STAINLESS STEEL VALVE

Stainless steel valve are utilized in the chemical, petrochemical, food, paper, and pharmaceutical processing industries all over the world.

Stainless steel valve are designed and manufactured in conformity with API, ANSI, BS and other standards recognized with quality meeting the stringent requirements for such industrial applications.

Stainless steel valve are specialized products through the processes of design, material selection, manufacturing, quality control, and experiences to final product.

PRODUCTION RANGE

UNIT : NPS

TYPE \ CLASS	150	300
GATE	1/2-24	1/2-24
GLOBE	1/2-12	1/2-12
SWING CHECK	1/2-24	1/2-24

INVESTMENT CASTING

Investment casting shall be manufactured up to 1 1/2" for class 150 and 300.

VALVE SHELL MATERIALS

Shell materials shall be in accordance with ASTM A351 Grade CF8M & CF8 and the others are optional.

ASTM DESIGNATION	MAXIMUM WORKING TEMPERATURE℉(℃)
A351 Gr. CF8	1500℉ (816℃) *
A351 Gr. CF8M	1500℉ (816℃) *
A351 Gr. CF3	800℉ (427℃)
A351 Gr. CF3M	850℉ (454℃)
A351 Gr. CF8C	1500℉ (816℃) *
A351 Gr. CN7M	300℉ (149℃)
A890 Gr 4A (UNS J92205)	600℉ (316℃)
A890 Gr 6A (UNS J93380)	600℉ (316℃)

※ At temperatures over 1000℉, use the material only when the carbon contents is 0.04% or higher.

OPTIONAL BONNET FLANGE GASKET MATERIAL

Depending on service conditions, various materials are available optionally for flange gasket and stem packing.

A. Gasket materials

1. Glass fiber sheet
2. Spiral wound material (Graphite or PTFE)
3. PTFE
4. Metal ring
5. Graphite

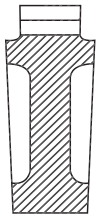
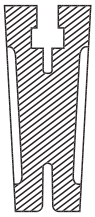
B. Packing materials

1. PTFE
2. Graphite
3. Glass fiber sheet

DESIGN FEATURES OF PK STAINLESS STEEL GATE VALVE WEDGES

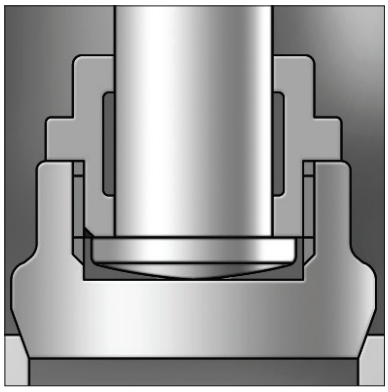
PK adopts an H-shaped flexible wedge of which the size is 3" and larger for Class 150 and 2" and higher for Class 300/600. The H-shaped flexible wedges are featured with mechanical flexibility to be able to adjust to the shape of body seat for secure mutual contacts.
It has a particular importance when large gate valve is applied to extremely high pressure and temperature that temporary deformation may occur in valve all the time.
If the H-shape wedge is provided, operating torque would get smaller, seat wear less, and valve closing tighter.

UNIT : NPS

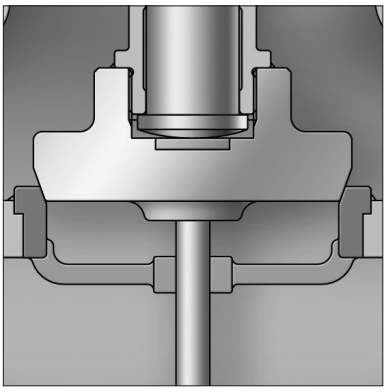
	ONE PIECE SOLID WEDGE	FLEXIBLE ONE PIECE WEDGE
CLASS		
150	2 1/2 & SMALLER	3 & LARGER
300	1 & SMALLER	1 1/2 & LARGER
600	-	2 & LARGER

DESIGN FEATURES OF GLOBE VALVE DISC

Globe valve adopts plug type disc. The bottom guide type plug disc shall be applied following the range shown below.



PLUG DISC



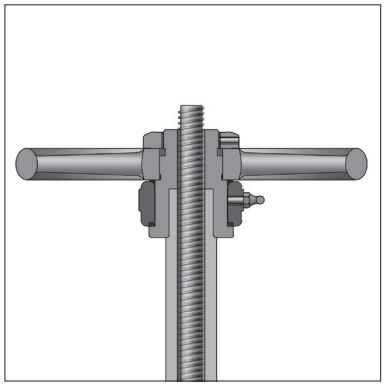
BOTTOM GUIDE TYPE PLUG DISC

UNIT : NPS

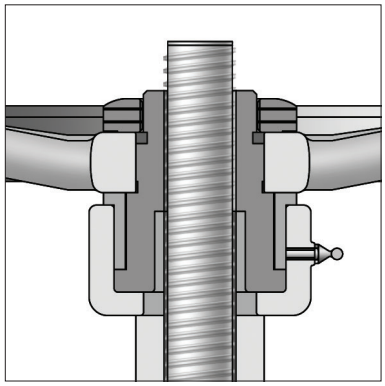
CLASS	SIZE
150	10 AND LARGER
300	8 AND LARGER

DESIGN FEATURES OF GATE VALVE YOKE SLEEVE

It is manufactured by two different ways depending on the valve size.



TYPE A



TYPE B

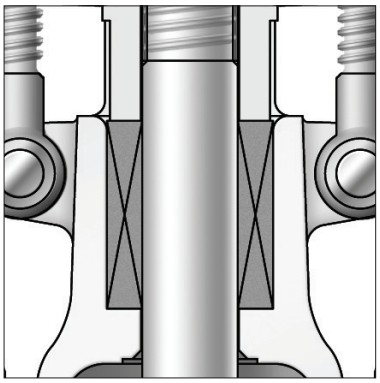
UNIT : NPS

TYPE A	TYPE B
5 AND SMALLER	6 AND LARGER

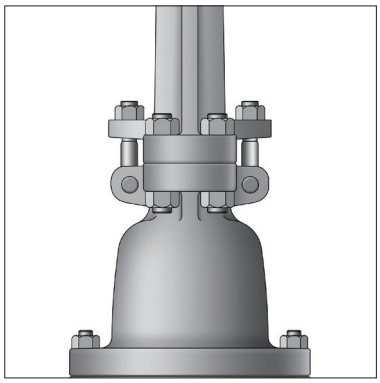
Yoke caps type B is made of CS 1020+Zn plating.

DESIGN FEATURES OF GATE VALVE YOKE

On 10" and smaller valve, the yoke is integrated with bonnet.
On 12" and larger valve, the yoke is separated from bonnet.



INTEGRAL YOKE



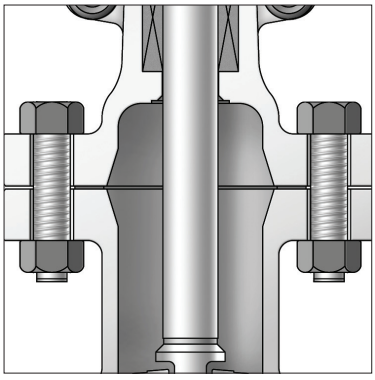
SEPARATE YOKE

DESIGN FEATURES OF VALVE BONNET BOLTS

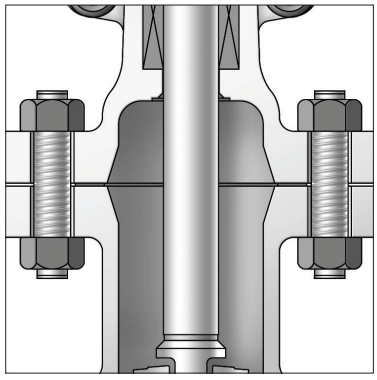
It is manufactured by two different ways depending on valve class and size.

UNIT : NPS

	CLASS	SIZE	BOLT
Type A	150	5 AND SMALLER	HEX. HEAD
	300	2 1/2 AND SMALLER	
Type B	150	6 AND LARGER	FULL THREAD. BOLT & NUT
	300	3 AND LARGER	



TYPE A
HEX. HEADED BOLT

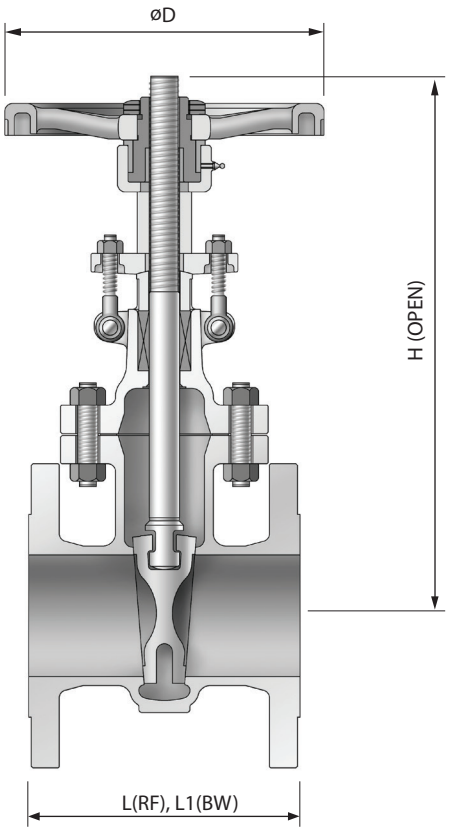


TYPE B
STUD BOLT

DESIGN FEATURES OF VALVE HAND WHEELS

Hand wheels are made in accordance with ASTM A 197 for external dimension 560mm and ASTM A216 WCB for over 560mm. A hammer blow type hand wheel of ASTM A216 WCB is provided for Class 150 (size 8) VALVE and Class 300 and over valve (size 6")

GATE VALVE



STANDARD MATERIAL SPECIFICATIONS

NO.	PART NAME	MATERIAL	
1	BODY	A351 - CF8	A351 - CF8M
2	BONNET	A351 - CF8	A351 - CF8M
3	WEDGE	A351 - CF8	A351 - CF8M
4	STEM	A479 - 304	A479 - 316
5	HAND WHEEL	A197	A197
6	BODY SEAT	A351 - CF8	A351 - CF8M
7	BACK SEAT	A351 - CF8	A351 - CF8M
8	GASKET	SPIRAL WOUND / GRAPHITE+316+316	
9	PACKING	GRAPHITE+GRAPHITE WITH INCONEL WIRE	
10	GLAND FLANGE	A351 - CF8	A351 - CF8
11	HINGE BOLT	A193 - B8	A193 - B8
12	HINGE NUT	A194 - 8	A194 - 8
13	HINGE PIN	A479 - 304	A479 - 304
14	PACKING GLAND	A479 - 304	A479 - 316
15	BONNET BOLT	A193 - B8	A193 - B8
16	BONNET NUT	A194 - 8	A194 - 8
17	YOKE CAP	A576 - 1020+Zn	A576 - 1020+Zn
18	YOKE SLEEVE	A439 - D2C	A439 - D2C
19	HANDLE NUT	304 S.S	304 S.S
20	SET SCREW	STEEL+ Cr	STEEL+ Cr
21	NIPPLE	STEEL+ Cr	STEEL+ Cr

END CONNECTION

- R.F FLANGED ENDS TO ASME B16.5
- B.W. ENDS TO ASME B16.25
- R.T.J FLANGED ENDS TO ASME B16.5
- CONSULT US FOR LARGER SIZE

DIMENSION AND WEIGHT

CLASS 150

UNIT : mm

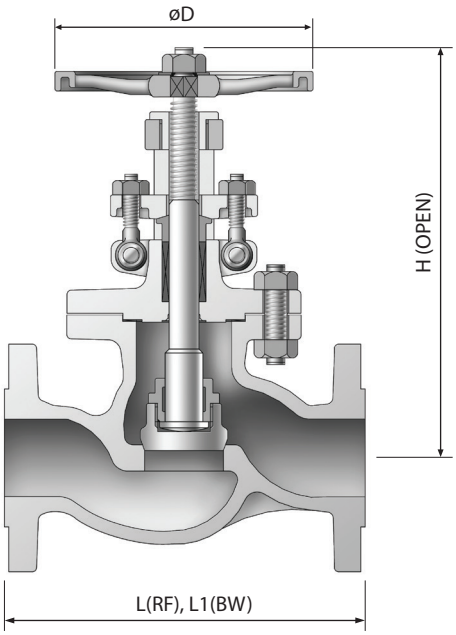
SIZE	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
L	108.0	117.3	127.0	165.1	177.8	190.5	203.2	228.6	266.7	292.1	330.2	355.6
L1	108.0	117.3	127.0	165.1	215.9	241.3	282.4	304.8	403.4	419.1	457.2	501.7
D	120	120	120	140	160	160	200	250	315	355	355	400
H	208	208	226	285	333	384	424	531	730	938	1114	1317
WEIGHT(kg)	6	6	6	9	12	18	23	35	62	102	147	213

CLASS 300

UNIT : mm

SIZE	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
L	139.7	152.4	165.1	190.5	215.9	241.3	282.4	304.8	403.4	419.1	457.2	501.7
L1	139.7	152.4	165.1	190.5	215.9	241.3	282.4	304.8	403.4	419.1	457.2	501.7
D	120	120	120	200	200	200	224	250	355	400	450	500
H	208	211	279	306	346	388	447	542	758	949	1152	1417
WEIGHT(kg)	8	8	8	16	18	29	39	54	112	202	253	390

GLOBE VALVE



STANDARD MATERIAL SPECIFICATIONS

NO.	PART NAME	MATERIAL	
1	BODY	A351 - CF8	A351 - CF8M
2	BONNET	A351 - CF8	A351 - CF8M
3	DISC	A351 - CF8	A351 - CF8M
4	STEM	A479 - 304	A479 - 316
5	HAND WHEEL	A197	A197
6	BODY SEAT	A351 - CF8	A351 - CF8M
7	BACK SEAT	A351 - CF8	A351 - CF8M
8	GASKET	SPIRAL WOUND / GRAPHITE+316+316	
9	PACKING	GRAPHITE+GRAPHITE WITH INCONEL WIRE	
10	GLAND FLANGE	A351 - CF8	A351 - CF8
11	HINGE BOLT	A193 - B8	A193 - B8
12	HINGE NUT	A194 - 8	A194 - 8
13	HINGE PIN	A479 - 304	A479 - 304
14	PACKING GLAND	A479 - 304	A479 - 316
15	BONNET BOLT	A193 - B8	A193 - B8
16	BONNET NUT	A194 - 8	A194 - 8
17	YOKE BUSH	A439 - D2C	A439 - D2C
18	LOCK NUT	A479 - 304	A479 - 316
19	HANDLE NUT	A194 - 8	A194 - 8
20	WASHER	304 S.S	304 S.S

END CONNECTION

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- R.T.J FLANGED ENDS TO ASME B16.5
- CONSULT US FOR LARGER SIZE

DIMENSION AND WEIGHT

CLASS 150

UNIT : mm

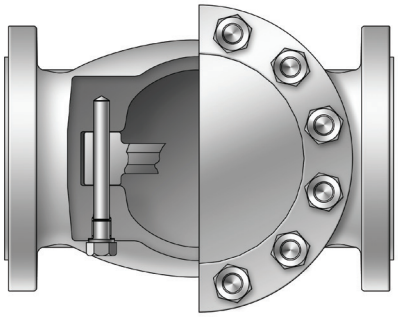
SIZE	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
L	108.0	117.3	127.0	165.1	203.2	215.9	241.3	292.1	406.4	495.3	622.3	698.5
L1	108.0	117.3	127.0	165.1	203.2	215.9	241.3	292.1	406.4	495.3	622.3	698.5
D	100	100	140	160	160	200	224	280	355	355	400	400
H	174	174	224	259	266	281	342	377	429	558	740	803
WEIGHT(kg)	4	4	4	10	13	21	27	42	76	149	241	395

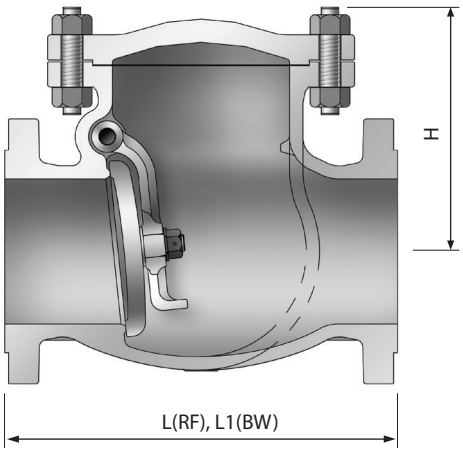
CLASS 300

UNIT : mm

SIZE	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
L	152.4	177.8	203.2	228.6	266.7	292.1	317.5	355.6	444.5	558.8	622.3	711.2
L1	152.4	177.8	203.2	228.6	266.7	292.1	317.5	355.6	444.5	558.8	622.3	711.2
D	100	100	140	160	160	200	224	280	355	400	450	500
H	185	194	224	267	329	354	383	443	567	625	881	989
WEIGHT(kg)	9	9	9	15	17	33	34	46	125	218	367	521

SWING CHECK VALVE





STANDARD MATERIAL SPECIFICATIONS

NO.	PART NAME	MATERIAL	
1	BODY	A351 - CF8	A351 - CF8M
2	BONNET	A351 - CF8	A351 - CF8M
3	DISC	A351 - CF8	A351 - CF8M
4	ARM	A351 - CF8	A351 - CF8M
5	ROD PIN	A479 - 304	A479 - 304
6	BODY SEAT RING	A351 - CF8	A351 - CF8M
7	PLUG BOLT	A479 - 304	A479 - 304
8	GASKET	SPIRAL WOUND / GRAPHITE+316+316	
9	PLUG GASKET	304 S.S	304 S.S
10	BONNET BOLT	A193 - B8	A193 - B8
11	BONNET NUT	A194 - 8	A194 - 8
12	DISC NUT	A194 - 8	A194 - 8M
13	PIN	304 S.S	304 S.S
14	WASHER	A240 - 304	A240 - 304

END CONNECTION

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- B.W. ENDS TO ASME B16.25
- R.T.J FLANGED ENDS TO ASME B16.5
- CONSULT US FOR LARGER SIZE

DIMENSION AND WEIGHT

CLASS 150

UNIT : mm

SIZE	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
L	108.0	117.3	127.0	165.1	203.2	215.9	241.3	292.1	355.6	495.3	622.3	698.5
L1	108.0	117.3	127.0	165.1	203.2	215.9	241.3	292.1	355.6	495.3	622.3	698.5
H	85	89	102	120	138	155	160	201	248	293	330	354
WEIGHT(kg)	5	5	5	11	13	18	22	36	62	119	155	235

CLASS 300

UNIT : mm

SIZE	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
L	152.4	177.8	215.9	241.3	266.7	292.1	317.5	355.6	444.5	533.4	622.3	711.2
L1	152.4	177.8	215.9	241.3	266.7	292.1	317.5	355.6	444.5	533.4	622.3	711.2
H	93	96	112	126	152	164	176	186	262	312	355	393
WEIGHT(kg)	10	10	10	14	19	25	33	53	109	199	231	308