

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

### Overview

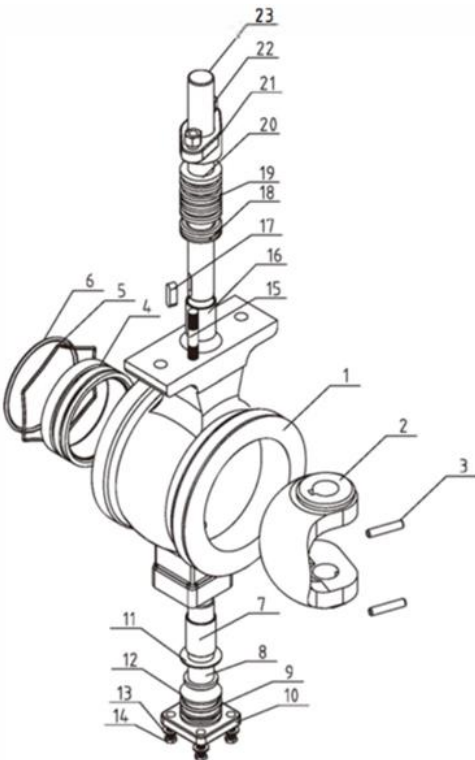
The VQD series v-port segment ball valve is primarily designed for flow control, and it can also be used for shut-off operation. The notched port on the segment ball contributes to strong shear stress to cut through media with fibers and particles. Consequently, this v-port segment valve is a good general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

As a solution provider, we do more than valves.

**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**

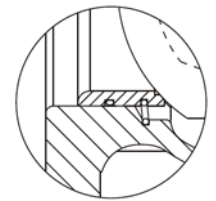
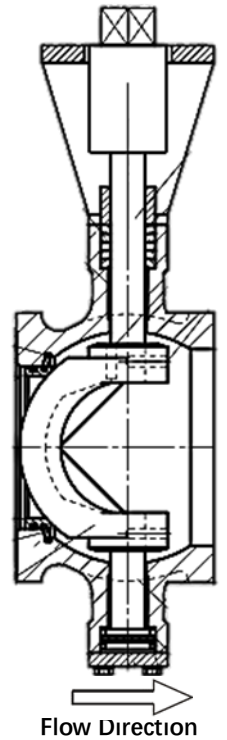
- Special seat design eliminates cavity between seat and valve body. This, consequently, prevents media from jamming between seat and body, ensure reliable sealing.

**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.



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**

Standard

**Temp. Range:**

-29°C ~ 220°C

**Seal Tightness:**

**Metal Seat**

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

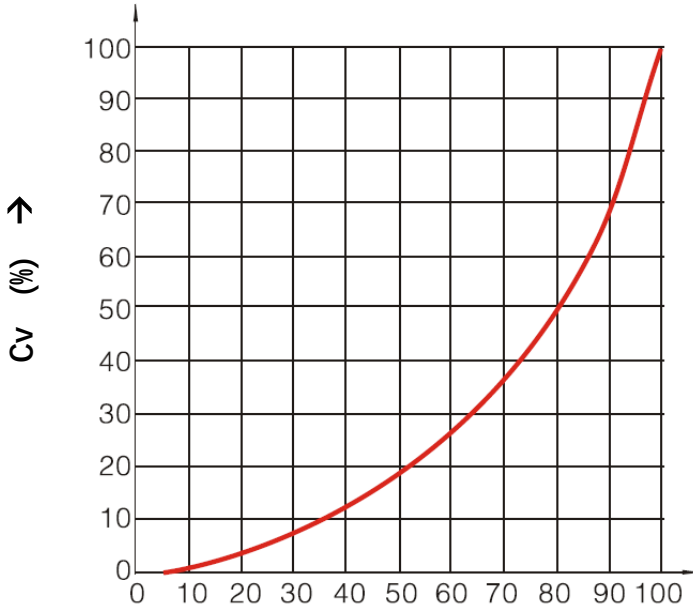
**Valve Trim Rotation**

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   |

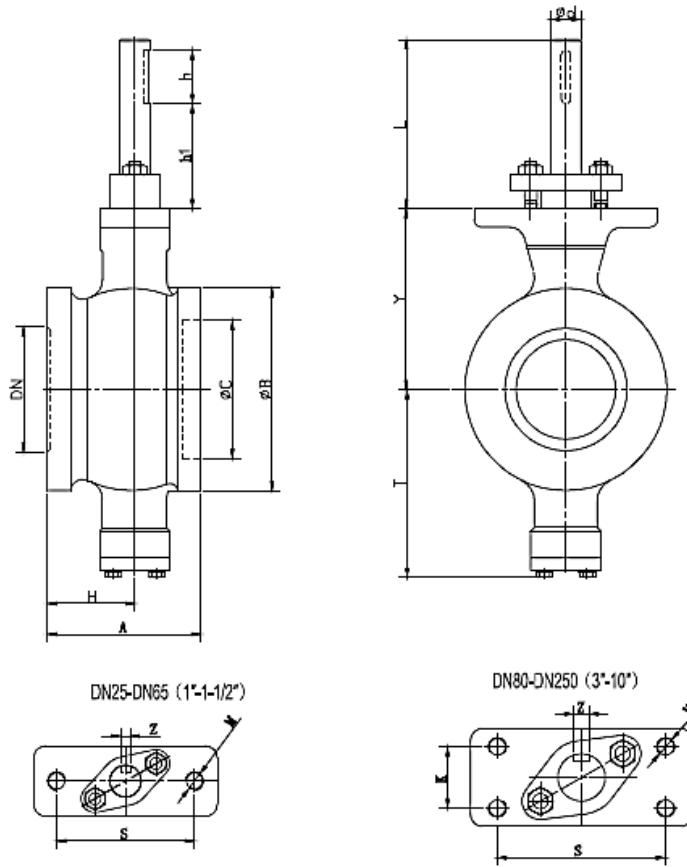
PN25, tested under 20 bar (differential pressure)

| 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.

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## 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