	637.14	25.084	12.70	0.500
		80					626	24.688	628.39	24.787	15.09	0.594
		100					619	24.376	621.14	24.475	17.48	0.688
		120					605	23.814	609.66	23.913	21.44	0.844
700	28	40	711.2	28.00	721	28.38	695.5	27.376	696.30	27.413	7.92	0.312
		60					686	27.000	687.94	27.084	12.70	0.500
		80					679.5	26.750	682.37	26.865	15.88	0.625
		100					673	26.438	675.80	26.549	18.26	0.719
		120					660.5	25.876	664.31	25.975	22.23	0.875
750	30	40	762.0	30.00	772	30.38	746	29.376	747.10	29.413	7.92	0.312
		60					736.5	29.000	738.74	29.084	12.70	0.500
		80					730	28.750	733.17	28.865	15.88	0.625
		100					717	28.188	720.68	28.313	19.05	0.750
		120					705	27.726	709.19	27.825	23.83	0.938
800	32	40	812.8	32.00	825	32.50	797	31.376	797.90	31.413	7.92	0.312
		60					787.5	31.000	789.54	31.084	12.70	0.500
		80					781	30.750	783.97	30.865	15.88	0.625
		100					778	30.624	781.17	30.755	17.48	0.688
		120					765	30.062	769.68	30.263	21.44	0.844
850	34	40	863.6	34.00	876	34.50	848	33.376	848.70	33.413	7.92	0.312
		60					838	33.000	840.34	33.084	12.70	0.500
		80					832	32.750	834.77	32.865	15.88	0.625
		100					828.5	32.624	831.97	32.755	17.48	0.688
		120					815	32.062	819.48	32.163	21.44	0.844
900	36	40	914.4	36.00	927	36.50	898.5	35.376	899.50	35.413	7.92	0.312
		60					889	35.000	891.50	35.084	12.70	0.500
		80					882.5	34.750	885.57	34.865	15.88	0.625
		100					876	34.500	878.00	34.584	18.26	0.719
		120					863	33.938	867.51	34.037	22.23	0.875

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Buttwelding End Dimensions

Nominal Pipe Size		Schedule No. [Note(1)]	O.D. at Welding Ends				B		C [Note(3)]		T	
DN	NPS		Wrought or Fabricated Components A [Note(1)]		Cast Steel Valves, A [Note(2)]		mm	in	mm	in	mm	in
400	16	STD	406.4	16.00	413	16.25	387.5	15.250	388.68	15.303	9.53	0.375
		40					381	15.000	383.14	15.084	12.70	0.500
		60					3					

KPI Valve 30

Materials

Material	CHEMICAL COMPOSITIONS(%) max									MECHANICAL PROPERTIES				
	C	Mn	P	S	Si	Ni	Cr	Mo	Other	Tensile, min MPa(ksi)	Yield, min MPa(ksi)	Elongation min (%)	Reduction of Area min(%)	Hardness Brinell
WCB	0.30	1.00	0.04	0.045	0.60	0.50	0.50	0.20	Cu 0.30 V0.03	485-655 (70-95)	250(36)	22	35	
WC1	0.25	0.50-0.80	0.04	0.045	0.60	0.50	0.35	0.45-0.65	Cu 0.50 V0.10	450-620 (65-90)	240(35)	24	35	
WC6	0.05-0.20	0.50-0.80	0.04	0.045	0.60	0.50	1.00-1.50	0.45-0.65	Cu 0.50 V0.10	485-655 (70-95)	275(40)	20	35	
WC9	0.05-0.18	0.40-0.70	0.04	0.045	0.60	0.50	2.00-2.75	0.90-1.20	Cu 0.50 V0.10	485-655 (70-95)	275(40)	20	35	
C5	0.20	0.40-0.70	0.04	0.045	0.75	0.50	4.00-6.50	0.45-0.65	Cu 0.50 V0.10	620-795 (90-115)	415(60)	18	35	
C12	0.20	0.35-0.65	0.04	0.045	1.00	0.50	8.00-10.00	0.90-1.20	Cu 0.50 V0.10	620-795 (90-115)	415(60)	18	35	
CA15	0.15	1.00	0.04	0.040	1.50	1.00	11.50-14.00	0.50		620-795 (90-115)	450(65)	18	30	
LCB	0.30	1.00	0.04	0.045	0.60	0.50	0.50	0.20	Cu 0.30 V0.03	450-650 (65-90.0)	240(35.0)	24	35	J(lbf · ft) 18(13)
LCC	0.25	1.20	0.04	0.045	0.60	0.50	0.50	0.20	Cu 0.30 V0.03	485-655 (70.0-95.0)	275(40.0)	22	35	J(lbf · ft) 20(15)
LC2	0.25	0.50-0.80	0.04	0.045	0.60	2.0-3.0				485-655 (70.0-95.0)	275(40.0)	24	35	J(lbf · ft) 20(15)
LC3	0.15	0.50-0.80	0.04	0.040	0.60	3.0-4.0				485-655 (70.0-95.0)	275(40.0)	24	35	J(lbf · ft) 20(15)
CF8	0.08	1.50	0.040	0.040	2.00	8.0-11.0	18.0-21.0			485(70)	205(30)	35		
CF8M	0.08	1.50	0.040	0.040	1.50	9.0-12.0	18.0-21.0	2.0-3.0		485(70)	205(30)	30		
CF3	0.03	1.50	0.040	0.040	2.00	8.0-12.0	17.0-21.0	0.50		485(70)	205(30)	35		
CF3M	0.03	1.50	0.040	0.040	1.50	9.0-12.0	17.0-21.0	2.0-3.0		485(70)	205(30)	30		
CF8C	0.08	1.50	0.040	0.040	2.00	27.5-30.5	18.0-21.0	0.50	No ≥8xC≤1	485(70)	205(30)	30		
CN7M	0.07	1.50	0.040	0.040	1.50	0.40	19.0-22.0	2.0-3.0	Cu0.40 V0.03 Nb0.02	450(62)	170(25)	35		
A105	0.35	0.60-1.05	0.040	0.050	0.35		0.30	0.12		485(70)	250(36)	22	30	≤187
F1	0.28	0.60-0.90	0.045	0.450	0.15-0.35			0.44-0.65		485(70)	275(40)	20	30	143-192
F5	0.15	0.30-0.60	0.030	0.030	0.50	0.50	4.0-6.0	0.44-0.65		485(70)	275(40)	20	35	143-217
F11-1	0.05-0.15	0.30-0.60	0.030	0.030	0.50-1.00		1.00-1.50	0.44-0.65		415(60)	205(30)	20	45	121-174
F22-1	0.05-0.15	0.30-0.60	0.040	0.040	0.50		2.00-2.50	0.87-1.13		415(60)	205(30)	20	35	≤170
F6A	0.15	1.00	0.040	0.030	1.00	0.50	11.5-13.5			585(85)	380(55)	18	35	167-229
F304	0.08	2.00	0.040	0.030	1.00	8.0-11.0	18.0-20.0			515(75)	205(30)	30	50	
F304L		2.00	0.040	0.030	1.00	8.0-13.0	18.0-20.0			485(70)	170(70)	30	50	

KPI Valve 31

Materials

Material	CHEMICAL COMPOSITIONS(%) max									MECHANICAL PROPERTIES				
	C	Mn	P	S	Si	Ni	Cr	Mo	Other	Tensile, min MPa(ksi)	Yield, min MPa(ksi)	Elongation min (%)	Reduction of Area min(%)	Hardness Brinell
F316	0.08	2.00	0.040	0.030	1.00	10.0-14.0	16.0-18.0	2.00-3.00		515(75)	250(30)	30	50	
F316L	0.035	2.00	0.040	0.030	1.00	10.0-15.0	16.0-18.0	2.00-3.00		485(70)	170(25)	30	50	
F321	0.08	2.00	0.040	0.030	1.00	9.0-12.0	≥17.0		To ≥5xC≤0.70	515(75)	205(30)	30	50	
F347	0.08	2.00	0.040	0.030	1.00	9.0-13.0	17.0-20.0		Nb+Ta ≥5xC≤0.70	515(75)	205(30)	30	50	
410	0.15	1.00	0.040	0.030	1.00		11.50-13.50			480(70)	275(40)	20	45	
416	0.15	1.25	0.06	≥0.15	1.00		12.00-14.00							≤262
420	Over 0.15	1.00	0.040	0.030	1.00		12.00-14.00							≤241
D-2	3.00	0.70-1.25	0.08		1.50-3.00	18.00-22.00	1.75-2.75			400(58)	207(30)	8.0		139-202
B7	0.37-0.49	0.65-1.10	0.035	0.040	0.15-0.35		0.75-1.20	0.15-0.25		860(125)	720(105)	16	50	
B7M	0.37-0.49	0.65-1.10	0.035	0.040	0.15-0.35		0.75-1.20	0.15-0.25		690(100)	550(80)	18	50	≤HB235 or HRB 99
B16	0.36-0.47	0.45-0.70	0.035	0.040	0.15-0.35		0.80-1.15	0.50-0.65	V0.25-0.35	860(125)	725(105)	18	50	
B8	0.08	2.00	0.030	0.030	1.00	8.00-10.50	18.00-20.00			515(75)	205(30)	30	50	≤HB223 or HRB 96
B8M	0.08	2.00	0.030	0.030	1.00	10.00-14.00	18.00-20.00	2.00-3.00		515(75)	205(30)	30	50	≤HB223 or HRB 96
L7	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35		0.80-1.10	0.15-0.25		860(125)	725(105)	16	50	
L7M	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35		0.80-1.10	0.15-0.25		690(100)	550(80)	18	50	≤HB235 or HRB 99
B			0.04	0.05						415-690 (60-100)		18		HRB121-212 HRC 68-95
2H	≥0.40	1.00	0.040	0.050	0.40				Cu0.40 V0.03 Nb0.02					HRB248-352 HRC 24-38
2HM	≥0.40	1.00	0.040	0.050	0.40									HRB248-352 HRC ≤22
4	0.40-0.50	0.70-0.90	0.035	0.040	0.15-0.35			0.20-0.30						HRB248-352 HRC 24-38
7	0.37-0.49	0.65-1.10	0.040	0.040	0.15-0.35		0.75-1.20	0.15-0.25						HRB248-352 HRC 24-38
7M	0.37-0.49	0.65-1.10	0.040	0.040	0.15-0.35		0.75-1.20	0.15-0.25						HRB248-352 HRC ≤22
8	0.08	2.00	0.045	0.030	1.00	8.00-10.50	18.0-20.0							HB126-300 HRC 60-105
8M	0.08	2.00	0.045	0.030	1.00	10.0-14.0	16.0-18.0	2.00-3.00						HB126-300 HRC 60-105

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