

V TYPE BALL VALVE SERIES



V TYPE BALL VALVE

USAGE

The V type ball valve is suitable for use on various pipelines of Class150~ Class300. According to different user requirements, the V type ball valve can be used for two purposes. One is it can be used to cut off or connect the medium in the pipeline. The other is it can serve as a control valve for controlling parameters such as flow rate of medium in the pipeline. The V type ball valve for cut-off purpose can adopt different driving modes such as manual operation, worm and worm gear transmission,

pneumatic operation and electric operation. The V type ball valve for control purpose adopt the driving modes such as pneumatic operation and electric operation.

By using different materials, the V type ball valve can be used for various media such as water, steam, oil, liquefied gas, natural gas, coal gas, nitric acid, acetic acid, oxidizing medium, urea and etc.

The connection ends of V type ball valve can be wafer or flange.

STRUCTURAL FEATURES

1. The V type ball valve adopts disc spring or cylindrical spring loaded moveable metal seat structure provided with compensation character, so no problems such as blocking or release of V type ball and seat will occur. The sealing is reliable and the service life is long.

2. The V type notch of the ball plays the shearing function between the metals, so the valve is especially suitable for media of high viscosity, containing fiber, solid granules, slurry and paper pulp.

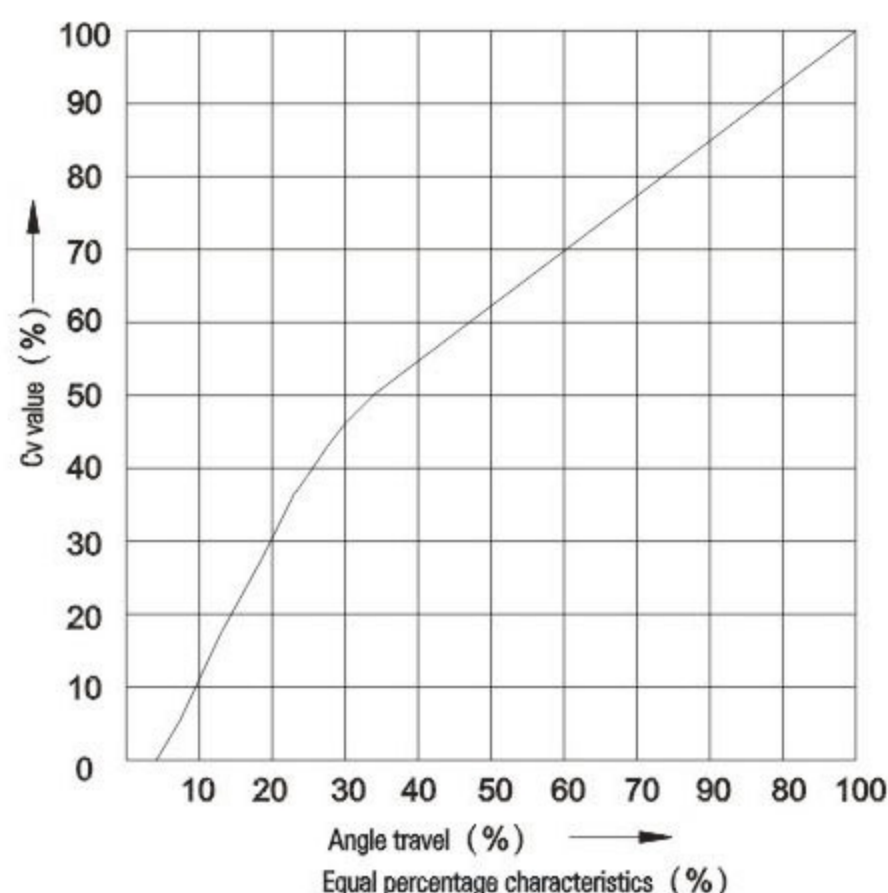
3. According to different service conditions, the metal seated ball and seat sealing face can be subjected to various advanced technologies such as nickel-base alloy ($HRC \geq 60$) spray welding, tungsten cobalt alloy ($HRC \geq 70$) HVOF coating, suitable for various severe service

conditions.

4. When the valve is fully opened, the flow is high and pressure loss is low, and the media will not deposit in the middle cavity of valve. The valve has flow characteristics of equal percentage, and the V type ball valve for control purpose has a wide adjusting range with the maximum adjusting ratio of 100:1. In addition, the valve is also provided with precise control and reliable positioning functions.

5. Compact structure, strong adaptability. The V type ball valve for cut-off purpose has good sealing performance and can replace various valves such as gate valve, globe valve, ordinary ball valve and etc.

Flow coefficient chart

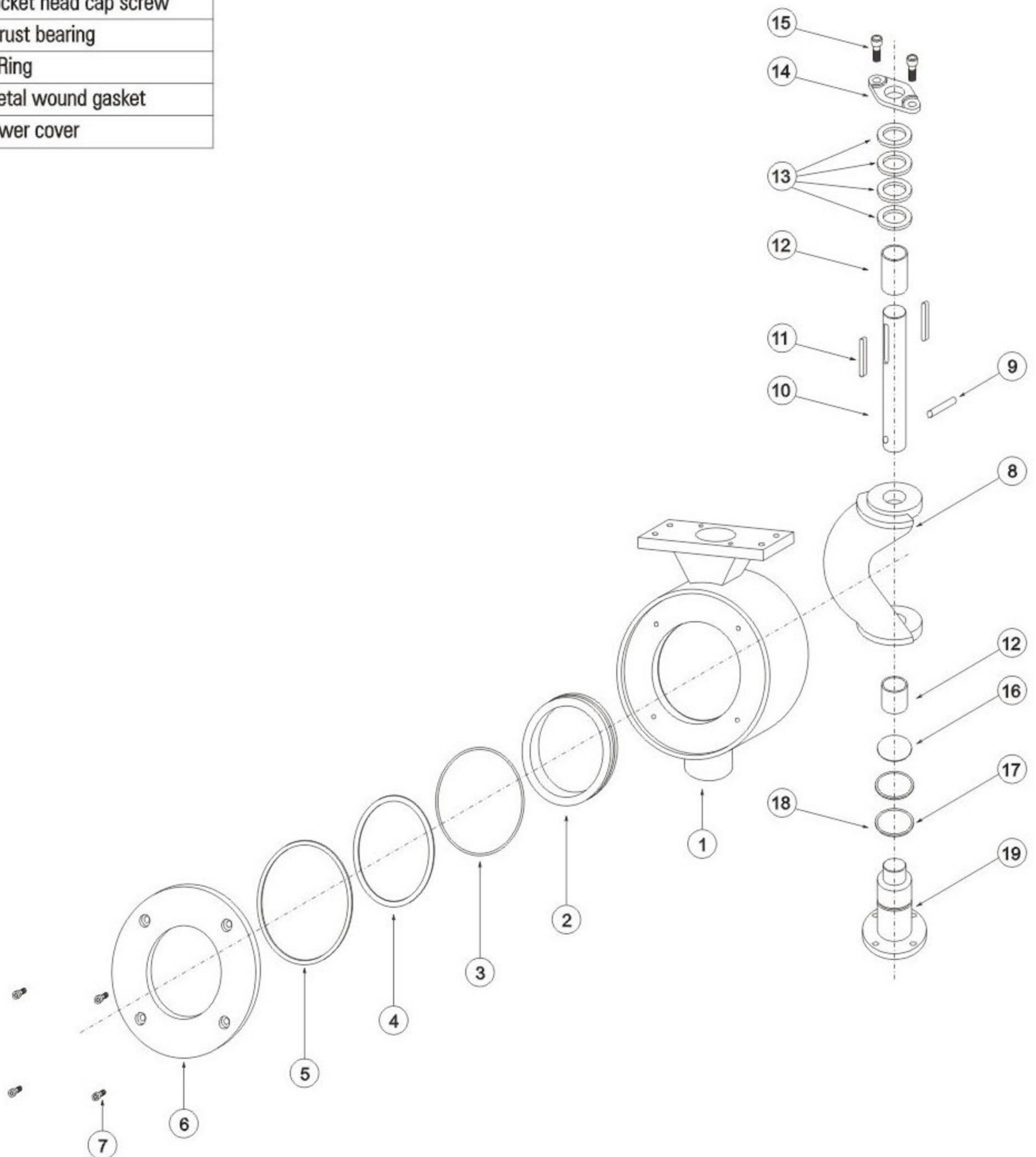


Relation of relative opening and flow coefficient Cv of the V type ball valve for control purpose

inside nominal diameter		relative opening					
DN	NPS	10%	30%	50%	70%	90%	100%
		discharge coefficient Cv					
25	1	0.33	1.6	4.6	10	20	33
40	1½	0.85	4.5	15	29	60	90
50	2	1.36	7.6	22	48	100	145
65	2½	2.3	12	37	80	165	250
80	3	3.1	16.5	50	108	215	330
100	4	5	27	80	178	365	530
125	5	7	36	108	238	488	710
150	6	10	53	160	356	740	1080
200	8	16	85	258	573	1195	1750
250	10	31	148	396	825	1460	2170
300	12	42	202	552	1110	2130	3120

V TYPE BALL VALVE

1	Body
2	Seat
3	O Ring
4	Disc spring
5	Metal wound gasket
6	Clamping ring
7	Socket head cap screw
8	Ball
9	Pin
10	Stem
11	Flat Key
12	Sliding bearing
13	Packing
14	Packing gland
15	Socket head cap screw
16	Thrust bearing
17	O Ring
18	Metal wound gasket
19	Lower cover

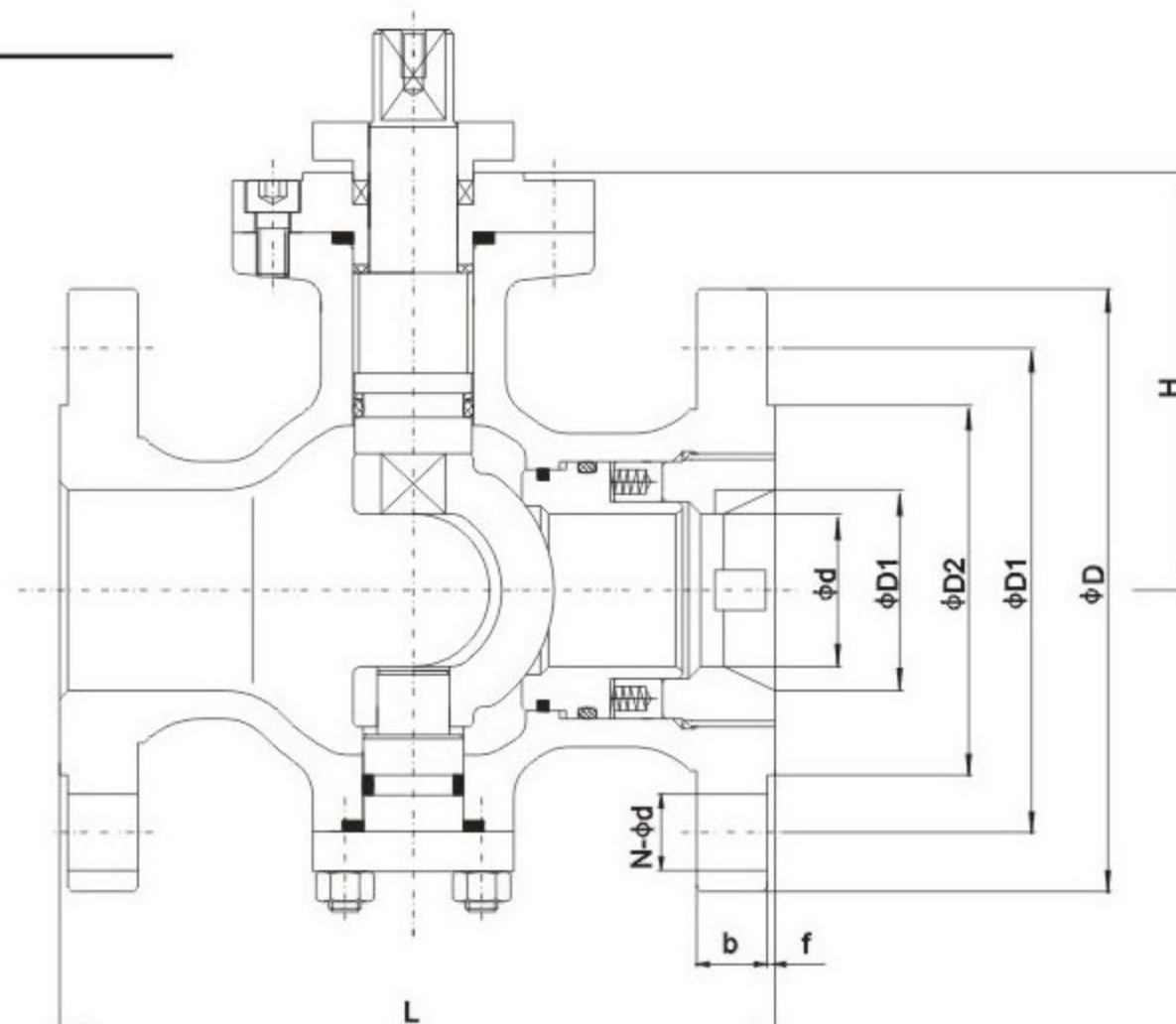


V TYPE BALL VALVE

PART MATERIALS AND MAIN PARAMETERS

Nominal diameter (in)		NPS 1~12					
Nominal pressure (MPa)		Class150~Class300					
Materials of parts	No.	Part name	Materials				
			Carbon steel	Stainless steel			
	1	Body	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M	ASTM A351 CF3	ASTM A351 CF3M
	2	Seat	ASTM A105+HF	ASTM A182 304+HF	ASTM A182 316+HF	ASTM A182 304L+HF	ASTM A182 316L+HF
	3	O Ring	VITON				
	4	Disc spring	17-7PH				
	5	Metal wound gasket	SST+Graphite				
	6	Clamping ring	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	7	Socket head cap screw	A193 B7M	A320 B8	A320 B8 M	A320 B8	A320 B8M
	8	Ball	ASTM A216 WCB+HF	ASTM A351 CF8+HF	ASTM A351 CF8M+HF	ASTM A351 CF3+HF	ASTM A351 CF3M+HF
	9	Pin	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035	ANSI 1035
	10	Stem	ASTM A182 F6a	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L
	11	Flat key	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045	ANSI 1045
	12	Sliding bearing	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE	Metal+PTFE
	13	Packing	Graphite				
	14	Packing gland	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB	ASTM A216 WCB
	15	Socket head cap screw	A193 B7M	A193 B7M	A193 B7M	A193 B7M	A193 B7M
	16	Thrust bearing	PTFE				
	17	O Ring	VITON				
18	Metal wound gasket	SST+Graphite					
19	Lower cover	ASTM A105 • ENP	ASTM A182 304	ASTM A182 316	ASTM A182 304L	ASTM A182 316L	
Applicable service conditions	Applicable media	Water, steam, oil, gas, liquefied petroleum gas and natural gas etc	Nitric acid	Acetic acid	Strong Oxidizer	Urea	
	Applicable temperature	Regular products: =200℃, special orders: =425℃ (carbon steel) or =540℃ (Cr-Mo steel, Cr-Mo-V steel, stainless steel)					
Design and manufacturing		API 608、API 6D					
Face-to-face dimensions		ASME B16.10、API 6D					
Type of connection		Flange	ASME B16.5	Wafer	ASME B16.5		
Pressure test		API 598、API 6D					
Transmission mode		Manual, worm and worm gear transmission, pneumatic, electric					

V TYPE BALL VALVE



Pressure rating	Nominal Diameter		d	d1	L	Flanged					H	Weight		
	Class	NPS				DN	D	D1	D2	f			b	N-φd
150		1"	25	19	25	127	110	79.5	51	2	11	4-φ16	80	△
		1 1/4"	32	25	32	140	115	89	64	2	11	4-φ16	86	△
		1 1/2"	40	32	38	165	125	98.5	73	2	13	4-φ16	95	△
		2"	50	38	50	178	150	120.5	92	2	14.5	4-φ19	104	△
		3"	80	50	75	203	190	152.5	127	2	17.5	4-φ19	114	△
		4"	100	75	100	229	230	190.5	157	2	22.5	8-φ19	160	△
		6"	150	100	150	267	280	241.5	216	2	24	8-φ22	200	△
		8"	200	150	201	292	345	298.5	270	2	27	8-φ22	240	△
		10"	250	201	252	330	405	362	324	2	29	12-φ25	275	△
	12"	300	252	303	356	485	432	381	2	30.5	12-φ25	330	△	
300		1"	25	19	25	127	125	89	51	2	16	4-φ19	80	△
		1 1/4"	32	25	32	140	135	98.5	64	2	17.5	4-φ19	86	△
		1 1/2"	40	32	38	165	155	114.5	73	2	19.5	4-φ22	95	△
		2"	50	38	50	178	165	127	92	2	21	8-φ19	104	△
		3"	80	50	75	203	210	168.5	127	2	27	8-φ22	114	△
		4"	100	75	100	229	255	200	157	2	30.5	8-φ22	160	△
		6"	150	100	150	267	320	270	216	2	35	12-φ22	200	△
		8"	200	150	201	292	380	330	270	2	40	12-φ25	240	△
		10"	250	201	252	330	445	387.5	324	2	46.5	16-φ29	275	△
		12"	300	252	303	356	520	451	381	2	49.5	16-φ32	330	△

△ Please consult the factory:

Note: The weight value is only for flanged valve. Please consult our factory for higher nominal diameter or weight. Any modification to sizes H, H1 and weight will not be notified otherwise.