# GVQ-077Y Series V-port Segment Ball Valve (Wafer)

## Overview

GVQ-077Y 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.

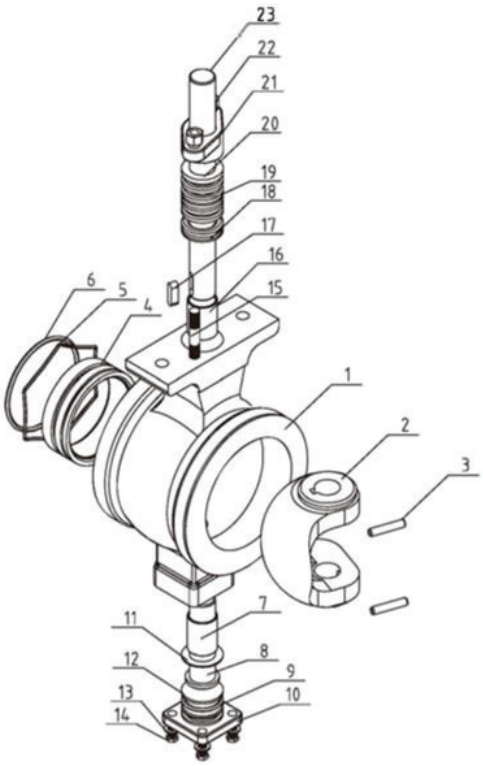
## Application

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



Wafer Type

## DESIGN FEATURES




**Std Stock**

**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 |

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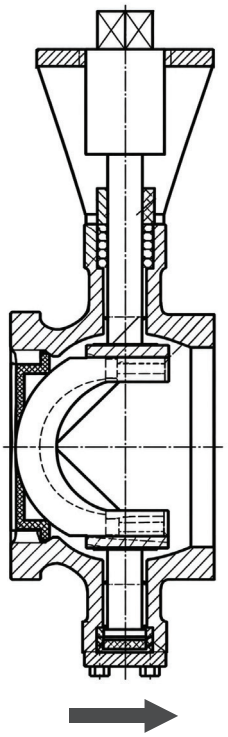
### Body
• Single-piece body prevents leaks caused by separate flanges or locking rings.

### 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.

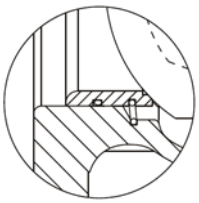
### Seat
• Special seat design eliminates cavity between seat and valve body. This, consequently, prevents media from jamming between seat and body, ensure reliable sealing.

### 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

## 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**
Design acc. to Manufacturer Standard
ANSI 150 as Standard

**Temp. Range:**
-29ºC ~ 220ºC

**Seal Tightness: Metal Seat**
Class V (standard), Class VI
(with Tungsten Carbide coated trim)

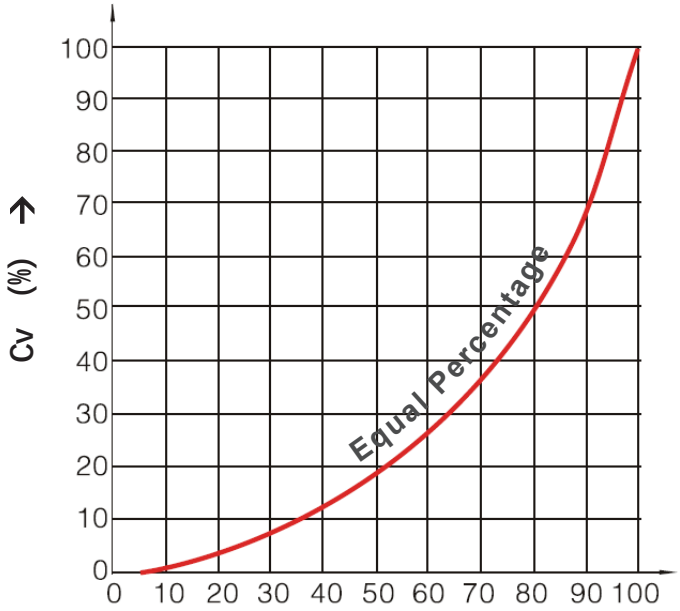
**Valve Trim Rotation**
Clockwise to close

**Flow Characteristic**
Equal Percentage

Order information: GVQ-077Y-S6 + STL - A - XXX

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## 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.**

## 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 |

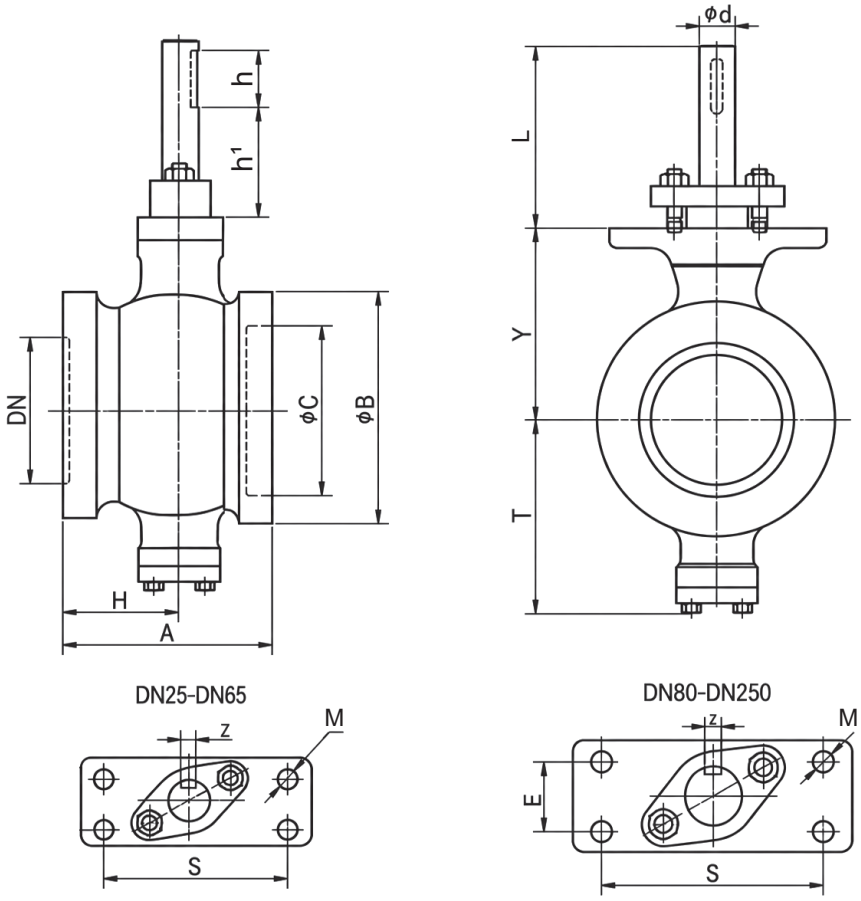
### PN25, tested under 20 bar (differential pressure)

| 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.**

## GVQ-077Y Series V-port Segment Ball Valve (Wafer)

### 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 |

# GVQ-077Y Series V-port Segment Ball Valve (Wafer)

## ACTUATOR OPTIONS

| Manual | Automatic |
|---|---|
| Handle Bar (DN25-DN100 Only) | Electric |
| Worm Gear | Pneumatic (single & double-acting) |

| Accessories | |
|---|---|
| Actuator Manual Override | Positioner |
| Limit Switches | Solenoid Valve |
| Air Filter | Mounting Bracket |

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



**Handle bar**



**Worm Gear**



**Pneumatic (ZS)**



**Pneumatic (DR or SC)**



**Electric (8280 Series)**