



**PSN International**

As a solution provider, we do more than valves.

## VQD Series V-port Segment Ball Valve (Wafer)

ISO9001 & CE Accredited

### Overview

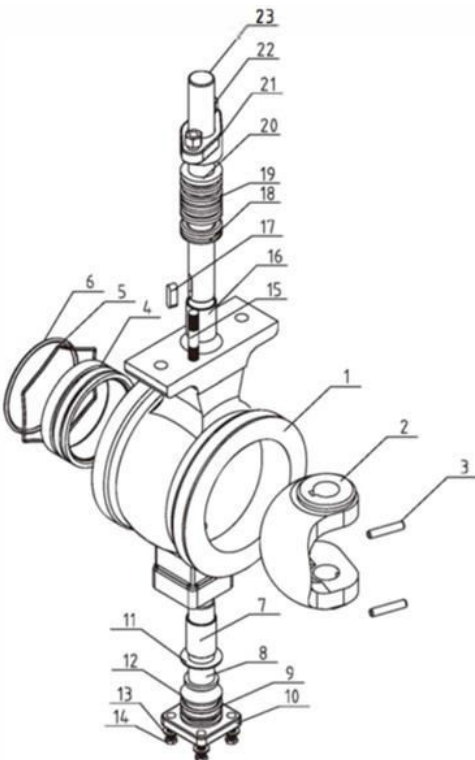
The PSN VQD series v-port segment ball valve is primarily designed for flow control, and it can also be used for shut-off operation. The notched port on the segment ball contributes to strong shear stress to cut through media with fibers and particles. Consequently, this v-port segment valve is a good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

### Application

Pulp and Paper/Waste Water Treatment/ Food and Beverage/Chemical Plants/ Power Plants/ Steel Industry/Etc.



### 1. Design Features



### STANDARD PART LIST

Parts	WCB	CF8	CF8M
1. Body	WCB	CF8	CF8M
2. V-port Segment	CF8+HCr	CF8+HCr	CF8M+HCr
3. Pin	304	304	316
4. Seat	304+STL	304+STL	316+STL
5. Spring		316L	
6. O-ring		VITON	
7. Bearing	304+PTFE	304+PTFE	316+PTFE
8. Lower Stem	304	304	316
9. O-ring		Viton	
10. Packing Gland	WCB	CF8	CF8M
11/12. Gasket		PTFE	
13. Washer	Q235	304	316
14/15 Bolt	25	304	304
16. Bearing	304+PTFE	304+PTFE	316+PTFE
17. Key	304	304	316
18/19/20. Packing		PTFE or Graphite	
21. Packing Gland	WCB	CF8	CF8M
22. Nut	Q235	304	304
23. Upper Stem	304	304	316



**Body**

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

**V-port Segment Ball:**

- Specially designed V-notch ball provides strong cutting stress and tight sealing. Well ground notched ball surface ensures small operating torque and tight seal, especially for metal seated segment valve.

**Seat**

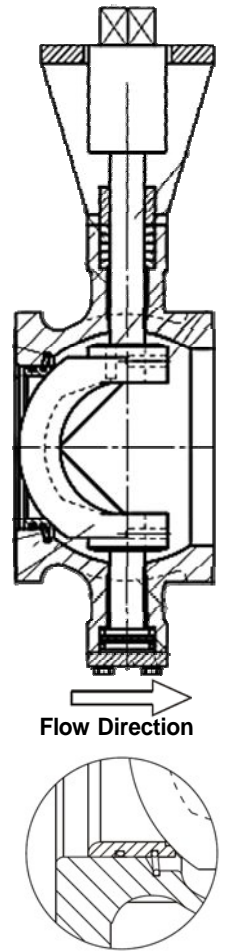
- Special seat design eliminates cavity between seat and valve body. This, consequently, prevents media from jamming between seat and body, ensure reliable sealing.

**Seal Surface**

- Nitriding/Tungsten Carbide/Satellite Alloy/Nickle Base Alloy plating are available for abrasive media.

**Stem**

- Stem is finely grounded to match actuator excellently, which prevents rocking motion and potential failure of the v-port segmented valve.
- Close-fit spline or pin-key are available for stem-segment ball connection to provide reliable transmission without motion lost or dead band.



Flow Direction

Seat Detail

**2. Technical Specification**

**Size Range**

1" ~10" (DN25~DN250)

**Pressure Rate**

DIN PN10, 16, 25; ANSI 150

**Body Material**

WCB, CF8, CF8M, CF3M, etc.

**Ball/Seat:**

**Metal Seat Only**

CF8+HCr/304+STL, CF8M+HCr/316+STL, CF3+HCr/304L+STL, etc.

Nitriding/Tungsten Carbide/Satellite Alloy/Nickle Base Alloy plating are available for abrasive media.

**End Connection**

Wafer Type

**Face to Face**

PSN Standard

**Temp. Range:**

-29°C ~ 220°C

**Seal Tightness:**

**Metal Seat**

Class V (standard), Class VI (with Tungsten Carbide coated trim)

**Valve Trim Rotation**

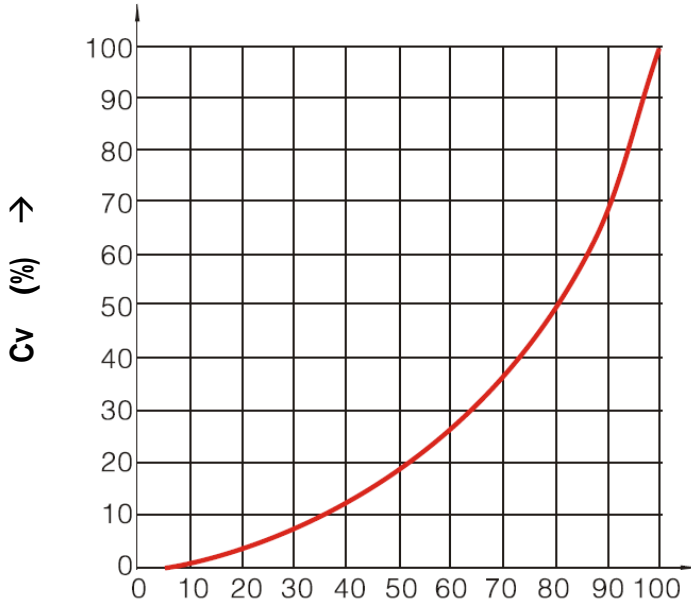
Clockwise to close

**Flow Characteristic**

Equal Percentage



### 3. Flow Characteristic



Size	CV
DN25	36
DN32	56
DN40	94
DN50	152
DN65	262
DN80	358
DN100	540
DN125	906
DN150	1424
DN200	2176
DN250	3532

\*The rated Cv value is for reference only.

### 4. Valve Torque

PN10/16, ANSI150LB tested under 10 bar (differential pressure)

Size	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
Torq. NM	20	25	30	35	50	60	80	110	170	240	430

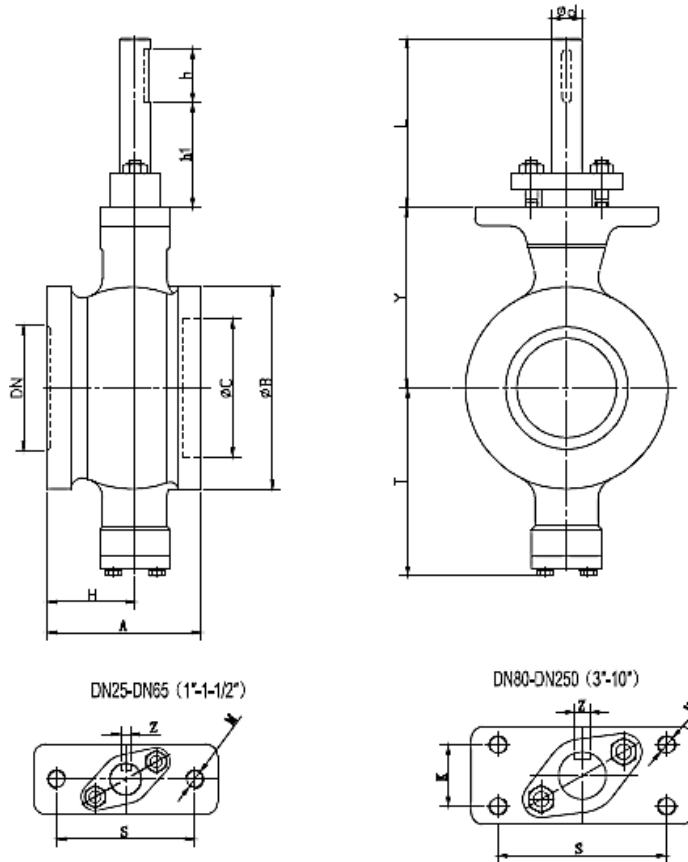
PN25, tested under 20 bar (differential pressure)

Size	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
Torq. NM	30	36	40	42	62	95	140	220	360	590	1100

\*Safety Factor (1.3) is included.



## 5. Dimension



DIN PN10/16/25, ANSI150

DN	A	B	C	T	Y	L	d	h	S	K	M	Z	Weight ( kg )	
													PN10/16	PN25
25	50	68	38	81	73	75	16	35	75	/	2-M10	5	2.6	2.9
32	60	76	45	86	78	75	16	35	75	/	2-M10	5	3	3.3
40	60	84	50	90	80	75	16	35	75	/	2-M10	5	3.5	4
50	75	100	62	93	90	75	16	35	75	/	2-M10	5	4.5	5
65	100	118	73	108	105	75	16	35	75	/	2-M10	5	6	7
80	100	132	90	123	118	75	20	35	90	8	4-M10	6	8	9
100	115	158	115	138	130	75	20	35	90	28	4-M10	6	12	13
125	129	184	134	148	145	80	25	40	90	28	4-M10	8	19	20
150	160	216	164	170	170	94	30	50	110	40	4-M12	8	30	33
200	200	268	206	200	201	94	30	50	110	40	4-M12	8	47	51
250	240	326	260	240	237	98	40	60	135	40	4-M16	12	79	87



## 6. Actuator Options

### Manual

Handle Bar (DN25-DN100 Only)

Worm Gear

### Automatic

Electric

Pneumatic (single & double-acting)

### Accessories

Actuator Manual Override

Limit Switches

Air Filter

Positioner

Solenoid Valve

Mounting Bracket

**\*Note: for more options, please contact us for availability.**



Handle bar



Worm Gear



Pneumatic (ZS)



Pneumatic (AT)



Electric