

GATE VALVE (Standard Manual Type P)

Features

- For all the wetted parts, corrosion-resistant material is used.
- Light weight and highly impact resistant.
- Made of robust, light weight and impact-resistant hard vinyl chloride (HI-PVC), with a weight of 1/3 to 1/5 compared to metal valves.
- Compact design allows for shallow depth mounting (Size: 32 - 200 mm).



Basic specifications

- Valve Type : Gate Valve (Type P)
- Size : 32 mm — 350 mm (1 1/4 inch — 14 inch)
- Body Material : HI-PVC (Conforming to ASTM D1784)
- Seal Material / O-ring : EPDM
- Connection / Flanged : JIS B2220 10K, DIN/EN1092-1 PN10, ANSI B16.5 CLASS150
- Threaded : Rc, Rp, NPT

Body Material	FLUID TEMPERATURE °C {°F}	Maximum working pressure (Normal temperature) MPa {psi}			Connection method	
		32mm - 200mm	250mm	300mm, 350mm	Flanged	Threaded
HI-PVC	-10 ~ 50 { 15~120 }	1.0 { 150 }	0.75 { 110 }	0.5 { 70 }	○	○

Note:: The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

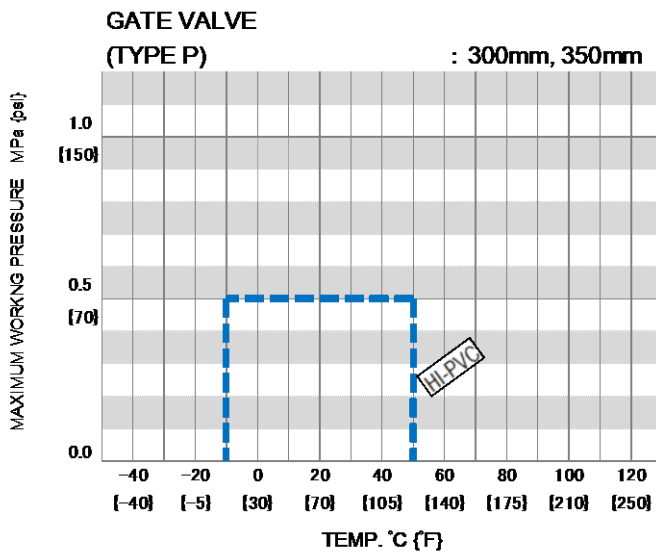
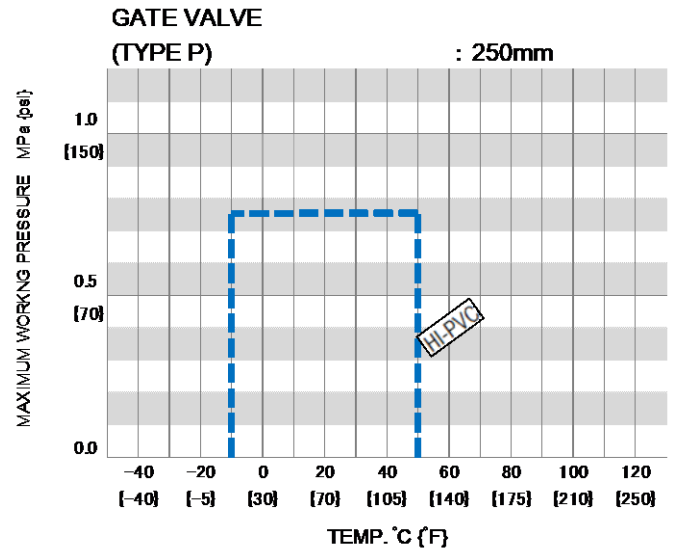
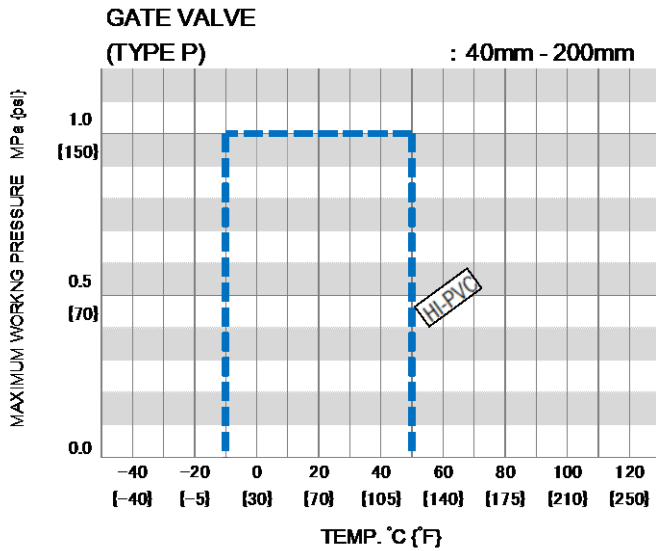
* Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.

Certificate / Approval / Directive

PED, NSF/ANSI61

“For details of applicable products, please consult us.”

Working pressure vs. Temperature



Note:

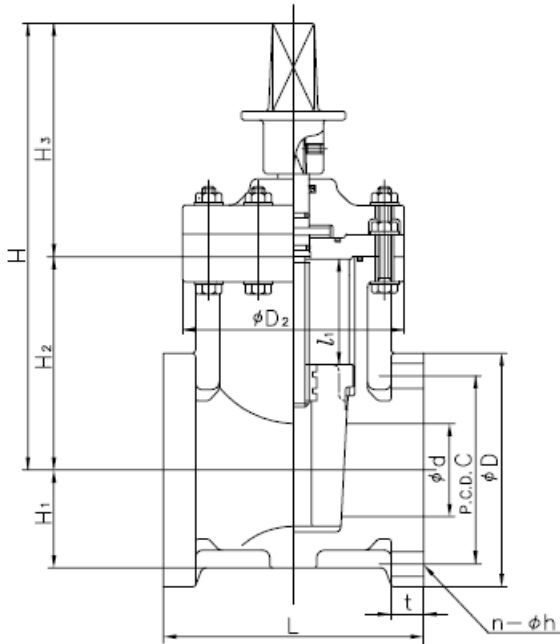
Make sure that the temperature and pressure are within the working range during operation.
(If the tolerance range is exceeded during use, the valve may be damaged.)

Product dimension

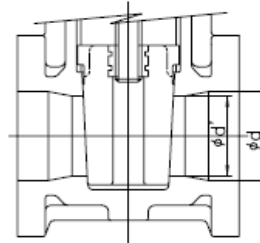
CAP TYPE

32 mm (1 1/4") – 150 mm (6")

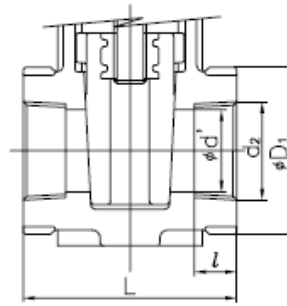
FLANGED



125mm (5"), 150mm (6")

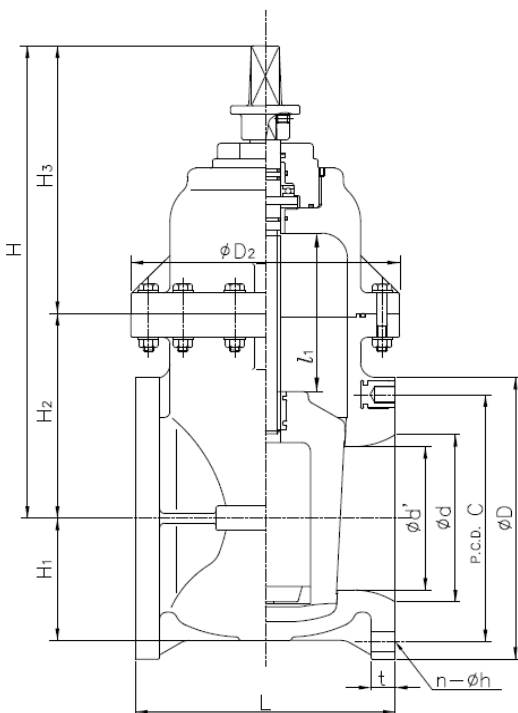


THREADED

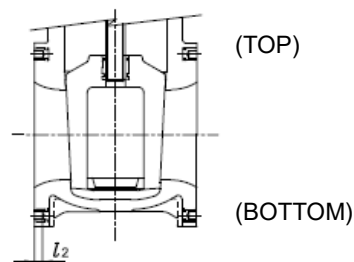
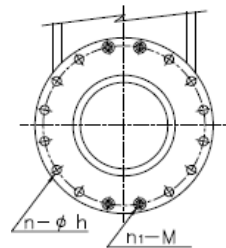


200 mm (8") – 350 mm (14")

FLANGED



Detail of inserted metal of body



■ JIS, DIN (Unit: mm)

mm	inch	d	d'	D ₂	l ₁	H	H ₁	H ₂	H ₃
32	1 1/4	40	30	120	49	268	50	107	161
40	1 1/2	40	40	120	49	268	50	107	161
50	2	50	50	130	60	299	58	134	165
65	2 1/2	65	-	155	75	321	68	152	169
80	3	75	-	170	85	357	77	170	187
100	4	100	-	195	110	396	89	207	189
125	5	125	110	235	117	427	89	227	200
150	6	150	130	270	138	466	102	263	203
200	8	196	168	310	180	555	143	240	315
250	10	247	210	360	226	675	175	270	405
300	12	298	255	410	273	772	195	320	452
350	14	348	297	440	319	872	230	310	565

		JIS												
mm	inch	FLANGED									THREADED			
		JIS 10K									D ₁	d ₂	l	L
		D	C	n	h	n ₁	M	L	t					
32	1 1/4	135	100	4	19	-	-	165	22	90	Rc1 1/4	22	115	
40	1 1/2	140	105	4	19	-	-	165	22	90	Rc1 1/2	25	115	
50	2	155	120	4	19	-	-	180	23	102	Rc 2	28	130	
65	2 1/2	175	140	4	19	-	-	190	24	-	-	-	-	
80	3	185	150	8	19	-	-	200	25	-	-	-	-	
100	4	210	175	8	19	-	-	230	27	-	-	-	-	
125	5	250	210	8	23	-	-	260	27	-	-	-	-	
150	6	280	240	8	23	-	-	270	28	-	-	-	-	
200	8	330	290	10	23	2	M20	290	28	-	-	-	-	
250	10	400	355	12	25	-	-	380	30	-	-	-	-	
300	12	445	400	14	25	2	M22	400	31	-	-	-	-	
350	14	490	445	12	25	4	M22	430	32	-	-	-	-	

		DIN											
mm	inch	FLANGED								THREADED			
		DIN PN10								D ₁	d ₂	l	L
		D	C	n	h	n ₁	M	L	t				
32	1 1/4	-	-	-	-	-	-	-	-	-	-	-	-
40	1 1/2	150	110	4	18	-	-	165	22	90	Rp1 1/2	25	115
50	2	165	125	4	18	-	-	180	23	90	Rp 2	28	130
65	2 1/2	185	145	4	18	-	-	210	24	-	-	-	-
80	3	200	160	8	18	-	-	240	25	-	-	-	-
100	4	220	180	8	18	-	-	250	27	-	-	-	-
125	5	250	210	8	18	-	-	260	27	-	-	-	-
150	6	285	240	8	22	-	-	280	27	-	-	-	-
200	8	340	295	6	22	2	M20	300	28	-	-	-	-
250	10	395	350	12	22	-	-	380	30	-	-	-	-
300	12	445	400	10	22	2	-	400	31	-	-	-	-
350	14	505	460	12	22	4	-	430	32	-	-	-	-

Detail of inserted metal of body (Nominal Size)

mm	inch	JIS 10K			QTY OF INSERTED METAL		
		M	n ₁	l ₂	TOP	BOTTOM	TOTAL (2Xn ₁)
200	8	M20	10	20	2X2	-	4
250	10	-	12	-	-	-	-
300	12	M22	14	22	2X2	-	4
350	14	M22	12	22	2X2	2X2	8

■ ANSI (Unit: inch)

mm	inch	d	d'	D ₂	l ₁	H	H ₁	H ₂	H ₃
40	1 1/2	1.57	1.57	4.72	1.93	10.55	1.97	4.21	6.34
50	2	1.97	1.97	5.12	2.36	11.77	2.28	5.28	6.50
65	2 1/2	2.56	-	6.10	2.95	12.64	2.68	5.98	6.65
80	3	2.95	-	6.69	3.35	14.06	3.03	6.69	7.36
100	4	3.94	-	7.68	4.33	15.59	3.50	8.15	7.44
125	5	4.92	4.33	9.25	4.61	16.81	3.50	8.94	7.87
150	6	5.91	5.12	10.63	5.43	18.35	4.02	10.35	7.99
200	8	7.72	6.61	12.20	7.09	21.85	5.63	9.45	12.40
250	10	9.72	8.27	14.17	8.90	26.57	6.89	10.63	15.94
300	12	11.73	10.04	16.14	10.75	30.39	7.68	12.60	17.80
350	14	13.70	11.69	17.32	12.56	34.45	9.06	12.20	22.24

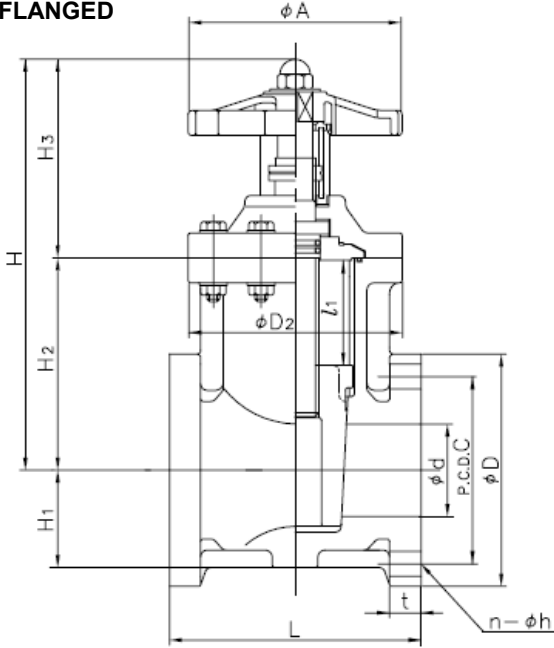
		ANSI												
inch	mm	FLANGED									THREADED			
		ANSI Class150									d ₂	l	L	
		D	C	n	h	n ₁	M	L	t					
1 1/2	40	5.00	3.88	4	0.62	-	-	6.50	0.87	1 1/2 - 11 1/2 NPT	0.98	4.53		
2	50	6.00	4.75	4	0.75	-	-	7.00	0.91	2 - 11 1/2 NPT	1.10	5.12		
2 1/2	65	7.00	5.50	4	0.75	-	-	7.50	0.94	-	-	-		
3	80	7.50	6.00	4	0.75	-	-	8.00	0.98	-	-	-		
4	100	9.00	7.50	8	0.75	-	-	9.00	1.06	-	-	-		
5	125	10.00	8.50	8	0.88	-	-	10.24	1.06	-	-	-		
6	150	11.00	9.50	8	0.88	-	-	10.50	1.06	-	-	-		
8	200	13.50	11.75	8	0.88	2	W 3/4	11.50	1.30	-	-	-		
10	250	16.00	14.25	12	1.00	-	-	14.96	1.18	-	-	-		
12	300	19.00	17.00	10	1.00	2	W 7/8	15.75	1.22	-	-	-		
14	350	21.00	18.75	8	1.12	4	W1	16.93	1.26	-	-	-		

Note: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

HANDLE TYPE

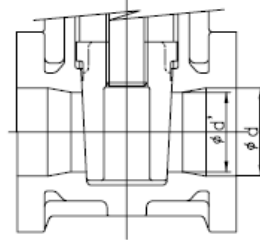
32 mm (1 1/4") – 150 mm (6")

FLANGED

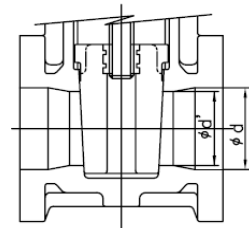


125mm (5"), 150mm (6")

(PVC STEM)

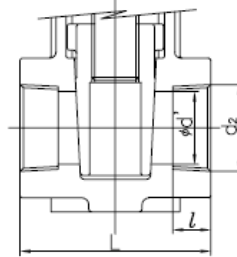


(SUS STEM)

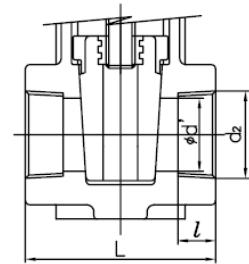


THREADED

(PVC STEM)

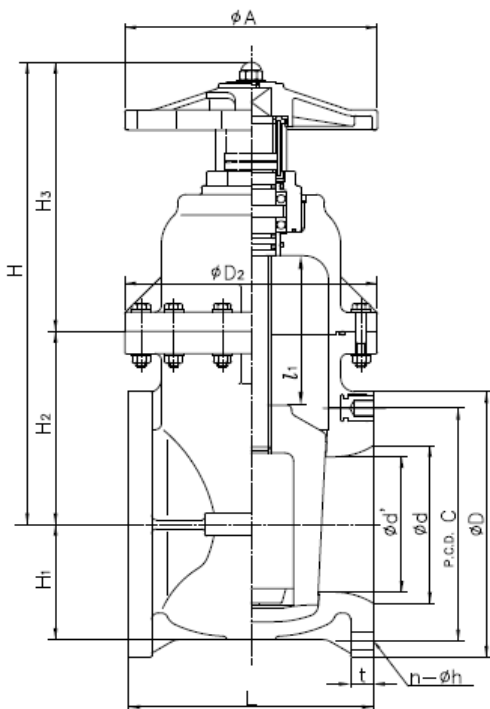


(SUS STEM)

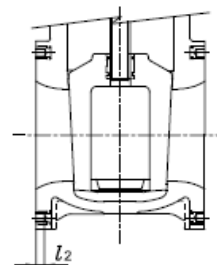
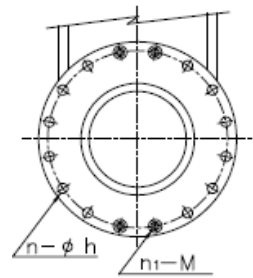


200mm (8") - 350mm (14")

FLANGED



Detail of inserted metal of body



(TOP)

(BOTTOM)

DATASHEET

■ JIS, DIN (Unit: mm)

mm	inch	d	d'	D ₂	l ₁	H	H ₁	H ₂	H ₃	A
32	1 1/4	40	30	120	49	239	50	107	132	12
40	1 1/2	40	40	120	49	239	50	107	132	120
50	2	50	50	130	60	270	58	134	136	130
65	2 1/2	65	-	155	75	302	68	152	150	155
80	3	75	-	170	85	325	77	170	155	170
100	4	100	-	195	110	370	89	207	163	195
125	5	125	110	235	117	407	89	227	180	235
150	6	150	130	270	138	445	102	263	182	270
200	8	196	168	310	180	577	143	240	337	310
250	10	247	210	360	226	690	175	270	420	360
300	12	298	255	410	273	800	195	320	480	410
350	14	348	297	440	319	910	230	310	600	455

		JIS																	
mm	inch	FLANGED												THREADED					
		JIS 5K						JIS 10K						d ₂	l	L			
		D	C	n	h	L	t	D	C	n	h	n ₁	M	L	t				
32	1 1/4	-	-	-	-	-	-	135	100	4	19	-	-	165	22	Rc1 1/4	22	115	
40	1 1/2	120	95	4	15	165	22	140	105	4	19	-	-	165	22	Rc1 1/2	25	115	
50	2	130	105	4	15	160	23	155	120	4	19	-	-	180	23	Rc 2	28	130	
65	2 1/2	155	130	4	15	170	24	175	140	4	19	-	-	190	24	-	-	-	
80	3	180	145	4	19	200	25	185	150	8	19	-	-	200	25	-	-	-	
100	4	200	165	8	19	230	27	210	175	8	19	-	-	230	27	-	-	-	
125	5	235	200	8	19	260	27	250	210	8	23	-	-	260	27	-	-	-	
150	6	165	230	8	19	270	28	280	240	8	23	-	-	270	28	-	-	-	
200	8	-	-	-	-	-	-	330	290	10	23	2	M20	290	28	-	-	-	
250	10	-	-	-	-	-	-	400	355	12	25	-	-	380	30	-	-	-	
300	12	-	-	-	-	-	-	445	400	14	25	2	M22	400	31	-	-	-	
350	14	-	-	-	-	-	-	490	445	12	25	4	M22	430	32	-	-	-	

		DIN											
mm	inch	FLANGED								THREADED			
		DIN PN10								D ₁	d ₂	ℓ	L
		D	C	n	h	n ₁	M	L	t				
32	1 1/4	-	-	-	-	-	-	-	-	-	-	-	-
40	1 1/2	150	110	4	18	-	-	165	22	90	Rp1 1/2	25	115
50	2	165	125	4	18	-	-	180	23	90	Rp 2	28	130
65	2 1/2	185	145	4	18	-	-	210	24	-	-	-	-
80	3	200	160	8	18	-	-	240	25	-	-	-	-
100	4	220	180	8	18	-	-	250	27	-	-	-	-
125	5	250	210	8	18	-	-	260	27	-	-	-	-
150	6	285	240	8	22	-	-	280	27	-	-	-	-
200	8	340	295	6	22	2	M20	300	28	-	-	-	-
250	10	395	350	12	22	-	-	380	30	-	-	-	-
300	12	445	400	10	22	2	-	400	31	-	-	-	-
350	14	505	460	12	22	4	-	430	32	-	-	-	-

Detail of inserted metal of body (Nominal Size)

mm	inch	JIS 10K			QTY OF INSERTED METAL		
		M	n ₁	l ₂	TOP	BOTTOM	TOTAL (2Xn ₁)
200	8	M20	10	20	2X2	-	4
250	10	-	12	-	-	-	-
300	12	M22	14	22	2X2	-	4
350	14	M22	12	22	2X2	2X2	8

■ ANSI (Unit: inch)

mm	inch	d	d'	D ₂	l ₁	H	H ₁	H ₂	H ₃	A
40	1 1/2	1.57	1.57	4.72	1.93	9.41	1.97	4.21	5.20	4.72
50	2	1.97	1.97	5.12	2.36	10.63	2.28	5.28	5.35	5.12
65	2 1/2	2.56	-	6.10	2.95	11.89	2.68	5.98	5.91	6.10
80	3	2.95	-	6.69	3.35	12.80	3.03	6.69	6.10	6.69
100	4	3.94	-	7.68	4.33	14.57	3.50	8.15	6.42	7.68
125	5	4.92	4.33	9.25	4.61	16.02	3.50	8.94	7.09	9.25
150	6	5.91	5.12	10.63	5.43	17.52	4.02	10.35	7.17	10.63
200	8	7.72	6.61	12.20	7.09	22.72	5.63	9.45	13.27	12.20
250	10	9.72	8.27	14.17	8.90	27.17	6.89	10.63	16.54	14.17
300	12	11.73	10.04	16.14	10.75	31.50	7.68	12.60	18.90	16.14
350	14	13.70	11.69	17.32	12.56	35.83	9.06	12.20	23.62	17.91

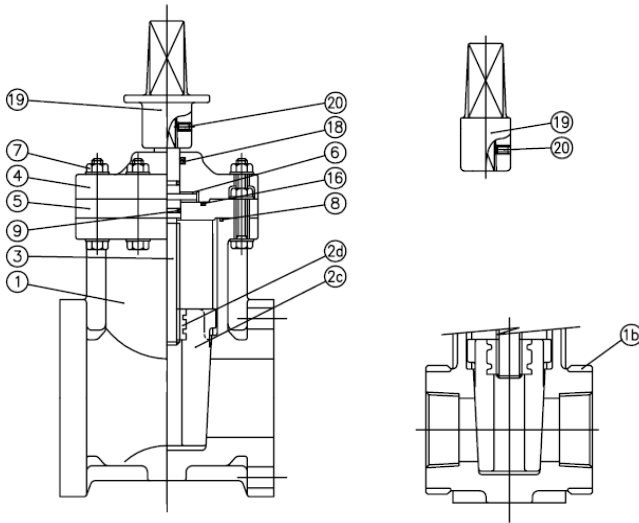
		ANSI											
inch	mm	FLANGED								THREADED			
		ANSI Class150								d ₂	l	L	
		D	C	n	h	n ₁	M	L	t				
1 1/2	40	5.00	3.88	4	0.62	-	-	6.50	0.87	1 1/2 - 11 1/2 NPT	0.98	4.53	
2	50	6.00	4.75	4	0.75	-	-	7.00	0.91	2 - 11 1/2 NPT	1.10	5.12	
2 1/2	65	7.00	5.50	4	0.75	-	-	7.50	0.94	-	-	-	
3	80	7.50	6.00	4	0.75	-	-	8.00	0.98	-	-	-	
4	100	9.00	7.50	8	0.75	-	-	9.00	1.06	-	-	-	
5	125	10.00	8.50	8	0.88	-	-	10.24	1.06	-	-	-	
6	150	11.00	9.50	8	0.88	-	-	10.50	1.06	-	-	-	
8	200	13.50	11.75	8	0.88	2	W 3/4	11.50	1.30	-	-	-	
10	250	16.00	14.25	12	1.00	-	-	14.96	1.18	-	-	-	
12	300	19.00	17.00	10	1.00	2	W 7/8	15.75	1.22	-	-	-	
14	350	21.00	18.75	8	1.12	4	W1	16.93	1.26	-	-	-	

Note: The shape and appearance of assembly differ a little with nominal size compared to this drawing.

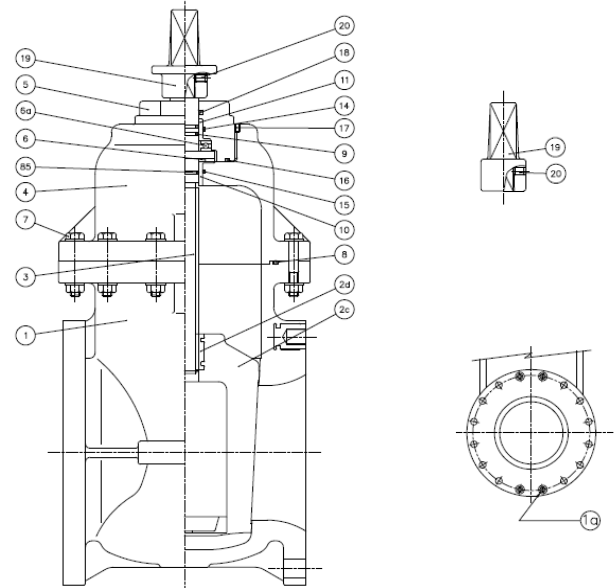
Parts list

CAP TYPE

32mm (1 1/4") - 150mm (6")



200mm (8") - 350mm (14")



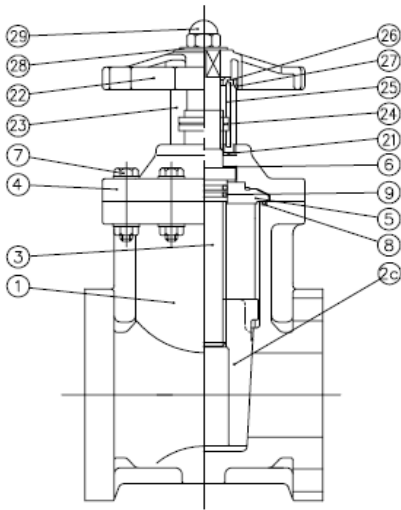
PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL
1 BODY	1	HI-PVC	4 BONNET (A)	1	HI-PVC	20 SET SCREW (B)	1	STAINLESS STEEL
1a INSERTED METAL OF BODY	-	COPPER ALLOY Used for 200mm - 350mm	5 BONNET (B)	1	HI-PVC	6a THRUST BEARING	1	HIGH CARBON CHROMIUM BEARING Used for 200mm - 350mm
1b RING	1Set (2)	CARBON STEEL CHROMZED&EPOXY COAT. Used for 32mm - 50mm	6 THRUST RING	1Set (2)	PP	10 BUSHING (A)	1	PP
2c GATE (A)	1	PP	7 BOLT&NUT	-	STAINLESS STEEL	11 BUSHING (B)	1	Used for 200mm - 350mm
2d INSERTED METAL OF GATE (A)	1	BRONZE CASTING	8 O-RING (B)	1	EPDM, Others	14 O-RING (E)	1	EPDM, Others
3 STEM	1	STAINLESS STEEL	9 O-RING (C)	2	EPDM, Others	15 O-RING (F)	1	Used for 200mm - 350mm
			16 O-RING (D)	1	EPDM, Others	85 O-RING (M)	1	EPDM, Others
			18 DUST SEAL	1	EPDM	17 SET SCREW (A)	1	STAINLESS STEEL Used for 200mm - 350mm
			19 CAP (A)	1	CAST IRON epoxy powder coat.			

DATASHEET

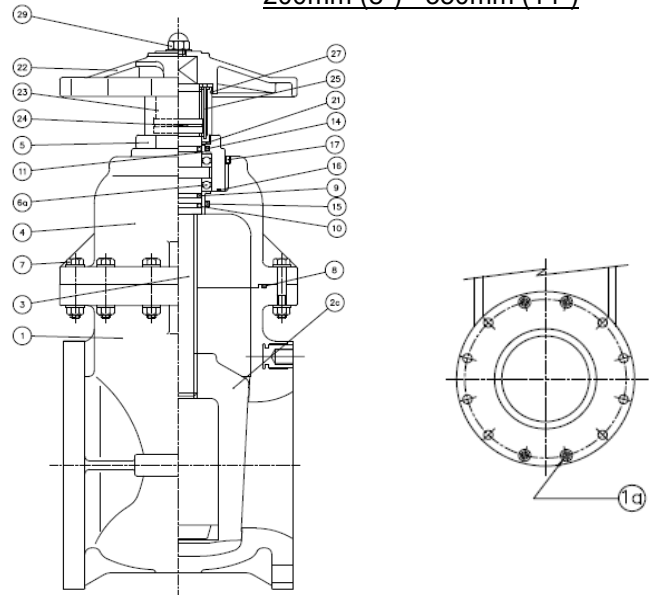
HANDLE TYPE

(PVC STEM)

32mm (1 1/4") - 150mm (6")

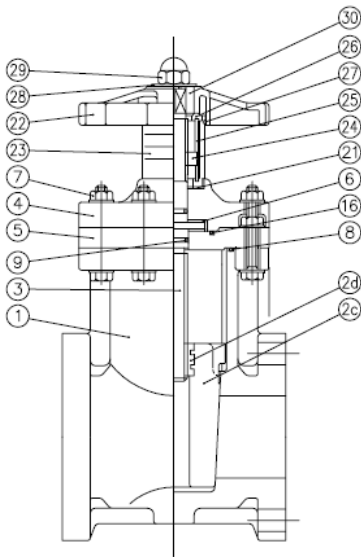


200mm (8") - 350mm (14")

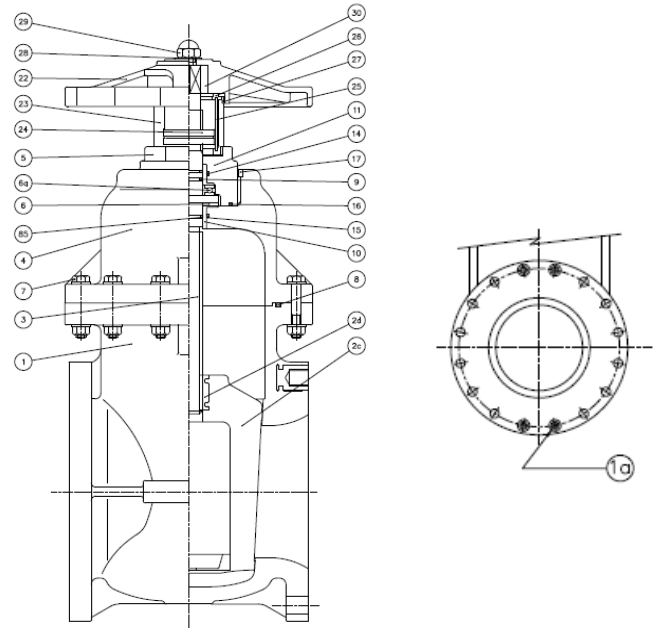


(SUS STEM)

32mm (1 1/4") - 150mm (6")

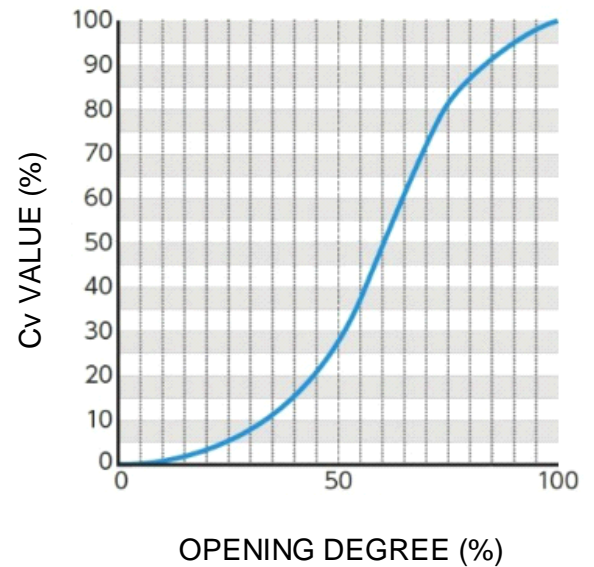


200mm (8") - 350mm (14")



PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL	PART NO./NAME	QTY	MATERIAL
1 BODY	1	HI-PVC	8 O-RING (B)	1	EPDM, Others	6a THRUST BEARING	1	HIGH CARBON
1a INSERTED METAL OF BODY	-	COPPER ALLOY Used for 200mm - 350mm	9 O-RING (C)	2	EPDM, Others		(2)	CHROMIUM BEARING Used for 200mm - 350mm
2c GATE (A)	1	PP	21 PACKING	1	EPDM	10 BUSHING (A)	1	PP
3 STEM	1	PVC	22 HAND WHEEL	1	PP	11 BUSHING (B)	1	Used for 200mm - 350mm
4 BONNET (A)	1	HI-PVC	23 INDICATING COVER	1	PC	14 O-RING (E)	1	
5 BONNET (B)	1	HI-PVC	24 INDICATING RING	1	PVC	15 O-RING (F)	1	EPDM, Others Used for 200mm - 350mm
6 THRUST RING	1Set (2)	PP Used for 32mm - 150mm	25 GUIDE PIN	1	STAINLESS STEEL	16 O-RING (D)	1	
7 BOLT&NUT	-	STAINLESS STEEL	26 GUIDE PIN HOLDER	1	PVC	17 SET SCREW (A)	1	STAINLESS STEEL Used for 200mm - 350mm
			27 O-RING (G)	1	EPDM			
			28 WASHER	1	PVC			
			29 BOX NUT	1	STAINLESS STEEL			

Cv value for each opening degree



GATE VALVE [TYPE P]
FULL-OPEN Cv VALUE

mm	40	50	65	80	100	125	150	200	250	300	350
inch	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14
GATE VALVE (TYPE P)	130	180	415	470	690	1000	1400	2900	3700	5200	7000

The values shown are reference values, not guaranteed values.

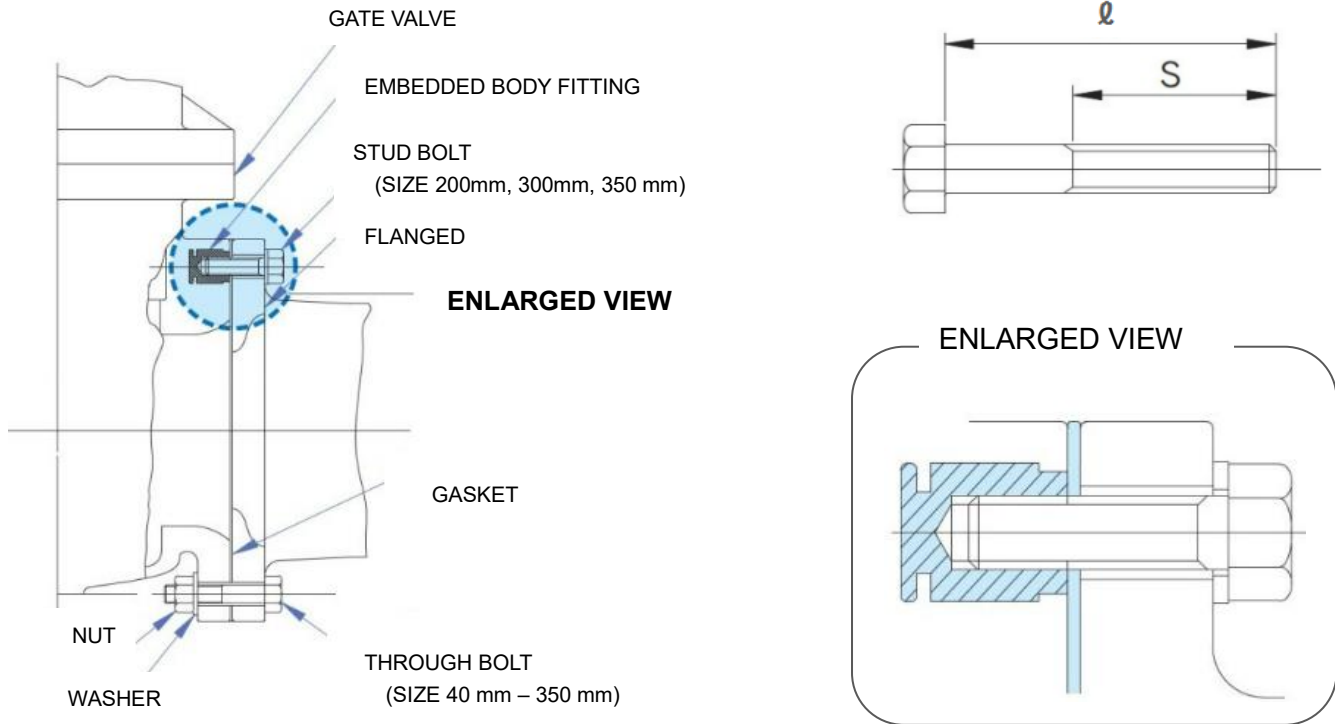
Product weight

GATE VALVE [TYPE P]

UNIT : kg

mm	inch	TYPE P INSIDE SCREW	
		HANDLE TYPE	CAP TYPE
40	1 1/2	2.5	3.5
50	2	3.5	4.5
65	2 1/2	5.5	6.0
80	3	7.0	8.0
100	4	8.5	9.5
125	5	13.5	14.5
150	6	19.5	20.0
200	8	29.5	30.0
250	10	42.0	43.0
300	12	68.0	68.5
350	14	81.5	82.0

PIPE BOLT DIMENSIONS (REFERENCE)



	mm	inch	STANDARD							
			JIS 10K STANDARD AV TS FLANGE				JIS 10K STANDARD / IRON FLANGE JIS B2212			
			NAME							
		BOLT NUT SIZE	WASHE R SIZE	ℓ	S	BOLT NUT SIZE	WASHE R SIZE	ℓ	S	
THROUGH BOLT	32	1 1/4	M16	16	70	38	M16	16	70	38
	40	1 1/2	M16	16	70	38	M16	16	70	38
	50	2	M16	16	75	38	M16	16	70	38
	65	2 1/2	M16	16	75	38	M16	16	75	38
	80	3	M16	16	80	38	M16	16	75	38
	100	4	M16	16	80	38	M16	16	80	38
	125	5	M20	20	85	46	M20	20	85	46
	150	6	M20	20	90	46	M20	20	80	46
	200	8	M20	20	90	46	M20	20	85	46
	250	10	M22	22	100	50	M22	22	95	50
	300	12	M22	22	100	50	M22	22	100	50
350	14	M22	22	110	50	M22	22	100	50	
STUD BOLT	200	8	M20	20	50	46	M20	20	50	46
	300	12	M22	22	60	50	M22	22	60	50

LENGTH OF T-SHAPED HANDLE OF AV GATE VALVE (CAP TYPE)

The close-off torque (torque required for complete closure) and the length of T-shaped handle handgrip are as follows:

mm	inch	CLOSE-OFF TORQUE N·m	T-SHAPED HANDLE l (mm) [REFERENCE]
32	1 1/4	15	200
40	1 1/2	15	200
50	2	15	200
65	2 1/2	23	200
80	3	25	200
100	4	30	200
125	5	40	300
150	6	60	350
200	8	100	550
250	10	110	550
300	12	130	700
350	14	150	700



Note:

1. When turning the T-shaped handle, do not insert a pipe or similar object. Do not turn it with two people either.
2. When the shaft is too long, adjust the l dimension using the handgrip.
3. The length of handle handgrip, l , is set so that the operating force (one hand) is approximately 150N to 200N.

Product model code list

STANDARD TYPE (TYPE P) INSIDE SCREW **CAP TYPE**

ACTUATION	TYPE	OPERATING SYSTEM	STEM MATERIAL / OPEN DIRCTION	BODY MATERIAL	SEAL MATERIAL	CONNECTION / STANDARD	SIZE
V	CG	C	*	I	E	*	***
V MANUAL VALVE	CG STANDARD TYPE	C CAP	R SUS, RIGHT L SUS, LEFT	I HI-PVC	E EPDM	F1 FALNGED, 10K FD FLANGED, DIN FA FLANGED, ANSI NJ THREADED, JIS ND THREADED, DIN NA THREADED, ANSI	032 32mm S 350 350mm

Note:

Tapping type is the standard for all the cases.

The price above is the set price for the valve, full-face gaskets (2pcs), and SUS plain washer.

STANDARD TYPE (TYPE P) INSIDE SCREW **HANDLE TYPE**

ACTUATION	TYPE	OPERATING SYSTEM	STEM MATERIAL / OPEN DIRCTION	BODY MATERIAL	SEAL MATERIAL	CONNECTION / STANDARD	SIZE
V	CG	M	*	I	E	*	***
V MANUAL VALVE	CG STANDARD TYPE	M ROUND HANDLE	J RESIN, LEFT R SUS, RIGHT	I HI-PVC	E EPDM	F1 FALNGED, 10K FD FLANGED, DIN FA FLANGED, ANSI NJ THREADED, JIS	032 32mm S 350 350mm

Note:

The SUS stem type opens only rightward. The resin stem type opens only leftward.

The price above is the set price for the valve, full-face gaskets (2pcs), and SUS plain washer.

Installation, Operation and Maintenance Manual

"For details of Installation, Operation and Maintenance, please contact our nearest distribution agent or sales office.