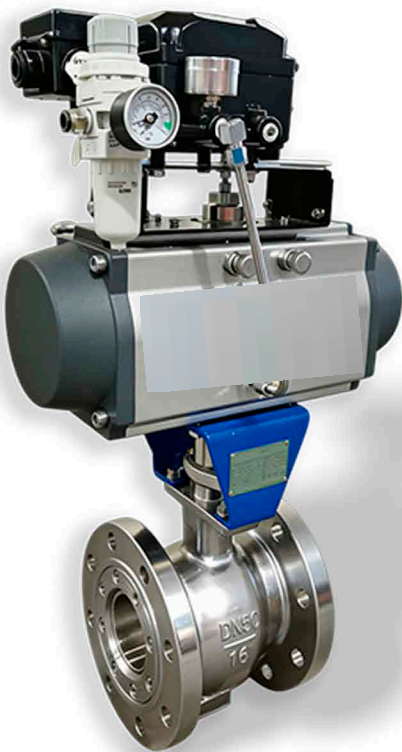
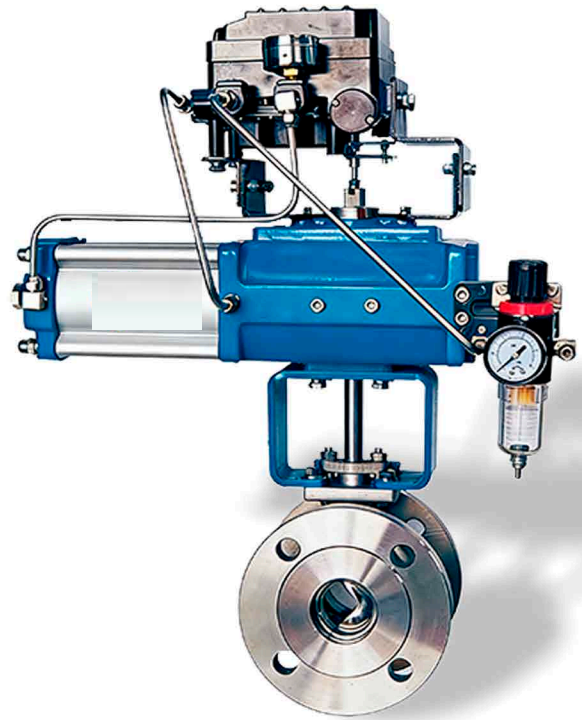


V-port Segmented Valve



Overview

The VBF series v-port segment ball valve is primarily intended for flow control, and it can also be used for shut-off operation. The v-notch port on the segment ball contributes to strong shear stress to cut through media with fibers and particles. Consequently, this v-port segment ball valve is a good general control valve for most pulp and paper process applications.



Application

- Pulp and Paper
- Food and Beverage
- Power Plants
- Pharmaceutical Industry
- Mining etc.
- Water Treatment
- Chemical Plants
- Steel Industry

Body

- The single-piece body prevents leaks caused by separate flanges or locking rings.

V-port Segment Ball

- The Specially designed V-notch ball provides strong cutting stress and tight sealing. Well ground notched ball surface ensures small operating torque and tight seal.

Seat

- Special seat design eliminates the body cavity between seat and valve body, thus preventing medium from jamming and ensuring reliable sealing.

Seal Surface

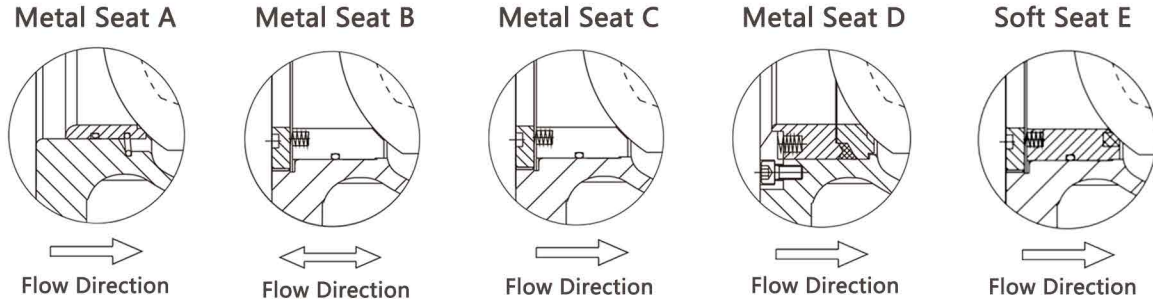
- Nitriding/Tungsten Carbide/Stellite Alloy/Nickel Base Alloy coatings are available for abrasive media.

Stem

- Stem is finely ground to match actuator excellently, which prevents rocking motion and potential failure of the V-port segmented valve.
- Close-fit spline/pin-key for stem-segment ball connection ensures no-backlash transmission.
- Anti-Blowout stem design is available on request.

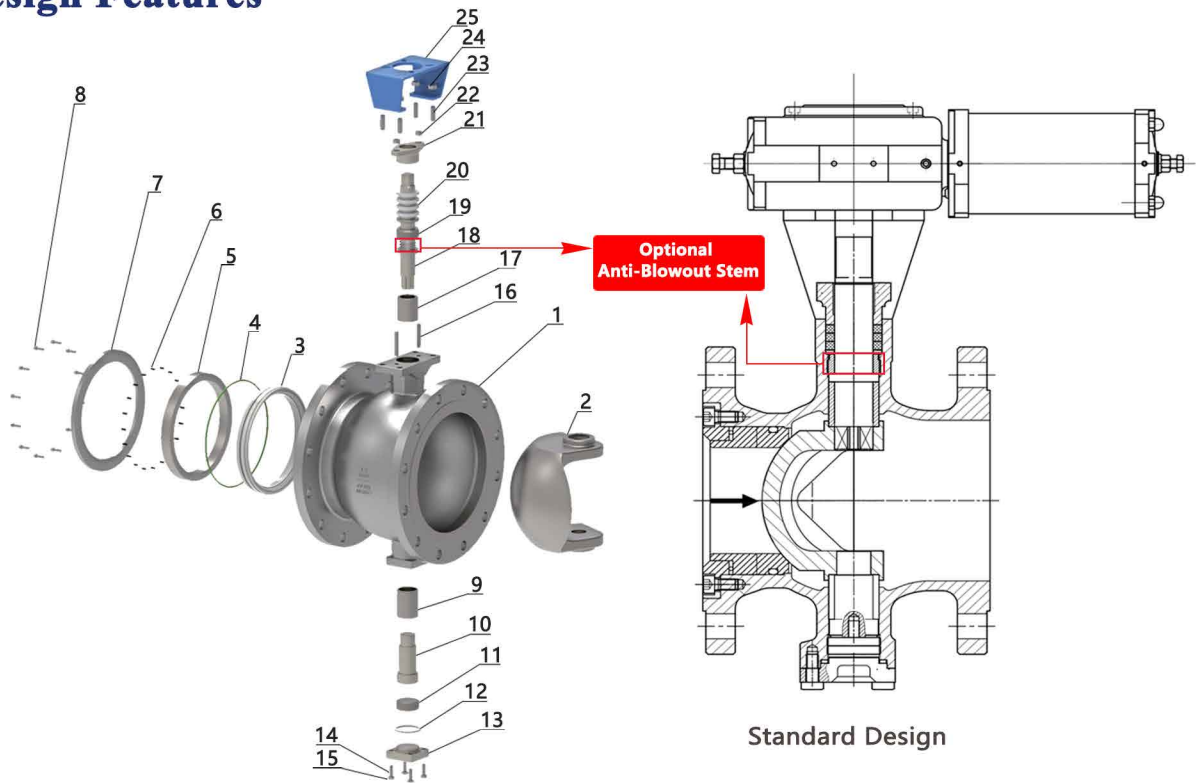


Seat Design



Seat Type	Metal Seat			Soft Seat
	A/B	C	D	E
Seat	304/316+STL	304/316+STL	304/316+STL	304/316+PTFE
Spring	17-7PH/316	17-7PH/316	17-7PH/316	17-7PH/316/Inconel
O-ring	Viton	Viton	Graphite	Viton
Packing	PTFE	Graphite	Graphite	PTFE
Temp. Range	-29°C~150°C	-29°C~180°C	-29°C~350°C	-29°C~150°C

1. Design Features

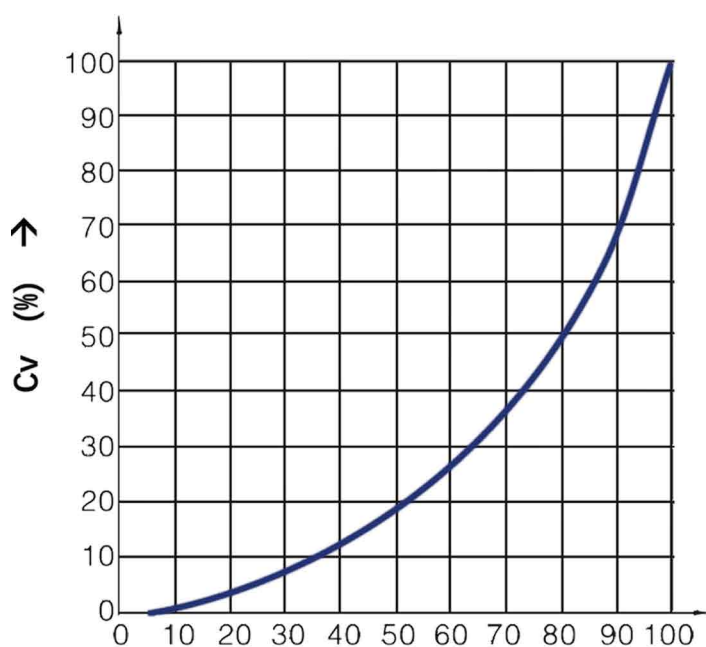


NO.	Part Name	Part Material		
1	Body	WCB	CF8	CF8M
2	V-port Ball	CF8+HCr		CF8M+HCr
3	Seat	304+STL		316+STL
4	O-ring	Viton		
5	Spring seat	304		316
6	Spring	304/316/Inconel X-750		
7	Seat Cover	304		316
8	Screw	B7	B8	B8M
9	Down Sleeve	304+Cr		316+Cr
10	Down Stem	304/316/17-4PH/F51		
11	Down Retainer Nut	304		316
12	Gasket	PTFE/304+Graphite/316+Graphite		
13	Bottom	WCB	CF8	CF8M
14/16/23	Bolt	B7	B8	B8M
15/22/24	Nut	2H	8	8M
17	Upper Sleeve	304+Cr		316+Cr
18	Upper Stem	304/316/17-4PH/F51		
19	Upper Retainer Nut	304		316
20	Packing	PTFE/Graphite		
21	Packing Gland	WCB	CF8	CF8M
25	Yoke	C.S	304	

2. Technical Specification

- **Size Range:** 1" ~ 20" (DN25~DN500)
- **End Connection:** Flange
- **Pressure Rate:** DIN PN10, 16, 25, 40, 63 & ANSI 150, 300, 600
- **Face to Face:** ISA S75.04, IEC/DIN 534-3-2
- **Temp. Range:** -29°C~200°C (Soft Seat); -29°C~350°C (Metal Seat)
- **Ball/Seat:** CF8+HCr/304+STL, CF8M+HCr/316+STL, CF3+HCr/304L+STL, etc.
Nitriding/Tungsten Carbide/Stellite Alloy/Nickel Base Alloy coatings are available for abrasive media. (Metal Seat)
- **Soft Seat:** Class VI, PTFE/RPTFE/PEEK/PCTFE are available.
- **Metal Seat Seal Tightness:** Class IV, Class V, Class VI (with Tungsten Carbide coated trim)
- **Valve Trim Rotation:** Clockwise to close
- **Flow Characteristic:** Equal Percentage
- **Leakage Class Test Standard:** ANSI/FCI 70-2

3. Flow Characteristic

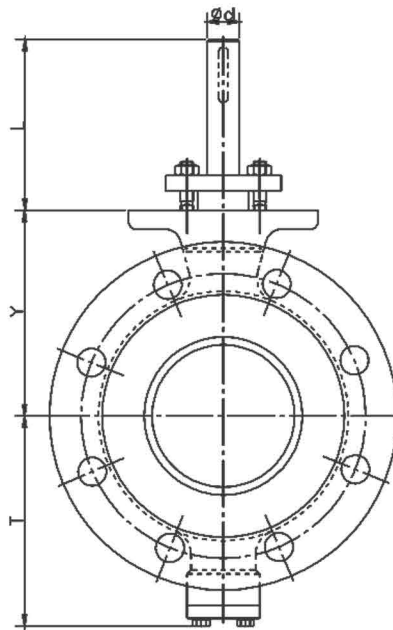
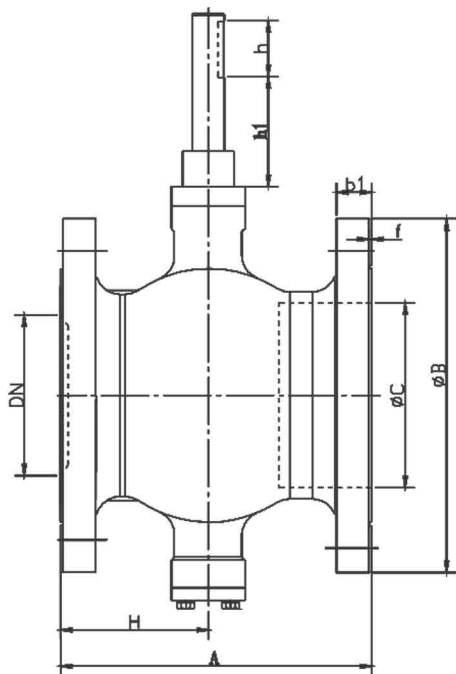


Size	CV
DN25	36
DN32	56
DN40	94
DN50	152
DN65	262
DN80	358
DN100	540
DN125	906

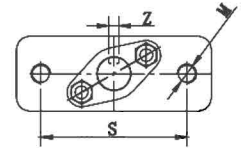
Size	CV
DN150	1424
DN200	2176
DN250	3532
DN300	5732
DN350	8245
DN400	10651
DN450	12878
DN500	16343

*The rated Cv value is for reference only.

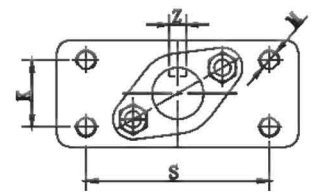
4. Dimension



DN25-DN65(1"-1-1/2")



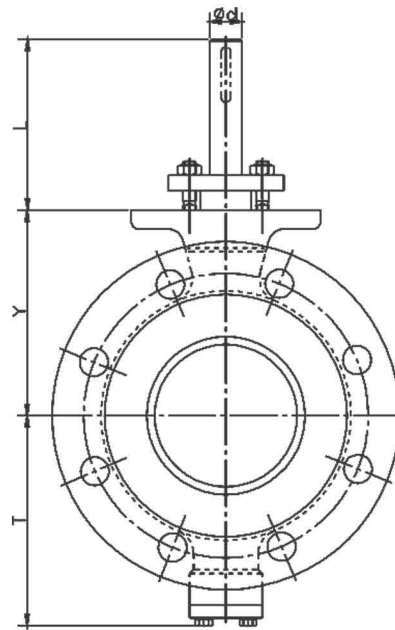
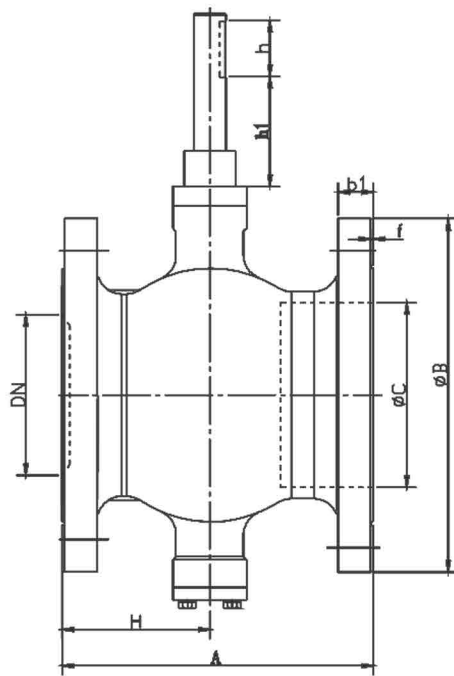
DN80-DN500(3"-20")



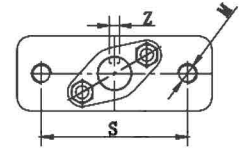
PN 16

DN	A	B	b1	f	C	T	Y	L	d	H	S	K	M	Z	Weight (kg)
25	102	115	16	2	38	81	73	75	16	35	75	/	2-M10	5	4.9
32	102	140	18	2	45	86	78	75	16	35	75	/	2-M10	5	6.6
40	114	150	18	2	50	90	80	75	16	35	75	/	2-M10	5	7.6
50	124	165	20	2	62	93	90	75	16	35	75	/	2-M10	5	9.5
65	145	185	20	2	73	108	105	75	16	35	75	/	2-M10	5	12.4
80	165	200	20	2	90	123	118	75	20	35	90	28	4-M10	6	15.5
100	194	220	22	2	115	138	130	75	20	35	90	28	4-M10	6	20.6
125	194	250	22	2	134	148	145	80	25	40	90	28	4-M10	8	28.6
150	229	285	24	2	164	170	170	94	30	50	110	40	4-M12	8	42.5
200	243	340	24	2	206	200	201	94	30	50	110	40	4-M12	8	59.5
250	297	405	26	2	260	240	237	98	40	60	135	40	4-M16	12	99
300	338	460	28	2	316	286	282	98	40	60	135	40	4-M16	12	148
350	400	520	30	2	372	330	337	125	50	60	140	64	4-M16	14	216
400	400	580	32	2	420	367	372	172	60	80	170	80	4-M20	18	285
450	520	640	40	2	470	422	432	172	70	90	190	90	4-M24	20	370
500	600	715	44	2	516	490	498	180	80	100	190	90	4-M24	22	480

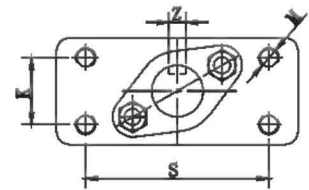
4. Dimension



DN25-DN65(1"-1-1/2")



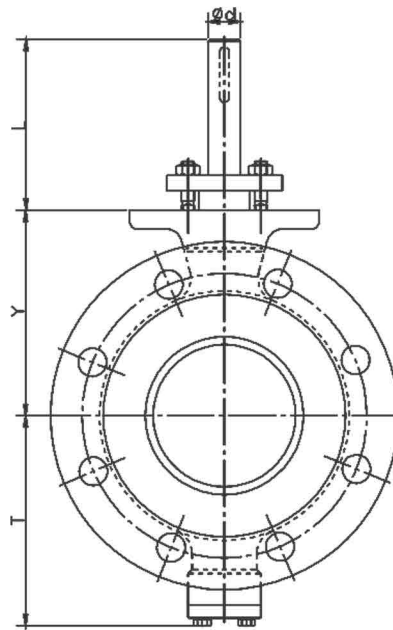
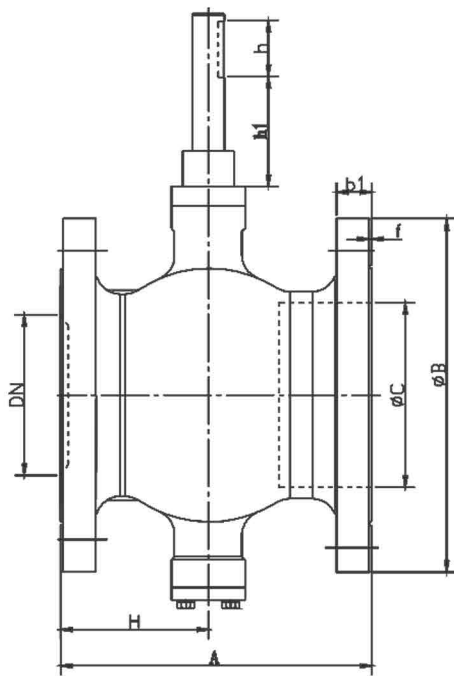
DN80-DN500(3"-20")



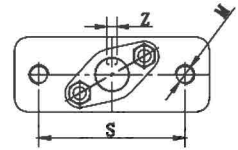
PN 25

DN	A	B	b1	f	C	T	Y	L	d	H	S	K	M	Z	Weight (kg)
25	102	115	16	2	40	88	86	75	20	35	90	28	4-M10	6	5.4
32	102	140	18	2	48	90	90	75	20	35	90	28	4-M10	6	7.3
40	114	150	18	2	56	95	93	80	25	40	90	28	4-M10	8	8.4
50	124	165	20	2	65	98	98	80	25	40	90	28	4-M10	8	10.5
65	145	185	22	2	81	130	125	95	30	50	110	40	4-M12	8	13.2
80	165	200	24	2	95	128	128	95	30	50	110	40	4-M12	8	17.7
100	194	235	24	2	115	142	142	95	30	50	110	40	4-M12	8	24.7
125	194	270	26	2	138	175	170	100	40	60	135	40	4-M16	12	34.5
150	229	300	28	2	170	215	215	125	50	60	140	64	4-M16	14	50.7
200	243	360	30	2	208	228	228	125	50	60	140	64	4-M16	14	72.7
250	297	425	32	2	265	260	260	150	60	80	170	80	4-M20	18	116
300	338	485	34	2	320	310	310	150	60	80	170	80	4-M20	18	169

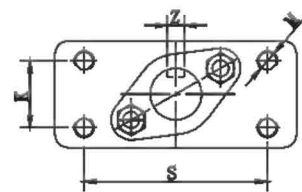
4. Dimension



DN25-DN65(1"-1-1/2")



DN80-DN500(3"-20")



ANSI 150

DN	A	B	b1	f	C	T	Y	L	d	H	S	K	M	Z	Weight (kg)
1"	102	108	14.5	2	38	81	73	75	16	35	75	/	2-M10	5	5.4
1-1/4"	102	115	14.5	2	45	86	78	75	16	35	75	/	2-M10	5	7.3
1-1/2"	114	127	14.5	2	50	90	80	75	16	35	75	/	2-M10	5	8.4
2"	124	152	16.3	2	62	93	90	75	16	35	75	/	2-M10	5	10.5
2-1/2"	145	180	18	2	73	108	105	75	16	35	75	/	2-M10	5	13.2
3"	165	191	19.5	2	90	123	118	75	20	35	90	28	4-M10	6	17.7
4"	194	230	24	2	115	138	130	75	20	35	90	28	4-M10	6	24.7
5"	194	255	24.3	2	134	148	145	80	25	40	90	28	4-M10	8	34.5
6"	229	280	26	2	164	170	170	94	30	50	110	40	4-M12	8	50.7
8"	243	340	29	2	206	200	201	94	30	50	110	40	4-M12	8	72.7
10"	297	405	30.6	2	260	240	237	98	40	60	135	40	4-M16	12	116
12"	338	485	32.2	2	316	286	282	98	40	60	135	40	4-M16	12	169
14"	400	535	35.4	2	372	330	337	125	50	60	140	64	4-M16	14	249
16"	400	595	37	2	420	367	372	172	60	80	170	80	4-M20	18	326
18"	520	635	40.1	2	470	422	432	172	70	90	190	90	4-M24	20	410
20"	600	700	44	2	516	490	498	180	80	100	190	90	4-M24	22	510

5. Valve Torque (Include 1.3 Safety Factor)

Size	PN16 10 Bar Pressure Metal Seat	PN16 10 Bar Pressure Soft Seat	PN25 20 Bar Pressure Metal/Soft Seat	PN40 30 Bar Pressure Metal/Soft Seat	PN63 50 Bar Pressure Metal/Soft Seat
DN25	20	20	30	70	150
DN32	25	25	36	90	230
DN40	30	30	40	140	270
DN50	35	35	42	150	520
DN65	50	50	62	300	640
DN80	60	80	95	300	640
DN100	80	120	140	420	900
DN125	110	180	220	600	1600
DN150	170	300	360	950	1600
DN200	240	500	590	1500	2700
DN250	430	900	1100	2300	4700
DN300	600	1400	1500	3500	7000
DN350	1200	2000	2500	6200	9300
DN400	1800	3200	4000	7200	13000
DN450	3000	4500	5600	11000	17300
DN500	4600	6500	8200	12500	22000

Size	150LB 10 Bar Pressure Metal Seat	150LB 10 Bar Pressure Soft Seat	150LB 20 Bar Pressure Metal/Soft Seat	300LB 35 Bar Pressure Metal/Soft Sea	600LB 70 Bar Pressure Metal/Soft Sea
1"	20	20	30	85	210
1-1/4"	25	25	36	105	320
1-1/2"	30	30	40	180	380
2"	35	35	42	190	730
2-1/2"	50	50	62	380	930
3"	60	80	95	380	1000
4"	80	120	140	530	1000
5"	110	180	220	720	2200
6"	170	300	360	1180	2500
8"	240	500	590	1750	3800
10"	430	900	1100	2800	6500
12"	600	1400	1500	4000	10000
14"	1200	2000	2500	7800	13100
16"	1800	3200	4000	9000	18000
18"	3000	4500	5600	13700	24000
20"	4600	6500	8200	15500	31000

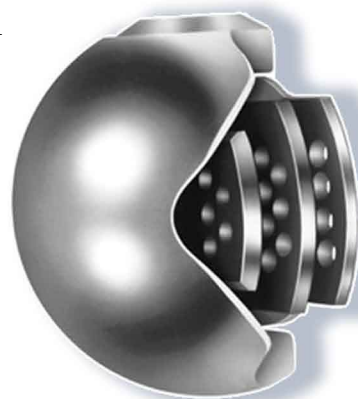
6. Actuator & Accessory Options

- **Manual:** Gear Operator; Hand Lever (DN25-DN100 Only)
 - **Accessories:** Actuator Manual Override; Limit Switch; Air Filter; Positioner; Solenoid Valve; ISO 5211 Mounting Bracket; Volume Booster; Lock-Up Valve.
 - **Automatic:** Electric; Pneumatic (single & double-acting)
- * Note: For more special requirements, please consult MIWIVAL.

7. Construction options

- **Q-trim valve trim for cavitation/noise abatement**

Liquid cavitation and aerodynamic noise problems can be solved with the Q-Trim valve trim. This design employs the two well known principles of dividing the pressure drop into a series of small pressure drops and of separating the flow stream into many small jet streams. The use of these two principles combined with the rotation of the attenuator elements provides a combination of cavitation/noise abatement with high rangeability, high capacity and capability to handle impure fluids.



- **Low Cv trims:**

Reduced Cv trims are available on the DN25/1" valve to control very tiny flows with high accuracy. The narrow orifice is a selfflushing design because the trim orifice is continually increasing.

