

# Hitewell MV700 V BALL VALVES

## APPLICATION

- Chemical, Petrochemical
- Oil, Natural Gas
- Power
- Steel
- Pharmacy
- Liquid
- Oil
- Water
- Gas
- Steam
- Chemical Products



## SIZE

1" ...16"/DN25...DN400

## PRESSURE RATING

ASME CLASS 150/300 PN16/25/40

CONNECTION: Wafer ANSI RF

Temperature Range

-50°C...+250°C For different seat

## APPLICABLE STANDARDS

**Design: ASME B16.34, API 608**

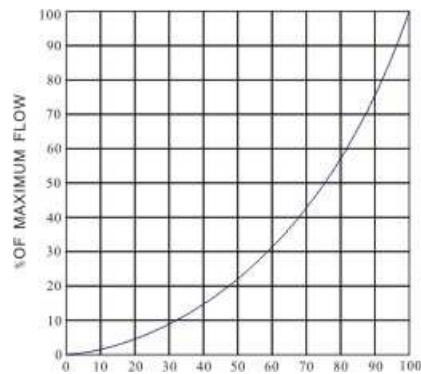
**Fire Safe: API 607 5<sup>th</sup> 2005, ISO 10497**

**Face to Face: ASME B16.10**

**Wall Thickness: ASME B16.34**

**End Flange: ASME B16.5**

**Inspection & Testing: API 598, API 6D**

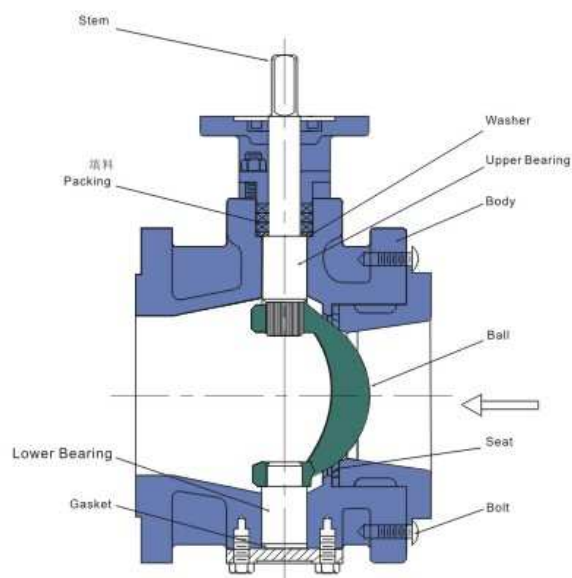


## DESIGN STANDARDS

Table 1 SPECIFICATIONS

STANDARD	AMERICAN	GERMAN	JAPAN
Pressure Rating	B16.34 CLASS150 (BS5351 CLASS 150) B16.34 CLASS 300 BS5351 CLASS 300	DIN 3357 PN10-PN40 EN 12516-1	B2001 10K B2001 20K
Face to Face	B16.10	DIN 3202 F4/F18 DIN 3202 F1/F17	B2002 10K Form 6 B2002 20K Form 10
End Flange	B16.5 RF serrated Finish (AARH200)	DIN 2501 PN10-PN40 Facing DIN 2526 Form	B2212 10K B2214 20K
Inspection & Testing	API 598, API 6D	DIN 3230/3, EN 12266	JIS B2003
Quality Assurance	ISO 9001, QS9000 AD 2000-Merkblatt W0 PED 97/23EC CE0036 API 6D		

Table 2 MATERIAL OF CONSTRUCTION



NO	SPARE PART	MATERIAL		
		ANSI/JIS/DIN	ANSI/JIS/DIN	ANSI/JIS/DIN
1	Body	A351-CF8M/SCS14A/1.4408	A351-CF8/SCS13A/1.4308/CF8	A216-WCB/SCPH2/1.0619
2	End Cap	A351-CF8M/SCS14A/1.4408	A351-CF8/SCS13A/1.4308/CF8	A216-WCB/SCPH2/1.0619
3	Ball	A351-CF8M/SCS14A/1.4408	A351-CF8/SCS13A/1.4308/CF8	
4	Seat	PTFE/RTFE/304/316/2C13		
5	Body Gasket	PTFE /GRAFOIL (Fire Safe)		
6	Bolt	A193-B8		A193-B7
7	Nut	A194-8		A194-2H
8	Stem	SUS316	SUS304	
9	Set Screwed	A193-B8		
10	Triangle Stopper	SUS304		
11	Tag	SUS304		

MV700-- Cv

Size		Relative open degree					
		10%	30%	50%	70%	90%	100%
DN	NPS	Flow volume coefficient Cv					
25	1	0.5	2	5.2	10	19	28
40	1 1/2	1.2	5.7	15	30	54	81
50	2	1.9	8.8	23	46	83	125
65	2 1/2	3.2	14	39	76	138	208
80	3	4.4	20	54	106	192	290
100	4	7	33	86	170	308	465
125	5	10	46	122	240	436	658
150	6	13	60	157	310	654	850
200	8	21	97	255	503	915	1380
250	10	33	152	401	792	1440	2170
300	12	46	216	572	1130	2050	3090
350	14	105	482	1280	2510	4620	7040
400	16	182	867	2370	4710	8610	13240

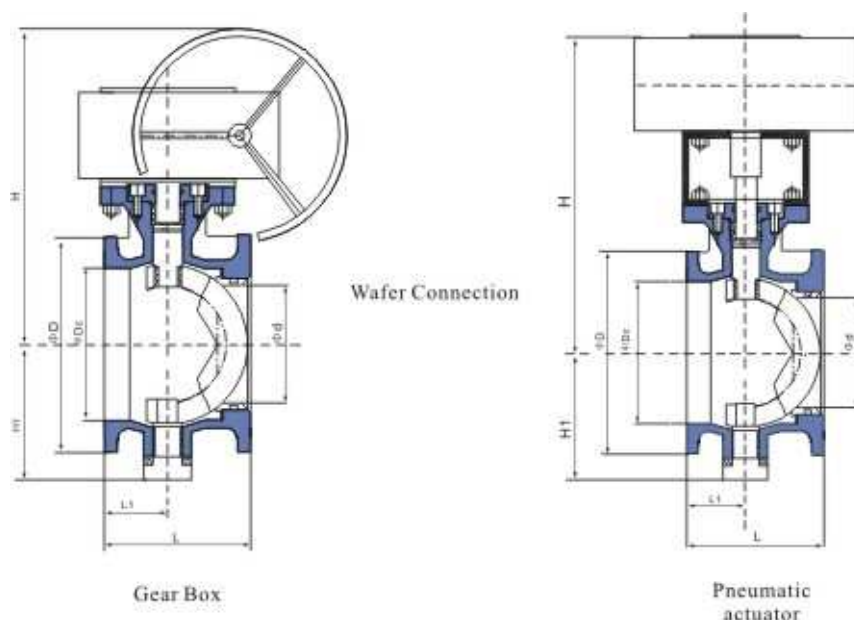
## Actuator

Series MV700 can equipped with the following Hitewell actuators.

- VED/VEDL Pneumatic Double Acting Actuator, see VED Volumes
- VEDS/VEDLS Pneumatic Spring Return Actuator, see VED Volumes
- VAQ Electric Quarter Actuator, see VAQ Volumes
- VAD/TW Electric Large Torque Quarter Actuator, see VED Volumes
- M M series Gear Boxes, see M Volumes
- LH Handle (1" --4" )

Other Actuator please contact local Hitewell office.

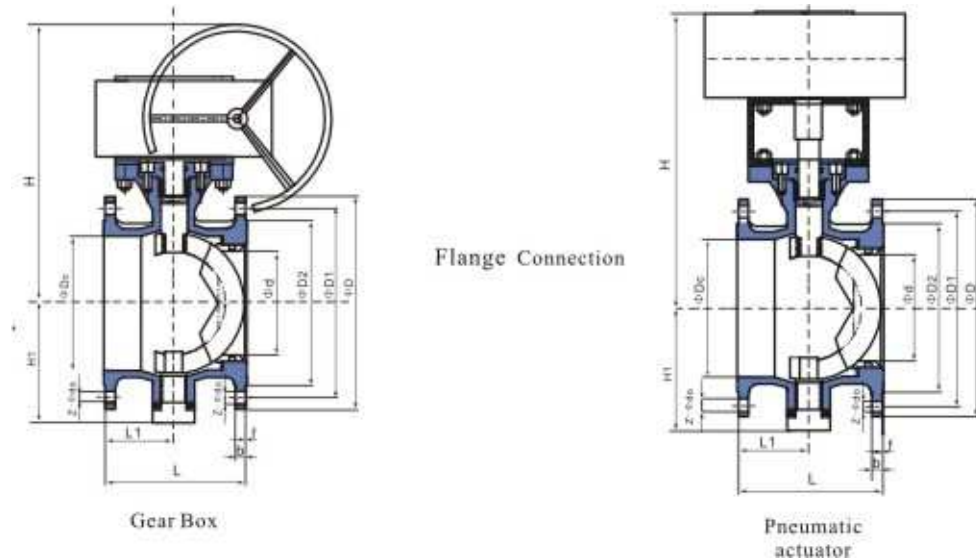
## Dimensions for Wafer Connection



Pressure Stage	Size		Dimensions(mm)(Wafer Connection)							
	DN	NPS	L	L1	d	D	Dc	H1	H	
									手动 Gear box	气动 Pneumatic actuator
Class150	25	1	50	25	19	65	38	57	200	222
	40	1 1/2	60	25	32	84	49	63	205	228
	50	2	75	32	38	103	60	92	225	248
	65	2 1/2	85	38	51	122	75	100	235	255
	80	3	100	45	64	135	89	108	260	270
	100	4	115	50	76	173	113	117	270	278
	125	5	135	55	102	195	140	140	320	335
	150	6	160	65	127	220	164	177	340	358
200	8	200	80	152	277	205	200	390	405	

	250	10	240	92	203	337	259	252	420	449
<b>Class300</b>	25	1	50	25	19	72	38	57	200	222
	40	1 1/2	60	25	32	94	49	63	205	228
	50	2	75	32	38	110	60	92	225	248
	65	2 1/2	85	38	51	128	75	100	235	255
	80	3	100	45	64	147	89	108	260	270
	100	4	115	50	76	179	113	117	270	278
	125	5	135	55	102	214	140	140	320	335
	150	6	160	65	127	249	164	177	340	358
	200	8	200	80	152	305	205	200	390	405
250	10	240	92	203	359	259	252	420	449	

Dimensions for Flange Connection



Pressure	Size		Dimensions(mm) (Flange Connection)												
	D N	NP S	L	L1	d	D	D1	D2	D c	b	f	Z- Φd 0	H1	H	
														Gear box	Pneumat ic actuator
	25	1	10 2	51	19	10 8	79. 5	51	3 8	11. 5	1.6	4-1 5	57	200	222
	40	1 1/2	11 4	57	32	12 7	98. 5	73	4 9	14. 5	1.6	4-1 5	63	205	228

Class150	50	2	12 4	62	38	15 2	12 0.5	92	6 0	16	1.6	4-1 9	92	225	248
	65	2 1/2	14 5	72. 5	51	17 8	13 9.5	105	7 5	17. 5	1.6	4-1 9	10 0	235	255
	80	3	16 5	82. 5	64	19 0	15 2.5	127	8 9	19. 5	1.6	4-1 9	10 8	260	270
	10 0	4	19 4	97	76	22 9	19 0.5	157	1 1 3	24	1.6	4-1 9	11 7	270	278
	12 5	5	21 0	10 5	10 2	25 4	21 6	186	1 4 0	24	1.6	8-2 2	14 0	320	335
	15 0	6	22 9	11 4.5	12 7	27 9	24 1.5	216	1 6 4	25. 5	1.6	8-2 2	17 7	340	358
	20 0	8	24 3	12 1.5	15 2	34 3	29 8.5	270	2 0 5	29	1.6	8-2 2	20 0	390	405
	25 0	10	29 7	14 8.5	20 3	40 6	36 2	324	2 5 9	31	1.6	12- 25	25 2	420	449
	30 0	12	33 8	16 9	25 4	48 3	43 2	381	3 0 0	32	1.6	12- 25	27 0	510	550
	35 0	14	38 1	20 6	30 5	53 3	47 6	413	3 5 0	35	1.6	12- 29	29 6	520	560
40 0	16	40 6	22 8	33 7	59 7	54 0	470	4 0 0	37	1.6	16- 29	33 8	570	590	
Class300	25	1	10 2	51	19	12 4	89	51	3 8	17. 5	1.6	4-1 9	57	200	222
	40	1 1/2	11 4	57	32	15 6	11 4.5	73	4 9	21	1.6	4-2 2	63	205	228
	50	2	12 4	62	38	16 5	12 7	92	6 0	22. 5	1.6	8-1 9	92	225	248
	65	2 1/2	14 5	72. 5	51	19 0	14 9	105	7 5	25. 5	1.6	8-2 2	10 0	235	255
	80	3	16 5	82. 5	64	21 0	16 8.5	127	8 9	29	1.6	8-2 2	10 8	260	270
	10 0	4	19 4	97	76	25 4	20 0	157	1 1 3	32	1.6	8-2 2	11 7	270	278
	12	5	21	10	10	27	23	186	1	35	1.6	8-2	14	320	335



Pressure	DN	L	D	D1	D2	b	f	Z-Φd	H1
PN25	50	124	165	125	100	16	1.6	4-18	92
	65	145	185	145	120	18	1.6	4-18	100
	80	165	200	160	135	20	1.6	8-18	108
	100	194	220	180	155	20	1.6	8-18	117
	125	210	250	210	185	22	1.6	8-18	140
	150	229	285	240	210	22	1.6	8-23	177
	200	243	340	295	265	24	1.6	8-23	200
	250	297	405	355	320	26	1.6	12-26	252
	300	338	460	410	375	28	1.6	12-26	270

MV700 Model Schedule Illustration

MV700-

1	2	3	4	5	6	7
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The pneumatic or electric actuator can be confirmed by user or Hitewell factory.

Body part

1 No	Size	
	Inch	mm
01	1	25
1H	1-1/2"	40
02	2	50
2H	2-1/2"	65
03	3	80
04	4	100
05	5	125
06	6	150
08	8	200
10	10	250
12	12	300
14	14	350
16	16	400

2 No	Body & Flange Pressure Rating
A	ANSI 150#
B	ANSI 300#
C	DIN PN16

D	DIN PN25
E	DIN PN40
F	JIS 10K
G	JIS 20K

3	No	Connect Mode
A		Wafer type
B		RF
X		Special Specification

4	No	Body Material
A		A216-WCB
B		A351-CF8
C		A351-CF8M
X		Special Specification

5	No	Ball Material
A		A216-WCB
B		A351-CF8
C		A351-CF8M
X		Special Specification

6	No	Seat Material
A		PTFE
B		RTFE
C		304
D		316
E		2C13
F		2C13
X		Special Specification

7	No	Control Mode
A		Handle
B		Pneumatic ( Double Acting)
C		Pneumatic (Spring Return Acting )
F		Electric
X		Special Specification